

**Geologic Report for the
Shovelnose Property,
Merritt, British Columbia**

**Nicola Mining Divisions
Merritt Area, British Columbia
BCGS: 09H086, 087, 096, 097
Latitude 49⁰52'N Longitude 120⁰50'W
UTM Zone 10: 655000E, 5526000N (NAD83)**

**Claims: 521061, 521063, 521064, 521067, 521069, 521070, 594225, 594226,
594227, 594228, 594229, 895724, 938549)**

**Approximate Property Location:
Centre: 655,000E and 5,526,000N
(UTM, NAD 83, Zone 10N)
30 km southeast of Merritt, BC**

**Completed By:
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**BC Geological Survey
Assessment Report
32921**

**Completed For:
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April 9, 2012
Edmonton, Alberta, Canada

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Shovelnose Property,
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SUMMARY

This assessment report is written for the Shovelnose Property (the “Property” or the “Project”), which is held 100 percent (%) by Strongbow Exploration Inc. (Strongbow). The Shovelnose property consists of 33 contiguous mineral claims, totalling 16,412 hectares (ha). The Property is situated approximately 30 kilometres (km) southeast of Merritt, BC and within the Nicola Mining Division. On January 24, 2011 Westhaven Ventures Inc (Westhaven) entered into an option agreement with Strongbow whereby Westhaven can earn up to a 70% interest in the Property.

APEX Geoscience Ltd. (“APEX”) was retained by Westhaven during February, 2011 as consultants to complete an exploration program and report on behalf of Westhaven specific to the Shovelnose Property. Mr. Kristopher Raffle, P.Geo., a senior geologist of APEX and Qualified Person supervised exploration at the Property between the dates of August 4 and October 26, 2011. The summer and fall 2011 Shovelnose Property exploration program consisted of soil, stream silt, rock grab and rock chip sampling; mechanical trenching; and diamond drilling. Exploration included the collection of 972 soil, 28 stream silt, 107 rock grab and 91 trench rock chip samples. Mechanized exploration included a total of 146.5 m of trenching and 606 m of diamond drilling within 7 holes. The total cost to complete the 2011 exploration program was \$ 358,432.57.

Through active exploration programs from 2006 to 2010, Strongbow discovered four gold showings (Mik, Line 6, Tower, Brookmere) and two geochemical targets (Mik-SE and Shovelnose-SE). The most advanced exploration targets are found at the Mik and Line 6 showing area where 21 hand and mechanically dug trenches, with a total length of 640 m, have been completed to bedrock. Summary results from the Mik Showing trench channel sampling include 2.72 grams-per-tonne (g/t) gold (Au) over 2.9 metres (m) (MK09-XT-04), 1.40 g/t Au over 3 m (MK08-XT-01) and 1.45 g/t Au over 2 m (MK08-XT-02). Summary results from the Line 6 Showing trench channel sampling include 16.95 g/t Au over 2 m (L608-XT-01), 1.40 g/t Au over 16 m (L608-XT-02) and 0.80 g/t Au over 21 m.

The Property is located within the southern Intermontane Belt of British Columbia, which is dominated by the Upper Triassic Nicola Group, a west-facing magmatic arc sequence comprising the south end of the Quesnel Terrane. These rocks are intruded by Late Triassic and Early Jurassic comagmatic plutons, and are unconformably overlain by Cretaceous and Tertiary volcanic rocks and clastic sediments of Spences Bridge Volcanic Belt and Princeton Group. At property scale, a series of small potassium feldspar phyric syenite bodies and mafic dykes intrude into and cross-cut the volcanic stratigraphy. Generally northeast trending, west-side down normal faults offset the underlying Nicola Group and Spences Bridge Group rocks. Less abundant northwest-trending structures have also been mapped and may be splays or conjugate structures to northeast trending ones.

The gold mineralization at the Mik and Line 6 showings appears to be structurally and stratigraphically controlled. The showings are spatially related to northeast and possibly conjugate northwest-trending faults. Gold mineralization is associated with

south-southwest trending quartz veining that is hosted within Cretaceous-age Spences Bridge Group crystal lithic tuffs. The tuffs contain siliceous fragments that also appear to be associated with the gold mineralization. Alteration associated with the gold mineralization includes clay, sericite, chlorite, limonite, manganese, and silica.

Results from 2011 soil sampling returned a total of 26 anomalous samples with greater than 6.27 ppb Au (>97.5th percentile) and up to 1607.2 ppb Au. Infill sampling between the Mik and Line 6 showings defined a 300 x 100 m area that returned 5 samples ranging from 12.7 to 58.3 ppb Au. Within the Shovelnose SE grid an approximately 3,500 m x 600 m northwest trending zone of anomalous copper, arsenic and gold in soil passes through the SHOVEL-19 and SHOVEL-20 claims. At the southeast end of the anomaly gold values ranging from 1.8 to 17.6 ppb Au lie within a broader zone of anomalous copper and arsenic values near Otter Creek. A rock grab sample collected near the Mik South Showing returned 6.83 g/t Au was likely not transported down slope from the Mik Showing and suggests the possibility of additional mineralization in this area. Mechanical trenching did not result in the discovery of significant new sources of mineralization.

Diamond drilling at the Mik Showing (drill hole 11-SH-003) returned assays of 1.19 g/t Au over 4.10 m from a depth of 33.90 m; including 3.01 g/t Au over 1.46 m. At the Line 6 Showing drill hole 11-SH-004 intersected altered tuff hosting mm-scale quartz-carbonate veins and fine grained pyrite mineralization that returned 0.32 g/t Au over 25.63 m. At the Tower Showing, pyritic silicified vein and breccia mineralization intersected at surface returned assays of 0.21 g/t Au over 55.8 m and anomalous arsenic, mercury, molybdenum and antimony values.

Based on the presence of gold anomalies (soil and rock) and favourable geology, the Shovelnose Property is of high priority for follow-up exploration. Follow-up exploration should focus on completing IP/resistivity surveys and drill testing at the Tower Showing; additional drill testing of the Mik and Line 6 showings; mechanical trenching of the soil geochemical anomaly between the Mik and Line 6 showings; rock grab and infill soil geochemical sampling of the Mik South and Shovelnose SE areas; and completion of detailed ground magnetic geophysical surveys between the Mike and Line 6 showings. The total cost to complete the recommended exploration is \$292,890.00 (not including HST).

INTRODUCTION

This report is written for the Shovelnose Property (the “Property” or the “Project”), which is held 100 percent (%) by Strongbow Exploration Inc. (Strongbow). On January 24, 2011 Westhaven Ventures Inc. (“Westhaven”) entered into an option agreement with Strongbow whereby Westhaven can earn up to a 70% interest in the Shovelnose Property. This report presents the results of, and expenditures related to, exploration work conducted by Westhaven at the Property during 2011.

APEX Geoscience Ltd. (“APEX”) was retained by Westhaven during February, 2011 as consultants to complete an exploration program and report on behalf of Westhaven. Mr. Kristopher Raffle, P.Geo., a senior geologist of APEX and a Qualified Person supervised exploration at the Project between the dates of August 4 and October 26, 2011. The 2011 exploration program comprised soil, stream silt, rock grab and rock chip sampling; mechanical trenching; and diamond drilling. The total cost to complete the 2011 exploration program was \$358,432.57.

All units used in this Report are metric and Universal Trans Mercator (UTM) coordinates in this report and accompanying illustrations are referenced to the North American Datum 1983 (NAD83), Zone 10, unless otherwise stated. Due to the authors limited exposure to the geology and mineralization of the Shovelnose Property and surrounding geology certain parts of the sections titled: “History”, “Geological Setting” and “Mineralization” have been directly quoted from Chang and Campbell (2011). In writing this report, the author has used as sources of information those publications listed in the reference section.

PROPERTY DESCRIPTION AND LOCATION

The Shovelnose Property is situated at latitude 49°52’ N and longitude 120°50’ W or 655,000E, 5,526,000N (UTM NAD 83, Zone 10). It is situated approximately 30 kilometres (km) southeast of Merritt and 10 km east of the Coquihalla highway (Figure 1). The property area is covered by 1:50,000 scale National Topographic System (NTS) map sheet 92H/15.

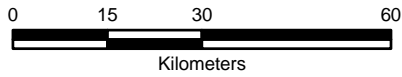
The Property consists of 33 contiguous mineral claims that covers 16,412 hectares (ha), and is recorded in good standing by the British Columbia Ministry of Energy and Mines (Table 1, Figure 2).

WESTHAVEN VENTURES INC




Shovelnose Property Location

1:1,200,000

UTM NAD83 / Zone 10



Legend

-  Shovelnose property
-  Road
-  River

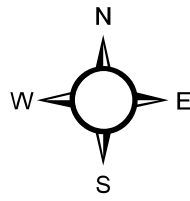
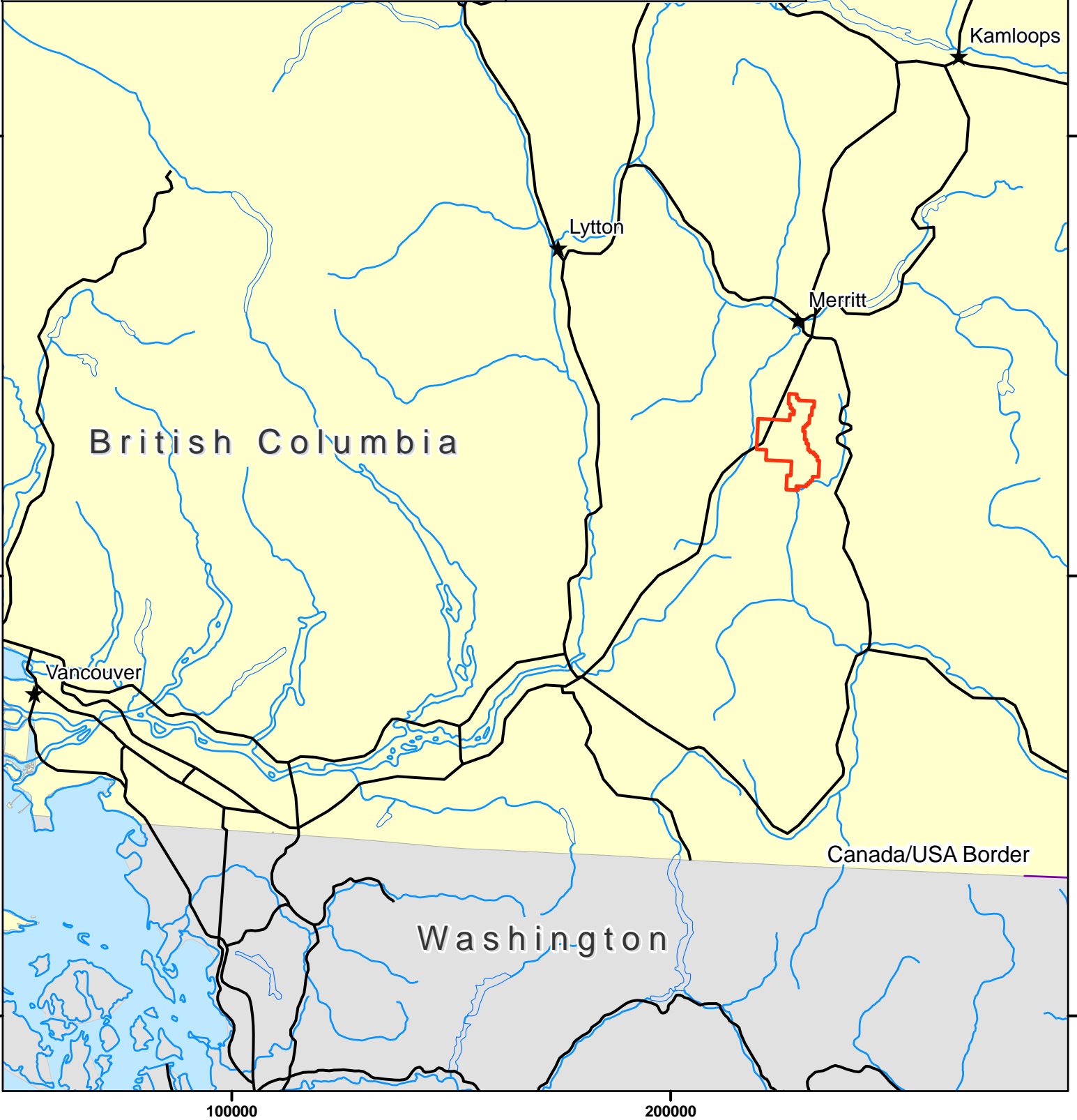
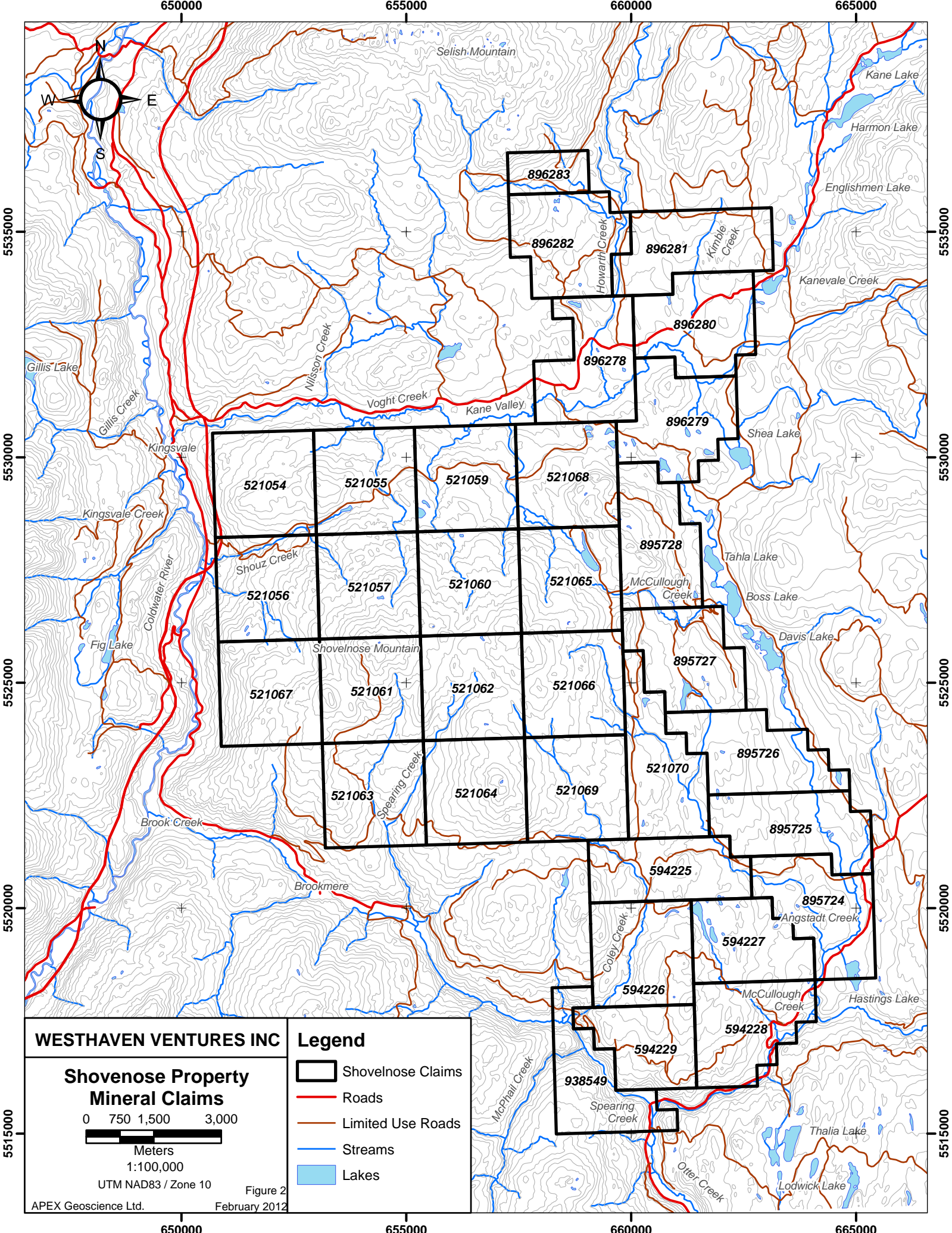


Figure 1

February 2012

APEX Geoscience Ltd.





WESTHAVEN VENTURES INC

**Shovenose Property
Mineral Claims**

0 750 1,500 3,000



Meters

1:100,000

UTM NAD83 / Zone 10

Figure 2

APEX Geoscience Ltd.

February 2012

Legend

-  Shovelnose Claims
-  Roads
-  Limited Use Roads
-  Streams
-  Lakes

Table 1: Shovelnose Mineral Claims

Tenure	Claim Name	Issue Date	Expiry Date	Area (ha)
521054	SHOVEL-1	2005-10-12	2015-07-01	520.30
521055	SHOVEL-2	2005-10-12	2015-07-01	520.30
521056	SHOVEL-3	2005-10-12	2017-10-08	520.52
521057	SHOVEL-4	2005-10-12	2017-10-08	520.52
521059	SHOVEL-5	2005-10-12	2015-07-01	520.31
521060	SHOVEL-6	2005-10-12	2015-07-01	520.53
521061	SHOVEL-7	2005-10-12	2017-10-08	520.74
521062	SHOVEL-8	2005-10-12	2017-10-08	520.75
521063	SHOVEL-9	2005-10-12	2017-10-08	520.97
521064	SHOVEL-10	2005-10-12	2015-07-01	520.97
521065	SHOVEL-11	2005-10-12	2015-07-01	520.53
521066	SHOVEL-12	2005-10-12	2015-07-01	520.75
521067	SHOVEL-13	2005-10-12	2017-10-08	520.74
521068	SHOVEL-14	2005-10-12	2015-07-01	520.31
521069	SHOVEL-15	2005-10-12	2015-11-30	520.97
521070	SHOVEL-16	2005-10-12	2015-07-01	520.93
594225	SHOVEL-17	2008-11-13	2015-11-30	479.46
594226	SHOVEL-18	2008-11-13	2015-11-30	521.32
594227	SHOVEL-19	2008-11-13	2015-11-30	437.91
594228	SHOVEL-20	2008-11-13	2015-11-30	500.63
594229	SHOVEL-21	2008-11-13	2015-11-30	396.35
895724	SHOVEL-22	2011-08-31	2014-08-31	521.25
895725	SHOVEL-23	2011-08-31	2014-08-31	500.23
895726	SHOVEL-24	2011-08-31	2014-08-31	500.08
895727	SHOVEL-25	2011-08-31	2014-08-31	499.87
895728	SHOVEL-26	2011-08-31	2014-08-31	499.64
896278	SHOVEL-27	2011-09-08	2014-09-08	520.08
896279	SHOVEL-28	2011-09-08	2014-09-08	520.20
896280	SHOVEL-29	2011-09-08	2014-09-08	520.00
896281	SHOVEL-30	2011-09-08	2014-09-08	519.84
896282	SHOVEL-31	2011-09-08	2014-09-08	519.82
896283	SHOVEL-32	2011-09-08	2014-09-08	166.29
938549	GORD	2011-12-22	2012-12-22	459.00
Total Area (ha):				16,412.10

Under the terms of the option agreement, Westhaven can earn an initial 51% interest in the Shovelnose property by i) incurring \$1.5 million in exploration expenditures over a three year period, including a firm commitment to spend \$250,000

in the first year of the agreement, and ii) issuing a total of 300,000 common shares to Strongbow including 100,000 common shares within 5 business days of Exchange approval of the option agreement. Within 12 months of having earned its 51% interest in the property, Westhaven will have the option to earn an additional 19% interest (bringing its total property interest to 70%) by i) issuing an additional 500,000 shares to Strongbow, and ii) incurring an additional \$1.5 million in exploration expenditures. The option agreement with Westhaven is subject to approval of the TSX Venture Exchange.

Exploration by Westhaven during 2011 was completed under Mineral and Coal Exploration Activities and Reclamation Permit number MX-4-392 (Mine #1620627). Mineral and Coal Notice of Work and Reclamation Activities permit applications for exploration trail construction; mechanical trenching and diamond drilling were originally submitted by Strongbow personnel on June 1, 2007 and March 25, 2008. The applications were approved on August 13, 2007 and August 7, 2008, respectively, by the Ministry of Energy, Mines and Petroleum Resources (MEMPR) at Kamloops, BC. The programs as approved in the 2007 and 2008 permits were not completed in their entirety. At the request of Strongbow personnel, a continuance was granted by MEMPR on February 9, 2011 to allow for completion of the remaining mechanical trenching and diamond drilling as approved under the 2007 and 2008 permits.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The Shovelnose Property can be accessed in less than a half-hour drive from Merritt, BC, along the highway and well maintained logging roads. To enter the northern portion of the property, turn east off the Coquihalla Highway onto the Kane Valley road. For the south and central portion of the property, including the main gold showings, turn east off the Coquihalla Highway along the Coldwater road, towards the community of Brookmere. The close proximity to Merritt and the Coquihalla Highway provides the project with good logistical support, potential mining personnel, as well as access, and an excellent transportation and power supply corridor. The Coldwater River runs along the western Property boundary and represents a potential water source. Numerous active and deactivated logging roads and trails allow for easy access to the property with 4-wheel drive vehicles.

The Shovelnose property lies within the Intermontane physiographic region, in the western area of the Okanagan Plateau, in the Coldwater River drainage basin. It is situated on a plateau with several small steep rolling hills including Shovelnose Mountain. Shovelnose Mountain lies within a broad transition from coastal to interior climatic zones. The area has been logged numerous times historically and contains several recreational ATV trails, as well as numerous cattle pastures.

Elevations range from 860 m on its lower western margin near the Coldwater River to 1680 m at the radio/cellular tower on Shovelnose Mountain. Forests are generally mixed pine forest with open grassy areas to wetlands particularly at low elevations to the north and east. Northern slopes tend to be denser and overgrown while south-facing slopes are less so. Bedrock is scattered and poor with some

exposures in road-cut at lower elevations and at higher elevations. Soil and till cover is extensive on lower slopes although thicknesses are unknown.

The climate in the Merritt area is dry with little precipitation (annual mean total of 30 mm) and presents mild winters ($\sim -3^{\circ}\text{C}$) with a temperate spring and fall seasons ($\sim 7^{\circ}\text{C}$). It is one of the warmest places in the Thompson-Nicola region, with warm and sunny summers ($\sim 26^{\circ}\text{C}$) and 2,030 hours of sunshine (Environment Canada, 2011; City of Merritt, 2011).

Exploration activities are possible throughout most of the year but access to the property can be subject to road washout conditions during spring rains and limited by snow conditions during the winter, particularly at the higher elevations of the property.

HISTORY

The discovery of placer gold in gravel bars, located 75 km to the northwest of Shovelnose, ignited the Fraser and Thompson rivers gold rush between the 19th and 20th centuries (Balon, 2005). Placer gold was mined from gravel bars on major tributaries in the Ashcroft-Lytton-Lillooet district. In particular, the Nicoamen River, located 23 km northwest from Shovelnose Mountain, played a role in initiating the gold rush for the Merritt region.

In 2001 to 2002, Almaden Minerals Ltd. (“Almaden”) conducted prospecting and reconnaissance geochemical sampling in a belt of rocks known as the Spences Bridge Group, which included the Shovelnose property, the Skoonka Creek property northeast of Lytton, BC and the Prospect Valley property west of Merritt. A Regional Geochemical Survey (RGS) silt anomaly in an east-west trending creek southeast of Kingsvale, on the north-western flank of Shovelnose Mountain, returned 68 parts-per-billion (ppb) gold (Au) and prompted Strongbow to stake the Shovelnose claims in October, 2005. After staking the Shovelnose claims, Strongbow acquired the historic rock (5 samples), silt (19 samples) and soil (6 samples) geochemical data collected by Almaden prior to 2005 (Chang and Campbell, 2011). Of the 5 rock samples collected, one (1) sample returned assays of greater than 10 ppb Au (164.4 ppb Au) from the FMN Showing area. Of the 6 soil samples collected, a total of two samples collected from the FMN Showing area returned assays of greater than 10 ppb Au (12.8 ppb Au and 26.6 ppb Au). None of the 19 stream samples collected returned assays of greater than 10 ppb Au.

Strongbow actively explored the Shovelnose Property between 2006 and 2010. As a result Strongbow discovered four gold showings (Mik, Line 6, Tower, and Brookmere) and two geochemical targets (Mik-SE and Shovelnose-SE) (Figure 4). This work involved a multidisciplinary approach of mapping, prospecting, soil, silt and rock geochemical sampling, airborne and ground geophysical techniques, and hand and mechanized trenching (Table 2).

Table 2: Exploration Summary for the 2006 to 2010 Programs

Exploration Technique	2006	2007	2008	2009	2010
Silt Sampling	52	-	-	-	-
Soil Sampling	57	3,838	272	14	274
Auger Soil Sampling	-	-	-	-	89
Prospecting/Trench (Rock) Sampling	57	162	243	193	43
Mechanized Trenching	-	-	199 m	441 m	-
Ground Geophysics	-		-	-	23.2 line-km
Airborne Geophysics	-	308 Line-km	-	-	-

Strongbow's 2006 exploration program on the Shovelnose Property involved reconnaissance silt sampling, prospecting, trenching, bedrock mapping and follow-up soil sampling. This work uncovered a geochemical trend, referred to as the Tower Showing, which covers a 100 m wide area of intense clay and silica alteration in rhyolite tuff. In total, 34 rock grab samples were collected from outcrop and boulders at the Tower Showing. Of the 34 samples collected, a total of 15 returned assays of greater than 100 ppb Au. The highest rock grab sample assay from the Tower Showing returned 505 ppb Au (Stewart and Gale, 2006). Locally intense clay alteration follows a trend from the Tower Showing, roughly north-northwest for 800 m along a weakly exposed structure. A second area of alteration and veining, referred to as the FMN Showing, occurs along this structure and is comprised of float and subcrop of quartz veins within strongly silicified rhyolitic tuff (Mitchell, et al, 2008). No significant gold mineralization has been observed to date at this location. A total of 190 soil samples were collected at 50 m intervals along a series of 200 m spaced, north-south oriented, survey lines covering the Tower Showing area. Of the 190 soil samples, a total of 5 samples returned assays of greater than 20 ppb Au. The highest soil sample assay from the Tower Showing area returned 83 ppb Au.

Exploration by Strongbow in 2007 consisted of an initial phase of regional and detailed soil sampling, prospecting and airborne geophysics. A total of 3,838 soil, and 162 rock grab samples were collected within the Shovel-1 through Shovel-16 claims during 2007. The initial soil sampling phase comprised the collection of 945 samples at 50 m intervals along 400 m spaced, east-west oriented survey lines covering the summit and western slopes of Shovelnose Mountain (including the Tower Showing area). Phase 1 soil sampling resulted in the discovery of the Line 6 Showing, where two consecutive soils samples along the same line returned assays of 536 ppb Au and 368 ppb Au. During Phase 2 soil sampling the regional 400 m spaced survey line grid was expanded to cover the remainder of the Shovel-1 through Shovel-16 claims (covering the north, east and south slopes of Shovelnose Mountain). In addition, 200 m spaced survey line infill soil sampling was completed over a 2 km by 5 km area encompassing the Tower Showing and newly discovered Line 6 Showing areas. Detailed 50 m by 50

m grid soil sampling of the Line 6 and Tower Showing areas was also completed. Within the Line 6 Showing detailed grid, a total of 30 soil samples from within a 500 m by 200 m area returned assays of greater than 20 ppb Au. Five of the samples that contain greater than 20 ppb Au also contain greater than 100 ppb Au. The highest soil sample from the Line 6 Showing detailed grid returned 692 ppb Au. Within the Tower Showing detailed grid, a total of 13 soil samples from within a 300 m by 200 m area returned assays of greater than 20 ppb Au. Four of the samples that contain greater than 20 ppb Au also contain greater than 100 ppb Au. The soil anomaly, now known as the Mik Showing, lies approximately 400 m to the southwest of the Tower Showing.

The follow-up phase of ground exploration consisted of regional bedrock mapping and hand trenching of two new showings exposed from the initial work: Mik and Line 6. Of the 162 rock (outcrop, sub-outcrop and float) samples collected during 2007, a total of 17 returned assays of greater than 1 ppm Au (Table 3). All of the rock samples that returned assays of greater than 1 ppm Au were collected from the Mik (13 samples) and Line 6 (4 samples) showings. In 2007, the Mik Showing, located 380 m to the southwest of the Tower showing, comprised a 200 m wide area of silica alteration and south-southwest striking colloform-banded quartz veins in volcanoclastic host rocks (predominantly boulders). The Line 6 Showing is located 1.6 km to the west of the Tower showing and comprises a 600 m wide area associated with southwest-striking quartz veins, hydrothermal breccia and silica alteration in volcanoclastic host rocks (predominantly boulders)(Chang and Campbell, 2011).

Table 3: Summary of 2007 Shovelnose Rock Sample Assay Results

Showing	Sample	Material	Au (ppm)	Ag (ppm)
Mik	73908	Float	46.3	98.0
	73909	Float	12.2	6.8
	73910	Float	9.4	16.6
	56765	Outcrop	9.2	9.2
	58359	Outcrop	8.2	14.0
	56769	Outcrop	7.5	19.0
	56770	Outcrop	4.8	15.0
	73912	Float	4.8	7.6
	58083	Float	3.9	6.0
	57985	Sub-Outcrop	1.6	3.4
	58358	Outcrop	1.4	2.0
	57984	Sub-Outcrop	1.3	1.4
	59254	Outcrop	1.1	3.0
Line 6	73923	Float	4.6	11.6
	73924	Outcrop	3.6	5.3
	58351	Outcrop	2.1	3.0
	58710	Float	1.0	7.0

The 2007 airborne geophysical survey was a helicopter-borne DIGHEM survey completed by Fugro Airborne Surveys Corp. along 150 m spaced east-west lines. The DIGHEM survey collected magnetic and electro-magnetic ("EM") data from a nominal sensor height of 30m above ground while radiometric spectrometer data was collected at a nominal sensor height of 58 m above ground. The results of the survey reveal several 2 to 3 km long northwest-trending lineaments within the survey area that were interpreted to represent fault zones. Additionally, several circular magnetic high features appear to be spatially associated with rhyolite flows and tuffs. This was interpreted to suggest they may represent a possible volcanic centre. No direct relationship between areas of magnetic high or lows and zones of gold mineralization was noted. Apparent resistivity data reveal a 2 km long by 300 m wide northwest-trending resistivity low lineament that is coincident with brecciated, clay-altered and stockwork veined rocks within an area including the Tower Showing. The Line 6 and Mik showings are associated with circular features of high resistivity that may represent zones of silicification. Interpretation of the radiometric data reveal the Line 6 and Mik showings are associated with high Potassium (K) levels and high Potassium/Thorium (K/Th) ratios suggesting the presence of hydrothermal alteration (Mitchell, et al, 2008).

Exploration during 2008 was focused on understanding the nature and extent of mineralization discovered in 2006 and 2007. Work consisted of select infill and detailed grid soil sampling (200m x 50m, 50m x 50m and 25 x 25m) totalling 272 soil samples collected between the Tower Showing and Brookmere Veins, reconnaissance and detailed prospecting totalling 240 rock samples (including rock grab, trench channel and vein-only chip), 1:10,000 scale bedrock mapping property over the southwestern portion of the property, and mechanized trenching over the Mik and Line 6 showings.

The 2008 trench sampling program included the collection of 136 channel and 28 vein-only chip samples (rock grab samples). The channel samples ranged in width from between 0.5 m and 3.0 m, and averaged 1.6 m in width. The channel samples had a total composite length of 213.1 m, and were collected from 3 separate trenches at the Mik Showing (47 samples having a 79.0 m total composite length) and 4 separate trenches at the Line 6 Showing (89 samples having a 134.1 m total composite length). Of the 47 channel samples collected at the Mik Showing, a total of 10 samples returned greater than 100 ppb Au. Three of the 10 samples which contain greater than 100 ppb Au also contain greater than 1 grams-per-tonne (g/t) Au (sample 78249 from trench MK-XT-01 contains 2.10 g/t Au). Of the 90 channel samples collected at the Line 6 Showing, a total of 45 samples returned greater than 100 ppb Au. Seventeen (17) of the samples which contain greater than 100 ppb Au also contain greater than 1 g/t Au (sample 43312 collected from trench LX-XT-01 contains 16.95 g/t Au). Of the 28 vein only chip samples, a total of 20 returned greater than 1 g/t Au (sample 78136 collected from the trench L608-XT-04 contains 46.56 g/t Au, and sample 78107 collected from trench L608-XT-03 contains 16.30 g/t Au; sample TL-131 collected from trench MK08-HT-01 contains 38.20 g/t Au and sample 78248 collected from trench MK08-XT-02 contains 22.18 g/t Au; Table 4).

Composite length weighted average gold grades have been calculated where successive trench channel samples returned anomalous gold values. Gold values of

16.95 g/t Au over 2.0 m, 1.40 g/t Au over 16.0 m, 5.10 g/t Au over 6.0 m and 1.45 g/t Au over 2.0 m were recovered from trenches L608-XT-01, L608-XT-02, L608-XT-04 and MK08-XT-02 (Table 4).

Table 4: Summary of 2008-2009 Line 6 and Mik Showing Trench Assay Results

Showing	Trench	Year	Composite Rock Channel Samples*	Quartz Vein-Only Rock Samples
Line 6	L6-XT-01	2008	2.0 m grading 16.95 g/t Au (1 sample)	1.55, 1.59, 1.81, 1.81, 3.49 and 4.30 g/t Au (8 veins sampled)
	L6-XT-02	2008	16.0 m grading 1.40 g/t Au (7 samples) and 4.0 m grading 3.57 g/t Au (2 samples)	1.30, 2.15, and 3.83 g/t Au (4 veins sampled)
	L6-XT-03	2008	2.5 m grading 1.68 g/t Au (3 samples)	3.10, 5.52, 6.69 and 16.30 g/t Au (4 veins sampled)
	L6-XT-04	2008	6.0 m grading 5.10 g/t Au including 2.0 m grading 13.49 g/t Au (6 samples)	1.44 and 46.56 g/t Au (6 veins sampled)
	L6-XT-06	2009	21.0 m grading 0.80 g/t Au including 2.0 m grading 5.01 g/t Au (13 samples)	None Collected
	L6-XT-08A	2009	6.0 m grading 0.79 g/t Au including 2.07 m grading 2.0 g/t Au (4 samples)	None Collected
Mik	MK-XT-01	2008	3.0 m grading 1.40 g/t Au (3 samples)	2.94, 4.14, 4.31 and 7.72 g/t Au (4 veins sampled)
	MK-XT-02	2008	2.0 m grading 1.45 g/t Au (1 sample)	16.84 and 22.18 g/t Au (2 veins sampled)
	MK-HT-01	2008	None collected	38.20 g/t Au (1 vein sampled)
	MK-XT-04	2009	2.9 m grading 2.72 g/t Au (3 samples)	8.38 and 66.42 g/t Au (2 veins sampled)
	MK-XT-06	2009	5.5 m grading 0.81 g/t Au (3 samples)	None Collected

*composite grades represent approximate true widths

Prospecting during 2008 included the collection of 79 rock grab samples. Of the 79 rock grab samples, a total of 10 samples contain greater than 100 ppb Au. Three of the 10 samples which contain greater than 100 ppb Au also contain greater than 1 g/t Au (samples 43393 and 43475 contained 1.09 and 18.84 g/t Au and were collected from the Line 6 and Mik showing areas, respectively). In addition, a highly anomalous boulder sample returning assays of 119.37 g/t Au (the highest gold assay value to date within the Shovelnose Property was collected approximately 500 m to the south and down-slope from the Mik Showing (Mik SE Showing).

Exploration in 2009 was mainly focused on expanding the mineralized trends discovered in 2006 to 2008 and follow-up on previously identified geochemical anomalies. Work consisted of follow-up prospecting and mapping on anomalous gold-in-soil samples in the Mik and Line 6 zones and in an anomalous copper zone located in the northern part of the property. Additional mechanical trenching was conducted to extend the Mik zone to the southwest. Discovery of more quartz veins in the Line 6 zone prompted two hand trenches followed by mechanical trenching.

The 2009 trench sampling included the collection of 166 channel and 11 vein-only chip samples. The 2009 channel samples ranged in width from between 0.1 m to 2.0 m, and averaged 1.3 m in width. The channel samples had a total composite length of 209.3 m, and were collected from 12 trenches at the Line 6 Showing (141 samples having a 179.6 m total composite length) and 3 separate trenches at the Mik Showing (25 samples having a 29.7 m total composite length). Of the 141 channel samples collected at the Line 6 Showing, a total of 39 contained greater than 100 ppb Au. Four (4) of the samples than contained greater than 100 ppb Au also contain greater than 1 g/t Au (sample 74675 collected from trench L609-XT-06 contained 5.01 g/t Au). Of the 25 channel samples collected at the Mik Showing, a total of 10 samples contained greater than 100 ppb Au. Four (4) of the samples that contained greater than 100 ppb Au also contained greater than 1 g/t Au (sample 73934 collected from trench MK09-XT-04 contained 4.20 g/t Au). Of the 11 vein-only chip samples, a total of 3 samples contained greater than 1 g/t Au (samples 73939 and 73941 collected from Mik Showing trench MK09-XT-04 contained 66.42 and 8.39 g/t Au respectively; and sample MWR-SHVL-3 collected from Line 6 Showing trench L608-XT-02 contained 3.83 g/t Au; Table 4).

Composite length weighted average gold grades have been calculated where successive trench channel samples returned anomalous gold values. Mik Showing channel samples from trench MK09-XT-04 returned values of 2.72 g/t Au over 2.9 m, whereas Line 6 Showing channel samples from trench L609-XT-06 yielded values of 0.8 g/t Au over 21 m including 5.01 g/t Au over 2 m (Table 4).

Prospecting during 2009 included the collection of 16 rock grab samples. Of the 16 rock grab samples, a total of 2 samples contain greater than 100 ppb Au (samples MWR-SHVL-1 and MWR-SHVL-2 collected from the Tower Showing area contained 167 and 233 ppb Au, respectively).

Based on results from 2007 to 2009, ground geophysics, prospecting, fill-in and auger soil sampling were carried out on the Shovelnose property during the 2010 field season. The focus of the 2010 exploration was to better define and expand the known areas of mineralization and find new gold targets in the southeast portion of the property. The 2010 exploration included the collection of 6 trench channel samples at the Line 6 and Mik showings and 37 rock grab samples. The results of trench channel sampling did not return significant assays (none of the samples contained greater than 100 ppb Au). Of the 37 rock grab samples collected during 2010, a total of 4 samples contained greater than 100 ppb Au. Prospecting led to the discovery of a new zone of quartz subcrop and boulders located from between 10 m and 80 m south of the main zone of trenching at the Mik Showing. At this location, two (2) of 17 samples collected

contained greater than 100 ppb Au (samples 77874 and 77923 contained 154 and 417 ppb Au, respectively). Regional prospecting in the southeast portion of the Shovelnose Property led to the discovery of a new area of interest within the Shovel-17 claim (Figure 4), where a sub-rounded boulder of chalcedonic and vuggy quartz returned 590.7 ppb Au (Shovelnose SE Showing).

Infill soil surveys during 2010 included the collection of 274 samples. Of the 274 samples, a total of 27 contained greater than 15 ppb Au and are considered anomalous. Soil sampling south of the Mik Showing defined a few gold-in-soil spot anomalies, with a total of 4 samples returning results ranging from between 19.5 ppb and 77.6 ppb Au. Together with the highly anomalous 119.37 g/t Au rock boulder sample collected in 2008, a north-northwest trending lineament and broad magnetic low to the west of this lineament, these samples continue to suggest the potential for gold mineralization in this area southeast of the Mik zone.

Auger soil sampling assay results for gold and pathfinder elements did not consistently show higher values compared to the associated surface soils and did not suggest that values increase with depth. However, auger sampling should be the preferred geochemical technique applied for areas of thicker overburden or areas with poor to disturbed soil profiles to ensure the best test of the soil media at depth, closer to bedrock. A review of the magnetic data at Mik indicates a low magnetic contrast in the immediate area of the Mik Showing trenches and soil anomalies (around 100 nT or less). On the other hand, the Line 6 magnetometer data indicates that the trenches and gold geochemical anomaly occur over a broad range of magnetic intensities, ranging from high (~55,550 nT) in east to low (~54,975 nT) in the central and west trenches, respectively. Both surveys indicate the presence of northeast and northwest-trending lineaments that are spatially associated with the zones of gold mineralization and geochemical anomalies.

GEOLOGICAL SETTING

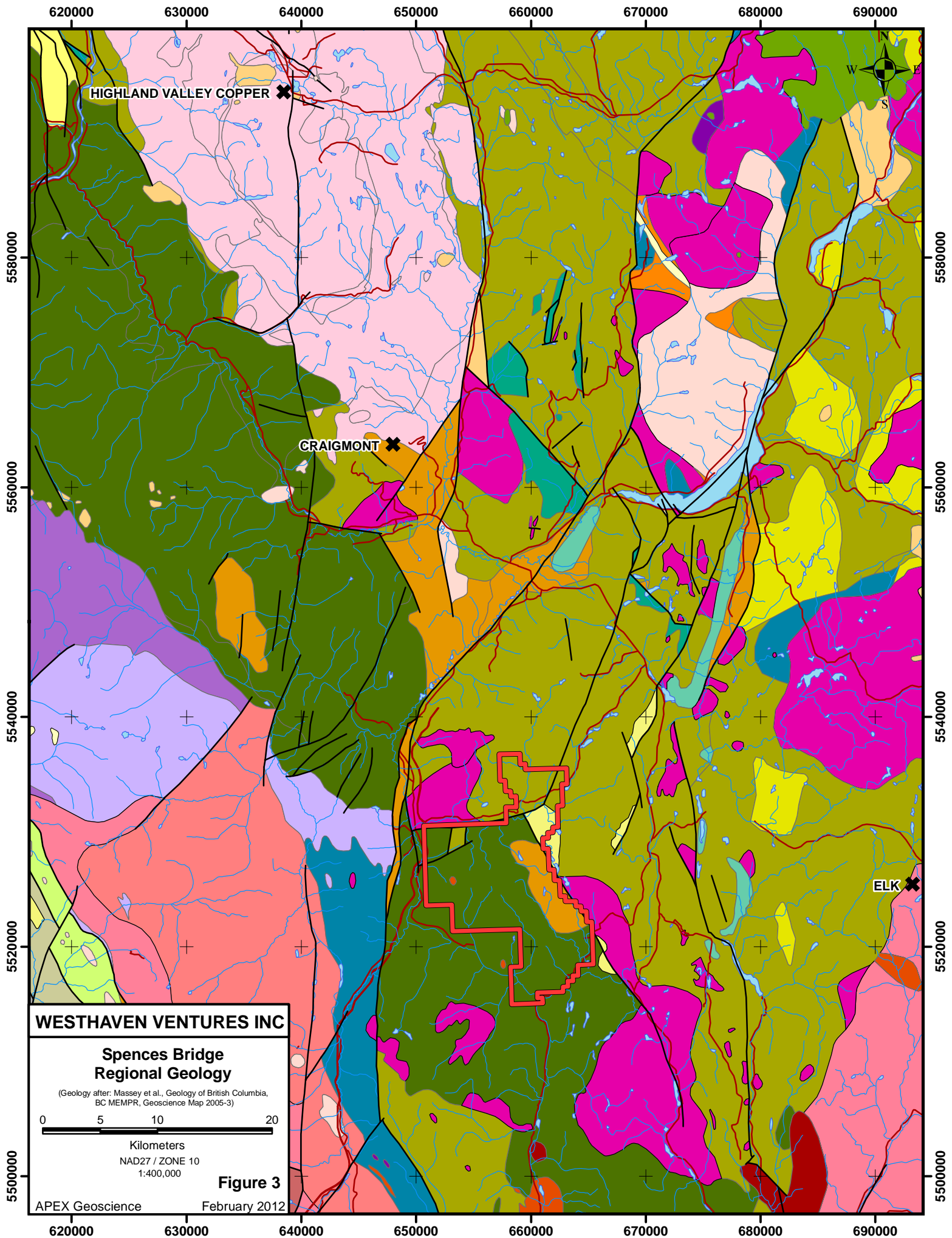
Regional Geology

The Shovelnose property is situated near the south end of the Intermontane Belt (Figure 3). The southern Intermontane Belt is dominated by the Upper Triassic Nicola Group, a west-facing magmatic arc sequence comprising the south end of the Quesnel Terrane (Monger, 1989). The Nicola Group consists of a north-trending belt of volcanic rocks and sediments. These rocks are intruded by Late Triassic and Early Jurassic co-magmatic plutons, and are unconformably overlain by Cretaceous and Tertiary volcanic rocks and clastic sediments (e.g. Spences Bridge Volcanic Belt and Princeton Group). This post-accretionary volcanism and sedimentation is in part controlled by a system of northerly striking strike-slip faults (e.g. Summers Creek and Allison faults). This island arc assemblage is bounded to the east and west by intrusions; mostly of Jurassic age (Monger, 1989). The Early Jurassic Pennask batholith and Bromley pluton, and the Middle Jurassic Osprey Lake batholith occur east of the Nicola belt. The Late Jurassic to Early Cretaceous Eagle Plutonic Complex flanks the Nicola belt to the west.

Predominant lithologies that cover the Shovelnose and surrounding region comprise Miocene age Chilcotin group basalt, Eocene Princeton Nicola Group volcanics, Mesozoic metasediments of the Ladner, Cayoosh assemblage, Jackass Mountain Group, Pasayten group, Paleozoic metasediments of the Chilliwack group and Hozameen complex and Spences Bridge Group volcanics (Figure 3). Stratigraphy is intruded by abundant Late Triassic and/or Jurassic to Miocene plutons such as the Allison Lake pluton. Metamorphic assemblages consist of Cache Creek Complex melanges and Bridge River Complex metamorphic and ultramafic rocks. Quaternary sediments occur as thick drifts along the main rivers and some of the larger creeks.

More recently, 1:50,000 scale regional mapping completed by the British Columbia Geological Survey (BCGS) Diakow and Barrios (2008) focused on the central to south portion of the Spences Bridge Volcanic Belt (SBVB), near Merritt (Figure 4). The focus of the mapping was to further distinguish the stratigraphic subdivisions for the Spences Bridge Group and study their relationships with gold mineralization. The map area is underlain by two magmatic arc successions, the Late Triassic Nicola Group and overlying Early Cretaceous Spences Bridge Group. The Nicola Group is uniquely characterized by Late Triassic (Carnian) felsic volcano-sedimentary-limestone successions containing silica-carbonate exhalite and sinter with a weakly elevated epithermal geochemical signature.

Low-sulphidation epithermal gold quartz veins occur throughout the range of Spences Bridge Group stratigraphy. An Uranium-Lead (U-Pb) isotopic age date of 104.5 ± 0.3 Million years (Ma) from the hornblende biotite rhyolite (PS3) and 59.1 Ma for the rhyolite at the top of Shovelnose Mountain (PS6) suggest these rhyolites are mid-Cretaceous to early Tertiary in age (Diakow and Barrios, 2008). A contemporaneous Argon/Argon isotopic (Ar/Ar) age date of 104.2 ± 0.6 Ma on hydrothermal alteration is derived from a gold-bearing epithermal quartz vein system hosted by the upper Spius Formation at the Prospect Valley showing (Diakow and Barrios, 2008). For further work on the Spences Bridge Volcanic Belt, please refer to Thorkelson (1985), Thorkelson (1986), Thorkelson and Rouse (1989), Thorkelson and Smith (1985), Monger (1989), and Diakow and Barrios (2008).



HIGHLAND VALLEY COPPER ✕

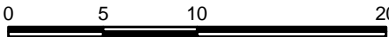
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ELK ✕

WESTHAVEN VENTURES INC

**Spences Bridge
Regional Geology**

(Geology after: Massey et al., Geology of British Columbia,
BC MEMPR, Geoscience Map 2005-3)



Kilometers
NAD27 / ZONE 10
1:400,000

Figure 3

APEX Geoscience

February 2012

Legend

✕ Mine

□ Claim outline

— Faults

— Road

— River

□ Lake

Geology

Cenozoic

□ Qvk - Alkali volcanic rocks

□ Mivb - Basaltic volcanic rocks

□ Egd - Granodioritic rocks

□ EKav, EKas - Kamloops Group volcanic and sedimentary rocks

□ EPr, EPra, EPrb - Princeton Group - volcanic and sedimentary rocks

□ Efp - Feldspar porphyritic rocks

□ ETg - Undivided Intrusive rocks

□ Pegd - Granodioritic rocks

Mesozoic

□ MLJdr - Dioritic rocks

□ Kgr - granodioritic rocks

□ MJgr, MKgr - Alkali feldspar granite rocks

□ IKSBSva, IKSb, IKSBPva, IKSBP - Spences Bridge Group - Volcanics

□ KJ - Jackass Mountain Group sedimentary rocks

□ Ks - Sedimentary rocks

□ KP - Pasayten Group sedimentary rocks

□ LJto - Tonalite rocks

□ ImJA - Ashcroft Formation - sedimentary rocks

□ ImJLa - Ladner Group - sedimentary rocks

□ ImJLaD - Dewdney Creek Formation - sedimentary rocks

□ LTrJto - Tonalite rocks

□ LTrJum - Ultramafic rocks

□ LTrJIC, LTrJIH, LTrJIS - Iron Mask Batholith Cherry Creek Hybrid - Sugarloaf dioritic rocks

□ LTrJdr, LTrJgd - Granodioritic/Dioritic rocks

□ LTrJGB, LTrJGBe, LTrJGBo, LTrJGG, LTrJGH, LTrJGqm - Guichon Creek Batholith

□ uTrNml - Nicola Group - metamorphic rocks

□ uTrN, uTrNC, uTrNE, uTrNW, uTrNvb - Nicola Group - volcanic rocks

□ UTrNsf, UTrNsv - Nicola Group - sedimentary rocks

Paleozoic

□ PzMzlm, PzMzcg - Sedimentary rocks

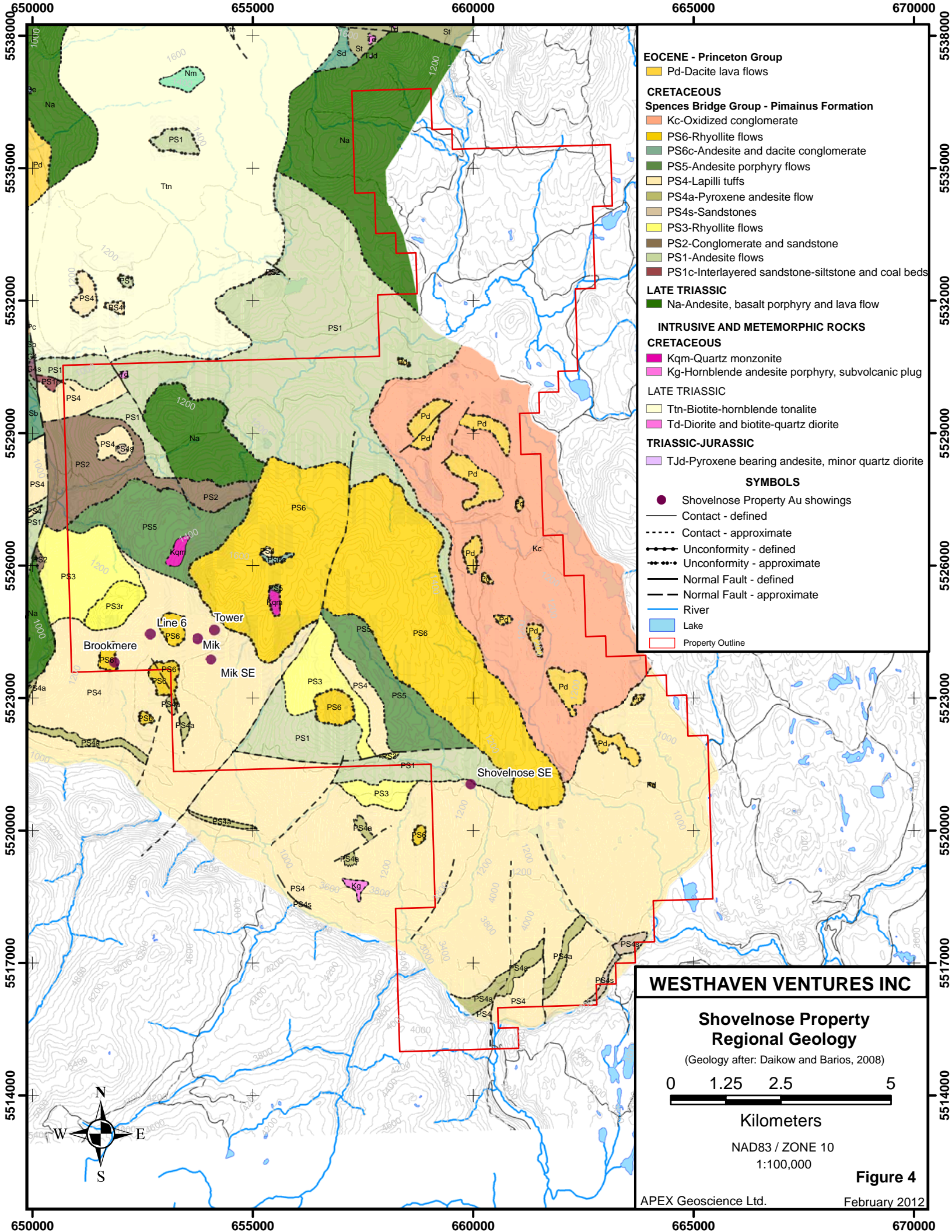
□ PTrCM, PnTrCE - Cache Creek Complex - Ultramafic and sedimentary rocks

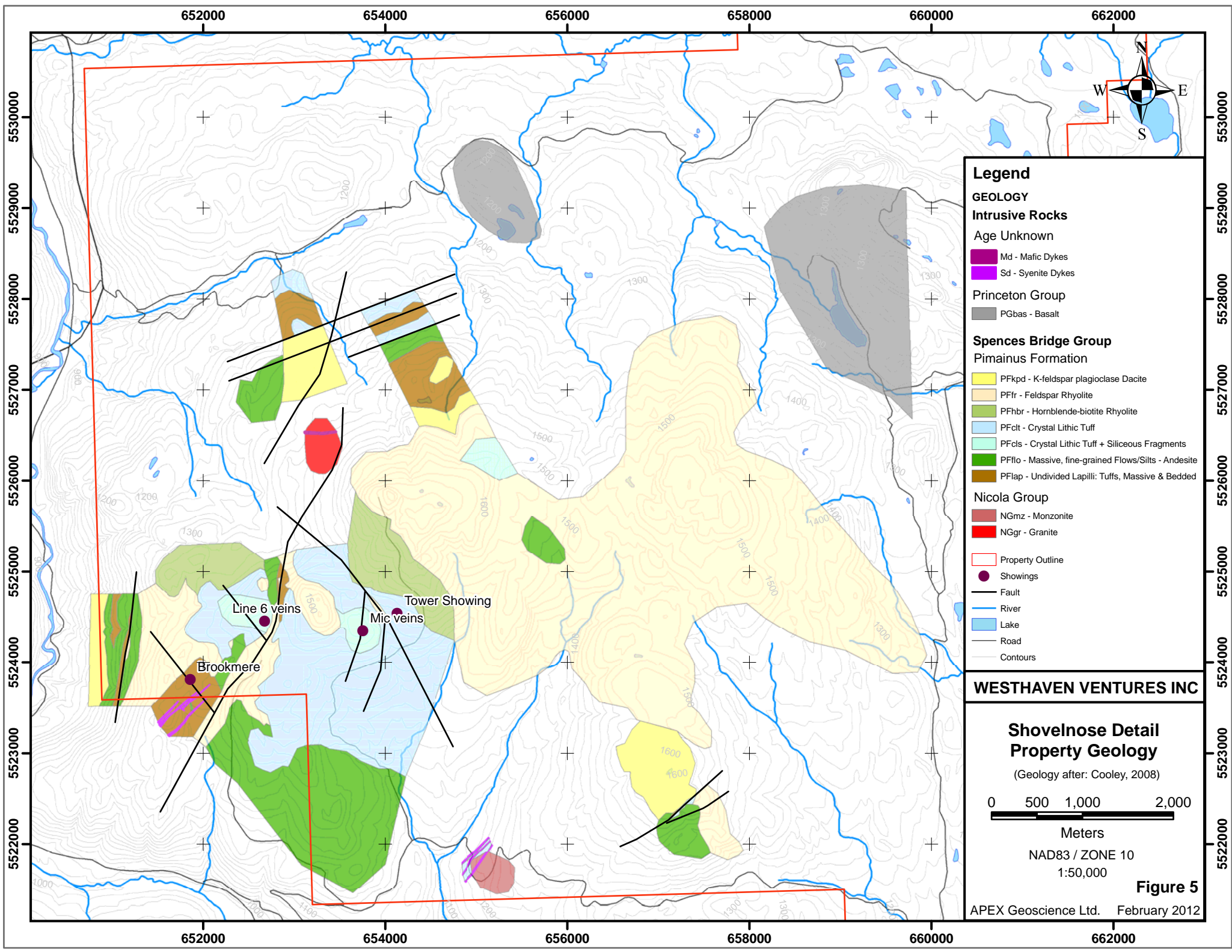
□ PTrMgd, PTrMdr - Mount Lytton Complex - intrusive rocks

□ PJdr - Dioritic rocks

□ PJHs - Hozameen Complex sedimentary rocks

□ PJum - Ultramafic rocks





Legend

GEOLOGY

Intrusive Rocks

- Age Unknown
- Md - Mafic Dykes
- Sd - Syenite Dykes

Princeton Group

- PGbas - Basalt

Spences Bridge Group

Pimainus Formation

- PFkpd - K-feldspar plagioclase Dacite
- PFfr - Feldspar Rhyolite
- PFhbr - Hornblende-biotite Rhyolite
- PFct - Crystal Lithic Tuff
- PFcls - Crystal Lithic Tuff + Siliceous Fragments
- PFflo - Massive, fine-grained Flows/Salts - Andesite
- PFlap - Undivided Lapilli: Tuffs, Massive & Bedded

Nicola Group

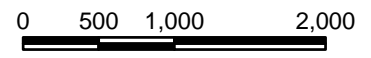
- NGmz - Monzonite
- NGgr - Granite

- Property Outline
- Showings
- Fault
- River
- Lake
- Road
- Contours

WESTHAVEN VENTURES INC

**Shovelnose Detail
Property Geology**

(Geology after: Cooley, 2008)



Meters

NAD83 / ZONE 10
1:50,000

Figure 5

Local and Property Geology

The geology of the Shovelnose property is summarized based on property-scale mapping by Strongbow geologists (Leatherman, 2007; Cooley, 2008), as well as regional observations from mapping by Diakow and Barrios (2008). The stratigraphic unit abbreviation codes referred to in the text are those compiled by Strongbow, followed by the equivalent codes assigned by Diakow and Barrios (2008), where applicable.

The Shovelnose property-scale geology is underlain by late Triassic Nicola Group volcanic rocks and equivalent-aged intrusive rocks, early-late Cretaceous Spences Bridge Group volcanic rocks of the Pimainus Formation, unconformably overlain by resistive mafic volcanic rocks of the Eocene Princeton group exposed to the northeast (Figure 5). A series of small potassium feldspar phyric syenite bodies and mafic dykes intrude into and cross-cut the volcanic stratigraphy. Outcrops are generally small and most abundant on topographic highs. Detailed descriptions of the geologic units are provided below and incorporate previous mapping efforts by Stewart and Gale (2006), Leatherman (2007), Cooley (2008) and Diakow and Barrios (2008).

Nicola Group

The oldest rocks on the property are represented by limited occurrences of strongly altered and deformed intermediate volcanic rocks and weathered granite (NGgr, Kqm) mapped in the northwestern portion of the claims. Both units have been proposed as part of the lower Triassic Nicola Group, which has been confirmed by U-Pb dating at 224.6 ± 0.9 Ma and 224.5 ± 0.3 Ma (Diakow and Barrios, 2008). These rocks typically occur on eastern sides of northeast-trending faults, implying that these faults have primarily a west-side down normal sense of displacement and the older Nicola rocks have been exposed in the up-thrown sides. Monzonite (NGmz) has only been observed in the south part of the property as a unit composed primarily of potassium-feldspar and plagioclase, with minor hornblende and biotite locally altered to chlorite. Although this unit is cut by syenite dykes, its age relative to the volcanic rocks and granitic intrusive rocks of the Nicola Group is uncertain. Recent mapping by the government suggests the age of this intrusion is Cretaceous (Diakow & Barrios, 2008).

Spences Bridge Group

Overlying the Nicola Group rocks is the Spences Bridge Group, which consists of locally carbonate altered andesitic flows (PFflo, PS1) and flow top breccias, intervening volcanoclastic debris flows (PFlap, PS2) and rhyolite flows (PFfr, PS6) of the Pimainus Formation. Andesite flows are typically massive, grey-green, plagioclase porphyritic flows. Andesite tuff is generally plagioclase porphyritic and poorly sorted, ranging from ash through ash-lapilli and ash-block tuff clast sizes. A minor component of these tuffaceous rocks appears to be epiclastic in nature. Alteration facies include pervasive chlorite, propylitic, hematitic and pervasive silicification alteration. Carbonate is

abundant, particularly near the margins of cross-cutting andesite dykes. These rocks are offset by the north-northeast trending normal faults and are locally cut by northeast-trending syenite dykes in the southwest part of the property.

Felsic Volcaniclastic Rocks and Flows

A conspicuous unit of crystal lithic tuffs (PFclt, PS4) unconformably overlies the porphyritic andesite flows (PFflo, PS1) of the Spences Bridge Group rocks in the central Shovelnose area. These rocks generally exhibit a crudely developed planar subhorizontal fabric interpreted to have formed from compaction and flow while the rocks were still hot, shortly after eruption and deposition. Many lithic clasts within this unit are flattened, representing fiamme formed by compacted pumice fragments. Clasts are generally heterolithic and rarely exceed pebble sizes. Crystal fragments in this unit consist of broken coarse-grained feldspars. Within this unit is a mappable subunit that is generally not foliated and which contains conspicuous silicified or siliceous rounded and angular fragments (PFcsl, PS4). This unit is the main host to the gold-bearing quartz veins in the outcrop at the Mik and Line 6 showings on the Shovelnose Property (Figures 4 and 5).

Felsic flows occupy both topographic highs and topographic lows where felsic eruptions flowed down slope into gullies and other depressions in the paleo-topography. The oldest felsic flow in the Shovelnose Mountain area is a hornblende biotite quartz eye rhyolite (PFhbr; PS3) that occurs along the lower slopes on the southwest side of Shovelnose Mountain, and on the northwest side of a smaller hill that occurs 2 km southwest of Shovelnose Mountain. This hornblende and biotite-bearing unit is locally overlain by a finegrained rhyolite with feldspar crystals (PFfr; PS6) that is observed at the peak of Shovelnose Mountain and also large areas to the east and west of the peak. These resistive peaks of yellowish-grey and reddish-grey to maroon siliceous rhyolite are ubiquitously flow-banded, aphanitic to porphyritic, fine- to medium-grained, contain clear quartz eyes, and are composed of 10% subhedral feldspar phenocrysts, 1 to 2% subhedral hornblende crystals, and occasional biotite. Locally, the rhyolite is coarser-grained and contains more phenocrysts. Flow banding is highly variable with regards to azimuth and dip; however in areas with columnar jointing, the flow banding is more consistently sub-horizontal. Flow breccias were also observed within the rhyolite flows. A third felsic unit that contains both potassium feldspar and plagioclase in an aphanitic maroon to grey green flow-banded matrix (PFkpd) forms a topographic high approximately 4 km east-southeast of Shovelnose Mountain. This maroon-matrix unit is tentatively identified as dacitic and is very similar to rocks encountered along the western edge of the property, low down in the valley occupied by the Coldwater River and on the east side of the Brookmere road. Its age relative to the two rhyolite flows mentioned above is uncertain. Diakow and Barrios (2008) has mapped this unit as part of the youngest rhyolite flow unit (PS6).

Princeton Group

Basalt Flows

On the eastern margin of the property, several small, round-topped hills host the erosional remnants of finegrained weakly amygdaloidal and weakly porphyritic basalt (PGbas; Stewart and Gale, 2006). Mapping by Diakow and Barrios has defined this unit as correlative to the Princeton Group volcanic rocks (Pd). The base of this unit can be observed as an outlier on the northern portion of this property, which overlies a fine charred regolith layer with striated wood fragments.

Syenite and Mafic Dykes

Syenite dykes (Sd) have been mapped at two locations on the property as northeast-trending, bright orange to red units that can measure up to 100 to 200 m in width and contain up to 30% coarse-grained potassium feldspar (Figure 5). There appears to be a broad area of ankerite, calcite, silica and pyrite alteration associated with their occurrence. At the Brookmere showing (Figure 5), the dykes are sub-parallel to the weakly mineralized quartz veins and to the faults, and crosscut Spences Bridge volcanoclastic rocks. At the south part of the property, the dykes are emplaced along, and crosscut, the contact between an older monzonite intrusion and Princeton Group crystal siliceous lapilli tuff. Although the dykes appear to postdate both Spences Bridge and Princeton group volcanoclastic rocks, it is uncertain if there is one or two generations of syenite dykes. Mafic dykes (Md) are typically dark greenish-brown, aphanitic and moderately- to strongly-magnetic, with occasional anhedral black mafic phenocrysts (<1 mm). The dykes crosscut the Princeton Group rhyolite flow and tuffaceous lithologies suggesting a subsequent volcanic event.

Structural Geology

Faults

Recent mapping has outlined generally northeast trending, west-side down normal faults that offset the underlying Nicola Group and Spences Bridge Group rocks (Figure 5). Less abundant northwest-trending structures have also been mapped and may be splays or conjugate structures to northeast trending ones. In the northwest part of the property where only limited mapping has been conducted, several east-northeast parallel faults have been defined to cut Nicola Group and Spences Bridge rocks. However, it is uncertain if (1) these faults offset the Princeton Group rocks as well and; (2) how they relate to the northeast and northwest trending earlier faults

MINERALIZATION

Detailed soil grid sampling and follow-up prospecting in 2006 and 2007 generated four gold showings: Mik, Line 6, Tower, and Brookmere (Figure 4). Mechanized trenching in 2008 defined the characteristics of gold mineralization at both

the Mik and Line 6 showings. Mechanized trenching in 2009 further expanded the Mik and Line 6 zones.

The Line 6 showing is located approximately 1 km west of the Mik showing and is hosted within a crystal lithic tuff with siliceous fragments (Figure 5). The Line 6 showing is defined by a 400 m wide, approximately east-west zone of gold mineralization, surrounded by a 600 m by 400 m outer zone of anomalous gold in soil geochemistry. Mineralization style is represented by south to southwest-striking, shallowly to moderately-dipping, weakly colloform-banded to massive quartz veins that vary in thickness from 0.5 to 20 cm. Vein breccia phases are also observed at the Line 6 showing, locally up to 60 cm thick. Wall rock alteration comprises patchy to pervasive silica and limonite, patchy to fracture-filled manganese alteration, and patchy to pervasive argillic-sericite alteration in the wall rock.

The Mik showing is located approximately in the southwest part of the Shovelnose property (Figure 5). It is defined by a 200 m wide zone of gold mineralization, including anomalous gold in soil samples 200 m to the north and 50 m south of the showing. Similar to Line 6, veins at the Mik zone are hosted in heterolithic, matrix-supported, unsorted crystal lithic tuff. Clasts are composed of felsic fragments that represent massive to flow banded rhyolite and siliceous sinter material, clay, limonite, sericite, and chlorite-altered fragments, and rare wood fragments. Matrix has been altered predominantly to sericite-clay-silica. Mineralization is also represented by south- to southwest-striking, shallow- to moderately dipping veins. Vein textures are massive to weak colloform banding, and where the veins are wider, they exhibit local cockscomb texture with calcite pseudomorphs of quartz. The quartz veins range from approximately 1 cm to 20 cm thick but are most commonly in the 1 to 10 cm thickness range. Unlike at Line 6, quartz vein, breccia phases were not observed at Mik. Locally, veins are stacked or occur as thin sheets, but are not evenly spaced. Veining appears to decrease in abundance and width to the east.

The Tower showing is located 450m east-northeast of the Mik showing (Figure 5) and comprises a small hummock, measuring approximately 100 m x 100 m, of intensely silicified, limonite-stained felsic crystal lithic tuff. Locally intense clay alteration follows a trend from the showing, roughly north-northwest for 800 m along a rarely exposed structure. Float and subcrop samples of minor quartz veins along this trend has returned weak gold but anomalous arsenic values. At the Tower showing, tuffs are variably silica flooded with either white to grey chalcedonic quartz or massive clear quartz. Grey quartz gets its colour from up to 10% fine pin-prick size pyrite disseminated inside veining. Silicification can be pervasive or localized along fractures and drusy cavity fillings. Pyritic quartz veins have returned assays grading up to 505 ppb Au with fifteen samples greater than 100 ppb Au (Stewart and Gale, 2006).

The Brookmere zone comprises several extensive vein systems that are exposed in proximity to, and aligned sub-parallel to, the syenite dykes in the southwest region of the property (Figure 5). One vein system, which was thoroughly sampled in 2006, has been traced for 200 m north-northwest from the southern property boundary (Stewart

and Gale, 2006). Veining consists of coarse, centimetre-scale cockscomb quartz coating open fractures and fault breccia. The veins are generally south-southeast striking (160°) with moderate to steep southwest dips (50 to 60°), which is different from the predominantly south-southwest striking veins at the Mik and Line 6 zones and therefore do not appear to be the southwestern extension of those zones. While some of these veins appear to have the characteristics of epithermal veins, and seem to be associated with extensively developed silica alteration, the assays returned no significant gold values.

Overall the mineralized quartz veins at the Mik and Line 6 showings display on surface similar and relatively consistent orientations, generally striking southwest and dipping shallowly to moderately northwest. The continuity of the mineralized veins in most areas of the Shovelnose project is not well established, largely due to the lack of surface exposure. In the Mik showing area trenches MK08-XT-01, MK08-XT-02 and MK09-XT-04 all contain mineralized quartz veins near the west most end of the trenches (Figure 13). It is reasonable to believe that mineralized zones at the west end of trenches MK08-XT-02 and MK09-XT-04 are continuous, which implies a strike length of at least 25 m. Weakly mineralized quartz veins near the middle of trench MK08-XT-01 may reflect a continuation of this same trend (if some undulation in the strike or small fault offset of the veins is assumed), suggesting there may be an additional 30 m of northeast strike extent to these veins but the vein thickness and gold grade is diminishing. This mineralized trend appears to be open to the southwest although there is a possibility that it has been cut off by trench MK09-ST-05. Note that the south end of trench LT09-XT-05 was not sampled because excavation at the south end of the trench was left incomplete.

The continuity of the mineralized quartz veins at the west end of trench MK08-XT-01 is unknown and remains open to the northeast and southwest.

In the Line 6 showing area, it is reasonable to believe that mineralization and quartz vein trends in trenches L608-XT-01 and L608-XT-02 are continuous with some variations in style, density of veins, thickness and grades, which implies a strike length of at least 15 m (Figure 17). Results from trench L609-XT-15 suggest that this mineralized zone has greatly diminished and must be cut off at a maximum of approximately 40 m to the northeast; more conservatively this mineralized trend is likely cut-off at approximately 20 m to the northeast of trench L608-XT-01 (half the distance to trench LT09-XT-15). Mineralization at the east end of trench L608-XT-03 remains open to the northeast and southwest. Mineralization in trench L608-XT-04 is open to the northeast but is cut off by trenches L609-XT-06 and L609-XT-12. Mineralization in trenches L609-XT-06 and L609-XT-8A remain open to the north and south but the structural and mineralogical controls in these zones have not been characterized.

2011 EXPLORATION

The summer and fall 2011 Shovelnose Property exploration program consisted of soil, stream silt, rock grab and rock chip sampling; mechanical trenching; and diamond drilling. In total, the 2011 exploration included the collection of 972 soil, 28 stream silt, 107 rock grab and 91 trench rock chip samples. Mechanized exploration included a total of 146.5 m of trenching and 606 m of diamond drilling within 7 holes. The 2011 Shovelnose exploration program was completed between the dates of August 4 and October 26, 2011.

Soil geochemical sampling included select infill between the Mik and Line 6 showings; and reconnaissance grid sampling of the Shovelnose SE area. Limited stream sediment sampling was conducted in the northeast claims as a follow-up to an anomalous RGS stream silt sample within Voght Creek that returned 110 ppb Au. Prospecting and rock grab sampling focused on expanding the zone of mineralization previously discovered at the Mik SE Showing, and locating new mineral occurrences within the Shovelnose SE area. Mechanical trenching and subsequent rock chip sampling tested a 749 ppb Au in soil geochemical anomaly located 150 m northwest of the Mik Showing; and a multi-sample soil anomaly returning up to 51 ppb Au located 400 m to the southwest of the Line 6 Showing. Diamond drilling was designed to test the subsurface extent of predominately northwest-dipping gold (\pm silver) bearing epithermal quartz vein mineralization exposed at the Mik and Line 6 showings, and gold-arsenic anomalous silicified felsic tuff rocks at the Tower Showing.

Summary results of all 2011 exploration work conducted are presented below. Detailed soil, stream-silt, rock grab, and trench sample descriptions and locations are presented in appendices 1, 2, 3, and 4 respectively. Copies of the original soil, stream-silt, and rock (grab and trench) samples analytical certificates are presented in appendices 5, 6, and 7 respectively. Diamond drill logs and cross sections are presented in appendices 8 and 9, respectively. Diamond drill analytical results, keyed to drill hole and depth interval are presented in appendix 10, and copies of original laboratory certificates are presented in appendix 11. The total cost to complete the 2011 exploration was \$358,432.57 (Appendix 12).

Soil Sampling

A total of 972 soil geochemical samples were collected during 2011, including 16 quality assurance / quality control (QA/QC) field duplicates. Of the 972 samples collected, a total of 72 samples were collected as selected infill of 2006 through 2010 soil surveys between the Mik and Line 6 showings. The remaining 900 samples were collected within the Shovelnose SE area (Figures 6 and 8).

Geochemical results for soil samples are calculated into breakdowns of the 70th, 90th, 95th and greater than 97.5th percentiles and shown as a gold thematic map (Figures 7 and 9a). Results from 2011 soil sampling returned a total of 26 anomalous samples with greater than 6.27 ppb Au (>97.5th percentile), up to 1607.2 ppb Au (Table 5). A comparison of pathfinder elements reveals the elements molybdenum (Mo), silver

(Ag), antimony (Sb), selenium (Se) returned low values with a limited range in comparison to the detection limit (≤ 20 times the detection limit). As a result these elements are expected to deliver poor anomaly contrast. The remaining base metal and pathfinder elements appear to exhibit sufficient variability in comparison to detection limit to permit anomaly discrimination.

Table 5: Element Percentile Calculation for 2011 Soil Samples

	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Mn (ppm)	As (ppm)	Au (ppb)	Sb (ppm)	Mg (%)	Ba (ppm)	Hg (ppm)	Se (ppm)
70th	0.6	14.2	6.7	77	0.05	796	2.8	0.80	0.2	0.25	189	0.03	0.3
90th	0.9	21.0	8.3	102	0.05	1109	4.1	1.70	0.3	0.33	245	0.04	0.3
95th	1.0	26.0	9.2	116	0.1	1362	5.0	3.33	0.4	0.39	299	0.06	0.6
97.5th	1.3	31.4	10.75	136	0.1	1612	6.2	6.27	0.5	0.48	354	0.07	0.7
Mean	0.6	13.0	6.4	70	0.06	689	2.6	2.99	0.2	0.23	175	0.03	0.3
Max.	2.1	81.4	26.2	518	0.8	3482	17.0	1607.2	1.7	3.12	1032	0.42	1.7
Detection Limit	0.1	0.1	0.1	1	0.1	1	0.5	0.5	0.1	0.01	1	0.01	0.5
Range	2.0	81.3	26.1	517	0.7	3481	16.5	1606.7	1.6	3.11	1031	0.41	1.2

Mik-Line 6 Infill Sampling

Soil sampling between the Mik and Line 6 showings was designed to provide selected 50 m and 25 m spaced infill of the “Anomaly C” geochemical target. “Anomaly C” is an approximately 1000 x 200 m northwest trending soil geochemical anomaly. The core of anomaly is defined by 11 soil samples that returned values ranging from 8 to 33 ppb Au (2007, 2008 and 2010 sampling programs). Infill sampling at the northern end of “Anomaly C” resulted in two adjacent samples (11CHS306 and 11EHS306) returning 58.3 ppb and 26.6 ppb Au, respectively (Figures 6 and 7). A total of three samples collected within 150 m of 11CHS306 and 11EHS306 also returned highly anomalous gold values ranging from 12.7 to 15.5 ppb Au (11EHS005, 11EHS007 and 11EHS009). At the southern end of “Anomaly C” 25 m spaced infill sampling adjacent to an anomalous 18 ppb Au soil sample collected in 2007 returned 6.8 ppb Au, anomalous copper and silver values (11EHS540).

Shovelnose SE Grid

The Shovelnose SE grid comprised a total of 900 soil samples collected at 50 m intervals along a series of 400 m spaced east-west oriented survey lines. The grid comprised an area of approximately 5 x 5 km and was designed to complete reconnaissance evaluation of the southeastern claims where 2010 prospecting resulted in the discovery of a subrounded boulder of chalcedonic and vuggy quartz that returned 590.7 ppb Au, 10.16 ppm Hg and 26.5 ppm Sb (Chang and Gale, 2011).

The Shovelnose SE grid returned a total of 19 anomalous samples containing greater than 6.27 ppb Au (>97.5th percentile). The highest gold in soil assay returned

1607.2 ppb Au (11SHS413) and lies within the southwest portion of the SHOVEL-21 claim (Figures 8 and 9a). Sample (11LMS177) collected 50 m to the east returned 5 ppb gold (>90th percentile). A distance of 1,600 m to the north, on the west side of Coley Creek, sample 11LMS075 returned 106.9 ppb Au. The remainder of the geochemical anomalies within the western half of the Shovelnose SE grid are isolated (ranging from 13.7 to 57.2 ppb Au) or in some cases comprise weak to moderate multi-line north-south trending anomalies (ranging from 0.8 to 6.2 ppb Au) coincident with topographic low liniments and mapped faults (Figure 4). Within the eastern half of the Shovelnose SE grid an approximately 3,500 m x 600 m northwest trending zone of anomalous copper, arsenic and gold in soil is coincident with an unnamed creek and mapped fault passing through the SHOVEL-19 and SHOVEL-20 claims (Figures 9a, 9b and 9c). At the northern end of the anomaly sample 11DRS013 returned assays of 124 ppb Au. At the southeast end of the zone anomalous gold values ranging from 1.8 to 17.6 ppb Au lie within a broader zone of anomalous copper and arsenic values near Otter Creek (Figures 9b and 9c).

Stream Sediment Sampling

Between the dates of October 6 to October 11, Mr. Ed Balon, geological consultant to Westhaven, completed limited stream silt sampling within the Shovelnose Property. A total of 28 (including 1 QA/QC field duplicate) widely spaced reconnaissance stream silt samples were collected from the Voght Creek (Kane Valley) area, and from McCullough, Angstadt and Coley Creeks that drain the eastern slopes of Shovelnose Mountain (Figure 2). A prior RGS stream silt sample collected within Voght Creek returned 110 ppb Au and was in initial follow-up target. No significant gold values were returned from the sampling, with values ranging from below the detection limit of 1 ppb Au up to 2 ppb Au (Figures 8 and 10). Given the limited number of samples, percentile analysis of base, precious metal and associated pathfinder elements was not completed. However a number of general observations can be made. In particular, samples 88622 and 88607 returned barium (Ba) values of 1130 and 819 ppm Ba, respectively from Voght Creek and a tributary to McCullough Creek. Stream silt samples collected within Coley Creek returned 0.8 and 0.9 ppm mercury (Hg, samples 88601 and 88600); values greater than the 97.5th percentile for 2011 soil samples. Stream silt samples returning relatively high arsenic values (>10 ppm As), may also be elevated with respect to barium, manganese and molybdenum. However, these samples are not spatially associated and are distributed throughout the surveyed area.

Rock Grab Sampling

A total of 107 (including 12 QA/QC field duplicate, standard and blank) rock grab samples were collected during 2011 exploration. All samples were submitted for gold fire assay and ICP-MS analysis.

A total of 43 rock samples were collected from the Line 6 and Mik SE showing areas. At the Line 6 Showing, sampling efforts focused on locating a bedrock source of a 2007 and 2010 soil anomaly where 5 consecutive samples spaced at 25m intervals returned values ranging from 10 to 51 ppb Au. Sampling at the Mik SE Showing

focused on attempting to locate a bedrock source of the highly anomalous boulder sample that returned assays of 119.37 g/t Au (Chang and Gale, 2009).

Of the 107 rock grab samples collected during 2011, a total of two samples returned values of greater than 100 ppb Au and are considered anomalous (Figures 6, 7, 8 and 9). The highest assayed sample (11ADP002) returned 6.83 g/t Au, a boulder quartzite sample, collected 300 m southeast of Mik SE Showing and 119.37 g/t Au boulder. The result is significant given that sample 11ADP002 lies on east side of a north-south trending creek gully separating it from the Mik and Mik SE showings. It is therefore unlikely that the sample represents mineralization transported down slope from the Mik Showing. Prospecting above the Line 6 soil geochemical anomaly resulted in discovery of silicified lithic tuff sub-outcrop containing up to 0.5% finely disseminated pyrite and local sub-cm quartz stringers that returned values of 121 ppb Au (11KRP008).

Trenching and Rock Chip Sampling

Mechanical trenching of two high priority soil geochemical anomalies was completed during 2011. A total of five trenches, two at the Mik Showing and three at the Line 6 Showing, were excavated for a total of length of 146.5 m of trenching (43.5 m in Mik area, 103 m in Line 6 area). A total of 91 (including 11 QA/QC duplicate, standard and blank) rock chip samples were collected over intervals of one or two metres (Figures 11, 12 and 13).

Trenching at the Mik Showing targeted a 2008 soil geochemical sample that returned 749 ppb Au (sample 78412). Repeat sampling at the same location during 2009 returned 209 ppb Au (sample 73422). Trench 11MKXT-08 (36 m in length) was oriented along a $300^{\circ}/120^{\circ}$ azimuth, approximately perpendicular to the strike of mineralized quartz veins at the Mik Showing 150 m to the southeast (Figure 12). Depth of overburden ranged from approximately 30 cm over a shallowly buried outcrop ridge between the 24 and 30 m intervals, and up to 1.5 m between the 2 and 22 m intervals (measured from the east end of the trench). Labelled flagging tape marking the location of sample 78412 was noted and corresponds to the 28 to 30 m sample interval. The trench exposes relatively homogenous crystal-lithic tuff, lacking visible quartz veins, along its entire length. Between the 16 and 18 m, the outcrop tuff is strongly clay altered and friable, within the most deeply eroded portion of the trench. Of the 21 rock chip samples (including 3 QA/QC field duplicate and standard), a total of two samples, 11MKP008 (0 to 2 m) and 11MKP027 (32 to 34 m) returned anomalous values of 117 and 88 ppb Au, respectively. The remaining 16 chip samples within trench 11MKXT-08 returned gold values ranging from 3.3 to 47.4 ppb Au and are not considered anomalous. Trench 11MKXT-07 (7.5 m in length) exposed a series of thin cm-scale northwest dipping quartz veins located 150 m southeast of the Mik Showing (Figure 11). The vein occurrence was discovered during construction of diamond drill exploration access trails, and was subsequently uncovered by hand. A total of 7 rock chip samples (including 1 QA/QC standard) were collected from trench 11MKXT-07, representing a

composite interval of 7.5 m. The chip samples returned values ranging from 3.3 to 44 ppb Au and are not considered anomalous.

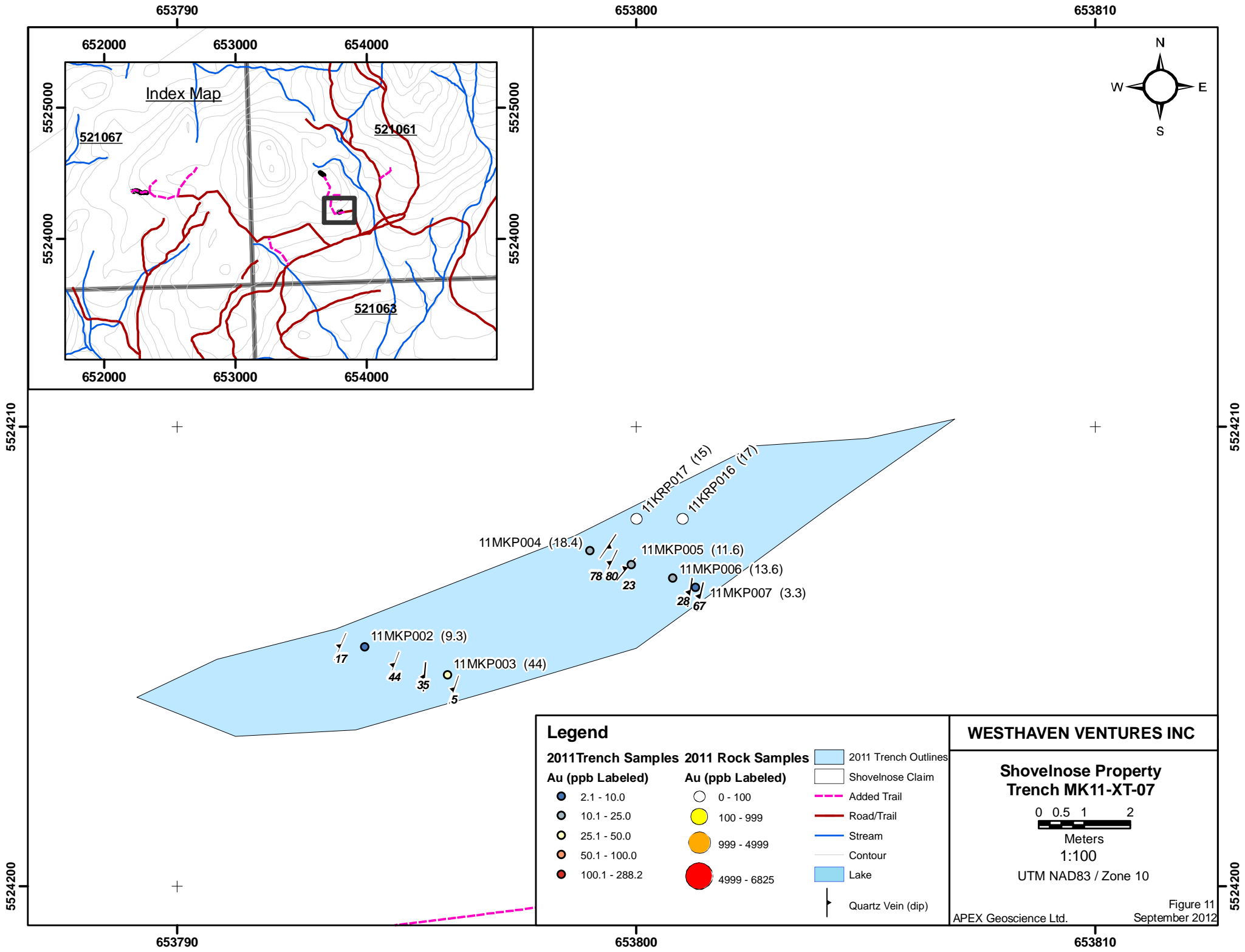
Trenching at the Line 6 Showing targeted a 2007 and 2010 soil anomaly where 5 consecutive samples spaced at 25m intervals returned values ranging from 10 to 51 ppb Au. Trenches 11L6XT-16 (26 m in length), 11L6XT-17 (55 m in length) and 11L6XT-18 (22 m in length) were excavated between 5 and 10 m immediately upslope from the 2007 and 2010 soil anomaly (Figure 13). Trench location and orientation was designed to minimize overburden depth and was partly dictated by local topography comprising a series of broadly northwest trending shallow ridges. The three trenches expose relatively homogenous crystal-lithic tuff, lacking visible quartz veins. Localized areas corresponding to topographic depressions appear clay altered and the tuff is relatively soft and friable. At the west end of trench 11L6XT-17, between 0 and 8 m, the tuff is strongly silicified, contains up to 0.5% finely disseminated pyrite, and local sub-cm quartz stringers. Of the 63 rock chip samples (including 7 QA/QC field duplicate, standard and blank) collected within the Line 6 trenches, a total of two samples, 11SP037 (30 to 32 m) and 11SP045 (44 to 46 m) within trench 1, 1L6XT-17 returned anomalous gold values of 288 and 117 ppb Au, respectively. The length weighted average composite grade between 24 and 32 m within trench 11L6XT-17 returned 112.8 ppb Au over 8 m. The silicified tuff lithologies mapped at the west end of trench 11L6XT-17 did not return significant gold values. At the east end of trench 11L6XT-18 sample 11LSP063 returned 95 ppb Au over 2 m between 20 and 22 m. The magnitude of trench rock chip gold values returned within the Line 6 trenches excavated during 2011 appear to be adequately explain the soil geochemical anomaly.

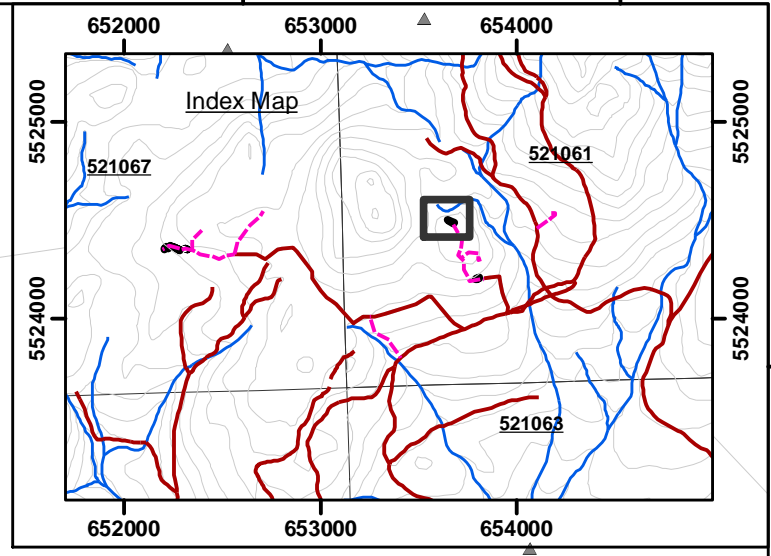
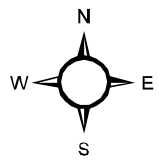
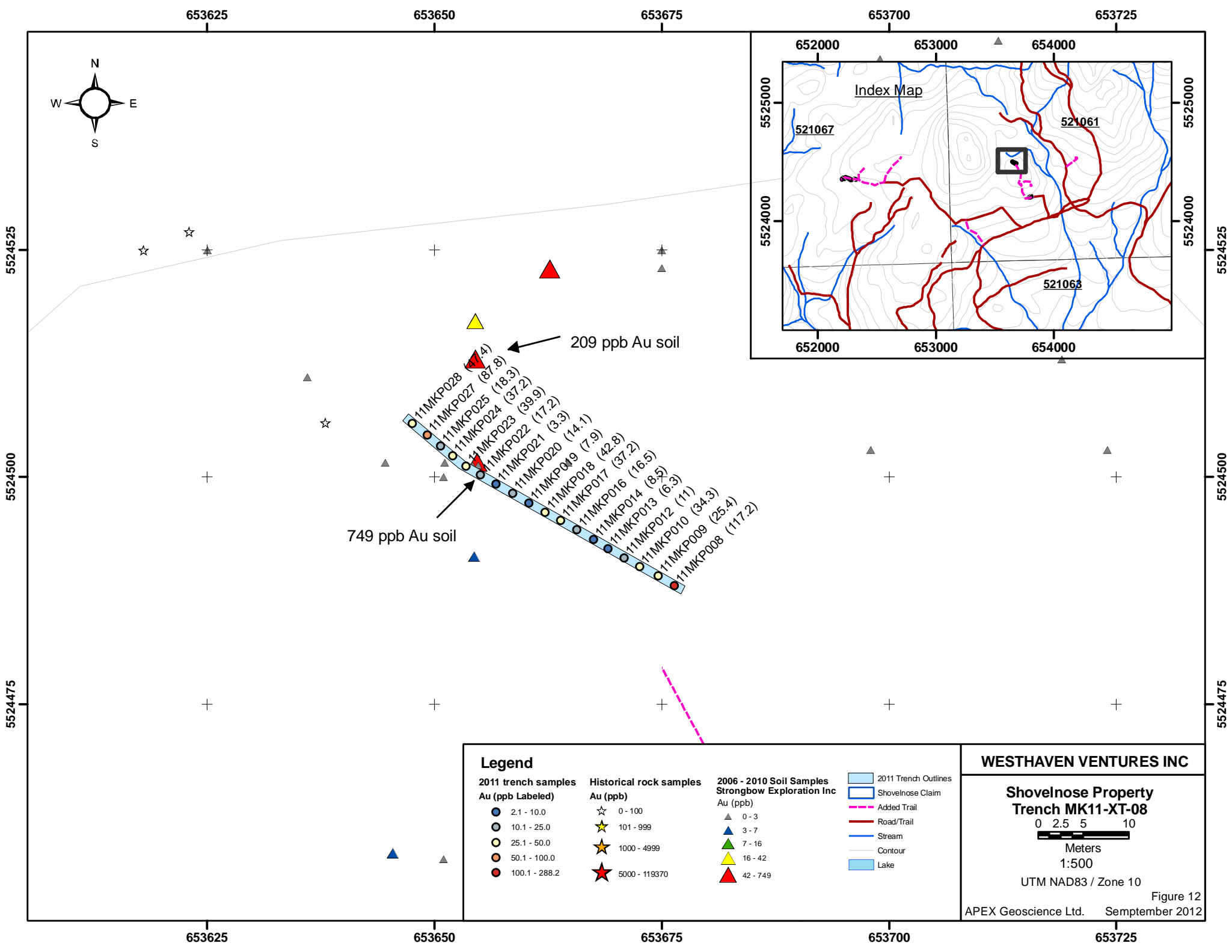
Diamond Drilling

The 2011 drill program tested the down-dip extent of gold bearing epithermal quartz vein mineralization at the Mik, Line 6, and Tower showings. A total of 606 m within 7 drill holes were drilled between the dates of October 6 and October 18, 2011 (Table 6). Drill core from the 2011 program is stored cross-stacked in the southwest corner of Shovel-7 claim (UTM NAD83 Zone 10 653,192 m E / 5,524,035 m N).

Table 6: 2011 Diamond Drill Hole Locations

Drill Hole	Northing*	Easting*	Elevation	Azimuth	Dip	Depth (m)
11-SH-001	5524355	653714	1453	110	60	79.25
11-SH-002	5524398	653722	1464	120	60	88.39
11-SH-003	5524305	653817	1461	110	55	104.25
11-SH-004	5524452	652402	1393	110	45	92.35
11-SH-005	5524482	652644	1419	110	43	95.40
11-SH-006	5524548	652711	1421	110	45	58.83
11-SH-007	5524543	654174	1446	250	70	87.17
*UTM NAD 1983 Zone10				Total (m):		605.64





Legend			
2011 trench samples Au (ppb Labeled)	Historical rock samples Au (ppb)	2006 - 2010 Soil Samples Strongbow Exploration Inc Au (ppb)	2011 Trench Outlines
● 2.1 - 10.0	☆ 0 - 100	▲ 0 - 3	▭ Shovelnose Claim
● 10.1 - 25.0	★ 101 - 999	▲ 3 - 7	— Added Trail
● 25.1 - 50.0	★ 1000 - 4999	▲ 7 - 16	— Road/Trail
● 50.1 - 100.0	★ 5000 - 119370	▲ 16 - 42	— Stream
● 100.1 - 288.2		▲ 42 - 749	— Contour
			▭ Lake

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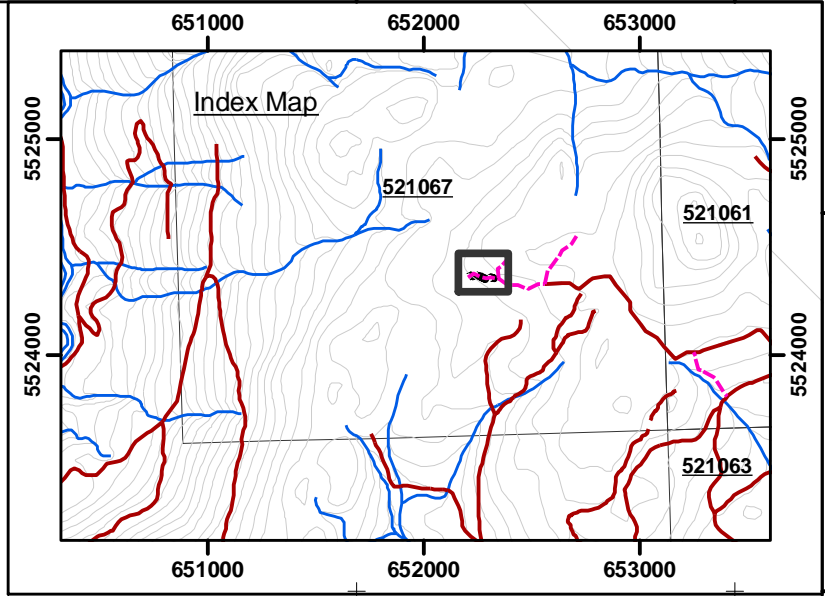
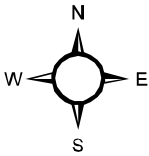
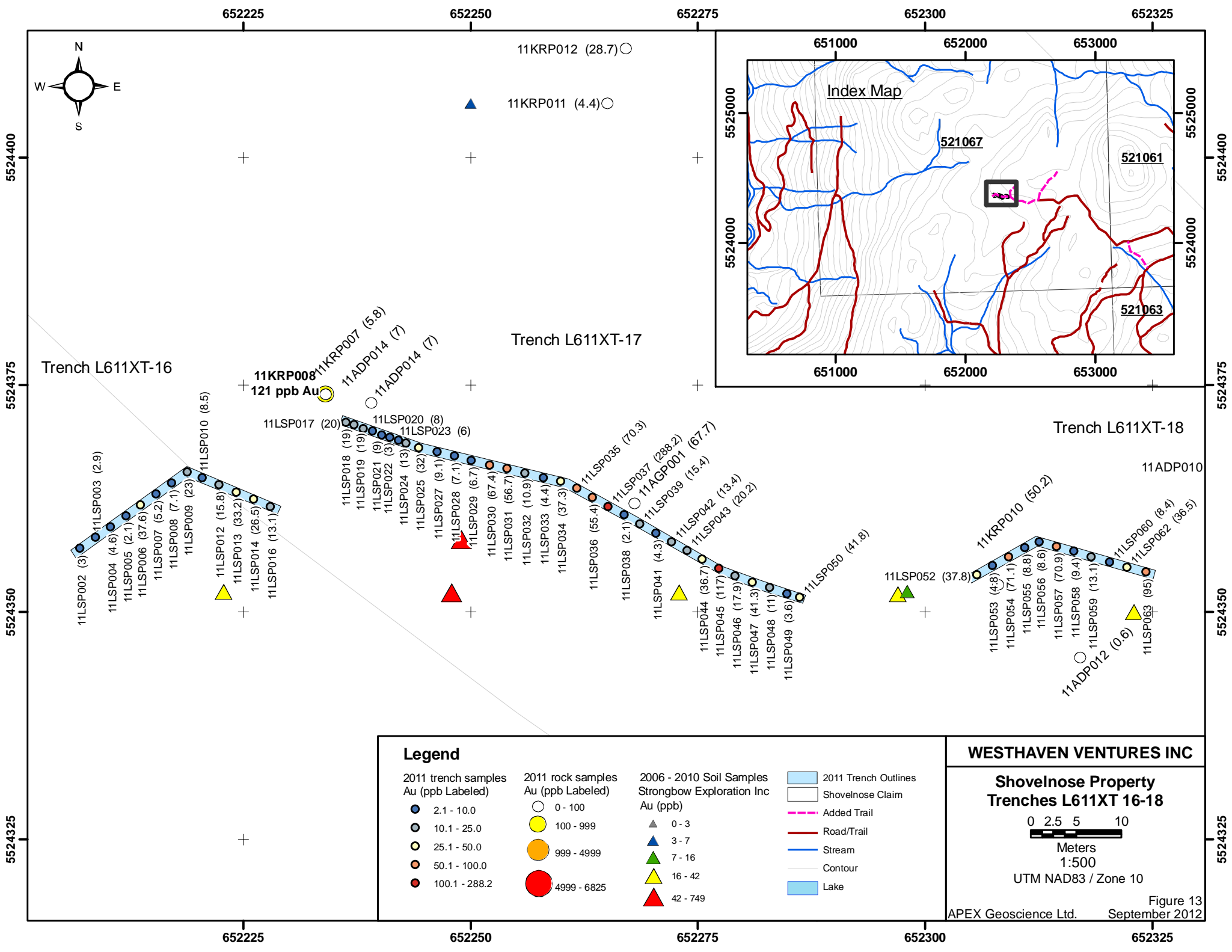
Shovelnose Property Trench MK11-Xt-08

0 2.5 5 10
Meters

1:500

UTM NAD83 / Zone 10

Figure 12
APEX Geoscience Ltd. September 2012



Trench L611XT-16

Trench L611XT-17

Trench L611XT-18

Legend		
2011 trench samples Au (ppb Labeled) ● 2.1 - 10.0 ● 10.1 - 25.0 ● 25.1 - 50.0 ● 50.1 - 100.0 ● 100.1 - 288.2	2011 rock samples Au (ppb Labeled) ○ 0 - 100 ● 100 - 999 ● 999 - 4999 ● 4999 - 6825	2006 - 2010 Soil Samples Strongbow Exploration Inc Au (ppb) ▲ 0 - 3 ▲ 3 - 7 ▲ 7 - 16 ▲ 16 - 42 ▲ 42 - 749
		■ 2011 Trench Outlines □ Shovelnose Claim - - - Added Trail - Road/Trail - Stream - Contour ■ Lake

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Shovelnose Property Trenches L611XT 16-18

0 2.5 5 10
 Meters
 Scale 1:500
 UTM NAD83 / Zone 10

Figure 13
 APEX Geoscience Ltd. September 2012

A total of 706 drill core samples (including 71 QA/QC duplicate, standard and blank) were submitted for gold fire assay and multi-element ICP-MS analysis. A summary of length weighted average assay highlights is provided in Table 6. Diamond drill logs and cross sections are presented in appendices 8 and 9, respectively. Diamond drill analytical results, keyed to drill hole and depth interval are presented in appendix 10, and copies of original laboratory certificates are presented in appendix 11.

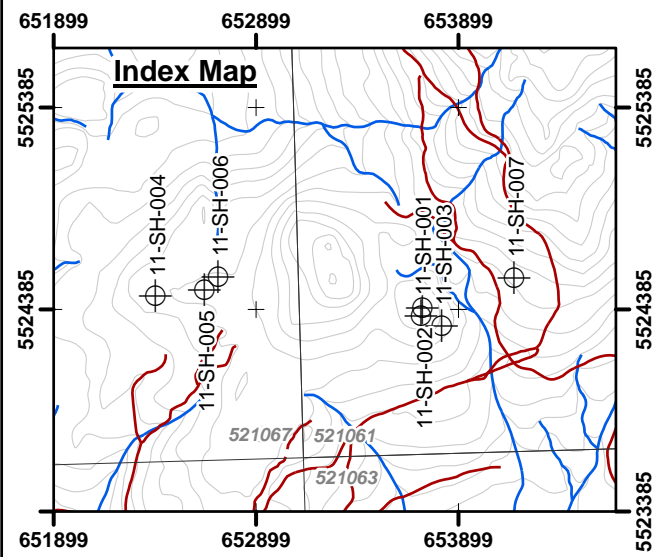
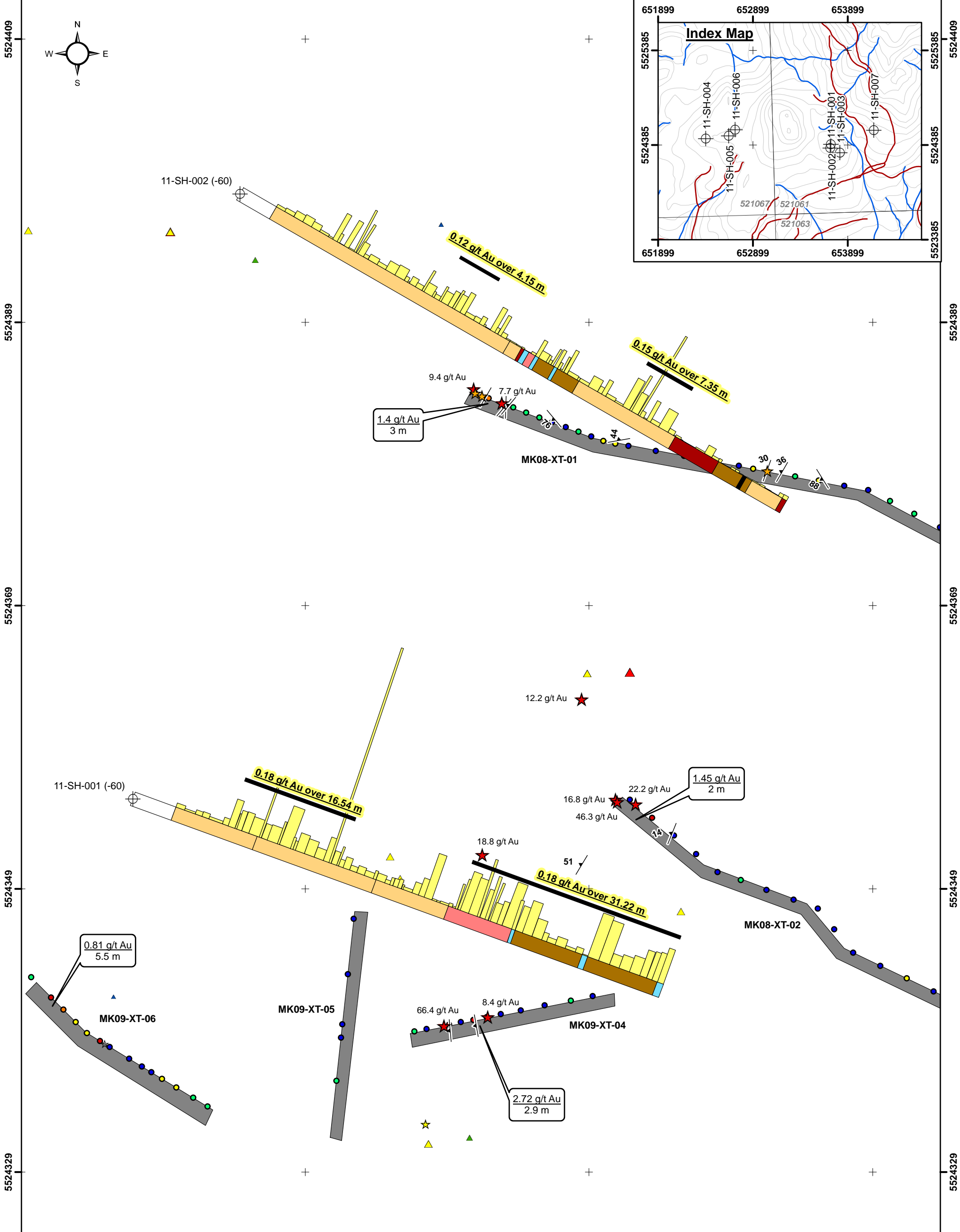
Table 7: 2011 Diamond Drilling Assay Highlights

Drill hole	Showing	From (m)	To (m)	Interval (m)	Au (g/t)	
11-SH-001	Mik	13.94	30.48	16.54	0.18	
and		48.03	79.25	31.22	0.18	
11-SH-002		31.82	35.97	4.15	0.12	
and		61.70	69.05	7.35	0.15	
11-SH-003		2.30	11.28	8.98	0.19	
and		33.90	38.00	4.10	1.19	
including		35.24	36.70	1.46	3.01	
11-SH-004		Line 6	6.91	32.54	25.63	0.32
and			66.00	67.85	1.85	0.70
11-SH-005			6.45	7.97	1.52	0.56
and	10.34		10.88	0.54	2.91	
and	27.83		30.75	2.92	0.58	
11-SH-006	1.98		15.50	13.52	0.16	
11-SH-007	Tower	2.80	58.60	55.80	0.21	

Mik Showing

Drill holes 11-SH-001 and 11-SH-002 tested quartz vein mineralization exposed at the west end of trenches MK08-XT-01, MK08-XT-02 and MK08-XT-04 (Figure 14). The trenches expose a series of shallowly northwest dipping, stacked, <1 to 20 cm thick, epithermal textured quartz veins that previously returned composite rock chip grades of up to 2.72 g/t Au over 2.9 m, and select quartz vein rock grab sample values of up to 66.4 g/t Au (Figure 14).

Drill holes 11-SH-001 (110az/-60°) and 11-SH-002 (120az/-60°) were collared approximately 40 m apart. Each hole intersected two separate zones of mineralization comprising mm- to cm-scale drusy and vuggy quartz veins, and clay gouge zones hosted within crystal-lithic tuff containing siliceous fragments. At a depth of 13.94 m, drill hole 11-SH-001 intersected an interval returning 0.18 g/t Au over 16.54 m; and at a depth of 48.03 m an interval returning 0.18 g/t Au over 31.22 m. Anomalous gold values occur at similar depths within drill hole 11-SH-002, although over somewhat narrower widths. At a depth of 31.82 m drill hole 11-SH-002 intersected an interval returning 0.12 g/t Au over 4.15 m; and at a depth of 61.70 m an interval returning



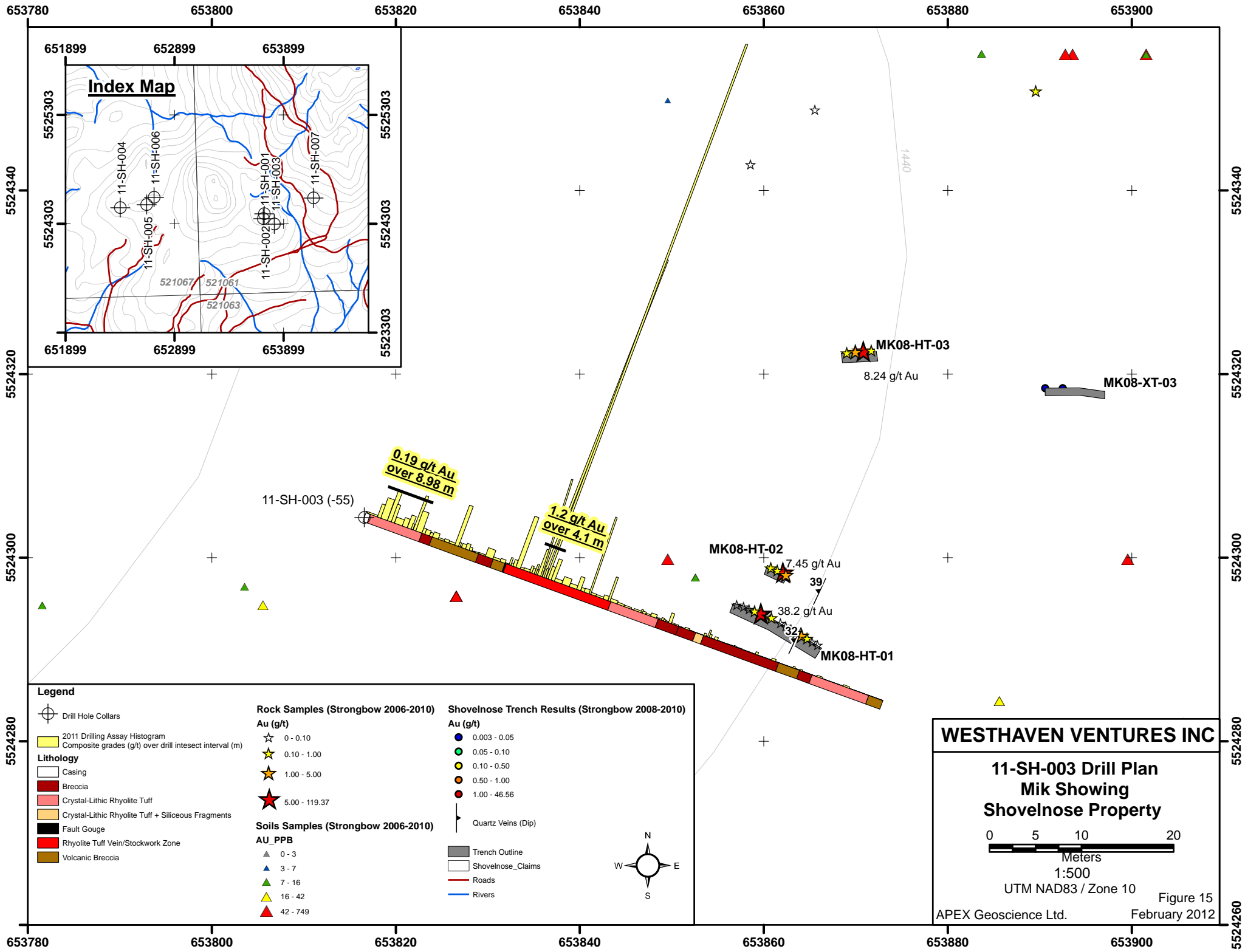
Legend		Rock Samples (Strongbow 2006-2010)	Shovelnose Trench Results (Strongbow 2008-2010)
	Drill Hole Collars	0 - 0.10	0.003 - 0.05
	2011 Drilling Assay Histogram	0.10 - 1.00	0.05 - 0.10
	Composite grades (g/t) over drill intersect interval (m)	1.00 - 5.00	0.10 - 0.50
Lithology		5.00 - 119.37	0.50 - 1.00
	Casing	Soils Samples (Strongbow 2006-2010)	1.00 - 46.56
	Breccia	AU_PPb	Trench Outline
	Crystal-Lithic Rhyolite Tuff	0 - 3	Quartz Veins (Dip)
	Crystal-Lithic Rhyolite Tuff + Siliceous Fragments	3 - 7	Shovelnose Claims
	Fault Gouge	7 - 16	Roads
	Feldspar Phyrlic Intermediate-Mafic Flow/Dyke	16 - 42	Rivers
	Volcanic Breccia	42 - 749	
	Welded Tuff		

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**11-SH-001 & 11-SH-002
Drill Plan at Mik Showing
Shovelnose Property**

0 2.5 5 10
Meters
1:250
UTM NAD83 / Zone 10
APEX Geoscience Ltd.

Figure 14
February 2012



0.15 g/t Au over 7.35 m. Shallow mineralization encountered within drill holes 11-SH-001 and 11-SH-002 correlates with the down-dip extension of mineralized veins encountered within trenches MK08-XT-01, MK08-XT-02, and MK08-XT-04. The deeper zone of mineralization does not correlate directly with the presently known surface occurrences. However, drill hole 11-SH-003 (described below) collared 115 m to the east along section from 11-SH-001 intersected surface mineralization that may correlate with deeper mineralized zones within 11-SH-001 and 11-SH-002 (Appendix 9).

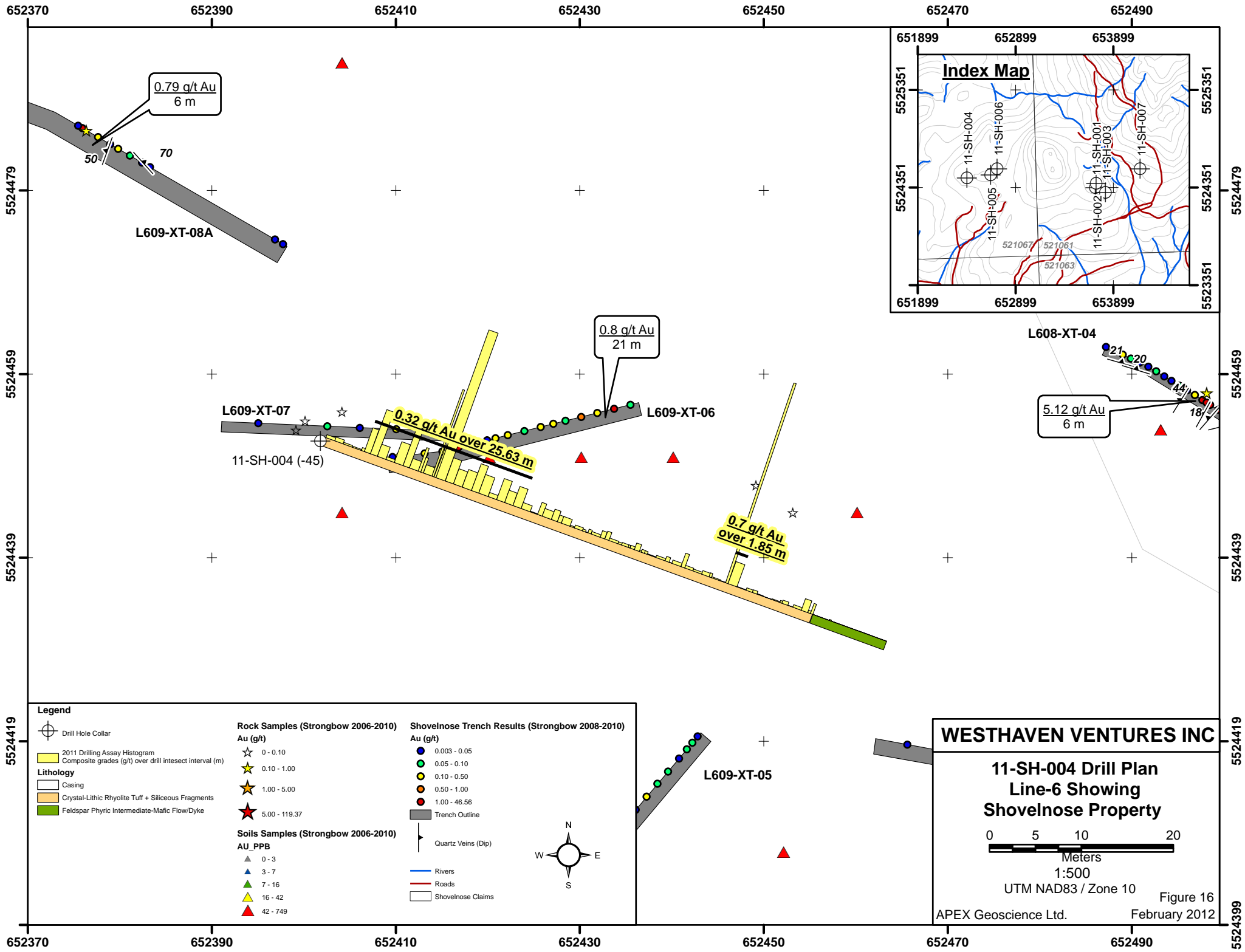
Drill hole 11-SH-003 targeted moderately northwest dipping epithermal quartz vein mineralization exposed with hand excavated trenches MK08-HT-01, MK08-HT-02 and MK08-HT-03, and an associated 2010 soil geochemical anomaly that returned 110 ppb Au (Figure 15). The trenches lie on a steep east facing hill slope and expose an approximately 4 m wide (true width) zone containing numerous <1 to 8 cm wide vuggy colloform banded, or comb textured quartz veins that previously returned assays of up to 38.2 g/t Au.

Drill hole 11-SH-003 (110az/-55°) was collared approximately 50 m to the west of the hand trenches, immediately upslope from the soil anomaly. At a depth of 2.30 m the drill hole intersected a series of mm- to cm-scale vuggy quartz veins, iron oxide altered fractures and clay gouge zones that returned 0.19 g/t Au over 8.98 m. Between a depth of 28 and 49 m downhole intensely clay-sericite altered rhyolite tuff and volcanic breccia containing frequent clay gouges up to 3 cm thick were encountered. The altered zone hosts, numerous colloform banded drusy and vuggy textured quartz-carbonate veins up to 5 cm thick. Mineralization within this zone returned assays of 1.19 g/t Au over 4.10 m from a depth of 33.90 m; including 3.01 g/t Au over 1.46 m between 35.24 and 36.70 m. Vein thickness, textures and depth of intersection are consistent with interpretation as the down dip extension of veins exposed within trenches MK08-HT-01, MK08-HT-02 and MK08-HT-03. Similarly, near surface mineralization within drill hole 11-SH-003 appears to adequately explain the soil geochemical anomaly.

Line 6 Showing

Drill hole 11-SH-004 (110az/-45°) was designed to test a broad zone of weak-moderately limonite clay altered volcanoclastic rock exposed within trench L6-XT-06 that returned a composite grade of 0.8 g/t Au over 21 m (Figure 16). At a depth of 6.91 m within drill hole 11-SH-004 variably iron oxide and clay altered crystal lithic tuff containing siliceous fragments hosts mm-scale quartz-carbonate vein and fine grained pyrite mineralization that returned 0.32 g/t Au over 25.63 m. The orientation of the mineralized zone is interpreted to be steeply west dipping to sub-vertical based on quartz vein to core axis angles and depth relative to mineralization exposed within trench L6-XT-06.

Drill holes 11-SH-005 (110az/-43°) and 11-SH-006 (110az/-45°) were designed to test shallowly to moderately west-northwest dipping quartz vein and local vein breccia mineralization exposed within trenches L608-XT-01 and L608-XT-02; and numerous cm-scale quartz veins and volcanoclastic rock containing siliceous fragments within the



0.79 g/t Au
6 m

0.8 g/t Au
21 m

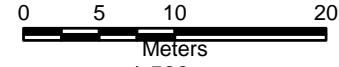
0.32 g/t Au over 25.63 m

0.7 g/t Au
over 1.85 m

5.12 g/t Au
6 m

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**11-SH-004 Drill Plan
Line-6 Showing
Shovelnose Property**



UTM NAD83 / Zone 10

APEX Geoscience Ltd.

Figure 16
February 2012

Legend

- Drill Hole Collar
- 2011 Drilling Assay Histogram
- Composite grades (g/t) over drill intersect interval (m)
- Lithology**
- Casing
- Crystal-Lithic Rhyolite Tuff + Siliceous Fragments
- Feldspar Phyric Intermediate-Mafic Flow/Dyke

Rock Samples (Strongbow 2006-2010)
Au (g/t)

- ☆ 0 - 0.10
- ★ 0.10 - 1.00
- ★ 1.00 - 5.00
- ★ 5.00 - 119.37

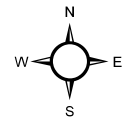
Soils Samples (Strongbow 2006-2010)
AU_PPB

- ▲ 0 - 3
- ▲ 3 - 7
- ▲ 7 - 16
- ▲ 16 - 42
- ▲ 42 - 749

Shovelnose Trench Results (Strongbow 2008-2010)
Au (g/t)

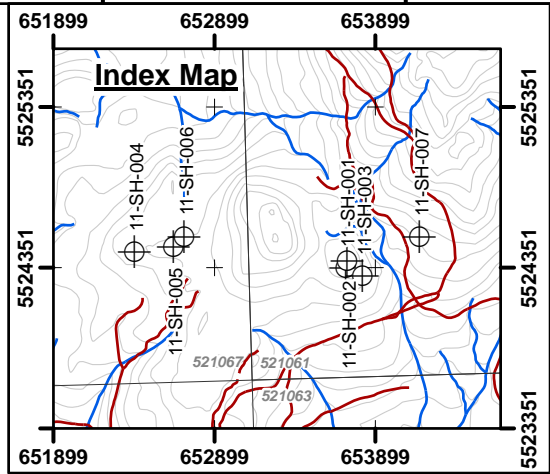
- 0.003 - 0.05
- 0.05 - 0.10
- 0.10 - 0.50
- 0.50 - 1.00
- 1.00 - 46.56

- Trench Outline
- Quartz Veins (Dip)
- Rivers
- Roads
- Shovelnose Claims



5524479
5524459
5524439
5524419
5524399

652370 652390 652410 652430 652450 652470 652490



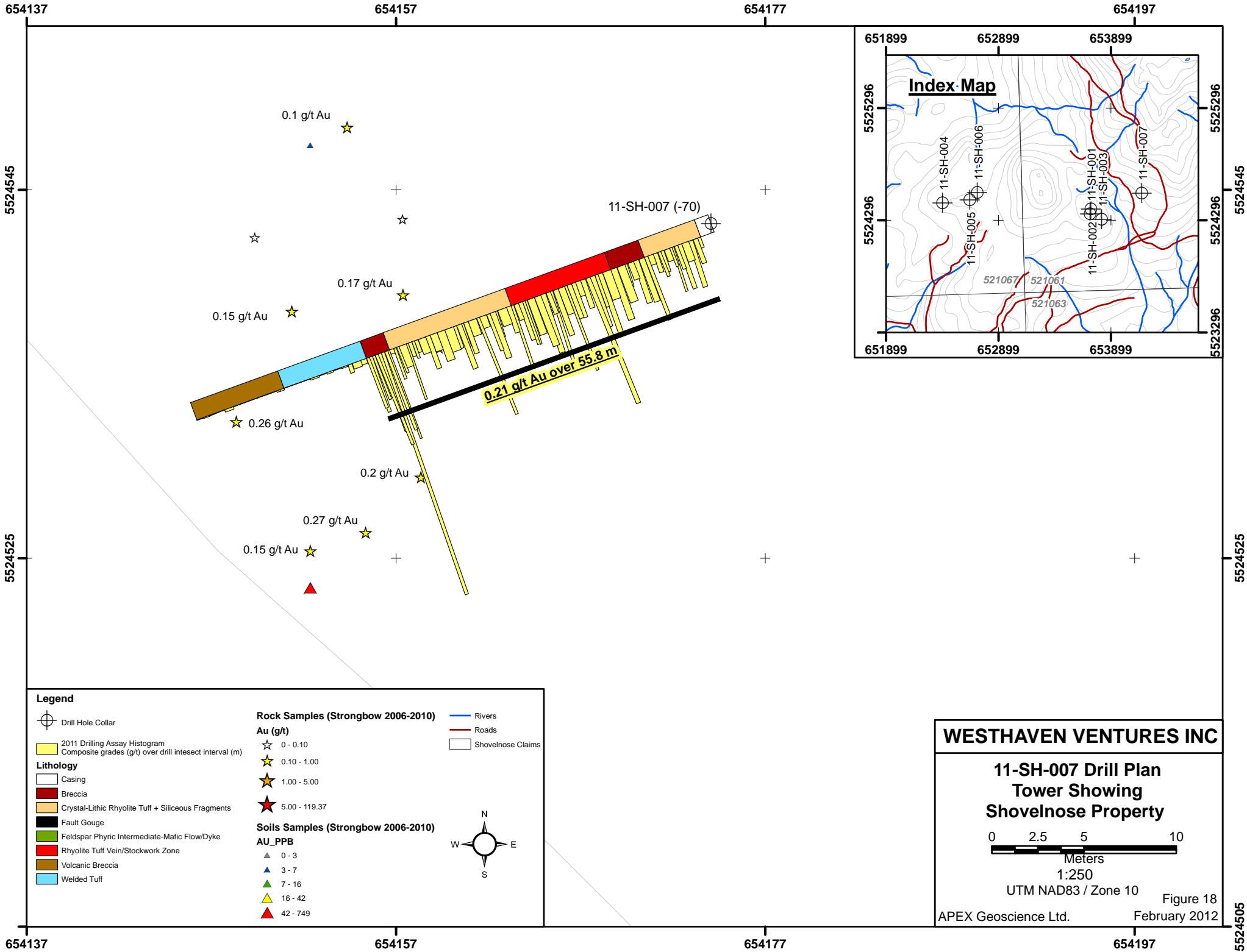
eastern half of trench L609-XT-15 (Figure 17). Trenches L608-XT-01 and L609-XT-15, returned composite chip sample assays of 16.95 g/t Au over 2.0 m and 0.20 g/t Au over 6.5 m, respectively (Barrios and Gale, 2010). Chip samples within trench L608-XT-02 were collected along the dip slope of a shallow surface vein and are therefore not representative of the true width of the mineralized zone.

Drill hole 11-SH-005 was collared approximately 20 m to the west of trench L608-XT-02. Due to local topography that sloped down to the west away from trench, a broken iron oxide and clay altered zone of mineralization was intersected immediately below the drill casing at 6.45 m depth that returned 0.56 g/t Au over 1.52 m. At a depth of 10.34 m, a zone containing broken colloform quartz vein fragments returned assays of 2.91 g/t Au over 0.54 m. A third, narrow zone of mm- to cm-scale colloform quartz veins and clay gouge intersected at a depth of 27.83 m returned assays of 0.58 g/t Au over 2.92 m. Drill hole 11-SH-006 intersected a broad zone of mineralization containing numerous mm- to cm-scale grey quartz veins immediately below the casing at 1.98 m that returned 0.16 g/t Au over 13.52 m. The observed quartz vein density and widths correlate well with those exposed on surface within trench L609-XT-15. Both drill holes exhibited a similar lithologic sequence comprising near surface crystal-lithic tuff containing siliceous fragments, underlain by unmineralized welded tuff and volcanic breccia rocks.

Tower Showing

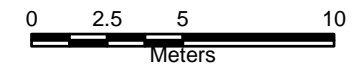
Drill hole 11-SH-007 was designed to test the Tower Showing where a north-northwest trending approximately 100 x 50 m zone of intensely silicified, limonite stained rhyolite tuff was discovered in 2006. Mineralization is associated with grey chalcedonic quartz flooded rhyolite tuffs containing up to 10% very fine grained pyrite and locally intense clay alteration that returned consistently anomalous gold values ranging from less than 100 ppb up to 505 ppb Au.

From immediately below the casing at a depth of 2.8 m, drill hole 11-SH-007 (250az/-70°) intersected a dark grey silicified vein and breccia zone containing finely disseminated pyrite hosted within crystal-lithic rhyolite tuff rocks. The zone was consistently mineralized and returned assays grading 0.21 g/t Au over 55.8 m with associated anomalous arsenic, mercury, molybdenum and antimony values. Gold values fall off sharply below 58.60 m corresponding with an abrupt transition to un-silicified clay-chlorite altered crystal-lithic rhyolite tuff and volcanic breccia. Based on the distribution of surface mineralization and that intersected within the drill hole, the Tower zone is interpreted to dip moderately-steeply to the northeast and have a true width of at least 20 m.



WESTHAVEN VENTURES INC

**11-SH-007 Drill Plan
Tower Showing
Shovelnose Property**



1:250

UTM NAD83 / Zone 10

Figure 18
APEX Geoscience Ltd. February 2012

5524505

SAMPLE METHOD AND APPROACH

Soil samples were collected using a shovel to dig a 30-60 cm hole to expose the generally brownish to red B horizon layer immediately beneath overlying humus layer. An approximate 200 g sample of humus was placed in a standard four by six-inch, folding top, high wet-strength Kraft paper sample bag with a unique sample number written on both sides of the bag with a permanent marker. The location of each sample site was marked using orange flagging tape bearing the sample number. The site position was recorded using a handheld GPS receiver in UTM NAD83 Zone 10 format.

Stream samples were collected as silt and sand grabs from several points across and along the channels over distances of up to 50 m. Samples were collected where the finest and cleanest material were available. The samples were collected in 5.5 inch by 8.5 inch size cloth bags, with sample weights of 1 to 1.5 kg. On site sieving (to ~20mesh) was only conducted in locations where silt was entrained in coarse dry sandbars. The site position was recorded in UTM NAD83 Zone 10 format via GPS.

Each rock grab (prospecting) sample location is marked with a representative sample, wrapped with orange flagging tape that contains the assigned sample number. Individual float and rock samples weigh no more than 5 kg. Rock samples were collected such that the specimens had little to no weathered surface or lichen and represented the overall characteristics of mineralization from that location. In places where rock material is rare or difficult to liberate, chip samples are taken to represent the zone of interest. The site position was recorded using a handheld GPS receiver in UTM NAD83 Zone 10 format and a rock sample card was filled out indicating composition, grain size, relative % of sulphides present, magnetism, material sampled, relief, and general remarks.

Where mechanized trenching was conducted, trenches were exposed using a backhoe and cleaned off with picks, shovels, brooms, and water where available. Channel samples were taken using a chisel and hammer with samples collected along the length of the trench in a relative straight line using a measuring tape and spray painted lines to mark samples interval locations relative to a GPS location at one end of the trench. Channel sample lengths were typically 1 – 2 m, with shorter lengths over veined or heterogeneous material. The chips from the channel samples were put into a plastic bag with the sample number marked on both sides and sealed.

Drill core samples were collected using a hand wheel core splitter. Prior to splitting, the sampling protocol considered the following factors:

- Lithological and alteration contacts.
- Minimum 0.3 m and maximum 1.5 m intervals as a general guideline.
- Insertion of QA/QC samples at pre-specified locations in the sample sequence.
- Potential mineralization was usually indicated by shorter intervals around particular structural observations, such as veining, brecciation or gouge material.

- Low potential areas were usually indicated by longer sample intervals.

The core sample intervals were marked by red lumber crayons directly on the core, and a 3-part sample tag was filled out for each sample, indicating the drill hole ID, sample interval and any relevant comments. One part of the sample tag was stapled into the core box indicating the beginning of the sample interval, one part was reserved for the plastic sample bag and the third part was left behind in the sample tag book for record keeping. The core was subsequently split length-wise with one half stored in the core box and the other half placed into a plastic sample bag with the sample number marked on both sides with a permanent marker and sealed. The average length of all core samples was 0.92 m. The minimum and maximum interval lengths were 0.27 m and 2.3 m respectively.

SAMPLE PREPARATION, ANALYSIS, AND SECURITY

All soil samples and 87 of 107 rock samples collected during the 2011 Shovelnose program were shipped to an independent laboratory, Acme Analytical Laboratories Ltd. (Acme), for analysis. Acme is currently registered with ISO 9001:2000 and ISO/IEC 17025:2005 accreditations. Rock sample preparation at Acme involves crushing each sample to 80% passing a 10 mesh (2 mm) screen. A 250 g split is then pulverized to 85% passing a 200 mesh (74 μm) screen. Soils, tills and sediments typically undergo two stages of preparation consisting of drying and screening. At Acme Labs these materials are dried at 60°C to minimize loss of volatile elements (eg. Mercury), and are screened to -180 microns (-80 mesh ASTM). Samples are handled, dried and screened in an area dedicated for these media to avoid contamination from more mineralized rock and core samples. All samples were submitted for a 36-element ICP-MS aqua regia analysis (Acme: 1DX2) and a 15g sample split from the prepared pulp was used for the analysis. Rock samples were also analyzed using Group 3A “Au by Wet Digestion”. In this method samples are digested in Aqua Regia then analyzed by ICP-Mass spectrometer. ICP-MS measures the element concentrations by counting the atoms for each element present in the solution.

All drill core samples and 20 of 107 rock samples collected during the 2011 Shovelnose program were shipped to Agat Laboratories (Agat) for analysis. Agat is accredited and certified to the International Organization for Standardization for the ISO 9001 and ISO/IEC 17025 standards. At Agat, rock and core samples were crushed to 75% passing a 10 mesh (2 mm) and split to 250g. Subsequently samples were pulverized to 85 % passing 200 mesh (74 μm) and shaken on an 80 mesh sieve with the plus fraction stored and the minus fraction sent to the laboratory for analysis. Rock and drill core samples went through following process: 1) prepared samples (sample split size 1g were digested with Aqua Regia for one hour using temperature controlled hot blocks. 2) resulting digests were diluted to 50 mL with de-ionized water. 3) to finish, ICP-OES/ICP-MS instrumentation were used for analysis. PerkinElmer 7300DV and 8300DV ICP-OES instruments and PerkinElmer 9000 and PerkinElmer NexION ICP-MS instruments were used for analysis. Inter-Element Correction (IEC) techniques were

used to correct for any spectral interferences. All samples sent to Agat were also analyzed with fire assay using an AAS Finish. Sample split size for fire assay was 30g.

All stream sediment samples were also sent to Agat for analysis. Sample preparation consisted of drying samples to 60°C and then screened using an 80-mesh sieve with the plus fraction stored and the minus fraction sent to the laboratory for analysis. A 1 gram sample split from the prepared pulp is used for the analysis and all samples were submitted for a 51-element analytical suite using the aqua regia digestion technique and ICP-OES/ICP-MS instrumentation.

DATA VERIFICATION

Quality assurance/quality control (QA/QC) for the 2011 field program comprised inserting blanks, field duplicates, and standards into the soil, rock and core sample streams. Two labs were used, Acme Analytical Laboratories and AGAT Laboratories in Vancouver, BC. These QA/QC measures were undertaken by field crew prior to shipment to the laboratory and are in addition to the QA/QC measures taken by the laboratory.

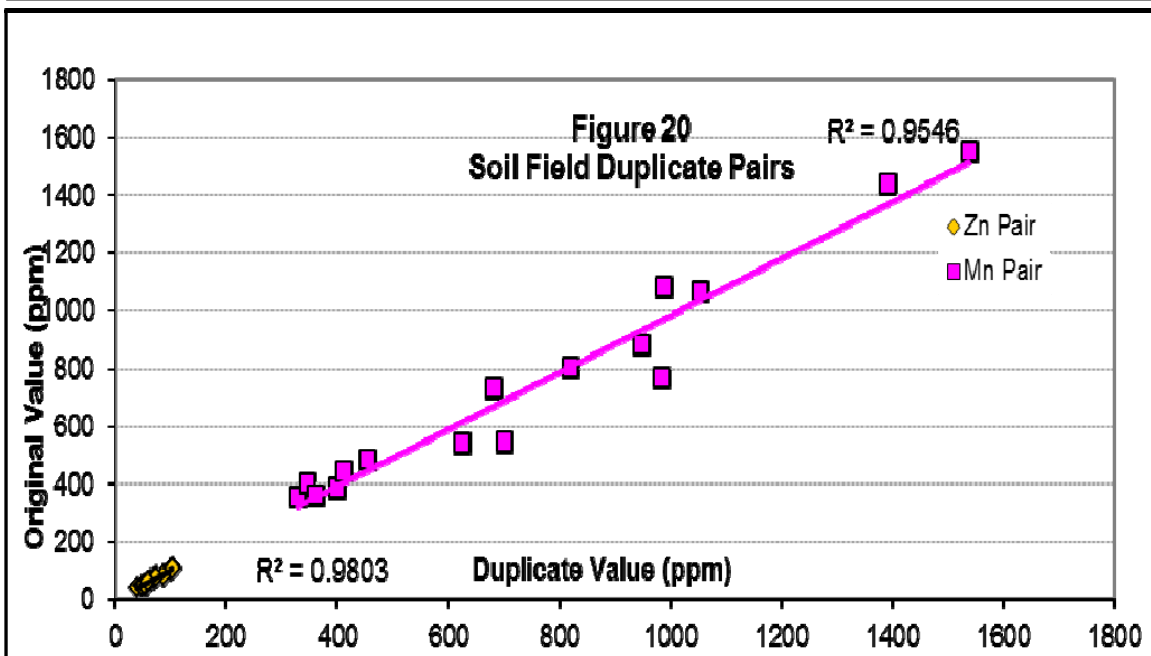
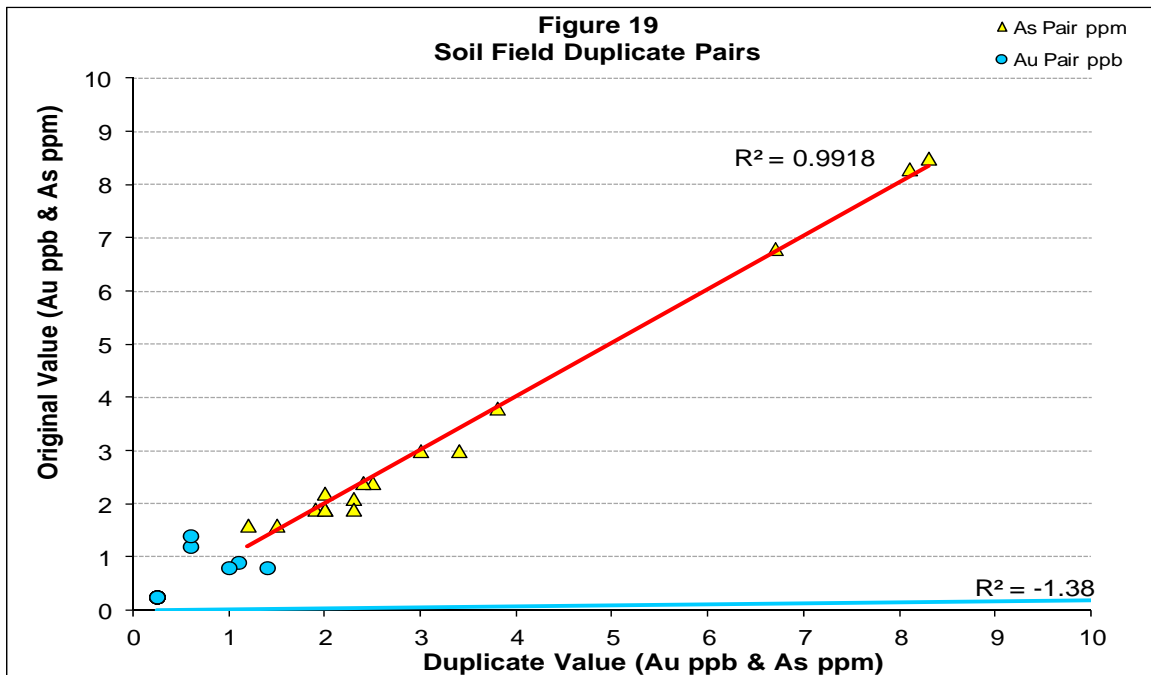
Blank material comprising of garden brick chips was inserted to monitor for potential contamination during analysis. Soil and rock/trench field duplicates were inserted to measure reproducibility and precision of data. Soil and rock/trench field duplicates were collected from the same site or immediately adjacent to the original sample. For core duplicate samples, the sample interval chosen for analysis was split into 2 parts, one half stored in the core box and one half reserved for analysis. The half-core sample reserved for analysis was split again to produce quarter-core samples for duplicate analysis. For gold standards, pre-packaged 60 g sealed foil patches labeled 10c, 61Pa, 62Pa, 67a, and 68a purchased from Analytical Solutions Ltd and used to assess laboratory precision and accuracy. These standards represent homogenized material that contains known concentrations of gold and silver. Results for standard material analyzed using ICP-MS (aqua regia) is only used as preliminary filter as this method cannot completely digest the pulp material. Standards were also analyzed by fire assay with an AAS finish and these values were used in the pass-fail criterion. Laboratory pulp standards inserted into the sample stream by the field crew were compared to the expected certified values and if the lab results fell significantly outside the established third standard deviation confidence levels, the internal batch or the entire sample shipment was requested to be re-run. In addition, an analytical batch was considered a failure if two or more values from that same analytical batch fell outside the +/- 2 SD lines.

Stream Samples

No blanks and standards were placed into the stream silt sample sequence. A single field duplicated pair (samples 88623 and 88624) returned <1 and 2 ppb Au, and 7.1 and 7.4 ppm As, respectively. A comparison of the remaining elements analyzed indicates the sampling method produces good repeatability (Appendix 5).

Soil Samples

For the soil samples a total of 16 field duplicates were collected during the soil sampling program. No blanks and standards were placed into the soil sample sequence. Generally, the Au pairs showed weak to moderate variability most likely representing a heterogeneous distribution of gold within the soil samples. Conversely, when comparing a selection of other elements (ie. As, Mn, and Zn), the field duplicate values were generally consistent, as shown in the figures below (Figure 19 and 20).

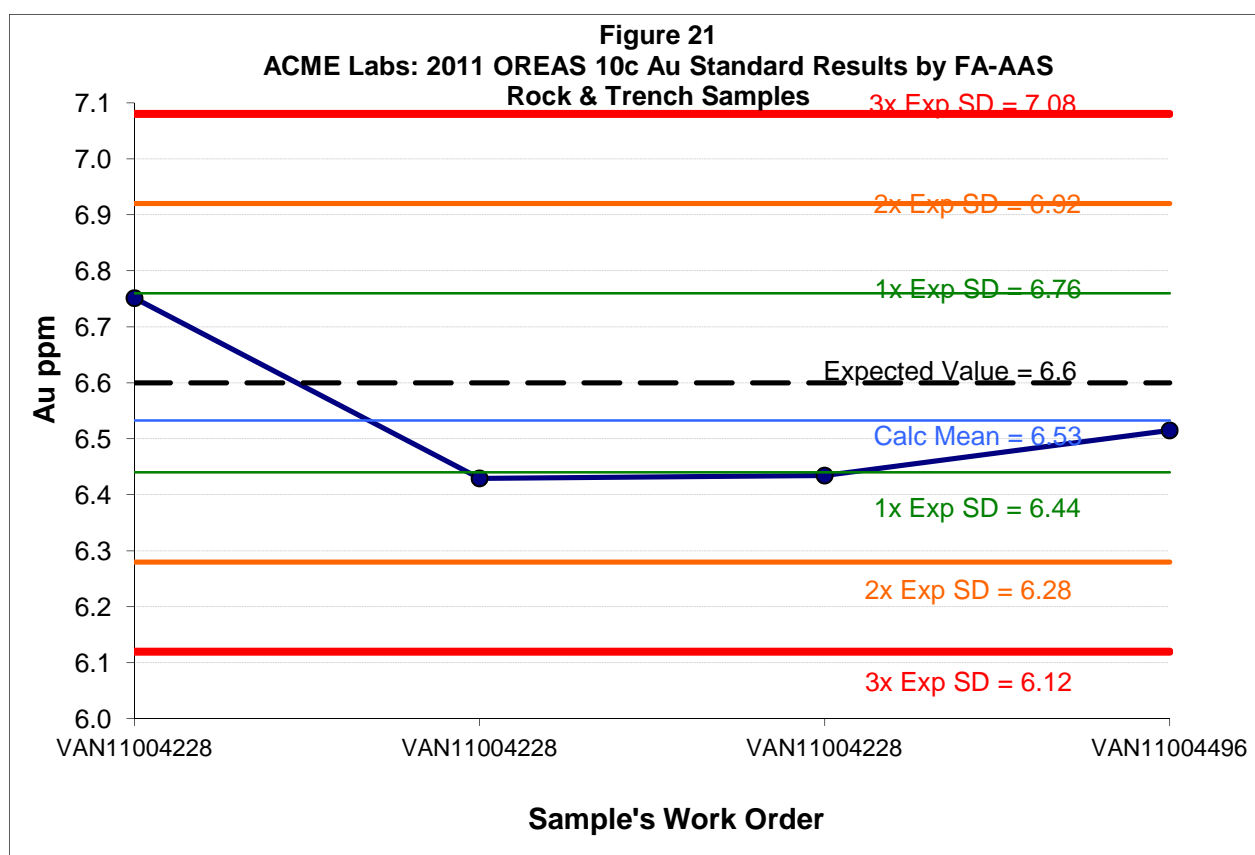


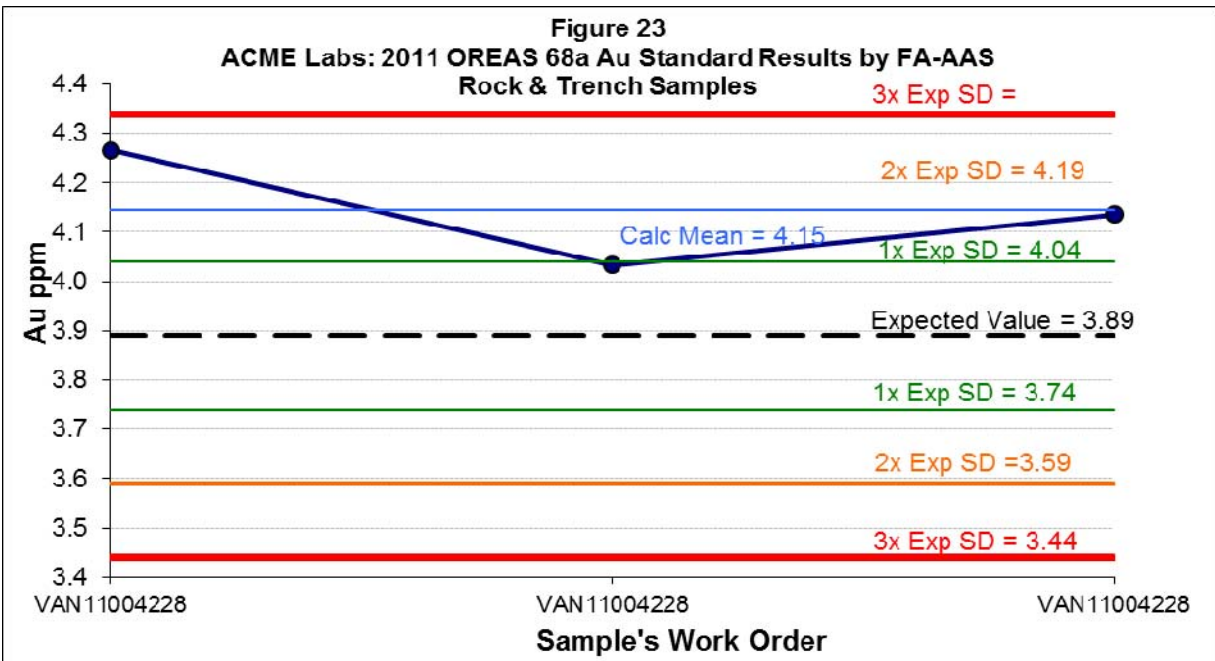
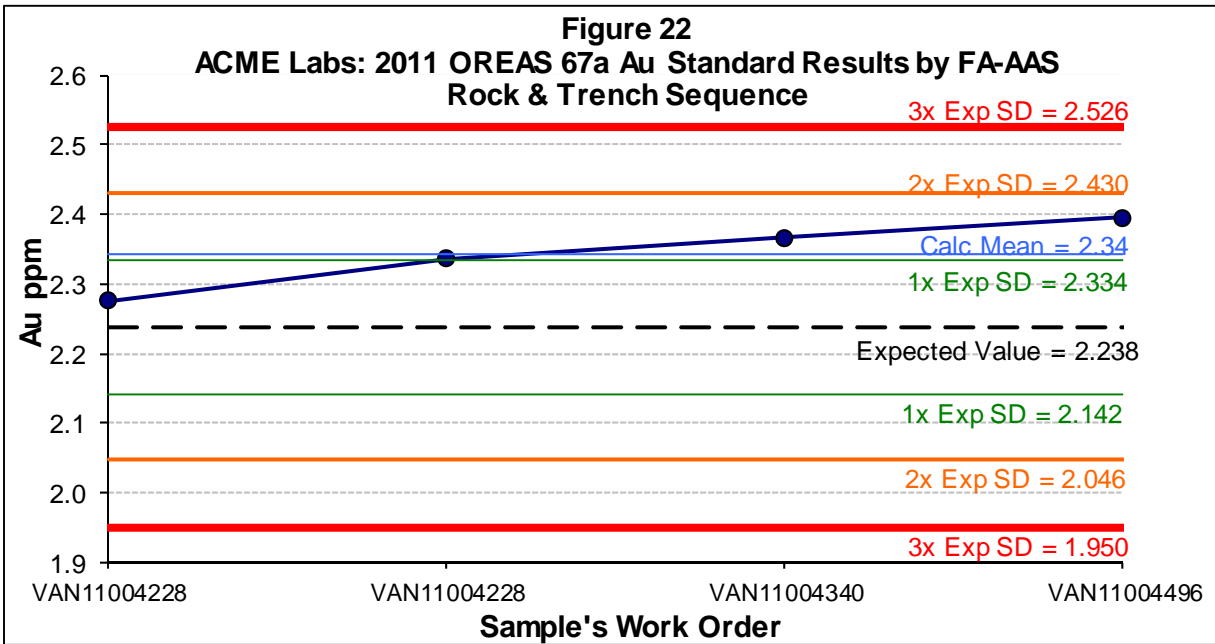
Rocks & Trench Samples

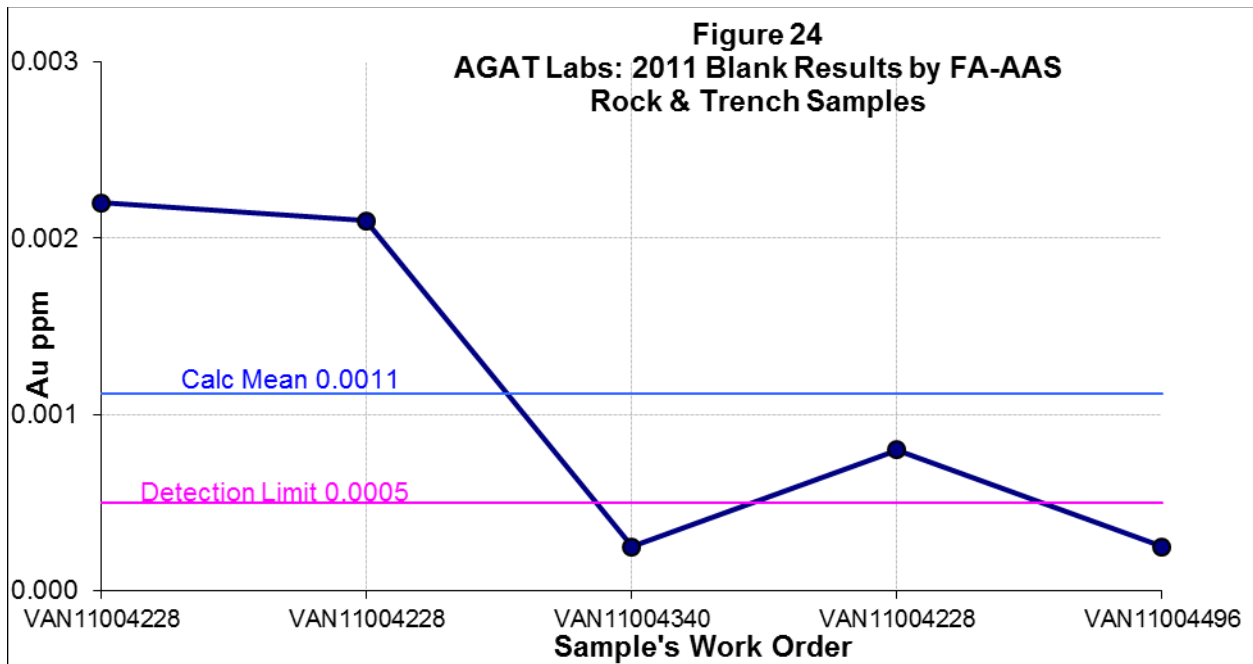
For rock samples a total of 4 blanks, 5 standards (OREAS 10c, 67a, and 68a) and 3 field duplicates were collected. The blanks returned values below detection limit

(<0.5 ppb) to 0.8 ppb, showing that there was negligible contamination in the preparation process. The standards all fell within two standard deviations of their certified values, therefore no failures were recorded (Figures 21-23).

For the trench samples two blanks and six standards (OREAS 10c, 67a and 68a) were inserted into the trench sample sequence. Three field duplicates were also collected. Five of the six standards all fell within 2 standard deviations of their certified values. One standard result was between 2 and 3 standard deviations, signifying a warning sample (Figures 21-23). The two blanks returned values of 2.1 and 2.2 ppb, 4 times the detection limit of 0.5 ppb (Figure 24).







Drill Core Samples

Quality assurance/quality control (QA/QC) for the 2011 field program comprised inserting blanks, field duplicates, and standards in the core sample stream. Only results from core sampling of the 2011 drilling program are discussed further in this section. A total of 71 QA/QC samples were used accounting for 10% of all drilling samples submitted (Table 8).

Table 8: QA/QC Sample Sequence

Type	Typical Sample Number Sequence*	Total Number Used
Blank	-015, -040, -065, -090	27
Standard	-001, -026, -051, -076	29
Duplicate	-010, -060	15

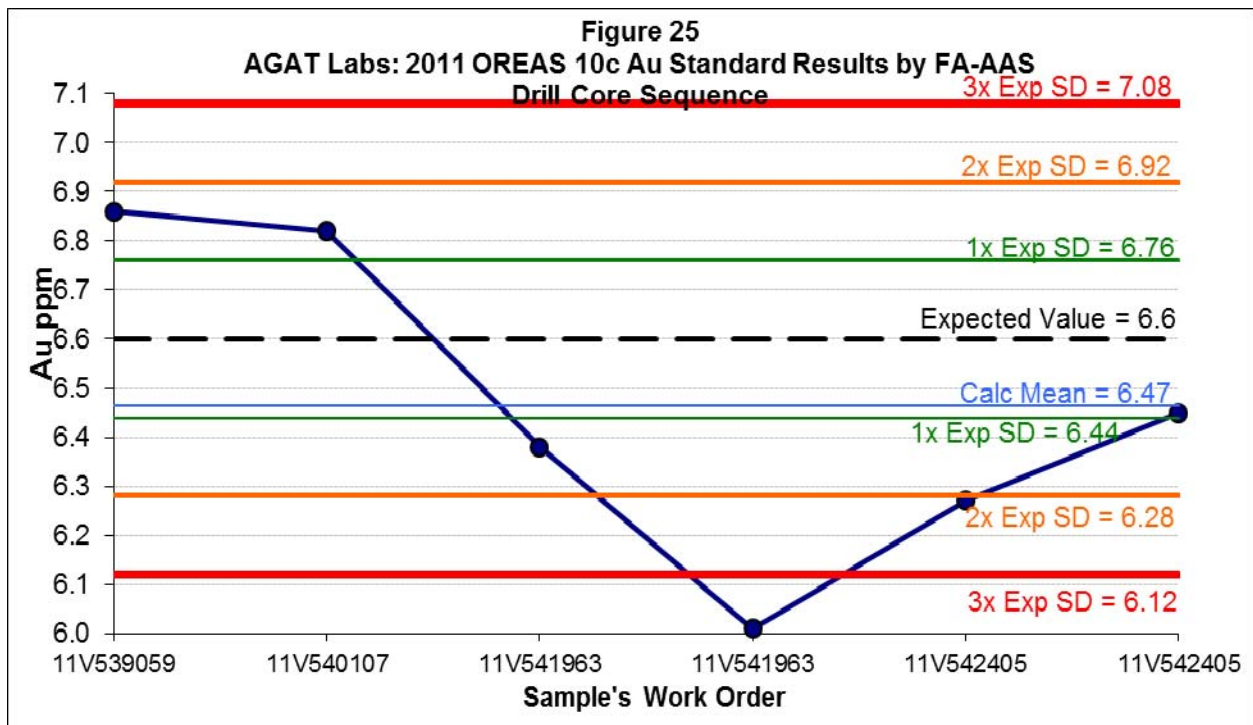
*Few exceptions do occur

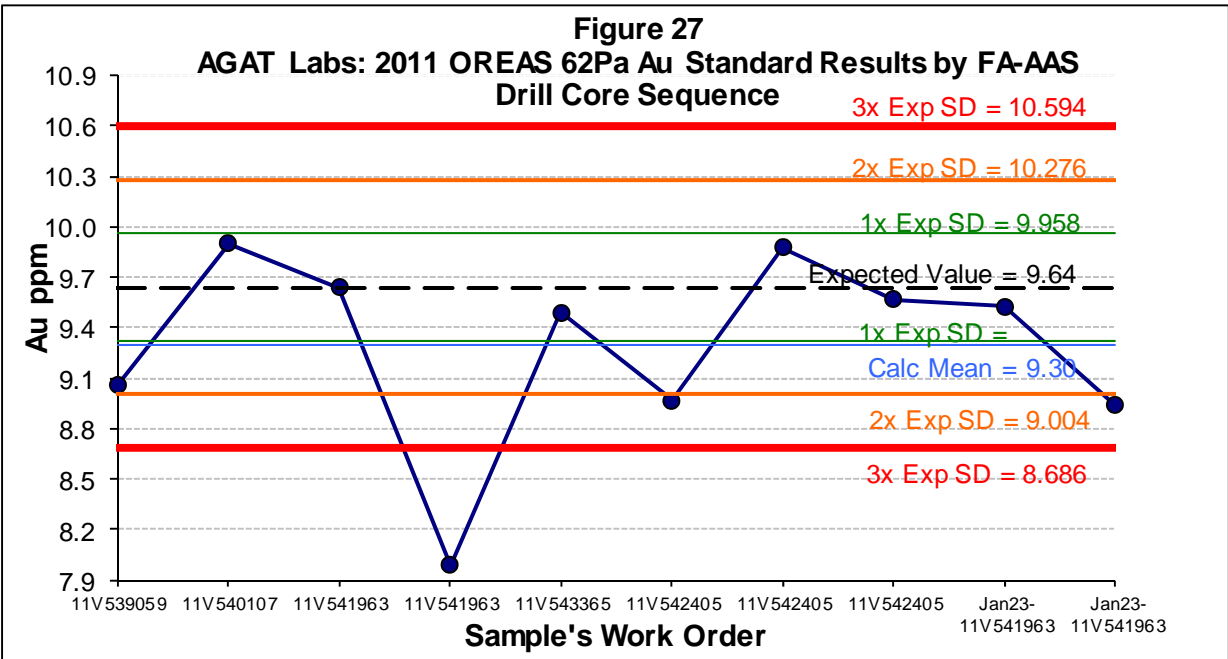
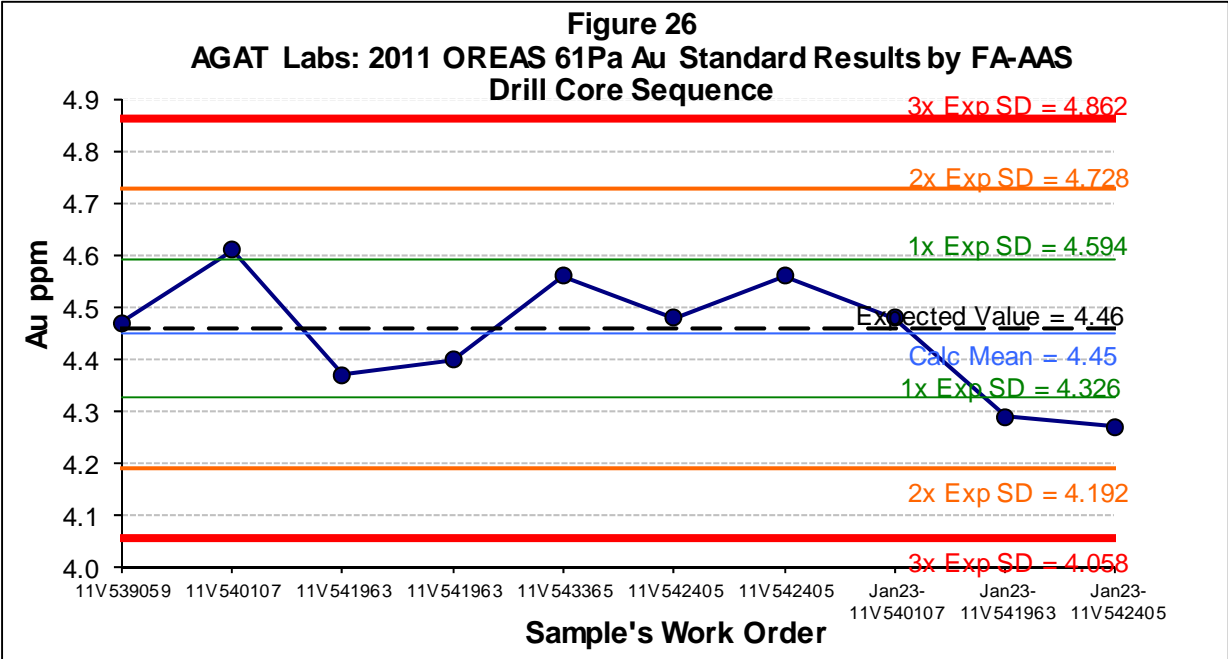
QA/QC Failures are identified on the basis of any Au standard value analyzed by fire assay with a result greater than three standard deviations from the expected certified value (type 1); or any two standard values in the same client shipment with fire assays values greater than two standard values from the expected value (type 2). If a failure is observed, then the specific sample batch that contains the standard(s) would have been reanalyzed. The results of 2011 QA/QC core sample analysis are presented in Figures 25 to 31.

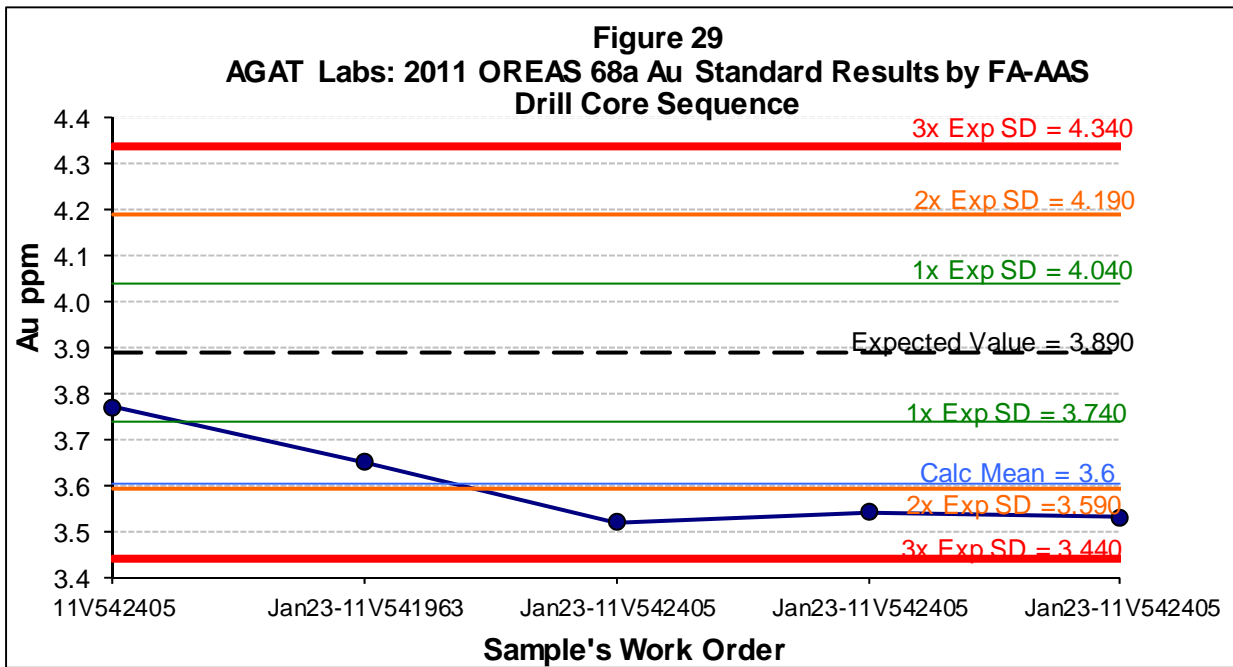
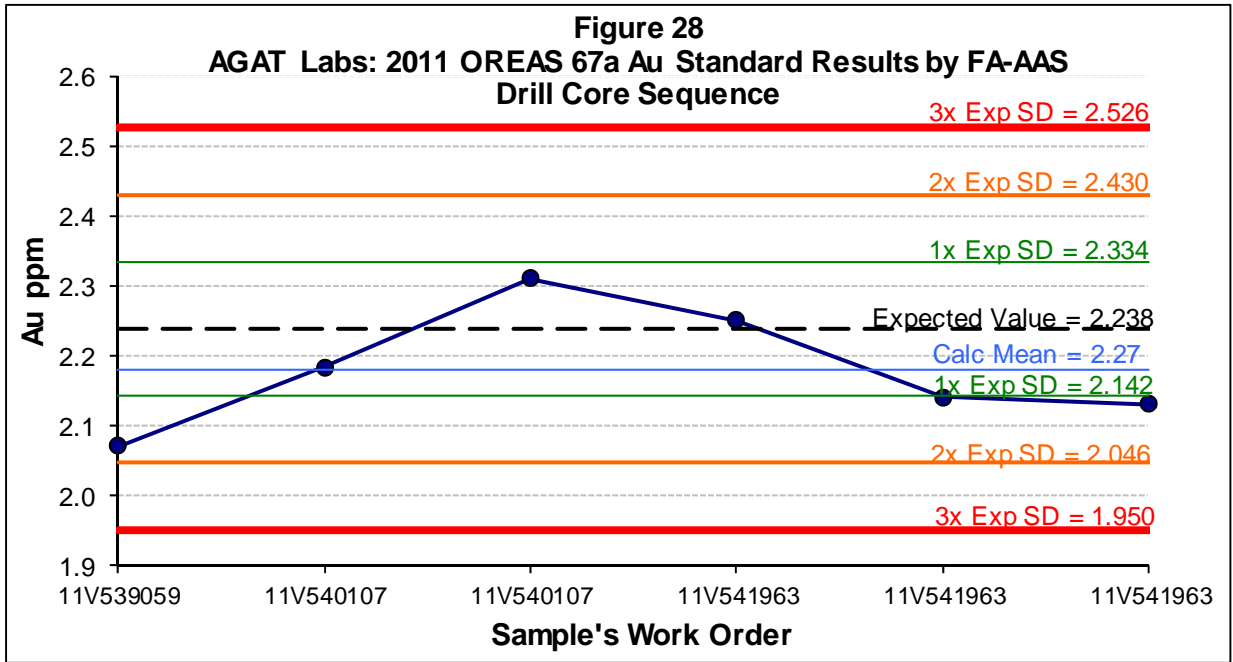
Two samples of different standard types, within the same laboratory work order (11V541963), returned assays greater than three standard deviations resulting in Type 1 failure (Figure 25 and Figure 27). Three samples of the same standard type returned,

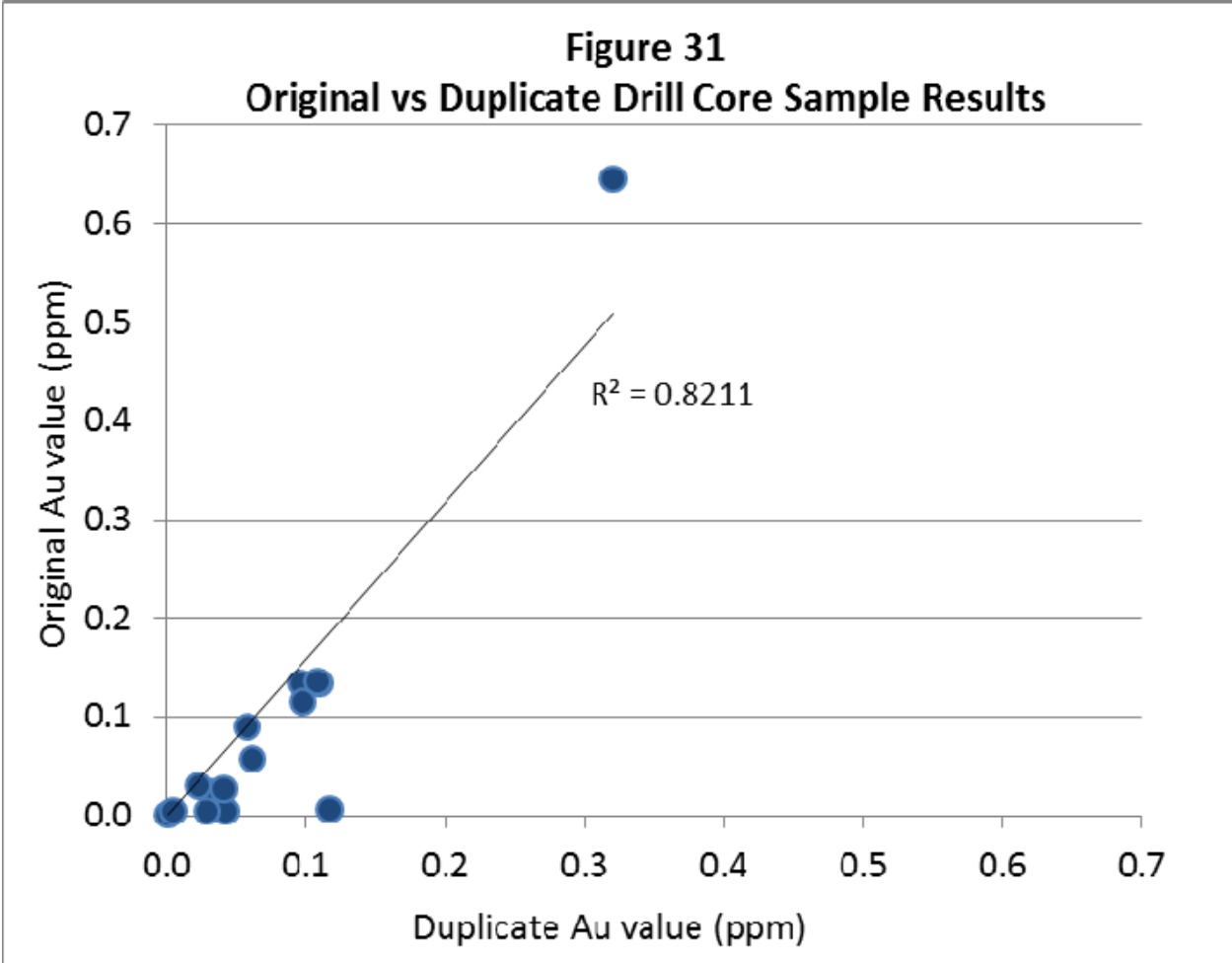
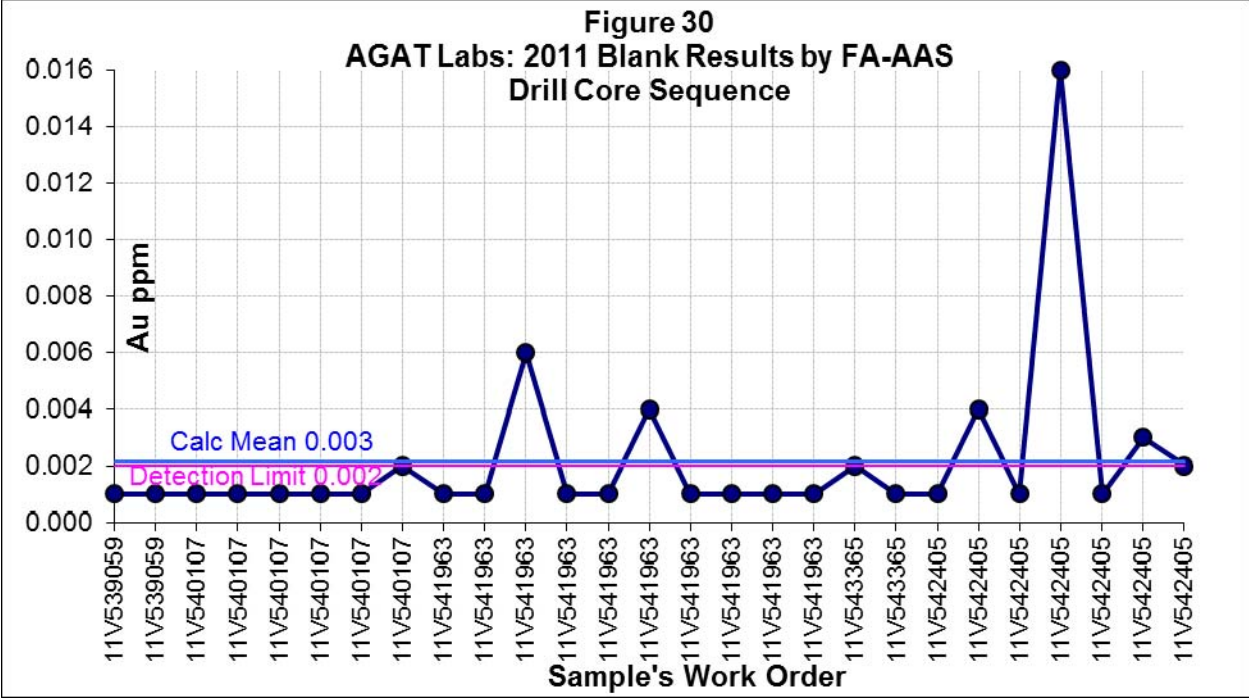
within the same laboratory work order (11V542405), assays higher than two standard deviations, resulting in a Type 2 failure (Figure 29). In addition, blank samples were observed for possible contamination. One blank sample returned 16 ppb, eight times the detection limit, and was considered a failed batch (Figure 30). Consequently, the internal lab batch numbers containing the failures were identified, and all the samples contained within the failed batch were reanalyzed.

With exception of one duplicate set, all other duplicates returned values within an acceptable range of each other (Figure 31). Therefore, there is no reason to suspect inconsistency of assaying results. The sole duplicate set returning inconsistent values may be due to heterogeneous differences within the sample interval.









INTERPRETATION AND CONCLUSIONS

Infill soil geochemical sampling between the Mik and Line 6 showing has resulted in further definition of the approximately 1000 x 200 m northwest trending “Anomaly C” soil geochemical anomaly. The core of anomaly is defined by 10 soil samples that returned values ranging from 8 to 33 ppb Au (2007, 2008 and 2010 soil programs). The 2011 sampling did not expand the southern end of “Anomaly C”. Here the anomaly may be explained by down slope dispersion of mineralization from the Mik Showing. However, partially overlapping coverage by the 2010 ground magnetic survey indicates the presence of coincident northwest trending magnetic anomalies that may imply a bedrock source. Importantly, at the northern end of “Anomaly C”, where 2007 sampling returned 3 samples between 9 and 33 ppb Au, infill sampling defined a 300 x 100 m area that returned an additional 5 samples ranging from 12.7 to 58.3 ppb Au. This anomaly occurs at an elevation above both the Mik and Line 6 showings on a subtle topographic plateau, and below a ridge capped by stratigraphically higher rhyolite flows. The area surrounding the anomaly is mapped as crystal-lithic tuff; however outcrop in the area is scarce. The location of the anomaly, between the Mik and Line 6 showings, indicates epithermal quartz vein mineralization may be continuous between them. Cooley (2008) noted hydrothermal alteration of rhyolite flows, and suggested that they may obscure mineralization; particularly where they occur within faulted related topographic depressions. Mechanical trenching or diamond drilling is required to test this anomaly.

Reconnaissance soil geochemical sampling within the Shovelnose SE grid area has highlighted a number of modest gold anomalies associated with elevated arsenic and copper values. A single highly anomalous outlier soil sample returned assays of 1607.2 ppb Au in the southwest of the Shovelnose Property near Coley Creek. The sample occurs within a area dominated by a series of north trending ridges. This pattern of topography continues to the east where weak to moderate multi-line north-south trending anomalies are coincident with topographic low lineaments and mapped faults (Diakow and Barrios, 2008). Within the eastern half of the Shovelnose SE grid an approximately 3,500 m x 600 m northwest trending zone of anomalous copper, arsenic and gold in soil is coincident with an unnamed creek and mapped fault passing through the SHOVEL-19 and SHOVEL-20 claims. A broader zone of anomalous copper and arsenic values occurs at the southern end of the anomaly near Otter Creek. Based on detailed geologic mapping in the Mik and Line 6 showing areas, Cooley (2008) highlighted the importance of north-northeast and northwest trending faults as an important exploration vector. The 2011 Shovelnose SE soil geochemical results area are interpreted to support the presence of additional bedrock sources of mineralization localized along north and northwest trending fault structures. These anomalies warrant detailed prospecting and geologic mapping follow-up, and select infill soil sampling in areas of sparse outcrop.

Rock grab sampling during 2011 returned relatively few anomalous values. However, sample 11ADP002 that returned values of 6.83 g/t Au, is significant given that it lies on east side of a north-south oriented fault controlled creek gully separating it from

the Mik and Mik SE showings. It is unlikely that the sample represents mineralization transported down slope from the Mik Showing. This lends further support to the possibility of additional mineralization in this area. Additional prospecting efforts in this area of sparse outcrop are unlikely to result in additional discoveries. An extension of high density 50 m spaced soil sampling to the south and east of the Mik SE Showing should be completed followed by trenching if warranted.

Mechanical trenching of soil geochemical anomalies at the Mik and Line 6 showings did not result in the discovery of significant new sources of mineralization. The 749 ppb Au in soil anomaly at the Mik Showing remains unexplained. The presence of sloping topography and presumably increasing overburden depths to the northwest preclude further trench testing of the anomaly. The anomaly could be tested by diamond drilling, but this may be difficult to justify without a bedrock source of mineralization or, or the presence of a broader soil geochemical anomaly. At the Line 6 Showing, the magnitudes of trench rock chip gold values returned adequately explain the soil geochemical anomaly.

Diamond drilling at the Mik Showing that tested mineralization within trenches MK08-XT-01, MK08-XT-02, and MK08-XT-04 (drill holes 11-SH-001 and 11-SH-002) intersected gold mineralization at shallow depths consistent with that exposed on surface. Individual drill intersected gold assays were typically reduced compared to surface values; however the composite width of drilled gold zones was often greater. Historic surface rock grab samples within trenches MK08-XT-02 and MK08-XT-04 returned significantly higher gold assays than those a short distance to the north within MK08-XT-01 (Figure 14). Similarly, higher individual and composite assays were returned from drill hole 11-SH-001 compared to 11-SH-002. This suggests significant along-strike gold grade variation can be expected. Drill testing of thicker high grade colloform textured quartz veins exposed in hand trenches MK08-HT-01, MK08-HT-02 and MK08-HT-03, returned individual assays of up to 6.21 g/t Au over 40 cm within drill hole 11-SH-003; values that are in close agreement with surface rock chip samples. Deeper gold zones intersected within drill hole 11-SH-001 (and 11-SH-002) are interpreted to correlate with surface mineralization intersected in drill hole 11-SH-003. Additional diamond drilling is warranted to determine the continuity of mineralization between the east end of trench MK08-XT-02 and the drill hole collar of 11-SH-003.

Similar to the Mik Showing, individual drill intersected gold assays at the Line 6 Showing were typically reduced compared to surface values. The orientation of a broad zone of fine grained pyrite bearing mineralization intersected within drill hole 11-SH-004 is interpreted to be steeply west dipping to sub-vertical based on quartz vein to core axis angles and depth intersected relative to mineralization exposed within trench L609-XT-06. Near surface mineralization intersected within drill holes 11-SH-005 and 11-SH-006 correlates well with that exposed in surface trenches. Both drill holes exhibited a similar lithologic sequence comprising near surface crystal-lithic tuff containing siliceous fragments, underlain by unmineralized welded tuff and volcanic breccia rocks. Feldspar-phyric andesite rocks intersected at the bottom of 11-SH-006 correlate with andesite flows and breccias mapped on surface to the northeast (Figure 5). Diamond

drill testing of trenches L608-XT-04 and L608-XT-03, and the andesite and rhyolite flow filled, fault controlled topographic depression to the east of the Line 6 Showing is warranted (Figure 5).

A single drill hole (11-SH-007) testing Tower Showing intersected a consistently mineralized zone grading 0.21 g/t Au over 55.8 m with associated anomalous arsenic, mercury, molybdenum and antimony values. Mineralization is interpreted to dip moderately-steeply to the northeast and have a true width of at least 20 m. A prominent arsenic, mercury, molybdenum and antimony soil geochemical anomaly extends northwest a distance of 600 m from the Tower Showing. Given the presence of significant fine grained pyrite with Tower Showing mineralization it should respond well to Induced Polarization (IP) resistivity geophysical surveys.

RECOMMENDATIONS

Based on the presence of gold anomalies (soil and rock) and favourable geology, the Shovelnose Property is of high priority for follow-up exploration. Follow-up exploration is warranted and recommended for the Shovelnose Property. This work should focus on completing IP/resistivity surveys and drill testing at the Tower Showing; additional drill testing of the Mik and Line 6 showings; mechanical trenching of the soil geochemical anomaly between the Mik and Line 6 showings; rock grab and infill soil geochemical sampling of the Mik South and Shovelnose SE areas; and completion of detailed ground magnetic geophysical surveys between the Mike and Line 6 showings. The summer and fall 2012 program should comprise but not be limited to:

- (a) Completion of an IP/resistivity geophysical survey over the Tower Showing. The survey should comprise at least 9 northeast oriented survey lines spaced at 100 m intervals, employing a 25 m “a” spacing, designed to cover the Tower Showing and multi-element soil geochemical extends to the northwest (approximately 3.6 line-km at \$3,500/line-m = \$12,600)
- (b) Diamond drill testing of IP/resistivity anomalies at the Tower Showing; follow-up drilling at Mik Showing to determine the continuity of mineralization between trench MK08-XT-02 and the drill hole 11-SH-003; drill testing of trenches L608-XT-04 and L608-XT-03, and fault east of the Line 6 Showing (approximately 8 holes or 800 metres approximately \$300/ metre = \$240,000)
- (c) Mechanical trenching of the soil geochemical anomaly located between the Mik and Line 6 Showings (approximately 50 m at \$100/m = \$5,000)
- (d) Prospecting and soil geochemical program should include: infill grid soil sampling (50 x 50m spacing or approximately 70 samples) in the Mik South area; infill soil geochemical lines (200m x 50m spacing or approximately 200 samples) in the Shovelnose SE grid; detailed prospecting including the collection of approximately 150 rock samples in the Mik South and Shovelnose SE areas. In total 270 soil and 150 rock geochemical samples should be collected. As well, as part of a standard quality control/quality assurance program, ten percent (10%) of soil samples should be collected in

- duplicate (i.e. an additional 27 samples, 447 samples total)(approximately \$70/ sample all-up = \$31,290)
- (e) Ground magnetic geophysical surveys designed to extend coverage around and between the Mik and Line 6 showings (approximately 10 line-km or approximately \$400/line-km = \$4,000)

The total cost to complete the recommended exploration is \$292,890.00 (not including HST).

DATE AND SIGNATURE PAGE

This Report was prepared by the following Qualified Persons. The effective date of this report is April 9, 2012.

APEX Geoscience Limited



Kristopher J. Raffle, B.Sc., P.Geo.

Yuliana Proenza, B.Sc.

April 9, 2012
Edmonton, Alberta, Canada

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CERTIFICATE OF AUTHOR

- (a) I, Kristopher J. Raffle, residing at 1155 Seymour Street, Vancouver British Columbia, Canada do hereby certify that: I am a senior geologist of APEX Geoscience Limited (“APEX”), Site 200, 9797 – 45 Avenue, Edmonton, Alberta, Canada.
- (b) I am the author of this Report entitled: “Geologic Report for the Shovelnose Project, Merritt, British Columbia”, and am responsible for the preparation and supervision of the preparation of the entire Report.
- (c) I am a graduate of The University of British Columbia, Vancouver, British Columbia with a B.Sc. in Geology (2000) and have practiced my profession continuously since 2000. I have been a geologist of APEX Geoscience Limited since 2003. I have supervised exploration programs specific to gold, and base metals. I have completed National Instrument 43-101 reports for projects in British Columbia and Ontario. I am a Professional Geologist registered with APEGGA (Association of Professional Engineers, Geologists and Geophysicists), and APEGBC (Association of Professional Engineers and Geoscientists of British Columbia) and a ‘Qualified Person’ in relation to the subject matter of this Assessment Report.
- (d) I visited the Property that is the subject of this Report during February, June, August and September 2011.
- (e) I am responsible for the preparation of the entire Report.
- (f) I am considered independent of the issuer as defined in Section 1.4. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Westhaven Ventures Incorporated.
- (g) To the best of my knowledge, information and belief, the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Edmonton, Alberta, Canada

“Signed and Sealed”

April 9, 2012

Kristopher J. Raffle, B.Sc., P.Geol

APPENDIX 1

2011 SOIL SAMPLE LOCATION AND DESCRIPTION

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11CHS300	657551	5523004	CLEAR	CON	MOD	10	10+	2	DRY		LEVEL	85	5	10	70	LIGHT BRN	MED	MED	15	1	6	MIX				VAN11004545	0.25
11CHS301	657601	5523002	CLEAR	CON	MOD	30	5+	1	DRY		MID SLOPE	60	10	30	20	LIGHT BRN	MED	POOR	40	1	20	MIX				VAN11004545	0.25
11CHS302	652852	5524501	CLEAR	CON	MOD	15	10+	3	DRY		MID SLOPE	80	10	30	40	LIGHT BRN	MED	MED	20	1	2	MIX				VAN11004545	0.25
11CHS303	652899	5524501	CLEAR	CON	MOD	15	10+	2	DRY		MID SLOPE	75	20	20	35	LIGHT BRN	POOR	MED	25	2	7	MIX				VAN11004545	0.25
11CHS304	652953	5524504	CLEAR	CON	MOD	20	10	2	DRY		LEVEL	75	10	25	40	LIGHT BRN	MED	MED	25	1	8	MIX				VAN11004545	1.1
11CHS305	653053	5524500	CLEAR	CON	MOD	6	15+	4	MST		LEVEL	85	5	20	60	MED BRN	MED	MED	15	1	6	MIX				VAN11004545	2.4
11CHS306	653149	5524500	CLEAR	CON	MOD	5	8+	4	MST		LEVEL	85	5	20	60	MED BRN	MED	WELL	15	0.5	1.5	MIX				VAN11004545	58.3
11CHS307	653127	5524449	CLEAR	CON	MOD	30	10+	2	DRY		LEVEL	80	10	20	50	LIGHT BRN	MED	MED	20	1	7	MIX				VAN11004545	0.25
11CHS308	653026	5524452	CLEAR	CON	MOD	5	20+	3	MST		MID SLOPE	85	5	30	40	MED BRN	MED	WELL	15	0.25	2	MIX				VAN11004545	5.2
11CHS309	653151	5524401	CLEAR	CON	MOD	5	20+	3	MST		LEVEL	80	10	20	50	MED BRN	MED	WELL	20	1	2	MIX				VAN11004545	1.2
11CHS310	653049	5524405	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	85	5	30	40	MED BRN	MED	WELL	15	1	2	MIX				VAN11004545	1.8
11CHS311	652950	5524394	CLEAR	CON	MOD	7	10+	2	DRY		MID SLOPE	75	5	30	40	LIGHT BRN	MED	MED	25	1	6	MIX				VAN11004545	1.3
11CHS312	652844	5524397	CLEAR	CON	MOD	20	10+	3	WET		LEVEL	75	5	20	50	MED BRN	WELL	MED	25	1.5	4.5	MIX				VAN11004545	1.9
11CHS313	652900	5524299	CLEAR	CON	MOD	10	5+	1	DRY		LEVEL	70	5	25	40	LIGHT BRN	MED	MED	30	0.5	15	MIX				VAN11004545	0.25
11CHS314	653006	5524303	CLEAR	CON	MOD	15	10+	3	DRY		MID SLOPE	85	5	30	50	LIGHT BRN	MED	WELL	15	1	6	MIX				VAN11004545	0.6
11CHS315	653102	5524298	CLEAR	CON	MOD	12	8+	3	DRY		MID SLOPE	90	5	20	60	LIGHT BRN	MED	MED	10	0.5	2	MIX				VAN11004545	0.6
11CHS316	653204	5524301	CLEAR	CON	MOD	8	10+	3	DRY		MID SLOPE	90	5	15	70	LIGHT BRN	MED	WELL	10	0.5	5	MIX				VAN11004545	0.9
11CHS317	653301	5524302	CLEAR	CON	MOD	10	5+	2	DRY		MID SLOPE	80	5	15	60	LIGHT BRN	MED	WELL	20	0.5	20	MIX				VAN11004545	3.2
11CHS318	653400	5524302	CLEAR	CON	MOD	7	10+	3	DRY		MID SLOPE	90	10	20	60	MED BRN	MED	WELL	10	0.25	1	MIX				VAN11004545	0.25
11CHS319	653223	5524248	CLEAR	CON	MOD	15	10+	3	DRY		MID SLOPE	85	5	20	60	LIGHT BRN	MED	MED	15	0.5	6	MIX				VAN11004545	0.25
11CHS320	653124	5524254	CLEAR	CON	MOD	10	12+	3	DRY		MID SLOPE	85	5	30	15	LIGHT BRN	MED	WELL	15	1	4	MIX				VAN11004545	1.1
11CHS321	652846	5524200	CLEAR	CON	MOD	6	10+	3	DRY		LEVEL	75	5	30	40	MED BRN	MED	MED	25	1	3	MIX				VAN11004545	0.25
11CHS322	652950	5524199	CLEAR	CON	MOD	10	5+	3	DRY		LEVEL	80	10	20	50	MED BRN	MED	MED	20	1	6	MIX				VAN11004545	0.25
11CHS323	653048	5524201	CLEAR	DEC-CON	MOD	6	10+	3	DRY		MID SLOPE	80	10	20	50	MED BRN	MED	MED	20	1	20	MIX				VAN11004545	4.1
11CHS324	653149	5524199	CLEAR	DEC-CON	MOD	15	10+	3	DRY		MID SLOPE	85	5	20	60	MED BRN	MED	MED	15	0.5	3	MIX				VAN11004545	0.8
11CHS325	653250	5524201	CLEAR	GRASS-CON	MOD	8	5+	2	DRY		LEVEL	80	5	25	50	LIGHT BRN	MED	MED	20	0.5	4	MIX				VAN11004545	0.7
11CHS326	653321	5524148	CLEAR	GRASS-CON	MOD	10	10+	3	DRY		LEVEL	90	10	20	60	MED BRN	MED	WELL	10	0.25	2	MIX				VAN11004545	0.2
11CHS327	653426	5524152	CLEAR	CON	MOD	15	8+	3	DRY		LEVEL	80	10	20	50	LIGHT BRN	MED	MED	20	0.5	3	MIX				VAN11004545	0.9
11CHS328	653249	5524099	CLEAR	GRASS-CON	MOD	10	5+	3	DRY		LEVEL	90	10	30	50	MED BRN	MED	WELL	10	0.5	5	MIX				VAN11004545	1.3
11CHS329	653148	5524102	CLEAR	GRASS-CON	MOD	15	10+	3	MST		LEVEL	85	10	20	55	DARK BRN	WELL	MED	15	0.5	4	MIX				VAN11004545	0.7
11CHS330	657850	5522999	CLEAR	FORESTED	MOD	7	10+	3	MST		LEVEL	75	5	20	50	MED BRN	MED	MED	25	1	5	MIX				VAN11004545	0.25
11CHS331	658451	5522599	CLEAR	CON	MOD	5	8+	3	DRY		MID SLOPE	80	5	25	50	LIGHT BRN	MED	MED	20	1	4	MIX				VAN11004545	0.25
11CHS332	658348	5522600	CLEAR	CON	MOD	10	10+	2	DRY		MID SLOPE	75	5	20	50	LIGHT BRN	MED	MED	25	1	10	MIX				VAN11004545	0.25
11CHS333	658252	5522597	CLEAR	CON	MOD	15	15+	1	DRY		MID SLOPE	85	10	5	70	GREY LIGHT	POOR	MED	15	1	12	MIX				VAN11004545	0.25
11CHS334	658150	5522600	CLEAR	CON	MOD	5	10+	2	DRY		MID SLOPE	75	0	15	60	GREY LIGHT	POOR	MED	25	0.5	6	MIX				VAN11004545	0.25
11CHS335	658051	5522598	CLEAR	CON	MOD	5	5+	1	DRY		MID SLOPE	60	0	10	50	MED BRN	POOR	MED	40	1	4	MIX				VAN11004545	0.25
11CHS336	657951	5522602	CLEAR	CON	MOD	8	15+	4	MST		LEVEL	85	5	30	50	LIGHT BRN	MED	MED	15	2	6	MIX				VAN11004545	0.25
11CHS337	657852	5522600	CLEAR	CON	MOD	15	10+	3	MST		MID SLOPE	90	10	30	50	LIGHT BRN	MED	WELL	10	0.5	3	MIX				VAN11004545	0.25
11CHS338	657751	5522597	CLEAR	FORESTED CON	MOD	7	10+	4	MST		LEVEL	75	10	20	45	MED BRN	MED	MED	25	1.5	4	MIX				VAN11004545	0.25
11CHS339	657652	5522599	CLEAR	DEC-CON	MOD	15	10+	3	MST		MID SLOPE	80	5	25	50	LIGHT BRN	MED	MED	20	1.5	4	MIX				VAN11004545	0.25
11CHS340	657550	5522598	CLEAR	DEC-CON	MOD	5	15+	5	MST		MID SLOPE	95	5	30	60	LIGHT BRN	MED	WELL	5	0.25	1.5	MIX				VAN11004545	0.25
11CHS341	657452	5522604	CLEAR	DEC-CON	MOD	7	10+	3	DRY		MID SLOPE	70	5	25	40	LIGHT BRN	MED	MED	30	1	6	MIX				VAN11004545	0.25
11CHS342	657357	5522599	CLEAR	CON	MOD	10	8+	3	MST		MID SLOPE	70	5	25	40	LIGHT BRN	MED	MED	30	1.5	2.5	MIX				VAN11004545	0.25
11CHS343	658498	5522200	CLEAR	CON	MOD	5	10+	2	DRY		RIDGE CREST	60	5	25	30	LIGHT BRN	MED	POOR	40	1	2	MIX				VAN11004545	0.25
11CHS344	658403	5522200	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	70	0	30	40	LIGHT BRN	MED	MED	30	1	5	MIX				VAN11004545	0.25
11CHS345	658304	5522201	CLEAR	CON	MOD	5	10+	4	MST		MID SLOPE	90	0	55	35	MED BRN	MED	WELL	10	0.5	1.5	MIX				VAN11004545	0.25
11CHS346	657354	5522203	CLEAR	DEC-CON	MOD	5	10+	2	DRY		MID SLOPE	90	0	60	30	MED BRN	MED	WELL	10	0.5	1	MIX		ORGANICS		VAN11004545	0.25
11CHS347	657452	5522198	CLEAR	DEC-CON	MOD	5	15+	3	DRY		MID SLOPE	70	0	25	45	MED BRN	MED	MED	30	1	2	MIX				VAN11004545	0.25
11CHS348	657552	5522198	CLEAR	CON	MOD	5	20+	3	DRY		LEVEL	70	0	30	40	LIGHT BRN	MED	MED	30	1	4	MIX				VAN11004545	0.25
11CHS349	657649	5522201	CLEAR	CON	MOD	5	15+	2	DRY		MID SLOPE	50	0	20	30	LIGHT BRN	MED	MED	50	1	2	FELSIC				VAN11004545	0.25
11CHS350	657747	5522202	CLEAR	CON	MOD	5	15+	2	DRY		MID SLOPE	80	0	40	40	LIGHT BRN	MED	MED	20	1	4	MIX				VAN11004545	0.25
11CHS353	657848	5522199	CLEAR	CON	MOD	5	10+	4	MST		MID SLOPE	80	10	50	20	MED BRN	MED	MED	20	1.5	4	MIX				VAN11004545	0.25
11CHS355	657999	5522198	CLEAR	CON	MOD	5	10+	4	MST		MID SLOPE	70	0	40	30	MED BRN	MED	MED	30	1.5	5	MAFIC				VAN11004545	0.25
11CHS356	658104	5522201	CLEAR	DEC-CON	MOD	5	10+	2	DRY		MID SLOPE	70	0	20	50	LIGHT BRN	MED	MED	30	1	3	MIX				VAN11004545	0.25
11CHS357	658202	5522200	CLEAR	CON	MOD	5	20+	1	DRY		MID SLOPE	80	0	20	60	GREY LIGHT	MED	MED	20	1	3	MIX		LEACHY		VAN11004545	0.25
11CHS358	658452	5521800	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	80	30	10	40	MED BRN	MED	MED	20	1	2	MAFIC				VAN11004545	0.5
11CHS359	658349	5521799	CLEAR	CON	MOD	5	15+	4	MST		LEVEL	70	20	20	30	MED BRN	MED	MED	30	1	4	MIX				VAN11004545	0.25
11CHS360	658259	5521797	CLEAR	CON	MOD	5	15+	3	MST		LEVEL	80	20	30	30	LIGHT BRN	MED	MED	20	1	3	MIX				VAN11004545	0.25
11CHS361	658149	5521797	CLEAR	CON	MOD	5	15+	3	DRY		LEVEL	80	10	40	30	MED BRN	MED	MED	20								

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11CHS375	659747	5521401	CLEAR	CON	MOD	5	15+	3	DRY		LEVEL	70	0	40	30	LIGHT BRN	MED	MED	30	1	3	MIX	SA-SR			VAN11004545	0.25
11CHS376	659102	5520996	CLEAR	CON	MOD	5	10+	3	DRY		LEVEL	80	0	40	40	LIGHT BRN	MED	MED	30	1	3	MIX	SA-SR			VAN11004545	0.7
11CHS377	659199	5520998	CLEAR	CON	MOD	5	10+	3	DRY		LEVEL	70	0	30	40	LIGHT BRN	MED	MED	30	1	4	MIX	SA			VAN11004545	0.25
11CHS378	659303	5521002	CLEAR	CON	MOD	5	10+	3	DRY		LEVEL	70	0	40	30	LIGHT BRN	MED	MED	30	1	5	MIX	SR			VAN11004545	0.25
11CHS379	659404	5520998	CLEAR	CON	MOD	5	10+	3	DRY		LEVEL	80	10	40	30	LIGHT BRN	MED	MED	20	2	4	MIX	SR			VAN11004545	0.25
11CHS380	659498	5520998	CLEAR	CON	MOD	5	10+	4	DRY		LEVEL	85	5	50	30	MED BRN	MED	MED	15	1	3	MIX	A-SA			VAN11004545	0.25
11CHS381	659605	5521002	CLEAR	CON	MOD	5	10+	3	DRY		LEVEL	70	0	30	40	LIGHT BRN	MED	MED	30	1	5	MIX	SA			VAN11004545	0.9
11CHS382	660899	5521396	CLEAR	CON	MOD	5	10+	5	MST		LEVEL	80	20	40	20	MED BRN	MED	MED	20	1	3	MIX	SR-R			VAN11004545	0.25
11CHS383	660799	5521401	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	90	50	30	10	LIGHT BRN	MED	MED	10	0.5	1	MIX	SA-SR			VAN11004545	0.9
11CHS384	660898	5521402	CLEAR	FORESTED CON	MOD	5	10+	3	DRY		MID SLOPE	80	0	40	40	LIGHT BRN	MED	MED	20	1	2	MIX	A-SA-SR			VAN11004545	5.7
11CHS385	661050	5520999	CLEAR	CON	MOD	5	10+	3	DRY		RIDGE CREST	70	0	30	40	LIGHT BRN	MED	MED	30	2	6	MIX	SA-SR			VAN11004545	1.9
11CHS386	660901	5520997	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	70	0	30	40	LIGHT BRN	MED	MED	30	2	8	MIX	SA-SR			VAN11004545	0.25
11CHS387	660800	5520994	CLEAR	CON	MOD	5	10+	2	DRY		MID SLOPE	70	0	30	40	LIGHT BRN	MED	MED	30	1	3	MIX	SA-SR			VAN11004545	0.25
11CHS388	660700	5520992	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	70	0	30	40	LIGHT BRN	WELL	MED	30	1	2	MIX	SA-SR			VAN11004545	0.25
11CHS389	660605	5521002	CLEAR	CON	MOD	5	10+	4	DRY		MID SLOPE	85	0	50	35	LIGHT BRN	MED	MED	15	3	6	MIX	SR			VAN11004545	0.25
11CHS390	660502	5520997	CLEAR	CON	MOD	5	10+	2	DRY		MID SLOPE	70	0	40	30	LIGHT BRN	MED	MED	30	1	2	MIX	SA-SR			VAN11004545	0.25
11CHS391	660150	5520196	CLEAR	CON	MOD	5	10+	2	DRY		MID SLOPE	80	0	40	40	DARK BRN	MED	MED	20	1	1.5	MIX	SA			VAN11004545	0.25
11CHS392	660053	5520196	CLEAR	CON	MOD	5	10+	3	DRY		MID SLOPE	80	0	40	40	LIGHT BRN	MED	MED	20	1	3	MIX	SA-SR			VAN11004545	0.25
11DRS001	662099	5520599	CLR	CON, DEC	MOD	4	15+	3	DRY	MED	LEVEL	80	60	40	40	Light-BRN	MED	WELL	20	0.5	5	Mixed	SA			VAN11004545	0.25
11DRS002	662197	5520601	CLR	CON, DEC	MOD	4	15+	4	DRY	MED	LEVEL	85	60	40	40	Light-BRN	MED	WELL	15	0.5	5	Mixed	SA			VAN11004545	1.8
11DRS003	662300	5520598	CLR	CON, DEC	MOD	4	15+	4	DRY	MED	LEVEL	90	60	40	40	Light-BRN	MED	WELL	10	0.5	5	Mixed	SA			VAN11004545	0.25
11DRS004	662450	5520598	CLR	CON, DEC	MOD	10	20+	4	DRY	MED	LEVEL	90	60	40	40	Light-BRN	MED	WELL	10	0.5	5	Mixed	SA			VAN11004545	0.25
11DRS005	662550	5520600	CLR	CON, DEC	MOD	2	15+	4	DRY	MED	MID-SLOPE	80	60	40	40	Light-BRN	MED	MED	20	0.5	5	Mixed	SA	Sloping East		VAN11004545	1.5
11DRS006	663052	5520198	CLR	CON, DEC	MOD	4	15+	2	DRY	MED	LEVEL	60	60	40	40	Light-BRN	MED	WELL	40	0.5	5	Mixed	SR			VAN11004545	1.2
11DRS007	662950	5520200	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	MID-SLOPE	90	60	40	40	Light-BRN	MED	MED	10	0.5	5	Mixed	SA	Sloping East		VAN11004545	9
11DRS008	662849	5520201	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	85	10	70	20	Light-BRN	MED	WELL	15	0.5	2	Mixed	SA			VAN11004545	0.25
11DRS009	662751	5520197	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	85	5	55	40	Light-BRN	MED	WELL	15	0.5	5	Mixed	SA			VAN11004545	0.25
11DRS010	662651	5520202	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	MID-SLOPE	85	5	60	35	Light-BRN	MED	WELL	15	0.5	5	Mixed	SA	Sloping North		VAN11004545	0.25
11DRS011	662502	5520201	CLR	CON, DEC	MOD	4	15+	4	DRY	MED	LEVEL	70	10	50	40	Light-BRN	MED	MED	30	1	5	Mixed	SA			VAN11004545	0.25
11DRS012	662399	5520198	CLR	CON, DEC	MOD	4	15+	3	DRY	MED	LEVEL	90	10	40	50	Light-BRN	MED	WELL	10	0.25	1	Mixed	SA-SR			VAN11004545	0.25
11DRS013	661301	5519397	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	85	5	55	40	Light-BRN	MED	WELL	15	0.5	4	Mixed	SA-SR			VAN11004545	124
11DRS014	661147	5519399	CLR	CON, DEC	MOD	10	15+	4	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA-SR			VAN11004545	0.25
11DRS015	661052	5519398	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	MID-SLOPE	90	5	60	35	Light-BRN	MED	WELL	10	0.5	4	Mixed	SA-SR	Sloping South-west		VAN11004545	1.8
11DRS016	661451	5519400	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	90	5	60	35	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA-SR	Sloping East		VAN11004545	0.25
11DRS017	661545	5519399	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	MID-SLOPE	75	10	50	40	Light-BRN	MED	MED	25	0.5	5	Mixed	SA	Sloping East		VAN11004545	2.9
11DRS018	662250	5518999	CLR	CON, DEC	MOD	3	15+	4	DRY	MED	LEVEL	90	5	60	35	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA			VAN11004545	18.2
11DRS019	662151	5518998	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	85	5	55	40	Light-BRN	MED	WELL	15	0.5	3	Mixed	SA			VAN11004545	1.6
11DRS020	662053	5518997	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.5	2	Mixed	SA			VAN11004545	1.7
11DRS021	661952	5519003	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.5	2	Mixed	SR			VAN11004545	0.25
11DRS022	661849	5518997	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA			VAN11004545	1
11DRS023	661702	5519004	CLR	CON, DEC	MOD	6	15+	2	DRY	MED	LEVEL	70	10	50	40	Med-BRN	MED	MED	30	0.5	5	Mixed	SA-SR			VAN11004545	2
11DRS024	661600	5518998	CLR	CON, DEC	MOD	6	15+	2	DRY	MED	LEVEL	70	10	50	40	Med-BRN	MED	MED	30	0.5	5	Mixed	SA-SR			VAN11004545	1.8
11DRS025	661504	5519002	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	MID-SLOPE	70	10	40	20	Light-GRY	Poor	MED	30	0.5	7	Mixed	A-SA	Sloping East		VAN11004545	2.2
11DRS026	661400	5519000	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	70	10	50	40	Med-BRN	MED	MED	30	0.5	5	Mixed	SA-SR			VAN11004545	0.25
11DRS027	661300	5519001	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	90	5	60	35	Light-BRN	MED	WELL	10	0.5	2	Mixed	SA			VAN11004545	0.8
11DRS028	661199	5519002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	90	5	55	40	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA			VAN11004545	0.25
11DRS029	661102	5519002	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	90	5	55	40	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA			VAN11004545	0.25
11DRS030	661000	5518999	CLR	CON, DEC	MOD	8	20+	2	DRY	MED	LEVEL	60	20	40	40	Dark-BRN	MED	MED	40	0.5	8	Mixed	SA-SR			VAN11004545	0.25
11DRS031	659197	5518598	CLR	CON, DEC	MOD	6	15+	3	DRY	MED	MID-SLOPE	90	5	55	40	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA-SR	Sloping East		VAN11004545	0.25
11DRS032	659251	5518597	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	5	55	40	Med-BRN	MED	MED	20	0.5	5	Mixed	SA-SR	Sloping East		VAN11004545	1.3
11DRS033	659401	5518597	CLR	CON, DEC	MOD	8	15+	3	DRY	MED	MID-SLOPE	85	5	60	35	Light-BRN	MED	WELL	15	0.5	4	Mixed	SA-SR	Sloping West		VAN11004545	2.4
11DRS034	659499	5518602	CLR	CON, DEC	MOD	4	15+	4	DRY	MED	LEVEL	90	5	60	35	Light-BRN	MED	WELL	10	0.5	3	Mixed	SA-SR			VAN11004545	0.25
11DRS035	661951	5519399	CLR	CON, DEC	MOD	8	15+	3	DRY	MED	LEVEL	85	5	55	40	Light-BRN	MED	WELL	15	0.5	5	Mixed	SA-SR			VAN11004494	43.4
11DRS036	662452	5519000	CLR	CON, DEC	MOD	6	15+	3	DRY	MED	LEVEL	80	10	55	35	Light-BRN	MED	WELL	20	0.5	5	Mixed	SA-SR			VAN11004494	2.3
11DRS037	662352	5519002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	85	10	55	35	Light-BRN	MED	WELL	15	0.5	4	Mixed	SA-SR	Sloping West		VAN11004494	1
11DRS038	662952	5518600	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	55	35	Light-BRN	MED	WELL	20	0.5	5	Mixed	SA-SR			VAN11004494	1.4
11DRS039	663050	5518600	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	90	5	45	50	Light-BRN	MED	WELL	10	0.5	4	Mixed	SA-SR	Sloping West		VAN11004494	1
11DRS040	663147	5518602	CLR	CON,																							

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11DRS055	660901	5517797	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	80	10	45	45	Dark-BRN	MED	WELL	20	0.4	5	Mixed	SA-SR			VAN11004494	0.25
11DRS056	660998	5517799	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	MID-SLOPE	80	5	55	40	Dark-BRN	MED	WELL	20	0.5	2	Mixed	SA-SR		Sloping West	VAN11004494	1.6
11DRS057	661100	5517798	CLR	CON, DEC	MOD	3	15+	2	DRY	MED	MID-SLOPE	60	10	45	45	Light-BRN	MED	POOR	40	0.5	5	Mixed	SA-SR		Sloping West	VAN11004494	0.25
11DRS058	661201	5517801	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.5	3	Mixed	SA-SR		Sloping West	VAN11004494	0.25
11DRS059	661301	5517797	CLR	CON, DEC	MOD	3	15+	3	DRY	MED	LEVEL	80	10	45	45	Med-BRN	MED	MED	20	0.25	4	Mixed	SA-SR			VAN11004494	0.25
11DRS060	661399	5517796	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	10	45	45	Med-BRN	MED	MED	30	0.5	4	Mixed	SA-SR		Sloping East	VAN11004494	0.25
11DRS061	661501	5517801	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	60	10	55	35	Med-BRN	MED	POOR	40	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS062	661599	5517799	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Med-BRN	MED	POOR	20	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS063	661701	5517800	CLR	CON, DEC	MOD	4	15+	3	DRY	MED	LEVEL	70	10	45	45	Light-BRN	MED	MED	30	0.3	3	Mixed	SA-SR			VAN11004494	0.25
11DRS064	661800	5517800	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	85	5	45	50	Light-BRN	MED	WELL	15	0.25	2	Mixed	SA-SR			VAN11004494	0.25
11DRS065	661905	5517798	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	95	5	55	45	Light-BRN	MED	WELL	5	0.1	3	Mixed	SA-SR			VAN11004494	0.25
11DRS066	662002	5517800	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	Lower Slope	90	5	45	50	Light-BRN	MED	WELL	10	0.25	3	Mixed	SA-SR		Sloping East	VAN11004494	1.1
11DRS067	662152	5517802	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	60	10	45	45	Light-BRN	MED	WELL	40	0.5	5	Mixed	SA-SR			VAN11004494	1.1
11DRS068	662249	5517803	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	75	10	45	45	Light-BRN	MED	MED	25	0.4	5	Mixed	SA-SR			VAN11004494	0.25
11DRS069	662353	5517801	CLR	CON, DEC	MOD	8	15+	4	DRY	MED	LEVEL	90	10	45	45	Med-BRN	MED	WELL	10	0.2	3	Mixed	SA-SR			VAN11004494	1.2
11DRS070	662449	5517803	CLR	CON, DEC	MOD	6	15+	3	DRY	MED	MID-SLOPE	80	5	45	45	Med-BRN	MED	WELL	20	0.5	3	Mixed	SA-SR		Sloping East	VAN11004494	0.25
11DRS071	662551	5517803	CLR	CON, DEC	MOD	7	15+	2	DRY	MED	LEVEL	60	15	45	40	Light-BRN	Poor	POOR	40	0.5	5	Mixed	SA-SR			VAN11004494	4.4
11DRS072	662648	5517804	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	10	45	45	Light-BRN	MED	MED	30	0.5	4.5	Mixed	SA-SR		Sloping East	VAN11004494	1.5
11DRS073	662750	5517803	CLR	CON, DEC	MOD	4	15+	3	DRY	MED	MID-SLOPE	75	10	45	45	Light-BRN	MED	MED	25	0.25	4	Mixed	SA-SR		Sloping East	VAN11004494	0.7
11DRS074	662810	5517801	CLR	CON, DEC	MOD	6	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.4	5	Mixed	SA-SR		Sloping West	VAN11004494	0.9
11DRS075	662904	5517796	CLR	CON, DEC	MOD	8	15+	2	DRY	MED	LEVEL	60	20	60	20	Light-BRN	Poor	POOR	40	0.5	5	Mixed	SA-SR			VAN11004494	1.8
11DRS076	664000	5517803	CLR	CON, DEC	MOD	8	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Med-BRN	MED	MED	20	0.25	5	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS077	663949	5517801	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	5	45	50	Light-BRN	MED	MED	20	0.4	5	Mixed	SA-SR			VAN11004494	0.25
11DRS078	663851	5517803	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	Ridge Crest	55	10	45	45	Med-BRN	Poor	POOR	45	0.5	10	Mixed	SA-SR			VAN11004494	1.7
11DRS079	663749	5517802	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	MID-SLOPE	60	10	45	45	Med-BRN	Poor	POOR	40	0.5	5	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS080	663602	5517800	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	10	45	45	Med-BRN	MED	MED	30	0.5	5	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS081	663503	5517802	CLR	CON, DEC	MOD	5	15+	3	MST	MED	LEVEL	70	10	45	45	Med-BRN	MED	MED	30	0.3	5	Mixed	SA-SR			VAN11004494	0.25
11DRS082	663400	5517804	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	80	5	45	45	Med-BRN	MED	WELL	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS083	663301	5517804	CLR	CON, DEC	MOD	3	15+	3	MST	MED	MID-SLOPE	70	5	60	35	Med-BRN	MED	WELL	30	0.2	5	Mixed	SA-SR		Sloping North-East	VAN11004494	0.25
11DRS084	663201	5517801	CLR	CON, DEC	MOD	5	15+	4	MST	MED	MID-SLOPE	80	5	45	45	Med-BRN	MED	MED	20	0.3	5	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS085	663101	5517802	CLR	CON, DEC	MOD	5	15+	4	MST	MED	MID-SLOPE	80	5	45	50	Med-BRN	MED	WELL	20	0.2	5	Mixed	SA-SR		Sloping South-East	VAN11004494	17.6
11DRS086	662999	5517802	CLR	CON, DEC	MOD	5	15+	4	MST	MED	LEVEL	85	5	50	45	Med-BRN	MED	WELL	15	0.25	5	Mixed	SA-SR			VAN11004494	0.25
11DRS087	663246	5517002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	Lower Slope	80	10	45	45	Med-BRN	MED	MED	20	0.4	5	Mixed	SA-SR		Sloping West	VAN11004494	1.9
11DRS088	663199	5517005	CLR	CON, DEC	MOD	5	15+	3	MST	MED	LEVEL	90	40	50	10	Med-BRN	MED	POOR	20	0.1	2	Mixed	SR			VAN11004494	0.9
11DRS089	663096	5517003	CLR	CON, DEC	MOD	5	15+	1	DRY	MED	MID-SLOPE	10	80	10	10	Med-GRY	Poor	POOR	90	2	5	Mixed	SR		Sloping South-East, Very poor sample	VAN11004494	1.3
11DRS090	663002	5517002	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	60	10	45	45	Dark-BRN	MED	POOR	40	0.5	3	Mixed	SA			VAN11004494	4.2
11DRS091	662902	5517002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Med-BRN	MED	MED	20	0.3	4	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS092	662802	5517002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	85	10	45	45	Light-BRN	MED	WELL	15	0.4	5	Mixed	SA-SR			VAN11004494	0.25
11DRS093	662597	5517000	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	Lower Slope	80	10	45	45	Light-BRN	MED	MED	20	0.3	5	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS094	662553	5517000	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	WELL	20	0.3	4	Mixed	SA-SR		Sloping South-East	VAN11004494	0.25
11DRS095	662451	5517001	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.5	4	Mixed	SA-SR			VAN11004494	0.25
11DRS096	662348	5516999	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.3	5	Mixed	SA-SR			VAN11004494	0.25
11DRS097	660949	5517000	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS098	661049	5517000	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR		Sloping South-West	VAN11004494	0.25
11DRS099	661153	5517002	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.1	1	Mixed	SA-SR			VAN11004494	0.25
11DRS100	661252	5517004	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	LEVEL	90	5	50	45	Light-BRN	MED	WELL	10	0.1	2	Mixed	SA-SR			VAN11004494	0.25
11DRS102	661399	5517002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR		Sloping South	VAN11004494	0.25
11DRS103	661496	5517003	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	75	10	45	45	Light-BRN	MED	MED	25	0.5	5	Mixed	SA-SR		Sloping South	VAN11004494	1.5
11DRS104	661601	5516997	CLR	CON, DEC	MOD	5	15+	4	DRY	MED	MID-SLOPE	90	5	55	40	Light-BRN	MED	WELL	10	0.1	2	Mixed	SA-SR		Sloping West	VAN11004494	1.2
11DRS105	661746	5517004	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS106	661853	5516998	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	10	50	40	Light-BRN	MED	MED	30	0.5	5	Mixed	SA-SR		Sloping South	VAN11004494	0.25
11DRS107	661948	5517002	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	75	10	45	45	Light-BRN	MED	MED	25	0.5	5	Mixed	SA-SR			VAN11004494	1.5
11DRS108	662049	5517000	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR		Sloping South	VAN11004494	0.6
11DRS109	662151	5516991	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	75	15	45	40	Light-BRN	MED	MED	25	0.5	5	Mixed	SA-SR		Sloping South	VAN11004494	0.7
11DRS110	661803	5516603	CLR	CON, DEC	MOD	5	15+	1	DRY	MED	MID-SLOPE	40	20	60	20	Light-BRN	Poor	POOR	60	0.8	10	Mixed	SA-SR		Sloping South	VAN11004494	0.25
11DRS111	661701	5516601	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	70	10	45	45	Light-BRN	MED	POOR	30	0.5	5	Mixed	SA-SR				

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11DRS116	661202	5516599	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	90	10	45	45	Light-BRN	MED	WELL	10	0.25	2	Mixed	SA-SR			VAN11004494	0.25
11DRS117	661104	5516598	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	85	5	50	45	Med-BRN	MED	WELL	15	0.25	2	Mixed	SA-SR			VAN11004494	0.5
11DRS118	660996	5516604	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS119	660848	5516601	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	15	45	40	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	2.8
11DRS120	659902	5517802	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS121	659803	5517796	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	Lower Slope	80	10	45	45	Light-BRN	MED	MED	20	0.5	3	Mixed	SA-SR	Sloping East		VAN11004494	0.9
11DRS122	659700	5517804	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR			VAN11004494	0.25
11DRS123	659603	5517797	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.25	4	Mixed	SA-SR	Sloping West		VAN11004494	0.25
11DRS124	659602	5517800	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS125	659387	5517799	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	85	5	50	45	Light-BRN	MED	WELL	15	0.25	1	Mixed	SA-SR	Sloping West		VAN11004494	0.5
11DRS126	659239	5517797	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	10	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS127	659205	5517800	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	30	40	30	Light-BRN	MED	MED	30	0.25	3	Mixed	SA-SR	Sloping West		VAN11004494	0.25
11DRS128	658802	5517403	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	70	10	45	45	Light-BRN	MED	MED	30	0.3	4	Mixed	SA-SR			VAN11004494	0.25
11DRS129	658899	5517397	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	70	30	40	30	Light-BRN	MED	MED	30	0.25	2	Mixed	SA-SR			VAN11004494	0.25
11DRS130	658993	5517407	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	Ridge Crest	80	20	45	35	Light-BRN	MED	MED	20	0.25	5	Mixed	SA-SR			VAN11004494	1
11DRS131	659146	5517399	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	20	40	40	Light-BRN	MED	MED	20	0.3	5	Mixed	SA-SR	Sloping West		VAN11004494	1.5
11DRS132	659248	5517401	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	20	45	35	Light-BRN	MED	MED	20	0.25	5	Mixed	SA-SR	Sloping West		VAN11004494	0.25
11DRS133	659350	5517398	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	20	40	40	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR	Sloping West		VAN11004494	0.25
11DRS134	659502	5517394	CLR	CON, DEC	MOD	5	15+	2	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.9
11DRS135	659550	5517400	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS136	659651	5517397	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	20	40	40	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS137	659802	5517402	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11DRS138	659852	5517395	CLR	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	20	40	40	Light-BRN	MED	MED	20	0.25	2	Mixed	SA-SR			VAN11004494	1.2
11DRS139	660297	5516601	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	20	40	40	Light-BRN	MED	MED	30	0.25	3	Mixed	SA-SR	Sloping SW		VAN11004494	1.3
11DRS140	660402	5516601	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	70	20	40	40	Light-BRN	MED	MED	30	0.25	4	Mixed	SA-SR	Sloping SW		VAN11004494	0.6
11DRS141	660501	5516600	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	1.7
11DRS142	660603	5516601	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	15	45	40	Light-BRN	MED	MED	20	0.5	5	Mixed	SA-SR	Sloping E		VAN11004494	0.25
11DRS143	660699	5516601	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.3	5	Mixed	SA-SR	Sloping E		VAN11004494	0.25
11DRS144	660800	5516600	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	LEVEL	80	10	45	45	Light-BRN	MED	MED	20	0.25	5	Mixed	SA-SR			VAN11004494	0.5
11DRS145	662003	5516597	CLDY	CON, DEC	MOD	5	15+	3	DRY	MED	MID-SLOPE	80	10	45	45	Light-BRN	MED	MED	20	0.25	3	Mixed	SA-SR			VAN11004494	0.25
11EHS500	657299	5523000	Clear	con,dec	mod	5	10+	3	dry	med	mid slope	80	10	50	20	light brown	well	med	20	1.5	5	mafic	A	NE	Abundant leached material.	VAN11004230	0.7
11EHS501	657351	5522999	Clear	con,dec	mod	15	5+	1	dry	med	mid slope	40	5	30	5	light brown	med	med	60	1	10	mixed	A-SR	NE	Unsure if B horizon, lots of clasts, Till.	VAN11004230	0.25
11EHS502	657401	5522999	Clear	con,dec	mod	40	20+	2	moist	med	mid slope	90	10	0	80	dark brown	well	med	10	1	1	mixed	SA-SR	E	Lots of organics. Unsure if B horizon, lots of clasts, Till.	VAN11004230	0.25
11EHS503	657448	5523002	Clear	con,dec	mod	40	10+	2	moist	med	mid slope	50	5	40	5	light brown	med	med	50	2	10	mixed	SR	E	Sample taken 5m off coordinates. Very leachy material.	VAN11004230	0.25
11EHS504	657499	5523000	Clear	con,dec	mod	40	10+	2	dry	med	mid slope	80	5	15	60	light brown	med	med	20	0.5	1	mixed	SA-SR	E	Abundant leached material.	VAN11004230	2.9
11EHS505	653001	5524502	Clear	con,dec	mod	60	40+	2	dry	med	mid slope	60	10	10	40	light brown	med	poor	40	0.5	15	mixed	SA-SR	W	Abundant leached material.	VAN11004230	12.7
11EHS506	653100	5524500	Clear	con,dec	mod	15	10+	2	dry	med	mid slope	70	10	20	40	light brown	med	med	30	1	9	mixed	SA-SR	W	Abundant leached material.	VAN11004230	26.6
11EHS507	653176	5524450	Clear	con,dec	mod	10	10+	4	moist	med	mid slope	80	20	40	20	med brown	med	well	20	1	2	mafic	SA	W	Abundant leached material.	VAN11004230	15.5
11EHS508	653075	5524450	Clear	con,dec	mod	40	10+	2	dry	med	mid slope	60	10	10	40	light brown	med	med	40	1	10	mixed	SA-SR	W	Abundant leached material.	VAN11004230	1.4
11EHS509	653200	5524401	Clear	con,dec	mod	10	10+	3	moist	med	level	80	20	40	20	med brown	med	med	20	1	4	mafic	SA-SR	N/A		VAN11004230	13.5
11EHS510	653100	5524401	Clear	con,dec	mod	5	10+	3	dry	med	level	80	10	30	40	dark brown	well	med	20	1	5	mafic	SA-SR	N/A		VAN11004230	0.8
11EHS511	653000	5524399	Clear	con,dec	mod	10	5+	2	dry	med	mid slope	70	10	10	50	light brown	well	med	30	1	3	felsic	SR-R	W	Abundant leached material. On a talus slope.	VAN11004230	5.3
11EHS512	652900	5524399	Clear	con,dec	mod	10	5+	1	dry	med	level	70	10	10	50	light brown	well	med	30	1	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS513	652851	5524301	Clear	con,dec	mod	10	5+	2	dry	med	mid slope	60	10	10	40	light brown	med	poor	40	1	5	felsic	A-SR	N/A		VAN11004230	0.25

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS514	652950	5524300	Clear	con.dec	mod	30	10+	2	wet	med	level	95	10	25	60	dark brown	well	well	5	2	5	mixed	SA	N/A	Abundant organic material. Sample taken 5m away from coordinates.	VAN11004230	0.6
11EHS515	653052	5524300	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	80	20	20	40	light brown	well	med	20	0.5	3	mixed	SA-SR	SW	Abundant leached material.	VAN11004230	0.25
11EHS516	653151	5524300	Clear	con.dec	mod	5	10+	3	dry	med	level	85	20	50	15	light brown	well	med	15	1	2	mixed	SA	N/A	Abundant leached material.	VAN11004230	0.25
11EHS517	653251	5524300	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	10	20	45	light brown	well	med	25	1	2	mafic	SA-SR	S	Abundant leached material.	VAN11004230	4
11EHS518	653351	5524300	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	10	20	40	light brown	med	med	30	2	5	felsic	SA	S	Abundant leached material.	VAN11004230	0.25
11EHS519	653275	5524252	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	15	20	40	light brown	med	med	25	1	5	felsic	SR	S	Abundant leached material.	VAN11004230	0.6
11EHS520	653174	5524251	Clear	con.dec	mod	5	5+	3	dry	med	mid slope	75	10	40	25	dark brown	med	med	25	0.5	2	mixed	SA	S	Abundant leached material.	VAN11004230	1.1
11EHS521	653075	5524251	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	40	30	light brown	med	well	20	1	2	mixed	SR	S	Abundant leached material.	VAN11004230	0.9
11EHS522	652900	5524199	Clear	con.dec	mod	10	10+	3	dry	med	level	70	5	40	25	light brown	med	med	30	1	2	felsic	SR	N/A	Abundant leached material.	VAN11004230	0.8
11EHS523	652999	5524199	Clear	con.dec	mod	5	5+	4	dry	med	mid slope	85	10	55	20	dark brown	med	well	15	0.5	1.5	mixed	SR	N/A		VAN11004230	1
11EHS524	653101	5524201	Clear	con.dec	mod	10	5+	3	dry	med	mid slope	70	10	40	20	med brown	med	med	30	1	4	mixed	SA-SR	S		VAN11004230	1
11EHS525	653199	5524200	Clear	con.dec	mod	10	5+	3	dry	med	mid slope	70	5	40	25	light brown	med	med	30	0.5	3	mixed	SA-SR	S	Abundant leached material.	VAN11004230	0.7
11EHS526	653276	5524151	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	5	40	25	med brown	med	med	30	0.5	3	mixed	SA-SR	S		VAN11004230	1
11EHS527	653374	5524149	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	0	50	30	dark brown	med	well	20	1	3	mafic	SA	S		VAN11004230	1.3
11EHS528	653476	5524150	Clear	con.dec	mod	5	10+	3	dry	med	level	75	10	40	25	dark brown	med	med	25	1	4	mafic	SA-SR	N/A		VAN11004230	0.25
11EHS529	653198	5524100	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	50	20	dark brown	med	med	20	0.5	5	mafic	SA-SR	S		VAN11004230	0.25
11EHS530	653102	5524099	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	dark brown	med	med	20	0.5	4	mixed	SA-SR	N/A		VAN11004230	4.7
11EHS532	653049	5524101	Clear	con.dec	mod	15	10+	2	dry	med	level	70	5	20	45	dark brown	well	med	30	2	6	felsic	SA-SR	N/A		VAN11004230	1.2
11EHS533	653102	5524002	Clear	con.dec	mod	10	5+	3	moist	med	level	70	30	0	40	light brown	well	med	30	1.5	4	felsic	SA-SR	N/A	Sample taken 15m off coordinates due to a swamp.	VAN11004230	3.9
11EHS534	653149	5524001	Clear	con.dec	mod	10	10+	3	dry	med	level	70	10	20	40	med brown	med	med	30	1	3	mixed	SA	N/A	some organics	VAN11004230	1.6
11EHS535	653202	5524001	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	30	40	med brown	med	med	20	1	3	mafic	SA-SR	N/A		VAN11004230	0.25
11EHS536	653251	5523999	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	75	15	40	20	light brown	med	med	25	1.5	4	mixed	SA-SR	S		VAN11004230	1.2
11EHS537	653477	5523952	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	75	5	30	40	light brown	med	med	25	1	3	felsic	SA-R	S		VAN11004230	6.2
11EHS538	653525	5523950	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	75	5	40	20	med brown	well	med	25	1	3	mixed	SR-R	S		VAN11004230	3.8
11EHS539	653575	5523949	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	75	5	30	40	light brown	med	med	25	1	3	felsic	SA-R	S		VAN11004230	0.8
11EHS540	653626	5523949	Clear	con.dec	mod	10	10+	1	dry	med	mid slope	70	10	50	20	dark brown	well	med	30	3	15	mafic	SA	S	abundant organics	VAN11004230	6.8
11EHS541	653675	5523949	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	5	40	30	med brown	med	med	25	1	4	mixed	SA	S		VAN11004230	1.2
11EHS542	653401	5523749	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	5	35	40	light brown	med	med	20	1	4	mafic	SA-SR	SE		VAN11004230	1.1
11EHS543	653451	5523750	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	5	40	25	light brown	med	med	30	2	3	mafic	SA	S	In a small valley	VAN11004230	1.4
11EHS544	653500	5523750	Clear	con.dec	mod	10	5+	3	dry	med	mid slope	70	0	40	30	med brown	med	med	30	0.5	2	mafic	SA	S		VAN11004230	0.25
11EHS545	653551	5523751	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	5	40	30	med brown	med	med	25	2	3	mafic	SA	S		VAN11004230	0.25
11EHS547	653598	5523750	Clear	con.dec	mod	5	10+	2	moist	med	level	70	30	0	0	dark brown	med	med	30	2	3	mixed	SR	N/A	Abundant organics	VAN11004230	4.6
11EHS548	653650	5523750	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	0	40	30	light brown	poor	med	30	1.5	3	mixed	A-SR	S		VAN11004230	0.25
11EHS549	653700	5523749	Clear	con.dec	mod	5	5+	2	dry	med	mid slope	70	0	40	30	light brown	med	med	70	2	5	mixed	SA	S	Sie of duplicate 11EHS550	VAN11004230	1
11EHS551	657649	5523003	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	40	5	25	10	light brown	med	poor	40	5	15	felsic	A	S	Abundant leaching material	VAN11004230	0.25
11EHS552	657700	5523000	Clear	con.dec	mod	20	20+	1	dry	med	mid slope	70	0	10	60	grey	med	med	70	0.5	1	mixed	SR-R	S	Abundant leaching material	VAN11004230	0.5

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Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS553	657750	5522999	Clear	con.dec	mod	10	10+	1	dry	med	level	60	0	20	40	grey	med	med	40	1.5	4	mixed	A-SA	N/A	Abundant leaching material	VAN11004230	0.25
11EHS554	657799	5523000	Clear	con.dec	mod	25	10+	2	wet	med	mid slope	80	0	40	40	light brown	med	med	20	2	3	felsic	SR-R	E	Abundant leached and organic material.	VAN11004230	0.25
11EHS555	658400	5522599	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	40	20	light brown	med	med	20	1	6	mixed	SA-SR	E	Abundant leaching material	VAN11004230	0.25
11EHS556	658299	5522600	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	10	25	40	light brown	med	med	25	1	3	mixed	SA-SR	S	Abundant leaching material	VAN11004230	0.25
11EHS557	658199	5522601	Clear	con.dec	mod	10	5+	3	dry	med	mid slope	70	0	30	40	light brown	med	med	30	1	3	mixed	SA-SR	SE	Abundant leaching material	VAN11004230	0.6
11EHS558	658102	5522601	Clear	con.dec	mod	5	10+	1	dry	med	mid slope	75	0	15	60	light brown	med	med	25	1	2	mixed	SA-R	SE	Abundant leaching material	VAN11004230	0.25
11EHS559	657997	5522599	Clear	con.dec	mod	5	10+	4	moist	med	mid slope	80	20	40	20	med brown	med	med	20	1	2	mixed	SA-SR	SE	Good soil compared with last stations	VAN11004230	0.25
11EHS560	657900	5522600	Clear	con.dec	mod	10	10+	3	dry	med	level	75	5	30	40	light brown	med	med	25	0.5	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS561	657799	5522598	Clear	con.dec	mod	5	10+	4	dry	med	mid slope	80	5	40	35	light brown	med	med	20	1	2	felsic	SR	SE		VAN11004230	0.25
11EHS562	657701	5522600	Clear	con.dec	mod	10	10+	4	moist	med	mid slope	80	5	35	40	med brown	med	med	20	1	3	mixed	SA-SR	SE		VAN11004230	0.25
11EHS563	657600	5522601	Clear	con.dec	mod	5	10+	4	moist	med	mid slope	80	5	40	35	med brown	med	med	20	0.5	1	mixed	SA-SR	E		VAN11004230	0.25
11EHS564	657500	5522600	Clear	con.dec	mod	5	10+	5	moist	med	mid slope	90	0	40	50	med brown	med	well	10	0.5	1	mixed	SA-SR	E		VAN11004230	0.8
11EHS565	657400	5522601	Clear	con.dec	mod	5	15+	4	dry	med	level	95	5	50	40	light brown	med	well	5	0.5	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS566	657299	5522601	Clear	con.dec	mod	5	10=	4	dry	med	level	90	10	60	30	light brown	med	well	10	0.5	1.5	mixed	SR-R	N/A	Abundant leaching material	VAN11004230	0.25
11EHS567	658551	5522201	Clear	con.dec	mod	5	10+	3	moist	med	mid slope	75	5	20	50	light brown	med	med	25	2	5	mixed	A-SA	SE		VAN11004230	0.25
11EHS568	658450	5522202	Clear	con.dec	mod	7	15+	3	moist	med	level	85	5	30	50	light brown	med	well	15	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.5
11EHS569	658348	5522199	Clear	con.dec	mod	8	10+	3	moist	med	mid slope	85	5	20	60	light brown	med	med	15	0.5	3	mixed	SA-SR	SE		VAN11004230	0.25
11EHS571	657299	5522201	Clear	con.dec	mod	5	15+	3	dry	med	mid slope	85	5	20	60	med brown	med	med	15	0.5	5	mixed	SA-SR	SE		VAN11004230	0.25
11EHS572	657399	5522200	Clear	con.dec	mod	6	10+	3	dry	med	mid slope	80	5	25	50	dark brown	med	med	20	1	5	mixed	SA-SR	SE		VAN11004230	0.25
11EHS573	657500	5522199	Clear	con.dec	mod	10	10+	3	dry	med	level	90	5	35	50	med brown	med	well	10	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS574	657600	5522201	Clear	con.dec	mod	15	10+	3	dry	med	mid slope	90	5	25	60	light brown	med	well	10	0.25	2	mixed	SA-SR	SE		VAN11004230	0.25
11EHS575	657699	5522200	Clear	con.dec	mod	15	10+	1	dry	med	mid slope	90	0	30	60	light brown	poor	med	10	0.5	3	mixed	A-SR	SE		VAN11004230	0.25
11EHS576	657800	5522200	Clear	con.dec	mod	10	15+	4	moist	med	level	90	5	25	60	light brown	med	well	10	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS577	657899	5522198	Clear	con.dec	mod	15	10+	2	dry	med	mid slope	80	5	25	50	light brown	med	med	20	1	5	mixed	A-SA	E		VAN11004230	0.25
11EHS578	657948	5522201	Clear	con.dec	mod	10	20+	4	moist	med	mid slope	90	5	15	70	med brown	med	well	10	0.25	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS579	658051	5522202	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	80	5	25	50	light brown	poor	med	20	0.5	4	mixed	A-SR	E		VAN11004230	0.25
11EHS580	658150	5522200	Clear	con.dec	mod	10	10+	1	dry	med	mid slope	85	0	25	60	light brown	poor	med	15	1	10	mixed	A-SR	W (VALLEY)		VAN11004230	0.25
11EHS581	658251	5522202	Clear	con.dec	mod	10	10+	2	dry	med	level	90	5	15	70	light brown	med	med	10	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.6
11EHS582	658502	5521801	Clear	con.dec	mod	60	15+	5	moist	med	level	95	25	10	60	med brown	med	well	5	0.25	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS583	658399	5521800	Clear	con.dec	mod	10	20+	5	moist	med	mid slope	95	20	10	65	med brown	med	well	5	0.5	2.5	mixed	SA-SR	SE		VAN11004230	0.25
11EHS585	658298	5521803	Clear	con.dec	mod	10	20+	3	moist	med	mid slope	90	20	10	60	light brown	med	med	10	0.5	3	mixed	SA-SR	S		VAN11004230	0.25
11EHS586	658199	5521803	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	85	10	20	55	light brown	med	med	15	1	4	mixed	SA-SR	S		VAN11004230	1.1
11EHS587	657899	5521801	Clear	con.dec	mod	8	10+	1	dry	med	mid slope	90	10	40	40	med brown	poor	well	10	0.25	4	mixed	SA-SR	S	Abundant leached material.	VAN11004230	0.5
11EHS588	657853	5521798	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	90	5	40	45	med brown	poor	med	10	0.5	3	mixed	SA-SR	S	Abundant leached material. Very dry soil	VAN11004230	0.7
11EHS589	657751	5521801	Clear	con.dec	mod	15	10+	2	dry	med	mid slope	80	10	40	30	light brown	med	med	20	1	4	mixed	SR-R	S	Abundant leached material.	VAN11004230	0.25
11EHS590	657650	5521802	Clear	con.dec	mod	10	10+	2	dry	med	mid slope	90	5	40	45	light brown	poor	well	10	0.25	3	mixed	SA-SR	S	Abundant leached material.	VAN11004230	0.8
11EHS591	657551	5521800	Clear	con.dec	mod	7	10+	2	dry	med	mid slope	85	5	40	40	light brown	poor	med	15	0.5	3	mixed	SA-SR	S	Abundant leached material.	VAN11004230	1.9
11EHS592	657502	5521803	Clear	con.dec	mod	15	10+	1	dry	med	mid slope	50	10	35	5	light brown	poor	poor	50	1.5	7	mixed	A-SA	S	Abundant leached material. Taken on talus slope.	VAN11004230	0.25

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS593	657400	5521803	Clear	con.dec	mod	15	10+	1	dry	med	mid slope	80	10	50	20	light brown	poor	med	20	0.5	6	mixed	A-SR	S	Abundant leached material. Taken on talus slope.	VAN11004230	0.25
11EHS594	657301	5521800	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	90	5	50	35	med brown	med	well	10	0.5	2	mixed	SA-SR	S		VAN11004230	2.9
11EHS595	659048	5521402	Clear	con.dec	mod	7	10+	2	dry	med	level	80	10	40	30	med brown	med	med	20	0.5	2	mixed	A-SR	N/A	Abundant leached material.	VAN11004230	0.8
11EHS596	659149	5521400	Clear	con.dec	mod	7	10+	3	dry	med	level	90	5	50	35	light brown	med	well	10	0.25	3	mixed	SA-SR	N/A	some leached material.	VAN11004230	0.7
11EHS597	659201	5521397	Clear	con.dec	mod	8	15+	4	moist	med	level	95	10	60	25	light brown	well	well	5	0.25	1	mixed	SA-SR	N/A	Very goos soil for the area	VAN11004230	0.25
11EHS598	659299	5521400	Clear	con.dec	mod	8	10+	3	moist	med	mid slope	85	10	40	35	light brown	med	med	15	0.5	3	mixed	SA-SR	NE	some leached material.	VAN11004230	0.5
11EHS599	659401	5521396	Clear	con.dec	mod	10	10+	3	moist	med	lower slope	75	15	40	20	dark brown	med	med	25	1	3	mixed	A-SR	NE	Near dried creek. Site of duplicate 11EHS600	VAN11004230	0.8
11EHS601	659500	5521401	Clear	con.dec	mod	15	10+	4	moist	med	level	90	5	45	40	light brown	med	well	10	0.5	2	mixed	SA-SR	N/A	Some leached material.	VAN11004230	0.25
11EHS602	659599	5521402	Clear	con.dec	mod	10	10+	4	moist	med	mid slope	85	5	40	40	light brown	med	med	15	0.5	3	mixed	SA-SR	NE	Some leached material.	VAN11004230	0.25
11EHS603	659701	5521399	Clear	con.dec	mod	10	10+	4	moist	med	level	90	10	40	40	med brown	well	well	10	0.5	2	mixed	SA-SR	N/A	Abundant leached material.	VAN11004230	0.6
11EHS604	659800	5521401	Clear	con.dec	mod	6	15+	4	moist	med	mid slope	85	10	35	40	med brown	med	well	15	1	2	mixed	SA-SR	NE	Abundant leached material.	VAN11004230	0.8
11EHS605	659152	5521001	Clear	con.dec	mod	10	10+	2	dry	med	level	85	10	40	35	light brown	poor	med	15	0.5	3	mixed	SA-SR	N/A	Abundant leached material.	VAN11004230	1.3
11EHS606	659250	5520999	Clear	con.dec	mod	7	10+	2	dry	med	mid slope	80	10	40	30	light brown	med	med	20	0.5	1.5	mixed	SA-SR	E	Abundant leached material.	VAN11004230	0.7
11EHS607	659350	5520998	Clear	con.dec	mod	6	15+	5	moist	med	level	95	5	50	40	med brown	med	well	5	0.25	1	mixed	SA-SR	N/A	Really good soil.	VAN11004230	1.9
11EHS608	659451	5521000	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	10	45	20	light brown	med	med	25	1	3	mixed	SA-SR	E	Abundant leached material.	VAN11004230	0.25
11EHS609	659550	5520999	Clear	con.dec	mod	8	15+	5	moist	med	mid slope	95	10	55	30	light brown	med	well	5	0.25	2	mixed	SA-SR	E		VAN11004230	0.8
11EHS610	660649	5521403	Clear	con.dec	mod	7	10+	3	dry	med	mid slope	85	10	45	30	light brown	med	well	15	0.5	2	mixed	SA-SR	E	Abundant leached material.	VAN11004230	0.25
11EHS611	660751	5521400	Clear	con.dec	mod	10	15+	3	dry	med	level	85	5	50	30	light brown	med	med	15	0.5	3	mixed	SA-SR	N/A	Abundant leached material.	VAN11004230	1
11EHS612	660851	5521400	Clear	con.dec	mod	7	10+	3	dry	med	mid slope	85	10	45	30	light brown	med	well	15	0.5	3	mixed	SA-SR	S	Abundant leached material.	VAN11004230	0.25
11EHS613	661002	5520999	Clear	con.dec	mod	8	10+	3	dry	med	ridge crest	90	10	50	30	light brown	med	med	10	0.5	3	mixed	A-SR	NW	On top of mountain crest.	VAN11004230	1
11EHS614	660936	5520998	Clear	con.dec	mod	6	10+	2	dry	med	lower slope	70	10	40	20	light brown	poor	med	30	1	7	mixed	A-SA	NW	Abundant leached material. At base of mountain away from station (about 15m)	VAN11004230	2.1
11EHS615	660850	5521000	Clear	con.dec	mod	7	10+	3	dry	med	mid slope	85	10	45	30	med brown	med	med	15	0.5	3	mixed	SA-SR	SE	Abundant leached material.	VAN11004230	1
11EHS616	660750	5520998	Clear	con.dec	mod	10	15+	3	moist	med	level	80	15	35	30	med brown	med	poor	20	1	3	mixed	SA-SR	N/A	some organics	VAN11004230	0.6
11EHS617	660651	5520999	Clear	con.dec	mod	10	15+	4	moist	med	level	90	5	55	30	light brown	poor	well	10	0.25	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS618	660549	5521000	Clear	con.dec	mod	7	10+	3	dry	med	level	80	10	40	30	light brown	med	well	20	0.5	3	mixed	SA-SR	N/A	some leached material.	VAN11004230	0.25
11EHS620	660201	5520201	Clear	con.dec	mod	3	10+	1	dry	med	level	85	25	40	20	dark brown	poor	med	15	1	3	mixed	SA-SR	N/		VAN11004230	1.2
11EHS621	660100	5520202	Clear	con.dec	mod	6	10+	3	dry	med	mid slope	80	10	30	30	light brown	med	med	20	0.25	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS622	659950	5520199	Clear	con.dec	mod	5	15+	3	dry	med	mid slope	90	20	50	20	grey	med	med	10	2	4	mixed	SA-SR	E		VAN11004230	0.25
11EHS623	659852	5520201	Clear	con.dec	mod	4	10+	3	dry	med	mid slope	80	10	40	30	grey	poor	med	20	1	3.5	mixed	SA-SR	W	Abundant leached material	VAN11004230	0.25

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS624	659752	5520199	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	85	10	45	30	light brown	poor	med	15	1	5	mixed	SA-SR	W	Abundant		
11EHS625	659650	5520199	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	1	6	mixed	SA-R	W	leached material	VAN11004230	0.5
11EHS626	659554	5520201	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	85	10	45	30	dark brown	med	med	15	1	4	mixed	SA-SR	E	Abundant	VAN11004230	0.9
11EHS627	659453	5520200	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	85	10	55	30	light brown	med	med	15	1	3	mixed	SA-SR	E	some leached material	VAN11004230	0.25
11EHS628	659351	5520202	Clear	con.dec	mod	4	10+	3	dry	med	mid slope	70	10	40	20	grey	poor	med	30	1.5	5	mixed	SA-SR	E	Abundant	VAN11004230	0.7
11EHS629	659252	5520202	Clear	con.dec	mod	5	15+	4	moist	med	level	90	5	55	30	light brown	med	well	10	1	2.5	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS630	659152	5520203	Clear	con.dec	mod	5	17+	3	dry	med	ridge crest	80	10	40	30	grey	med	med	20	1	5	mixed	SA-SR	E	Abundant	VAN11004230	0.5
11EHS631	659150	5520601	Clear	con.dec	mod	5	10+	3	dry	med	ridge crest	80	10	50	30	light brown	poor	med	20	1	2	mixed	SA-SR	E	leached material	VAN11004230	0.5
11EHS632	659254	5520601	Clear	con.dec	mod	5	10+	2	dry	med	mid slope	75	10	45	20	grey	poor	med	25	1	3	mixed	SA-SR	E	Abundant	VAN11004230	0.25
11EHS634	659350	5520599	Clear	con.dec	mod	5	10+	2	dry	med	ridge crest	70	10	40	20	grey	poor	med	30	1	3	mixed	SA-SR	E	leached material	VAN11004230	0.25
11EHS635	659450	5520599	Clear	con.dec	mod	5	10+	3	moist	med	level	80	10	50	20	dark brown	med	med	20	1	3	mixed	SA-SR	N/A	Abundant	VAN11004230	1.2
11EHS636	659548	5520598	Clear	con.dec	mod	10	15+	4	moist	med	mid slope	85	25	40	20	light brown	med	well	15	1	3	mixed	SA-SR	E	leached material	VAN11004230	0.25
11EHS637	659849	5520600	Clear	con.dec	mod	5	10+	3	dry	med	level	70	10	40	20	grey	poor	med	30	1	2	mixed	SA-SR	N/A	very sandy abundant	VAN11004230	0.25
11EHS638	659899	5520598	Clear	con.dec	mod	5	10+	2	dry	med	level	80	10	40	30	grey	poor	med	20	0.5	3	mixed	SA-SR	N/A	leached material	VAN11004230	0.5
11EHS639	659999	5520601	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	75	5	40	30	grey	poor	med	25	1	4	mixed	SA-SR	W	abundant	VAN11004230	0.25
11EHS640	660099	5520600	Clear	con.dec	mod	5	10+	3	dry	med	level	75	10	45	20	grey	poor	med	25	1	2	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS641	660197	5520598	Clear	con.dec	mod	10	20+	3	moist	med	level	90	15	45	30	light brown	med	med	10	3	6	mixed	SR	N/A	leached material	VAN11004230	0.6
11EHS642	660750	5519799	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	40	30	light brown	med	med	20	1	3	mixed	SA-SR	W	Abundant	VAN11004230	0.25
11EHS643	660853	5519803	Clear	con.dec	mod	4	10+	3	dry	med	ridge crest	85	10	45	30	dark brown	poor	med	15	1	2	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS644	660950	5519801	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	med brown	med	med	20	1	3	mixed	SA-SR	N/A	Abundant	VAN11004230	0.25
11EHS645	661049	5519799	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	50	20	dark brown	poor	med	20	0.5	2	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS646	661150	5519800	Clear	con.dec	mod	5	10+	3	dry	med	level	90	20	50	20	dark brown	poor	med	10	1	2	mixed	SA-SR	N/A	near a road	VAN11004230	0.6
11EHS647	661248	5519799	Clear	con.dec	mod	10	10+	2	dry	med	level	85	0	55	30	dark brown	poor	med	15	1	2	mixed	SA-SR	N/A	leached material	VAN11004230	0.8
11EHS648	661350	5519801	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	90	10	50	30	med brown	med	well	10	0.5	2	mixed	SA-SR	N	Abundant	VAN11004230	0.6
11EHS649	661449	5519800	Clear	con.dec	mod	10	10+	3	dry	med	level	60	30	20	10	med brown	well	med	40	1	2	mixed	SA-SR	N/A	leached material	VAN11004230	1.7
11EHS650	660701	5520199	Clear	con.dec	mod	5	15+	4	moist	med	mid slope	90	10	50	30	med brown	med	well	10	1	4	mixed	SA-SR	NW	site of duplicate 11EHS651	VAN11004230	0.25
11EHS652	660799	5520199	Clear	con.dec	mod	10	10+	4	moist	med	mid slope	85	10	55	20	med brown	med	well	15	0.5	2	mixed	SA-SR	NW	leached material	VAN11004230	0.25
11EHS653	660899	5520199	Clear	con.dec	mod	10	15+	4	dry	med	mid slope	90	10	40	40	med brown	med	med	10	0.5	2	mixed	SA-SR	NW	abundant	VAN11004230	0.5
11EHS654	661000	5520200	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	light brown	med	med	20	0.5	2	mixed	SA-R	N/A	leached material	VAN11004230	0.25
11EHS655	661099	5520200	Clear	con.dec	mod	7	10+	4	dry	med	level	90	10	40	40	light brown	poor	med	10	0.5	2	mixed	SA-SR	N/A	Abundant	VAN11004230	0.25
11EHS656	661203	5520199	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	grey	med	med	15	0.5	3	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS657	661299	5520203	Clear	con.dec	mod	5	18+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS658	661397	5520198	Clear	con.dec	mod	15	10+	1	wet	med	level	75	15	20	40	dark brown	med	med	25	1	3	mixed	SA-SR	N/A	near a swamp	VAN11004230	0.25
11EHS659	661499	5520199	Clear	con.dec	mod	20	15+	2	dry	med	level	70	20	30	20	light brown	poor	med	30	1	5	mixed	SA-SR	N/A	abundant	VAN11004230	0.25
11EHS660	661601	5520200	Clear	con.dec	mod	25	10+	2	dry	med	level	85	15	40	30	light brown	poor	med	15	1	6	mixed	SA-R	N/A	leached material	VAN11004230	0.25
11EHS661	661800	5519798	Clear	con.dec	mod	10	10+	3	dry	med	level	85	15	40	30	light brown	poor	med	15	1	3	mixed	SA-SR	N/A	leached material	VAN11004230	0.25
11EHS662	661901	5519800	Clear	con.dec	mod	10	10+	3	dry	med	level	70	10	50	10	light brown	poor	med	30	0.5	3	mixed	SA-SR	N/A	Abundant	VAN11004230	0.7
11EHS663	662050	5519800	Clear	con.dec	mod	5	10+	4	dry	med	mid slope	90	0	45	45	light brown	poor	med	10	0.5	2	mixed	SA-SR	W	Abundant	VAN11004230	5.6

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS664	662150	5519801	Clear	con.dec	mod	5	15+	3	dry	med	level	80	5	45	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS665	662200	5519800	Clear	con.dec	mod	5	10+	3	dry	med	level	90	5	45	40	light brown	poor	well	10	0.5	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS666	662299	5519802	Clear	con.dec	mod	10	15+	3	dry	med	mid slope	80	5	55	20	light brown	poor	med	20	1	3	mixed	SA-SR	E		VAN11004230	0.8
11EHS667	662850	5519799	Clear	con.dec	mod	4	20+	3	dry	med	level	90	30	30	30	grey	med	well	10	0.25	1	mixed	SA-R	N/A	very sandy	VAN11004230	0.25
11EHS668	662952	5519799	Clear	con.dec	mod	6	10+	3	dry	med	level	85	5	40	40	grey	poor	well	15	0.25	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS669	663045	5519799	Clear	con.dec	mod	20	10+	1	dry	med	level	80	20	40	20	grey	med	poor	20	1	3	mixed	SA-R	N/A	near a swamp	VAN11004230	0.25
11EHS670	662850	5519400	Clear	con.dec	mod	10	5+	2	dry	med	mid slope	75	5	30	40	light brown	poor	med	25	1	3	mixed	SA-SR	W		VAN11004230	0.25
11EHS671	662751	5519401	Clear	con.dec	mod	15	10+	3	dry	med	ridge crest	85	10	40	35	grey	poor	med	15	1	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS672	662898	5519398	Clear	con.dec	mod	6	15+	3	dry	med	mid slope	90	10	40	40	light brown	poor	med	10	0.25	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS673	662800	5519401	Clear	con.dec	mod	6	10+	3	dry	med	ridge crest	75	25	30	20	med brown	poor	med	25	0.5	3	mixed	SA-SR	E		VAN11004230	0.25
11EHS674	662055	5520597	Clear	con.dec	mod	4	15+	4	moist	med	mid slope	90	5	45	40	light brown	med	well	10	0.5	4	mixed	SA-SR	W		VAN11004230	0.25
11EHS675	662149	5520599	Clear	con.dec	mod	5	10+	3	dry	med	level	85	10	45	30	grey	poor	med	15	0.5	3	mixed	SA-SR	N/A		VAN11004230	1.7
11EHS676	662250	5520599	Clear	con.dec	mod	5	10+	3	dry	med	level	80	5	40	35	light brown	poor	med	20	1	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS677	662351	5520601	Clear	con.dec	mod	5	15+	3	moist	med	level	85	15	40	30	light brown	med	med	15	0.5	2	mixed	SA-SR	N/A		VAN11004230	1.5
11EHS678	662403	5520602	Clear	con.dec	mod	5	15+	4	moist	med	level	90	10	40	40	light brown	med	well	10	0.5	1	mixed	SA-SR	N/A		VAN11004230	3.5
11EHS679	662500	5520599	Clear	con.dec	mod	5	10+	2	dry	med	level	80	0	30	50	light brown	poor	med	20	0.25	3	mixed	SA-R	N/A		VAN11004230	6.3
11EHS680	663101	5520201	Clear	con.dec	mod	5	15+	1	dry	med	level	70	0	30	40	light brown	poor	med	30	0.5	2	mixed	SA-SR	N/A	very dry soil	VAN11004230	1
11EHS681	662999	5520198	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	5	45	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	E		VAN11004230	2
11EHS682	662898	5520199	Clear	con.dec	mod	20	15+	4	moist	med	level	80	10	40	30	med brown	med	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS683	662802	5520201	Clear	con.dec	mod	7	10+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	0.5	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS684	662700	5520199	Clear	con.dec	mod	6	20+	3	moist	med	mid slope	85	5	40	40	light brown	poor	med	15	1	4	mixed	SA-SR	E		VAN11004230	0.25
11EHS685	662600	5520200	Clear	con.dec	mod	6	15+	3	dry	med	mid slope	85	0	45	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS686	662551	5520200	Clear	con.dec	mod	15	10+	3	dry	med	mid slope	80	10	40	30	light brown	med	med	20	2	10	mixed	SA-SR	E		VAN11004230	0.25
11EHS687	662450	5520200	Clear	con.dec	mod	5	15+	3	dry	med	level	80	5	45	30	light brown	poor	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS688	661349	5519403	Clear	con.dec	mod	10	10+	3	dry	med	level	85	10	45	30	light brown	med	med	15	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS689	661252	5519401	Clear	con.dec	mod	10	15+	3	dry	med	mid slope	85	5	40	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS690	661199	5519399	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	50	30	light brown	poor	well	15	0.5	3	mixed	SA-SR	N/A		VAN11004230	1
11EHS691	661100	5519401	Clear	con.dec	mod	7	10+	3	dry	med	level	90	5	45	40	light brown	poor	well	10	0.5	4	mixed	SA-SR	N/A		VAN11004230	0.6
11EHS692	661399	5519401	Clear	con.dec	mod	4	15+	3	dry	med	mid slope	80	10	40	30	dark brown	med	med	20	0.5	3	mixed	SA-SR	E		VAN11004230	0.25
11EHS693	661499	5519400	Clear	con.dec	mod	8	10+	3	dry	med	mid slope	75	10	45	20	light brown	poor	med	25	0.5	2	mixed	SA-SR	E		VAN11004230	0.25
11EHS694	661599	5519400	Clear	con.dec	mod	8	10+	3	dry	med	level	70	10	30	30	dark brown	poor	med	30	0.5	2	mixed	SA-SR	N/A		VAN11004230	0.7
11EHS695	662289	5519000	Clear	con.dec	mod	7	10+	4	moist	med	level	80	0	50	30	med brown	med	well	20	0.5	1	mixed	SA-SR	N/A	Next to swamp, 10m away from station	VAN11004230	0.25
11EHS696	662200	5519000	Clear	con.dec	mod	5	10+	3	dry	med	level	70	10	40	20	light brown	poor	med	30	0.5	1	mixed	A-SR	N/A		VAN11004230	0.25
11EHS697	662100	5518999	Clear	con.dec	mod	7	15+	4	moist	med	level	90	5	45	40	light brown	med	well	10	0.25	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS698	661998	5519002	Clear	con.dec	mod	10	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS699	661897	5518997	Clear	con.dec	mod	5	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS700	661790	5518990	Clear	con.dec	mod	5	10+	1	dry	med	level	70	10	50	10	med brown	poor	poor	30	1	3	mixed	SA-SR	N/A	20m away from station due to swamp	VAN11004230	0.8
11EHS701	661752	5519000	Clear	con.dec	mod	10	15+	3	dry	med	level	70	10	40	20	dark brown	med	poor	30	1	3	mixed	A-SA	N/A	site of duplicate 11EHS702	VAN11004230	1.2
11EHS703	661650	5519001	Clear	con.dec	mod	10	15+	3	dry	med	level	80	10	40	30	dark brown	med	med	20	1	3	mixed	SA-SR	N/A		VAN11004230	1.2
11EHS704	661551	5518998	Clear	con.dec	mod	10	15+	3	dry	med	level	85	5	40	40	med brown	med	med	15	0.25	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS705	661452	5519000	Clear	con.dec	mod	15	10+	3	dry	med	level	80	10	40	30	med brown	med	med	20	0.5	1	mixed	SA-SR	N/A		VAN11004230	0.7
11EHS706	661348	5518998	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	0.5	12	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS707	661252	5519000	Clear	con.dec	mod	5	15+	3	dry	med	level	85	5	50	30	light brown	poor	med	15	1	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS708	661148	5519003	Clear	con.dec	mod	7	10+	3	dry	med	level	80	10	40	30	light brown	med	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS709	661049	5519000	Clear	con.dec	mod	7	10+	4	dry	med	level	85	5	50	30	light brown	med	med	15	0.25	1	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS710	660951	5519000	Clear	con.dec	mod	8	15+	3	dry	med	level	85	5	40	40	light brown	poor	well	15	1	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS711	659150	5518603	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS712	659299	5518601	Clear	con.dec	mod	8	10+	3	dry	med	level	80	5	35	40	light brown	poor	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004230	0.6
11EHS713	659349	5518600	Clear	con.dec	mod	5	20+	4	dry	med	mid slope	85	5	45	30	light brown	poor	med	15	1	3	mixed	SA-SR	E		VAN11004230	0.25
11EHS714	659453	5518597	Clear	con.dec	mod	4	4+	2	dry	med	mid slope	75	5	40	30	light brown	poor	med	25	0.5	2	mixed	SA-SR	N/A		VAN11004230	0.25
11EHS715	659552	5518600	Clear	con.dec	mod	5	15+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	N/A	Taken 10m away due to outcrop	VAN11004230	0.25
11EHS716	662001	5519399	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	1	3	mixed	SA-SR	N/A		VAN11004495	2.2
11EHS717	661800	5519398	Clear	con.dec	mod	5	15+	4	moist	med	level	90	5	45	40	light brown	med	well	10	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS718	662501	5519000	Clear	con.dec	mod	4	15+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	E		VAN11004495	0.25
11EHS719	662401	5518999	Clear	con.dec	mod	4	15+	3	dry	med	level	85	5	50	30	light brown	poor	well	15	0.5	1	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS720	662901	5518601	Clear	con.dec	mod	3	5+	2	dry	med	level	70	10	40	20	light brown	poor	poor	30	1	3	mixed	A-SR	N/A		VAN11004495	0.25
11EHS721	663000	5518601	Clear	con.dec	mod	5	10+	4	dry	med	level	80	5	35	40	med brown	med	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004495	

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS730	662450	5518602	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	0.5	3	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS731	662351	5518597	Clear	con.dec	mod	10	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	2	4	mixed	SA-SR	N/A		VAN11004495	0.5
11EHS732	662301	5518600	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	1	3	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS733	662202	5518599	Clear	con.dec	mod	10	10+	3	dry	med	level	75	5	40	30	light brown	poor	med	25	1	2	mixed	A-SA	N/A		VAN11004495	0.25
11EHS734	662151	5518600	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS735	662051	5518599	Clear	con.dec	mod	5	10+	4	moist	med	mid slope	85	5	40	40	light brown	poor	med	15	1	2	mixed	SA-SR	W		VAN11004495	0.25
11EHS736	659977	5517801	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS737	660099	5517800	Clear	con.dec	mod	5	10+	2	dry	med	level	80	10	40	30	light brown	poor	poor	20	1	4	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS738	660199	5517802	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	75	5	35	35	light brown	poor	poor	25	1	5	mixed	SA-SR	S		VAN11004495	1.1
11EHS739	660299	5517797	Clear	con.dec	mod	15	10+	2	dry	med	level	70	10	30	30	light brown	poor	poor	30	1	14	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS740	660353	5517800	Clear	con.dec	mod	7	10+	2	dry	med	mid slope	70	10	35	25	light brown	poor	poor	30	1	3	mixed	SA-SR	E		VAN11004495	0.25
11EHS741	660451	5517799	Clear	con.dec	mod	10	15+	3	dry	med	level	80	5	45	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004495	0.9
11EHS742	660550	5517798	Clear	con.dec	mod	10	10+	3	dry	med	level	75	5	40	30	light brown	poor	med	25	1	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS743	660850	5517798	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	med brown	med	med	20	1	2	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS744	660949	5517800	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	70	5	35	30	med brown	med	med	30	0.5	2	mixed	SA-SR	W		VAN11004495	1.2
11EHS745	661052	5517797	Clear	con.dec	mod	15	10+	3	dry	med	level	80	5	45	30	med brown	poor	well	20	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS746	661149	5517800	Clear	con.dec	mod	13	10+	3	dry	med	level	80	5	55	20	light brown	poor	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS747	661250	5517798	Clear	con.dec	mod	15	10+	3	dry	med	lower slope	80	5	35	40	med brown	poor	med	20	0.5	2	mixed	SA-SR	E		VAN11004495	0.25
11EHS748	661349	5517799	Clear	con.dec	mod	20	5+	1	dry	med	ridge crest	60	10	20	30	dark brown	poor	poor	40	1	6	mixed	A-SA	N/A		VAN11004495	0.9
11EHS749	661450	5517802	Clear	con.dec	mod	5	25+	3	dry	med	ridge crest	85	25	40	20	light brown	poor	well	15	0.5	2	mixed	SA-R	N/A	Very white colour, sandy	VAN11004495	0.25
11EHS750	661548	5517802	Clear	con.dec	mod	10	10+	2	dry	med	lower slope	70	5	40	25	dark brown	poor	med	30	1	5	mixed	A-SA	E		VAN11004495	0.25
11EHS751	661650	5517800	Clear	con.dec	mod	5	15+	3	dry	med	level	75	5	40	30	light brown	poor	med	25	1	6	mixed	A-SR	N/A	site of duplicate 11EHS752	VAN11004495	0.25
11EHS752	661749	5517799	Clear	con.dec	mod	6	5+	3	dry	med	level	70	5	35	30	light brown	poor	poor	30	2	10	mixed	A-SA	N/A		VAN11004495	0.25
11EHS754	661852	5517798	Clear	con.dec	mod	25	25+	4	moist	med	level	85	5	40	40	light brown	med	well	15	1	10	mixed	SA-SR	N/A	Near tuff rock unit, outcrop	VAN11004495	0.25
11EHS755	661949	5517801	Clear	con.dec	mod	10	5+	3	dry	med	ridge crest	75	0	40	35	light brown	poor	poor	25	2	10	mixed	SA-SR	N/A		VAN11004495	24
11EHS756	662049	5517802	Clear	con.dec	mod	6	20+	3	dry	med	level	80	5	45	30	light brown	poor	med	20	0.5	5	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS757	662098	5517802	Clear	con.dec	mod	7	15+	5	moist	med	level	95	5	60	30	light brown	poor	well	5	1	2	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS758	662200	5517800	Clear	con.dec	mod	20	10+	3	dry	med	ridge crest	65	5	30	30	light brown	poor	med	35	2	5	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS759	662300	5517798	Clear	con.dec	mod	8	15+	3	dry	med	mid slope	80	5	40	35	light brown	poor	med	20	2	8	mixed	A-SR	NE		VAN11004495	0.25
11EHS760	662399	5517798	Clear	con.dec	mod	8	15+	3	dry	med	mid slope	65	10	35	20	light brown	poor	med	35	2	6	mixed	SA-SR	E		VAN11004495	0.25
11EHS761	662498	5517802	Clear	con.dec	mod	6	15+	4	dry	med	level	80	10	40	30	med brown	med	well	20	0.5	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS762	662600	5517798	Clear	con.dec	mod	7	20+	4	dry	med	mid slope	75	10	45	20	light brown	poor	well	25	0.5	3	mixed	SA-SR	NE		VAN11004495	1.1
11EHS763	662701	5517798	Clear	con.dec	mod	20	20+	4	moist	med	mid slope	90	5	55	30	light brown	med	well	10	0.5	2	mixed	SA-SR	E		VAN11004495	3.7
11EHS764	662799	5517796	Clear	con.dec	mod	10	20+	5	moist	med	level	90	5	75	10	med brown	med	well	10	0.25	1	mixed	SA-SR	N/A	In a valley with a stream	VAN11004495	0.25
11EHS765	662847	5517803	Clear	con.dec	mod	20	20+	3	moist	med	mid slope	80	5	45	30	light brown	med	well	20	0.5	3	mixed	SA-SR	W		VAN11004495	1.3
11EHS766	664048	5517801	Clear	con.dec	mod	6	10+	3	dry	med	mid slope	75	10	35	30	dark brown	med	med	25	0.5	3	mixed	SA-SR	S		VAN11004495	0.25
11EHS767	663901	5517800	Clear	con.dec	mod	5	15+	3	dry	med	level	80	10	40	30	dark brown	med	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004495	2.3
11EHS768	663800	5517802	Clear	con.dec	mod	7	15+	3	dry	med	lower slope	80	5	45	30	dark brown	med	med	20	1	2	mixed	SA-SR	E		VAN11004495	0.8
11EHS769	663701	5517800	Clear	con.dec	mod	10	15+	3	dry	med	mid slope	90	10	50	30	dark brown	med	well	10	0.5	1	mixed	SA-SR	E		VAN11004495	1.3
11EHS770	663651	5517802	Clear	con.dec	mod	9	15+	4	moist	med	level	90	5	55	30	med brown	med	well	10	0.5	1	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS771	663550	5517799	Clear	con.dec	mod	20	10+	3	dry	med	level	80	20	40	20	light brown	poor	med	20	1	3	mixed	SA-R	N/A		VAN11004495	0.25
11EHS772	663451	5517800	Clear	con.dec	mod	10	10+	2	dry	med	level	75	5	40	30	dark brown	med	med	25	0.5	3	mixed	SA-SR	N/A		VAN11004495	1.2
11EHS773	663351	5517798	Clear	con.dec	mod	10	15+	4	dry	med	mid slope	85	5	45	35	med brown	med	med	15	0.5	2	mixed	SA-SR	E		VAN11004495	0.25
11EHS774	663252	5517803	Clear	con.dec	mod	15	10+	3	dry	med	mid slope	60	10	20	30	light brown	poor	med	40	0.25	3	mixed	SA-SR	E		VAN11004495	3
11EHS775	663151	5517800	Clear	con.dec	mod	5	5+	3	dry	med	mid slope	70	5	35	30	med brown	poor	med	30	0.5	6	mixed	SA-SR	S		VAN11004495	0.25
11EHS776	663051	5517801	Clear	con.dec	mod	10	15+	3	dry	med	mid slope	85	5	40	40	dark brown	poor	med	15	0.25	2	mixed	SA-SR	SE		VAN11004495	0.25
11EHS777	662950	5517802	Clear	con.dec	mod	10	15+	3	dry	med	mid slope	80	5	45	30	dark brown	poor	med	20	0.5	3	mixed	SA-SR	E		VAN11004495	2.2
11EHS778	663302	5516997	Clear	con.dec	mod	25	1+	1	moist	med	mid slope	5	0	4	1	dark brown	poor	poor	95	7	25	mixed	A	W	On talus slope, this is a horrible sample	VAN11004495	0.25
11EHS779	663150	5517001	Clear	con.dec	mod	10	10+	3	dry	med	level	85	5	45	30	dark brown	poor	med	15	2	6	mixed	SA-SR	N/A		VAN11004495	1.7
11EHS780	663050	5517003	Clear	con.dec	mod	7	10+	3	dry	med	level	70	5	45	20	light brown	med	poor	30	1	3	mixed	A-SA	N/A		VAN11004495	0.25
11EHS781	662948	5517000	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	dark brown	poor	med	15	0.5	2	mixed	SA-SR	N/A		VAN11004495	1
11EHS782	662850	5517004	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	5	35	40	med brown	poor	well	20	0.5	3	mixed	SA-SR	W		VAN11004495	0.8
11EHS783	662751	5517000	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	35	35	light brown	poor	poor	20	0.5	2	mixed	SA-SR	W		VAN11004495	0.25
11EHS784	662700	5516998	Clear	con.dec	mod	5	10+	3	dry	med	ridge crest	70	10	40	20	light brown	poor	med	30	1	2	mixed	SA	N/A		VAN11004495	0.25
11EHS785	662651	5516997	Clear	con.dec	mod	7	10+	4	dry	med	lower slope	75	5	40	30	light brown	poor	med	25	1	5	mixed	SA-SR	E		VAN11004495	0.25
11EHS786	662501	5517002	Clear	con.dec	mod	5	7+	3	dry	med	ridge crest	70	10	40	20	light brown	poor	med	30	1	3	mixed	SA	N/A		VAN11004495	0.25
11EHS787	662399	5517001	Clear	con.dec	mod	5	10+	2	dry	med	level	75	5	30	40	light brown	poor	poor	25	1	4	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS788	662302																										

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11EHS797	661650	5517002	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	med brown	poor	well	15	0.5	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS798	661701	5517002	Clear	con.dec	mod	10	15+	4	dry	med	level	90	5	55	30	light brown	med	well	10	1	2	mixed	SA-SR	N/A		VAN11004495	1.7
11EHS799	661799	5517000	Clear	con.dec	mod	5	15+	3	dry	med	mid slope	85	5	40	40	light brown	poor	med	15	0.5	2	mixed	SA-SR	E		VAN11004495	0.25
11EHS800	661899	5516999	Clear	con.dec	mod	5	10+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.7
11EHS801	662003	5517002	Clear	con.dec	mod	5	20+	4	moist	med	mid slope	90	10	50	30	light brown	med	well	10	0.25	2	mixed	SA-SR	E	Site of duplicate	VAN11004495	0.8
11EHS803	662103	5516999	Clear	con.dec	mod	5	15+	4	dry	med	level	90	5	55	30	light brown	med	well	10	0.5	3	mixed	SA-SR	N/A		VAN11004495	1.6
11EHS804	662197	5516997	Clear	con.dec	mod	5	5+	2	dry	med	level	60	10	40	10	dark brown	poor	poor	40	0.5	3	mixed	SA-SR	N/A	sample on a dried up swamp	VAN11004495	0.8
11EHS805	662248	5516999	Clear	con.dec	mod	5	15+	4	moist	med	level	90	10	40	40	light brown	poor	well	10	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS806	661851	5516603	Clear	con.dec	mod	10	10+	4	moist	med	mid slope	90	10	60	20	light brown	poor	well	10	0.5	2	mixed	SA-SR	E		VAN11004495	0.5
11EHS807	661751	5516600	Clear	con.dec	mod	5	10+	2	dry	med	ridge crest	70	10	50	10	light brown	poor	med	30	0.5	3	mixed	SA-SR	N/A		VAN11004495	1.2
11EHS808	661649	5516602	Clear	con.dec	mod	10	10+	4	dry	med	mid slope	85	5	40	40	light brown	poor	well	15	0.5	2	mixed	SA-SR	SW		VAN11004495	1
11EHS809	661551	5516600	Clear	con.dec	mod	5	15+	4	dry	med	level	90	10	60	20	light brown	poor	well	10	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS810	661452	5516603	Clear	con.dec	mod	10	15+	4	dry	med	level	90	5	35	50	light brown	poor	well	10	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS811	661351	5516601	Clear	con.dec	mod	20	10+	3	dry	med	level	80	10	50	20	light brown	poor	med	20	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS812	661253	5516602	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	85	5	40	40	light brown	poor	med	15	2	2	mixed	A-SA	W		VAN11004495	0.25
11EHS813	661151	5516604	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	60	10	50	0	light brown	poor	poor	40	0.5	6	mixed	SA-SR	W		VAN11004495	0.25
11EHS814	661050	5516599	Clear	con.dec	mod	10	10+	3	dry	med	level	80	10	40	30	med brown	poor	med	20	1	3	mixed	SA-SR	N/A		VAN11004495	0.5
11EHS815	660944	5516600	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	E	10m away from coordinates due to swamp	VAN11004495	1.3
11EHS816	660903	5516602	Clear	con.dec	mod	7	20+	5	moist	med	level	95	0	5	0	light brown	med	well	5	0.25	1	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS817	659948	5517798	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	1	5	mixed	SA-SR	E		VAN11004495	0.25
11EHS818	659849	5517802	Clear	con.dec	mod	5	15+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS819	659750	5517802	Clear	con.dec	mod	5	10+	3	dry	med	ridge crest	80	10	40	30	light brown	poor	med	20	1	2	mixed	SA-SR	N/A		VAN11004495	0.6
11EHS820	659648	5517803	Clear	con.dec	mod	5	7+	1	dry	med	mid slope	60	10	30	20	light brown	poor	poor	40	2	9	mixed	A-SA	W	On talus slope.	VAN11004495	0.25
11EHS821	659552	5517797	Clear	con.dec	mod	5	15+	4	dry	med	mid slope	85	5	45	35	light brown	poor	med	15	1	2	mixed	SA-SR	W		VAN11004495	0.25
11EHS822	659452	5517801	Clear	con.dec	mod	5	15+	4	dry	med	mid slope	85	0	50	35	light brown	poor	well	15	0.5	3	mixed	SA-SR	E		VAN11004495	0.8
11EHS823	659351	5517799	Clear	con.dec	mod	5	5+	3	dry	med	level	75	5	40	30	light brown	poor	med	25	1	4	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS824	659251	5517800	Clear	con.dec	mod	25	5+	2	dry	med	mid slope	60	5	35	20	light brown	poor	poor	40	3	15	mixed	A-SA	W		VAN11004495	0.6
11EHS825	659152	5517804	Clear	con.dec	mod	20	5+	1	moist	med	mid slope	60	5	45	10	light brown	poor	poor	40	3	15	mixed	A-SA	NE		VAN11004495	0.25
11EHS826	658749	5517403	Clear	con.dec	mod	5	15+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	SW		VAN11004495	0.25
11EHS827	658850	5517397	Clear	con.dec	mod	5	7+	3	dry	med	level	80	10	40	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS828	658851	5517401	Clear	con.dec	mod	5	15+	4	dry	med	lower slope	85	5	40	40	light brown	poor	med	15	1	3	mixed	SA-SR	SW		VAN11004495	4.1
11EHS829	659050	5517403	Clear	con.dec	mod	5	7+	3	dry	med	level	75	5	35	35	light brown	poor	med	25	0.5	3	mixed	SA-SR	N/A		VAN11004495	1.1
11EHS830	659100	5517398	Clear	con.dec	mod	5	15+	1	dry	med	mid slope	60	10	40	10	light brown	poor	poor	40	2	15	mixed	A-SA	W	On talus slope.	VAN11004495	0.9
11EHS831	659201	5517398	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	60	10	30	20	light brown	poor	poor	40	2	6	mixed	A-SA	W		VAN11004495	1
11EHS832	659299	5517401	Clear	con.dec	mod	5	7+	2	dry	med	mid slope	60	10	30	20	light brown	poor	poor	40	2	7	mixed	A-SA	W		VAN11004495	10.3
11EHS833	659403	5517401	Clear	con.dec	mod	5	10+	2	dry	med	ridge crest	70	10	40	20	light brown	poor	poor	30	2	6	mixed	A-SA	N/A		VAN11004495	0.25
11EHS834	659449	5517400	Clear	con.dec	mod	5	10+	3	dry	med	ridge crest	70	10	40	20	light brown	poor	poor	30	1	4	mixed	SA	N/A		VAN11004495	1.2
11EHS835	659597	5517400	Clear	con.dec	mod	5	10+	3	moist	med	level	80	10	40	30	light brown	poor	med	20	1	3	mixed	SA-SR	N/A		VAN11004495	0.8
11EHS836	659704	5517396	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	10	40	20	light brown	poor	poor	30	1	4	mixed	A-SA	E		VAN11004495	0.25
11EHS837	659750	5517400	Clear	con.dec	mod	5	10+	3	dry	med	level	70	10	40	20	light brown	poor	med	30	1	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS838	659900	5517400	Clear	con.dec	mod	10	15+	3	dry	med	level	75	5	40	30	light brown	poor	med	25	1	3	mixed	SA-SR	N/A		VAN11004495	0.25
11EHS839	660248	5516599	Clear	con.dec	mod	10	10+	3	dry	med	mid slope	80	10	40	30	light brown	poor	med	20	0.5	3	mixed	SA-SR	W		VAN11004495	0.9
11EHS840	660350	5516602	Clear	con.dec	mod	5	10+	3	dry	med	level	85	5	40	40	light brown	poor	med	15	1	3	mixed	SA-SR	N/A		VAN11004495	1.1
11EHS841	660450	5516600	Clear	con.dec	mod	5	15+	4	moist	med	level	85	5	50	30	light brown	poor	well	15	0.5	2	mixed	SA-SR	N/A		VAN11004495	0.7
11EHS842	660550	5516599	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	10	40	20	light brown	poor	poor	30	2	10	mixed	A-SA	W		VAN11004495	1
11EHS843	660653	5516598	Clear	con.dec	mod	5	10+	3	dry	med	mid slope	70	10	50	10	light brown	poor	med	30	1	5	mixed	A-SR	E		VAN11004495	0.25
11EHS844	660751	5516601	Clear	con.dec	mod	5	8+	3	dry	med	level	75	5	40	30	light brown	poor	poor	25	1	4	mixed	SA-SR	N/A		VAN11004495	1.1
11EHS845	662048	5516599	Clear	con.dec	mod	5	10+	3	dry	med	ridge crest	70	10	50	10	light brown	poor	med	30	1	4	mixed	A-SA	N/A		VAN11004495	0.25
11LMS001	661952	5519801	cldy	con, grs, moss	mod	10	10+	2	dry	med	level	70	5	75	20	light gry	med	poor	30	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS002	662101	5519801	cldy	con, grs, moss	mod	10	10+	4	dry	med	level	90	10	40	50	light gry	poor	well	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS003	662251	5519799	cldy	con, grs, moss	mod	10	10+	2	dry	med	level	90	5	40	55	light gry	med	well	10	0.5		f/m	sr, r			VAN11004545	0.25
11LMS004	662351	5519797	cldy	con, grs, moss, dec	mod	10	10+	2	dry	med	level	90	5	50	45	light gry	well	med	10	0.5		f/m	sr			VAN11004545	0.25
11LMS005	662902	5519800	cldy	con, grs, moss	mod	10	10+	2	dry	med	level	98	15	40	45	med gry	poor	well	2	0.5		f/m	sr			VAN11004545	0.25
11LMS006	663000	5519800	cldy	con, grs, moss	mod	10	10+	2	dry	med	level	95	5	50	45	light gry	med	med	5	0.5		f/m	a, sa		organics	VAN11004545	0.25
11LMS007	663100	5519800	cldy	con, grs	sprs	5	5+	1	dry	med	level	60	10	40	50	light gry	med	med	40	0.5		f/m	sa, sr		clasty	VAN11004545	0.25
11LMS008	662900	5519401	cldy	con, grs, moss	mod	10	10+	2	dry	med	level	80	10	50	40	light gry	well	well	20	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS009	662797	5519400	cldy	con, grs, moss, dec	mod	5	10+	1	dry	med	level	90	5	50	45	light gry	well	well	10	0.5		f/m	sa, sr		sloping East	VAN11004545	0.25
11LMS010	662																										

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11LMS020	659498	5519398	cldy	con, dec, moss	mod	5	10+	1	dry	med		70	5	50	45	light gry	poor	poor	30	0.5		f/m	a, sa		shale slide	VAN11004545	0.25
11LMS021	659600	5519401	cldy	con, grs, moss	mod	10	10+	2	dry	med		95	5	50	45	light gry	med	med	5	0.5		f/m	sa, sr		sloping East	VAN11004545	0.25
11LMS022	659701	5519400	cldy	con, grs, moss	mod	10	10+	2	dry	med		80	10	40	50	light gry	med	med	20	0.5		f/m	sa, sr		sloping East	VAN11004545	0.25
11LMS023	659801	5519400	cldy	grs	sprs	10	10+	1	dry	med		80	10	40	50	light brn	well	poor	20	0.5		f/m	sa, sr		clasty	VAN11004545	0.25
11LMS024	660198	5519399	cldy	con, grs	mod	10	10+	3	dry	med		90	15	40	45	light brn	med	well	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS025	660300	5519400	cldy	con, grs	mod	10	10+	3	dry	med		90	15	40	45	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS026	660970	5519400	clr	dec, grs, moss, swmp	mod	20	10+	4	mst	med		100	20	30	50	med brn	poor	well	0	0.5		f/m			20m East of point due to swamp	VAN11004545	1.2
11LMS027	660850	5519400	clr	con, grs, moss	mod	15	10+	4	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	0.8
11LMS028	660749	5519401	clr	con, grs, moss	mod	10	10+	2	dry	med		80	10	40	50	light gry	med	med	20	0.5		f/m	sa, sr		sloping North	VAN11004545	0.25
11LMS029	660647	5519399	clr	con, grs, moss	mod	10	10+	2	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	1
11LMS030	660550	5519399	clr	con, grs, moss	mod	10	10+	3	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS031	660451	5519401	clr	con, grs, moss	mod	10	10+	2	dry	med		70	10	40	50	light gry	med	med	30	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS032	660500	5519001	clr	dec, grs	sprs	10	10+	3	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	1
11LMS033	660149	5519000	clr	con, dec, grs	sprs	10	10+	2	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr		slp West	VAN11004545	0.25
11LMS034	660250	5519000	clr	con, dec, grs	mod	10	10+	2	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr		slp West	VAN11004545	0.25
11LMS035	660353	5519000	clr	con, dec, grs	mod	10	10+	2	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	a, sa		slp West	VAN11004545	0.25
11LMS036	660452	5519000	clr	con, dec, grs	mod	5	10+	1	dry	med		50	10	40	50	light gry	med	poor	50	0.5		f/m	a, sa		sloping East	VAN11004545	2
11LMS037	660552	5519001	clr	con, grs	mod	10	10+	2	dry	med		70	15	40	45	light gry	poor	med	30	0.5		f/m	a, sa		sloping East	VAN11004545	0.6
11LMS038	660650	5519001	clr	con, dec, grs	mod	5	10+	1	dry	med		70	10	40	50	light gry	well	poor	30	0.5		f/m	a, sa			VAN11004545	0.25
11LMS039	660749	5519000	clr	con, grs, moss	mod	10	10+	2	dry	med		90	10	40	50	light gry	well	med	10	0.5		f/m	sa, sr			VAN11004545	0.6
11LMS040	660851	5519000	clr	con, grs, moss, swmp	mod	15	10+	5	dry	med		100	20	30	50	light brn	well	well	0	0.5		f/m				VAN11004545	1.5
11LMS041	659202	5519005	clr	con, grs, moss	mod	5	10+	1	dry	med		50	10	40	50	light gry	well	poor	50	0.5		f/m	a, sa			VAN11004545	0.25
11LMS042	659299	5518999	clr	con, grs, moss	mod	5	10+	1	dry	med		70	10	40	50	light gry	well	poor	30	0.5		f/m	a, sa			VAN11004545	0.25
11LMS043	659400	5519001	clr	con, grs, moss	mod	10	10+	3	dry	med		80	10	40	50	light gry	med	poor	20	0.5		f/m	a, sa			VAN11004545	0.25
11LMS044	659495	5519001	clr	con, grs, moss	mod	10	10+	3	dry	med		90	10	40	50	light gry	poor	med	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS045	659600	5519000	clr	con, grs, moss	mod	10	10+	2	dry	med		90	10	40	50	light gry	med	med	10	0.5		f/m	sa, sr			VAN11004545	0.25
11LMS046	659650	5518600	clr	con, grs, moss	mod	5	10+	2	dry	med	lvl	80	10	40	50	light gry	med	med	20	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS047	659751	5518600	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	60	10	40	50	light gry	med	med	40	0.5	10	f/m	a, sa		sloping East	VAN11004495	0.25
11LMS048	659850	5518598	clr	con, grs	mod	5	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS049	659950	5518599	clr	con, grs, moss	mod	15	10+	3	mst	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.6
11LMS050	660049	5518600	clr	con, grs, moss	mod	10	10+	3	dry	med	mid slp	50	10	40	50	light gry	med	med	50	0.5	10	f/m	a, sa		slp West, site of duplicate	VAN11004495	0.25
11LMS052	660151	5518601	clr	con, grs, moss	mod	5	10+	1	dry	med	mid slp	50	10	40	50	light gry	med	med	50	0.5	5	f/m	a, sa		slp West	VAN11004495	0.25
11LMS053	660250	5518600	clr	con, grs, moss	mod	10	10+	1	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	4	f/m	sa, sr			VAN11004495	0.25
11LMS054	660351	5518600	clr	con, grs, moss	mod	10	10+	3	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25
11LMS055	660450	5518604	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr		sloping East	VAN11004495	0.25
11LMS056	660550	5518599	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr		sloping North	VAN11004495	0.25
11LMS057	660649	5518601	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS058	660751	5518601	clr	con, grs, moss	mod	5	10+	1	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr		clasty	VAN11004495	1.3
11LMS059	660851	5518602	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	1	f/m	sa, sr			VAN11004495	0.25
11LMS061	661050	5518598	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS062	661149	5518609	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS063	661254	5518599	clr	con, grs, moss, swmp	mod	15	10+	4	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS064	661351	5518600	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25
11LMS065	661450	5518600	clr	con, grs, moss	mod	10	10+	3	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS066	661553	5518600	clr	con, grs, moss	mod	5	10+	1	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	1	f/m	sa, sr			VAN11004495	0.25
11LMS067	661650	5518598	clr	con, grs, moss	mod	5	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	1	f/m	sa, sr			VAN11004495	0.25
11LMS068	661751	5518600	clr	con, grs, moss	mod	15	10+	3	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr		sloping East	VAN11004495	0.25
11LMS069	661849	5518601	clr	con, grs	mod	10	10+	1	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS070	661950	5518600	clr	con, dec, grs	mod	15	10+	4	dry	med	lvl	95	10	40	50	light gry	med	med	5	0.5	3	f/m	sa, sr			VAN11004495	0.25
11LMS071	659200	5518200	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40													

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb	
11LMS089	662350	5518200	clr	con, dec, grs, swmp	mod	30	10+	4	mst	med	lvl	98	20	30	50	med blk	med	well	2	0.5	2	f/m	sr, r			VAN11004495	0.9	
11LMS090	662250	5518200	clr	con, grs, moss	mod	10	10+	4	dry	med	rdg crst	90	40	30	30	light brn	poor	med	10	0.5	3	f/m	a, sa			VAN11004495	1	
11LMS091	662150	5518200	clr	con, dec, grs	mod	10	10+	4	dry	med	lvl	60	30	30	40	light brn	med	poor	40	0.5	6	f/m	a, sa			VAN11004495	1.1	
11LMS092	662050	5518200	clr	con, grs	sprs	20	10+	3	mst	med	lvl	70	30	30	40	light brn	med	poor	30	0.5	3	f/m	sa, sr			VAN11004495	0.25	
11LMS093	661950	5518200	clr	con, grs	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	poor	10	0.5	10	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS094	661850	5518200	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	50	10	40	50	light gry	med	poor	50	0.5	10	f/m	a, sa	sloping North		VAN11004495	0.25	
11LMS095	661750	5518200	clr	con, grs	mod	20	10+	3	dry	med	mid slp	90	10	40	50	light gry	med	poor	10	0.5	4	f/m	sa, sr	sloping south		VAN11004495	0.25	
11LMS098	661652	5518201	clr	con, grs, moss	mod	20	10+	3	dry	med	mid slp	90	10	40	50	light gry	poor	med	10	0.5	3	f/m	a, sa	sloping south		VAN11004495	0.25	
11LMS099	661550	5518200	clr	con, grs, moss	mod	10	10+	3	mst	med	lvl	95	20	30	50	dkr brn	well	poor	5	0.5	10	f/m	sa, sr			VAN11004495	1	
11LMS100	661449	5518200	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	organics		VAN11004495	0.7	
11LMS101	661349	5518199	clr	con, dec, grs, moss	mod	15	10+	3	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.9	
11LMS102	661151	5518200	clr	con, grs, moss	mod	30	10+	3	dry	med	lvl	90	15	40	45	light gry	poor	med	10	0.5	2	f/m	sa, sr	site of duplicate		VAN11004495	0.25	
11LMS104	661050	5518201	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	80	10	40	50	light gry	med	med	20	0.5	8	f/m	sa, sr	sloping south		VAN11004495	0.25	
11LMS105	660949	5518201	clr	con, grs, moss	mod	5	10+	1	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	6.2	
11LMS106	660851	5518201	clr	con, grs, moss	mod	5	10+	3	dry	med	lvl	90	10	30	60	light gry	med	med	10	0.5	5	f/m	sa, sr			VAN11004495	0.25	
11LMS107	660601	5517800	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.6	
11LMS108	660700	5517800	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.5	
11LMS109	662600	5518202	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS110	662700	5518201	clr	con, grs, moss	mod	15	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS111	662801	5518197	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr	sloping West		VAN11004495	0.25	
11LMS112	662898	5518201	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS113	663000	5518199	clr	con, grs, moss	mod	15	10+	3	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS114	663100	5518197	clr	con, grs, moss	mod	10	10+	3	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS115	663200	5518200	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS116	663300	5518200	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS117	663399	5518200	clr	con, dec, moss	mod	10	10+	1	dry	med	lvl	70	10	40	50	light gry	med	med	30	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS118	663501	5518200	clr	con, grs	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS119	663601	5518201	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS120	663700	5518200	clr	con, dec, grs	mod	5	10+	4	dry	med	lvl	95	5	35	60	med brn	med	well	5	0.5	3	f/m	sa, sr			VAN11004495	1	
11LMS121	662550	5517399	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	0.25	
11LMS122	662649	5517402	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	0.6	
11LMS123	662750	5517401	clr	grs	mod	20	10+	3	dry	med	lvl	90	20	30	50	light brn	med	med	10	0.5	1	f/m	sa, sr			VAN11004495	0.8	
11LMS124	662850	5517400	clr	con, grs, moss	mod	15	10+	4	dry	med	lvl	90	20	30	50	med gry	poor	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25	
11LMS125	662949	5517399	clr	con, dec, grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	well	med	10	0.5	1	f/m	sa, sr			VAN11004495	0.25	
11LMS126	663051	5517401	clr	con, dec, grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS127	663151	5517398	clr	con, dec, grs	mod	15	10+	3	dry	med	mid slp	90	10	40	50	med gry	med	med	10	0.5	2	f/m	sa, sr	sloping East		VAN11004495	4.6	
11LMS128	663250	5517400	clr	con, dec, grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	5	f/m	sa, sr			VAN11004495	0.25	
11LMS129	663351	5517400	clr	con, grs	mod	10	10+	3	dry	med	lvl	90	10	20	30	50	light brn	well	med	10	0.5	2	f/m	sa, sr			VAN11004495	1.1
11LMS130	663450	5517400	clr	con, grs	mod	5	10+	1	dry	med	mid slp	70	20	30	50	light brn	poor	poor	30	0.5	8	f/m	a, sa	shifted 10m East due to shale slide, slping West, clasty		VAN11004495	0.25	
11LMS131	663550	5517399	clr	con, dec, grs	mod	10	10+	2	dry	med	lvl	80	20	30	50	light brn	med	med	20	0.5	3	f/m	a, sa			VAN11004495	2.4	
11LMS132	663650	5517399	clr	con, grs	mod	10	10+	1	dry	med	mid slp	50	20	10	70	light gry	med	poor	50	0.5	15	f/m	a, sa	sloping southwest		VAN11004495	3.7	
11LMS133	662401	5517400	clr	con, grs, moss	mod	30	10+	2	dry	med	lvl	90	10	40	50	light gry	poor	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.6	
11LMS134	662300	5517399	clr	con, grs, moss	mod	10	10+	2	dry	med	rdg crst	70	10	40	50	light gry	med	med	30	0.5	2	f/m	sa, sr	clasty		VAN11004495	0.25	
11LMS135	662201	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	rdg crst	90	10	40	50	light gry	med	poor	10	0.5	4	f/m	sa, sr			VAN11004495	0.25	
11LMS136	662100	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25	
11LMS137	662000	5517400	clr	con, grs, moss	mod	10	10+	3	dry	med	lvl	90	15	35	50	light gry	well	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25	
11LMS138	661900	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	rdg crst	90	10	40	50	light gry	well	poor	10	0.5	10	f/m	a, sa			VAN11004495	3.7	
11LMS139	661800	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25	
11LMS140	661700	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping west		VAN11004495	0.25	
11LMS141	661605	5517399	clr	con, dec, grs, moss	mod	30	10+	2	dry	med	lvl	80	10	40	50	light gry	poor	poor	20	0.5	8	f/m	a, sa			VAN11004495	0.25	
11LMS142	661500	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr	sloping North		VAN11004495	0.25	
11LMS143	661400	5517400	clr	con, grs, moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr			VAN11004495	0.25	
11LMS144	661300	5517400	clr	con, dec, grs, moss	mod	10	10+	2	dry	med	lvl	90	20	30	50	med brn	med	med	10	0.5	8	f/m	a, sa			VAN11004495	0.25	
11LMS145	661201	5517400	clr	con, dec, moss	mod	10	10+	3	dry	med	lvl	90	20	30	50	light brn	well	med	10	0.5	3	f/m	sa, sr			VAN11004495	1.6	
11LMS146	661101	5517400	clr	con, dec, grs	mod	10	10+	2	dry	med	lvl	90	10	30	60	med gry	well	poor	10	0.5	10	f/m	sa, sr			VAN11004495	0.25	
11LMS147	660999	5517399	clr	con, dec, grs	mod	15	10+	3	dry	med	mid slp	90	10	50	40	med gry	med	med										

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11LMS160	660751	5517000	clr	con,grs,moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr		sloping southwest	VAN11004495	0.25
11LMS161	660649	5517001	clr	con,grs,moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	poor	10	0.5	10	f/m	sa, sr		sloping southwest	VAN11004495	0.25
11LMS162	660549	5517000	clr	con,grs	sprs	5	10+	1	dry	med	lvl	60	10	40	50	light gry	med	med	40	0.5	4	f/m	sa, sr			VAN11004495	0.7
11LMS163	660449	5516999	clr	con,grs,moss	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.7
11LMS164	660350	5517001	clr	con,dec,grs	mod	10	10+	2	dry	med	mid slp	80	10	40	50	light gry	med	poor	20	0.5	8	f/m	sa, sr		sloping west	VAN11004495	0.5
11LMS165	660250	5517000	clr	con,grs	mod	20	10+	2	dry	med	lvl	90	10	40	50	light gry	poor	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.8
11LMS166	660150	5517000	clr	con,grs	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	6	f/m	sa, sr		sloping west	VAN11004495	1.7
11LMS167	660050	5517000	clr	con,dec,grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.7
11LMS168	659847	5517000	clr	con,dec,grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	4	f/m	sa, sr			VAN11004495	2.1
11LMS169	659849	5517000	clr	con,grs,moss	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	3	f/m	sa, sr		sloping East	VAN11004495	0.25
11LMS170	659750	5517000	clr	con,grs	mod	10	10+	4	dry	med	lvl	90	20	30	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS171	659650	5516999	clr	con,dec,grs	mod	10	10+	2	dry	med	lvl	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	1
11LMS172	659550	5517000	clr	con,dec,grs	sprs	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	4	f/m	sa, sr		sloping south	VAN11004495	0.8
11LMS173	659450	5517000	clr	con,grs,moss	mod	10	10+	1	dry	med	mid slp	70	10	40	50	light gry	med	poor	30	0.5	3	f/m	sa, sr		sloping south	VAN11004495	0.25
11LMS174	659350	5516999	clr	con,grs	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr		sloping south	VAN11004495	0.25
11LMS175	659250	5517000	clr	con,grs	mod	10	10+	2	dry	med	mid slp	80	10	40	50	light gry	med	med	20	0.5	3	f/m	sa, sr		sloping south	VAN11004495	0.25
11LMS176	659701	5516600	clr	con,dec,grs	mod	10	10+	2	dry	med	level	90	10	40	50	light gry	med	med	10	0.5	2	f/m	sa, sr			VAN11004495	0.25
11LMS177	659801	5516600	clr	con,dec,grs	mod	10	10+	2	dry	med	level	90	10	40	50	light gry	med	med	10	0.5	10	f/m	sa, sr			VAN11004495	5
11LMS178	659900	5516599	clr	con,dec,grs	mod	10	10+	2	dry	med	level	80	10	40	50	light gry	poor	poor	20	0.5	8	f/m	sa, sr			VAN11004495	0.25
11LMS179	660001	5516601	clr	con,dec,grs	mod	10	10+	2	dry	med	mid slp	90	10	40	50	light gry	well	med	10	0.5	2	f/m	sa, sr		sloping west	VAN11004495	0.6
11LMS180	660100	5516598	clr	con,grs,moss	mod	5	10+	2	dry	med	level	80	10	40	50	light gry	well	poor	20	0.5	8	f/m	sa, sr			VAN11004495	0.25
11LMS181	660199	5516605	clr	con,grs,moss,swmp	mod	15	10+	2	dry	med	level	90	10	40	50	light gry	poor	med	10	0.5	3	f/m	sa, sr			VAN11004495	1
11LMS182	661900	5516600	clr	con,dec,grs	mod	10	10+	2	dry	med	level	80	10	40	50	light gry	med	poor	20	0.5	8	f/m	sa, sr			VAN11004495	0.25
11SHS200	660000	5520200	Clear	CON	MOD	6	10+	3	DRY	MED	MID SLOPE	80	10	50	20	LT GR	MED	MED	20	1	3	MIX	SA-SR		Sloping NE	VAN11004545	2.7
11SHS201	659900	5520200	Clear	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	70	20	40	10	LT GR	MED	MED	30	5	12	MIX	SA-SR		Sloping SW	VAN11004545	0.8
11SHS202	659800	5520199	Clear	CON,DEC	MOD	6	10+	3	DRY	MED	LEVEL	80	25	35	20	LT GR	MED	MED	20	3	8	MIX	SA			VAN11004545	1.7
11SHS203	659700	5520200	Clear	CON	MOD	10	10+	4	DRY	MED	MID SLOPE	90	20	40	30	LT GR	MED	MED	10	3	5	MIX	SA-SR		Sloping SW	VAN11004545	0.9
11SHS204	659600	5520199	Clear	CON,DEC	MOD	5	10+	2	DRY	MED	LEVEL	80	15	40	25	LT GR	MED	MED	20	3	5	MIX	SR			VAN11004545	1.1
11SHS205	659500	5520201	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	90	20	50	20	LT GR	MED	MED	10	4	5	MAF	SR		Sloping East	VAN11004545	2.1
11SHS206	659400	5520200	Clear	CON,GRS	MOD	8	15+	3	DRY	MED	MID SLOPE	85	15	40	30	LT GR	MED	MED	15	3	8	MIX	SA-SR		Sloping East	VAN11004545	1.5
11SHS207	659300	5520200	Clear	CON,GRS	MOD	5	20+	4	DRY	MED	MID SLOPE	90	15	45	30	LT GR	MED	MED	10	3	8	MIX	SR		Sloping East	VAN11004545	0.25
11SHS208	659202	5520208	Clear	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	75	25	30	20	LT GR	MED	MED	25	10	15	MAF	SA		Off mark B/C bedrock, Sloping East	VAN11004545	0.5
11SHS209	659100	5520200	Clear	CON	MOD	5	10+	2	DRY	MED	MID SLOPE	80	10	30	40	LT GR	MED	MED	20	0.5	3	MIX	SA-SR		Sloping East	VAN11004545	0.7
11SHS210	659101	5520601	Clear	CON,GRS	MOD	5	20+	3	DRY	MED	LEVEL	90	15	50	25	LT GR	MED	MED	10	3	5	MAF	SR		Bedrock Close	VAN11004545	0.9
11SHS211	659200	5520600	Clear	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	80	20	30	30	LT GR	WELL	MED	20	4	6	MIX	SA-SR		Sloping East	VAN11004545	0.25
11SHS212	659300	5520599	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	80	15	45	20	LT GR	MED	MED	20	4	10	MIX	SR		Sloping East	VAN11004545	1.1
11SHS213	659401	5520600	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	70	20	35	15	LT GR	MED	POOR	30	5	15	MAF	SA		Sloping East	VAN11004545	1.4
11SHS214	659500	5520599	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	90	20	40	30	LT GR	MED	MED	10	2	4	MIX	SR		Sloping East	VAN11004545	1.6
11SHS215	659803	5520601	Clear	CON,GRS	MOD	10	15+	3	MST	MED	LOWER SLOPE	95	20	50	25	LT BRN	MED	MED	5	1	2	MAF	SR		Sloping West	VAN11004545	0.25
11SHS216	659950	5520600	Clear	GRS	MOD	4	10+	2	DRY	MED	LEVEL	90	20	40	30	LT GR	MED	WELL	10	1	2	MIX	SR			VAN11004545	0.25
11SHS217	660051	5520601	Clear	CON	MOD	3	15+	3	DRY	MED	MID SLOPE	70	15	35	20	LT GR	MED	MED	30	2	4	MAF	SR-R		Sloping NE	VAN11004545	1.3
11SHS218	660150	5520600	Clear	CON	MOD	5	20+	4	MST	MED	MID SLOPE	90	20	40	30	LT BRN	MED	MED	10	2	15	MAF	SA-SR		Sloping NE	VAN11004545	1.3
11SHS219	660800	5519801	Cloudy	CON	MOD	3	10+	3	DRY	MED	MID SLOPE	90	15	45	30	LT GR	MED	MED	10	0.5	1	MIX	SR		Sloping SW	VAN11004545	1.8
11SHS220	660899	5519799	Cloudy	CON	MOD	5	15+	3	DRY	MED	LEVEL	80	20	40	20	LT GR	MED	MED	20	3	5	MIX	SR			VAN11004545	0.7
11SHS221	660999	5519800	Cloudy	CON	MOD	4	10+	3	DRY	MED	LEVEL	75	15	40	20	LT GR	MED	MED	25	5	10	MIX	SA-SR			VAN11004545	0.9
11SHS222	661099	5519800	Cloudy	GRS	MOD	3	10+	2	DRY	MED	LEVEL	70	10	30	30	LT GR	WELL	MED	30	3	6	MIX	SR			VAN11004545	1.9
11SHS223	661199	5519800	Cloudy	CON	MOD	3	10+	4	DRY	MED	MID SLOPE	80	15	30	35	LT GR	MED	MED	20	4	15	MIX	SA-SR		Sloping N	VAN11004545	0.25
11SHS225	661300	5519800	Cloudy	CON	MOD	8	15+	3	DRY	MED	MID SLOPE	90	10	40	40	LT GR	WELL	MED	10	2	4	MIX	SA-SR		Sloping NE	VAN11004545	0.8
11SHS226	661399	5519799	Cloudy	CON	SPRS	10	10+	4	MST	MED	LEVEL	95	15	30	50	MED BRN	WELL	WELL	5	1	1	MIX	SR			VAN11004545	1.6
11SHS227	660751	5520200	Cloudy	GRS	MOD	10	15+	2	DRY																		

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11SHS245	659350	5519401	Cloudy	CON	SPRS	4	10+	3	DRY	MED	LEVEL	90	15	40	35	LT BRN	MED	MED	10	1	5	MIX	A-SA		on top of bedrock	VAN11004545	1.4
11SHS246	659450	5519400	Cloudy	CON	MOD	5	20+	2	DRY	MED	MID SLOPE	60	15	30	15	LT GRV	MED	POOR	40	4	30	MIX	A-SR		Sloping NE	VAN11004545	0.25
11SHS247	659551	5519400	Cloudy	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	85	15	40	30	LT GRV	MED	MED	15	3	10	MIX	SR		Sloping NE	VAN11004545	0.25
11SHS248	659651	5519401	Cloudy	CON	MOD	8	15+	2	DRY	MED	MID SLOPE	55	10	25	20	LT GRV	MED	POOR	45	6	20	MIX	A-SA		Sloping NE/E	VAN11004545	0.25
11SHS249	659750	5519401	Cloudy	CON	MOD	8	15+	3	DRY	MED	LOWER SLOPE	60	15	35	10	LT GRV	MED	POOR	40	5	12	MIX	A-SA		Sloping NE	VAN11004545	0.25
11SHS251	659849	5519400	Cloudy	GRS	MOD	15	20+	2	DRY	MED	LEVEL	80	20	40	20	Dark BRN	MED	MED	20	3	5	MIX	SR		Near Road	VAN11004545	0.6
11SHS252	660149	5519399	Cloudy	CON	SPRS	5	10+	3	DRY	MED	MID SLOPE	80	10	35	35	LT BRN	MED	MED	20	3	14	MIX	A-SR		Sloping NW	VAN11004545	0.25
11SHS253	660249	5519400	Cloudy	CON.GRS	MOD	10	10+	2	DRY	MED	LEVEL	90	10	40	40	MED BRN	MED	MED	10	2	4	MIX	SA-SR			VAN11004545	0.25
11SHS254	660350	5519400	Cloudy	CON.GRS	MOD	10	10+	4	DRY	MED	LEVEL	90	15	45	30	MED BRN	MED	MED	10	1	4	MIX	SA-SR			VAN11004545	0.25
11SHS255	660400	5519400	Cloudy	CON	MOD	5	10+	2	DRY	MED	MID SLOPE	90	5	35	50	LT GRV	MED	MED	10	0.5	2	MIX	SA-SR		Sloping W/NW	VAN11004545	0.25
11SHS256	661000	5519400	Clear	CON	MOD	8	10+	4	DRY	MED	MID SLOPE	85	15	35	35	LT BRN	MED	MED	15	2	4	MIX	SR		Sloping SW	VAN11004545	6.7
11SHS257	660900	5519399	Clear	CON.GRS	SPRS	10	5+	2	DRY	MED	LEVEL	95	15	35	40	MED BRN	WELL	WELL	5	4	6	MIX	SA		Near Swamp	VAN11004545	0.25
11SHS258	660800	5519399	Clear	CON.GRS	SPRS	5	10+	3	DRY	MED	LEVEL	80	10	30	40	LT GRV	MED	MED	20	2	5	MIX	SR			VAN11004545	0.25
11SHS259	660700	5519400	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	85	10	35	40	LT GRV	MED	MED	15	0.5	5	MIX	A		Sloping N	VAN11004545	0.25
11SHS260	660600	5519399	Clear	CON	MOD	30	15+	2	DRY	MED	MID SLOPE	50	10	25	15	LT GRV	MED	POOR	50	5	15	MIX	A		Sloping N	VAN11004545	1.1
11SHS261	660499	5519401	Clear	CON	MOD	10	10+	3	DRY	MED	LOWER SLOPE	80	10	30	40	LT GRV	MED	MED	20	1	3	MIX	SA-R		Sloping N	VAN11004545	1
11SHS262	660006	5518999	Clear	CON.SWMP	MOD	10	15+	4	MST	MED	LOWER SLOPE	90	10	30	50	MED BRN	MED	MED	10	3	15	MIX	SA-SR		Sloping W, 5m away from swamp	VAN11004545	1.2
11SHS263	660100	5519001	Clear	DEC.GRS	MOD	10	10+	4	DRY	MED	LEVEL	90	10	35	45	MED BRN	MED	MED	10	1	3	MIX	SA-SR			VAN11004545	1.2
11SHS264	660200	5519000	Clear	CON	SPRS	5	15+	3	DRY	MED	Ridge Crest	70	5	25	40	LT GRV	MED	MED	30	5	15	MIX	SA-SR		Sloping NW/N	VAN11004545	0.25
11SHS265	660300	5519000	Clear	CON	SPRS	10	10+	2	MST	MED	MID SLOPE	85	15	30	40	LT GRV	MED	MED	15	3	8	MIX	SA-SR		Sloping NW/N	VAN11004545	0.25
11SHS266	660399	5518999	Clear	CON	SPRS	3	8+	2	DRY	MED	LEVEL	55	15	20	20	LT GRV	MED	POOR	45	3	15	MIX	A-SR			VAN11004545	0.6
11SHS267	660500	5519000	Clear	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	90	10	30	50	LT GRV	MED	MED	10	2	5	MIX	SA-SR		Sloping NW/N	VAN11004545	0.25
11SHS268	660599	5519001	Clear	CON.DEC	MOD	15	10+	3	DRY	MED	LEVEL	60	10	20	30	LT GRV	MED	POOR	40	6	20	MIX	A-SR			VAN11004545	0.25
11SHS269	660699	5519000	Clear	CON	SPRS	8	10+	3	DRY	MED	MID SLOPE	75	5	30	40	LT GRV	MED	MED	25	4	8	MIX	A-SA		Sloping NE	VAN11004545	0.25
11SHS270	660799	5519000	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	90	15	35	40	LT GRV	MED	MED	10	1	3	MIX	SR			VAN11004545	0.6
11SHS271	660899	5519000	Clear	CON	MOD	4	15+	4	DRY	MED	LEVEL	90	10	30	50	LT BRN	MED	MED	10	3	8	MIX	A-SA			VAN11004545	0.25
11SHS272	659150	5519000	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	80	15	30	35	LT GRV	MED	MED	20	4	8	MIX	A-SA		Sloping SE	VAN11004545	1.2
11SHS273	659250	5519000	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	60	5	25	30	LT GRV	MED	MED	40	5	15	MIX	A-SA		Sloping SE	VAN11004545	0.25
11SHS274	659350	5519000	Clear	CON	MOD	10	10+	2	DRY	MED	MID SLOPE	90	15	25	50	LT GRV	MED	MED	10	2	5	MIX	SA-SR		Sloping E	VAN11004545	0.25
11SHS275	659449	5519000	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	60	15	20	25	LT GRV	MED	POOR	40	2	10	MIX	A-SA		Sloping E/SE	VAN11004545	0.25
11SHS276	659549	5519001	Clear	CON	SPRS	5	10+	3	DRY	MED	LOWER SLOPE	70	20	20	30	LT GRV	MED	POOR	30	2	5	MIX	SA-SR		Sloping W/SW	VAN11004545	0.25
11SHS277	659651	5519000	Clear	CON	SPRS	10	10+	2	DRY	MED	LEVEL	85	15	30	40	LT GRV	MED	MED	15	2	8	MIX	A			VAN11004545	0.25
11SHS278	659700	5518999	Clear	CON	MOD	5	10+	2	DRY	MED	LOWER SLOPE	90	10	35	45	LT GRV	MED	MED	10	2	3	MIX	SA-SR		Sloping E/SE	VAN11004545	0.25
11SHS279	659899	5518600	Clear	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	60	10	20	30	LT GRV	MED	POOR	40	2	15	MIX	A-SA		Sloping W	VAN11004494	0.25
11SHS280	659700	5518601	Clear	CON	MOD	4	8+	3	DRY	MED	LEVEL	75	20	25	30	LT GRV	MED	MED	25	1	3	MIX	SR-R			VAN11004494	0.6
11SHS281	659799	5518599	Clear	GRS	MOD	10	10+	3	DRY	MED	Ridge Crest	85	15	30	40	LT GRV	MED	WELL	15	5	8	MIX	SA-SR		Sloping W	VAN11004494	0.25
11SHS282	659899	5518600	Clear	GRS	MOD	5	10+	2	DRY	MED	LEVEL	90	10	30	50	LT GRV	MED	WELL	10	1	5	MIX	SA-SR			VAN11004494	0.25
11SHS283	659999	5518600	Clear	CON.DEC	MOD	4	10+	4	DRY	MED	LEVEL	80	10	30	40	LT GRV	MED	MED	20	3	10	MIX	SR			VAN11004494	0.7
11SHS284	660099	5518600	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	80	15	30	35	LT GRV	WELL	MED	20	2	8	MIX	SA-SR		Sloping SW	VAN11004494	0.25
11SHS285	660200	5518599	Clear	GRS	MOD	5	10+	2	DRY	MED	LEVEL	90	20	30	40	LT GRV	MED	MED	10	2	8	MIX	SA-SR			VAN11004494	0.25
11SHS286	660300	5518599	Clear	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	85	15	35	35	LT GRV	WELL	MED	15	1	5	MIX	SA-SR		Sloping W	VAN11004494	0.25
11SHS287	660400	5518600	Clear	CON	MOD	5	15+	3	DRY	MED	LEVEL	90	10	30	50	LT GRV	WELL	MED	10	2	4	MIX	SA-SR			VAN11004494	2.2
11SHS288	660500	5518599	Clear	CON	MOD	5	10+	2	DRY	MED	MID SLOPE	60	20	20	20	LT GRV	MED	POOR	40	5	12	MIX	A-SR		Sloping NE/E	VAN11004494	2.9
11SHS289	660600	5518599	Clear	CON	MOD	10	15+	4	DRY	MED	LEVEL	90	10	40	40	LT GRV	MED	MED	10	1	3	MIX	SR			VAN11004494	0.25
11SHS290	660700	5518602	Clear	CON.DEC	MOD	10	10+	2	DRY	MED	MID SLOPE	40	10	15	15	LT GRV	MED	POOR	60	4	10	MIX	A-SR		Sloping E	VAN11004494	0.8
11SHS291	660799	5518600	Clear	CON	MOD	10	20+	4	DRY	MED	LEVEL	75	10	25	40	LT GRV	MED	MED	25	2	8	MIX	SA-SR			VAN11004494	0.7
11SHS292	660900	5518600	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	90	15	35	40	LT GRV	MED	MED	10	2	8	MIX	SR-R			VAN11004494	1.2
11SHS293	661000	5518599	Clear	CON	MOD	10	10+	4	DRY	MED	LEVEL	90	10	30	50	LT GRV	MED	MED	10	2	10	MIX	SA-SR			VAN11004494	0.8
11SHS294	661100	5518601	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	95	15	35	45	LT GRV	MED	WELL	5	2	5	MIX	SR			VAN11004494	0.9
11SHS295	661200	5518599	Clear	CON	MOD	5	15+	3	DRY	MED	LEVEL	95	15	30	50	LT GRV	MED										

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb	
11SHS317	660250	5518200	Clear	CON,DEC,GRS	MOD	10	10+	3	DRY	MED	LEVEL	90	10	30	50	LT GR	MED	MED	10	1	4	MIX	SA-SR			VAN11004494	0.25	
11SHS318	660349	5518200	Clear	CON	MOD	10	10+	4	DRY	MED	LEVEL	95	15	40	40	LT GR	MED	WELL	5	1	4	MIX	SR			VAN11004494	0.9	
11SHS319	660449	5518200	Clear	CON	MOD	10	10+	2	DRY	MED	LEVEL	55	25	15	15	LT GR	MED	POOR	45	4	8	MIX	A-SA			VAN11004494	0.25	
11SHS320	660550	5518200	Clear	CON	SPRS	10	10+	3	DRY	MED	MID SLOPE	85	5	30	50	LT GR	MED	MED	15	2	5	MIX	SA-SR		Sloping S/SE	VAN11004494	21.3	
																									Moved Because			
																										of Swamp	VAN11004494	0.6
11SHS321	660655	5518201	Clear	CON,SWMP	MOD	30	15+	3	DRY	MED	LEVEL	40	10	10	20	LT GR	MED	POOR	60	8	20	MIX	A-SA			VAN11004494	0.25	
11SHS322	660750	5518200	Clear	CON	MOD	4	8+	3	DRY	MED	LEVEL	90	20	30	40	LT GR	MED	MED	10	1	3	MIX	A-SA			VAN11004494	0.25	
11SHS323	662501	5518200	Clear	CON	SPRS	10	10+	3	DRY	MED	LEVEL	80	5	25	50	LT GR	MED	MED	20	3	8	MIX	SA-R			VAN11004494	9.7	
11SHS324	662400	5518200	Clear	CON	SPRS	10	15+	3	DRY	MED	LEVEL	80	10	30	40	LT BRN	MED	POOR	20	2	8	MIX	SA-SR		Near Road	VAN11004494	2.2	
11SHS325	662299	5518199	Clear	CON	MOD	20	10+	2	WET	MED	LEVEL	90	15	30	45	MED BLK	MED	MED	10	2	5	MIX	SA-SR		In Marshy Area	VAN11004494	1.2	
11SHS326	662200	5518199	Clear	CON,DEC	MOD	10	15+	3	MST	MED	LEVEL	80	20	30	30	Dark BRN	MED	MED	20	1	12	MIX	A-SR			VAN11004494	1.5	
11SHS327	662100	5518199	Cloudy	GRS	MOD	15	10+	3	DRY	MED	LEVEL	55	25	15	15	LT GR	MED	POOR	45	1	3	MIX	SR-R			VAN11004494	0.25	
11SHS328	662000	5518199	Cloudy	CON,DEC,GRS	MOD	10	10+	2	DRY	MED	MID SLOPE	60	20	20	20	LT GR	MED	POOR	40	4	10	MIX	SA-SR		Sloping E/SE	VAN11004494	0.25	
11SHS329	661901	5518201	Cloudy	CON	MOD	5	10+	2	DRY	MED	LEVEL	80	10	35	45	LT GR	MED	MED	20	2	5	MIX	SA-SR			VAN11004494	1.4	
11SHS330	661802	5518201	Cloudy	CON	MOD	10	15+	3	DRY	MED	LEVEL	80	10	30	40	LT GR	MED	MED	20	4	15	MIX	A-SR			VAN11004494	0.25	
11SHS331	661701	5518200	Cloudy	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	90	10	30	50	LT GR	MED	MED	10	2	20	MIX	SA-SR		Sloping SE	VAN11004494	0.7	
11SHS332	661600	5518201	Cloudy	CON	MOD	10	5+	4	DRY	MED	Lower Slope	95	15	35	45	LT GR	MED	WELL	5	2	15	MIX	SA-SR		Sloping E	VAN11004494	1	
11SHS333	661499	5518201	Clear	CON	MOD	10	10+	3	DRY	MED	LEVEL	80	5	25	50	LT GR	MED	MED	20	2	5	MIX	SA-SR			VAN11004494	0.7	
11SHS334	661399	5518200	Clear	DEC	MOD	10	10+	3	MST	MED	Lower Slope	90	10	30	50	LT GR	MED	WELL	10	4	6	MIX	SR-R		Sloping SW	VAN11004494	0.6	
11SHS335	661298	5518198	Clear	CON,SWMP	MOD	20	5+	2	MST	MED	LEVEL	90	10	25	55	LT GR	MED	WELL	10	2	5	MIX	SA-SR			VAN11004494	0.9	
11SHS336	661199	5518200	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	80	10	35	35	LT GR	MED	MED	20	2	8	MIX	SA-SR			VAN11004494	1.4	
11SHS337	661100	5518199	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	85	15	30	40	LT GR	MED	MED	15	1.5	10	MIX	A-SR		Sloping SW/W	VAN11004494	1.7	
11SHS338	661000	5518201	Clear	CON	MOD	10	15+	3	DRY	MED	LEVEL	80	10	30	40	LT GR	MED	MED	20	2	6	MIX	SA-SR			VAN11004494	0.25	
11SHS339	660900	5518201	Clear	CON	MOD	10	15+	3	DRY	MED	LEVEL	95	15	35	45	LT GR	MED	WELL	5	1	3	MIX	SA-SR			VAN11004494	5	
11SHS340	660650	5517801	Clear	CON	MOD	5	15+	3	DRY	MED	MID SLOPE	90	10	30	50	LT GR	MED	WELL	10	2	6	MIX	SA-SR		Sloping SW	VAN11004494	1.7	
11SHS341	660750	5517800	Clear	CON	SPRS	5	10+	3	DRY	MED	MID SLOPE	85	15	30	40	LT GR	MED	MED	15	1	3	MIX	SA-SR		Sloping SE	VAN11004494	0.6	
11SHS342	660799	5517800	Clear	CON	SPRS	5	10+	2	DRY	MED	Lower Slope	90	10	30	50	LT GR	MED	MED	10	0.5	3	MIX	SA-SR		Sloping SE	VAN11004494	0.6	
11SHS343	662549	5518200	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	85	15	30	30	LT GR	MED	MED	15	2	5	MIX	SA-SR			VAN11004494	0.9	
11SHS344	662650	5518200	Clear	CON	MOD	4	8+	3	DRY	MED	LEVEL	90	10	30	50	LT GR	MED	MED	10	1	4	MIX	SA-SR			VAN11004494	0.8	
11SHS345	662752	5518199	Clear	CON,SWMP	MOD	3	10+	3	DRY	MED	Lower Slope	95	15	30	50	LT GR	MED	WELL	5	1	4	MIX	SA-SR		Sloping W	VAN11004494	1.3	
11SHS346	662850	5518201	Clear	CON	MOD	4	10+	2	DRY	MED	MID SLOPE	90	20	35	40	LT GR	MED	WELL	5	0.5	2	MIX	SR-R		Sloping W/SW	VAN11004494	0.25	
11SHS347	662950	5518200	Clear	CON	MOD	5	10+	3	DRY	MED	LEVEL	95	5	35	50	LT GR	MED	MED	10	2	8	MIX	SA-SR			VAN11004494	0.7	
11SHS348	663051	5518200	Clear	CON,GRS	SPRS	10	15+	4	DRY	MED	LEVEL	90	10	30	50	LT GR	MED	WELL	10	0.5	2	MIX	SR-R			VAN11004494	1.2	
11SHS349	663150	5518200	Clear	CON,GRS	SPRS	10	15+	3	DRY	MED	LEVEL	90	10	30	50	MED BRN	MED	WELL	10	2	10	MIX	SA-SR			VAN11004494	1.4	
11SHS351	663250	5518199	Clear	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	95	15	35	45	LT GR	MED	WELL	5	1	5	MIX	SA-SR		Sloping SW	VAN11004494	0.25	
11SHS352	663349	5518200	Clear	CON	MOD	10	10+	4	DRY	MED	LEVEL	95	5	30	60	MED BRN	MED	WELL	5	1	6	MIX	SA-SR			VAN11004494	1	
11SHS353	663450	5518200	Clear	CON,DEC	SPRS	10	15+	3	DRY	MED	LEVEL	90	10	35	45	MED GR	MED	WELL	10	2	6	MIX	A-SR			VAN11004494	0.25	
11SHS354	663551	5518200	Clear	CON,DEC	MOD	10	15+	4	DRY	MED	LEVEL	95	10	35	50	LT BRN	MED	WELL	5	0.5	2	MIX	SR-R			VAN11004494	0.25	
11SHS355	663649	5518201	Clear	DEC	MOD	5	10+	2	DRY	MED	LEVEL	95	5	40	55	LT BRN	MED	WELL	5	1	3	MIX	SA-SR			VAN11004494	0.25	
11SHS356	662500	5517400	Clear	CON	SPRS	4	10+	2	DRY	MED	LEVEL	75	25	20	30	LT GR	MED	POOR	25	0.5	2	MIX	SA-SR			VAN11004494	0.25	
11SHS357	662601	5517400	Clear	CON	MOD	5	10+	2	DRY	MED	MID SLOPE	50	20	10	20	LT GR	MED	POOR	50	1	6	MIX	A-SR		Sloping S/SE	VAN11004494	0.7	
11SHS358	662700	5517400	Clear	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	55	5	20	30	LT GR	MED	POOR	45	4	10	MIX	A-SA		Sloping SE	VAN11004494	0.25	
11SHS359	662800	5517400	Clear	CON,DEC	MOD	8	10+	3	DRY	MED	MID SLOPE	85	10	35	40	LT GR	MED	WELL	15	2	6	MIX	A-SR		Sloping SE	VAN11004494	0.25	
11SHS360	662900	5517400	Clear	CON	MOD	10	10+	3	DRY	MED	LEVEL	90	5	35	50	LT GR	MED	WELL	10	1	4	MIX	SA-SR			VAN11004494	0.25	
11SHS361	662999	5517400	Clear	CON	MOD	8	12+	3	DRY	MED	MID SLOPE	90	15	30	45	LT GR	MED	WELL	10	0.5	2	MIX	SA-SR		Sloping S	VAN11004494	13.4	
11SHS362	663100	5517400	Clear	CON	MOD	10	10+	3	DRY	MED	LEVEL	95	15	30	50	LT GR	MED	WELL	5	1	2	MIX	SA-SR			VAN11004494	0.5	
11SHS363	663201	5517400	Clear	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	90	15	30	45	LT GR	MED	WELL	10	1	6	MIX	A-SR		Sloping SW	VAN11004494	0.7	
11SHS364	663300	5517400	Clear	CON,DEC	MOD	10	10+	3	DRY	MED	LEVEL	75	20	20	35	LT GR	MED	POOR	25	1	15	MIX	SA-R			VAN11004494	0.7	
11SHS365	663400	5517399	Clear	CON	SPRS	10	15+	3	DRY	MED	LEVEL	65	15	25	35	LT GR	MED	MED	35	0.5	4	MIX	SA-R		Near Road	VAN11004494	6.8	
11SHS366	663600	5517400	Clear	CON	SPRS	15	10+	3	DRY	MED	MID SLOPE	90	5	35	50	MED BRN	MED	WELL	10	1	5	MIX	SA-SR		Sloping S/SE	VAN11004494	2	
11SHS367	663501	5517400	Clear	CON	SPRS	10	10+	3	DRY	MED	MID SLOPE	60	15	20	25	LT GR	MED	POOR	40	1	8	MIX	A-SR			VAN11004494	0.7	
11SHS368	662450	5517399	Cloudy	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	70	15	25	30	LT GR	MED	MED	30	0.5	8	MIX	A-SR		Sloping E	VAN11004494	0.7	
11SHS369	662351	5517400	Clear	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	50	10	15	25	LT GR	MED	POOR	50	2	8	MIX	A-SA		Sloping S	VAN11004494	0.25	
11SHS370	662250	5517400	Cloudy	CON	MOD	5	10+	3	DRY	MED	LEVEL	60	10	20	30	LT GR	MED	POOR	40	4	8	MIX	A-SA			VAN11004494	0.5	
11SHS371	662146	5517400	Clear	CON,SWMP	MOD	10	15+	3	DRY	MED	LEVEL	80	10	30	40	LT GR	MED	MED	20	2	5	MIX	SA-SR		Near Swamp	VAN11004494	0.25	
11SHS372	662050	5517400	Clear	CON	MOD	10	15+	3	MST	MED	LEVEL	65	15	20	30	LT GR	MED	MED	35	2	4	MIX	A-SR			VAN11004494	1	
11SHS373	661949	5517400	Clear	CON	SPRS	10	10+	3	DRY	MED	MID SLOPE	85	15	30	40	LT BRN	MED	WELL	15	0.5	6	MIX						

2011 Shovelnose Soil Samples

Sample_ID	X_Nad83z10	Y_Nad83z10	Weather	Vegetation	Veg_Int	Depth (cm)	Thickness (cm)	Rating	Moisture	Relief	Topo_Position	Matrix_%	sand	silt	clay	Matrix_color	Compaction	sorting	Clast_perc	Clast_Size Modal	Clast_Size Max	Lithology	Shape	Striae	Remarks	Lab_Cert	Au_ppb
11SHS387	660549	5517400	Clear	CON	MOD	10	10+	3	DRY	MED	LEVEL	85	10	30	45	LT GR	MED	WELL	15	0.5	3	MIX	SA-SR			VAN11004494	0.8
11SHS388	659950	5517400	Cloudy	CON	SPRS	15	10+	2	DRY	MED	LEVEL	80	20	25	35	LT GR	MED	MED	20	0.5	4	MIX	SA-SR		Near Road	VAN11004494	0.8
11SHS389	660050	5517400	Cloudy	DEC	MOD	10	10+	3	DRY	MED	LEVEL	90	10	30	50	MED BRN	MED	WELL	10	1	3	MIX	SR-R			VAN11004494	0.25
11SHS390	660149	5517400	Cloudy	CON,DEC	SPRS	10	10+	3	DRY	MED	MID SLOPE	95	15	30	50	MED BRN	MED	WELL	5	0.5	2	MIX	SA-R		Sloping SW	VAN11004494	0.25
11SHS391	660251	5517400	Cloudy	CON	MOD	10	10+	3	DRY	MED	LEVEL	95	10	35	50	LT GR	MED	WELL	5	0.5	2	MIX	SA-R			VAN11004494	3.1
11SHS392	660349	5517400	Cloudy	CON	SPRS	5	10+	3	DRY	MED	LEVEL	60	10	20	30	LT GR	MED	POOR	40	1	4	MIX	SA-SR			VAN11004494	0.25
11SHS393	660450	5517401	Cloudy	CON	MOD	10	10+	4	DRY	MED	LEVEL	90	5	25	60	LT BRN	MED	WELL	10	0.5	2	MIX	SR-R			VAN11004494	0.25
11SHS394	660799	5517000	Cloudy	CON	SPRS	15	10+	3	DRY	MED	LEVEL	95	5	30	60	MED BRN	MED	WELL	5	1	2	MIX	A-SR			VAN11004494	0.25
11SHS395	660700	5516999	Cloudy	CON	MOD	10	10+	3	DRY	MED	MID SLOPE	80	10	30	40	LT GR	MED	MED	20	1	4	MIX	SA-SR		Sloping SE	VAN11004494	0.25
11SHS396	660600	5517000	Cloudy	CON	SPRS	10	10+	2	DRY	MED	MID SLOPE	80	10	20	40	LT GR	WELL	MED	20	0.5	3	MIX	SA-R		Sloping SE	VAN11004494	0.25
11SHS397	660501	5516999	Cloudy	CON	SPRS	15	10+	2	DRY	MED	LEVEL	50	20	10	20	LT GR	MED	POOR	50	1	20	MIX	A-SR			VAN11004494	0.6
11SHS398	660400	5517000	Cloudy	CON	MOD	10	15+	3	DRY	MED	MID SLOPE	85	5	30	50	LT GR	MED	MED	15	1	5	MIX	SA-SR		Sloping S/SE	VAN11004494	0.25
11SHS400	660300	5517000	Cloudy	CON	SPRS	10	10+	3	DRY	MED	MID SLOPE	85	15	30	40	LT GR	MED	WELL	15	1	6	MIX	SA-SR		Sloping S	VAN11004494	0.25
11SHS401	660200	5517000	Cloudy	CON	MOD	5	10+	4	DRY	MED	MID SLOPE	80	10	20	50	LT GR	MED	MED	20	1	10	MIX	SA-R		Sloping S/SW	VAN11004494	0.25
11SHS402	660100	5517000	Cloudy	CON	SPRS	10	10+	3	DRY	MED	LEVEL	90	10	35	45	LT GR	MED	MED	10	0.5	3	MIX	SA-R		Near Road	VAN11004494	0.25
11SHS403	660000	5517000	Cloudy	CON	MOD	5	10+	4	DRY	MED	LEVEL	95	10	30	55	LT GR	MED	WELL	5	1	5	MIX	SA-SR			VAN11004494	0.25
11SHS404	659901	5516999	Cloudy	CON	SPRS	15	10+	3	DRY	MED	LEVEL	55	10	20	25	LT BRN	MED	POOR	45	2	15	MIX	A-SA			VAN11004494	1
11SHS405	659801	5517000	Cloudy	CON	SPRS	10	10+	2	DRY	MED	MID SLOPE	75	15	25	35	LT GR	MED	POOR	25	1	12	MIX	A-SR		Sloping S/SE	VAN11004494	0.25
11SHS406	659701	5517000	Cloudy	CON	SPRS	5	10+	3	DRY	MED	LEVEL	75	15	20	40	LT GR	MED	MED	25	2	8	MIX	A-SA			VAN11004494	0.25
11SHS407	659600	5517000	Cloudy	CON	SPRS	5	15+	4	DRY	MED	MID SLOPE	80	10	20	50	LT GR	MED	WELL	20	2	10	MIX	SA-SR		Sloping S/SE	VAN11004494	0.25
11SHS408	659500	5516999	Cloudy	GRS	MOD	5	5+	3	DRY	MED	MID SLOPE	70	5	15	50	LT BRN	MED	POOR	30	1	8	MIX	A-SA		Sloping S/SW	VAN11004494	0.25
11SHS409	659398	5517000	Cloudy	CON	MOD	10	10+	2	DRY	MED	MID SLOPE	40	5	10	25	LT GR	MED	POOR	60	2	10	MIX	A-SA		Sloping S/SW	VAN11004494	0.25
11SHS410	659301	5517000	Cloudy	CON	MOD	5	10+	3	DRY	MED	MID SLOPE	90	2	25	60	LT GR	MED	WELL	10	1	6	MIX	SA-SR		Sloping S/SW	VAN11004494	0.25
11SHS411	659202	5517001	Cloudy	CON	MOD	10	10+	4	DRY	MED	MID SLOPE	75	5	20	50	LT GR	MED	MED	25	1	4	MIX	A-SR		Sloping S/SW	VAN11004494	0.25
11SHS412	659651	5516600	Cloudy	CON,DEC	SPRS	10	10+	3	DRY	MED	MID SLOPE	85	5	30	50	LT GR	MED	MED	15	1	5	MIX	SA-SR		Sloping SW/W	VAN11004494	0.25
11SHS413	659749	5516600	Cloudy	CON	MOD	10	15+	3	DRY	MED	LEVEL	80	10	25	45	LT GR	MED	MED	20	1	6	MIX	SA-SR			VAN11004494	1607.2
11SHS414	659849	5516600	Cloudy	CON,DEC	MOD	10	20+	2	DRY	MED	LEVEL	90	15	30	45	LT GR	MED	WELL	10	1	4	MIX	SA-R			VAN11004494	1.2
11SHS415	659950	5516600	Cloudy	CON	SPRS	5	10+	2	DRY	MED	MID SLOPE	70	15	25	30	LT GR	MED	MED	30	0.5	10	MIX	SA-SR		Sloping W/SW	VAN11004494	0.25
11SHS416	660050	5516600	Cloudy	CON	SPRS	5	10+	3	DRY	MED	MID SLOPE	75	15	25	35	LT GR	WELL	MED	25	0.5	5	MIX	SA-SR		Sloping W/SW	VAN11004494	0.9
11SHS417	660150	5516600	Cloudy	CON	MOD	10	10+	3	DRY	MED	LEVEL	75	15	25	35	LT GR	MED	MED	25	0.5	6	MIX	SA-R			VAN11004494	0.7
11SHS418	661950	5516600	Cloudy	CON,DEC	MOD	5	10+	3	DRY	MED	LEVEL	90	10	30	50	LT GR	MED	WELL	10	1	5	MIX	SR-R			VAN11004494	13.7

Soil QA/QC Samples

Sample_ID	Type	Certificate_ID	Au_ppb
11CHS354	Duplicate of 11CHS353	VAN11004545	0.25
11DRS051	Duplicate of 11DRS050	VAN11004494	1.1
11DRS101	Duplicate of 11DRS100	VAN11004494	0.25
11EHS550	Duplicate of 11EHS549	VAN11004230	57.2
11EHS600	Duplicate of 11EHS599	VAN11004230	1.4
11EHS651	Duplicate of 11EHS650	VAN11004230	0.25
11EHS702	Duplicate of 11EHS701	VAN11004230	0.6
11EHS752	Duplicate of 11EHS751	VAN11004495	0.25
11EHS802	Duplicate of 11EHS801	VAN11004495	1
11LMS051	Duplicate of 11LMS050	VAN11004495	0.25
11LMS103	Duplicate of 11LMS102	VAN11004495	0.25
11LMS152	Duplicate of 11LMS151	VAN11004495	0.25
11SHS250	Duplicate of 11SHS249	VAN11004545	0.25
11SHS300	Duplicate of 11SHS299	VAN11004494	0.25
11SHS350	Duplicate of 11SHS349	VAN11004494	0.6
11SHS399	Duplicate of 11SHS398	VAN11004494	0.25

APPENDIX 2

2011 STREAM SAMPLE LOCATION AND DESCRIPTION

2011 Shovelnose Stream Sampling

*UTM Nad83 Zone 10

SampleID	East*	North*	NAT_Elevation	Sampled_By	Comments	weight_kg	Au_ppm
88600	658879	5517687	955	RH/EB	Bouldery chnl; poor sed development. Sample collected 35m upstream from WP031	1.07	0.002
88601	659733	5519601	1156	RH/EB	Boggy trickler.	1.68	0.002
88602	661520	5521339	1106	RH/EB	Boggy chnl w/ coarse seds atop.	1.4	<0.001
88603	663073	5520571	1017	RH/EB	Main trunk above sm mapped pond.	1.54	0.002
88604	663841	5520384	1005	RH/EB	Dry chnl, meandering in this location. Large field sieved sample.	1.52	0.001
88605	664270	5519075	978	RH/EB	Bouldery, partly boggy chnl. Weak flow.	1.69	0.001
88606	664082	5522161	987	RH/EB	Meandering chnl. Gentle flow.	1.3	0.001
88607	663347	5523938	1036	RH/EB	Boggy, irregular chnl. Trickle of water/stagnant pools.	1.29	0.002
88608	661491	5527430	1056	RH/EB	Dry chnl, poor sed transport (low gradient).	1.45	0.001
88609	661290	5526402	1110	RH/EB	Mere trickle, but good clean grvl stream bed.	1.43	0.002
88610	661302	5526419	1106	RH/EB	Mere trickle, but good clean grvl/cobble stream bed.	1.4	0.002
88611	662134	5520806	1114	RH/EB	Boggy chnl, trickler flow; v. Low gradient.	1.88	0.002
88612	660914	5524993	1195	RH/EB	Dry, shallow chnl; very little transported seds. Drainage basin mapped as (dominately) Kc w/ patches of Pd.	1.31	0.002
88613	660535	5529341	1083	RH/EB	V. Minor flow (trickle) over gravelly base.	1.7	0.002
88614	659439	5532940	1056	RH/EB	Wide, boggy valley; meandering chnl- gentle flow. Abundant pools, dams, widening of stream valley bottom downstream.	1.66	<0.001
88615	659449	5535432	1150	RH/EB	Sample collected from three spots along 25m of chnl. Weak flow	1.86	0.001
88616	659450	5535459	1146	RH/EB	Minor organics. Sample from several spots 20-25m upstream from GPS reading site. Good pockets of clean silt/sand.	1.56	0.001
88617	659899	5535141	1115	RH/EB	Good stream flow (Med.). Clean silt/sands. Sample collected from several spots over 25m.	1.6	0.001
88618	659665	5534277	1069	RH/EB	V. Good clean silt/sand from one location.. Moderate flow.	1.55	<0.001
88619	660609	5532898	1034	RH/EB	Dry chnl, poor sed development/ transport. Most of sample collected at N end (WP053)	1.17	0.002
88620	661887	5535375	1185	RH/EB	Irregular, boggy chnl. Dry. Poorly transported seds. Part of sample collected at WP054. Majority of sample collected at WP055.	1.43	<0.001
88621	661532	5534591	1118	RH/EB	Boggy chnl, mere trickle of water. Poorly transported seds. Part collected @ WP056, most collected @ WP057	1.51	0.001
88622	662588	5532588	1051	RH/EB	V. Coarse seds, grvl/cobble base, low flow. Low gradient drainage below sm. Lake.	2.07	0.001
88623	663000	5532498	1047	RH/EB	Meandering chnl, wide valley bottom. Trickle flow. Sample loc'n is off property to E.	1.45	<0.001
88624	662999	5532498	1047	RH/EB	Duplicate of 88623	1.38	0.002
88625	658528	5530150	1056	RH/EB	Dry chnl. Sparse, good clean seds. Low gradient.	1.23	0.001
88627	654015	5528794	1147	RH/EB	Dry, poor chnl; humus base, v. coarse transported seds, scarce fines & much organics. (Poor sample).	1.07	<0.001
88629	652227	5528428	1084	RH/EB	Dry, shallow chnl. Coarse seds atop humus base. Marginal quality due to mixed organics.	1.04	<0.001

APPENDIX 3

2011 ROCK GRAB LOCATION AND DESCRIPTION

2011 Rock Grab Samples

*UTM Nad83 Zone 10

Sample	Easting*	Northing*	Type	Material	Lithology	Grain Size	sulph	% Sulph	Alteration Type	Veining	Relief	Structure	Strike	Dip	Description	Certificate #	Au_ppb
11ADP001	654570	5524268	Grab	Outcrop	Lithic tuff	Medium				Moderate					Grey lithic tuff w/ qtz clasts and qtz veins	VAN11004228	57.3
11ADP002	654276	5523677	Grab	Boulder	Quartzite	Fine	Pyrite	1		high					Red/Grey quartzite w/ visible pyrite and other sulphides (arsenopyrite?)	VAN11004228	6825.1
11ADP003	652119	5524297	Grab	Outcrop	Ryolite(?)	Fine									Grey, highly silicic, volcanic rock with pyroclastic flow texture	VAN11004228	15.0
11ADP004	652087	5524387	Grab	Outcrop	Ryolite	Fine									Felsic volcanic rock with pyroclastic flow texture (ryolite flow?)	VAN11004228	15.1
11ADP005	652159	5524543	Grab	Outcrop	Lithic Tuff	Fine				Moderate					Lithic tuff, heterolithic, with rounded qtz clasts and qtz veins (up to 2 cm in size)	VAN11004228	16.5
11ADP006	651940	5524481	Grab	Outcrop	Lithic Tuff	Fine				Moderate					Lithic tuff with qtz clasts and qtz veins (up to 2 cm in size)	VAN11004228	2.1
11ADP007	652065	5524289	Grab	Outcrop	Lithic Tuff	Fine				Low					Fine grained lithic tuff with qtz clasts and qtz veins (up to 1 cm in size)	VAN11004228	3.4
11ADP008	652264	5524047	Grab	Outcrop	Lithic Tuff	Fine									Fine grained lithic tuff with qtz clasts. No veins are visible	VAN11004228	1.3
11ADP009	652542	5524203	Grab	Outcrop	Ryolite (?)	Fine				Low					Very altered fine grained felsic volcanic rock with flow texture (ryolite flow?)	VAN11004228	1.8
11ADP010	652335	5524366	Grab	Boulder	Lithic Tuff	Medium				Low					Lithic tuff with qtz clasts and qtz veins (up to 1 cm in size)	VAN11004228	3.6
11ADP011	652907	5524306	Grab	Outcrop	Lithic Tuff	Fine									Fine grained lithic tuff with small qtz clasts. No veins are visible	VAN11004228	1.3
11ADP012	652317	5524345	Grab	Boulder	Tuff (?)	Fine				Low					Grey, very fine grained felsic pyroclastic rock with feldspar clasts and small quartz veins (-0.5 cm in size)	VAN11004228	0.6
11ADP014	652239	5524373	Grab	Outcrop	Quartzite (vein)	Medium						vein	332	47	Quartz vein (3-6 cm) found in a bed of clay and altered rock in trench 017 @ Line 6. The material found may not be in its original position. Solid bedrock is found ~ 40 cm below.	11V526516	7.0
11ADP016	654116	5523870	Grab	boulder	Lithic tuff	medium	pyrite	2.5	arg	moderate					lithic tuff boulders with qtz veins and sulfide stringers. Boulders are large in size (~100kg the biggest) and angular	VAN11004340	12.6
11ADP017	654222	5523617	Grab	boulder	veined quartzite	Fine		0.5	Si	high					rounded boulder of red/grey veined quartzite with geods of quartz and sulfide stringers	VAN11004340	0.25
11ADP018	661242	5516207	Grab	Outcrop	Lithic tuff	medium			arg	Moderate					grey lithic tuff with small quartz clasts. No veining observed. Disseminated sulfides locally	VAN11004340	0.25
11ADP019	661076	5517395	Grab	Outcrop	Lithic tuff	medium	Pyrite	0.5	arg						large outcrop of grey lithic tuff. Locally silicified. Disseminated sulfides present	VAN11004340	1.7
11ADP020	663746	5520548	Grab	Outcrop	ash tuff	Fine			arg	Low	Moderate				very fine grained ash tuff with fine quartz stringers and disseminated sulfides. Locally silicified	11V526992	1.0
11ADP021	663617	5520662	Grab	Outcrop	ash tuff	Fine	Pyrite	1	arg	moderate	Moderate				fine grained grey ash tuff with abundant quartz veins and sulfide stringers	11V526992	4.0
11ADP022	663553	5520670	Grab	Outcrop	ash tuff	Fine			arg	moderate	Moderate				fine grained grey ash tuff with abundant quartz veins and disseminated sulfides. Locally silicified	11V526992	1.0
11ADP023	663925	5520542	Grab	Outcrop	ash tuff	Fine	Pyrite	0.5	arg	moderate	Moderate				fine grained grey ash tuff with quartz stringers and disseminated sulfides	11V526992	1.0
11ADP024	661826	5520716	Grab	Outcrop	Silicified tuff	Fine			arg		Moderate				strongly altered silicified tuff with disseminated sulfides	VAN11004340	0.3
11ADP025	661819	5520834	Grab	Outcrop	Silicified tuff	Fine			arg	moderate	Moderate				silicified tuff with quartz veins (0.2-2cm) and stringers of quartz and sulfides	VAN11004340	0.3
11ADP027	661989	5520822	Grab	outcrop	Silicified tuff	fine			arg	moderate	moderate				altered silicified tuff with quartz veins (1-5cm) and disseminated sulfides	VAN11004340	0.3
11AGP001	652268	5524362	Grab	Outcrop	Lithic Tuff	Medium					Moderate				Rubby outcrop on top of small knoll. Greyish in colour, medium grained, subrounded to rounded quartz fragments.	VAN11004228	67.7
11AGP002	652876	5524374	Grab	Outcrop	Lithic Tuff	Porphyritic					Low				Lithic tuff, beige in colour near line 6 trenches. Lithic fragments 1-5mm, wedge shaped, 5%. 10% kfs xtals. Orange-tan pervasive alteration, with some pink hematite along some fractures.	VAN11004228	2.3
11AGP003	654130	5524043	Grab	Boulder	Lapilli Tuff (?)	Fine									1m x 2m subrounded boulder - long axis parallel to creek. Possibly outcrop?? Dark purple possibly lapilli tuff. Elongate lapilli altered by pervasive fine grained maroon to dark orange hematite and are 0.1 x 0.5 - 1mm long. Immediately below crest of hill.	VAN11004228	1.0
11AGP004	654184	5523855	Grab	Boulder	Lithic Tuff	Medium									Rounded boulder in meadow, 40cm in diameter. Quartz vein in lithic tuff, or possibly large cherty fragment in tuff. Small drusy quartz veinlets in quartz, and quartz is grey-green in colour.	VAN11004228	1.2
11AGP005	654136	5523819	Grab	Outcrop	Lithic Tuff	Porphyritic					High				Outcrop at bottom of hill adjacent to creek. Outcrop is blocky. A note on flagging found at the outcrop said "dissem py." but no sample was observed on map at this location. Lithic fragments 1-5mm in diameter and fairly square/blocky. 5% of fragments appear to be quartz. Hairline quartz veinlets, grey appear in more silicic patches. Patchy-pervasive rusty hematite alteration.	VAN11004228	1.2
11AGP006	654082	5523929	Grab	Outcrop	Lithic Tuff	Medium					High				Outcrop - blocky and massive on side of hill. Lithic tuff, but clasts are more heterolithic than previous tuff (11AGP005). Beige, with rusty orange on some weathered surfaces.	VAN11004228	0.25
11AGP007	654119	5523895	Grab	Boulder	Lithic Tuff	Medium	Pyrite	1			Moderate				Sub-angular boulder mostly beneath tree. 50-60cm x 10 20cm (?). Lithic tuff, 5% quartz lithic fragments. Rusty orange, especially on surface - 1% disseminated vfg pyrite. At lower end of 6m long angular boulder (of same composition) train.	VAN11004228	0.6
11AGP008	654251	5524172	Grab	Boulder	Welded Tuff	Fine									Welded lapilli tuff? 1mm feldspar xtals, matrix is vfg pale pink. Large 1.5 x 1.5m boulder.	VAN11004228	0.25
11AGP009	652598	5524456	Grab	Outcrop	Lithic Tuff	Medium									Quartz-fragment bearing lithic tuff. Host lithology, but no significant veining observed. About 50m from a trench.	VAN11004228	8.7
11AGP010	652105	5524329	Grab	Outcrop	Lithic Tuff	Fine						Jointing	214	74	Lithic tuff, pink hematite alteration in places. Lithic fragments 1-5mm.	VAN11004228	7.0
11AGP011	652165	5524563	Grab	Outcrop	Lithic Tuff	Porphyritic									Rubby outcrop on top of knoll. Lithic tuff with drusy quartz veinlets. Quartz lithic fragments 1-10mm, and they are blocky in shape. Groundmass of rock is white.	VAN11004228	23.5

2011 Rock Grab Samples

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Sample	Easting	Northing	Type	Material	Lithology	Grain Size	sulph	% Sulph	Alteration Type	Veining	Relief	Structure	Strike	Dip	Description	Certificate #	Au_ppb
11AGP012	652095	5524695	Grab	Outcrop	Lithic Tuff	Medium									Lithic tuff - beige groundmass. Outcrop on top of rubbly hill above swamp. Lithic fragments are heterolithic and contain that greeny-grey quartz fragments. No veining observed in this outcrop.	VAN11004228	1.6
11AGP013	651991	5524743	Grab	Outcrop	Lithic Tuff	Medium									Outcrop on crest of hill facing northwest. Lithic tuff very similar to previous, but with no quartz.	VAN11004228	0.25
11AGP014	651919	5524459	Grab	Outcrop	Rhyolite (?)	Fine									Prominent outcrop on edge of hill, fine grained very felsic rock. 30m or so from lithic tuff outcrop. Light grey pink in colour. No veining.	VAN11004228	0.25
11AGP015	652042	5524288	Grab	Boulder (?)	Lithic Tuff	Fine									Rubbly boulder patch under tall tree. Fine grained lithic tuff, with quartz fragments and quartz veins. Weak pink to orange hematite alteration along fractures.	VAN11004228	1.9
11CHP100	657351	5521685	Grab	Outcrop	Rhyolite (?)	fine				high					sample taken from outcrop on hill, 50m x 20m. Structural deformation present. Pink fine grained host rock displaying deformed bands holding 0.5cm to 5cm quartz inclusions	VAN11004496	0.7
11EHP100	652945	5524214	Grab	Boulder	Lithic Tuff	Medium				High	Moderate				Grey/pink lithic tuff with qtz clasts and pervasive veins of quartz	VAN11004228	9.4
11KRP007	652234	5524374	Grab	Boulder	Silicified tuff	Medium				Moderate	Moderate				Loose subcrop, silicified tuff plus mm scale carbonate stringers and trace disseminated pyrite locally	VAN11004228	5.8
11KRP008	652234	5524374	Grab	Boulder	Welded Tuff	Medium				Moderate					Flattened cm scale lithic fragment with parallel, up to 1 cm scale quartz stringers	VAN11004228	121.4
11KRP009	652234	5524374	Grab	Boulder	Lithic tuff		Pyrite	1		Low	Moderate				Silicified fine to medium grained lithic tuff with 0.5% pyrite as mm-scale veinlets	VAN11004228	10.5
11KRP010	652308	5524353	Grab		Lithic tuff										Reddish-pink pervasively altered lithic tuff containing abundant flattened or elongated silicic fragments and mm scale anastomizing qtz stringers	VAN11004228	50.2
11KRP011	652265	5524406	Grab	Talus/ Boulder	Quartz vein/ Lithic tuff					High	Moderate				10 cm quartz ± carbonate breccia cobble, angular probably some downhill transport here	VAN11004228	4.4
11KRP012	652267	5524412	Grab	Boulder	Silicified lithic tuff										30 cm angular boulder, silicified lithic tuff. Contains 1-5mm angular greenish silicic clasts. Sparse, thin sub-mm quartz stringers	VAN11004228	28.7
11KRP013	653800	5524202	Grab	Outcrop	Quartz vein	Medium	Pyrite	trace	arg, Si	high	Moderate		9	28	6cm thickness, opaque white, laminated quartz vein, lithic tuff host rock, vein is vuggy in places possibly due to dissolved carbonate. Chip composite over 1m length along vein exposure	11V526516	19.0
11KRP016	653801	5524208	Grab	outcrop	Quartz vein	medium-coarse	pyrite	trace	Si	high	moderate				3cm vuggy quartz vein, 2m NNE of 11KRP013 sample, and an extension of this same vein. Sample collected from local 30cm zone where vein bifurcates/brecciated	11V526516	17.0
11KRP017	653800	5524208	Grab	outcrop	Quartz vein	coarse			Si	moderate	moderate				select grab from 1-3cm laminated, vuggy quartz vein	11V526516	15.0
11SHP002	659602	5519068	Grab	outcrop	Lithic Tuff	med-crs	pyrite	0.5	arg, Si		moderate				Lithic Tuff, fine-grained disseminated sulphides, greenish grey groundmass, lithics range from 0.5mm to 1cm	VAN11004496	0.8
11SHP003	659584	5519377	Grab	outcrop	Lithic Tuff	med-crs	pyrite	trace	arg		moderate				Lithic Tuff, trace amounts of sulphides, Lithic Fragments range from 0.2mm to 8mm, Greenish-grey colour	VAN11004496	<0.5
11SHP004	659497	5519437	Grab	outcrop	Lithic Tuff	med-crs			arg		high				Greenish-grey, no visible sulphides under hand lens, clasts range from 0.5mm to 1cm	VAN11004496	<0.5
11SHP005	660778	5517840	Grab	outcrop	Lithic Tuff	med-crs			arg	low	moderate				Lithic Tuff, with fine quartz veins, greenish-grey. Lithics range from 0.5mm to 1cm. Argillically altered, no visible sulphides.	VAN11004496	0.7
11SHP006	661465	5517812	Grab	outcrop	Lithic Tuff	med-crs			arg, Si		moderate				Weathered, salmony pink lithic tuff with argillic alteration and slight silicic alteration. Clasts range from 0.5-6mm.	VAN11004496	<0.5
11SHP007	661820	5517791	Grab	outcrop	Lithic Tuff	med-crs	pyrite	trace	arg		moderate				Greyish-cream. Lithics range from 0.3mm-1cm, argillically altered. Trace sulphides.	VAN11004496	<0.5
11SHP008	659504	5516837	Grab	outcrop	Lithic Tuff	med-crs	pyrite	trace	arg	low	moderate				Greenish grey, argillically altered lithic tuff. Trace sulphides, lithics ranging from 0.5mm to 1cm. Sub-mm quartz veining.	VAN11004496	<0.5
11SHP009	659537	5517050	Grab	outcrop	Lithic Tuff	med-crs	pyrite	trace	arg, Si	low	moderate				Greenish grey lithic tuff. Fine quartz with moderate argillic alteration with slight silicic alteration. Lithics range from 0.3mm to 1cm. Near rhyolite.	VAN11004496	<0.5
11SHP010	659503	5517066	Grab	outcrop	Ash Tuff	fine	pyrite	trace	arg, Si	high	moderate				Fine grained ash tuff with argillic alteration with some silicic overprinting, high amounts of quartz veins with trace amounts of sulfides.	VAN11004496	<0.5
11SHP011	659386	5517454	Grab	outcrop	Lithic Tuff	med-crs	pyrite	trace	arg, Si		moderate				Weathered, salmony pink lithic tuff with argillic alteration and slight silicic alteration. Disseminated sulphides and lithics, 0.5mm to ~1cm.	VAN11004496	<0.5
11SMP001	654088	5524001	Grab	boulder	Lithic tuff	medium	Pyrite	trace	arg		Moderate				angular boulder, ~10m E of creek. Very fine disseminated sulfides	VAN11004340	0.25
11SMP002	654259	5523628	Grab	boulder	Lithic tuff	medium	Pyrite	trace	arg		Moderate				subangular boulder. Possible very fine sulfides	VAN11004340	3.6
11SMP003	662581	5516133	Grab	Outcrop	Rhyolite Tuff/ Quartz vein	Fine	Pyrite	trace	Si	high	Moderate		306	77	quartz vein zone in rhyolite tuff. 10cm x 1.5m composite of vein area. Veins 3mm-2cm wide. Trace disseminated pyrite	VAN11004340	0.25
11SMP004	661255	5516211	Grab	Outcrop	Lithic tuff	medium	Pyrite	0.5	arg		Moderate				extensive outcrop. Pieces sampled from 5m x 5m area	VAN11004340	0.25
11SMP005	663801	5520504	Grab	Outcrop	Lithic tuff	Fine	Pyrite	trace	arg		Moderate				fine grained clasts in ash matrix. Possible very fine grained sulfides	11V526992	1.0
11SMP006	663747	5520640	Grab	Outcrop	ash tuff	Fine	Pyrite	0.5	arg, Si	moderate-high	Moderate				green fine grained ash tuff. 0.5-2mm quartz stringers, occasionally with trace disseminated sulfides. Trace to minor disseminated sulfides. Patchy silicification	11V526992	1.0
11SMP007	663818	5520646	Grab	Outcrop	ash tuff	Fine	Pyrite	0.5	Si	moderate	Moderate				fine grained, green ash tuff. Patchy silicification. Minor fine disseminated sulfides. Quartz stringers 1-2mm. Large area of outcrop	11V526992	1.0
11SMP008	661871	5520563	Grab	Outcrop	tuff	Fine	Pyrite	0.5	Si	Low	Moderate				tuff. Moderately to strongly silicified. Occasional fine sub-mm quartz stringers. Minor disseminated sulfides. Large area of outcrop along entire ridge	VAN11004340	0.25
11SMP009	661849	5520636	Grab	outcrop	Silicified tuff	fine-medium	pyrite	trace	Si, arg		moderate				fine to medium grained. Moderate argillic alteration and silicification. Possible trace very fine grained sulfides. Outcrop in bush along ridge top	VAN11004340	0.25

2011 Rock Grab Samples

*UTM Nad83 Zone 10

Sample	Easting	Northing	Type	Material	Lithology	Grain Size	sulph	% Sulph	Alteration Type	Veining	Relief	Structure	Strike	Dip	Description	Certificate #	Au_ppb
11SMP010	661820	5520774	Grab	outcrop	Welded Tuff	fine	pyrite	trace	Si, arg	low	moderate				fine grained. Finely laminated with alternating white and purple layers. Occasional small clasts. Rare mm scale quartz stringers. Trace fine disseminated sulfides. Moderate argillic and silicic alteration. Outcrop at top of hill.	VAN11004340	0.25
11SMP012	661826	5520945	Grab	outcrop	ash tuff	fine	pyrite	trace	arg	low	moderate				very fine grained. Moderate argillic alteration. Rare mm scale quartz veins. Trace fine disseminated sulfides. Outcrop at top of ridge beside swampy area	VAN11004340	0.25
11SMP013	661981	5520836	Grab	outcrop	ash tuff	fine	pyrite	trace	arg, Si		moderate				very fine grained. Weak patchy silicification. Moderate argillic alteration. Possible trace very fine sulfides. Small outcrop, strongly weathered	VAN11004340	0.25
11SMP014	663947	5520516	Grab	outcrop	ash tuff	fine	pyrite	0.5	Si, arg	moderate	moderate				very fine grained. Greenish. Silicified and moderately argillically altered. Sub-3mm quartz veins. Minor disseminated sulfides. Outcrop at side of road	11V526992	1.0
11SMP015	661714	5516458	Grab	outcrop	Lithic tuff	medium			arg, Si	low	moderate				weak to moderate argillic alteration. Patchy silicification. Rare fine (0.5mm) quartz veins	VAN11004496	<0.5
11SMP016	661892	5516664	Grab	outcrop	Lithic tuff	medium	pyrite	0.5	arg, Si	low	moderate				medium to fine clasts in very fine matrix. Rare sub-mm quartz veining. Moderate argillic alteration. Moderate patchy silicification. Minor fine disseminated pyrite	VAN11004496	<0.5
11SMP018	660212	5522866	Grab	outcrop	Rhyolite	fine	pyrite	trace	arg	low	moderate				cream and purple. Flow banded. Fine grained. Occasional sub-mm to 2mm quartz veins. Trace disseminated sulfides. Large outcrop, ~10m thick, ~50m from road	VAN11004496	<0.5
11SMP019	659935	5520976	Grab	outcrop	lithic tuff/ conglomerate	coarse	pyrite	trace	arg		moderate				coarse clasts to 75cm, angular to subround. Various lithologies. Tuff matrix, fine. Argillic alteration. Trace sulfides in matrix and clasts. ~80m from Strongbow grab 77959	VAN11004496	1.1
11SMP020	659359	5518693	Grab	outcrop	lithic tuff	medium			arg		moderate				grey-green. Medium grained. Moderately argillic altered. Weak patchy silicification. Outcrop at side of road	VAN11004496	<0.5
11SMP021	655719	5519286	Grab	outcrop	lithic tuff	medium			arg, Si		moderate				green-tan. Medium grained. Moderate argillic alteration. Patchy silicification	VAN11004496	<0.5
11SMP022	656093	5518764	Grab	outcrop	lithic tuff	fine- medium	pyrite	trace	arg	low	moderate				fine to medium grained. Moderate argillic alteration. Rare sub-mm quartz veins. Trace disseminated sulfides. Light grey	VAN11004496	<0.5
11SMP023	659551	5519031	Grab	outcrop	lithic tuff	medium	pyrite	trace	Si		moderate				medium grey. Silicified. Minor disseminated pyrite. Lithic clasts to 10mm	VAN11004496	0.7
11SMP024	659624	5519214	Grab	outcrop	lithic tuff	medium	pyrite	trace	arg, Si		moderate				grey-green. Weak silicification and moderate argillic alteration. Trace fine disseminated sulfides. Low outcrop on ridge top	VAN11004496	2.4
11SMP025	659586	5519536	Grab	outcrop	lithic tuff	fine			arg, Si	low	moderate				green with purple oxidation on fracture planes. Occasional quartz veining to 5mm. Trace very fine disseminated sulfides	VAN11004496	<0.5
11SMP027	663044	5516953	Grab	outcrop	ash tuff	fine			arg, Si	low	moderate				very fine grained. Moderate to strong argillic alteration. Patchy silicification. Green. Outcrop at side of road	VAN11004496	3.7
11SMP028	661111	5517749	Grab	outcrop	ash tuff	fine	pyrite	trace	arg	low	moderate				light grey, rare lithic clasts, occasional crystal fragments. Moderate argillic alteration. Rare sub-mm quartz veins, trace fine disseminated sulfides. Outcrop 5-10m NE of porphyry outcrop.	VAN11004496	<0.5
11SMP029	661556	5517824	Grab	outcrop	lithic tuff	fine	pyrite	trace	arg		moderate				light grey. Fine grained. Trace fine disseminated sulfides. Platy pasting.	VAN11004496	2.7
11SMP030	661860	5517817	Grab	outcrop	lithic tuff	medium	pyrite	trace	arg		moderate				light grey. Medium grained. Moderate to strong argillic alteration. Trace very fine disseminated sulfides. Large outcrop 15-20m high x 200-300m long.	VAN11004496	1.6
11SMP031	659488	5516974	Grab	outcrop	lithic tuff	medium	pyrite	trace	arg	low	mod-high				greenish-tan. Medium grained clasts. Moderate argillic alteration. Occasional discontinuous sub-mm quartz veins. Trace fine sulfides in clasts.	VAN11004496	0.8
11SMP032	659451	5517311	Grab	outcrop	lithic tuff	medium	pyrite	trace	arg	low	mod-high				greenish-tan. Medium grained. Occasional quartz veining to 1mm. Moderate argillic alteration. Trace fine sulfides. Outcrop on ridge top.	VAN11004496	<0.5

2011 Shovelnose Rock Samples by Ed Balon

*Nad83 Zone 10

Sample	Type	Northing*	Easting*	Sampled_By	Lith_Code	Grain_Szie	Colour_Weathered	Mineral1	Mineral2	Alt1_Code	Alt1_Int	Alt1_Style	Alt2_Code	Alt2_Int	Alt2_Style	Min1_Pct	Min1_Style	Min2_Pct	Min2_Style	Comments	Au_ppm**
88626	chnl-2.5m	5529753	655189	EB / RH	VAc	fine	orng-brn	agate	calcite							1	vnlt	1	vnlt	Sample across shr zn (140/stpSW) in strong Fe carb / silic altd area.	<0.01
88630	grab	5529177	653325	EB	VAc / VAa	fine	dk grn/grey	pyrite	pyrrhotite							2	dissem	1	dissem	Selected grabs from dk rusty weathered / fractured rubble (near OC).	<0.01
88631	grab	5532907	659325	EB	Qtz Vn	ultra fine	pale grey	chalcedony	pyrolusite							97	msv / xtln	2	cav lin/flng	Float; single tabular, subrnded pc 5x8x11cm. Till covered area.	<0.01
88632	grab	5520485	663815	EB	VAI+qtz vn	variable	dk grn/wht	pyrite	limonite							(locally) 3	dissem	10	frac flngs	Float; dk rusty arg altd pyritic VA + 4cm thick shrd opaque wht Qtz Vn	<0.01
88633	grab	5520663	663616	EB	VAc / VAa	fine	lt olive grn	qtz	pyrite	silicic	v.strong	pervasive	propyl.	weak	patchy	(locally) 7	vnlt	<0.1	dissem	Outcrop selected grab. Dup of ApexGeo Sample 11ADP021.	0.01
88634	chip -1.4m	5521178	662010	EB / RH	VRc	fine	yel-orng			arg	mod-strng	loc pervsv	FeOx (lim)	mod	patchy					Sample across shr zn (260/vert to stpN), near prev R-81060-HRD.	<0.01

**Certificate#: 11V539066

Rock Grabs QA/QC Samples

Sample_ID	Type	Certificate #	Au_ppb
11ADP015	Blank	VAN11004340	0.25
11AGP017	Blank	VAN11004228	0.8
11SMP017	Blank	VAN11004496	0.25
11KRP015	Blank	11V526516	1
11SMP026	Standard 10c	VAN11004496	6514.9
11ADP013	Standard 67a	VAN11004228	2337
11ADP026	Standard 67a	VAN11004340	2366.3
11SHP001	Standard 67a	VAN11004496	2395.9
11AGP016	Standard 68a	VAN11004228	4136
11KRP014	Duplicate of 11KRP013	11V526516	25
11SHP012	Duplicate of 11SHP011	VAN11004496	3
11SMP011	Duplicate of 11SMP010	VAN11004340	0.25

APPENDIX 4

2011 TRENCH SAMPLE LOCATION AND DESCRIPTION

2011 Shovelnose Trench Sampling

Sample	Easting	Northing	From (m)	To (m)	Trench Name	Lithology	Grain_Size	sulphide	\$_Sulf	Alteration	Alterati_1	Veining	Magnetism	Relief	Comments	Certificat	Au_ppb_FA
11MKP002	653794	5524205	0.00	2.00	MK11-XT-07	lithic tuff						low	none	mod	MK road cut trench 0-2m	VAN11004228	9.30
11MKP003	653796	5524205	2.00	4.00	MK11-XT-07	lithic tuff						low	none		MK road cut trench 2-4m	VAN11004228	44.00
11MKP004	653799	5524207	4.00	5.00	MK11-XT-07	lithic tuff									MK road cut trench 4-5m	VAN11004228	18.40
11MKP005	653800	5524207	5.00	6.00	MK11-XT-07	lithic tuff									MK road cut trench 5-6m	VAN11004228	11.60
11MKP006	653801	5524207	6.00	7.00	MK11-XT-07	lithic tuff									MK road cut trench 6-7m	VAN11004228	13.60
11MKP007	653801	5524207	7.00	8.00	MK11-XT-07	lithic tuff									MK road cut trench 7-7.5m	VAN11004228	3.30
11MKP008	653676	5524488	0.00	2.00	MK11-XT-08	lithic tuff	med			str	arg		none		0-2m, very altered bedrock, no veining visible	VAN11004228	117.20
11MKP009	653675	5524489	2.00	4.00	MK11-XT-08	lithic tuff	med			str	arg		none		2-4m, very altered bedrock, no veining visible	VAN11004228	25.40
11MKP010	653673	5524490	4.00	6.00	MK11-XT-08	lithic tuff	med			str	arg		none		4-6m, very altered bedrock, no veins are visible	VAN11004228	34.30
11MKP012	653671	5524491	6.00	8.00	MK11-XT-08	lithic tuff	med			str	arg		none		6-8m, very altered bedrock, no veins are visible	VAN11004228	11.00
11MKP013	653669	5524492	8.00	10.00	MK11-XT-08	lithic tuff	med			str	arg		none		8-10m, very altered bedrock, no veins are visible	VAN11004228	6.30
11MKP014	653668	5524493	10.00	12.00	MK11-XT-08	lithic tuff	med				arg		none		10-12m, altered bedrock but no visible veins	VAN11004228	8.50
11MKP016	653666	5524494	12.00	14.00	MK11-XT-08	lithic tuff									12-14m in trench	VAN11004228	16.50
11MKP017	653664	5524495	14.00	16.00	MK11-XT-08	lithic tuff	fn-med			str	clay weathering		none	mod	14-16m, 749ppb trench	VAN11004228	37.20
11MKP018	653662	5524496	16.00	18.00	MK11-XT-08	lithic tuff	med	py	trace	str		low	none		16-18m in trench, strongly to intensely altered	VAN11004228	42.80
11MKP019	653660	5524497	18.00	20.00	MK11-XT-08	lithic tuff									18-20m in trench	VAN11004228	7.90
11MKP020	653659	5524498	20.00	22.00	MK11-XT-08	lithic tuff									20-22m, 749ppb Au trench	VAN11004228	14.10
11MKP021	653657	5524499	22.00	24.00	MK11-XT-08	lithic tuff	fn-med	py	trace	mod-str			none	mod	22-24m along trench at MK	VAN11004228	3.30
11MKP022	653655	5524500	24.00	26.00	MK11-XT-08	lithic tuff									24-26m in trench, first 20cm missing, from 24.5-25.2m also missing due to flooded trench	VAN11004228	17.20
11MKP023	653654	5524501	26.00	28.00	MK11-XT-08	lithic tuff									749ppb Au trench, 26-27m no sample (clay/water hole), 27-28m sampled	VAN11004228	39.90
11MKP024	653652	5524502	28.00	30.00	MK11-XT-08	lithic tuff						low	none		28-30m 749ppb trench, o/c underlying original 749ppb cover sample location, ~30cm	VAN11004228	37.20
11MKP025	653651	5524503	30.00	32.00	MK11-XT-08	lithic tuff	fn-med	py	trace	mod		low	none		MiK trench 30-32m	VAN11004228	18.30
11MKP027	653649	5524505	32.00	34.00	MK11-XT-08	lithic tuff	fn-med					low	none		32-34m 749ppb Au trench	VAN11004228	87.80
11MKP028	653648	5524506	34.00	36.00	MK11-XT-08	lithic tuff									34-36m in trench	VAN11004228	47.40
11LSP002	652207	5524357	0.00	2.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	0-2m, trench 016	VAN11004228	3.00
11LSP003	652209	5524358	2.00	4.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	2-4m, trench 016	VAN11004228	2.90
11LSP004	652210	5524359	4.00	6.00	L611-XT-16	Lithic Tuff	med			mod	arg	mod	none	mod	4-6m, trench 016	VAN11004228	4.60
11LSP005	652212	5524361	6.00	8.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	6-8m, trench 016	VAN11004228	2.10
11LSP006	652214	5524362	8.00	10.00	L611-XT-16	Lithic Tuff	med	py	trace	mod	arg, Si		none	mod	8-10m, trench 016	VAN11004228	37.60

2011 Shovelnose Trench Sampling

Sample	Easting	Northing	From (m)	To (m)	Trench Name	Lithology	Grain_Size	sulphide	\$_Sulf	Alteration	Alterati_1	Veining	Magnetism	Relief	Comments	Certificat	Au_ppb_FA
11LSP007	652215	5524363	10.00	12.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	10-12m, trench 016	VAN11004228	5.20
11LSP008	652217	5524364	12.00	14.00	L611-XT-16	Lithic Tuff	med	py	trace	mod	arg, Si	low	none	mod	12-14m, trench 016	VAN11004228	7.10
11LSP009	652219	5524365	14.00	16.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	14-16m, trench 016	VAN11004228	23.00
11LSP010	652221	5524365	16.00	18.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	16-18m, trench 016	VAN11004228	8.50
11LSP012	652222	5524364	18.00	20.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	18-20m, trench 016	VAN11004228	15.80
11LSP013	652224	5524363	20.00	22.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	20-22m, trench 016	VAN11004228	33.20
11LSP014	652226	5524362	22.00	24.00	L611-XT-16	Lithic Tuff	med			mod	arg, Si		none	mod	22-24m, trench 016	VAN11004228	26.50
11LSP016	652228	5524362	24.00	26.00	L611-XT-16	Lithic Tuff	med			mod	arg		none	mod	24-26m, trench 016	VAN11004228	13.10
11LSP017	652236	5524371	0.00	1.00	L611-XT-17	Lithic Tuff	med			str	arg		none	mod	0-1m, trench 017	11V526516	20.00
11LSP018	652237	5524371	1.00	2.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	1-2m, trench 017	11V526516	19.00
11LSP019	652238	5524370	2.00	3.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	2-3m, trench 017	11V526516	19.00
11LSP020	652239	5524370	3.00	4.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	3-4m, trench 017	11V526516	8.00
11LSP021	652240	5524370	4.00	5.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	4-5m, trench 017	11V526516	9.00
11LSP022	652241	5524369	5.00	6.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	5-6m, trench 017	11V526516	3.00
11LSP023	652242	5524369	6.00	7.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	6-7m, trench 017	11V526516	6.00
11LSP024	652243	5524369	7.00	8.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	7-8m trench 017	11V526516	13.00
11LSP025	652244	5524368	8.00	10.00	L611-XT-17	Lithic Tuff	med			mod	arg, Si	low	none	mod	8-10m, trench 017	11V526516	32.00
11LSP027	652246	5524368	10.00	12.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	10-12m, trench 017	VAN11004228	9.10
11LSP028	652248	5524367	12.00	14.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	12-14m, trench 017	VAN11004228	7.10
11LSP029	652250	5524367	14.00	16.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	14-16m, trench 017	VAN11004228	6.70
11LSP030	652252	5524366	16.00	18.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	16-18m, trench 017	VAN11004228	67.40
11LSP031	652254	5524366	18.00	20.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	18-20m, trench 017	VAN11004228	56.70
11LSP032	652256	5524365	20.00	22.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	20-22m, trench 017	VAN11004228	10.90
11LSP033	652258	5524365	22.00	24.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	22-24m, trench 017	VAN11004228	4.40
11LSP034	652260	5524364	24.00	26.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	24-26m, trench 017	VAN11004228	37.30
11LSP035	652262	5524364	26.00	28.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	26-28m, trench 017	VAN11004228	70.30
11LSP036	652263	5524363	28.00	30.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	28-30m, trench 017	VAN11004228	55.40
11LSP037	652265	5524362	30.00	32.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	30-32m, trench 017	VAN11004228	288.20
11LSP038	652267	5524361	32.00	34.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	32-34m, trench 017	VAN11004228	2.10
11LSP039	652269	5524360	34.00	36.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	34-36m, trench 017	VAN11004228	15.40
11LSP041	652270	5524359	36.00	38.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	36-38m, trench 017	VAN11004228	4.30
11LSP042	652272	5524358	38.00	40.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	38-40m, trench 017	VAN11004228	13.40
11LSP043	652274	5524357	40.00	42.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	40-42m, trench 017	VAN11004228	20.20
11LSP044	652276	5524356	42.00	44.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	42-44m, trench 017	VAN11004228	36.70
11LSP045	652277	5524355	44.00	46.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	44-46m, trench 017	VAN11004228	117.00
11LSP046	652279	5524354	46.00	48.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	46-48m, trench 017	VAN11004228	17.90
11LSP047	652281	5524353	48.00	50.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	48-50m, trench 017	VAN11004228	41.30
11LSP048	652283	5524353	50.00	52.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	50-52m, trench 017	VAN11004228	11.00
11LSP049	652285	5524352	52.00	54.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	52-54m, trench 017	VAN11004228	3.60
11LSP050	652286	5524352	54.00	55.00	L611-XT-17	Lithic Tuff	med			mod	arg		none	mod	54-55m, trench 017	VAN11004228	41.80
11LSP052	652306	5524354	0.00	2.00	L611-XT-18	Lithic Tuff	med			mod	arg		none	mod	0-2m, trench 018	VAN11004228	37.80
11LSP053	652307	5524355	2.00	4.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 2 to mt 4 in trench 018 @ Line 6	VAN11004228	4.80
11LSP054	652309	5524356	4.00	6.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 4 to mt 6 in trench 018 @ Line 7	VAN11004228	71.10

2011 Shovelnose Trench Sampling

Sample	Easting	Northing	From (m)	To (m)	Trench Name	Lithology	Grain_Size	sulphide	\$_Sulf	Alteration	Alterati_1	Veining	Magnetism	Relief	Comments	Certificat	Au_ppb_FA
11LSP055	652311	5524357	6.00	8.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 6 to mt 8 in trench 018 @ Line 8	VAN11004228	8.80
11LSP056	652313	5524358	8.00	10.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 8 to mt 10 in trench 018 @ Line 9	VAN11004228	8.60
11LSP057	652315	5524357	10.00	12.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 10 to mt 12 in trench 018 @ Line 10	VAN11004228	70.90
11LSP058	652316	5524357	12.00	14.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 12 to mt 14 in trench 018 @ Line 11	VAN11004228	9.40
11LSP059	652318	5524356	14.00	16.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 14 to mt 16 in trench 018 @ Line 12	VAN11004228	13.10
11LSP060	652320	5524356	16.00	18.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 16 to mt 18 in trench 018 @ Line 13	VAN11004228	8.40
11LSP062	652322	5524355	18.00	20.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 18 to mt 20 in trench 018 @ Line 15	VAN11004228	36.50
11LSP063	652324	5524354	20.00	22.00	L611-XT-18	Lithic tuff	med			mod	arg		none	mod	mt 20 to mt 22 in trench 018 @ Line 16	VAN11004228	95.00

Trench QA/QC Samples

Sample_ID	Type	Certificate #	Au_ppb
11LSP015	Blank	VAN11004228	2.2
11LSP040	Blank	VAN11004228	2.1
11MKP001	Standard 10c	VAN11004228	6751.2
11MKP015	Standard 10c	VAN11004228	6429.2
11LSP051	Standard 10c	VAN11004228	6434.3
11LSP001	Standard 67a	VAN11004228	2275.5
11MKP026	Standard 68a	VAN11004228	4266.6
11LSP026	Standard 68a	VAN11004228	4033.4
11MKP011	Duplicate of 11MKP010	VAN11004228	17.7
11LSP011	Duplicate of 11LSP010	VAN11004228	7.2
11LSP061	Duplicate of 11LSP060	VAN11004228	8.9

APPENDIX 5

2011 SOIL SAMPLE ANALYTICAL CERTIFICATES



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

www.acmelab.com

Client: Westhaven Ventures Inc.

1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6 Canada

Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: August 26, 2011
Report Date: November 20, 2011
Page: 1 of 9

CERTIFICATE OF ANALYSIS

VAN11004230.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 2
P.O. Number
Number of Samples: 211

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	210	Dry at 60C			VAN
SS80	210	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	210	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Client: **Westhaven Ventures Inc.**
 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 20, 2011

Page: 2 of 9 Part 1

CERTIFICATE OF ANALYSIS

VAN11004230.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS500	Soil	1.1	6.6	7.1	66	<0.1	6.5	4.1	689	1.48	2.9	0.7	1.1	9	0.1	0.1	0.1	35	0.06	0.062	4
11EHS501	Soil	1.0	8.6	5.3	67	<0.1	7.4	4.7	522	1.50	2.1	<0.5	0.8	18	0.2	0.1	0.1	40	0.20	0.083	4
11EHS502	Soil	0.9	20.8	7.4	37	0.1	8.8	5.6	765	1.89	7.1	<0.5	1.5	38	<0.1	0.2	0.1	39	0.78	0.033	32
11EHS503	Soil	0.6	11.7	5.7	58	<0.1	13.8	7.2	273	2.19	3.1	<0.5	0.8	24	<0.1	0.2	<0.1	56	0.21	0.121	4
11EHS504	Soil	0.6	10.1	5.6	50	<0.1	9.7	5.1	407	1.63	2.4	2.9	0.8	21	<0.1	0.1	<0.1	43	0.16	0.099	4
11EHS505	Soil	0.5	14.9	5.8	58	<0.1	10.4	6.3	463	2.39	2.3	12.7	1.0	32	0.1	0.3	<0.1	68	0.34	0.029	8
11EHS506	Soil	0.5	10.7	5.7	51	<0.1	6.8	5.8	322	2.29	2.8	26.6	1.1	26	0.1	0.4	<0.1	68	0.22	0.045	5
11EHS507	Soil	1.1	8.0	6.3	99	0.1	8.6	4.5	1047	1.52	2.0	15.5	0.9	21	0.3	0.1	<0.1	41	0.19	0.077	5
11EHS508	Soil	0.5	9.6	5.8	45	<0.1	7.0	4.9	321	1.97	2.3	1.4	1.0	31	<0.1	0.4	<0.1	53	0.24	0.031	6
11EHS509	Soil	0.7	12.9	4.4	70	<0.1	9.9	5.8	675	2.05	1.9	13.5	0.9	33	0.2	0.2	<0.1	56	0.28	0.054	5
11EHS510	Soil	0.8	12.8	8.0	55	<0.1	6.5	6.2	1031	1.86	3.7	0.8	0.5	35	0.1	0.4	<0.1	44	0.28	0.043	10
11EHS511	Soil	0.7	7.0	7.3	54	<0.1	4.2	3.7	1195	1.35	1.8	5.3	1.1	36	0.2	0.4	<0.1	35	0.33	0.044	5
11EHS512	Soil	0.6	9.2	7.2	39	<0.1	6.5	5.8	694	1.76	1.5	<0.5	0.7	28	0.1	0.2	<0.1	44	0.39	0.018	6
11EHS513	Soil	0.7	15.6	9.6	56	<0.1	10.0	8.1	961	2.33	2.1	<0.5	0.9	36	0.2	0.3	<0.1	54	0.46	0.034	16
11EHS514	Soil	0.4	24.4	7.8	64	0.2	11.1	7.0	502	2.06	2.8	0.6	0.7	44	0.2	0.3	<0.1	48	0.60	0.046	31
11EHS515	Soil	0.7	13.1	7.5	49	<0.1	6.7	6.5	873	1.89	3.8	<0.5	1.1	45	0.2	0.5	<0.1	49	0.42	0.024	10
11EHS516	Soil	0.6	9.4	7.0	52	<0.1	5.1	4.5	958	1.45	2.1	<0.5	0.7	35	0.2	0.4	<0.1	40	0.32	0.029	5
11EHS517	Soil	1.0	9.0	7.9	92	<0.1	4.2	3.5	1379	1.18	3.3	4.0	0.9	32	0.4	0.5	<0.1	26	0.39	0.042	7
11EHS518	Soil	0.7	13.2	8.3	88	<0.1	6.0	4.7	1109	1.57	3.1	<0.5	1.0	64	0.5	0.4	<0.1	42	0.52	0.046	8
11EHS519	Soil	0.7	11.6	9.1	68	<0.1	4.4	4.3	1291	1.31	3.7	0.6	0.9	44	0.4	0.5	<0.1	32	0.48	0.037	8
11EHS520	Soil	0.8	13.6	10.4	67	<0.1	4.9	5.7	1428	1.44	4.2	1.1	0.6	54	0.4	0.6	<0.1	36	0.54	0.031	8
11EHS521	Soil	0.8	16.1	8.2	54	<0.1	6.6	7.5	1015	2.02	4.3	0.9	1.1	44	0.3	0.5	0.1	52	0.42	0.040	12
11EHS522	Soil	0.9	14.3	7.8	55	<0.1	9.0	7.7	926	2.30	1.9	0.8	0.9	47	0.2	0.2	0.1	57	0.53	0.034	7
11EHS523	Soil	0.7	15.5	7.1	75	<0.1	6.8	5.0	947	1.39	2.8	1.0	0.4	67	0.5	0.5	<0.1	35	0.74	0.070	12
11EHS524	Soil	1.1	20.5	8.2	88	<0.1	8.4	7.5	1479	2.01	4.7	1.0	0.9	58	0.6	0.5	<0.1	49	0.56	0.053	16
11EHS525	Soil	0.8	13.3	7.9	65	<0.1	6.0	5.5	1304	1.64	3.4	0.7	0.9	40	0.4	0.5	<0.1	41	0.34	0.036	11
11EHS526	Soil	0.8	20.4	7.6	79	<0.1	8.5	7.7	1050	2.23	4.4	1.0	0.8	46	0.4	0.4	<0.1	55	0.42	0.063	15
11EHS527	Soil	0.7	17.0	7.4	58	<0.1	8.7	6.7	760	1.88	3.4	1.3	1.1	42	0.3	0.3	<0.1	46	0.41	0.024	12
11EHS528	Soil	0.6	15.8	7.5	98	<0.1	7.1	5.6	1029	1.72	3.3	<0.5	0.6	61	0.4	0.3	<0.1	43	0.68	0.065	7
11EHS529	Soil	0.7	14.5	7.6	76	<0.1	5.1	4.5	1182	1.40	3.1	<0.5	0.4	60	0.4	0.4	<0.1	37	0.69	0.075	7

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Project: Shovelnose
 Report Date: November 20, 2011

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CERTIFICATE OF ANALYSIS

VAN11004230.1

Method	Analyte	1DX15															
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
11EHS500	Soil	8	0.14	108	0.053	1	1.93	0.012	0.04	<0.1	0.04	1.0	<0.1	<0.05	6	<0.5	<0.2
11EHS501	Soil	11	0.21	243	0.048	1	1.45	0.013	0.06	<0.1	0.02	1.3	<0.1	<0.05	5	0.9	<0.2
11EHS502	Soil	14	0.34	585	0.018	<1	2.35	0.017	0.08	<0.1	0.06	5.1	<0.1	<0.05	6	0.6	<0.2
11EHS503	Soil	17	0.31	114	0.074	1	1.89	0.009	0.06	<0.1	0.02	2.4	<0.1	<0.05	6	0.6	<0.2
11EHS504	Soil	12	0.22	114	0.073	<1	1.60	0.011	0.05	<0.1	0.02	1.6	<0.1	<0.05	5	<0.5	<0.2
11EHS505	Soil	19	0.43	116	0.096	<1	1.25	0.015	0.09	<0.1	0.01	2.6	<0.1	<0.05	4	0.7	<0.2
11EHS506	Soil	15	0.30	152	0.080	1	1.20	0.013	0.06	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS507	Soil	12	0.25	143	0.061	<1	1.41	0.011	0.06	<0.1	0.02	1.7	<0.1	<0.05	5	<0.5	<0.2
11EHS508	Soil	14	0.32	106	0.088	1	1.02	0.012	0.07	<0.1	0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
11EHS509	Soil	18	0.36	174	0.101	1	1.15	0.012	0.11	<0.1	0.01	2.4	<0.1	<0.05	4	<0.5	<0.2
11EHS510	Soil	11	0.27	141	0.052	1	1.32	0.008	0.14	<0.1	0.03	1.9	<0.1	<0.05	4	0.6	<0.2
11EHS511	Soil	8	0.14	190	0.066	1	0.73	0.010	0.09	<0.1	0.05	1.3	<0.1	<0.05	3	<0.5	<0.2
11EHS512	Soil	12	0.30	131	0.092	<1	1.09	0.008	0.11	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS513	Soil	16	0.41	135	0.076	1	1.53	0.008	0.13	<0.1	0.02	2.5	<0.1	<0.05	5	<0.5	<0.2
11EHS514	Soil	18	0.44	147	0.051	<1	2.05	0.014	0.12	<0.1	0.04	4.0	<0.1	<0.05	6	0.7	<0.2
11EHS515	Soil	11	0.28	157	0.076	2	1.00	0.009	0.14	<0.1	0.04	2.6	<0.1	<0.05	3	0.6	<0.2
11EHS516	Soil	9	0.20	182	0.065	1	0.79	0.010	0.09	<0.1	0.03	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS517	Soil	6	0.14	231	0.043	<1	0.73	0.006	0.12	<0.1	0.02	0.9	<0.1	<0.05	3	0.6	<0.2
11EHS518	Soil	10	0.22	240	0.075	2	0.96	0.009	0.13	<0.1	0.03	2.0	<0.1	<0.05	3	0.6	<0.2
11EHS519	Soil	7	0.17	260	0.045	3	0.77	0.012	0.15	0.1	0.04	1.6	<0.1	<0.05	2	0.5	<0.2
11EHS520	Soil	8	0.21	250	0.043	2	0.74	0.006	0.13	<0.1	0.05	1.7	<0.1	<0.05	2	0.5	<0.2
11EHS521	Soil	12	0.31	149	0.066	2	1.13	0.008	0.19	<0.1	0.03	3.1	<0.1	<0.05	4	<0.5	<0.2
11EHS522	Soil	16	0.40	187	0.080	<1	1.42	0.008	0.09	<0.1	0.04	2.2	<0.1	<0.05	5	0.5	<0.2
11EHS523	Soil	10	0.26	168	0.040	2	1.00	0.006	0.17	<0.1	0.05	1.6	<0.1	0.06	3	<0.5	<0.2
11EHS524	Soil	12	0.30	201	0.064	2	1.21	0.008	0.24	0.1	0.03	3.3	<0.1	<0.05	4	0.6	<0.2
11EHS525	Soil	9	0.21	196	0.057	<1	0.97	0.008	0.16	<0.1	0.02	2.1	<0.1	<0.05	3	0.8	<0.2
11EHS526	Soil	15	0.35	164	0.051	1	1.37	0.007	0.22	<0.1	0.03	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS527	Soil	14	0.28	141	0.070	<1	1.22	0.013	0.13	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11EHS528	Soil	12	0.26	233	0.063	2	0.94	0.006	0.12	<0.1	0.05	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS529	Soil	8	0.20	235	0.055	3	0.83	0.005	0.16	<0.1	0.03	1.3	<0.1	<0.05	3	0.5	<0.2



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Project: Shovelnose
 Report Date: November 20, 2011

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS530	Soil		1.0	18.9	8.8	86	<0.1	7.1	6.2	1134	1.71	3.7	4.7	0.4	64	0.5	0.5	<0.1	41	0.67	0.078	16
11EHS532	Soil		0.5	14.3	6.5	38	<0.1	6.9	5.3	429	1.58	1.7	1.2	0.9	53	0.2	0.5	<0.1	43	0.49	0.017	16
11EHS533	Soil		0.3	5.9	6.0	13	<0.1	3.6	2.7	131	0.89	1.1	3.9	0.9	29	<0.1	0.2	<0.1	25	0.20	0.007	6
11EHS534	Soil		0.8	11.3	7.0	60	<0.1	6.5	5.6	1245	1.66	2.0	1.6	0.8	45	0.1	0.4	<0.1	44	0.44	0.048	8
11EHS535	Soil		0.6	14.8	7.1	65	<0.1	8.0	5.9	926	1.96	3.4	<0.5	0.5	45	0.2	0.5	<0.1	51	0.46	0.047	10
11EHS536	Soil		0.7	15.9	8.7	56	<0.1	7.5	6.4	1070	1.90	4.4	1.2	0.6	53	0.1	0.5	<0.1	46	0.50	0.056	19
11EHS537	Soil		0.7	17.7	6.9	69	<0.1	10.1	7.6	744	2.27	2.7	6.2	1.2	50	0.2	0.3	0.1	61	0.48	0.054	6
11EHS538	Soil		0.6	17.5	6.2	52	<0.1	9.2	6.8	745	2.03	2.1	3.8	1.1	45	0.2	0.3	0.1	55	0.42	0.025	15
11EHS539	Soil		0.6	13.4	5.4	50	<0.1	6.7	4.8	408	1.72	1.8	0.8	0.9	29	<0.1	0.2	<0.1	48	0.26	0.031	10
11EHS540	Soil		0.8	33.3	7.2	92	0.8	12.6	6.1	760	2.04	3.4	6.8	0.7	84	0.3	0.7	0.1	37	0.95	0.103	51
11EHS541	Soil		0.7	21.3	6.9	76	0.1	10.7	7.6	919	2.04	3.2	1.2	0.4	54	0.3	0.3	0.1	53	0.51	0.068	16
11EHS542	Soil		0.6	12.3	7.4	62	<0.1	7.4	6.1	1206	1.81	2.6	1.1	0.7	45	0.2	0.3	<0.1	47	0.41	0.062	8
11EHS543	Soil		0.7	15.1	9.5	50	<0.1	6.9	6.8	894	1.81	3.9	1.4	0.8	62	0.3	0.4	0.1	49	0.68	0.028	12
11EHS544	Soil		0.7	25.1	7.5	74	0.1	9.5	6.1	785	1.73	3.2	<0.5	0.5	70	0.4	0.3	<0.1	42	0.72	0.055	20
11EHS545	Soil		0.7	25.1	7.7	54	<0.1	9.6	7.0	967	1.83	2.6	<0.5	0.8	64	0.3	0.3	<0.1	47	0.62	0.029	32
11EHS547	Soil		0.5	28.8	8.9	57	0.3	11.8	6.9	847	1.92	3.0	4.6	0.8	99	0.3	0.4	0.1	41	1.20	0.043	34
11EHS548	Soil		0.9	11.2	5.9	56	<0.1	8.4	6.6	685	1.91	1.5	<0.5	0.6	38	0.1	0.2	<0.1	56	0.45	0.020	6
11EHS549	Soil		0.6	10.8	5.7	65	<0.1	7.0	5.1	1081	1.59	1.6	1.0	0.5	42	0.1	0.2	<0.1	43	0.41	0.026	9
11EHS550	Soil		0.6	11.1	5.3	63	<0.1	6.9	5.3	988	1.61	1.2	57.2	0.6	38	0.1	0.2	<0.1	43	0.35	0.026	8
11EHS551	Soil		0.8	4.9	10.6	76	<0.1	4.2	3.1	2071	1.12	1.7	<0.5	0.3	11	0.2	<0.1	0.1	28	0.17	0.063	4
11EHS552	Soil		0.6	7.1	6.1	39	<0.1	4.4	3.3	227	1.46	1.6	0.5	0.9	42	<0.1	0.1	0.1	41	0.28	0.025	6
11EHS553	Soil		0.6	11.2	8.6	41	<0.1	5.3	4.7	658	1.66	2.4	<0.5	1.2	51	0.1	0.2	<0.1	47	0.51	0.021	24
11EHS554	Soil		0.3	7.4	4.8	30	<0.1	4.8	3.1	196	1.45	1.2	<0.5	0.8	28	<0.1	<0.1	0.1	39	0.27	0.009	9
11EHS555	Soil		0.7	12.3	7.0	75	<0.1	7.0	5.9	1045	2.08	4.2	<0.5	0.9	41	0.1	0.2	<0.1	59	0.37	0.077	5
11EHS556	Soil		0.5	8.8	5.8	42	<0.1	4.5	4.1	469	1.85	2.2	<0.5	0.7	38	<0.1	0.2	<0.1	52	0.24	0.032	4
11EHS557	Soil		0.9	8.3	5.7	44	<0.1	4.4	4.5	627	1.92	2.7	0.6	0.7	29	<0.1	0.2	<0.1	56	0.17	0.058	4
11EHS558	Soil		1.9	8.0	5.9	42	<0.1	4.8	3.9	553	1.59	2.1	<0.5	0.6	48	<0.1	0.2	<0.1	45	0.28	0.030	6
11EHS559	Soil		0.5	8.9	5.3	38	<0.1	5.6	4.5	198	1.73	1.7	<0.5	0.7	29	<0.1	0.1	<0.1	49	0.19	0.024	5
11EHS560	Soil		0.5	8.4	5.4	31	<0.1	3.2	2.7	206	1.29	1.0	<0.5	0.9	35	<0.1	0.2	<0.1	34	0.34	0.014	16
11EHS561	Soil		0.4	5.7	6.2	33	<0.1	3.8	3.2	259	1.47	1.3	<0.5	0.8	24	<0.1	0.1	<0.1	41	0.18	0.031	5

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS530	Soil			11	0.28	196	0.044	2	1.31	0.010	0.24	<0.1	0.03	1.9	<0.1	0.06	4	<0.5	<0.2
11EHS532	Soil			12	0.26	153	0.062	<1	1.03	0.012	0.18	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
11EHS533	Soil			7	0.20	106	0.052	<1	0.84	0.014	0.07	<0.1	0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
11EHS534	Soil			12	0.25	173	0.076	1	1.01	0.008	0.18	<0.1	0.02	1.9	<0.1	<0.05	4	0.9	<0.2
11EHS535	Soil			14	0.30	156	0.070	<1	1.24	0.010	0.10	<0.1	0.04	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS536	Soil			13	0.28	168	0.055	2	1.38	0.008	0.18	<0.1	0.03	2.7	<0.1	<0.05	4	<0.5	<0.2
11EHS537	Soil			19	0.34	221	0.106	2	1.31	0.016	0.11	<0.1	0.02	3.2	<0.1	<0.05	4	<0.5	<0.2
11EHS538	Soil			16	0.30	157	0.094	2	1.19	0.016	0.12	<0.1	0.03	3.5	<0.1	<0.05	4	<0.5	<0.2
11EHS539	Soil			13	0.20	149	0.091	<1	0.97	0.016	0.08	<0.1	0.02	2.8	<0.1	<0.05	3	<0.5	<0.2
11EHS540	Soil			18	0.38	188	0.025	2	2.22	0.012	0.18	0.1	0.06	5.2	<0.1	0.07	5	<0.5	<0.2
11EHS541	Soil			18	0.31	186	0.068	3	1.29	0.014	0.37	<0.1	0.03	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS542	Soil			12	0.21	243	0.077	2	1.10	0.012	0.08	<0.1	0.04	2.2	<0.1	<0.05	4	<0.5	<0.2
11EHS543	Soil			13	0.25	171	0.073	2	1.06	0.012	0.10	0.1	0.07	2.8	<0.1	<0.05	3	<0.5	<0.2
11EHS544	Soil			13	0.24	180	0.058	3	1.27	0.009	0.15	0.1	0.06	3.1	<0.1	<0.05	4	<0.5	<0.2
11EHS545	Soil			15	0.26	160	0.072	2	1.20	0.010	0.12	<0.1	0.05	3.8	<0.1	<0.05	4	<0.5	<0.2
11EHS547	Soil			16	0.28	210	0.046	3	1.66	0.011	0.10	0.1	0.08	4.9	<0.1	<0.05	4	<0.5	<0.2
11EHS548	Soil			17	0.28	119	0.105	1	0.92	0.013	0.10	<0.1	0.04	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS549	Soil			14	0.22	149	0.074	1	1.06	0.019	0.08	<0.1	0.03	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS550	Soil			14	0.22	133	0.074	<1	1.06	0.016	0.08	<0.1	0.03	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS551	Soil			6	0.08	104	0.055	1	1.12	0.011	0.05	<0.1	0.04	0.8	<0.1	<0.05	5	<0.5	<0.2
11EHS552	Soil			9	0.13	148	0.066	<1	0.94	0.015	0.06	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11EHS553	Soil			11	0.17	134	0.085	1	1.02	0.016	0.07	0.1	0.04	3.2	<0.1	<0.05	3	<0.5	<0.2
11EHS554	Soil			9	0.10	77	0.074	<1	0.93	0.025	0.04	<0.1	0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS555	Soil			12	0.19	172	0.082	2	1.15	0.015	0.12	<0.1	0.03	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS556	Soil			10	0.14	169	0.084	<1	0.90	0.012	0.09	<0.1	0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS557	Soil			11	0.13	133	0.069	1	0.86	0.009	0.06	<0.1	0.02	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS558	Soil			11	0.15	174	0.084	1	0.81	0.016	0.10	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS559	Soil			13	0.16	126	0.092	<1	1.00	0.015	0.06	<0.1	0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS560	Soil			7	0.09	131	0.044	<1	0.91	0.013	0.08	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11EHS561	Soil			8	0.11	161	0.054	<1	1.10	0.016	0.06	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 20, 2011

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CERTIFICATE OF ANALYSIS

VAN11004230.1

Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS562	Soil	1.3	4.8	5.3	22	<0.1	2.6	2.5	136	1.10	0.6	<0.5	0.5	29	<0.1	<0.1	<0.1	31	0.15	0.014	6
11EHS563	Soil	0.6	9.6	7.1	57	<0.1	10.4	5.9	289	2.10	1.6	<0.5	0.9	22	<0.1	0.2	<0.1	57	0.19	0.034	4
11EHS564	Soil	0.7	7.5	6.2	68	<0.1	7.5	4.3	755	1.50	1.9	0.8	1.0	21	<0.1	0.1	0.1	40	0.17	0.075	4
11EHS565	Soil	0.9	9.8	8.3	85	<0.1	7.8	5.0	683	1.72	3.4	<0.5	1.2	12	<0.1	0.2	0.1	41	0.10	0.079	5
11EHS566	Soil	1.2	7.3	7.1	94	<0.1	5.5	4.2	1628	1.52	3.3	<0.5	0.6	19	0.2	0.2	<0.1	35	0.21	0.082	4
11EHS567	Soil	0.4	4.4	4.9	77	<0.1	2.3	2.3	534	0.92	1.1	<0.5	0.7	58	<0.1	<0.1	<0.1	23	0.27	0.026	3
11EHS568	Soil	0.3	12.1	5.1	40	<0.1	6.1	4.9	232	1.99	1.7	0.5	0.8	28	<0.1	0.2	<0.1	54	0.29	0.030	7
11EHS569	Soil	0.5	5.9	4.4	63	<0.1	4.1	3.4	396	1.47	0.6	<0.5	0.6	25	<0.1	0.1	<0.1	40	0.16	0.041	3
11EHS571	Soil	1.1	12.9	7.1	48	<0.1	6.8	7.7	784	2.18	5.2	<0.5	1.3	53	0.1	0.3	<0.1	55	0.48	0.024	10
11EHS572	Soil	0.5	13.3	5.7	58	<0.1	6.7	7.4	976	2.12	3.2	<0.5	0.8	56	0.2	0.3	<0.1	56	0.55	0.047	5
11EHS573	Soil	0.8	12.5	6.3	54	<0.1	5.1	4.2	685	1.48	2.0	<0.5	0.9	51	0.2	0.2	0.1	33	0.68	0.032	11
11EHS574	Soil	0.8	12.3	5.7	36	<0.1	7.9	5.0	253	1.74	1.7	<0.5	1.0	51	0.1	0.2	<0.1	47	0.47	0.015	15
11EHS575	Soil	0.4	9.9	6.0	48	<0.1	8.4	4.5	309	1.97	1.7	<0.5	1.2	59	0.1	0.2	<0.1	54	0.35	0.027	6
11EHS576	Soil	0.5	7.5	6.4	55	<0.1	6.3	4.4	584	1.57	1.8	<0.5	0.9	32	<0.1	0.2	<0.1	40	0.18	0.072	4
11EHS577	Soil	0.3	9.2	7.5	40	<0.1	5.3	4.0	253	1.85	2.2	<0.5	1.2	52	<0.1	0.2	0.1	47	0.21	0.037	7
11EHS578	Soil	0.4	7.0	6.4	47	<0.1	4.5	3.4	269	1.63	1.7	<0.5	0.9	33	<0.1	0.2	<0.1	45	0.24	0.033	5
11EHS579	Soil	0.6	5.2	7.9	75	<0.1	3.9	2.8	585	1.24	1.6	<0.5	0.8	47	0.1	0.1	<0.1	29	0.23	0.046	5
11EHS580	Soil	0.3	5.8	5.2	30	<0.1	4.1	3.3	197	1.74	1.3	<0.5	0.9	34	<0.1	0.3	<0.1	48	0.21	0.021	4
11EHS581	Soil	0.4	8.4	6.3	38	<0.1	5.4	4.1	310	2.01	2.1	0.6	1.0	54	0.1	0.3	<0.1	54	0.27	0.033	4
11EHS582	Soil	0.8	15.9	6.7	50	<0.1	6.5	5.8	399	2.42	6.0	<0.5	1.5	62	<0.1	0.4	<0.1	65	0.38	0.048	10
11EHS583	Soil	0.5	8.1	6.2	49	<0.1	4.8	3.9	327	1.83	2.5	<0.5	1.1	66	<0.1	0.3	<0.1	48	0.25	0.029	4
11EHS585	Soil	0.4	8.3	5.7	44	<0.1	4.7	4.0	270	1.89	2.1	<0.5	1.1	59	<0.1	0.2	<0.1	51	0.22	0.030	4
11EHS586	Soil	0.6	9.3	4.7	27	<0.1	4.6	3.5	316	1.53	2.0	1.1	0.9	34	<0.1	0.2	<0.1	43	0.30	0.011	13
11EHS587	Soil	1.7	13.0	8.8	109	<0.1	3.9	4.4	1167	1.27	3.6	0.5	0.6	116	1.1	0.3	<0.1	30	1.20	0.038	7
11EHS588	Soil	0.9	13.9	8.0	37	<0.1	5.1	4.7	678	1.52	3.2	0.7	1.3	120	0.2	0.2	0.1	33	0.97	0.021	11
11EHS589	Soil	0.7	7.5	6.0	54	<0.1	5.3	3.5	474	1.55	1.7	<0.5	0.9	54	<0.1	0.2	<0.1	41	0.27	0.037	5
11EHS590	Soil	0.5	9.3	6.0	44	<0.1	5.5	4.1	366	1.90	2.1	0.8	1.1	44	<0.1	0.3	<0.1	51	0.32	0.033	6
11EHS591	Soil	0.5	9.7	5.7	62	<0.1	5.7	4.4	476	1.95	1.9	1.9	0.9	38	<0.1	0.3	<0.1	53	0.32	0.030	5
11EHS592	Soil	0.3	9.6	11.0	140	<0.1	3.5	1.9	1193	1.01	2.3	<0.5	0.7	65	0.5	0.2	<0.1	18	0.80	0.068	8
11EHS593	Soil	0.3	4.2	6.0	56	<0.1	3.0	1.8	636	0.99	0.7	<0.5	0.9	47	0.1	<0.1	<0.1	20	0.42	0.021	7

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Project: Shovelnose
Report Date: November 20, 2011

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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2		
11EHS562	Soil	7	0.08	125	0.049	<1	0.67	0.015	0.06	<0.1	<0.01	1.2	<0.1	<0.05	2	<0.5	<0.2
11EHS563	Soil	16	0.25	126	0.103	<1	1.82	0.015	0.05	<0.1	0.02	2.2	<0.1	<0.05	6	<0.5	<0.2
11EHS564	Soil	10	0.14	157	0.069	2	1.45	0.015	0.09	<0.1	0.02	1.5	<0.1	<0.05	5	<0.5	<0.2
11EHS565	Soil	10	0.16	117	0.069	<1	1.97	0.012	0.05	<0.1	0.04	1.6	<0.1	<0.05	6	<0.5	<0.2
11EHS566	Soil	8	0.13	207	0.053	1	1.34	0.012	0.08	<0.1	0.03	1.6	<0.1	<0.05	4	<0.5	<0.2
11EHS567	Soil	5	0.08	192	0.055	<1	0.83	0.012	0.10	<0.1	0.03	1.4	<0.1	<0.05	3	<0.5	<0.2
11EHS568	Soil	11	0.17	112	0.135	<1	1.24	0.018	0.06	<0.1	<0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS569	Soil	9	0.11	121	0.082	<1	0.91	0.014	0.08	<0.1	<0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
11EHS571	Soil	15	0.22	167	0.060	2	1.29	0.012	0.18	<0.1	0.03	4.3	<0.1	<0.05	4	<0.5	<0.2
11EHS572	Soil	14	0.22	180	0.071	2	1.21	0.013	0.16	<0.1	0.03	3.4	<0.1	<0.05	4	<0.5	<0.2
11EHS573	Soil	10	0.17	270	0.039	2	1.40	0.014	0.22	<0.1	0.04	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS574	Soil	15	0.20	190	0.072	1	1.19	0.024	0.09	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
11EHS575	Soil	17	0.28	157	0.146	3	1.04	0.018	0.20	<0.1	0.01	2.4	<0.1	<0.05	4	<0.5	<0.2
11EHS576	Soil	9	0.18	175	0.084	2	1.32	0.016	0.08	<0.1	0.01	1.7	<0.1	<0.05	5	<0.5	<0.2
11EHS577	Soil	11	0.22	211	0.093	3	1.56	0.022	0.07	<0.1	<0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS578	Soil	10	0.15	144	0.094	2	0.80	0.017	0.07	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS579	Soil	7	0.14	214	0.057	2	1.38	0.016	0.10	<0.1	0.03	1.1	<0.1	<0.05	4	<0.5	<0.2
11EHS580	Soil	12	0.14	113	0.130	2	0.75	0.015	0.10	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS581	Soil	11	0.20	202	0.132	2	1.00	0.016	0.11	<0.1	0.01	2.1	<0.1	<0.05	3	<0.5	<0.2
11EHS582	Soil	14	0.28	175	0.075	3	1.01	0.023	0.10	<0.1	0.05	4.5	<0.1	<0.05	3	<0.5	<0.2
11EHS583	Soil	11	0.18	221	0.102	2	0.88	0.017	0.13	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS585	Soil	11	0.19	198	0.103	1	0.95	0.018	0.11	<0.1	<0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS586	Soil	10	0.17	108	0.084	2	0.77	0.027	0.07	<0.1	0.02	3.0	<0.1	<0.05	3	<0.5	<0.2
11EHS587	Soil	8	0.15	231	0.053	5	0.74	0.017	0.12	<0.1	0.06	1.6	<0.1	0.07	2	0.8	<0.2
11EHS588	Soil	10	0.20	286	0.044	5	1.04	0.023	0.15	<0.1	0.03	3.2	<0.1	<0.05	3	<0.5	<0.2
11EHS589	Soil	10	0.19	212	0.087	1	0.96	0.017	0.10	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS590	Soil	12	0.21	203	0.090	2	0.86	0.016	0.15	<0.1	0.02	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS591	Soil	14	0.24	211	0.101	2	0.89	0.016	0.15	<0.1	0.02	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS592	Soil	5	0.10	622	0.038	7	0.80	0.025	0.12	<0.1	0.05	1.1	<0.1	<0.05	3	<0.5	<0.2
11EHS593	Soil	5	0.08	296	0.038	3	0.76	0.022	0.12	<0.1	0.02	0.9	<0.1	<0.05	3	<0.5	<0.2



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Project: Shovelnose
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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS594	Soil	0.8	14.1	6.6	58	<0.1	6.8	7.4	990	1.98	2.8	2.9	0.8	56	0.3	0.2	<0.1	48	0.52	0.033	8
11EHS595	Soil	0.5	13.9	6.4	37	<0.1	6.1	5.3	337	2.03	2.0	0.8	1.2	53	<0.1	0.2	<0.1	50	0.45	0.014	9
11EHS596	Soil	0.6	9.1	6.3	48	<0.1	4.9	4.8	424	1.88	2.6	0.7	1.1	26	<0.1	0.2	<0.1	47	0.15	0.072	5
11EHS597	Soil	0.5	7.3	5.8	42	<0.1	3.7	4.3	199	1.73	2.2	<0.5	1.0	26	<0.1	0.2	<0.1	41	0.15	0.093	4
11EHS598	Soil	0.6	10.5	5.6	41	<0.1	7.7	5.6	444	2.10	2.0	0.5	0.8	38	<0.1	0.2	<0.1	57	0.24	0.032	8
11EHS599	Soil	0.5	24.2	6.8	48	0.1	9.9	6.9	484	2.47	3.8	0.8	1.6	96	0.1	0.3	<0.1	53	0.79	0.041	26
11EHS600	Soil	0.4	23.7	7.1	48	<0.1	9.6	6.6	455	2.44	3.8	1.4	1.6	99	0.2	0.3	<0.1	50	0.80	0.044	28
11EHS601	Soil	0.4	7.3	6.2	43	<0.1	5.1	4.0	413	1.93	2.4	<0.5	1.0	23	<0.1	0.2	<0.1	55	0.17	0.037	3
11EHS602	Soil	0.5	7.7	5.8	103	<0.1	5.0	4.1	502	1.85	2.1	<0.5	1.0	29	0.2	0.2	<0.1	47	0.21	0.093	3
11EHS603	Soil	0.3	10.2	5.4	27	<0.1	4.4	3.4	323	1.63	2.0	0.6	1.0	31	<0.1	0.2	<0.1	47	0.20	0.011	11
11EHS604	Soil	0.7	7.8	6.2	85	<0.1	5.8	4.4	930	1.68	2.9	0.8	0.9	32	0.2	0.2	<0.1	41	0.25	0.112	4
11EHS605	Soil	0.4	6.9	5.6	56	<0.1	4.9	3.6	406	1.74	2.3	1.3	1.2	37	<0.1	0.2	<0.1	46	0.27	0.039	5
11EHS606	Soil	0.4	7.3	5.4	46	<0.1	4.0	4.2	438	1.91	1.7	0.7	0.8	38	<0.1	0.2	<0.1	48	0.28	0.027	5
11EHS607	Soil	0.4	7.3	5.7	44	<0.1	4.9	4.3	247	1.90	1.9	1.9	1.0	32	<0.1	0.2	<0.1	50	0.25	0.051	4
11EHS608	Soil	0.5	9.5	5.5	32	<0.1	4.8	4.3	307	1.90	1.9	<0.5	0.9	39	<0.1	0.2	<0.1	51	0.26	0.020	8
11EHS609	Soil	0.4	8.7	5.9	53	<0.1	5.3	4.5	488	2.08	2.2	0.8	1.0	25	<0.1	0.2	<0.1	54	0.17	0.039	3
11EHS610	Soil	0.5	13.6	6.2	58	<0.1	6.1	4.8	346	2.13	1.6	<0.5	1.2	39	<0.1	0.2	<0.1	58	0.26	0.027	4
11EHS611	Soil	0.4	7.1	5.8	41	<0.1	4.5	4.0	449	1.65	1.1	1.0	0.6	27	<0.1	0.2	<0.1	41	0.28	0.032	3
11EHS612	Soil	0.6	6.3	7.8	52	<0.1	5.1	3.8	433	2.01	1.3	<0.5	1.4	22	<0.1	0.2	0.1	56	0.20	0.019	6
11EHS613	Soil	0.7	7.7	11.0	68	<0.1	7.0	5.0	1009	1.38	2.3	1.0	1.8	14	0.1	<0.1	0.1	28	0.13	0.089	7
11EHS614	Soil	0.5	5.8	7.1	77	<0.1	3.5	3.2	467	1.15	1.3	2.1	0.8	21	<0.1	<0.1	0.1	26	0.23	0.079	3
11EHS615	Soil	0.3	6.4	5.2	67	<0.1	3.7	3.2	351	1.70	1.0	1.0	0.7	23	0.1	0.1	<0.1	52	0.17	0.032	3
11EHS616	Soil	0.5	22.4	6.2	63	0.2	9.3	6.5	571	2.56	2.5	0.6	1.3	68	0.1	0.3	<0.1	67	0.62	0.023	8
11EHS617	Soil	0.4	8.5	4.7	59	<0.1	6.1	4.7	684	1.80	1.6	<0.5	0.7	28	<0.1	0.1	<0.1	53	0.21	0.053	3
11EHS618	Soil	0.4	11.4	5.9	58	<0.1	6.9	5.5	253	2.02	2.2	<0.5	0.9	24	<0.1	0.2	<0.1	54	0.18	0.059	4
11EHS620	Soil	0.7	18.1	8.7	71	<0.1	6.8	6.2	933	1.59	3.3	1.2	0.4	78	0.4	0.1	0.1	37	0.79	0.063	9
11EHS621	Soil	1.1	10.8	5.0	85	<0.1	6.1	7.5	586	2.62	6.9	<0.5	0.9	37	0.1	<0.1	<0.1	62	0.39	0.044	5
11EHS622	Soil	0.4	6.3	5.2	58	<0.1	5.2	3.5	297	1.81	1.8	<0.5	0.8	31	<0.1	0.2	<0.1	50	0.19	0.027	3
11EHS623	Soil	0.4	8.1	5.7	63	<0.1	5.4	4.4	639	1.82	1.7	<0.5	0.7	30	0.1	0.2	<0.1	51	0.26	0.026	4
11EHS624	Soil	0.8	11.9	7.3	74	<0.1	5.5	5.9	860	1.95	3.2	0.5	0.7	43	0.3	0.2	<0.1	48	0.37	0.051	6

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 20, 2011

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL	MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS594	Soil	13	0.29	274	0.072	4	1.06	0.016	0.18	<0.1	0.03	3.4	<0.1	<0.05	3	<0.5	<0.2
11EHS595	Soil	13	0.24	132	0.076	2	1.13	0.019	0.10	<0.1	0.02	3.7	<0.1	<0.05	4	<0.5	<0.2
11EHS596	Soil	10	0.18	122	0.072	2	1.28	0.020	0.05	<0.1	0.02	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS597	Soil	8	0.16	112	0.070	2	1.19	0.019	0.05	<0.1	<0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS598	Soil	18	0.27	104	0.085	1	1.09	0.019	0.06	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11EHS599	Soil	17	0.39	180	0.048	3	2.05	0.021	0.10	<0.1	0.04	8.2	<0.1	<0.05	6	<0.5	<0.2
11EHS600	Soil	17	0.40	180	0.047	2	2.13	0.021	0.09	<0.1	0.04	8.0	<0.1	<0.05	6	0.5	<0.2
11EHS601	Soil	11	0.15	131	0.095	2	0.97	0.018	0.07	<0.1	0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS602	Soil	11	0.17	155	0.074	1	0.91	0.018	0.07	<0.1	0.01	2.1	<0.1	<0.05	3	<0.5	<0.2
11EHS603	Soil	11	0.16	103	0.085	2	0.85	0.026	0.04	<0.1	0.01	3.0	<0.1	<0.05	3	<0.5	<0.2
11EHS604	Soil	10	0.18	217	0.070	2	1.33	0.022	0.08	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS605	Soil	10	0.17	165	0.084	3	1.06	0.021	0.10	<0.1	0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS606	Soil	10	0.20	162	0.083	3	0.85	0.016	0.13	<0.1	<0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS607	Soil	11	0.21	126	0.094	2	1.04	0.022	0.09	<0.1	<0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS608	Soil	12	0.21	116	0.102	2	0.90	0.023	0.09	<0.1	0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS609	Soil	11	0.20	133	0.088	2	1.07	0.019	0.06	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS610	Soil	14	0.26	174	0.120	2	1.20	0.022	0.12	<0.1	0.01	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS611	Soil	10	0.16	122	0.077	2	0.80	0.019	0.07	<0.1	0.02	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS612	Soil	11	0.12	164	0.066	2	1.06	0.021	0.09	<0.1	0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS613	Soil	6	0.11	162	0.066	2	2.30	0.018	0.07	<0.1	0.03	2.2	0.1	<0.05	7	<0.5	<0.2
11EHS614	Soil	7	0.08	183	0.042	<1	1.01	0.014	0.07	<0.1	0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
11EHS615	Soil	9	0.10	97	0.091	2	0.72	0.016	0.09	<0.1	<0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
11EHS616	Soil	18	0.30	232	0.077	3	1.89	0.027	0.08	<0.1	0.04	5.5	<0.1	<0.05	6	<0.5	<0.2
11EHS617	Soil	12	0.17	137	0.084	1	0.96	0.013	0.08	<0.1	0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS618	Soil	13	0.20	138	0.082	1	1.22	0.012	0.07	<0.1	0.01	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS620	Soil	9	0.20	226	0.049	4	1.38	0.013	0.13	<0.1	0.04	2.0	<0.1	0.05	4	<0.5	<0.2
11EHS621	Soil	13	0.47	79	0.017	<1	1.47	0.016	0.26	<0.1	0.02	3.6	<0.1	<0.05	7	<0.5	<0.2
11EHS622	Soil	11	0.12	138	0.081	2	0.83	0.017	0.11	<0.1	0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS623	Soil	11	0.15	163	0.080	<1	0.97	0.021	0.08	<0.1	0.02	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS624	Soil	10	0.18	194	0.055	2	0.86	0.013	0.16	<0.1	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2

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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS625	Soil	0.4	7.7	5.8	51	<0.1	4.7	4.6	652	1.81	1.8	<0.5	0.6	30	0.1	0.2	<0.1	51	0.21	0.027	4
11EHS626	Soil	0.8	26.3	9.0	76	0.1	7.2	6.5	1151	2.20	6.2	0.9	1.2	60	0.3	0.2	0.1	48	0.78	0.047	27
11EHS627	Soil	0.6	12.4	6.9	42	<0.1	5.0	5.6	430	1.92	3.4	<0.5	1.0	41	0.1	0.2	<0.1	52	0.49	0.024	13
11EHS628	Soil	1.7	11.5	9.0	97	<0.1	4.9	5.2	971	1.63	5.9	0.7	0.4	32	0.4	0.2	0.1	33	0.40	0.036	13
11EHS629	Soil	0.7	8.9	6.0	48	<0.1	4.3	4.2	507	1.76	3.4	<0.5	0.8	39	0.2	0.2	<0.1	47	0.33	0.020	7
11EHS630	Soil	0.7	12.3	6.3	61	<0.1	6.3	6.3	899	2.05	2.6	0.5	0.8	43	0.1	0.2	<0.1	58	0.36	0.046	6
11EHS631	Soil	0.4	6.3	5.2	63	<0.1	4.7	4.3	518	1.82	1.5	0.5	0.7	20	<0.1	0.1	<0.1	46	0.24	0.038	4
11EHS632	Soil	0.5	9.8	7.0	61	<0.1	5.0	5.5	893	1.93	2.5	<0.5	0.7	34	0.2	0.2	<0.1	50	0.39	0.032	8
11EHS633	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
11EHS634	Soil	0.6	6.7	5.2	80	<0.1	4.5	4.2	733	1.57	2.2	<0.5	0.6	27	0.2	0.1	<0.1	40	0.24	0.085	3
11EHS635	Soil	0.6	31.4	7.3	63	0.1	8.9	5.8	682	2.17	2.9	1.2	1.1	81	0.4	0.2	0.1	41	1.02	0.032	18
11EHS636	Soil	0.6	8.0	5.2	59	<0.1	4.9	4.2	500	1.85	2.7	<0.5	0.9	29	<0.1	0.2	<0.1	53	0.28	0.091	3
11EHS637	Soil	0.4	8.3	6.5	44	<0.1	4.9	4.2	288	2.06	2.5	<0.5	1.0	26	<0.1	0.2	<0.1	58	0.19	0.029	4
11EHS638	Soil	0.6	8.0	6.0	60	<0.1	4.4	4.2	637	1.69	1.9	0.5	0.8	29	0.2	0.2	<0.1	47	0.21	0.043	4
11EHS639	Soil	0.4	6.8	6.5	76	<0.1	5.6	4.2	529	1.59	1.9	<0.5	0.7	23	0.3	0.2	0.1	42	0.21	0.027	3
11EHS640	Soil	0.5	9.0	6.4	72	<0.1	6.0	4.6	492	1.95	2.2	<0.5	1.1	36	0.3	0.2	0.1	56	0.28	0.030	4
11EHS641	Soil	0.5	24.3	6.5	71	<0.1	7.7	6.8	817	2.03	4.9	0.6	0.6	137	0.4	0.2	0.1	47	1.20	0.082	15
11EHS642	Soil	0.4	15.8	5.1	68	<0.1	9.4	6.8	347	2.38	1.8	<0.5	1.0	37	0.1	0.2	<0.1	68	0.30	0.067	5
11EHS643	Soil	0.3	30.9	4.5	101	<0.1	10.9	12.7	1605	3.02	1.9	<0.5	0.7	43	0.4	0.2	<0.1	61	0.75	0.152	13
11EHS644	Soil	0.5	13.0	4.8	86	<0.1	6.1	11.4	1101	2.87	1.4	<0.5	0.9	26	0.1	0.2	<0.1	59	0.30	0.061	8
11EHS645	Soil	0.5	14.1	6.5	53	<0.1	6.1	6.3	764	2.00	2.6	<0.5	0.5	66	0.2	0.2	<0.1	56	0.39	0.040	7
11EHS646	Soil	0.5	20.0	6.3	48	<0.1	6.5	6.6	610	2.04	3.5	0.6	0.9	94	0.1	0.3	<0.1	54	0.64	0.026	10
11EHS647	Soil	0.7	16.5	5.5	43	<0.1	5.0	6.7	651	1.95	3.3	0.8	0.5	107	0.2	0.3	<0.1	51	0.80	0.049	6
11EHS648	Soil	0.5	13.5	6.5	84	<0.1	5.8	7.2	619	2.58	2.6	0.6	0.9	50	0.2	0.3	<0.1	73	0.36	0.045	4
11EHS649	Soil	0.4	24.7	5.8	44	<0.1	8.8	8.9	514	2.93	5.5	1.7	1.8	74	<0.1	0.4	<0.1	84	0.54	0.045	11
11EHS650	Soil	0.4	6.6	4.6	39	<0.1	4.9	4.3	355	1.81	1.6	<0.5	0.8	23	<0.1	0.2	<0.1	53	0.18	0.024	3
11EHS651	Soil	0.4	7.2	4.8	39	<0.1	5.3	4.7	329	1.91	1.5	<0.5	0.8	23	<0.1	0.2	<0.1	57	0.18	0.026	3
11EHS652	Soil	0.6	9.7	5.4	56	<0.1	6.0	6.3	554	2.07	2.4	<0.5	0.8	27	<0.1	0.2	<0.1	60	0.24	0.102	3
11EHS653	Soil	0.6	9.6	5.4	55	<0.1	5.0	5.3	408	2.21	2.2	0.5	1.2	27	<0.1	0.3	<0.1	67	0.20	0.028	4
11EHS654	Soil	0.5	8.1	4.9	64	<0.1	4.6	4.2	588	1.83	2.0	<0.5	0.9	26	0.1	0.2	<0.1	54	0.24	0.038	3

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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
11EHS625	Soil	10	0.14	142	0.069	<1	0.86	0.022	0.08	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11EHS626	Soil	11	0.22	248	0.058	2	1.87	0.019	0.13	<0.1	0.05	4.1	<0.1	<0.05	5	<0.5	<0.2
11EHS627	Soil	11	0.17	163	0.078	1	1.08	0.014	0.15	<0.1	0.02	2.7	<0.1	<0.05	3	<0.5	<0.2
11EHS628	Soil	8	0.14	238	0.039	2	0.94	0.010	0.15	<0.1	0.03	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS629	Soil	9	0.14	197	0.066	1	0.83	0.016	0.12	<0.1	0.02	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS630	Soil	13	0.22	194	0.084	1	1.02	0.014	0.11	<0.1	0.03	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS631	Soil	8	0.14	245	0.028	<1	1.23	0.012	0.11	<0.1	0.02	1.6	<0.1	<0.05	4	<0.5	<0.2
11EHS632	Soil	10	0.17	332	0.065	1	1.16	0.012	0.14	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11EHS633	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
11EHS634	Soil	9	0.14	223	0.061	1	1.06	0.012	0.20	<0.1	0.02	1.6	<0.1	<0.05	4	<0.5	<0.2
11EHS635	Soil	13	0.29	277	0.047	2	2.10	0.021	0.10	<0.1	0.04	4.6	<0.1	<0.05	6	<0.5	<0.2
11EHS636	Soil	10	0.15	165	0.074	2	1.00	0.027	0.09	<0.1	0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS637	Soil	11	0.14	165	0.077	<1	0.89	0.013	0.06	<0.1	0.02	1.9	<0.1	<0.05	3	<0.5	<0.2
11EHS638	Soil	9	0.14	155	0.069	2	0.86	0.013	0.07	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11EHS639	Soil	8	0.12	195	0.072	<1	1.03	0.015	0.07	<0.1	<0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS640	Soil	12	0.18	209	0.094	1	1.07	0.014	0.08	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS641	Soil	13	0.35	217	0.039	4	1.51	0.013	0.12	<0.1	0.06	4.2	<0.1	<0.05	4	<0.5	<0.2
11EHS642	Soil	16	0.32	176	0.093	1	1.51	0.016	0.08	<0.1	0.02	3.0	<0.1	<0.05	5	<0.5	<0.2
11EHS643	Soil	22	0.70	301	0.012	<1	2.08	0.009	0.19	<0.1	0.03	5.2	<0.1	<0.05	7	<0.5	<0.2
11EHS644	Soil	9	0.54	139	0.013	<1	1.86	0.014	0.21	<0.1	0.02	3.4	<0.1	<0.05	7	<0.5	<0.2
11EHS645	Soil	11	0.20	174	0.070	2	1.07	0.013	0.16	<0.1	0.03	2.3	<0.1	<0.05	3	<0.5	<0.2
11EHS646	Soil	11	0.24	185	0.065	2	1.14	0.017	0.09	<0.1	0.05	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS647	Soil	9	0.28	213	0.050	4	1.08	0.015	0.18	<0.1	0.06	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS648	Soil	13	0.24	148	0.086	2	1.10	0.019	0.12	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS649	Soil	17	0.37	181	0.053	2	1.39	0.027	0.08	<0.1	0.17	6.7	<0.1	<0.05	4	<0.5	<0.2
11EHS650	Soil	11	0.14	139	0.091	2	0.86	0.012	0.09	<0.1	<0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS651	Soil	12	0.15	135	0.094	<1	0.86	0.014	0.09	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS652	Soil	13	0.17	160	0.079	2	1.08	0.015	0.11	<0.1	0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS653	Soil	13	0.15	151	0.105	1	0.93	0.015	0.09	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
11EHS654	Soil	11	0.13	163	0.094	<1	0.85	0.012	0.09	<0.1	0.02	1.9	<0.1	<0.05	3	<0.5	<0.2

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Client: **Westhaven Ventures Inc.**
 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 20, 2011

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CERTIFICATE OF ANALYSIS

VAN11004230.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS655	Soil		0.5	8.5	5.0	49	<0.1	5.0	4.3	460	1.86	2.1	<0.5	0.9	24	<0.1	0.2	<0.1	56	0.20	0.032	3
11EHS656	Soil		0.7	11.9	5.6	52	<0.1	4.7	5.5	470	1.87	2.0	<0.5	0.9	34	0.1	0.2	<0.1	57	0.32	0.032	4
11EHS657	Soil		0.6	15.0	6.0	52	<0.1	6.8	7.0	326	2.95	3.6	<0.5	1.2	32	<0.1	0.5	<0.1	95	0.28	0.029	4
11EHS658	Soil		0.4	22.8	5.5	33	<0.1	7.2	9.9	635	2.45	3.0	<0.5	1.2	93	0.1	0.3	<0.1	73	1.35	0.020	6
11EHS659	Soil		0.5	19.9	5.0	49	<0.1	6.7	6.6	312	2.84	3.1	<0.5	1.4	50	<0.1	0.3	<0.1	91	0.26	0.042	4
11EHS660	Soil		0.4	18.7	5.6	58	<0.1	7.4	7.5	415	2.71	2.3	<0.5	1.1	42	<0.1	0.2	<0.1	76	0.32	0.048	4
11EHS661	Soil		0.6	10.1	5.3	89	<0.1	5.3	5.5	761	1.84	3.0	<0.5	0.7	27	<0.1	0.2	<0.1	54	0.25	0.085	3
11EHS662	Soil		0.5	10.7	5.8	79	<0.1	8.0	6.6	651	2.41	1.8	0.7	0.9	33	<0.1	0.2	<0.1	75	0.27	0.028	3
11EHS663	Soil		0.4	10.5	4.7	45	<0.1	5.8	5.2	270	2.07	1.1	5.6	0.8	37	<0.1	0.2	<0.1	63	0.24	0.023	3
11EHS664	Soil		0.4	6.8	4.7	59	<0.1	4.3	3.5	339	1.39	1.0	<0.5	0.6	33	<0.1	<0.1	<0.1	39	0.19	0.031	3
11EHS665	Soil		0.4	7.2	4.5	50	<0.1	3.8	3.3	366	1.44	1.2	<0.5	0.5	43	<0.1	<0.1	<0.1	42	0.22	0.018	4
11EHS666	Soil		0.3	9.7	3.7	72	<0.1	4.7	4.0	413	1.63	1.1	0.8	0.7	27	<0.1	<0.1	<0.1	48	0.22	0.023	5
11EHS667	Soil		0.5	9.7	2.4	34	<0.1	7.0	10.1	211	2.71	0.9	<0.5	0.5	36	<0.1	0.5	<0.1	61	0.32	0.010	2
11EHS668	Soil		0.3	18.8	4.4	61	<0.1	13.6	12.9	500	3.29	2.8	<0.5	1.1	30	<0.1	1.7	<0.1	76	0.42	0.026	4
11EHS669	Soil		0.2	14.9	5.6	24	<0.1	7.3	7.4	142	2.08	1.5	<0.5	0.9	39	<0.1	1.1	<0.1	52	0.46	0.011	4
11EHS670	Soil		0.5	7.3	4.0	85	<0.1	3.0	4.2	926	1.46	1.2	<0.5	0.6	25	0.2	0.2	<0.1	32	0.33	0.022	2
11EHS671	Soil		0.3	10.1	4.7	53	<0.1	4.3	7.9	426	2.23	1.8	<0.5	1.0	28	<0.1	0.2	<0.1	56	0.28	0.024	3
11EHS672	Soil		0.4	11.2	4.2	66	<0.1	5.4	6.3	446	2.35	1.9	<0.5	1.0	33	0.1	0.2	<0.1	70	0.31	0.027	4
11EHS673	Soil		0.5	20.7	4.6	63	<0.1	5.5	10.7	1149	2.88	2.5	<0.5	1.9	33	0.1	0.3	<0.1	71	0.49	0.063	13
11EHS674	Soil		0.3	18.7	3.8	54	<0.1	7.6	11.5	390	2.52	2.3	<0.5	0.8	45	<0.1	<0.1	<0.1	61	0.43	0.063	3
11EHS675	Soil		0.3	11.8	4.6	62	<0.1	5.1	5.9	336	2.06	1.2	1.7	0.9	34	<0.1	<0.1	<0.1	57	0.30	0.034	3
11EHS676	Soil		0.3	12.6	5.1	75	<0.1	7.5	9.8	487	2.93	1.1	<0.5	1.2	43	0.1	0.1	0.1	82	0.43	0.029	5
11EHS677	Soil		0.3	17.5	4.2	77	<0.1	4.3	9.7	514	2.99	1.4	1.5	1.0	52	<0.1	<0.1	<0.1	105	0.53	0.034	6
11EHS678	Soil		0.3	9.1	5.4	31	<0.1	4.8	4.6	385	2.11	1.8	3.5	0.9	28	<0.1	0.2	<0.1	64	0.24	0.016	4
11EHS679	Soil		0.4	16.8	5.0	85	<0.1	9.3	10.1	736	3.02	1.7	6.3	0.9	28	<0.1	0.1	<0.1	82	0.37	0.040	4
11EHS680	Soil		0.6	17.7	6.0	79	<0.1	8.3	9.5	812	2.75	3.0	1.0	1.2	43	0.1	0.2	<0.1	84	0.35	0.057	6
11EHS681	Soil		0.5	11.1	5.9	57	<0.1	5.5	6.7	497	2.51	2.5	2.0	0.9	27	<0.1	0.2	<0.1	75	0.25	0.039	4
11EHS682	Soil		0.2	15.9	4.9	60	0.1	5.1	7.7	572	2.25	1.2	<0.5	1.4	51	0.1	<0.1	<0.1	53	0.60	0.021	10
11EHS683	Soil		0.3	14.5	5.0	69	<0.1	6.0	9.7	366	2.84	1.2	<0.5	1.3	43	<0.1	<0.1	<0.1	80	0.50	0.023	7
11EHS684	Soil		0.3	12.3	5.4	81	<0.1	4.7	6.3	479	2.26	0.9	<0.5	1.0	28	<0.1	<0.1	<0.1	68	0.36	0.025	4

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Project: Shovelnose
 Report Date: November 20, 2011

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CERTIFICATE OF ANALYSIS

VAN11004230.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS655	Soil	11	0.12	136	0.100	<1	0.91	0.019	0.08	<0.1	0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
11EHS656	Soil	10	0.17	135	0.092	2	0.89	0.013	0.10	<0.1	0.03	2.2	<0.1	<0.05	3	<0.5	<0.2
11EHS657	Soil	16	0.20	159	0.112	<1	0.79	0.014	0.12	<0.1	0.03	2.9	<0.1	<0.05	3	<0.5	<0.2
11EHS658	Soil	15	0.27	210	0.077	2	1.04	0.035	0.08	<0.1	0.28	4.2	<0.1	<0.05	3	0.5	<0.2
11EHS659	Soil	18	0.18	134	0.103	1	0.98	0.015	0.12	<0.1	0.04	3.3	<0.1	<0.05	3	<0.5	<0.2
11EHS660	Soil	18	0.25	157	0.100	<1	1.35	0.018	0.11	<0.1	0.04	3.5	<0.1	<0.05	4	<0.5	<0.2
11EHS661	Soil	10	0.14	187	0.076	2	1.15	0.014	0.11	<0.1	0.03	1.8	<0.1	<0.05	4	0.5	<0.2
11EHS662	Soil	14	0.19	169	0.108	<1	1.35	0.015	0.10	<0.1	0.06	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS663	Soil	12	0.17	160	0.114	<1	1.11	0.017	0.09	<0.1	0.10	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS664	Soil	8	0.11	160	0.071	<1	1.01	0.013	0.10	<0.1	0.06	1.4	<0.1	<0.05	3	<0.5	<0.2
11EHS665	Soil	8	0.11	152	0.076	<1	0.92	0.017	0.10	<0.1	0.06	1.4	<0.1	<0.05	3	<0.5	<0.2
11EHS666	Soil	10	0.14	131	0.089	1	0.90	0.015	0.09	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS667	Soil	18	0.20	113	0.075	<1	1.24	0.022	0.08	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2
11EHS668	Soil	48	0.36	119	0.172	<1	1.54	0.018	0.16	<0.1	0.01	6.4	<0.1	<0.05	5	<0.5	<0.2
11EHS669	Soil	26	0.28	123	0.111	<1	1.55	0.029	0.03	<0.1	0.02	3.5	<0.1	<0.05	5	<0.5	<0.2
11EHS670	Soil	6	0.12	144	0.047	2	0.80	0.019	0.12	<0.1	0.04	1.5	<0.1	<0.05	3	0.5	<0.2
11EHS671	Soil	9	0.26	110	0.059	<1	1.47	0.017	0.12	<0.1	0.01	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS672	Soil	13	0.20	128	0.112	1	1.02	0.022	0.13	<0.1	0.01	3.2	<0.1	<0.05	3	<0.5	<0.2
11EHS673	Soil	9	0.29	160	0.031	<1	1.89	0.015	0.17	<0.1	0.02	6.4	<0.1	<0.05	7	0.6	<0.2
11EHS674	Soil	8	0.27	184	0.049	<1	2.02	0.014	0.15	<0.1	0.05	4.7	<0.1	<0.05	5	<0.5	<0.2
11EHS675	Soil	11	0.19	132	0.091	<1	1.48	0.020	0.10	<0.1	<0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS676	Soil	13	0.29	149	0.175	<1	2.19	0.027	0.11	<0.1	0.01	6.9	<0.1	<0.05	6	<0.5	<0.2
11EHS677	Soil	9	0.29	150	0.242	<1	1.74	0.023	0.10	<0.1	0.01	8.7	<0.1	<0.05	5	<0.5	<0.2
11EHS678	Soil	13	0.14	117	0.078	2	0.69	0.014	0.07	<0.1	<0.01	2.3	<0.1	<0.05	3	<0.5	<0.2
11EHS679	Soil	18	0.45	144	0.095	<1	1.96	0.015	0.10	<0.1	0.03	4.2	<0.1	<0.05	7	<0.5	<0.2
11EHS680	Soil	15	0.29	210	0.090	2	1.34	0.014	0.12	<0.1	0.01	4.1	<0.1	<0.05	4	0.6	<0.2
11EHS681	Soil	13	0.19	141	0.074	1	0.93	0.009	0.09	<0.1	<0.01	2.6	<0.1	<0.05	3	0.5	<0.2
11EHS682	Soil	10	0.27	120	0.063	2	1.81	0.023	0.07	<0.1	0.03	4.8	<0.1	<0.05	5	0.5	<0.2
11EHS683	Soil	12	0.54	172	0.116	<1	2.23	0.021	0.10	<0.1	0.03	5.7	<0.1	<0.05	7	<0.5	<0.2
11EHS684	Soil	10	0.23	147	0.156	<1	1.31	0.020	0.08	<0.1	0.01	3.7	<0.1	<0.05	4	0.6	<0.2

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Project: Shovelnose
 Report Date: November 20, 2011

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CERTIFICATE OF ANALYSIS

VAN11004230.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS685	Soil		0.3	13.3	4.0	50	<0.1	5.1	8.4	344	2.42	1.1	<0.5	1.0	33	<0.1	<0.1	<0.1	69	0.42	0.019	5
11EHS686	Soil		0.4	11.5	5.0	51	<0.1	5.9	5.6	420	2.32	1.4	<0.5	1.0	36	<0.1	0.1	0.1	64	0.33	0.031	4
11EHS687	Soil		0.6	9.2	5.7	77	<0.1	6.5	6.2	659	2.30	1.5	<0.5	0.7	25	<0.1	0.1	0.1	70	0.24	0.040	3
11EHS688	Soil		0.7	16.7	5.8	62	<0.1	5.9	8.3	920	2.14	2.1	<0.5	0.6	64	0.2	0.2	0.2	57	0.54	0.035	10
11EHS689	Soil		0.7	12.7	4.9	67	<0.1	5.6	7.1	701	2.25	2.9	<0.5	0.7	41	0.1	0.3	0.1	57	0.34	0.046	5
11EHS690	Soil		1.6	21.9	7.3	78	<0.1	4.4	6.5	507	2.80	3.2	1.0	1.0	17	<0.1	0.3	0.2	42	0.19	0.053	6
11EHS691	Soil		0.5	15.6	10.8	277	<0.1	6.5	7.3	462	2.72	2.8	0.6	1.1	29	1.1	0.5	0.1	68	0.25	0.040	5
11EHS692	Soil		0.8	24.3	8.1	101	<0.1	6.8	10.6	958	2.89	3.5	<0.5	0.7	46	0.2	0.4	0.2	56	0.53	0.055	15
11EHS693	Soil		0.7	12.8	5.6	79	<0.1	5.5	6.9	612	2.73	2.5	<0.5	1.1	29	0.1	0.4	<0.1	70	0.30	0.033	6
11EHS694	Soil		0.4	27.6	4.3	138	<0.1	5.2	7.0	1003	2.17	1.3	0.7	0.7	57	0.4	0.2	0.1	50	0.64	0.146	5
11EHS695	Soil		0.3	8.2	3.4	21	<0.1	4.4	4.9	314	1.66	1.2	<0.5	0.5	69	<0.1	0.1	<0.1	44	0.55	0.019	4
11EHS696	Soil		0.6	22.7	5.2	58	<0.1	15.0	8.5	393	2.91	3.1	<0.5	1.7	46	0.1	0.3	<0.1	89	0.37	0.046	5
11EHS697	Soil		0.5	9.7	5.3	58	<0.1	5.1	4.7	581	2.24	1.8	<0.5	0.7	27	<0.1	0.2	<0.1	66	0.20	0.022	3
11EHS698	Soil		0.5	8.9	4.7	80	<0.1	6.2	4.8	506	1.80	1.7	<0.5	0.8	30	<0.1	0.1	<0.1	50	0.31	0.048	3
11EHS699	Soil		0.5	10.9	5.7	70	<0.1	6.6	6.7	475	2.44	1.8	<0.5	1.0	35	0.1	0.2	<0.1	71	0.28	0.051	3
11EHS700	Soil		0.7	9.4	4.5	58	<0.1	5.3	5.8	194	2.01	1.9	0.8	0.7	40	<0.1	0.2	<0.1	59	0.38	0.017	6
11EHS701	Soil		0.5	35.4	5.6	72	<0.1	12.3	13.2	880	3.73	3.0	1.2	1.2	30	0.1	0.2	<0.1	57	0.69	0.087	19
11EHS702	Soil		0.4	38.7	5.8	70	0.1	11.2	13.2	948	3.82	3.0	0.6	1.2	28	0.2	0.3	<0.1	61	0.68	0.095	18
11EHS703	Soil		0.5	38.8	8.3	59	0.2	10.9	8.2	334	2.33	2.9	1.2	1.0	52	0.3	0.3	0.1	66	0.68	0.041	18
11EHS704	Soil		0.5	19.2	7.4	81	<0.1	7.0	7.9	914	2.27	3.4	<0.5	0.6	61	0.3	0.3	<0.1	61	0.87	0.051	9
11EHS705	Soil		0.6	9.8	7.0	56	<0.1	4.3	8.5	663	2.30	3.9	0.7	0.7	18	<0.1	0.2	0.1	33	0.24	0.025	6
11EHS706	Soil		0.5	14.8	5.4	77	<0.1	6.5	7.5	868	2.54	3.0	<0.5	1.1	33	0.1	0.3	<0.1	67	0.34	0.052	7
11EHS707	Soil		0.5	16.7	5.4	70	<0.1	7.3	7.7	497	2.85	3.2	<0.5	1.1	42	<0.1	0.4	<0.1	75	0.33	0.038	8
11EHS708	Soil		0.7	9.4	4.8	98	<0.1	6.2	4.9	550	1.72	1.4	<0.5	0.8	27	0.2	0.1	<0.1	44	0.28	0.072	4
11EHS709	Soil		0.5	13.2	5.9	143	<0.1	6.8	6.6	814	2.26	2.8	<0.5	0.9	28	0.2	0.2	<0.1	64	0.30	0.087	5
11EHS710	Soil		0.5	13.6	5.7	99	<0.1	9.2	6.6	704	2.69	2.6	<0.5	1.0	29	0.2	0.3	<0.1	80	0.27	0.058	4
11EHS711	Soil		0.5	6.4	5.6	75	<0.1	7.2	4.0	519	1.57	1.4	<0.5	0.8	32	<0.1	0.1	<0.1	41	0.27	0.029	4
11EHS712	Soil		0.5	6.4	5.9	93	<0.1	4.2	3.7	693	1.72	1.5	0.6	0.9	38	0.1	0.2	<0.1	45	0.34	0.036	5
11EHS713	Soil		0.6	13.5	6.8	71	<0.1	6.4	5.7	547	2.29	2.9	<0.5	1.3	57	0.2	0.2	<0.1	62	0.47	0.054	10
11EHS714	Soil		0.4	7.2	7.1	97	<0.1	5.5	4.4	796	1.78	1.2	<0.5	0.9	31	0.3	0.1	<0.1	48	0.20	0.028	4

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Project: Shovelnose
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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
11EHS685	Soil	9	0.27	77	0.130	<1	1.37	0.026	0.14	<0.1	<0.01	4.9	<0.1	<0.05	4	<0.5	<0.2
11EHS686	Soil	13	0.18	107	0.109	4	1.32	0.022	0.12	<0.1	0.02	3.6	<0.1	<0.05	4	<0.5	<0.2
11EHS687	Soil	13	0.19	145	0.109	2	1.42	0.016	0.09	<0.1	0.01	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS688	Soil	8	0.24	164	0.062	2	1.22	0.016	0.12	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS689	Soil	11	0.22	171	0.069	1	1.13	0.014	0.16	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11EHS690	Soil	7	0.18	159	0.035	<1	1.29	0.013	0.17	<0.1	0.04	2.2	<0.1	<0.05	4	<0.5	<0.2
11EHS691	Soil	13	0.18	266	0.086	2	1.29	0.014	0.08	<0.1	<0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS692	Soil	10	0.30	182	0.041	2	1.51	0.012	0.23	<0.1	0.03	3.8	<0.1	<0.05	5	<0.5	<0.2
11EHS693	Soil	12	0.22	142	0.083	3	1.00	0.015	0.19	<0.1	0.02	3.2	<0.1	<0.05	4	<0.5	<0.2
11EHS694	Soil	7	0.21	302	0.020	2	1.42	0.016	0.14	<0.1	0.02	2.7	<0.1	<0.05	5	<0.5	<0.2
11EHS695	Soil	9	0.20	155	0.060	2	1.18	0.058	0.10	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11EHS696	Soil	24	0.40	174	0.120	2	1.45	0.019	0.11	<0.1	0.02	4.1	<0.1	<0.05	5	<0.5	<0.2
11EHS697	Soil	11	0.14	128	0.104	1	1.15	0.018	0.08	<0.1	0.04	2.0	<0.1	<0.05	4	<0.5	<0.2
11EHS698	Soil	12	0.15	148	0.097	1	1.34	0.018	0.09	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS699	Soil	13	0.20	158	0.137	2	1.45	0.020	0.10	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS700	Soil	11	0.25	171	0.086	2	1.09	0.064	0.05	<0.1	0.04	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS701	Soil	13	0.58	371	0.005	2	1.65	0.007	0.22	<0.1	0.04	5.7	<0.1	<0.05	5	<0.5	<0.2
11EHS702	Soil	13	0.53	352	0.004	2	1.62	0.006	0.23	<0.1	0.04	6.3	<0.1	<0.05	5	<0.5	<0.2
11EHS703	Soil	15	0.35	187	0.068	2	2.02	0.025	0.11	<0.1	0.05	5.4	<0.1	<0.05	6	0.5	<0.2
11EHS704	Soil	12	0.21	182	0.058	4	1.19	0.012	0.13	<0.1	0.03	3.1	<0.1	0.06	4	<0.5	<0.2
11EHS705	Soil	6	0.32	92	0.011	<1	1.32	0.008	0.18	<0.1	0.03	1.8	<0.1	<0.05	5	<0.5	<0.2
11EHS706	Soil	13	0.23	180	0.058	<1	1.20	0.013	0.16	<0.1	0.02	3.3	<0.1	<0.05	4	<0.5	<0.2
11EHS707	Soil	15	0.28	159	0.089	2	1.54	0.018	0.12	<0.1	0.03	3.7	<0.1	<0.05	5	<0.5	<0.2
11EHS708	Soil	11	0.19	110	0.087	1	1.49	0.016	0.10	<0.1	0.01	2.2	<0.1	<0.05	5	<0.5	<0.2
11EHS709	Soil	13	0.22	164	0.087	2	1.38	0.013	0.12	<0.1	0.02	2.4	<0.1	<0.05	5	<0.5	<0.2
11EHS710	Soil	17	0.28	141	0.111	2	1.67	0.015	0.08	<0.1	0.01	3.0	<0.1	<0.05	5	<0.5	<0.2
11EHS711	Soil	10	0.19	126	0.086	1	1.56	0.021	0.08	<0.1	0.02	1.8	<0.1	<0.05	6	<0.5	<0.2
11EHS712	Soil	9	0.14	156	0.082	2	1.14	0.015	0.10	<0.1	0.02	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS713	Soil	14	0.23	145	0.100	2	1.29	0.014	0.20	<0.1	0.08	3.4	<0.1	<0.05	4	<0.5	<0.2
11EHS714	Soil	10	0.18	132	0.102	1	1.42	0.016	0.07	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2

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Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
11EHS715	Soil	0.7	7.9	5.7	45	<0.1	5.1	4.4	384	1.81	1.8	<0.5	0.9	30	0.1	0.2	<0.1	49	0.31	0.020	7



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Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
11EHS715	Soil	10	0.16	132	0.088	1	1.28	0.014	0.09	<0.1	0.01	2.2	<0.1	<0.05	4	<0.5	<0.2



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QUALITY CONTROL REPORT

VAN11004230.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Pulp Duplicates																					
11EHS508	Soil	0.5	9.6	5.8	45	<0.1	7.0	4.9	321	1.97	2.3	1.4	1.0	31	<0.1	0.4	<0.1	53	0.24	0.031	6
REP 11EHS508	QC	0.5	9.1	5.6	45	<0.1	7.1	5.0	313	1.92	1.9	2.2	1.0	31	<0.1	0.4	<0.1	52	0.25	0.029	6
11EHS525	Soil	0.8	13.3	7.9	65	<0.1	6.0	5.5	1304	1.64	3.4	0.7	0.9	40	0.4	0.5	<0.1	41	0.34	0.036	11
REP 11EHS525	QC	0.8	13.3	7.9	67	<0.1	6.0	5.6	1323	1.61	3.2	1.5	0.9	40	0.3	0.5	<0.1	41	0.35	0.037	12
11EHS547	Soil	0.5	28.8	8.9	57	0.3	11.8	6.9	847	1.92	3.0	4.6	0.8	99	0.3	0.4	0.1	41	1.20	0.043	34
REP 11EHS547	QC	0.5	29.3	8.8	58	0.3	12.3	6.9	825	1.97	3.4	4.7	0.9	96	0.3	0.4	<0.1	44	1.11	0.041	32
11EHS562	Soil	1.3	4.8	5.3	22	<0.1	2.6	2.5	136	1.10	0.6	<0.5	0.5	29	<0.1	<0.1	<0.1	31	0.15	0.014	6
REP 11EHS562	QC	1.4	5.2	5.2	24	<0.1	2.7	2.4	135	1.09	1.0	<0.5	0.8	29	<0.1	<0.1	<0.1	32	0.15	0.014	6
11EHS593	Soil	0.3	4.2	6.0	56	<0.1	3.0	1.8	636	0.99	0.7	<0.5	0.9	47	0.1	<0.1	<0.1	20	0.42	0.021	7
REP 11EHS593	QC	0.3	4.1	6.2	55	<0.1	2.9	1.7	616	0.95	1.0	<0.5	0.9	48	0.1	<0.1	<0.1	19	0.41	0.021	7
11EHS609	Soil	0.4	8.7	5.9	53	<0.1	5.3	4.5	488	2.08	2.2	0.8	1.0	25	<0.1	0.2	<0.1	54	0.17	0.039	3
REP 11EHS609	QC	0.4	8.3	5.6	51	<0.1	5.0	4.3	464	1.96	1.9	1.1	1.0	25	<0.1	0.2	<0.1	52	0.17	0.038	3
11EHS614	Soil	0.5	5.8	7.1	77	<0.1	3.5	3.2	467	1.15	1.3	2.1	0.8	21	<0.1	<0.1	0.1	26	0.23	0.079	3
REP 11EHS614	QC	0.4	5.5	7.1	80	<0.1	3.5	3.1	463	1.12	1.4	<0.5	0.8	21	<0.1	<0.1	<0.1	25	0.23	0.080	3
11EHS649	Soil	0.4	24.7	5.8	44	<0.1	8.8	8.9	514	2.93	5.5	1.7	1.8	74	<0.1	0.4	<0.1	84	0.54	0.045	11
REP 11EHS649	QC	0.4	25.7	6.1	46	<0.1	8.6	9.3	528	3.06	5.7	1.9	1.8	76	0.1	0.4	<0.1	87	0.57	0.047	11
11EHS667	Soil	0.5	9.7	2.4	34	<0.1	7.0	10.1	211	2.71	0.9	<0.5	0.5	36	<0.1	0.5	<0.1	61	0.32	0.010	2
REP 11EHS667	QC	0.5	9.9	2.3	34	<0.1	7.2	9.7	212	2.69	0.9	<0.5	0.5	36	<0.1	0.4	<0.1	60	0.32	0.011	2
11EHS685	Soil	0.3	13.3	4.0	50	<0.1	5.1	8.4	344	2.42	1.1	<0.5	1.0	33	<0.1	<0.1	<0.1	69	0.42	0.019	5
REP 11EHS685	QC	0.2	13.2	4.1	51	<0.1	4.9	8.4	353	2.43	1.0	<0.5	1.0	34	<0.1	<0.1	<0.1	69	0.43	0.020	5
11EHS695	Soil	0.3	8.2	3.4	21	<0.1	4.4	4.9	314	1.66	1.2	<0.5	0.5	69	<0.1	0.1	<0.1	44	0.55	0.019	4
REP 11EHS695	QC	0.3	8.3	3.4	21	<0.1	4.2	4.9	321	1.64	1.0	0.5	0.5	73	<0.1	0.1	<0.1	41	0.56	0.018	4
11EHS701	Soil	0.5	35.4	5.6	72	<0.1	12.3	13.2	880	3.73	3.0	1.2	1.2	30	0.1	0.2	<0.1	57	0.69	0.087	19
REP 11EHS701	QC	0.5	35.4	5.8	73	<0.1	11.7	12.9	896	3.60	2.8	1.0	1.2	31	0.2	0.3	0.1	58	0.74	0.086	19
Reference Materials																					
STD DS8	Standard	13.7	108.6	126.9	314	1.8	39.0	7.8	616	2.43	25.1	108.6	7.1	70	2.4	5.7	6.6	44	0.71	0.079	16
STD DS8	Standard	13.7	118.1	132.6	309	1.7	40.5	8.2	615	2.47	26.6	104.3	7.6	66	2.5	6.1	6.5	44	0.67	0.080	16
STD DS8	Standard	13.4	105.3	135.9	301	1.9	36.5	7.2	588	2.36	24.8	129.1	7.6	73	2.3	6.2	7.2	40	0.65	0.080	16



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QUALITY CONTROL REPORT

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Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																	
11EHS508	Soil	14	0.32	106	0.088	1	1.02	0.012	0.07	<0.1	0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
REP 11EHS508	QC	14	0.31	110	0.083	<1	1.03	0.011	0.07	<0.1	<0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS525	Soil	9	0.21	196	0.057	<1	0.97	0.008	0.16	<0.1	0.02	2.1	<0.1	<0.05	3	0.8	<0.2
REP 11EHS525	QC	10	0.21	205	0.061	1	1.02	0.008	0.17	<0.1	0.03	2.1	<0.1	<0.05	3	0.6	<0.2
11EHS547	Soil	16	0.28	210	0.046	3	1.66	0.011	0.10	0.1	0.08	4.9	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS547	QC	16	0.29	212	0.050	3	1.74	0.013	0.10	<0.1	0.08	5.3	<0.1	<0.05	5	<0.5	<0.2
11EHS562	Soil	7	0.08	125	0.049	<1	0.67	0.015	0.06	<0.1	<0.01	1.2	<0.1	<0.05	2	<0.5	<0.2
REP 11EHS562	QC	6	0.08	124	0.051	<1	0.71	0.015	0.06	<0.1	0.01	1.4	<0.1	<0.05	3	<0.5	<0.2
11EHS593	Soil	5	0.08	296	0.038	3	0.76	0.022	0.12	<0.1	0.02	0.9	<0.1	<0.05	3	<0.5	<0.2
REP 11EHS593	QC	5	0.08	297	0.037	3	0.75	0.023	0.12	<0.1	0.01	0.9	<0.1	<0.05	3	<0.5	<0.2
11EHS609	Soil	11	0.20	133	0.088	2	1.07	0.019	0.06	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS609	QC	11	0.19	130	0.086	2	1.08	0.020	0.06	<0.1	0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS614	Soil	7	0.08	183	0.042	<1	1.01	0.014	0.07	<0.1	0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS614	QC	7	0.09	179	0.040	2	1.02	0.017	0.07	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2
11EHS649	Soil	17	0.37	181	0.053	2	1.39	0.027	0.08	<0.1	0.17	6.7	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS649	QC	17	0.39	185	0.055	2	1.45	0.030	0.08	<0.1	0.20	6.9	<0.1	<0.05	4	<0.5	<0.2
11EHS667	Soil	18	0.20	113	0.075	<1	1.24	0.022	0.08	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS667	QC	18	0.19	112	0.073	<1	1.21	0.022	0.08	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2
11EHS685	Soil	9	0.27	77	0.130	<1	1.37	0.026	0.14	<0.1	<0.01	4.9	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS685	QC	9	0.27	79	0.130	1	1.39	0.031	0.14	<0.1	0.01	4.8	<0.1	<0.05	4	<0.5	<0.2
11EHS695	Soil	9	0.20	155	0.060	2	1.18	0.058	0.10	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS695	QC	9	0.21	150	0.062	2	1.19	0.061	0.10	<0.1	0.02	2.3	<0.1	<0.05	4	<0.5	<0.2
11EHS701	Soil	13	0.58	371	0.005	2	1.65	0.007	0.22	<0.1	0.04	5.7	<0.1	<0.05	5	<0.5	<0.2
REP 11EHS701	QC	13	0.57	388	0.008	4	1.68	0.007	0.25	<0.1	0.05	6.2	<0.1	<0.05	5	0.9	<0.2
Reference Materials																	
STD DS8	Standard	117	0.62	288	0.124	3	0.95	0.094	0.44	3.2	0.20	2.9	5.5	0.14	5	5.5	4.6
STD DS8	Standard	123	0.61	301	0.122	1	0.91	0.088	0.39	3.0	0.21	2.4	5.5	0.15	5	5.4	5.3
STD DS8	Standard	112	0.58	285	0.124	3	0.84	0.082	0.41	3.1	0.19	2.2	5.5	0.15	5	5.2	4.7



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Vancouver BC V6E 2M6 Canada

Project: Shovelnose

Report Date: November 20, 2011

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QUALITY CONTROL REPORT

VAN11004230.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
STD DS8	Standard	12.8	111.7	129.0	300	1.7	37.9	7.6	593	2.41	25.4	132.5	7.1	66	2.7	5.5	6.5	42	0.66	0.078	14
STD DS8	Standard	13.5	109.1	125.1	301	1.8	38.1	7.3	595	2.39	23.9	109.4	6.9	66	2.3	5.3	6.6	42	0.66	0.076	16
STD DS8	Standard	12.2	103.7	116.6	294	1.8	36.1	7.2	564	2.28	23.6	110.9	6.7	69	2.3	5.3	6.0	39	0.65	0.073	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



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Project: Shovelnose

Report Date: November 20, 2011

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QUALITY CONTROL REPORT

VAN11004230.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
STD DS8	Standard	114	0.59	278	0.110	2	0.95	0.112	0.44	2.9	0.19	2.5	5.4	0.13	5	5.0	5.1
STD DS8	Standard	117	0.58	274	0.120	2	0.90	0.100	0.41	3.0	0.18	2.8	5.5	0.12	5	4.7	4.5
STD DS8	Standard	109	0.63	271	0.114	2	0.92	0.109	0.40	2.7	0.18	2.8	5.0	0.15	5	4.9	4.3
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



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Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: August 26, 2011
Report Date: November 23, 2011
Page: 1 of 10

CERTIFICATE OF ANALYSIS

VAN11004545.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 2
P.O. Number
Number of Samples: 248

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	248	Dry at 60C			VAN
SS80	248	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	248	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001		1
11SHS200	Soil	0.5	7.6	5.6	85	<0.1	6.6	4.4	410	1.80	2.3	2.7	0.6	45	<0.1	0.1	43	0.23	0.043	4	
11SHS201	Soil	0.5	7.7	4.8	46	<0.1	4.8	3.9	280	1.98	1.7	0.8	0.8	28	<0.1	0.2	<0.1	54	0.23	0.022	5
11SHS202	Soil	0.5	11.8	5.1	41	<0.1	6.9	6.0	474	1.95	2.2	1.7	0.6	39	0.2	0.2	0.1	56	0.30	0.018	7
11SHS203	Soil	0.2	7.4	5.1	48	<0.1	5.5	3.9	317	1.76	2.1	0.9	0.8	33	<0.1	0.2	0.1	47	0.22	0.037	4
11SHS204	Soil	0.9	17.2	6.7	49	<0.1	6.8	5.5	644	1.72	4.0	1.1	0.6	59	0.2	0.2	0.1	39	0.70	0.041	14
11SHS205	Soil	1.2	21.7	7.8	63	0.1	6.4	5.6	1044	1.87	5.0	2.1	0.9	41	0.2	0.2	0.1	37	0.54	0.031	29
11SHS206	Soil	1.0	11.0	6.1	37	<0.1	5.3	4.8	606	1.58	2.7	1.5	0.6	37	<0.1	0.2	0.1	38	0.47	0.019	12
11SHS207	Soil	0.9	8.7	5.9	47	<0.1	3.7	4.0	1017	1.44	3.0	<0.5	0.3	48	0.1	0.2	0.1	37	0.40	0.023	6
11SHS208	Soil	0.7	9.5	8.1	67	<0.1	5.3	5.1	1095	1.85	2.9	0.5	0.8	24	0.1	0.1	0.1	41	0.28	0.087	7
11SHS209	Soil	0.7	12.5	5.8	53	<0.1	4.2	3.3	585	1.26	2.0	0.7	0.5	41	0.2	0.1	0.1	29	0.53	0.029	13
11SHS210	Soil	0.5	5.4	5.5	48	<0.1	3.8	3.3	206	1.39	1.3	0.9	0.4	14	<0.1	<0.1	0.1	29	0.16	0.049	5
11SHS211	Soil	0.4	9.7	5.9	69	0.1	4.8	4.3	966	1.70	2.3	<0.5	0.6	32	0.1	0.2	<0.1	40	0.43	0.034	13
11SHS212	Soil	0.4	5.2	4.0	66	<0.1	3.2	3.0	652	1.45	1.9	1.1	0.6	30	0.1	0.1	<0.1	39	0.20	0.042	4
11SHS213	Soil	0.4	9.1	6.2	197	<0.1	5.4	4.6	787	1.58	2.1	1.4	0.5	45	0.8	0.1	<0.1	39	0.72	0.029	5
11SHS214	Soil	0.4	8.2	4.4	48	<0.1	4.0	3.9	577	1.61	2.1	1.6	0.7	30	<0.1	0.2	<0.1	45	0.21	0.041	4
11SHS215	Soil	0.2	12.0	6.0	24	<0.1	5.7	4.9	124	1.41	1.8	<0.5	1.0	59	<0.1	0.1	<0.1	34	0.36	0.011	11
11SHS216	Soil	0.3	6.5	4.7	47	<0.1	3.4	2.9	548	1.37	1.2	<0.5	0.6	30	<0.1	0.1	0.1	37	0.20	0.014	6
11SHS217	Soil	0.3	8.0	5.4	59	<0.1	5.9	3.9	212	1.84	2.0	1.3	0.7	27	0.1	0.2	<0.1	48	0.26	0.019	4
11SHS218	Soil	0.7	10.4	5.5	51	<0.1	9.4	4.9	397	1.96	2.6	1.3	1.0	42	<0.1	0.2	<0.1	48	0.34	0.032	7
11SHS219	Soil	0.2	18.0	2.7	56	<0.1	9.9	11.5	544	2.98	1.1	1.8	0.6	24	<0.1	0.2	<0.1	63	0.29	0.050	7
11SHS220	Soil	0.4	12.3	5.4	44	<0.1	6.4	6.2	562	1.91	1.7	0.7	0.8	42	0.1	0.2	<0.1	51	0.30	0.020	7
11SHS221	Soil	0.4	10.9	5.4	77	<0.1	5.2	5.3	782	2.32	2.3	0.9	0.9	34	0.1	0.3	<0.1	65	0.25	0.049	6
11SHS222	Soil	0.8	20.2	6.0	52	<0.1	7.3	7.8	538	2.73	9.7	1.9	1.0	53	<0.1	0.4	<0.1	71	0.45	0.050	10
11SHS223	Soil	0.4	9.6	4.4	66	<0.1	4.7	4.7	381	1.81	2.5	<0.5	0.6	25	<0.1	0.2	<0.1	49	0.18	0.041	4
11SHS225	Soil	0.6	16.0	5.2	44	<0.1	6.4	7.4	728	2.14	1.9	0.8	0.9	60	0.1	0.2	<0.1	56	0.49	0.017	9
11SHS226	Soil	0.3	30.6	6.3	47	0.1	8.1	5.7	676	2.22	3.8	1.6	1.7	71	<0.1	0.2	0.1	55	0.55	0.022	14
11SHS227	Soil	0.3	12.8	4.0	52	<0.1	6.1	4.0	318	1.75	2.2	2.0	0.8	31	<0.1	0.2	<0.1	51	0.29	0.022	6
11SHS228	Soil	0.5	10.6	5.3	62	<0.1	6.5	5.1	439	2.09	1.8	1.7	0.9	33	<0.1	0.2	<0.1	63	0.24	0.035	4
11SHS229	Soil	0.5	12.2	5.8	43	<0.1	5.9	5.1	248	2.38	2.8	<0.5	1.1	32	<0.1	0.3	<0.1	68	0.22	0.038	4
11SHS230	Soil	0.3	8.3	5.0	42	<0.1	4.4	3.9	301	1.81	1.7	<0.5	0.9	23	<0.1	0.2	<0.1	51	0.17	0.034	3

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Project: Shovelnose
Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS200	Soil			12	0.19	161	0.063	2	1.13	0.014	0.13	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11SHS201	Soil			10	0.15	138	0.084	1	0.72	0.011	0.10	<0.1	0.05	2.0	<0.1	<0.05	3	<0.5	<0.2
11SHS202	Soil			13	0.23	131	0.073	1	1.05	0.011	0.09	<0.1	0.03	2.3	<0.1	<0.05	3	<0.5	<0.2
11SHS203	Soil			10	0.15	144	0.076	2	0.98	0.015	0.10	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS204	Soil			10	0.23	192	0.060	2	1.40	0.013	0.15	<0.1	0.05	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS205	Soil			8	0.17	194	0.043	1	1.65	0.013	0.14	<0.1	0.03	3.0	<0.1	<0.05	5	<0.5	<0.2
11SHS206	Soil			9	0.19	150	0.056	2	1.07	0.013	0.11	<0.1	0.04	2.2	<0.1	<0.05	3	<0.5	<0.2
11SHS207	Soil			8	0.15	229	0.053	2	0.71	0.010	0.13	<0.1	0.02	1.2	<0.1	<0.05	3	<0.5	<0.2
11SHS208	Soil			9	0.21	228	0.049	1	1.68	0.011	0.11	<0.1	0.03	1.7	<0.1	<0.05	5	<0.5	<0.2
11SHS209	Soil			7	0.15	142	0.042	2	0.91	0.014	0.08	<0.1	0.04	1.6	<0.1	<0.05	3	<0.5	<0.2
11SHS210	Soil			6	0.13	173	0.013	<1	1.54	0.013	0.05	<0.1	0.04	1.0	<0.1	<0.05	6	<0.5	<0.2
11SHS211	Soil			8	0.16	325	0.045	1	1.33	0.016	0.13	<0.1	0.04	1.8	<0.1	<0.05	4	<0.5	<0.2
11SHS212	Soil			7	0.12	176	0.064	1	0.84	0.015	0.08	<0.1	0.02	1.3	<0.1	<0.05	3	<0.5	<0.2
11SHS213	Soil			8	0.17	160	0.069	2	1.02	0.017	0.07	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5	<0.2
11SHS214	Soil			9	0.13	179	0.074	1	0.76	0.014	0.09	<0.1	0.02	1.5	<0.1	<0.05	3	<0.5	<0.2
11SHS215	Soil			10	0.29	163	0.068	<1	1.20	0.028	0.04	<0.1	0.02	3.0	<0.1	<0.05	3	<0.5	<0.2
11SHS216	Soil			7	0.12	119	0.066	<1	0.77	0.016	0.05	<0.1	0.02	1.6	<0.1	<0.05	2	<0.5	<0.2
11SHS217	Soil			12	0.16	130	0.070	<1	0.90	0.015	0.05	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS218	Soil			13	0.18	135	0.033	2	1.13	0.017	0.10	<0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
11SHS219	Soil			21	0.70	148	0.029	<1	1.82	0.014	0.19	<0.1	0.01	3.8	<0.1	<0.05	6	<0.5	<0.2
11SHS220	Soil			11	0.21	142	0.077	<1	1.14	0.015	0.11	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11SHS221	Soil			13	0.19	138	0.080	<1	0.98	0.012	0.08	<0.1	0.02	2.6	<0.1	<0.05	3	<0.5	<0.2
11SHS222	Soil			13	0.33	133	0.061	2	1.31	0.024	0.10	<0.1	0.10	4.2	<0.1	<0.05	4	<0.5	<0.2
11SHS223	Soil			9	0.18	136	0.066	<1	1.11	0.013	0.10	<0.1	0.05	1.7	<0.1	<0.05	4	<0.5	<0.2
11SHS225	Soil			11	0.26	124	0.070	2	1.22	0.016	0.11	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11SHS226	Soil			12	0.28	211	0.063	<1	2.06	0.029	0.06	<0.1	0.07	5.0	<0.1	<0.05	5	<0.5	<0.2
11SHS227	Soil			12	0.24	121	0.083	<1	1.11	0.016	0.06	<0.1	0.02	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS228	Soil			14	0.19	168	0.090	<1	1.13	0.011	0.09	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11SHS229	Soil			14	0.19	133	0.115	<1	1.00	0.018	0.09	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11SHS230	Soil			10	0.14	121	0.087	<1	0.92	0.014	0.07	<0.1	0.01	1.8	<0.1	<0.05	3	<0.5	<0.2



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Project: Shovelnose
 Report Date: November 23, 2011

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VAN11004545.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS231	Soil		0.6	8.4	5.7	53	<0.1	4.2	3.5	763	1.75	1.6	<0.5	0.9	35	0.1	0.2	<0.1	51	0.34	0.032	4
11SHS232	Soil		0.4	8.1	5.3	63	<0.1	4.6	4.5	361	1.91	1.4	<0.5	0.7	24	<0.1	0.1	<0.1	55	0.22	0.036	3
11SHS233	Soil		0.5	11.6	6.1	45	<0.1	4.7	5.9	418	2.26	2.4	1.3	0.7	34	<0.1	0.3	<0.1	67	0.27	0.018	4
11SHS234	Soil		0.4	7.9	4.6	25	<0.1	2.7	3.6	265	1.56	1.1	15.0	0.6	36	<0.1	0.2	<0.1	45	0.23	0.021	3
11SHS235	Soil		0.4	8.6	5.1	57	<0.1	3.8	4.1	338	1.75	1.5	0.7	0.9	27	<0.1	0.1	<0.1	50	0.18	0.085	3
11SHS236	Soil		0.4	7.6	4.0	37	<0.1	3.6	3.7	238	1.61	1.3	1.6	0.6	26	<0.1	0.1	<0.1	48	0.20	0.033	3
11SHS237	Soil		0.3	6.9	4.3	34	<0.1	3.7	3.2	180	1.43	1.5	<0.5	0.6	26	<0.1	0.2	<0.1	42	0.17	0.021	4
11SHS238	Soil		0.9	10.2	5.6	41	<0.1	5.9	5.2	284	1.98	3.2	<0.5	0.9	30	<0.1	0.1	0.1	55	0.33	0.012	9
11SHS239	Soil		0.6	12.8	5.2	76	<0.1	5.4	5.1	641	1.99	3.9	2.2	0.9	52	0.1	0.2	0.2	51	0.33	0.056	14
11SHS240	Soil		0.9	2.4	3.7	18	<0.1	1.4	1.3	78	0.66	1.4	0.8	0.2	16	<0.1	<0.1	0.1	17	0.18	0.020	3
11SHS241	Soil		0.8	11.7	8.3	114	<0.1	6.4	5.3	1312	1.79	5.9	<0.5	0.8	33	0.2	0.1	0.2	38	0.29	0.186	6
11SHS242	Soil		0.5	10.8	6.4	54	0.1	5.2	4.9	465	1.84	2.8	<0.5	1.0	24	0.1	0.2	0.1	48	0.19	0.059	6
11SHS243	Soil		0.5	12.3	7.6	42	0.1	6.6	4.9	242	2.20	6.0	<0.5	1.4	20	<0.1	0.2	0.1	54	0.12	0.043	7
11SHS244	Soil		0.2	4.4	4.6	64	<0.1	4.2	3.1	226	1.27	1.3	<0.5	0.6	15	0.1	0.1	0.1	31	0.18	0.054	5
11SHS245	Soil		0.3	8.4	6.6	42	<0.1	4.3	3.8	230	1.72	2.4	1.4	0.9	17	<0.1	0.1	0.1	41	0.18	0.056	6
11SHS246	Soil		0.4	6.9	7.6	97	<0.1	5.3	3.7	823	1.43	2.4	<0.5	0.6	20	0.1	0.1	0.1	31	0.19	0.111	5
11SHS247	Soil		0.4	8.7	5.7	37	<0.1	4.1	4.3	209	2.17	3.2	<0.5	1.0	31	<0.1	0.3	0.1	62	0.21	0.029	5
11SHS248	Soil		0.4	5.6	6.5	80	<0.1	4.4	3.4	575	1.33	1.7	<0.5	0.7	25	0.1	0.1	<0.1	33	0.26	0.068	5
11SHS249	Soil		0.6	8.6	5.9	50	<0.1	5.7	4.5	443	1.90	2.2	<0.5	0.7	28	0.1	0.2	<0.1	52	0.31	0.062	5
11SHS250	Soil		0.5	8.1	5.8	53	<0.1	5.7	4.5	413	1.90	2.0	<0.5	0.8	28	<0.1	0.2	<0.1	51	0.32	0.060	5
11SHS251	Soil		0.6	50.5	7.6	87	0.4	10.6	5.1	326	2.53	10.0	0.6	1.2	75	0.3	0.3	0.1	44	1.01	0.105	26
11SHS252	Soil		0.5	12.1	5.7	73	<0.1	5.7	5.6	486	1.91	3.0	<0.5	1.1	28	<0.1	0.1	<0.1	51	0.19	0.102	6
11SHS253	Soil		0.4	13.1	7.0	52	<0.1	4.9	6.7	630	2.06	2.5	<0.5	1.3	52	0.1	0.2	0.1	54	0.48	0.020	11
11SHS254	Soil		0.8	24.1	5.9	54	<0.1	12.0	8.3	609	2.30	3.5	<0.5	0.7	47	0.1	0.2	0.1	58	0.49	0.038	13
11SHS255	Soil		0.5	9.4	5.1	36	<0.1	5.1	4.8	310	1.93	2.1	<0.5	0.9	28	<0.1	0.2	<0.1	53	0.25	0.015	5
11SHS256	Soil		0.5	18.0	17.5	173	0.1	4.6	6.5	614	2.68	3.1	6.7	0.9	30	0.6	0.3	<0.1	59	0.26	0.027	10
11SHS257	Soil		0.7	45.6	5.6	78	0.2	12.5	8.4	635	2.36	3.1	<0.5	0.7	72	0.2	0.2	<0.1	63	0.87	0.043	16
11SHS258	Soil		0.5	12.2	4.7	73	<0.1	7.3	6.4	501	2.09	2.0	<0.5	0.7	28	0.2	0.2	<0.1	58	0.32	0.078	4
11SHS259	Soil		0.6	7.2	7.0	77	<0.1	4.0	3.3	446	1.45	2.4	<0.5	0.8	17	0.1	0.1	<0.1	33	0.33	0.047	6
11SHS260	Soil		0.1	3.3	3.9	74	<0.1	3.5	2.7	260	1.00	1.8	1.1	0.7	11	<0.1	<0.1	<0.1	22	0.24	0.092	4

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Project: Shovelnose
Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS231	Soil			10	0.12	160	0.093	3	0.74	0.021	0.12	<0.1	0.03	2.1	<0.1	<0.05	2	<0.5	<0.2
11SHS232	Soil			10	0.15	124	0.080	<1	0.81	0.013	0.08	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS233	Soil			12	0.18	129	0.080	<1	0.83	0.017	0.07	<0.1	0.06	2.0	<0.1	<0.05	3	<0.5	<0.2
11SHS234	Soil			8	0.11	115	0.070	2	0.65	0.023	0.09	<0.1	<0.01	1.7	<0.1	<0.05	2	<0.5	<0.2
11SHS235	Soil			9	0.12	154	0.063	<1	0.97	0.015	0.07	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS236	Soil			9	0.13	111	0.078	<1	0.76	0.016	0.08	<0.1	0.02	1.8	<0.1	<0.05	3	<0.5	<0.2
11SHS237	Soil			9	0.11	111	0.075	2	0.74	0.014	0.07	<0.1	<0.01	1.5	<0.1	0.06	2	<0.5	<0.2
11SHS238	Soil			14	0.21	116	0.083	2	0.97	0.022	0.08	<0.1	0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11SHS239	Soil			10	0.19	110	0.066	2	1.43	0.016	0.10	<0.1	0.02	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS240	Soil			3	0.05	55	0.027	2	0.38	0.014	0.06	<0.1	0.03	0.6	<0.1	<0.05	2	<0.5	<0.2
11SHS241	Soil			9	0.16	212	0.056	3	2.06	0.013	0.06	<0.1	0.03	1.7	<0.1	<0.05	6	<0.5	<0.2
11SHS242	Soil			10	0.18	143	0.059	2	1.36	0.016	0.08	<0.1	0.02	1.9	<0.1	<0.05	4	<0.5	<0.2
11SHS243	Soil			11	0.23	112	0.044	1	1.86	0.011	0.06	<0.1	0.03	2.1	<0.1	<0.05	5	<0.5	<0.2
11SHS244	Soil			6	0.13	100	0.048	1	1.07	0.017	0.08	<0.1	<0.01	1.1	<0.1	<0.05	5	<0.5	<0.2
11SHS245	Soil			8	0.15	91	0.036	1	1.68	0.016	0.06	<0.1	0.02	1.6	<0.1	<0.05	5	<0.5	<0.2
11SHS246	Soil			7	0.15	170	0.065	2	1.68	0.019	0.05	<0.1	0.03	1.4	<0.1	<0.05	7	<0.5	<0.2
11SHS247	Soil			10	0.18	88	0.114	2	0.81	0.023	0.10	<0.1	0.01	2.6	<0.1	<0.05	3	<0.5	<0.2
11SHS248	Soil			7	0.15	151	0.065	2	1.35	0.015	0.09	<0.1	0.02	1.6	<0.1	<0.05	5	<0.5	<0.2
11SHS249	Soil			11	0.18	112	0.068	2	1.19	0.015	0.09	<0.1	0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11SHS250	Soil			11	0.18	115	0.069	2	1.21	0.016	0.09	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11SHS251	Soil			16	0.34	220	0.035	3	3.08	0.024	0.16	0.1	0.08	6.3	<0.1	0.07	7	<0.5	<0.2
11SHS252	Soil			9	0.16	85	0.121	1	1.87	0.015	0.06	<0.1	0.04	2.9	<0.1	<0.05	6	<0.5	<0.2
11SHS253	Soil			9	0.23	135	0.175	2	1.43	0.021	0.11	<0.1	0.02	4.4	<0.1	<0.05	4	<0.5	<0.2
11SHS254	Soil			17	0.34	191	0.070	2	1.67	0.026	0.10	<0.1	0.03	4.0	<0.1	<0.05	5	<0.5	<0.2
11SHS255	Soil			11	0.18	114	0.082	2	0.87	0.025	0.07	<0.1	0.03	2.1	<0.1	<0.05	3	<0.5	<0.2
11SHS256	Soil			10	0.13	153	0.051	2	0.85	0.013	0.12	<0.1	0.02	3.5	<0.1	<0.05	3	<0.5	<0.2
11SHS257	Soil			17	0.37	179	0.061	3	1.73	0.023	0.09	<0.1	0.04	5.5	<0.1	<0.05	5	<0.5	<0.2
11SHS258	Soil			14	0.26	146	0.076	2	1.21	0.013	0.11	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS259	Soil			8	0.14	97	0.043	1	0.95	0.012	0.11	<0.1	0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11SHS260	Soil			5	0.09	21	0.049	1	1.15	0.033	0.07	<0.1	<0.01	1.2	<0.1	<0.05	5	<0.5	<0.2

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 Report Date: November 23, 2011

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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS261	Soil	0.6	11.8	4.6	113	<0.1	7.7	5.6	980	1.71	2.3	1.0	0.9	32	<0.1	0.1	<0.1	45	0.31	0.092	4
11SHS262	Soil	1.4	13.9	10.4	60	<0.1	5.8	6.6	478	2.83	17.0	1.2	1.1	28	0.2	0.5	0.1	65	0.26	0.046	12
11SHS263	Soil	0.7	12.4	6.7	55	<0.1	5.7	5.8	726	1.98	3.2	1.2	0.8	38	0.2	0.2	0.1	48	0.40	0.045	10
11SHS264	Soil	0.3	8.7	5.6	54	<0.1	5.5	5.4	696	2.02	2.5	<0.5	0.9	25	0.1	0.2	<0.1	48	0.29	0.039	6
11SHS265	Soil	0.4	10.6	6.4	55	<0.1	6.0	5.5	520	2.26	2.8	<0.5	0.9	28	0.2	0.2	<0.1	62	0.39	0.028	8
11SHS266	Soil	0.2	9.0	6.4	74	<0.1	4.5	5.2	745	2.04	1.7	0.6	0.8	120	0.1	0.1	0.1	46	0.43	0.049	8
11SHS267	Soil	0.4	6.1	4.1	62	<0.1	4.6	3.3	502	1.22	1.3	<0.5	0.5	19	<0.1	0.1	<0.1	32	0.23	0.035	3
11SHS268	Soil	0.5	12.3	5.4	72	<0.1	8.6	5.4	435	1.89	2.3	<0.5	0.9	102	0.3	0.1	<0.1	49	0.54	0.034	7
11SHS269	Soil	0.4	10.9	9.7	110	0.1	5.4	5.8	1111	2.00	2.6	<0.5	0.8	99	0.2	0.1	0.1	35	0.58	0.119	11
11SHS270	Soil	0.6	12.2	4.5	68	<0.1	8.4	6.0	386	2.25	2.1	0.6	0.9	32	0.1	0.2	<0.1	56	0.27	0.044	4
11SHS271	Soil	0.4	12.0	5.6	73	<0.1	7.4	6.0	433	2.40	2.1	<0.5	0.9	23	<0.1	0.2	<0.1	64	0.25	0.052	4
11SHS272	Soil	0.3	4.3	3.7	58	<0.1	4.1	2.7	304	1.35	0.9	1.2	0.5	17	0.1	<0.1	<0.1	33	0.21	0.027	3
11SHS273	Soil	0.5	7.0	5.7	48	<0.1	3.8	3.4	513	1.57	1.8	<0.5	0.7	34	<0.1	0.2	<0.1	40	0.32	0.026	6
11SHS274	Soil	0.4	11.9	5.5	40	0.1	4.1	3.6	370	1.61	1.7	<0.5	0.9	26	0.1	0.2	<0.1	37	0.38	0.018	27
11SHS275	Soil	0.6	15.4	9.0	61	0.2	6.5	5.2	545	2.15	2.2	<0.5	1.7	43	0.1	0.2	0.1	46	0.47	0.019	15
11SHS276	Soil	0.5	6.6	5.2	59	<0.1	5.1	4.0	441	1.84	1.6	<0.5	0.8	26	<0.1	0.1	<0.1	47	0.17	0.020	6
11SHS277	Soil	0.4	10.0	7.1	58	<0.1	5.7	4.9	530	2.04	2.3	<0.5	1.4	25	<0.1	0.2	<0.1	50	0.17	0.033	16
11SHS278	Soil	0.6	7.1	5.1	50	<0.1	4.9	3.7	348	1.76	1.7	<0.5	0.8	25	<0.1	0.2	<0.1	50	0.19	0.021	5
11LMS001	Soil	0.4	8.8	5.7	63	<0.1	4.5	4.4	447	1.81	1.3	<0.5	0.6	31	<0.1	0.2	<0.1	54	0.24	0.032	3
11LMS002	Soil	0.3	8.9	5.0	62	<0.1	7.3	3.9	296	1.51	0.9	<0.5	0.8	35	<0.1	<0.1	<0.1	42	0.23	0.062	3
11LMS003	Soil	0.3	7.3	4.3	49	<0.1	4.1	3.4	168	1.48	0.8	<0.5	0.5	32	<0.1	<0.1	<0.1	42	0.17	0.016	3
11LMS004	Soil	0.3	14.1	5.2	52	<0.1	5.8	5.9	395	1.90	1.1	<0.5	0.7	36	<0.1	0.1	<0.1	56	0.31	0.020	4
11LMS005	Soil	0.2	20.2	2.7	66	<0.1	11.0	11.6	401	3.58	1.0	<0.5	1.1	54	<0.1	0.6	<0.1	83	0.56	0.027	8
11LMS006	Soil	0.3	14.6	5.6	48	<0.1	8.2	6.9	260	2.16	1.7	<0.5	1.0	24	<0.1	1.1	<0.1	55	0.25	0.031	3
11LMS007	Soil	0.2	18.7	5.1	93	<0.1	16.8	12.5	969	2.60	2.9	<0.5	0.8	32	0.1	0.7	<0.1	66	0.37	0.076	5
11LMS008	Soil	0.4	11.4	4.2	53	<0.1	4.3	6.5	317	2.41	1.5	<0.5	0.8	37	<0.1	0.3	<0.1	74	0.29	0.030	3
11LMS009	Soil	0.4	10.4	3.8	50	<0.1	4.6	8.9	638	2.62	2.3	<0.5	1.2	25	<0.1	0.3	<0.1	55	0.29	0.026	7
11LMS010	Soil	0.3	7.4	4.3	31	<0.1	2.7	5.1	272	1.69	0.9	<0.5	0.8	27	<0.1	<0.1	<0.1	41	0.22	0.019	3
11LMS011	Soil	0.4	10.5	4.2	59	<0.1	5.3	7.8	680	2.39	1.9	<0.5	1.2	23	<0.1	0.2	<0.1	69	0.29	0.040	4
11LMS012	Soil	0.4	10.4	5.4	49	<0.1	5.1	4.4	249	2.12	2.8	<0.5	1.0	40	<0.1	0.2	<0.1	65	0.26	0.036	5

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Project: Shovelnose
 Report Date: November 23, 2011

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS261	Soil			13	0.23	183	0.074	2	1.30	0.019	0.09	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS262	Soil			13	0.27	110	0.058	1	1.19	0.013	0.11	<0.1	0.03	3.5	<0.1	<0.05	4	<0.5	<0.2
11SHS263	Soil			10	0.18	260	0.051	2	1.12	0.016	0.17	<0.1	0.02	2.6	<0.1	0.05	3	<0.5	<0.2
11SHS264	Soil			11	0.26	131	0.089	<1	1.71	0.017	0.08	<0.1	0.02	2.7	<0.1	<0.05	6	<0.5	<0.2
11SHS265	Soil			13	0.19	107	0.090	3	1.15	0.016	0.12	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11SHS266	Soil			8	0.20	237	0.077	<1	1.92	0.016	0.20	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11SHS267	Soil			8	0.15	57	0.059	1	1.01	0.018	0.07	<0.1	<0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS268	Soil			13	0.26	212	0.080	3	1.16	0.016	0.17	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11SHS269	Soil			7	0.31	189	0.053	<1	2.47	0.018	0.15	<0.1	0.06	2.3	<0.1	<0.05	6	<0.5	<0.2
11SHS270	Soil			15	0.29	114	0.092	1	1.39	0.017	0.09	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11SHS271	Soil			14	0.24	128	0.088	1	1.38	0.013	0.07	<0.1	0.02	2.4	<0.1	<0.05	5	<0.5	<0.2
11SHS272	Soil			7	0.12	110	0.053	2	1.01	0.018	0.09	<0.1	0.01	0.8	<0.1	<0.05	4	0.6	<0.2
11SHS273	Soil			8	0.15	144	0.076	2	1.05	0.016	0.11	<0.1	0.02	1.6	<0.1	<0.05	4	<0.5	<0.2
11SHS274	Soil			8	0.17	71	0.063	1	1.22	0.021	0.09	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11SHS275	Soil			11	0.23	130	0.099	2	1.78	0.023	0.12	<0.1	0.03	3.8	<0.1	<0.05	5	<0.5	<0.2
11SHS276	Soil			10	0.20	112	0.065	<1	1.25	0.015	0.08	<0.1	0.02	2.0	<0.1	<0.05	4	<0.5	<0.2
11SHS277	Soil			11	0.23	75	0.069	<1	1.49	0.017	0.07	<0.1	0.02	3.4	<0.1	<0.05	5	<0.5	<0.2
11SHS278	Soil			11	0.15	94	0.075	<1	0.86	0.015	0.07	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11LMS001	Soil			10	0.15	135	0.075	<1	0.93	0.013	0.09	<0.1	0.07	1.9	<0.1	<0.05	3	<0.5	<0.2
11LMS002	Soil			8	0.13	185	0.073	1	1.19	0.021	0.11	<0.1	0.42	1.5	<0.1	<0.05	4	<0.5	<0.2
11LMS003	Soil			8	0.13	127	0.079	<1	0.96	0.021	0.07	<0.1	0.03	1.7	<0.1	<0.05	3	<0.5	<0.2
11LMS004	Soil			13	0.22	119	0.096	<1	1.16	0.025	0.08	<0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS005	Soil			29	0.23	171	0.026	<1	2.10	0.028	0.14	<0.1	0.02	7.0	<0.1	<0.05	6	<0.5	<0.2
11LMS006	Soil			28	0.24	140	0.134	1	1.68	0.019	0.10	<0.1	0.02	3.7	<0.1	<0.05	5	<0.5	<0.2
11LMS007	Soil			44	0.67	171	0.106	<1	2.48	0.022	0.08	<0.1	0.03	5.5	<0.1	<0.05	8	<0.5	<0.2
11LMS008	Soil			11	0.22	84	0.093	2	1.05	0.024	0.13	<0.1	0.01	2.9	<0.1	<0.05	4	<0.5	<0.2
11LMS009	Soil			6	0.17	95	0.041	<1	1.56	0.018	0.14	<0.1	0.01	4.2	<0.1	<0.05	5	<0.5	<0.2
11LMS010	Soil			6	0.19	80	0.069	<1	1.09	0.028	0.10	<0.1	<0.01	2.6	<0.1	<0.05	3	<0.5	<0.2
11LMS011	Soil			10	0.27	129	0.068	<1	1.33	0.013	0.11	<0.1	0.02	3.4	<0.1	<0.05	5	<0.5	<0.2
11LMS012	Soil			12	0.21	142	0.099	1	0.93	0.015	0.10	<0.1	0.01	2.7	<0.1	<0.05	3	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm		
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11LMS013	Soil		0.5	8.0	5.2	72	<0.1	4.7	3.7	464	1.71	2.0	<0.5	0.9	22	0.1	0.1	<0.1	49	0.23	0.072	4
11LMS014	Soil		0.5	11.4	6.1	56	<0.1	6.5	5.2	250	2.28	2.9	<0.5	1.0	31	0.1	0.2	<0.1	59	0.23	0.039	6
11LMS015	Soil		0.3	5.7	7.3	67	<0.1	5.3	3.5	696	1.32	1.4	<0.5	0.9	27	0.2	0.1	0.1	33	0.24	0.044	6
11LMS016	Soil		0.5	5.5	4.9	54	<0.1	3.9	3.4	650	1.34	1.5	<0.5	0.5	18	0.1	0.1	<0.1	36	0.16	0.035	3
11LMS017	Soil		0.7	11.0	6.7	78	<0.1	5.4	4.7	564	1.87	2.6	2.3	1.0	34	0.1	0.2	0.1	46	0.34	0.078	7
11LMS018	Soil		0.2	5.5	5.0	48	<0.1	4.3	3.9	309	1.53	0.9	<0.5	0.6	19	<0.1	<0.1	<0.1	41	0.15	0.019	3
11LMS019	Soil		0.4	4.6	3.8	76	<0.1	2.3	2.3	874	0.93	1.4	0.5	0.3	24	0.2	<0.1	<0.1	24	0.36	0.054	2
11LMS020	Soil		0.4	10.7	11.0	95	<0.1	4.4	5.0	1762	1.89	2.0	<0.5	1.3	44	0.3	0.1	0.1	37	0.51	0.032	14
11LMS021	Soil		0.4	4.3	4.9	57	<0.1	3.8	3.5	495	1.50	1.1	<0.5	0.8	14	<0.1	<0.1	<0.1	40	0.13	0.039	3
11LMS022	Soil		0.8	9.4	5.3	55	<0.1	5.9	4.7	388	1.69	1.0	<0.5	0.9	30	<0.1	0.1	<0.1	45	0.24	0.029	8
11LMS023	Soil		0.9	27.0	8.6	78	<0.1	8.0	5.8	535	1.94	5.6	<0.5	0.7	55	0.3	0.2	<0.1	52	0.66	0.098	13
11LMS024	Soil		0.4	16.2	6.5	121	<0.1	4.3	7.6	949	2.52	4.0	<0.5	1.3	50	0.2	0.2	<0.1	77	0.53	0.186	8
11LMS025	Soil		0.4	10.3	6.6	73	<0.1	5.9	5.6	752	2.00	2.6	<0.5	1.2	53	0.1	0.2	<0.1	56	0.37	0.054	5
11LMS026	Soil		0.4	17.9	2.6	16	0.1	3.9	2.7	366	0.85	1.3	1.2	0.2	606	0.1	0.2	<0.1	18	18.00	0.047	3
11LMS027	Soil		0.4	14.7	5.0	102	0.1	8.7	6.3	741	2.08	2.3	0.8	0.8	25	0.2	0.2	<0.1	61	0.42	0.142	4
11LMS028	Soil		0.4	10.4	4.6	91	<0.1	7.6	5.3	616	1.85	2.0	<0.5	0.8	27	0.2	0.1	<0.1	54	0.29	0.053	4
11LMS029	Soil		0.7	10.3	5.2	41	<0.1	5.8	4.9	370	1.85	1.8	1.0	0.8	21	<0.1	0.2	<0.1	58	0.26	0.019	7
11LMS030	Soil		0.8	17.3	5.2	75	<0.1	11.3	7.4	435	2.02	2.0	<0.5	0.9	34	0.1	0.2	<0.1	57	0.32	0.044	6
11LMS031	Soil		0.7	9.1	5.0	68	<0.1	7.5	5.4	839	1.95	1.7	<0.5	0.6	34	0.1	0.1	0.2	53	0.30	0.040	4
11LMS032	Soil		0.6	16.5	7.2	69	<0.1	6.4	7.3	879	2.41	4.4	1.0	0.8	45	0.2	0.3	0.1	59	0.50	0.061	11
11LMS033	Soil		0.6	14.0	6.0	60	<0.1	5.9	6.1	771	2.02	3.0	<0.5	0.6	44	0.2	0.2	0.1	50	0.55	0.038	7
11LMS034	Soil		0.4	16.4	6.4	60	<0.1	8.2	7.1	791	2.10	2.4	<0.5	0.9	41	0.2	0.2	0.1	56	0.54	0.031	8
11LMS035	Soil		0.2	8.4	6.0	74	<0.1	3.7	5.0	633	1.82	1.8	<0.5	0.7	182	0.2	0.1	0.1	40	0.52	0.045	6
11LMS036	Soil		0.7	17.4	6.9	57	<0.1	8.3	6.6	493	2.42	4.2	2.0	1.2	45	0.2	0.3	0.1	62	0.47	0.047	8
11LMS037	Soil		0.3	7.2	5.3	84	<0.1	5.7	4.6	718	1.73	1.1	0.6	1.0	18	0.2	0.1	<0.1	42	0.20	0.059	6
11LMS038	Soil		0.8	10.8	6.8	91	<0.1	5.6	4.3	700	2.09	1.9	<0.5	1.2	66	0.2	0.2	0.1	50	0.32	0.049	9
11LMS039	Soil		0.6	17.3	6.9	57	<0.1	7.6	7.5	831	2.26	3.1	0.6	1.0	46	0.1	0.3	<0.1	56	0.62	0.031	14
11LMS040	Soil		0.6	43.9	6.3	71	0.2	19.3	11.6	1050	3.37	3.4	1.5	2.0	54	0.2	0.3	0.1	75	0.73	0.028	12
11LMS041	Soil		0.4	6.6	6.7	135	<0.1	4.5	3.2	1483	1.20	1.9	<0.5	0.5	44	0.5	<0.1	<0.1	25	0.48	0.155	8
11LMS042	Soil		0.9	7.6	5.5	77	<0.1	4.5	4.1	774	1.73	1.5	<0.5	0.8	22	<0.1	0.1	<0.1	44	0.23	0.024	5

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11LMS013	Soil			10	0.15	142	0.075	1	0.97	0.015	0.12	<0.1	<0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
11LMS014	Soil			12	0.25	129	0.084	<1	1.62	0.016	0.11	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11LMS015	Soil			9	0.14	129	0.055	<1	1.53	0.021	0.06	<0.1	0.02	1.5	<0.1	<0.05	5	<0.5	<0.2
11LMS016	Soil			7	0.13	128	0.057	<1	1.05	0.017	0.07	<0.1	<0.01	1.2	<0.1	<0.05	4	<0.5	<0.2
11LMS017	Soil			10	0.20	146	0.075	2	1.25	0.013	0.16	<0.1	0.01	2.6	<0.1	<0.05	5	<0.5	<0.2
11LMS018	Soil			7	0.14	123	0.067	<1	1.21	0.018	0.05	<0.1	<0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
11LMS019	Soil			4	0.08	160	0.046	<1	0.61	0.012	0.08	<0.1	0.02	0.8	<0.1	<0.05	3	<0.5	<0.2
11LMS020	Soil			8	0.21	190	0.057	1	2.08	0.019	0.13	<0.1	0.03	2.8	<0.1	<0.05	8	<0.5	<0.2
11LMS021	Soil			7	0.13	105	0.064	<1	1.28	0.020	0.05	<0.1	0.01	1.4	<0.1	<0.05	5	<0.5	<0.2
11LMS022	Soil			11	0.20	91	0.091	<1	1.25	0.017	0.09	<0.1	0.01	2.8	<0.1	<0.05	5	<0.5	<0.2
11LMS023	Soil			12	0.27	171	0.066	2	1.71	0.017	0.18	<0.1	0.03	3.7	<0.1	<0.05	5	<0.5	<0.2
11LMS024	Soil			6	0.25	155	0.280	<1	2.13	0.017	0.14	<0.1	0.03	6.5	<0.1	<0.05	7	<0.5	<0.2
11LMS025	Soil			10	0.20	154	0.141	1	1.39	0.019	0.13	<0.1	0.02	3.2	<0.1	<0.05	4	<0.5	<0.2
11LMS026	Soil			5	0.64	203	0.024	5	0.66	0.043	0.03	<0.1	0.02	1.2	<0.1	0.17	2	1.7	<0.2
11LMS027	Soil			14	0.27	200	0.088	2	1.38	0.015	0.09	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11LMS028	Soil			13	0.25	119	0.088	<1	1.25	0.017	0.09	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11LMS029	Soil			12	0.21	75	0.090	<1	1.04	0.017	0.06	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11LMS030	Soil			16	0.31	150	0.092	2	1.55	0.019	0.09	<0.1	0.02	3.0	<0.1	<0.05	5	<0.5	<0.2
11LMS031	Soil			13	0.22	176	0.081	2	1.19	0.016	0.10	<0.1	0.02	2.0	<0.1	<0.05	4	<0.5	<0.2
11LMS032	Soil			12	0.18	204	0.059	3	1.23	0.013	0.16	<0.1	0.03	3.6	<0.1	0.06	4	<0.5	<0.2
11LMS033	Soil			12	0.20	213	0.047	3	1.32	0.013	0.14	<0.1	0.04	2.4	<0.1	0.06	4	<0.5	<0.2
11LMS034	Soil			14	0.23	172	0.081	3	1.26	0.015	0.15	<0.1	0.04	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS035	Soil			6	0.23	247	0.141	1	2.15	0.019	0.17	<0.1	0.03	3.3	<0.1	<0.05	6	<0.5	<0.2
11LMS036	Soil			15	0.28	133	0.080	3	1.25	0.015	0.15	<0.1	0.04	4.2	<0.1	<0.05	4	<0.5	<0.2
11LMS037	Soil			9	0.15	51	0.061	2	1.78	0.030	0.09	<0.1	0.02	1.5	<0.1	<0.05	5	<0.5	<0.2
11LMS038	Soil			11	0.21	146	0.088	3	1.24	0.013	0.23	<0.1	0.03	3.0	<0.1	<0.05	5	<0.5	<0.2
11LMS039	Soil			14	0.29	135	0.073	3	1.39	0.014	0.15	<0.1	0.05	4.1	<0.1	0.07	4	<0.5	<0.2
11LMS040	Soil			29	0.67	199	0.131	3	2.91	0.039	0.12	<0.1	0.03	8.3	<0.1	0.06	8	<0.5	<0.2
11LMS041	Soil			6	0.14	352	0.046	2	1.41	0.016	0.07	<0.1	0.03	1.4	<0.1	<0.05	6	<0.5	<0.2
11LMS042	Soil			9	0.15	141	0.083	1	1.11	0.013	0.11	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
				ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm		
				0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	
11LMS043	Soil			0.9	7.5	5.1	47	<0.1	4.1	3.8	474	1.40	1.3	<0.5	0.7	27	<0.1	0.1	<0.1	36	0.33	0.018	6
11LMS044	Soil			0.8	11.1	5.4	38	<0.1	7.1	5.7	227	2.25	1.8	<0.5	1.0	35	<0.1	0.2	<0.1	61	0.32	0.008	7
11LMS045	Soil			0.5	6.7	5.9	94	<0.1	5.3	3.8	518	1.77	1.4	<0.5	0.8	20	<0.1	0.2	<0.1	43	0.18	0.034	5
11CHS300	Soil			0.7	9.2	7.8	54	<0.1	7.1	3.9	420	1.34	1.7	<0.5	1.3	12	<0.1	<0.1	0.1	30	0.13	0.130	5
11CHS301	Soil			0.6	10.1	7.4	30	<0.1	5.3	3.9	200	1.89	2.5	<0.5	1.1	58	<0.1	0.2	0.1	48	0.31	0.030	9
11CHS302	Soil			0.5	16.1	5.1	51	<0.1	9.6	7.2	343	2.31	1.9	<0.5	0.9	30	<0.1	0.2	<0.1	62	0.33	0.031	8
11CHS303	Soil			0.3	6.3	6.9	52	<0.1	4.5	4.0	525	1.46	0.9	<0.5	0.7	16	0.1	0.1	<0.1	34	0.26	0.060	5
11CHS304	Soil			0.5	14.8	6.6	60	<0.1	9.4	7.1	422	2.56	2.1	1.1	1.4	28	0.1	0.3	<0.1	64	0.37	0.041	8
11CHS305	Soil			0.6	11.5	5.7	56	<0.1	7.8	6.6	389	2.38	2.2	2.4	0.9	32	0.1	0.3	<0.1	64	0.26	0.035	5
11CHS306	Soil			0.8	9.1	5.9	120	0.1	9.7	5.2	798	1.80	1.7	58.3	0.9	20	0.3	0.2	<0.1	45	0.19	0.078	5
11CHS307	Soil			0.5	14.8	5.7	54	<0.1	8.5	7.1	390	2.65	3.3	<0.5	1.2	39	0.1	0.5	<0.1	74	0.35	0.046	6
11CHS308	Soil			0.4	7.8	5.7	54	<0.1	6.3	3.9	411	1.68	2.1	5.2	1.0	23	0.1	0.6	<0.1	42	0.20	0.068	5
11CHS309	Soil			0.7	12.1	5.9	47	<0.1	7.7	6.0	552	2.09	2.5	1.2	0.9	31	0.1	0.3	<0.1	55	0.24	0.017	9
11CHS310	Soil			0.6	10.7	6.5	53	0.1	6.8	5.7	930	1.85	2.5	1.8	0.7	37	0.2	0.4	<0.1	48	0.32	0.026	8
11CHS311	Soil			0.5	14.4	7.6	52	<0.1	9.5	7.2	608	2.45	2.3	1.3	1.1	30	0.2	0.3	0.2	63	0.42	0.035	10
11CHS312	Soil			0.3	21.4	7.0	48	<0.1	12.5	5.7	204	2.01	1.6	1.9	1.8	36	<0.1	0.2	0.1	57	0.42	0.035	12
11CHS313	Soil			0.5	21.7	8.9	83	0.1	12.5	10.7	1371	2.89	2.7	<0.5	0.9	34	0.4	0.3	0.1	63	0.49	0.088	18
11CHS314	Soil			0.5	8.7	5.2	75	<0.1	5.6	3.9	576	1.46	1.7	0.6	0.8	31	0.1	0.3	<0.1	39	0.26	0.035	7
11CHS315	Soil			0.8	9.4	7.0	56	<0.1	5.8	5.0	759	1.71	2.1	0.6	0.7	37	0.3	0.4	<0.1	43	0.35	0.032	8
11CHS316	Soil			0.7	11.9	5.6	67	<0.1	6.4	5.8	655	2.12	2.3	0.9	0.8	37	0.2	0.4	<0.1	59	0.31	0.031	7
11CHS317	Soil			0.8	8.1	6.6	49	<0.1	4.8	3.8	913	1.31	1.5	3.2	0.8	40	0.2	0.3	<0.1	37	0.40	0.020	7
11CHS318	Soil			0.7	19.9	8.0	76	<0.1	8.7	7.8	885	2.23	5.6	<0.5	0.8	55	0.3	0.4	<0.1	54	0.54	0.055	14
11CHS319	Soil			0.8	13.6	6.9	68	<0.1	6.5	6.6	972	2.07	2.3	<0.5	0.9	43	0.2	0.4	<0.1	55	0.39	0.028	9
11CHS320	Soil			0.7	12.5	7.2	54	<0.1	5.2	5.2	701	1.91	3.6	1.1	1.2	39	<0.1	0.6	<0.1	47	0.37	0.026	8
11CHS321	Soil			0.7	25.0	7.4	72	0.2	12.7	8.8	1163	2.30	2.6	<0.5	0.8	49	0.2	0.3	0.2	56	0.81	0.046	24
11CHS322	Soil			0.9	24.2	8.0	58	0.2	10.6	11.8	1428	2.91	3.9	<0.5	0.7	28	0.2	0.4	0.2	63	0.33	0.038	10
11CHS323	Soil			0.8	18.2	8.7	76	<0.1	7.6	7.4	1085	2.09	7.8	4.1	0.7	52	0.3	0.5	0.1	48	0.59	0.058	13
11CHS324	Soil			1.0	18.6	8.2	74	<0.1	8.4	7.4	985	2.14	4.9	0.8	1.0	41	0.3	0.6	0.1	54	0.43	0.040	13
11CHS325	Soil			0.8	23.1	8.6	77	<0.1	9.2	9.5	1082	2.60	5.9	0.7	1.1	54	0.3	0.5	0.1	66	0.49	0.060	17
11CHS326	Soil			0.8	22.4	6.7	79	<0.1	10.1	9.3	922	2.55	4.5	<0.5	0.7	56	0.4	0.4	0.1	69	0.53	0.056	12

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11LMS043	Soil			8	0.12	126	0.067	1	1.31	0.014	0.12	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11LMS044	Soil			13	0.19	92	0.088	2	1.17	0.016	0.08	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11LMS045	Soil			11	0.14	121	0.075	1	1.46	0.014	0.07	<0.1	0.02	1.4	<0.1	<0.05	5	<0.5	<0.2
11CHS300	Soil			8	0.13	168	0.054	1	2.42	0.014	0.07	<0.1	0.03	1.5	<0.1	<0.05	8	<0.5	<0.2
11CHS301	Soil			11	0.17	114	0.066	1	1.26	0.038	0.08	<0.1	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2
11CHS302	Soil			19	0.33	133	0.102	1	1.67	0.014	0.10	<0.1	0.01	3.2	<0.1	<0.05	5	<0.5	<0.2
11CHS303	Soil			7	0.22	191	0.076	<1	1.37	0.014	0.09	0.1	0.02	1.3	<0.1	<0.05	5	<0.5	<0.2
11CHS304	Soil			18	0.34	133	0.105	2	1.73	0.013	0.10	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11CHS305	Soil			16	0.31	124	0.089	1	1.27	0.013	0.08	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11CHS306	Soil			12	0.20	129	0.081	1	1.56	0.019	0.07	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2
11CHS307	Soil			18	0.35	154	0.118	1	1.31	0.037	0.11	<0.1	0.02	4.0	<0.1	<0.05	4	<0.5	<0.2
11CHS308	Soil			10	0.17	139	0.066	2	1.12	0.016	0.07	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11CHS309	Soil			15	0.27	123	0.084	2	1.23	0.016	0.08	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11CHS310	Soil			12	0.22	156	0.074	2	1.09	0.014	0.11	<0.1	0.03	2.1	<0.1	<0.05	4	<0.5	<0.2
11CHS311	Soil			16	0.34	135	0.121	1	1.50	0.014	0.11	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11CHS312	Soil			25	0.47	148	0.110	1	2.07	0.033	0.05	<0.1	0.01	5.2	<0.1	<0.05	6	<0.5	<0.2
11CHS313	Soil			21	0.48	180	0.074	1	2.38	0.013	0.17	<0.1	0.03	4.0	<0.1	<0.05	7	<0.5	<0.2
11CHS314	Soil			10	0.16	166	0.082	2	1.06	0.017	0.10	<0.1	0.02	1.9	<0.1	<0.05	3	<0.5	<0.2
11CHS315	Soil			11	0.20	176	0.083	2	1.01	0.021	0.10	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
11CHS316	Soil			14	0.24	176	0.097	1	1.11	0.016	0.10	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11CHS317	Soil			9	0.15	195	0.073	2	0.85	0.014	0.13	<0.1	0.04	1.7	<0.1	<0.05	3	<0.5	<0.2
11CHS318	Soil			17	0.30	177	0.074	3	1.59	0.013	0.18	<0.1	0.02	3.4	<0.1	<0.05	5	<0.5	<0.2
11CHS319	Soil			14	0.25	198	0.091	2	1.18	0.015	0.14	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11CHS320	Soil			10	0.20	168	0.079	2	0.99	0.014	0.13	<0.1	0.04	2.7	<0.1	<0.05	3	<0.5	<0.2
11CHS321	Soil			18	0.36	161	0.046	<1	2.60	0.013	0.10	<0.1	0.05	5.1	<0.1	0.06	7	<0.5	<0.2
11CHS322	Soil			14	0.50	145	0.054	1	2.14	0.010	0.08	<0.1	0.03	4.3	<0.1	<0.05	8	<0.5	<0.2
11CHS323	Soil			12	0.29	146	0.033	2	1.29	0.009	0.20	0.1	0.03	3.1	<0.1	0.08	4	<0.5	<0.2
11CHS324	Soil			14	0.28	148	0.069	2	1.32	0.011	0.20	0.1	0.02	3.3	<0.1	<0.05	4	<0.5	<0.2
11CHS325	Soil			18	0.38	196	0.075	2	1.61	0.012	0.23	<0.1	0.02	4.7	<0.1	<0.05	5	<0.5	<0.2
11CHS326	Soil			17	0.37	159	0.076	3	1.42	0.016	0.22	<0.1	0.02	3.8	<0.1	0.06	5	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit	MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
11CHS327	Soil	0.8	13.9	7.1	55	<0.1	8.0	6.2	599	1.88	2.6	0.9	1.4	45	<0.1	0.4	0.1	50	0.46	0.017	12
11CHS328	Soil	0.7	16.5	8.0	74	<0.1	7.8	6.7	1196	1.89	4.0	1.3	0.6	47	0.3	0.5	0.1	49	0.44	0.056	15
11CHS329	Soil	0.9	22.0	8.4	76	0.1	10.2	7.2	1204	2.09	4.3	0.7	0.7	58	0.2	0.4	0.1	47	0.58	0.067	22
11CHS330	Soil	0.4	8.7	4.8	31	<0.1	4.2	3.7	234	1.67	2.5	<0.5	0.9	49	<0.1	0.2	<0.1	47	0.38	0.019	10
11CHS331	Soil	0.7	8.9	5.7	107	<0.1	6.2	5.8	1134	1.82	2.5	<0.5	0.9	23	0.1	0.2	<0.1	51	0.20	0.131	3
11CHS332	Soil	0.4	8.6	5.6	49	<0.1	5.1	4.3	401	2.02	2.7	<0.5	0.8	34	<0.1	0.2	<0.1	58	0.23	0.038	4
11CHS333	Soil	0.5	6.8	5.3	43	<0.1	4.0	3.6	378	1.86	1.8	<0.5	0.6	35	<0.1	0.2	<0.1	58	0.24	0.022	4
11CHS334	Soil	1.1	6.4	6.1	101	<0.1	4.8	4.3	956	1.60	2.3	<0.5	0.6	32	<0.1	0.2	<0.1	45	0.22	0.064	4
11CHS335	Soil	0.8	6.7	5.7	35	<0.1	3.4	3.3	285	1.65	2.4	<0.5	0.6	37	<0.1	0.2	<0.1	50	0.17	0.029	4
11CHS336	Soil	0.4	7.4	5.7	37	<0.1	4.8	3.2	195	1.49	1.7	<0.5	0.8	28	<0.1	0.1	<0.1	42	0.33	0.011	6
11CHS337	Soil	0.6	6.7	6.7	33	<0.1	3.6	3.2	195	1.76	2.4	<0.5	0.9	36	<0.1	0.2	<0.1	55	0.22	0.019	6
11CHS338	Soil	0.5	5.6	5.3	51	<0.1	4.2	3.4	172	1.38	1.6	<0.5	0.8	31	<0.1	<0.1	<0.1	37	0.16	0.093	4
11CHS339	Soil	0.4	7.0	6.6	55	<0.1	5.3	3.3	353	1.47	2.1	<0.5	0.8	28	<0.1	0.2	<0.1	42	0.15	0.060	4
11CHS340	Soil	0.5	13.3	5.9	50	<0.1	10.2	6.1	303	2.18	2.7	<0.5	1.1	36	<0.1	0.2	<0.1	68	0.28	0.022	6
11CHS341	Soil	0.5	6.3	9.3	91	<0.1	5.0	3.5	1360	1.41	2.1	<0.5	0.7	15	0.1	0.2	0.2	34	0.19	0.063	6
11CHS342	Soil	0.5	6.2	5.5	76	<0.1	5.2	3.6	464	1.57	1.7	<0.5	0.9	21	<0.1	0.2	0.1	41	0.19	0.023	5
11CHS343	Soil	0.3	13.3	6.6	201	<0.1	18.4	9.6	661	2.62	12.6	<0.5	0.7	34	0.3	0.4	<0.1	70	0.66	0.133	7
11CHS344	Soil	0.5	8.7	5.3	131	<0.1	4.6	5.5	980	1.64	2.5	<0.5	0.7	27	0.1	0.2	<0.1	40	0.35	0.086	3
11CHS345	Soil	0.4	6.6	4.4	71	<0.1	4.9	3.5	551	1.60	1.4	<0.5	0.7	30	<0.1	0.1	<0.1	46	0.23	0.029	3
11CHS346	Soil	0.9	20.8	6.0	70	<0.1	10.4	12.2	897	2.69	14.3	<0.5	1.0	86	0.3	0.8	<0.1	69	0.72	0.045	11
11CHS347	Soil	0.5	9.5	5.3	51	<0.1	5.1	5.0	435	1.86	1.9	<0.5	0.9	33	<0.1	0.2	<0.1	51	0.36	0.023	5
11CHS348	Soil	0.9	9.0	6.6	46	<0.1	6.0	5.0	367	1.71	2.1	<0.5	0.9	32	<0.1	0.2	<0.1	47	0.38	0.017	8
11CHS349	Soil	0.6	7.1	10.0	70	<0.1	5.6	4.3	1055	1.62	2.4	<0.5	1.7	30	0.1	0.2	0.1	37	0.29	0.033	12
11CHS350	Soil	0.4	8.3	5.7	112	<0.1	7.3	4.4	749	1.71	1.8	<0.5	0.8	29	0.1	0.2	<0.1	49	0.16	0.067	4
11CHS353	Soil	0.3	7.4	6.3	52	<0.1	6.1	3.6	388	1.49	1.9	<0.5	0.9	39	<0.1	0.1	<0.1	40	0.29	0.060	5
11CHS354	Soil	0.3	7.7	6.4	57	<0.1	6.2	3.7	399	1.55	2.0	<0.5	0.9	38	<0.1	0.1	0.1	40	0.29	0.063	5
11CHS355	Soil	0.4	5.9	5.8	47	<0.1	4.4	3.7	455	1.55	1.8	<0.5	0.8	28	<0.1	0.2	<0.1	45	0.20	0.040	4
11CHS356	Soil	1.3	5.2	5.7	59	<0.1	3.4	3.6	657	1.48	1.9	<0.5	0.6	31	<0.1	0.1	<0.1	46	0.29	0.029	4
11CHS357	Soil	0.4	8.7	5.4	51	<0.1	3.2	4.2	538	1.94	2.3	<0.5	0.9	27	0.1	0.3	0.1	43	0.28	0.028	4
11CHS358	Soil	0.8	7.2	5.5	62	<0.1	4.5	4.8	921	1.82	2.5	0.5	0.7	30	0.1	0.3	0.1	49	0.20	0.045	3

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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11CHS327	Soil	14	0.23	118	0.095	2	1.36	0.018	0.10	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11CHS328	Soil	13	0.24	164	0.058	2	1.34	0.013	0.18	<0.1	0.03	2.7	<0.1	0.06	4	<0.5	<0.2
11CHS329	Soil	15	0.31	177	0.043	1	1.93	0.013	0.19	<0.1	0.04	3.9	<0.1	<0.05	6	<0.5	<0.2
11CHS330	Soil	10	0.13	113	0.076	1	1.01	0.026	0.06	<0.1	0.02	2.5	<0.1	0.05	3	<0.5	<0.2
11CHS331	Soil	10	0.14	190	0.073	2	1.48	0.015	0.08	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2
11CHS332	Soil	11	0.14	151	0.089	2	0.95	0.011	0.09	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
11CHS333	Soil	10	0.14	134	0.096	2	0.88	0.012	0.09	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11CHS334	Soil	9	0.13	150	0.079	1	1.15	0.012	0.08	<0.1	0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
11CHS335	Soil	9	0.12	128	0.095	1	0.75	0.011	0.07	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11CHS336	Soil	10	0.12	115	0.076	1	1.07	0.022	0.05	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11CHS337	Soil	10	0.12	149	0.105	<1	0.92	0.013	0.07	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11CHS338	Soil	8	0.10	164	0.065	<1	1.12	0.013	0.07	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
11CHS339	Soil	8	0.11	141	0.088	<1	1.21	0.017	0.10	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
11CHS340	Soil	20	0.33	162	0.117	1	1.39	0.017	0.06	<0.1	0.01	2.7	<0.1	<0.05	4	<0.5	<0.2
11CHS341	Soil	6	0.13	156	0.053	1	1.58	0.014	0.07	<0.1	0.03	1.2	<0.1	<0.05	5	<0.5	<0.2
11CHS342	Soil	8	0.12	168	0.071	2	1.14	0.015	0.09	<0.1	0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
11CHS343	Soil	29	0.54	82	0.230	2	2.63	0.014	0.12	0.2	0.13	5.8	<0.1	<0.05	10	<0.5	<0.2
11CHS344	Soil	6	0.13	226	0.076	1	1.70	0.015	0.08	<0.1	0.03	2.6	<0.1	<0.05	7	<0.5	<0.2
11CHS345	Soil	10	0.13	130	0.097	1	1.06	0.014	0.09	<0.1	0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11CHS346	Soil	21	0.30	194	0.056	3	1.65	0.014	0.27	<0.1	0.05	5.5	<0.1	<0.05	5	<0.5	<0.2
11CHS347	Soil	12	0.17	156	0.080	2	1.24	0.016	0.14	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11CHS348	Soil	12	0.16	209	0.069	2	1.32	0.018	0.11	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11CHS349	Soil	10	0.17	197	0.054	<1	1.73	0.022	0.17	<0.1	0.03	2.0	<0.1	<0.05	4	<0.5	<0.2
11CHS350	Soil	12	0.16	164	0.087	1	1.47	0.015	0.06	<0.1	0.02	1.7	<0.1	<0.05	5	<0.5	<0.2
11CHS353	Soil	9	0.15	232	0.076	<1	1.80	0.013	0.10	<0.1	<0.01	1.6	<0.1	<0.05	5	<0.5	<0.2
11CHS354	Soil	10	0.16	226	0.087	<1	1.84	0.014	0.10	<0.1	0.02	1.7	<0.1	<0.05	5	<0.5	<0.2
11CHS355	Soil	8	0.10	144	0.078	1	1.03	0.011	0.08	<0.1	0.01	1.5	<0.1	<0.05	4	<0.5	<0.2
11CHS356	Soil	9	0.11	161	0.096	1	0.78	0.012	0.10	<0.1	0.02	1.5	<0.1	<0.05	3	<0.5	<0.2
11CHS357	Soil	6	0.12	155	0.146	2	1.05	0.012	0.10	0.1	0.01	2.1	<0.1	0.05	4	<0.5	<0.2
11CHS358	Soil	8	0.13	184	0.074	2	1.00	0.014	0.12	<0.1	0.03	1.7	<0.1	<0.05	3	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit	MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
11CHS359	Soil	0.8	5.4	5.2	75	<0.1	4.2	3.1	806	1.14	1.9	<0.5	0.7	54	<0.1	0.1	<0.1	29	0.22	0.045	3
11CHS360	Soil	0.6	5.5	4.1	29	<0.1	2.6	2.7	204	1.27	1.7	<0.5	0.5	31	<0.1	0.2	0.1	38	0.25	0.018	3
11CHS361	Soil	0.9	6.6	5.9	69	<0.1	4.1	4.2	862	1.61	1.8	1.1	0.8	53	<0.1	0.1	0.1	41	0.29	0.047	4
11CHS362	Soil	1.4	12.2	7.3	51	<0.1	5.0	4.7	451	1.79	3.2	1.6	1.2	75	0.2	0.3	0.1	39	0.61	0.048	8
11CHS363	Soil	0.7	7.5	6.7	74	<0.1	4.6	3.8	1105	1.65	2.8	<0.5	0.7	52	0.2	0.2	<0.1	45	0.48	0.041	5
11CHS364	Soil	0.7	10.1	5.3	84	<0.1	4.9	3.1	866	1.30	2.6	<0.5	0.9	54	0.3	0.2	<0.1	36	0.57	0.048	4
11CHS365	Soil	0.6	6.9	5.8	92	<0.1	4.7	3.9	1258	1.59	2.1	<0.5	0.6	33	0.3	0.2	<0.1	41	0.47	0.036	4
11CHS366	Soil	0.6	5.4	5.6	79	<0.1	3.0	2.4	1074	1.12	1.3	<0.5	0.5	26	0.2	0.1	<0.1	29	0.36	0.025	4
11CHS367	Soil	1.4	11.0	6.8	41	<0.1	5.8	6.1	1036	1.81	2.5	<0.5	0.7	68	0.2	0.2	<0.1	46	0.53	0.028	6
11CHS368	Soil	0.4	7.9	5.4	42	<0.1	4.7	4.0	427	1.63	1.8	<0.5	0.8	34	0.1	0.2	<0.1	41	0.35	0.038	5
11CHS369	Soil	0.6	8.1	5.6	47	<0.1	4.7	3.9	166	1.85	2.7	<0.5	0.9	22	0.1	0.2	<0.1	48	0.14	0.113	4
11CHS370	Soil	0.5	10.3	6.8	52	<0.1	6.2	5.3	469	2.19	3.6	1.8	0.9	36	<0.1	0.3	<0.1	66	0.26	0.034	5
11CHS371	Soil	0.4	6.2	5.9	79	<0.1	5.3	4.6	1963	1.88	2.2	<0.5	0.8	13	<0.1	0.2	0.1	37	0.13	0.107	4
11CHS372	Soil	0.5	8.5	6.8	64	<0.1	5.3	5.2	629	1.93	2.9	<0.5	0.9	28	<0.1	0.2	<0.1	52	0.25	0.061	4
11CHS373	Soil	0.6	6.6	6.1	40	<0.1	4.1	4.0	605	1.81	2.4	<0.5	0.7	28	<0.1	0.2	<0.1	50	0.26	0.031	3
11CHS374	Soil	0.4	5.8	5.6	76	<0.1	5.5	3.9	635	1.36	2.5	1.0	0.9	16	<0.1	<0.1	<0.1	37	0.17	0.125	2
11CHS375	Soil	0.6	7.6	6.3	52	<0.1	5.1	4.0	568	1.82	2.0	<0.5	0.8	21	<0.1	0.2	<0.1	50	0.17	0.045	3
11CHS376	Soil	0.5	8.7	5.6	67	<0.1	4.7	3.8	651	1.64	2.7	0.7	0.9	27	<0.1	0.2	<0.1	42	0.21	0.064	4
11CHS377	Soil	0.6	6.7	5.3	34	<0.1	3.2	3.2	707	1.53	1.7	<0.5	0.6	32	<0.1	0.2	<0.1	44	0.25	0.019	4
11CHS378	Soil	0.5	6.4	5.1	43	<0.1	3.9	3.7	378	1.62	2.0	<0.5	0.7	26	<0.1	0.1	<0.1	42	0.23	0.036	3
11CHS379	Soil	0.5	8.5	4.8	54	<0.1	5.4	4.0	507	1.77	2.1	<0.5	0.7	27	<0.1	0.1	<0.1	47	0.24	0.038	5
11CHS380	Soil	0.4	18.6	6.5	39	<0.1	5.4	4.8	520	1.77	2.8	<0.5	0.6	61	0.2	0.2	<0.1	47	0.51	0.027	22
11CHS381	Soil	0.5	8.7	5.8	43	<0.1	5.1	4.1	472	2.00	2.3	0.9	0.9	27	<0.1	0.2	<0.1	56	0.23	0.036	5
11CHS382	Soil	0.5	10.9	5.3	65	<0.1	5.7	5.3	478	2.34	2.6	<0.5	0.9	28	<0.1	0.2	<0.1	66	0.27	0.044	4
11CHS383	Soil	0.4	10.7	6.1	45	<0.1	6.6	5.7	517	2.46	2.9	0.9	1.1	32	<0.1	0.2	<0.1	70	0.22	0.026	4
11CHS384	Soil	2.0	8.3	7.2	45	<0.1	5.0	4.3	600	2.35	1.6	5.7	1.0	25	<0.1	0.2	<0.1	69	0.22	0.020	4
11CHS385	Soil	0.5	10.5	8.0	95	<0.1	5.5	4.8	862	2.22	1.7	1.9	1.2	33	<0.1	0.1	0.1	63	0.32	0.029	6
11CHS386	Soil	0.6	6.0	5.5	73	<0.1	3.7	3.3	427	1.53	1.5	<0.5	0.7	19	<0.1	<0.1	<0.1	43	0.16	0.044	3
11CHS387	Soil	0.6	5.5	5.5	52	<0.1	3.0	3.4	730	1.71	2.3	<0.5	0.6	27	<0.1	0.2	<0.1	38	0.22	0.024	3
11CHS388	Soil	0.4	8.9	5.2	51	<0.1	4.7	3.4	375	1.45	1.4	<0.5	0.5	26	<0.1	0.1	<0.1	41	0.23	0.027	6

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Project: Shovelnose
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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11CHS359	Soil			6	0.10	189	0.058	<1	1.12	0.015	0.12	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5	<0.2
11CHS360	Soil			7	0.10	130	0.075	2	0.61	0.011	0.11	<0.1	0.02	1.5	<0.1	<0.05	2	<0.5	<0.2
11CHS361	Soil			8	0.13	255	0.072	1	1.13	0.011	0.16	<0.1	0.03	1.6	<0.1	<0.05	3	<0.5	<0.2
11CHS362	Soil			9	0.21	193	0.042	4	0.98	0.010	0.18	<0.1	0.03	3.0	<0.1	<0.05	3	<0.5	<0.2
11CHS363	Soil			9	0.14	267	0.077	3	0.86	0.010	0.15	<0.1	0.05	1.7	<0.1	<0.05	3	<0.5	<0.2
11CHS364	Soil			9	0.15	287	0.065	5	0.91	0.013	0.18	<0.1	0.04	1.6	<0.1	<0.05	3	<0.5	<0.2
11CHS365	Soil			10	0.15	265	0.058	3	0.92	0.011	0.17	<0.1	0.05	2.1	<0.1	<0.05	3	0.6	<0.2
11CHS366	Soil			7	0.10	300	0.042	3	0.76	0.014	0.14	<0.1	0.04	1.2	<0.1	<0.05	2	<0.5	<0.2
11CHS367	Soil			12	0.22	309	0.063	3	0.89	0.010	0.17	<0.1	0.05	2.7	<0.1	<0.05	3	<0.5	<0.2
11CHS368	Soil			9	0.14	140	0.063	1	0.99	0.013	0.12	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
11CHS369	Soil			9	0.13	120	0.059	2	1.06	0.015	0.05	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11CHS370	Soil			12	0.19	118	0.095	1	1.02	0.015	0.06	0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11CHS371	Soil			9	0.17	153	0.061	1	1.55	0.013	0.04	<0.1	0.03	2.0	<0.1	<0.05	6	<0.5	<0.2
11CHS372	Soil			11	0.16	172	0.074	2	1.25	0.013	0.08	<0.1	0.03	2.0	<0.1	<0.05	4	<0.5	<0.2
11CHS373	Soil			9	0.13	149	0.070	2	0.81	0.011	0.07	<0.1	0.02	1.5	<0.1	<0.05	3	0.6	<0.2
11CHS374	Soil			8	0.12	154	0.065	1	1.46	0.013	0.07	<0.1	0.02	1.5	<0.1	<0.05	5	<0.5	<0.2
11CHS375	Soil			10	0.12	149	0.078	<1	1.04	0.014	0.10	<0.1	0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11CHS376	Soil			9	0.13	179	0.065	1	1.08	0.012	0.09	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11CHS377	Soil			8	0.11	204	0.074	1	0.70	0.011	0.10	<0.1	0.02	1.6	<0.1	<0.05	2	<0.5	<0.2
11CHS378	Soil			8	0.12	147	0.074	<1	1.02	0.019	0.07	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2
11CHS379	Soil			13	0.14	135	0.076	2	0.86	0.016	0.08	0.1	<0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11CHS380	Soil			10	0.19	134	0.062	2	1.07	0.023	0.07	<0.1	0.03	3.2	<0.1	<0.05	3	0.8	<0.2
11CHS381	Soil			11	0.15	104	0.089	<1	0.96	0.012	0.08	<0.1	0.01	2.2	<0.1	<0.05	3	<0.5	<0.2
11CHS382	Soil			13	0.19	167	0.069	2	1.03	0.013	0.10	<0.1	0.11	2.3	<0.1	<0.05	4	<0.5	<0.2
11CHS383	Soil			13	0.20	160	0.066	1	1.01	0.012	0.08	<0.1	<0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11CHS384	Soil			12	0.15	146	0.090	2	0.89	0.012	0.10	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11CHS385	Soil			11	0.21	222	0.083	2	0.97	0.011	0.14	<0.1	0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11CHS386	Soil			8	0.11	125	0.075	2	0.87	0.013	0.08	<0.1	<0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11CHS387	Soil			6	0.10	164	0.066	<1	0.85	0.018	0.10	<0.1	<0.01	1.5	0.2	<0.05	3	<0.5	<0.2
11CHS388	Soil			11	0.13	121	0.063	<1	0.79	0.016	0.06	<0.1	0.01	1.7	<0.1	<0.05	3	0.6	<0.2

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11CHS389	Soil		0.4	6.0	4.6	95	<0.1	7.3	3.9	1185	1.66	1.1	<0.5	0.6	23	0.1	0.1	<0.1	45	0.22	0.034	3
11CHS390	Soil		0.5	7.4	5.6	38	<0.1	4.8	4.0	269	2.04	1.9	<0.5	0.9	27	<0.1	0.2	<0.1	56	0.22	0.024	4
11CHS391	Soil		0.7	15.2	6.6	88	<0.1	7.7	6.7	971	2.04	2.6	<0.5	0.4	106	0.4	0.2	<0.1	52	0.58	0.053	6
11CHS392	Soil		0.8	9.5	5.4	65	<0.1	6.9	5.9	576	2.36	4.1	<0.5	0.9	51	0.1	0.2	0.1	54	0.42	0.038	7
11DRS001	Soil		0.4	8.9	5.0	52	<0.1	4.8	5.3	618	1.89	1.3	<0.5	0.7	25	<0.1	0.2	0.1	49	0.27	0.059	3
11DRS002	Soil		0.4	13.3	5.0	41	<0.1	5.0	4.6	292	2.03	1.3	1.8	0.7	36	<0.1	0.1	0.1	54	0.26	0.035	3
11DRS003	Soil		0.4	9.7	5.6	66	<0.1	5.9	6.2	524	2.67	1.4	<0.5	0.8	35	0.1	0.2	0.1	72	0.33	0.043	3
11DRS004	Soil		0.3	14.7	4.7	71	<0.1	4.0	10.5	548	3.25	0.6	<0.5	0.8	38	0.1	0.1	<0.1	101	0.38	0.024	3
11DRS005	Soil		0.5	12.2	6.2	63	<0.1	6.5	6.0	732	2.61	2.2	1.5	0.7	41	0.1	0.2	<0.1	75	0.34	0.042	4
11DRS006	Soil		0.6	15.3	6.5	86	<0.1	8.4	8.3	1180	2.90	3.5	1.2	1.1	40	0.3	0.3	<0.1	82	0.33	0.064	5
11DRS007	Soil		0.4	9.5	5.3	55	<0.1	3.9	6.3	336	2.24	1.1	9.0	0.7	25	<0.1	0.1	<0.1	58	0.23	0.052	3
11DRS008	Soil		0.4	8.9	4.5	45	<0.1	4.2	5.4	455	2.15	0.9	<0.5	0.8	39	0.1	<0.1	<0.1	53	0.39	0.024	4
11DRS009	Soil		0.5	8.6	6.0	75	<0.1	4.8	4.7	666	2.44	1.6	<0.5	0.8	30	<0.1	0.2	<0.1	68	0.28	0.033	3
11DRS010	Soil		0.4	11.8	5.5	71	<0.1	5.8	8.2	392	2.79	1.7	<0.5	1.0	39	0.1	0.1	<0.1	82	0.52	0.030	5
11DRS011	Soil		0.5	12.2	5.5	99	<0.1	8.8	8.5	1269	2.61	1.8	<0.5	0.9	45	0.2	0.1	0.1	62	0.37	0.065	4
11DRS012	Soil		0.3	12.4	4.5	45	<0.1	3.3	6.4	517	2.32	6.2	<0.5	0.9	35	<0.1	0.1	<0.1	46	0.60	0.051	12
11DRS013	Soil		0.6	11.4	4.9	47	<0.1	5.1	6.6	444	2.39	2.2	124.0	0.9	47	<0.1	0.2	<0.1	64	0.26	0.018	6
11DRS014	Soil		0.4	10.8	5.5	90	<0.1	5.4	5.1	507	1.91	2.1	<0.5	0.7	35	0.4	0.2	<0.1	47	0.30	0.027	5
11DRS015	Soil		0.6	25.4	22.5	518	0.1	5.1	7.2	533	3.03	7.0	1.8	1.0	30	1.7	0.7	0.1	64	0.32	0.040	7
11DRS016	Soil		0.9	9.2	4.7	73	<0.1	3.5	5.2	827	1.91	1.4	<0.5	0.7	19	<0.1	0.2	<0.1	36	0.23	0.028	4
11DRS017	Soil		0.6	15.8	6.2	57	<0.1	4.8	7.8	907	2.22	2.3	2.9	0.7	55	0.1	0.3	<0.1	58	0.55	0.040	7
11DRS018	Soil		0.4	13.3	4.9	57	<0.1	7.2	6.0	361	2.33	1.8	18.2	0.9	35	<0.1	0.2	<0.1	67	0.26	0.044	4
11DRS019	Soil		0.7	12.3	4.8	70	<0.1	6.4	6.2	505	2.38	1.6	1.6	1.0	43	0.2	0.2	<0.1	68	0.34	0.033	5
11DRS020	Soil		0.5	9.1	4.5	39	<0.1	5.3	5.1	198	2.04	1.4	1.7	0.7	28	<0.1	0.1	<0.1	59	0.27	0.027	4
11DRS021	Soil		0.3	9.5	4.7	70	<0.1	6.2	5.0	303	2.31	2.3	<0.5	1.0	27	<0.1	0.2	<0.1	63	0.22	0.061	3
11DRS022	Soil		0.6	14.2	4.6	61	<0.1	7.1	7.0	327	2.90	2.9	1.0	1.1	42	<0.1	0.3	<0.1	84	0.27	0.051	4
11DRS023	Soil		0.6	10.0	5.5	44	<0.1	5.0	6.1	560	1.96	1.4	2.0	0.5	46	0.1	0.2	<0.1	54	0.48	0.020	3
11DRS024	Soil		0.4	18.9	6.6	81	<0.1	6.1	8.2	959	2.49	3.7	1.8	0.7	51	0.2	0.3	<0.1	63	0.64	0.082	8
11DRS025	Soil		0.3	12.8	5.5	71	<0.1	4.0	6.6	803	2.18	3.8	2.2	0.8	25	<0.1	0.2	0.1	27	0.35	0.067	15
11DRS026	Soil		0.6	13.2	8.6	114	0.1	4.1	6.5	1765	1.88	2.0	<0.5	0.4	32	0.4	0.1	0.1	23	0.57	0.064	12

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Project: Shovelnose
 Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11CHS389	Soil	10	0.14	180	0.074	2	1.16	0.014	0.09	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
11CHS390	Soil	11	0.14	143	0.075	2	0.84	0.015	0.11	<0.1	0.02	1.9	<0.1	<0.05	3	0.7	<0.2
11CHS391	Soil	13	0.25	208	0.062	3	1.18	0.014	0.13	<0.1	0.03	2.4	<0.1	<0.05	4	<0.5	<0.2
11CHS392	Soil	13	0.21	114	0.047	4	1.27	0.023	0.11	<0.1	0.02	3.2	<0.1	<0.05	4	<0.5	<0.2
11DRS001	Soil	9	0.18	149	0.090	2	1.34	0.016	0.06	<0.1	<0.01	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS002	Soil	12	0.18	111	0.077	2	1.08	0.017	0.08	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11DRS003	Soil	13	0.21	144	0.119	3	1.36	0.022	0.11	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2
11DRS004	Soil	10	0.32	101	0.169	2	1.63	0.045	0.09	<0.1	0.01	4.3	<0.1	<0.05	5	<0.5	<0.2
11DRS005	Soil	14	0.22	154	0.087	4	1.10	0.020	0.07	<0.1	0.02	2.6	<0.1	<0.05	3	<0.5	<0.2
11DRS006	Soil	15	0.27	216	0.077	3	1.24	0.013	0.15	<0.1	0.01	3.9	<0.1	<0.05	4	<0.5	<0.2
11DRS007	Soil	10	0.20	101	0.075	3	1.21	0.016	0.09	<0.1	0.01	2.6	<0.1	<0.05	4	<0.5	<0.2
11DRS008	Soil	9	0.21	93	0.081	3	1.33	0.026	0.10	<0.1	0.01	3.3	<0.1	<0.05	4	<0.5	<0.2
11DRS009	Soil	12	0.17	153	0.112	3	1.03	0.016	0.10	<0.1	0.01	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS010	Soil	13	0.45	139	0.187	4	2.34	0.029	0.06	<0.1	0.02	5.8	<0.1	<0.05	6	<0.5	<0.2
11DRS011	Soil	14	0.33	183	0.094	2	2.59	0.018	0.08	<0.1	0.03	3.9	<0.1	<0.05	7	<0.5	<0.2
11DRS012	Soil	5	0.41	189	0.005	1	1.69	0.009	0.23	<0.1	0.06	4.4	<0.1	<0.05	6	<0.5	<0.2
11DRS013	Soil	11	0.23	127	0.077	1	1.10	0.015	0.14	<0.1	0.04	2.3	<0.1	<0.05	4	<0.5	<0.2
11DRS014	Soil	11	0.21	175	0.068	1	1.20	0.015	0.10	<0.1	<0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11DRS015	Soil	9	0.16	169	0.044	3	1.01	0.012	0.11	<0.1	<0.01	3.4	<0.1	<0.05	3	<0.5	<0.2
11DRS016	Soil	6	0.21	148	0.038	1	1.08	0.012	0.16	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2
11DRS017	Soil	10	0.23	206	0.061	5	0.95	0.014	0.18	<0.1	0.05	2.7	<0.1	<0.05	3	<0.5	<0.2
11DRS018	Soil	15	0.26	162	0.093	2	1.50	0.014	0.07	<0.1	0.03	2.3	<0.1	<0.05	5	<0.5	<0.2
11DRS019	Soil	14	0.23	191	0.112	3	1.18	0.020	0.12	<0.1	0.02	3.3	<0.1	<0.05	4	<0.5	<0.2
11DRS020	Soil	11	0.17	109	0.085	2	1.16	0.018	0.06	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
11DRS021	Soil	12	0.16	142	0.093	2	1.22	0.016	0.06	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS022	Soil	16	0.27	138	0.116	3	1.16	0.016	0.10	<0.1	0.07	3.3	<0.1	<0.05	4	<0.5	<0.2
11DRS023	Soil	10	0.21	136	0.078	3	1.09	0.018	0.11	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11DRS024	Soil	12	0.30	213	0.059	4	1.22	0.013	0.17	<0.1	0.03	3.0	<0.1	<0.05	4	<0.5	<0.2
11DRS025	Soil	6	0.36	137	0.012	2	1.32	0.009	0.25	<0.1	0.03	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS026	Soil	5	0.31	245	0.009	1	1.11	0.008	0.22	<0.1	0.05	1.4	<0.1	<0.05	4	<0.5	<0.2

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11DRS027	Soil	0.5	9.6	5.2	53	<0.1	4.3	6.5	732	2.33	2.3	0.8	0.9	29	<0.1	0.3	<0.1	64	0.22	0.028	4
11DRS028	Soil	0.5	9.9	5.1	63	<0.1	4.6	5.6	631	2.06	2.1	<0.5	0.8	30	<0.1	0.2	<0.1	55	0.31	0.038	5
11DRS029	Soil	0.4	10.6	6.2	114	<0.1	5.9	5.1	615	2.26	1.8	<0.5	0.9	30	0.1	0.2	<0.1	62	0.24	0.046	4
11DRS030	Soil	0.8	11.6	6.5	72	<0.1	6.1	5.9	542	2.12	2.2	<0.5	0.8	38	0.2	0.2	<0.1	59	0.40	0.035	6
11DRS031	Soil	0.6	9.7	5.8	52	<0.1	7.8	5.1	571	2.10	2.2	<0.5	1.2	50	<0.1	0.2	<0.1	52	0.35	0.030	9
11DRS032	Soil	0.6	11.1	6.4	59	<0.1	5.1	4.1	680	1.82	1.9	1.3	1.2	37	<0.1	0.2	<0.1	42	0.39	0.019	13
11DRS033	Soil	0.3	7.3	14.2	116	<0.1	4.5	3.8	397	1.63	1.6	2.4	0.8	34	0.2	0.1	<0.1	41	0.22	0.038	4
11DRS034	Soil	0.5	5.1	5.5	51	<0.1	4.1	3.3	316	1.26	1.0	<0.5	0.7	15	<0.1	<0.1	<0.1	33	0.14	0.052	3



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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 23, 2011

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CERTIFICATE OF ANALYSIS

VAN11004545.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11DRS027	Soil	11	0.20	128	0.082	1	0.97	0.015	0.11	<0.1	0.01	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS028	Soil	10	0.20	150	0.069	2	1.04	0.018	0.14	<0.1	0.03	2.2	<0.1	<0.05	3	<0.5	<0.2
11DRS029	Soil	12	0.20	110	0.075	2	1.28	0.014	0.09	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS030	Soil	12	0.25	132	0.078	2	1.16	0.014	0.09	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11DRS031	Soil	13	0.27	138	0.094	2	1.29	0.017	0.18	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11DRS032	Soil	9	0.18	118	0.073	2	1.34	0.016	0.11	<0.1	0.02	2.6	<0.1	<0.05	5	<0.5	<0.2
11DRS033	Soil	8	0.17	106	0.086	1	1.43	0.017	0.05	<0.1	<0.01	1.8	<0.1	<0.05	5	<0.5	<0.2
11DRS034	Soil	7	0.13	97	0.062	<1	1.23	0.013	0.04	<0.1	<0.01	1.2	<0.1	<0.05	4	<0.5	<0.2



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QUALITY CONTROL REPORT

VAN11004545.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Pulp Duplicates																					
11SHS214	Soil	0.4	8.2	4.4	48	<0.1	4.0	3.9	577	1.61	2.1	1.6	0.7	30	<0.1	0.2	<0.1	45	0.21	0.041	4
REP 11SHS214	QC	0.5	9.4	4.6	51	<0.1	4.3	4.4	613	1.79	2.3	<0.5	0.7	34	0.1	0.2	<0.1	49	0.26	0.043	5
11SHS222	Soil	0.8	20.2	6.0	52	<0.1	7.3	7.8	538	2.73	9.7	1.9	1.0	53	<0.1	0.4	<0.1	71	0.45	0.050	10
REP 11SHS222	QC	0.9	20.5	6.1	53	<0.1	7.0	8.2	563	2.83	9.9	3.6	1.0	54	<0.1	0.5	<0.1	71	0.47	0.053	10
11SHS244	Soil	0.2	4.4	4.6	64	<0.1	4.2	3.1	226	1.27	1.3	<0.5	0.6	15	0.1	0.1	0.1	31	0.18	0.054	5
REP 11SHS244	QC	0.3	5.0	4.7	67	<0.1	3.9	3.2	232	1.28	1.2	<0.5	0.7	15	<0.1	<0.1	0.1	31	0.18	0.058	5
11SHS268	Soil	0.5	12.3	5.4	72	<0.1	8.6	5.4	435	1.89	2.3	<0.5	0.9	102	0.3	0.1	<0.1	49	0.54	0.034	7
REP 11SHS268	QC	0.4	12.4	5.4	69	<0.1	7.9	5.3	429	1.94	2.0	0.8	0.9	101	0.2	0.1	<0.1	50	0.53	0.036	7
11LMS001	Soil	0.4	8.8	5.7	63	<0.1	4.5	4.4	447	1.81	1.3	<0.5	0.6	31	<0.1	0.2	<0.1	54	0.24	0.032	3
REP 11LMS001	QC	0.4	8.1	5.8	61	<0.1	4.0	4.2	423	1.79	1.3	<0.5	0.6	31	<0.1	0.2	<0.1	53	0.25	0.032	3
11LMS015	Soil	0.3	5.7	7.3	67	<0.1	5.3	3.5	696	1.32	1.4	<0.5	0.9	27	0.2	0.1	0.1	33	0.24	0.044	6
REP 11LMS015	QC	0.4	5.7	7.6	67	<0.1	5.1	3.5	695	1.33	1.4	<0.5	0.9	28	0.2	<0.1	0.1	31	0.24	0.047	6
11LMS040	Soil	0.6	43.9	6.3	71	0.2	19.3	11.6	1050	3.37	3.4	1.5	2.0	54	0.2	0.3	0.1	75	0.73	0.028	12
REP 11LMS040	QC	0.5	43.0	6.1	71	0.1	19.6	11.6	1046	3.34	3.7	<0.5	2.0	56	0.2	0.3	0.1	74	0.72	0.028	12
11CHS311	Soil	0.5	14.4	7.6	52	<0.1	9.5	7.2	608	2.45	2.3	1.3	1.1	30	0.2	0.3	0.2	63	0.42	0.035	10
REP 11CHS311	QC	0.4	14.9	7.8	53	<0.1	9.3	7.1	619	2.40	2.4	<0.5	1.2	31	0.1	0.3	0.1	62	0.43	0.036	10
11CHS326	Soil	0.8	22.4	6.7	79	<0.1	10.1	9.3	922	2.55	4.5	<0.5	0.7	56	0.4	0.4	0.1	69	0.53	0.056	12
REP 11CHS326	QC	0.8	23.3	6.7	79	<0.1	10.1	9.1	927	2.46	4.4	1.6	0.7	56	0.3	0.4	0.1	67	0.52	0.060	12
11CHS339	Soil	0.4	7.0	6.6	55	<0.1	5.3	3.3	353	1.47	2.1	<0.5	0.8	28	<0.1	0.2	<0.1	42	0.15	0.060	4
REP 11CHS339	QC	0.4	6.7	6.3	51	<0.1	5.1	3.1	349	1.45	1.9	<0.5	0.8	27	<0.1	0.2	<0.1	40	0.16	0.059	4
11CHS369	Soil	0.6	8.1	5.6	47	<0.1	4.7	3.9	166	1.85	2.7	<0.5	0.9	22	0.1	0.2	<0.1	48	0.14	0.113	4
REP 11CHS369	QC	0.5	8.3	6.0	48	<0.1	4.1	3.8	167	1.88	2.7	1.8	0.9	23	0.1	0.2	<0.1	47	0.14	0.116	4
11CHS388	Soil	0.4	8.9	5.2	51	<0.1	4.7	3.4	375	1.45	1.4	<0.5	0.5	26	<0.1	0.1	<0.1	41	0.23	0.027	6
REP 11CHS388	QC	0.3	8.5	5.0	51	<0.1	4.1	3.4	384	1.48	1.3	<0.5	0.5	27	<0.1	<0.1	<0.1	41	0.24	0.027	6
11DRS004	Soil	0.3	14.7	4.7	71	<0.1	4.0	10.5	548	3.25	0.6	<0.5	0.8	38	0.1	0.1	<0.1	101	0.38	0.024	3
REP 11DRS004	QC	0.2	14.4	4.7	66	<0.1	4.0	10.1	545	3.01	0.7	<0.5	0.8	37	<0.1	<0.1	<0.1	97	0.38	0.024	3
11DRS019	Soil	0.7	12.3	4.8	70	<0.1	6.4	6.2	505	2.38	1.6	1.6	1.0	43	0.2	0.2	<0.1	68	0.34	0.033	5
REP 11DRS019	QC	0.8	13.0	5.0	71	<0.1	6.9	6.8	535	2.42	1.8	<0.5	1.0	46	0.1	0.2	<0.1	69	0.36	0.038	5



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QUALITY CONTROL REPORT

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Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																	
11SHS214	Soil	9	0.13	179	0.074	1	0.76	0.014	0.09	<0.1	0.02	1.5	<0.1	<0.05	3	<0.5	<0.2
REP 11SHS214	QC	10	0.15	193	0.078	1	0.85	0.016	0.11	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS222	Soil	13	0.33	133	0.061	2	1.31	0.024	0.10	<0.1	0.10	4.2	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS222	QC	13	0.33	133	0.065	1	1.32	0.016	0.11	<0.1	0.10	4.2	<0.1	<0.05	4	<0.5	<0.2
11SHS244	Soil	6	0.13	100	0.048	1	1.07	0.017	0.08	<0.1	<0.01	1.1	<0.1	<0.05	5	<0.5	<0.2
REP 11SHS244	QC	6	0.13	104	0.049	1	1.12	0.018	0.09	<0.1	<0.01	1.2	<0.1	<0.05	5	<0.5	<0.2
11SHS268	Soil	13	0.26	212	0.080	3	1.16	0.016	0.17	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS268	QC	14	0.27	212	0.081	2	1.17	0.017	0.17	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11LMS001	Soil	10	0.15	135	0.075	<1	0.93	0.013	0.09	<0.1	0.07	1.9	<0.1	<0.05	3	<0.5	<0.2
REP 11LMS001	QC	10	0.15	132	0.071	<1	0.93	0.014	0.09	<0.1	0.06	1.8	<0.1	<0.05	3	<0.5	<0.2
11LMS015	Soil	9	0.14	129	0.055	<1	1.53	0.021	0.06	<0.1	0.02	1.5	<0.1	<0.05	5	<0.5	<0.2
REP 11LMS015	QC	9	0.15	139	0.050	<1	1.55	0.022	0.07	<0.1	0.02	1.3	<0.1	<0.05	5	<0.5	<0.2
11LMS040	Soil	29	0.67	199	0.131	3	2.91	0.039	0.12	<0.1	0.03	8.3	<0.1	0.06	8	<0.5	<0.2
REP 11LMS040	QC	28	0.66	201	0.134	3	2.93	0.054	0.13	<0.1	0.04	8.2	<0.1	<0.05	8	<0.5	<0.2
11CHS311	Soil	16	0.34	135	0.121	1	1.50	0.014	0.11	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
REP 11CHS311	QC	17	0.35	137	0.118	1	1.56	0.014	0.10	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11CHS326	Soil	17	0.37	159	0.076	3	1.42	0.016	0.22	<0.1	0.02	3.8	<0.1	0.06	5	<0.5	<0.2
REP 11CHS326	QC	18	0.37	163	0.075	2	1.50	0.017	0.22	<0.1	0.02	3.8	<0.1	<0.05	5	<0.5	<0.2
11CHS339	Soil	8	0.11	141	0.088	<1	1.21	0.017	0.10	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
REP 11CHS339	QC	8	0.11	140	0.085	2	1.22	0.012	0.10	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5	<0.2
11CHS369	Soil	9	0.13	120	0.059	2	1.06	0.015	0.05	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
REP 11CHS369	QC	10	0.13	124	0.059	2	1.06	0.015	0.05	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11CHS388	Soil	11	0.13	121	0.063	<1	0.79	0.016	0.06	<0.1	0.01	1.7	<0.1	<0.05	3	0.6	<0.2
REP 11CHS388	QC	9	0.14	124	0.062	<1	0.82	0.016	0.06	<0.1	0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
11DRS004	Soil	10	0.32	101	0.169	2	1.63	0.045	0.09	<0.1	0.01	4.3	<0.1	<0.05	5	<0.5	<0.2
REP 11DRS004	QC	10	0.31	99	0.165	3	1.57	0.043	0.10	<0.1	0.02	4.3	<0.1	<0.05	5	<0.5	<0.2
11DRS019	Soil	14	0.23	191	0.112	3	1.18	0.020	0.12	<0.1	0.02	3.3	<0.1	<0.05	4	<0.5	<0.2
REP 11DRS019	QC	14	0.23	191	0.111	2	1.20	0.034	0.11	<0.1	0.03	3.1	<0.1	<0.05	4	<0.5	<0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Report Date: November 23, 2011

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QUALITY CONTROL REPORT

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		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Reference Materials																					
STD DS8	Standard	12.3	110.6	125.5	319	1.9	38.0	7.6	627	2.53	25.5	117.0	6.6	67	2.3	5.8	6.4	42	0.70	0.084	14
STD DS8	Standard	13.4	111.4	122.5	310	1.8	39.8	7.8	614	2.46	26.2	112.4	7.0	70	2.3	5.6	6.2	44	0.73	0.079	17
STD DS8	Standard	12.3	107.1	118.0	297	1.8	35.6	7.1	568	2.33	24.0	111.7	6.3	70	2.2	5.7	6.3	39	0.65	0.074	15
STD DS8	Standard	12.7	101.5	120.5	302	1.8	35.6	7.0	611	2.46	24.8	112.8	7.3	70	2.1	5.4	6.4	40	0.67	0.076	16
STD DS8	Standard	13.3	103.7	114.0	299	1.7	37.3	7.4	584	2.38	24.9	109.8	6.3	68	2.3	5.1	6.0	41	0.70	0.079	16
STD DS8	Standard	12.6	108.9	125.9	308	1.9	36.9	7.5	563	2.38	23.5	110.9	6.8	64	2.3	5.5	6.5	43	0.65	0.074	14
STD DS8	Standard	12.5	106.0	120.5	301	1.7	36.5	7.3	576	2.36	24.3	106.4	6.1	67	2.2	5.5	6.3	41	0.64	0.074	13
STD DS8	Standard	12.4	101.7	114.2	280	1.6	34.9	6.9	523	2.20	23.9	102.3	6.4	66	2.3	5.6	5.0	42	0.69	0.067	14
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



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VAN11004545.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																	
STD DS8	Standard	117	0.63	285	0.113	3	0.96	0.105	0.43	2.8	0.21	3.0	5.6	0.16	5	5.3	4.7
STD DS8	Standard	117	0.61	284	0.129	3	0.91	0.091	0.40	3.1	0.22	2.5	5.3	0.18	5	5.5	5.1
STD DS8	Standard	110	0.58	263	0.114	2	0.93	0.104	0.40	2.7	0.17	2.3	5.3	0.13	4	4.7	4.7
STD DS8	Standard	111	0.60	270	0.113	2	0.88	0.088	0.41	2.8	0.19	2.3	5.3	0.14	5	4.9	5.0
STD DS8	Standard	114	0.62	282	0.119	4	0.99	0.106	0.42	2.8	0.20	3.4	5.0	0.16	5	4.5	4.7
STD DS8	Standard	116	0.59	262	0.114	3	0.91	0.101	0.41	2.9	0.20	2.8	5.5	0.14	5	4.8	4.6
STD DS8	Standard	113	0.58	270	0.108	3	0.89	0.109	0.42	2.9	0.17	2.9	5.2	0.16	5	5.1	4.6
STD DS8	Standard	111	0.57	250	0.114	4	0.85	0.091	0.39	2.5	0.16	2.0	5.0	0.19	4	4.3	4.7
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



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Client: Westhaven Ventures Inc.

1095 - 1920 W. Pender St.
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Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: September 06, 2011
Report Date: November 24, 2011
Page: 1 of 10

CERTIFICATE OF ANALYSIS

VAN11004494.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 4
P.O. Number
Number of Samples: 250

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	250	Dry at 60C			VAN
SS80	250	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	250	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

RTRN-PLP Return

ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle



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Project: Shovelnose
 Report Date: November 24, 2011

Page: 2 of 10 Part 1

CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11DRS035	Soil		0.5	15.3	5.1	56	<0.1	7.6	6.0	261	2.11	1.6	43.4	1.2	32	<0.1	0.2	0.1	62	0.23	0.052	4
11DRS036	Soil		0.6	8.0	5.0	54	<0.1	4.5	4.2	403	1.76	1.4	2.3	0.7	28	<0.1	0.2	<0.1	50	0.25	0.045	3
11DRS037	Soil		0.4	8.4	4.7	50	<0.1	4.8	4.5	325	1.90	0.8	1.0	0.8	33	<0.1	0.2	<0.1	56	0.27	0.024	3
11DRS038	Soil		0.5	10.6	4.4	63	<0.1	4.8	6.2	506	2.02	1.7	1.4	0.9	24	<0.1	0.2	<0.1	56	0.21	0.062	4
11DRS039	Soil		0.5	12.7	4.0	61	<0.1	5.7	5.7	493	2.02	1.6	1.0	0.9	32	<0.1	0.3	<0.1	58	0.30	0.038	4
11DRS040	Soil		0.7	14.7	4.6	47	<0.1	5.4	6.8	668	2.05	2.5	1.8	0.7	29	0.1	0.4	<0.1	55	0.36	0.031	4
11DRS041	Soil		0.4	27.6	5.3	53	<0.1	4.5	8.9	721	2.36	2.7	0.7	0.8	79	0.2	0.4	<0.1	49	0.85	0.041	9
11DRS042	Soil		0.4	12.6	4.8	49	<0.1	3.6	5.9	636	1.78	1.6	0.6	0.7	43	<0.1	0.2	<0.1	40	0.45	0.035	5
11DRS043	Soil		0.5	10.2	3.8	74	<0.1	3.8	9.5	624	2.45	0.6	0.6	0.7	49	<0.1	0.1	<0.1	74	0.25	0.029	3
11DRS044	Soil		0.6	13.8	6.8	50	<0.1	3.1	7.1	399	2.38	3.0	<0.5	2.3	26	<0.1	0.5	0.2	42	0.51	0.052	9
11DRS045	Soil		0.7	8.1	4.3	72	<0.1	4.2	4.4	597	1.80	1.4	<0.5	0.7	30	<0.1	0.2	<0.1	55	0.29	0.040	3
11DRS046	Soil		0.6	19.7	5.8	63	<0.1	7.7	7.9	741	2.65	2.9	0.8	1.1	52	0.1	0.3	<0.1	79	0.47	0.040	6
11DRS047	Soil		0.5	12.6	5.1	54	<0.1	6.4	6.0	521	2.24	1.4	<0.5	1.0	42	0.1	0.2	<0.1	68	0.34	0.038	4
11DRS048	Soil		0.5	11.1	5.1	71	<0.1	5.3	5.2	753	1.93	2.0	0.5	0.7	36	0.2	0.2	0.1	58	0.37	0.068	3
11DRS049	Soil		0.9	10.8	6.8	78	<0.1	6.3	5.6	927	1.82	2.4	<0.5	0.8	53	0.2	0.2	0.1	47	0.43	0.051	6
11DRS050	Soil		1.5	15.0	5.7	48	<0.1	6.7	6.1	769	1.89	2.1	0.9	1.1	45	0.1	0.1	<0.1	48	0.36	0.022	28
11DRS051	Soil		1.5	15.6	6.3	52	<0.1	7.7	6.4	983	1.93	2.3	1.1	1.1	57	0.1	0.2	<0.1	51	0.46	0.024	30
11DRS052	Soil		0.6	10.0	5.4	72	<0.1	5.9	4.9	725	2.06	2.0	0.5	1.0	37	0.2	0.2	<0.1	57	0.28	0.033	5
11DRS053	Soil		0.9	9.2	6.5	90	<0.1	5.3	5.0	1284	1.78	1.9	<0.5	0.7	37	0.3	0.2	<0.1	46	0.41	0.042	6
11DRS054	Soil		0.7	10.8	5.7	78	<0.1	5.2	4.5	942	1.66	2.3	3.8	1.1	45	0.2	0.1	<0.1	42	0.36	0.054	7
11DRS055	Soil		1.3	33.2	6.3	97	0.1	11.5	9.5	1265	2.81	4.7	<0.5	0.7	71	0.3	0.2	<0.1	65	0.70	0.061	9
11DRS056	Soil		1.9	20.2	8.3	100	0.1	5.4	6.5	1001	1.96	3.5	1.6	1.0	96	0.4	0.3	<0.1	44	0.88	0.031	13
11DRS057	Soil		0.4	9.7	5.6	79	<0.1	4.6	5.5	792	2.08	1.7	<0.5	0.9	26	0.1	0.2	0.1	42	0.37	0.043	8
11DRS058	Soil		0.5	9.9	8.5	82	<0.1	5.1	6.0	963	2.06	2.4	<0.5	1.3	53	0.2	0.2	0.1	46	0.29	0.100	6
11DRS059	Soil		0.8	10.0	9.0	67	<0.1	4.1	6.3	1024	1.90	2.5	<0.5	1.0	91	0.2	0.2	0.1	45	0.47	0.025	8
11DRS060	Soil		0.6	13.7	7.9	104	<0.1	4.6	6.7	1614	1.99	3.5	<0.5	0.6	38	0.2	0.2	0.1	44	0.51	0.079	11
11DRS061	Soil		0.6	7.9	9.0	168	<0.1	4.9	4.8	2037	1.80	1.5	<0.5	0.4	24	0.4	0.1	0.1	38	0.36	0.067	6
11DRS062	Soil		0.6	6.1	4.3	36	<0.1	3.7	3.9	267	1.73	0.8	<0.5	0.5	22	<0.1	0.1	<0.1	48	0.19	0.009	3
11DRS063	Soil		0.5	7.0	4.4	53	<0.1	4.1	3.4	496	1.53	1.3	<0.5	0.7	27	<0.1	0.1	<0.1	43	0.23	0.021	4
11DRS064	Soil		0.4	7.9	5.7	100	<0.1	5.2	5.2	443	1.95	1.5	<0.5	0.7	19	0.1	0.1	<0.1	56	0.16	0.072	2

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11DRS035	Soil	14	0.24	158	0.088	2	1.53	0.017	0.06	<0.1	0.02	2.2	<0.1	<0.05	5	0.7	<0.2
11DRS036	Soil	9	0.16	156	0.084	4	1.00	0.018	0.10	<0.1	0.03	1.8	<0.1	<0.05	4	0.6	<0.2
11DRS037	Soil	10	0.17	140	0.101	3	1.12	0.026	0.08	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11DRS038	Soil	11	0.21	130	0.077	3	1.15	0.016	0.09	<0.1	0.02	2.3	<0.1	<0.05	4	<0.5	<0.2
11DRS039	Soil	14	0.25	132	0.083	3	1.05	0.019	0.10	<0.1	0.02	2.9	<0.1	<0.05	3	<0.5	<0.2
11DRS040	Soil	12	0.21	166	0.068	3	1.01	0.016	0.11	<0.1	0.03	2.4	<0.1	<0.05	3	0.6	<0.2
11DRS041	Soil	7	0.30	246	0.032	6	1.33	0.028	0.08	<0.1	0.02	2.9	<0.1	<0.05	4	1.0	<0.2
11DRS042	Soil	7	0.19	198	0.044	4	1.36	0.021	0.08	<0.1	0.02	2.6	<0.1	<0.05	4	0.5	<0.2
11DRS043	Soil	8	0.41	93	0.057	2	1.18	0.024	0.15	<0.1	0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11DRS044	Soil	5	0.35	81	0.027	2	2.11	0.019	0.14	<0.1	0.01	5.1	<0.1	<0.05	7	<0.5	<0.2
11DRS045	Soil	9	0.17	172	0.080	2	1.04	0.020	0.08	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS046	Soil	15	0.32	172	0.092	3	1.25	0.018	0.11	<0.1	0.06	4.3	<0.1	<0.05	4	<0.5	<0.2
11DRS047	Soil	13	0.22	170	0.104	3	0.94	0.017	0.12	<0.1	0.06	2.8	<0.1	<0.05	3	<0.5	<0.2
11DRS048	Soil	10	0.21	163	0.083	4	1.10	0.017	0.10	<0.1	0.03	2.1	<0.1	<0.05	4	0.7	<0.2
11DRS049	Soil	10	0.21	190	0.069	2	1.47	0.019	0.11	<0.1	0.05	2.0	<0.1	<0.05	5	0.6	<0.2
11DRS050	Soil	13	0.24	100	0.071	2	1.50	0.016	0.09	<0.1	0.03	3.6	<0.1	<0.05	5	0.6	<0.2
11DRS051	Soil	13	0.24	145	0.079	<1	1.51	0.017	0.14	<0.1	0.04	3.3	<0.1	<0.05	5	<0.5	<0.2
11DRS052	Soil	12	0.20	159	0.089	2	1.41	0.015	0.09	<0.1	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS053	Soil	11	0.18	187	0.074	2	1.09	0.015	0.08	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS054	Soil	9	0.19	136	0.077	2	1.18	0.016	0.13	<0.1	0.02	2.1	<0.1	<0.05	4	0.6	<0.2
11DRS055	Soil	16	0.37	239	0.073	4	1.85	0.020	0.09	<0.1	0.04	4.0	<0.1	<0.05	6	0.7	<0.2
11DRS056	Soil	9	0.20	373	0.050	4	1.40	0.015	0.15	<0.1	0.10	3.6	<0.1	<0.05	4	0.7	<0.2
11DRS057	Soil	8	0.29	231	0.039	<1	1.54	0.020	0.13	<0.1	0.03	2.4	<0.1	<0.05	6	0.7	<0.2
11DRS058	Soil	8	0.22	194	0.116	1	2.03	0.019	0.09	<0.1	0.02	2.7	<0.1	<0.05	7	<0.5	<0.2
11DRS059	Soil	7	0.25	166	0.163	2	1.26	0.013	0.16	<0.1	0.05	3.4	<0.1	<0.05	4	0.7	<0.2
11DRS060	Soil	9	0.18	397	0.034	2	1.22	0.016	0.10	<0.1	0.04	2.3	<0.1	<0.05	4	0.6	<0.2
11DRS061	Soil	7	0.12	472	0.029	2	1.31	0.014	0.07	<0.1	0.04	1.5	<0.1	<0.05	5	<0.5	<0.2
11DRS062	Soil	10	0.16	148	0.072	<1	0.94	0.015	0.08	<0.1	0.01	1.6	<0.1	<0.05	3	0.7	<0.2
11DRS063	Soil	9	0.12	152	0.044	1	0.79	0.014	0.11	<0.1	<0.01	1.9	<0.1	<0.05	3	<0.5	<0.2
11DRS064	Soil	10	0.14	152	0.073	1	1.21	0.015	0.05	<0.1	0.01	1.7	<0.1	<0.05	5	<0.5	<0.2

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 24, 2011

Page: 3 of 10 Part 1

CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte Unit MDL	1DX15 Mo ppm 0.1	1DX15 Cu ppm 0.1	1DX15 Pb ppm 0.1	1DX15 Zn ppm 1	1DX15 Ag ppm 0.1	1DX15 Ni ppm 0.1	1DX15 Co ppm 0.1	1DX15 Mn ppm 1	1DX15 Fe % 0.01	1DX15 As ppm 0.5	1DX15 Au ppb 0.5	1DX15 Th ppm 0.1	1DX15 Sr ppm 1	1DX15 Cd ppm 0.1	1DX15 Sb ppm 0.1	1DX15 Bi ppm 0.1	1DX15 V ppm 2	1DX15 Ca % 0.01	1DX15 P % 0.001	1DX15 La ppm 1	
11DRS065	Soil	0.6	9.7	6.8	54	<0.1	7.0	5.2	258	2.01	1.6	<0.5	1.2	14	<0.1	0.1	0.1	50	0.13	0.066	4
11DRS066	Soil	0.3	5.2	4.6	118	<0.1	3.6	2.7	762	1.30	0.6	1.1	0.7	25	0.1	<0.1	<0.1	32	0.35	0.035	5
11DRS067	Soil	0.7	14.5	7.2	67	<0.1	7.8	6.5	467	2.59	2.4	1.1	1.1	39	0.2	0.3	0.1	74	0.40	0.037	8
11DRS068	Soil	0.6	10.9	5.9	72	<0.1	8.1	6.3	1030	2.18	1.5	<0.5	1.0	22	0.1	0.2	<0.1	62	0.20	0.059	4
11DRS069	Soil	0.6	10.3	7.5	83	<0.1	7.7	6.4	1072	3.01	2.5	1.2	0.8	23	0.2	0.3	<0.1	92	0.24	0.045	3
11DRS070	Soil	0.4	11.7	4.5	69	<0.1	3.4	7.6	577	2.75	3.0	<0.5	0.7	44	<0.1	0.2	<0.1	55	0.56	0.078	9
11DRS071	Soil	0.4	8.1	8.0	98	<0.1	3.2	3.9	619	1.39	1.7	4.4	0.8	44	0.4	<0.1	0.1	29	0.56	0.038	7
11DRS072	Soil	0.2	4.8	5.2	70	<0.1	2.9	3.4	324	1.42	1.2	1.5	0.8	72	<0.1	<0.1	<0.1	29	0.26	0.028	6
11DRS073	Soil	0.5	9.8	5.7	56	<0.1	4.0	4.6	570	1.55	2.2	0.7	0.9	25	0.1	0.1	<0.1	39	0.33	0.028	9
11DRS074	Soil	0.5	16.6	5.2	55	<0.1	7.0	7.2	652	2.01	2.7	0.9	1.0	39	0.2	0.3	<0.1	62	0.44	0.025	6
11DRS075	Soil	0.6	27.7	5.4	52	<0.1	8.9	8.9	516	2.83	3.6	1.8	1.4	37	0.1	0.4	<0.1	84	0.41	0.028	9
11DRS076	Soil	1.0	28.9	6.9	79	<0.1	13.6	10.4	966	2.21	2.8	<0.5	1.2	46	0.3	0.2	<0.1	59	0.51	0.047	9
11DRS077	Soil	0.5	23.5	5.9	101	<0.1	10.2	8.3	684	2.44	2.2	<0.5	1.1	39	0.2	0.2	<0.1	73	0.48	0.061	7
11DRS078	Soil	0.4	71.9	6.4	64	<0.1	16.0	14.5	893	3.47	5.3	1.7	1.3	77	0.2	0.3	<0.1	111	0.71	0.070	10
11DRS079	Soil	0.6	21.8	7.1	113	<0.1	10.2	8.4	967	2.61	2.6	<0.5	1.2	33	0.2	0.2	<0.1	79	0.40	0.075	6
11DRS080	Soil	0.4	21.0	6.7	88	<0.1	7.6	9.2	785	2.39	4.2	<0.5	1.2	60	0.2	0.2	0.1	51	0.73	0.051	11
11DRS081	Soil	0.5	17.3	5.2	47	<0.1	9.1	8.3	604	2.36	2.9	<0.5	1.2	50	<0.1	0.1	<0.1	60	0.62	0.024	9
11DRS082	Soil	1.0	18.5	5.0	42	<0.1	7.2	7.1	737	1.87	2.7	<0.5	0.5	40	0.2	0.1	<0.1	51	0.49	0.045	7
11DRS083	Soil	0.5	33.9	8.1	120	<0.1	12.9	12.1	2727	1.98	5.0	<0.5	0.8	39	0.4	<0.1	0.1	55	0.67	0.248	9
11DRS084	Soil	0.4	16.0	4.5	52	<0.1	7.7	6.8	579	2.17	2.6	<0.5	1.1	30	0.1	0.2	<0.1	62	0.37	0.038	7
11DRS085	Soil	0.5	24.8	5.6	59	<0.1	6.5	7.0	718	1.80	2.9	17.6	0.8	55	0.3	0.2	<0.1	46	0.70	0.050	9
11DRS086	Soil	0.6	14.0	4.8	58	<0.1	6.2	5.9	807	1.83	2.1	<0.5	0.9	25	0.2	0.2	<0.1	51	0.31	0.032	5
11DRS087	Soil	0.6	31.3	20.5	46	<0.1	10.1	8.5	479	2.60	5.0	1.9	1.5	66	0.1	0.3	<0.1	71	0.59	0.053	11
11DRS088	Soil	0.5	18.6	5.6	51	<0.1	7.8	8.8	743	2.40	4.8	0.9	0.9	98	0.1	0.2	<0.1	56	0.86	0.064	10
11DRS089	Soil	0.6	30.9	7.2	55	<0.1	11.1	9.5	665	2.54	5.5	1.3	1.8	79	0.2	0.3	<0.1	69	0.61	0.056	10
11DRS090	Soil	0.4	25.6	7.9	47	<0.1	5.2	5.8	612	1.61	3.4	4.2	1.3	33	0.2	0.2	<0.1	34	0.92	0.032	10
11DRS091	Soil	0.7	9.9	7.0	58	<0.1	3.5	4.4	609	1.34	2.0	<0.5	1.3	123	0.2	0.1	<0.1	33	0.38	0.037	10
11DRS092	Soil	0.5	13.0	5.8	76	<0.1	6.0	4.9	505	1.68	2.4	<0.5	1.0	32	<0.1	<0.1	<0.1	44	0.32	0.067	5
11DRS093	Soil	0.5	9.5	5.9	59	<0.1	5.0	4.9	573	1.84	2.2	<0.5	1.1	19	<0.1	0.1	<0.1	47	0.23	0.035	7
11DRS094	Soil	0.3	6.0	6.0	62	<0.1	4.5	4.0	386	1.67	1.7	<0.5	1.2	22	0.1	<0.1	<0.1	37	0.34	0.030	7

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 24, 2011

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11DRS065	Soil			10	0.15	143	0.078	1	2.04	0.020	0.04	<0.1	0.04	1.7	<0.1	<0.05	7	0.6	<0.2
11DRS066	Soil			7	0.10	451	0.060	2	1.03	0.022	0.13	<0.1	0.02	1.2	<0.1	<0.05	3	<0.5	<0.2
11DRS067	Soil			15	0.27	218	0.074	3	1.15	0.016	0.12	<0.1	0.04	3.1	<0.1	<0.05	4	<0.5	<0.2
11DRS068	Soil			14	0.24	172	0.092	<1	1.82	0.019	0.05	<0.1	0.06	2.4	<0.1	<0.05	6	<0.5	<0.2
11DRS069	Soil			16	0.18	176	0.085	2	0.98	0.011	0.06	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11DRS070	Soil			5	0.22	206	0.008	2	1.76	0.012	0.18	<0.1	0.03	6.1	<0.1	<0.05	5	<0.5	<0.2
11DRS071	Soil			5	0.21	181	0.087	3	1.52	0.012	0.16	<0.1	0.04	1.6	<0.1	<0.05	4	<0.5	<0.2
11DRS072	Soil			5	0.19	180	0.090	2	1.72	0.016	0.13	<0.1	0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
11DRS073	Soil			8	0.18	116	0.044	2	1.05	0.016	0.16	<0.1	0.03	2.2	<0.1	<0.05	3	<0.5	<0.2
11DRS074	Soil			15	0.24	140	0.074	2	0.80	0.013	0.14	<0.1	0.04	3.6	<0.1	<0.05	3	<0.5	<0.2
11DRS075	Soil			20	0.36	130	0.090	3	1.34	0.018	0.14	<0.1	0.04	5.7	<0.1	<0.05	4	<0.5	<0.2
11DRS076	Soil			21	0.40	208	0.076	3	1.18	0.012	0.24	<0.1	0.03	4.6	<0.1	<0.05	4	<0.5	<0.2
11DRS077	Soil			15	0.32	221	0.100	2	1.71	0.016	0.16	<0.1	0.03	4.4	<0.1	<0.05	5	<0.5	<0.2
11DRS078	Soil			25	0.65	281	0.102	3	1.68	0.012	0.17	<0.1	0.03	9.1	<0.1	<0.05	5	<0.5	<0.2
11DRS079	Soil			15	0.30	245	0.098	2	1.71	0.014	0.12	<0.1	0.04	4.2	<0.1	<0.05	6	<0.5	<0.2
11DRS080	Soil			13	0.35	143	0.027	2	2.17	0.019	0.19	<0.1	0.03	5.4	<0.1	<0.05	6	<0.5	<0.2
11DRS081	Soil			21	0.29	143	0.059	2	1.97	0.022	0.14	<0.1	0.02	5.8	<0.1	<0.05	5	<0.5	<0.2
11DRS082	Soil			13	0.23	168	0.056	2	1.44	0.012	0.10	<0.1	0.02	3.4	<0.1	<0.05	4	<0.5	<0.2
11DRS083	Soil			41	0.28	180	0.075	2	2.85	0.019	0.08	<0.1	0.03	5.2	<0.1	<0.05	8	<0.5	<0.2
11DRS084	Soil			17	0.25	105	0.087	2	1.46	0.017	0.17	<0.1	0.02	4.7	<0.1	<0.05	4	<0.5	<0.2
11DRS085	Soil			12	0.28	194	0.060	3	1.45	0.014	0.19	<0.1	0.03	3.8	<0.1	<0.05	4	<0.5	<0.2
11DRS086	Soil			12	0.20	152	0.081	<1	1.13	0.012	0.14	<0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
11DRS087	Soil			18	0.43	140	0.061	2	1.35	0.017	0.11	<0.1	0.05	5.9	<0.1	<0.05	4	<0.5	<0.2
11DRS088	Soil			14	0.47	234	0.033	3	1.11	0.022	0.10	<0.1	0.06	4.1	<0.1	<0.05	4	<0.5	<0.2
11DRS089	Soil			17	0.55	120	0.060	3	1.17	0.072	0.11	<0.1	0.02	4.5	<0.1	<0.05	4	<0.5	<0.2
11DRS090	Soil			10	0.27	204	0.024	3	1.41	0.022	0.13	<0.1	0.04	3.0	<0.1	0.06	4	<0.5	<0.2
11DRS091	Soil			7	0.17	300	0.045	3	1.19	0.012	0.40	<0.1	0.04	2.2	<0.1	<0.05	3	<0.5	<0.2
11DRS092	Soil			10	0.18	104	0.080	1	1.61	0.015	0.10	<0.1	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS093	Soil			9	0.20	124	0.064	<1	1.54	0.014	0.09	<0.1	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS094	Soil			6	0.21	88	0.129	2	1.92	0.017	0.11	<0.1	0.01	2.6	<0.1	<0.05	8	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11DRS095	Soil	0.3	10.7	7.3	48	<0.1	5.8	5.2	337	2.19	2.4	<0.5	1.4	29	<0.1	0.2	<0.1	57	0.29	0.028	7
11DRS096	Soil	0.3	11.1	6.3	41	<0.1	5.1	4.1	395	1.58	2.4	<0.5	1.0	29	0.2	0.1	<0.1	38	0.40	0.018	7
11DRS097	Soil	0.6	13.1	6.2	63	<0.1	6.2	5.9	585	2.03	2.7	<0.5	0.8	31	0.1	0.2	<0.1	56	0.31	0.042	6
11DRS098	Soil	0.5	6.6	5.9	87	<0.1	4.3	3.8	865	1.74	1.1	<0.5	1.1	26	0.2	0.1	0.1	47	0.16	0.035	6
11DRS099	Soil	0.4	10.8	6.6	88	<0.1	6.4	5.6	658	2.11	3.3	<0.5	1.3	16	<0.1	0.2	0.1	51	0.15	0.301	4
11DRS100	Soil	0.5	11.6	5.6	51	<0.1	5.6	5.2	547	1.77	1.9	<0.5	0.9	36	0.1	0.2	<0.1	46	0.34	0.018	8
11DRS101	Soil	0.4	11.3	5.7	54	<0.1	5.4	5.4	701	1.73	1.9	<0.5	0.8	37	0.2	0.2	<0.1	45	0.41	0.022	7
11DRS102	Soil	0.3	7.1	5.6	78	<0.1	3.6	3.5	541	1.63	1.5	<0.5	0.6	21	0.1	0.2	<0.1	38	0.27	0.030	5
11DRS103	Soil	0.5	12.3	8.2	91	<0.1	6.6	6.8	1004	2.68	2.1	1.5	1.1	31	0.3	0.3	<0.1	79	0.29	0.027	5
11DRS104	Soil	0.4	9.5	6.6	47	<0.1	5.4	5.8	949	1.98	1.9	1.2	0.7	39	0.1	0.2	<0.1	56	0.39	0.015	4
11DRS105	Soil	0.3	5.3	4.5	118	<0.1	5.1	2.8	322	1.23	1.1	<0.5	0.9	16	<0.1	<0.1	<0.1	30	0.18	0.080	3
11DRS106	Soil	0.4	6.0	9.2	52	<0.1	2.7	2.9	468	1.55	1.3	<0.5	0.9	31	0.2	0.2	<0.1	37	0.32	0.035	6
11DRS107	Soil	0.6	15.8	6.5	77	<0.1	7.0	6.1	850	2.04	2.1	1.5	1.0	52	0.2	0.2	0.1	59	0.51	0.032	6
11DRS108	Soil	0.4	9.9	5.6	59	<0.1	5.3	4.7	546	2.06	2.3	0.6	1.3	26	<0.1	0.2	0.1	56	0.21	0.044	7
11DRS109	Soil	0.7	14.8	6.9	78	<0.1	7.2	6.9	888	2.43	2.7	0.7	0.9	41	0.1	0.2	0.1	73	0.44	0.045	5
11DRS110	Soil	0.4	6.5	6.9	150	<0.1	5.6	3.7	1365	1.56	1.0	<0.5	0.8	21	0.3	<0.1	0.1	39	0.26	0.061	4
11DRS111	Soil	0.5	10.3	6.2	47	<0.1	4.9	3.8	529	1.73	1.4	0.6	1.2	30	0.1	0.2	0.1	43	0.38	0.013	12
11DRS112	Soil	0.6	15.0	7.1	94	<0.1	8.1	6.7	885	2.53	3.2	<0.5	1.2	37	0.1	0.2	0.1	64	0.32	0.052	7
11DRS113	Soil	1.7	14.8	6.5	115	<0.1	6.4	5.7	984	1.97	2.2	<0.5	0.8	45	0.3	0.2	<0.1	54	0.55	0.091	4
11DRS114	Soil	0.8	11.2	6.8	79	<0.1	5.3	5.1	440	1.91	1.3	<0.5	1.1	33	0.2	0.2	0.1	48	0.32	0.021	6
11DRS115	Soil	1.0	11.6	7.5	50	<0.1	6.1	5.5	664	2.13	1.9	<0.5	1.1	40	0.1	0.2	0.1	55	0.39	0.023	18
11DRS116	Soil	0.6	8.1	11.7	154	<0.1	8.3	4.6	1095	1.92	1.4	<0.5	1.4	18	0.2	0.1	0.2	39	0.20	0.107	7
11DRS117	Soil	1.1	17.6	7.0	73	<0.1	7.2	7.1	768	2.09	2.5	0.5	0.9	65	0.2	0.2	<0.1	56	0.75	0.041	9
11DRS118	Soil	0.9	17.5	6.7	58	<0.1	6.6	6.9	714	1.90	1.8	<0.5	0.9	61	0.2	0.2	0.1	49	0.51	0.028	9
11DRS119	Soil	0.6	23.0	6.6	63	<0.1	10.5	8.9	590	2.92	4.1	2.8	1.6	48	0.1	0.3	<0.1	84	0.40	0.042	10
11DRS120	Soil	0.7	10.0	6.6	111	<0.1	6.9	5.4	1704	1.83	2.2	<0.5	1.0	30	0.3	0.2	0.1	48	0.26	0.096	4
11DRS121	Soil	0.7	13.2	6.3	61	<0.1	6.7	5.8	516	2.20	2.6	0.9	1.0	59	0.1	0.2	<0.1	58	0.44	0.031	6
11DRS122	Soil	1.3	12.9	6.7	39	<0.1	6.0	5.3	178	1.81	2.4	<0.5	1.0	41	<0.1	0.1	0.1	45	0.35	0.018	6
11DRS123	Soil	0.6	9.4	6.5	80	<0.1	7.1	5.0	776	1.94	2.1	<0.5	1.2	29	<0.1	0.2	0.1	51	0.22	0.052	5
11DRS124	Soil	0.4	6.2	6.1	78	<0.1	5.9	4.0	627	1.61	1.6	<0.5	0.9	26	<0.1	0.1	<0.1	42	0.19	0.050	4

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11DRS095	Soil	12	0.24	111	0.105	<1	1.47	0.009	0.08	<0.1	0.01	2.8	<0.1	<0.05	5	<0.5	<0.2
11DRS096	Soil	8	0.15	101	0.076	2	1.53	0.016	0.06	<0.1	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS097	Soil	12	0.20	152	0.073	2	1.17	0.013	0.09	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11DRS098	Soil	8	0.13	177	0.072	1	1.10	0.012	0.10	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11DRS099	Soil	10	0.18	159	0.052	<1	2.18	0.011	0.06	<0.1	0.03	2.3	<0.1	<0.05	7	<0.5	<0.2
11DRS100	Soil	9	0.19	151	0.067	2	1.08	0.012	0.11	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11DRS101	Soil	9	0.19	172	0.066	2	1.04	0.013	0.14	<0.1	0.02	2.6	<0.1	<0.05	3	<0.5	<0.2
11DRS102	Soil	6	0.11	127	0.057	2	1.01	0.015	0.11	<0.1	0.01	1.5	<0.1	<0.05	4	<0.5	<0.2
11DRS103	Soil	14	0.23	209	0.093	2	1.10	0.009	0.11	<0.1	0.09	2.8	<0.1	<0.05	4	<0.5	<0.2
11DRS104	Soil	10	0.18	211	0.066	2	0.96	0.010	0.11	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
11DRS105	Soil	6	0.10	355	0.044	1	1.28	0.017	0.07	<0.1	0.02	1.2	<0.1	<0.05	5	<0.5	<0.2
11DRS106	Soil	6	0.11	222	0.037	3	0.69	0.009	0.17	<0.1	0.02	1.7	<0.1	<0.05	2	<0.5	<0.2
11DRS107	Soil	13	0.22	239	0.081	3	1.16	0.016	0.12	<0.1	0.04	2.5	<0.1	<0.05	4	<0.5	<0.2
11DRS108	Soil	11	0.16	172	0.062	3	1.08	0.017	0.10	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS109	Soil	14	0.25	242	0.083	1	1.17	0.013	0.12	<0.1	0.04	2.4	<0.1	<0.05	4	<0.5	<0.2
11DRS110	Soil	7	0.14	393	0.049	1	1.35	0.020	0.08	<0.1	0.03	1.3	<0.1	<0.05	5	<0.5	<0.2
11DRS111	Soil	9	0.14	224	0.050	2	1.33	0.015	0.07	<0.1	0.03	3.7	<0.1	<0.05	4	<0.5	<0.2
11DRS112	Soil	13	0.25	275	0.063	<1	1.60	0.014	0.11	<0.1	0.03	3.2	<0.1	<0.05	5	<0.5	<0.2
11DRS113	Soil	11	0.19	221	0.064	2	1.12	0.013	0.13	<0.1	0.02	1.9	<0.1	<0.05	4	<0.5	<0.2
11DRS114	Soil	10	0.20	193	0.071	1	1.48	0.014	0.11	<0.1	0.02	2.3	<0.1	<0.05	5	<0.5	<0.2
11DRS115	Soil	12	0.21	146	0.074	1	1.62	0.018	0.09	<0.1	0.03	3.0	<0.1	<0.05	5	<0.5	<0.2
11DRS116	Soil	10	0.16	293	0.059	<1	2.14	0.022	0.07	<0.1	0.01	2.1	<0.1	<0.05	7	<0.5	<0.2
11DRS117	Soil	12	0.26	255	0.064	4	1.28	0.015	0.15	<0.1	0.03	2.7	<0.1	<0.05	4	<0.5	<0.2
11DRS118	Soil	12	0.24	188	0.075	1	1.31	0.020	0.22	<0.1	0.03	2.7	<0.1	<0.05	4	<0.5	<0.2
11DRS119	Soil	19	0.41	160	0.095	2	1.48	0.022	0.12	<0.1	0.04	4.6	<0.1	<0.05	5	<0.5	<0.2
11DRS120	Soil	12	0.19	271	0.078	2	1.51	0.022	0.10	<0.1	0.02	2.5	<0.1	<0.05	5	<0.5	<0.2
11DRS121	Soil	13	0.22	158	0.085	1	1.30	0.020	0.12	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11DRS122	Soil	10	0.19	127	0.068	<1	1.45	0.021	0.09	<0.1	0.03	2.1	<0.1	<0.05	4	<0.5	<0.2
11DRS123	Soil	13	0.19	168	0.090	3	1.68	0.021	0.07	<0.1	0.01	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS124	Soil	9	0.14	139	0.080	<1	1.37	0.017	0.08	<0.1	0.02	1.6	<0.1	<0.05	4	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11DRS125	Soil		0.6	14.3	9.9	113	<0.1	5.1	3.8	874	1.60	3.2	0.5	1.2	23	0.2	0.1	0.1	31	0.28	0.152	7
11DRS126	Soil		0.4	7.7	7.6	100	<0.1	6.2	4.4	968	1.70	1.8	<0.5	1.1	23	0.2	0.2	0.1	41	0.23	0.040	5
11DRS127	Soil		0.8	12.0	4.8	56	<0.1	2.5	6.3	728	2.25	5.1	<0.5	1.7	35	<0.1	0.2	<0.1	38	0.59	0.032	20
11DRS128	Soil		0.5	8.1	11.7	100	<0.1	10.0	6.0	1412	1.92	3.1	<0.5	1.9	66	0.1	0.2	0.2	37	0.50	0.050	12
11DRS129	Soil		0.4	14.9	7.9	74	<0.1	8.9	6.5	318	2.25	2.6	<0.5	1.7	38	<0.1	0.2	<0.1	58	0.24	0.059	6
11DRS130	Soil		0.5	10.4	5.6	46	<0.1	5.9	5.5	443	2.22	1.9	1.0	1.2	47	<0.1	0.3	<0.1	65	0.34	0.033	6
11DRS131	Soil		0.5	8.1	10.8	75	<0.1	4.9	4.6	722	1.96	2.7	1.5	1.3	46	0.2	0.2	0.1	44	0.47	0.028	9
11DRS132	Soil		0.6	7.6	9.2	123	<0.1	4.1	3.3	721	1.66	1.9	<0.5	1.0	43	0.3	0.1	<0.1	40	0.36	0.031	5
11DRS133	Soil		0.5	10.4	9.5	94	<0.1	6.8	5.5	748	2.25	2.6	<0.5	1.7	34	0.1	0.3	0.2	57	0.31	0.045	10
11DRS134	Soil		0.6	7.5	7.0	81	<0.1	4.7	3.9	569	1.51	2.0	0.9	0.8	28	<0.1	0.1	0.1	36	0.24	0.044	5
11DRS135	Soil		0.7	3.9	6.0	76	<0.1	5.4	4.1	685	1.25	1.5	<0.5	0.7	15	<0.1	<0.1	0.1	31	0.16	0.044	3
11DRS136	Soil		1.0	10.8	9.3	102	<0.1	8.3	6.7	2253	2.10	3.7	<0.5	1.4	24	0.2	0.2	0.1	49	0.24	0.090	12
11DRS137	Soil		0.6	8.2	8.1	170	<0.1	6.2	4.8	2542	1.59	2.7	<0.5	1.0	38	0.3	0.1	0.1	36	0.52	0.226	7
11DRS138	Soil		1.4	18.8	8.6	59	<0.1	8.3	6.7	928	2.17	3.4	1.2	1.4	70	0.1	0.2	0.1	50	0.69	0.033	21
11DRS139	Soil		0.9	11.4	6.0	70	<0.1	5.3	6.1	926	2.09	2.3	1.3	1.1	53	0.1	0.2	<0.1	59	0.42	0.037	7
11DRS140	Soil		1.0	21.1	8.1	76	<0.1	8.7	8.3	846	2.51	5.0	0.6	1.2	72	0.2	0.3	<0.1	63	0.56	0.073	12
11DRS141	Soil		1.0	14.3	8.1	92	<0.1	8.1	5.6	778	2.03	2.2	1.7	1.3	52	0.2	0.2	<0.1	52	0.48	0.051	8
11DRS142	Soil		0.4	7.2	6.5	114	<0.1	5.6	3.8	264	1.77	1.7	<0.5	1.0	30	0.1	0.2	<0.1	47	0.24	0.070	5
11DRS143	Soil		1.2	16.4	9.1	112	<0.1	6.7	5.6	1434	1.65	2.5	<0.5	0.6	46	0.5	0.2	0.1	40	0.64	0.069	7
11DRS144	Soil		0.8	13.8	6.3	46	<0.1	5.3	5.6	843	1.74	2.1	0.5	0.9	40	0.2	0.2	<0.1	44	0.53	0.032	10
11DRS145	Soil		1.1	8.6	7.1	68	<0.1	5.6	4.7	861	1.87	1.4	<0.5	0.8	27	0.2	0.2	<0.1	50	0.37	0.030	5
11SHS279	Soil		0.5	7.9	8.5	119	<0.1	6.8	4.8	1713	1.57	2.6	<0.5	0.6	38	0.4	0.1	0.1	33	0.48	0.125	6
11SHS280	Soil		0.4	6.1	8.6	51	<0.1	4.9	3.8	305	1.61	1.2	0.6	1.2	22	0.1	0.2	<0.1	35	0.21	0.024	4
11SHS281	Soil		0.7	17.3	6.6	52	<0.1	7.3	8.3	675	2.60	4.5	<0.5	1.0	45	0.1	0.2	<0.1	67	0.35	0.022	6
11SHS282	Soil		0.5	12.7	5.8	78	<0.1	8.5	6.6	461	2.45	2.8	<0.5	1.2	26	0.1	0.2	<0.1	67	0.27	0.056	4
11SHS283	Soil		0.7	15.0	7.7	66	<0.1	7.0	6.7	509	2.55	6.0	0.7	0.9	38	0.1	0.3	0.1	71	0.33	0.083	6
11SHS284	Soil		0.6	11.9	7.6	64	<0.1	5.4	5.6	560	2.29	5.1	<0.5	1.1	37	0.2	0.3	0.1	54	0.40	0.039	9
11SHS285	Soil		0.7	16.1	7.1	57	0.1	8.0	6.5	645	2.25	3.3	<0.5	1.0	46	0.2	0.3	<0.1	61	0.55	0.032	11
11SHS286	Soil		0.7	8.9	6.0	51	<0.1	5.4	5.0	629	1.81	2.6	<0.5	0.8	36	0.1	0.2	<0.1	47	0.32	0.020	5
11SHS287	Soil		0.5	7.4	5.4	96	<0.1	5.5	4.0	468	1.81	2.0	2.2	0.8	27	0.1	0.2	0.1	47	0.23	0.073	5

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11DRS125	Soil			7	0.16	179	0.074	<1	2.17	0.022	0.06	<0.1	0.04	1.7	<0.1	<0.05	6	<0.5	<0.2
11DRS126	Soil			9	0.16	209	0.077	<1	1.68	0.019	0.06	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2
11DRS127	Soil			7	0.40	97	0.004	<1	2.24	0.010	0.17	<0.1	0.02	4.4	<0.1	<0.05	9	<0.5	<0.2
11DRS128	Soil			11	0.29	161	0.098	<1	2.80	0.022	0.18	<0.1	0.02	3.3	0.1	<0.05	9	<0.5	<0.2
11DRS129	Soil			15	0.31	220	0.102	<1	2.08	0.022	0.10	<0.1	0.01	3.2	<0.1	<0.05	6	<0.5	<0.2
11DRS130	Soil			15	0.25	123	0.102	1	0.90	0.031	0.15	<0.1	0.03	2.9	<0.1	<0.05	3	<0.5	<0.2
11DRS131	Soil			9	0.27	119	0.161	<1	1.76	0.025	0.17	0.1	0.02	3.7	<0.1	<0.05	6	<0.5	<0.2
11DRS132	Soil			9	0.15	119	0.102	<1	1.35	0.032	0.12	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11DRS133	Soil			11	0.24	170	0.093	<1	2.23	0.026	0.12	<0.1	0.02	2.9	0.1	<0.05	7	<0.5	<0.2
11DRS134	Soil			9	0.16	132	0.069	<1	1.57	0.020	0.08	<0.1	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11DRS135	Soil			6	0.11	123	0.074	2	1.45	0.020	0.07	<0.1	0.02	1.0	<0.1	<0.05	5	<0.5	<0.2
11DRS136	Soil			12	0.21	206	0.065	<1	2.45	0.027	0.09	<0.1	0.03	2.6	0.2	<0.05	7	<0.5	<0.2
11DRS137	Soil			8	0.16	533	0.070	2	1.68	0.027	0.09	<0.1	0.05	1.8	<0.1	<0.05	5	<0.5	<0.2
11DRS138	Soil			14	0.25	154	0.071	1	1.80	0.019	0.14	<0.1	0.04	4.2	<0.1	<0.05	5	<0.5	<0.2
11DRS139	Soil			12	0.25	185	0.101	1	1.10	0.020	0.19	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11DRS140	Soil			15	0.39	196	0.077	2	1.66	0.016	0.23	<0.1	0.04	4.3	<0.1	<0.05	5	0.7	<0.2
11DRS141	Soil			13	0.24	187	0.091	2	1.41	0.022	0.15	<0.1	0.02	3.2	<0.1	<0.05	5	<0.5	<0.2
11DRS142	Soil			9	0.15	147	0.062	2	1.24	0.025	0.09	<0.1	0.01	1.8	<0.1	<0.05	5	<0.5	<0.2
11DRS143	Soil			10	0.18	347	0.044	3	0.99	0.011	0.16	<0.1	0.05	2.3	<0.1	<0.05	3	<0.5	<0.2
11DRS144	Soil			9	0.17	272	0.035	2	0.92	0.011	0.16	<0.1	0.04	3.0	<0.1	<0.05	3	<0.5	<0.2
11DRS145	Soil			11	0.19	174	0.077	1	1.19	0.010	0.10	<0.1	0.05	1.8	<0.1	<0.05	4	<0.5	<0.2
11SHS279	Soil			8	0.22	301	0.048	2	1.58	0.017	0.07	<0.1	0.03	1.4	<0.1	<0.05	6	<0.5	<0.2
11SHS280	Soil			9	0.22	107	0.050	<1	1.07	0.016	0.12	<0.1	<0.01	1.5	<0.1	<0.05	4	<0.5	<0.2
11SHS281	Soil			14	0.29	158	0.050	1	1.03	0.023	0.13	<0.1	0.07	3.8	<0.1	<0.05	4	<0.5	<0.2
11SHS282	Soil			16	0.28	139	0.103	2	1.40	0.018	0.12	<0.1	0.02	3.0	<0.1	<0.05	5	<0.5	<0.2
11SHS283	Soil			14	0.25	145	0.074	2	1.15	0.011	0.10	<0.1	0.03	3.0	<0.1	<0.05	4	<0.5	<0.2
11SHS284	Soil			10	0.24	115	0.062	<1	1.33	0.018	0.14	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
11SHS285	Soil			14	0.24	163	0.080	2	1.25	0.016	0.12	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
11SHS286	Soil			10	0.18	129	0.071	1	1.25	0.019	0.09	<0.1	0.02	2.0	<0.1	<0.05	4	<0.5	<0.2
11SHS287	Soil			10	0.16	98	0.063	2	1.07	0.017	0.09	0.1	0.02	1.6	<0.1	<0.05	4	<0.5	<0.2

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS288	Soil		0.4	7.7	6.5	67	<0.1	4.4	4.0	484	1.87	2.1	2.9	1.0	27	<0.1	0.2	0.1	45	0.27	0.062	6
11SHS289	Soil		0.4	4.0	4.8	52	<0.1	2.8	2.4	501	1.24	1.1	<0.5	0.5	27	<0.1	<0.1	0.1	26	0.21	0.023	5
11SHS290	Soil		0.5	7.4	6.9	113	<0.1	3.3	3.3	1254	1.44	2.1	0.8	0.8	25	0.2	0.1	0.1	24	0.39	0.069	14
11SHS291	Soil		0.5	15.6	6.1	62	<0.1	10.6	6.9	399	2.48	3.6	0.7	1.2	45	<0.1	0.3	0.1	66	0.34	0.039	8
11SHS292	Soil		0.4	8.6	4.5	96	<0.1	5.3	4.7	869	2.00	1.8	1.2	0.7	25	<0.1	0.2	<0.1	58	0.26	0.055	3
11SHS293	Soil		0.3	10.8	5.6	106	<0.1	5.7	5.6	408	1.97	2.2	0.8	0.9	31	0.2	0.2	<0.1	50	0.29	0.080	4
11SHS294	Soil		0.4	9.2	5.4	110	<0.1	5.8	4.4	721	1.87	1.6	0.9	0.9	26	0.2	0.2	0.1	47	0.24	0.082	4
11SHS295	Soil		0.4	9.2	5.2	81	<0.1	5.2	4.7	597	2.11	2.0	0.7	0.8	27	0.1	0.2	<0.1	54	0.22	0.059	4
11SHS296	Soil		0.4	31.3	6.3	40	0.1	8.4	5.7	257	2.12	2.0	17.6	1.2	58	<0.1	0.2	<0.1	49	0.60	0.018	36
11SHS297	Soil		0.5	8.2	5.5	32	<0.1	4.4	5.0	190	2.04	1.1	<0.5	0.7	28	<0.1	0.2	<0.1	53	0.32	0.008	4
11SHS298	Soil		0.6	10.4	5.5	57	<0.1	5.3	5.9	472	2.21	2.0	1.0	0.9	26	0.2	0.2	<0.1	55	0.27	0.028	5
11SHS299	Soil		0.4	16.6	5.2	107	0.1	10.7	8.6	1437	1.96	8.3	<0.5	0.6	48	0.2	0.1	0.1	48	0.67	0.205	5
11SHS300	Soil		0.4	16.4	4.9	103	0.1	9.6	8.5	1392	1.91	8.1	<0.5	0.6	50	0.2	<0.1	<0.1	46	0.71	0.202	5
11SHS301	Soil		0.5	11.8	4.8	60	<0.1	7.5	6.6	372	2.51	1.8	<0.5	0.7	33	<0.1	0.2	<0.1	61	0.30	0.038	5
11SHS302	Soil		0.4	12.9	5.8	66	<0.1	7.1	5.6	482	2.44	2.6	<0.5	0.9	40	<0.1	0.2	<0.1	69	0.30	0.039	4
11SHS303	Soil		0.5	17.3	5.6	54	<0.1	8.5	8.4	796	2.47	3.0	<0.5	0.9	48	0.2	0.2	<0.1	69	0.50	0.041	9
11SHS304	Soil		0.4	21.0	6.2	61	<0.1	9.7	10.5	878	2.93	4.4	1.4	1.3	68	0.1	0.2	<0.1	75	0.73	0.043	8
11SHS305	Soil		0.4	7.9	5.7	54	<0.1	4.8	3.5	274	1.91	2.0	<0.5	1.1	31	<0.1	0.1	<0.1	49	0.24	0.026	5
11SHS306	Soil		0.3	3.1	4.0	88	<0.1	4.3	2.7	283	1.15	0.8	<0.5	0.6	13	<0.1	<0.1	<0.1	27	0.13	0.025	3
11SHS307	Soil		0.4	7.7	10.0	69	<0.1	5.1	4.4	374	1.95	1.7	<0.5	1.0	38	<0.1	0.1	<0.1	50	0.28	0.037	6
11SHS308	Soil		0.6	7.8	7.8	70	<0.1	4.6	3.6	589	1.79	2.0	<0.5	0.9	29	0.1	0.2	<0.1	44	0.32	0.036	5
11SHS310	Soil		0.7	5.4	4.5	72	<0.1	3.1	2.9	582	1.21	1.4	<0.5	0.6	20	<0.1	<0.1	<0.1	32	0.17	0.079	3
11SHS311	Soil		0.6	15.1	7.3	74	<0.1	7.4	7.1	728	2.45	3.5	<0.5	1.2	44	<0.1	0.2	<0.1	66	0.37	0.050	10
11SHS312	Soil		0.5	10.6	6.2	61	<0.1	6.5	5.1	354	2.22	3.1	<0.5	1.0	34	<0.1	0.2	<0.1	57	0.27	0.046	6
11SHS313	Soil		0.4	9.3	5.8	68	<0.1	5.2	4.3	869	1.73	2.8	<0.5	0.9	36	0.2	0.2	<0.1	43	0.30	0.066	4
11SHS314	Soil		0.8	8.6	7.0	46	<0.1	5.1	4.6	429	1.77	2.9	<0.5	1.0	30	<0.1	0.2	0.1	40	0.24	0.031	9
11SHS315	Soil		0.8	13.5	7.2	68	<0.1	5.6	5.5	952	1.90	3.9	<0.5	0.5	42	0.3	0.2	<0.1	46	0.43	0.041	7
11SHS316	Soil		0.5	15.8	5.9	103	<0.1	7.2	6.8	988	2.31	3.7	<0.5	1.0	43	0.2	0.3	<0.1	60	0.42	0.090	7
11SHS317	Soil		1.0	8.6	5.3	47	<0.1	4.5	4.7	938	1.69	2.5	<0.5	0.5	47	0.2	0.2	<0.1	43	0.42	0.038	4
11SHS318	Soil		0.4	7.4	5.2	59	<0.1	5.0	3.7	285	1.72	2.1	0.9	0.9	29	<0.1	0.2	<0.1	44	0.20	0.050	3

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Project: Shovelnose
 Report Date: November 24, 2011

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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
11SHS288	Soil	9	0.19	123	0.048	<1	1.25	0.013	0.08	0.1	0.02	2.0	<0.1	<0.05	5	<0.5	<0.2
11SHS289	Soil	5	0.14	81	0.041	2	0.91	0.018	0.11	<0.1	<0.01	1.2	<0.1	<0.05	4	<0.5	<0.2
11SHS290	Soil	4	0.10	111	0.023	<1	1.27	0.018	0.12	0.2	0.02	2.2	<0.1	<0.05	5	<0.5	<0.2
11SHS291	Soil	18	0.31	167	0.097	2	1.48	0.029	0.11	0.1	0.02	3.6	<0.1	<0.05	5	<0.5	<0.2
11SHS292	Soil	12	0.19	136	0.092	<1	0.99	0.016	0.08	0.1	<0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11SHS293	Soil	11	0.19	174	0.072	2	1.08	0.026	0.09	0.2	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS294	Soil	11	0.18	168	0.069	1	1.08	0.027	0.11	0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS295	Soil	11	0.19	154	0.077	2	0.96	0.021	0.11	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS296	Soil	12	0.29	126	0.044	1	1.51	0.021	0.06	0.1	0.04	5.2	<0.1	<0.05	4	<0.5	<0.2
11SHS297	Soil	10	0.18	106	0.069	2	1.01	0.021	0.13	<0.1	0.01	2.2	<0.1	<0.05	3	<0.5	<0.2
11SHS298	Soil	13	0.20	118	0.068	1	1.10	0.019	0.12	0.1	0.07	2.6	<0.1	<0.05	4	<0.5	<0.2
11SHS299	Soil	23	0.25	201	0.074	1	2.35	0.021	0.10	0.3	0.03	3.2	<0.1	<0.05	7	<0.5	<0.2
11SHS300	Soil	22	0.24	199	0.074	2	2.24	0.020	0.10	0.2	0.04	3.1	<0.1	<0.05	7	<0.5	<0.2
11SHS301	Soil	18	0.32	139	0.073	<1	1.51	0.019	0.14	0.1	0.02	2.9	<0.1	<0.05	5	<0.5	<0.2
11SHS302	Soil	14	0.21	187	0.094	2	1.40	0.019	0.15	0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
11SHS303	Soil	18	0.29	173	0.082	2	1.64	0.025	0.19	0.2	0.03	4.7	<0.1	<0.05	5	<0.5	<0.2
11SHS304	Soil	21	0.41	206	0.065	3	1.84	0.029	0.12	0.1	0.05	6.5	<0.1	<0.05	5	<0.5	<0.2
11SHS305	Soil	10	0.16	154	0.094	<1	1.07	0.015	0.11	0.1	0.01	2.1	<0.1	<0.05	4	<0.5	<0.2
11SHS306	Soil	5	0.08	193	0.061	<1	1.13	0.027	0.06	<0.1	0.01	1.0	<0.1	<0.05	4	<0.5	<0.2
11SHS307	Soil	10	0.20	131	0.108	2	1.56	0.021	0.11	<0.1	0.01	2.9	<0.1	<0.05	5	<0.5	<0.2
11SHS308	Soil	9	0.18	145	0.081	1	1.20	0.018	0.15	0.2	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS310	Soil	7	0.10	143	0.064	<1	0.90	0.024	0.08	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS311	Soil	14	0.23	194	0.087	2	1.26	0.021	0.17	0.1	0.02	3.9	<0.1	<0.05	4	<0.5	<0.2
11SHS312	Soil	13	0.22	162	0.083	<1	1.26	0.015	0.13	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11SHS313	Soil	10	0.17	216	0.077	2	1.01	0.014	0.12	<0.1	0.03	1.8	<0.1	<0.05	3	<0.5	<0.2
11SHS314	Soil	9	0.19	115	0.063	1	1.33	0.014	0.09	<0.1	0.03	2.0	<0.1	<0.05	4	<0.5	<0.2
11SHS315	Soil	10	0.20	199	0.064	2	1.09	0.014	0.14	<0.1	0.04	2.1	<0.1	<0.05	3	<0.5	<0.2
11SHS316	Soil	14	0.24	209	0.079	2	1.28	0.015	0.12	<0.1	0.03	2.7	<0.1	<0.05	4	<0.5	<0.2
11SHS317	Soil	9	0.18	156	0.076	2	0.88	0.013	0.12	<0.1	0.03	1.9	<0.1	<0.05	3	<0.5	<0.2
11SHS318	Soil	10	0.14	128	0.082	2	1.13	0.018	0.08	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS319	Soil		0.6	11.8	8.1	95	<0.1	3.4	3.9	937	1.58	3.0	<0.5	0.5	52	0.2	0.2	<0.1	30	0.72	0.068	12
11SHS320	Soil		0.4	12.9	4.9	59	<0.1	9.4	6.4	475	2.37	2.3	21.3	1.0	54	<0.1	0.3	<0.1	62	0.43	0.030	7
11SHS321	Soil		0.3	7.7	4.1	103	<0.1	4.3	4.2	577	1.39	1.6	0.6	0.8	40	0.2	<0.1	<0.1	31	0.50	0.148	6
11SHS322	Soil		0.5	18.6	6.3	83	<0.1	9.2	8.3	985	2.62	4.6	<0.5	1.3	54	0.2	0.3	<0.1	69	0.36	0.070	14
11SHS323	Soil		0.5	10.8	4.7	57	<0.1	6.2	5.1	475	2.10	1.5	9.7	0.7	32	<0.1	0.2	<0.1	59	0.27	0.042	3
11SHS324	Soil		0.6	19.5	6.0	70	<0.1	7.7	8.2	856	2.38	3.1	2.2	0.9	59	<0.1	0.2	<0.1	66	0.55	0.068	7
11SHS325	Soil		0.4	40.9	5.3	46	0.2	17.0	8.6	991	2.51	3.4	1.2	1.0	110	0.2	0.2	<0.1	55	1.13	0.041	12
11SHS326	Soil		0.4	50.1	4.6	58	0.1	34.6	13.6	1378	3.42	5.7	1.5	0.8	114	0.3	0.2	<0.1	74	1.26	0.081	12
11SHS327	Soil		0.4	12.9	4.5	102	0.2	7.0	5.2	636	1.60	2.7	<0.5	1.1	26	0.2	0.1	<0.1	42	0.22	0.180	4
11SHS328	Soil		0.5	11.4	4.5	63	<0.1	12.0	6.5	460	2.18	2.3	<0.5	0.8	38	<0.1	0.1	<0.1	60	0.38	0.044	3
11SHS329	Soil		0.3	22.1	4.9	40	0.1	7.9	4.5	522	2.09	2.7	1.4	1.3	59	<0.1	0.2	<0.1	44	0.59	0.019	23
11SHS330	Soil		0.4	12.0	5.3	81	<0.1	6.4	5.5	329	2.09	2.2	<0.5	1.0	37	0.1	0.2	<0.1	54	0.29	0.091	4
11SHS331	Soil		0.3	14.0	4.8	52	<0.1	8.2	6.5	359	2.62	2.8	0.7	1.2	41	<0.1	0.2	<0.1	71	0.30	0.031	6
11SHS332	Soil		0.5	10.4	5.3	71	<0.1	5.3	4.7	619	1.80	2.4	1.0	0.9	77	0.1	0.2	<0.1	43	0.38	0.070	5
11SHS333	Soil		0.4	14.9	5.7	50	<0.1	6.1	5.6	507	2.20	2.1	0.7	1.0	39	0.1	0.2	<0.1	57	0.33	0.023	15
11SHS334	Soil		0.5	11.7	4.9	42	<0.1	5.5	5.1	363	2.26	2.4	0.6	0.9	41	<0.1	0.3	<0.1	63	0.29	0.015	5
11SHS335	Soil		0.6	6.2	5.0	33	<0.1	4.0	4.9	161	1.94	1.5	0.9	0.8	41	<0.1	0.2	<0.1	51	0.24	0.011	4
11SHS336	Soil		0.5	12.0	5.9	52	<0.1	5.5	5.8	449	2.51	2.2	1.4	1.1	34	<0.1	0.3	<0.1	67	0.31	0.022	6
11SHS337	Soil		0.5	9.7	4.4	54	<0.1	3.8	5.5	335	2.64	3.0	1.7	0.9	39	<0.1	0.2	<0.1	63	0.33	0.038	4
11SHS338	Soil		0.6	9.9	5.0	63	<0.1	5.0	4.8	457	1.97	2.8	<0.5	0.9	52	0.1	0.2	<0.1	52	0.39	0.038	4
11SHS339	Soil		0.4	12.1	4.8	87	<0.1	7.3	6.3	593	2.03	2.0	5.0	1.1	31	0.1	0.1	<0.1	53	0.30	0.088	4
11SHS340	Soil		0.4	12.7	5.0	46	<0.1	7.4	5.3	250	2.56	2.7	1.7	1.3	45	<0.1	0.3	<0.1	74	0.30	0.038	5
11SHS341	Soil		0.4	10.1	4.9	96	<0.1	7.5	4.9	752	2.02	2.0	0.6	1.2	39	0.1	0.2	<0.1	48	0.25	0.043	6
11SHS342	Soil		0.8	15.0	5.4	84	<0.1	7.8	6.1	736	2.15	2.4	0.6	1.0	36	0.3	0.3	<0.1	53	0.37	0.049	6
11SHS343	Soil		0.4	10.8	4.2	54	<0.1	5.1	4.8	387	1.94	1.4	0.9	0.9	33	<0.1	0.2	<0.1	52	0.26	0.030	4
11SHS344	Soil		0.6	13.0	4.9	40	<0.1	5.5	6.3	548	1.95	1.7	0.8	0.9	44	<0.1	0.2	<0.1	50	0.41	0.024	7
11SHS345	Soil		0.6	13.5	5.0	62	<0.1	6.6	7.0	603	2.14	2.0	1.3	1.1	43	<0.1	0.2	<0.1	54	0.38	0.051	5
11SHS346	Soil		0.3	7.8	8.6	112	<0.1	5.5	4.4	740	2.07	1.4	<0.5	1.1	24	0.2	0.2	<0.1	47	0.26	0.049	5
11SHS347	Soil		0.3	12.7	4.7	64	<0.1	5.0	4.4	380	1.91	1.8	0.7	1.2	37	<0.1	0.2	<0.1	43	0.22	0.031	7
11SHS348	Soil		0.5	10.0	5.0	44	<0.1	5.2	5.5	632	1.88	2.1	1.2	1.0	58	<0.1	0.2	<0.1	45	0.34	0.032	5

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 Report Date: November 24, 2011

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS319	Soil	6	0.21	114	0.046	1	1.56	0.010	0.13	<0.1	0.03	1.9	<0.1	<0.05	6	<0.5	<0.2
11SHS320	Soil	16	0.34	129	0.108	2	1.41	0.019	0.18	<0.1	0.01	3.5	<0.1	<0.05	5	<0.5	<0.2
11SHS321	Soil	6	0.14	156	0.083	1	1.06	0.025	0.06	<0.1	0.01	2.2	<0.1	<0.05	5	<0.5	<0.2
11SHS322	Soil	16	0.35	167	0.092	2	2.09	0.014	0.10	<0.1	0.03	4.4	<0.1	<0.05	7	<0.5	<0.2
11SHS323	Soil	12	0.23	138	0.098	2	1.34	0.019	0.07	<0.1	0.02	2.3	<0.1	<0.05	4	<0.5	<0.2
11SHS324	Soil	14	0.34	210	0.089	2	1.46	0.020	0.14	<0.1	0.08	4.0	<0.1	<0.05	4	<0.5	<0.2
11SHS325	Soil	20	0.57	256	0.068	3	2.02	0.048	0.07	<0.1	0.05	5.1	<0.1	<0.05	6	<0.5	<0.2
11SHS326	Soil	38	1.01	251	0.077	4	2.05	0.045	0.09	<0.1	0.05	7.2	<0.1	<0.05	6	0.5	<0.2
11SHS327	Soil	10	0.19	200	0.073	1	1.44	0.020	0.06	<0.1	0.03	2.6	<0.1	<0.05	5	<0.5	<0.2
11SHS328	Soil	21	0.31	150	0.111	2	1.54	0.022	0.11	<0.1	0.03	2.7	<0.1	<0.05	5	<0.5	<0.2
11SHS329	Soil	13	0.26	121	0.041	1	1.85	0.028	0.06	<0.1	0.04	5.9	<0.1	<0.05	5	<0.5	<0.2
11SHS330	Soil	12	0.22	201	0.077	2	1.31	0.017	0.07	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS331	Soil	18	0.30	143	0.082	<1	1.27	0.019	0.09	<0.1	0.03	4.1	<0.1	<0.05	4	<0.5	<0.2
11SHS332	Soil	9	0.23	230	0.071	1	1.36	0.019	0.09	<0.1	0.03	2.1	<0.1	<0.05	4	<0.5	<0.2
11SHS333	Soil	12	0.23	130	0.077	1	1.17	0.020	0.09	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
11SHS334	Soil	12	0.22	122	0.089	1	0.96	0.017	0.09	<0.1	0.02	2.5	<0.1	<0.05	3	<0.5	<0.2
11SHS335	Soil	8	0.18	159	0.039	<1	1.09	0.017	0.08	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11SHS336	Soil	12	0.23	132	0.090	1	1.04	0.021	0.13	<0.1	0.02	3.2	<0.1	<0.05	3	<0.5	<0.2
11SHS337	Soil	9	0.28	119	0.050	2	1.14	0.015	0.13	<0.1	0.02	4.3	<0.1	<0.05	5	<0.5	<0.2
11SHS338	Soil	11	0.20	162	0.083	1	1.03	0.015	0.14	<0.1	0.03	2.3	<0.1	<0.05	4	<0.5	<0.2
11SHS339	Soil	13	0.28	141	0.079	1	1.37	0.017	0.10	<0.1	0.01	2.6	<0.1	<0.05	5	<0.5	<0.2
11SHS340	Soil	17	0.29	121	0.119	1	1.05	0.014	0.12	<0.1	<0.01	3.1	<0.1	<0.05	4	<0.5	<0.2
11SHS341	Soil	12	0.25	156	0.096	1	1.60	0.017	0.16	<0.1	0.02	2.5	<0.1	<0.05	5	<0.5	<0.2
11SHS342	Soil	13	0.26	136	0.085	1	1.15	0.014	0.14	<0.1	<0.01	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS343	Soil	11	0.20	145	0.089	1	1.18	0.020	0.07	<0.1	0.02	2.6	<0.1	<0.05	4	<0.5	<0.2
11SHS344	Soil	11	0.24	140	0.078	2	1.43	0.022	0.11	<0.1	0.04	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS345	Soil	13	0.25	171	0.084	1	1.47	0.018	0.10	<0.1	0.03	3.1	<0.1	<0.05	5	<0.5	<0.2
11SHS346	Soil	9	0.15	264	0.074	1	1.29	0.017	0.09	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS347	Soil	10	0.25	175	0.069	<1	1.39	0.014	0.17	<0.1	0.01	2.4	<0.1	<0.05	4	<0.5	<0.2
11SHS348	Soil	10	0.24	151	0.084	1	1.35	0.013	0.11	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS349	Soil		0.9	26.5	6.2	76	<0.1	6.9	11.2	1065	2.93	6.8	1.4	1.0	50	0.2	0.2	0.1	59	0.63	0.100	17
11SHS350	Soil		0.9	26.6	6.0	74	<0.1	6.7	11.2	1055	2.87	6.7	0.6	0.9	51	0.2	0.2	<0.1	58	0.68	0.095	17
11SHS351	Soil		0.6	14.2	5.0	47	<0.1	6.0	6.9	605	2.31	2.5	<0.5	1.1	39	0.1	0.3	<0.1	64	0.40	0.024	6
11SHS352	Soil		0.6	16.3	5.3	83	<0.1	6.9	8.2	877	2.37	3.5	1.0	0.7	30	0.2	0.2	<0.1	59	0.33	0.048	6
11SHS353	Soil		0.7	22.5	5.5	62	<0.1	8.6	10.6	781	2.71	4.1	<0.5	0.7	47	0.1	0.2	<0.1	74	0.50	0.058	10
11SHS354	Soil		0.6	23.9	7.4	95	<0.1	12.0	10.0	823	2.64	3.9	<0.5	0.5	41	0.3	0.3	<0.1	62	0.53	0.086	10
11SHS355	Soil		0.3	13.7	5.6	46	<0.1	4.5	5.6	425	1.76	2.8	<0.5	1.1	1711	<0.1	0.1	<0.1	35	0.83	0.039	9
11SHS356	Soil		0.2	7.7	6.1	50	<0.1	4.4	4.7	316	2.15	1.2	<0.5	1.2	70	<0.1	<0.1	0.1	44	0.29	0.031	8
11SHS357	Soil		0.3	10.8	8.4	59	<0.1	5.7	5.7	510	2.49	1.9	0.7	1.3	94	<0.1	0.2	0.1	56	0.36	0.035	11
11SHS358	Soil		1.0	15.3	10.0	74	0.1	5.4	6.1	1191	1.85	3.2	<0.5	0.8	46	0.2	<0.1	0.1	33	0.73	0.064	12
11SHS359	Soil		1.0	14.5	5.4	63	<0.1	5.8	6.2	631	1.95	1.7	<0.5	0.6	30	0.1	0.2	<0.1	52	0.37	0.050	7
11SHS360	Soil		0.5	15.6	4.7	66	<0.1	7.0	6.3	464	2.40	2.3	<0.5	1.2	29	0.1	0.2	<0.1	69	0.31	0.032	6
11SHS361	Soil		0.6	20.8	5.6	64	<0.1	7.8	7.8	603	2.61	3.1	13.4	1.3	70	0.1	0.2	0.1	69	0.43	0.047	13
11SHS362	Soil		0.7	13.3	6.0	77	<0.1	4.8	6.6	756	2.17	3.8	0.5	1.2	74	<0.1	0.3	<0.1	53	0.40	0.045	9
11SHS363	Soil		0.7	27.4	6.5	75	<0.1	11.6	11.7	1133	2.95	3.3	0.7	1.5	61	0.1	0.3	<0.1	78	0.56	0.053	13
11SHS364	Soil		0.8	27.9	7.7	117	<0.1	12.2	9.8	1306	2.71	2.8	0.7	1.3	56	0.3	0.2	0.1	75	0.54	0.130	8
11SHS365	Soil		0.7	28.4	6.9	108	<0.1	12.9	9.8	815	3.41	2.6	6.8	1.6	49	0.2	0.2	<0.1	102	0.37	0.090	7
11SHS366	Soil		0.5	36.6	4.6	79	<0.1	19.0	17.9	1029	4.12	3.9	2.0	1.4	88	<0.1	<0.1	<0.1	108	0.69	0.082	12
11SHS367	Soil		0.5	11.8	7.1	60	<0.1	5.6	6.4	558	2.57	2.3	0.7	1.4	31	<0.1	0.2	0.1	59	0.35	0.024	8
11SHS368	Soil		0.3	6.2	6.0	58	<0.1	4.4	4.9	345	2.08	1.4	0.7	1.2	37	<0.1	0.1	<0.1	42	0.33	0.022	8
11SHS369	Soil		0.1	5.3	6.7	48	<0.1	3.6	3.2	292	1.53	1.0	<0.5	1.2	26	0.1	<0.1	0.1	30	0.39	0.064	7
11SHS370	Soil		0.3	6.8	6.7	72	<0.1	4.7	4.0	319	1.85	1.2	0.5	0.9	60	0.1	0.1	0.1	46	0.24	0.030	7
11SHS371	Soil		0.8	11.0	5.9	64	<0.1	7.4	7.3	393	2.42	1.6	<0.5	0.8	30	<0.1	0.2	<0.1	72	0.28	0.015	5
11SHS372	Soil		0.4	7.0	8.3	93	<0.1	4.5	3.0	401	1.43	1.1	1.0	0.7	21	0.2	0.1	<0.1	38	0.26	0.052	3
11SHS373	Soil		0.4	14.8	8.9	58	0.2	6.9	5.5	493	2.43	1.9	<0.5	1.4	32	0.2	0.2	0.1	68	0.38	0.023	11
11SHS374	Soil		0.4	7.9	9.8	126	<0.1	5.4	4.8	834	2.10	1.0	0.5	1.2	24	0.2	0.2	0.1	45	0.32	0.049	12
11SHS375	Soil		0.5	6.8	7.0	94	<0.1	6.4	4.6	474	1.93	1.8	0.8	1.2	22	0.1	0.1	0.1	49	0.25	0.022	13
11SHS376	Soil		0.4	15.5	5.4	116	<0.1	5.3	5.2	1098	1.96	2.8	1.0	0.8	52	0.2	0.2	<0.1	52	0.53	0.105	5
11SHS377	Soil		0.5	11.3	9.0	79	<0.1	5.2	5.6	845	2.03	3.5	1.0	1.0	29	0.3	0.2	<0.1	47	0.49	0.096	15
11SHS378	Soil		0.6	11.9	7.0	77	<0.1	5.2	4.6	512	1.50	2.0	<0.5	0.6	37	0.2	0.2	<0.1	32	0.31	0.027	9

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Project: Shovelnose
Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
			ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
			1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS349	Soil		10	0.39	190	0.017	3	1.99	0.011	0.24	<0.1	0.04	6.7	<0.1	<0.05	5	0.5	<0.2
11SHS350	Soil		10	0.38	187	0.016	2	1.97	0.011	0.23	<0.1	0.06	6.8	<0.1	<0.05	6	0.6	<0.2
11SHS351	Soil		13	0.22	144	0.085	1	1.06	0.021	0.13	<0.1	0.02	3.9	<0.1	<0.05	3	<0.5	<0.2
11SHS352	Soil		12	0.25	152	0.047	1	1.32	0.014	0.23	<0.1	0.03	3.7	<0.1	<0.05	4	<0.5	<0.2
11SHS353	Soil		16	0.33	169	0.056	4	1.42	0.015	0.25	<0.1	0.02	4.7	<0.1	<0.05	4	<0.5	<0.2
11SHS354	Soil		15	0.24	160	0.040	2	1.77	0.015	0.20	<0.1	0.03	5.5	<0.1	<0.05	5	0.8	<0.2
11SHS355	Soil		6	0.38	1032	0.017	<1	2.26	0.010	0.38	<0.1	0.03	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS356	Soil		7	0.29	226	0.072	<1	1.97	0.016	0.11	<0.1	0.02	1.9	<0.1	<0.05	7	<0.5	<0.2
11SHS357	Soil		11	0.32	141	0.105	<1	1.85	0.014	0.18	<0.1	0.03	3.3	<0.1	<0.05	6	<0.5	<0.2
11SHS358	Soil		8	0.25	176	0.061	1	1.93	0.017	0.15	<0.1	0.03	2.8	<0.1	<0.05	6	<0.5	<0.2
11SHS359	Soil		12	0.23	196	0.071	3	1.29	0.015	0.21	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11SHS360	Soil		15	0.26	146	0.097	2	1.29	0.018	0.11	<0.1	0.02	3.8	<0.1	<0.05	4	0.8	<0.2
11SHS361	Soil		13	0.31	293	0.096	2	1.69	0.014	0.20	<0.1	0.04	5.0	<0.1	<0.05	5	<0.5	<0.2
11SHS362	Soil		9	0.28	369	0.041	<1	1.15	0.015	0.18	<0.1	0.03	3.3	<0.1	<0.05	4	<0.5	<0.2
11SHS363	Soil		17	0.43	312	0.099	2	1.82	0.023	0.27	<0.1	0.02	6.5	<0.1	<0.05	6	<0.5	<0.2
11SHS364	Soil		15	0.36	305	0.091	<1	2.13	0.022	0.11	<0.1	0.03	4.9	<0.1	<0.05	6	0.5	<0.2
11SHS365	Soil		20	0.39	237	0.106	<1	1.94	0.019	0.13	<0.1	0.02	5.2	<0.1	<0.05	6	0.7	<0.2
11SHS366	Soil		45	0.83	144	0.013	<1	4.09	0.052	0.25	<0.1	0.03	11.3	<0.1	<0.05	10	<0.5	<0.2
11SHS367	Soil		11	0.31	101	0.088	1	1.56	0.017	0.19	<0.1	0.01	3.5	<0.1	<0.05	5	<0.5	<0.2
11SHS368	Soil		7	0.28	218	0.152	2	1.96	0.017	0.15	<0.1	<0.01	2.5	<0.1	<0.05	6	<0.5	<0.2
11SHS369	Soil		5	0.15	103	0.043	<1	1.67	0.030	0.11	<0.1	0.02	1.1	<0.1	<0.05	5	<0.5	<0.2
11SHS370	Soil		9	0.21	128	0.088	<1	1.98	0.019	0.09	<0.1	0.02	2.2	<0.1	<0.05	6	<0.5	<0.2
11SHS371	Soil		14	0.24	129	0.096	<1	1.19	0.017	0.10	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11SHS372	Soil		9	0.13	292	0.058	<1	0.94	0.017	0.11	<0.1	0.02	1.5	<0.1	<0.05	3	<0.5	<0.2
11SHS373	Soil		14	0.20	282	0.083	1	1.64	0.019	0.07	<0.1	0.05	4.0	<0.1	<0.05	5	<0.5	<0.2
11SHS374	Soil		9	0.16	297	0.063	2	1.60	0.019	0.10	<0.1	0.02	2.2	<0.1	<0.05	5	0.6	<0.2
11SHS375	Soil		9	0.16	261	0.060	<1	1.87	0.021	0.08	<0.1	0.02	2.2	<0.1	<0.05	6	<0.5	<0.2
11SHS376	Soil		10	0.17	391	0.059	<1	1.06	0.015	0.15	<0.1	0.03	2.3	<0.1	<0.05	3	<0.5	<0.2
11SHS377	Soil		8	0.23	168	0.041	1	1.46	0.015	0.09	<0.1	0.04	2.3	<0.1	<0.05	6	<0.5	<0.2
11SHS378	Soil		7	0.13	308	0.032	5	1.44	0.018	0.07	<0.1	0.04	1.9	<0.1	<0.05	4	0.8	<0.2

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
			0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	
11SHS379	Soil		0.8	12.5	6.7	74	<0.1	4.9	5.2	1123	1.70	1.8	<0.5	0.6	58	0.3	0.1	0.1	38	0.67	0.031	10
11SHS380	Soil		1.0	19.1	10.1	116	<0.1	5.8	6.8	1854	1.91	2.6	<0.5	0.5	52	0.5	0.2	0.1	38	0.75	0.057	12
11SHS381	Soil		0.6	29.1	7.3	70	0.1	7.7	6.4	893	1.95	3.7	0.8	1.0	121	0.3	0.3	0.1	43	1.15	0.053	17
11SHS382	Soil		0.7	21.6	14.7	262	<0.1	5.7	5.8	2907	2.22	6.9	<0.5	0.6	61	0.8	0.3	0.2	34	0.71	0.210	10
11SHS383	Soil		0.7	23.0	8.2	59	<0.1	7.6	8.0	699	2.33	4.3	0.8	1.1	86	0.2	0.3	0.1	55	0.81	0.035	13
11SHS384	Soil		0.8	25.0	6.1	92	<0.1	8.9	8.7	867	2.65	3.6	0.8	0.7	43	0.3	0.3	<0.1	76	0.56	0.081	8
11SHS385	Soil		0.8	17.2	7.3	65	<0.1	9.1	7.0	669	2.01	1.9	1.0	1.1	35	0.1	0.2	0.2	51	0.33	0.025	14
11SHS386	Soil		0.6	15.1	6.5	60	<0.1	8.6	7.2	527	2.55	3.1	<0.5	1.2	33	<0.1	0.3	0.2	65	0.25	0.053	8
11SHS387	Soil		0.3	18.5	5.0	26	<0.1	8.9	7.6	188	2.00	1.1	0.8	1.3	38	<0.1	0.1	0.1	41	0.73	0.011	11
11SHS388	Soil		1.2	19.1	6.6	68	<0.1	9.0	6.8	741	1.95	2.6	0.8	0.9	43	0.3	0.2	0.2	45	0.50	0.039	13
11SHS389	Soil		1.0	46.6	7.8	82	0.3	11.3	6.6	919	2.18	4.7	<0.5	0.9	78	0.3	0.2	0.1	40	0.98	0.062	40
11SHS390	Soil		0.6	31.5	7.7	67	0.1	7.7	6.8	789	2.04	3.0	<0.5	1.0	58	0.2	0.2	0.1	46	0.61	0.031	18
11SHS391	Soil		0.5	11.3	6.9	58	<0.1	6.9	5.7	509	2.09	2.9	3.1	1.2	31	0.1	0.2	0.1	51	0.53	0.019	9
11SHS392	Soil		0.7	4.8	6.0	58	<0.1	5.5	4.0	514	1.63	1.2	<0.5	0.7	15	<0.1	<0.1	<0.1	41	0.21	0.019	3
11SHS393	Soil		0.5	11.9	7.0	87	<0.1	7.1	5.6	775	2.12	3.3	<0.5	1.1	25	0.2	0.2	0.1	51	0.27	0.134	6
11SHS394	Soil		0.7	29.1	7.6	66	0.1	9.1	7.3	797	2.31	3.6	<0.5	1.0	53	0.3	0.3	0.1	53	0.82	0.038	18
11SHS395	Soil		0.3	10.5	4.6	98	<0.1	5.5	3.7	658	1.57	1.3	<0.5	0.8	22	0.3	<0.1	<0.1	43	0.22	0.034	4
11SHS396	Soil		1.0	16.8	6.1	68	<0.1	7.9	7.1	586	2.28	2.4	<0.5	1.1	33	0.2	0.2	<0.1	58	0.52	0.022	13
11SHS397	Soil		0.8	13.4	8.2	125	<0.1	6.2	5.4	787	2.06	3.3	0.6	0.8	38	0.5	0.2	<0.1	52	0.44	0.084	8
11SHS398	Soil		0.9	12.9	7.4	59	0.1	5.9	5.0	803	1.77	3.0	<0.5	1.1	38	0.3	0.2	0.1	42	0.65	0.032	21
11SHS399	Soil		1.0	13.5	7.5	59	0.1	5.9	5.1	820	1.79	3.4	<0.5	1.0	38	0.2	0.2	0.1	41	0.68	0.032	22
11SHS400	Soil		0.6	12.3	5.4	115	<0.1	7.4	5.8	894	2.14	2.6	<0.5	0.9	42	0.2	0.2	<0.1	60	0.39	0.065	6
11SHS401	Soil		0.5	10.8	5.8	84	<0.1	6.7	5.5	742	2.15	2.5	<0.5	1.1	42	0.2	0.2	<0.1	56	0.30	0.034	6
11SHS402	Soil		1.0	17.3	8.3	72	<0.1	7.0	6.4	914	1.96	3.7	<0.5	0.8	56	0.4	0.2	0.1	50	0.70	0.047	13
11SHS403	Soil		0.4	7.4	4.5	111	<0.1	6.3	3.7	434	1.65	1.8	<0.5	0.7	25	0.1	0.1	<0.1	42	0.20	0.048	3
11SHS404	Soil		0.6	10.8	10.3	134	<0.1	7.1	4.6	1713	1.65	2.5	1.0	0.7	38	0.5	0.2	0.1	37	0.46	0.088	6
11SHS405	Soil		1.1	10.9	6.6	98	<0.1	6.6	5.2	1082	2.12	3.2	<0.5	0.9	40	0.2	0.2	<0.1	59	0.35	0.049	7
11SHS406	Soil		0.4	5.7	4.4	116	<0.1	4.6	2.7	952	1.19	1.3	<0.5	0.5	26	0.1	<0.1	<0.1	30	0.30	0.056	3
11SHS407	Soil		0.6	8.4	5.2	61	<0.1	4.6	3.6	448	1.73	2.1	<0.5	0.8	32	0.1	0.2	<0.1	46	0.30	0.038	6
11SHS408	Soil		0.4	8.3	7.6	73	<0.1	6.2	4.2	459	1.76	2.9	<0.5	0.9	23	<0.1	0.1	0.1	40	0.27	0.118	6

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 24, 2011

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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
			ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
			1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11SHS379	Soil		8	0.15	298	0.045	3	1.44	0.018	0.14	<0.1	0.04	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS380	Soil		9	0.20	477	0.043	<1	1.83	0.013	0.18	<0.1	0.03	2.6	<0.1	<0.05	5	<0.5	<0.2
11SHS381	Soil		10	0.24	197	0.051	3	2.11	0.021	0.10	<0.1	0.05	3.9	<0.1	<0.05	5	0.9	<0.2
11SHS382	Soil		7	0.16	460	0.045	2	1.91	0.014	0.15	<0.1	0.03	1.7	<0.1	<0.05	6	0.5	<0.2
11SHS383	Soil		13	0.27	249	0.052	1	1.53	0.016	0.15	<0.1	0.04	4.3	<0.1	<0.05	5	<0.5	<0.2
11SHS384	Soil		18	0.33	182	0.088	1	1.51	0.018	0.15	<0.1	0.02	3.8	<0.1	<0.05	5	<0.5	<0.2
11SHS385	Soil		14	0.27	140	0.084	2	1.37	0.013	0.11	<0.1	0.03	3.3	<0.1	<0.05	4	<0.5	<0.2
11SHS386	Soil		16	0.33	86	0.076	2	1.71	0.016	0.10	<0.1	0.02	2.8	<0.1	<0.05	5	<0.5	<0.2
11SHS387	Soil		14	0.23	92	0.061	2	1.49	0.018	0.03	<0.1	0.03	3.4	<0.1	<0.05	4	<0.5	<0.2
11SHS388	Soil		14	0.24	118	0.075	3	1.55	0.012	0.16	<0.1	0.04	3.2	<0.1	<0.05	5	<0.5	<0.2
11SHS389	Soil		13	0.25	178	0.038	2	2.43	0.012	0.19	<0.1	0.08	4.8	<0.1	0.08	6	0.6	<0.2
11SHS390	Soil		11	0.22	162	0.068	2	1.89	0.018	0.13	<0.1	0.06	3.9	<0.1	<0.05	5	0.6	<0.2
11SHS391	Soil		11	0.19	221	0.078	2	1.74	0.017	0.06	<0.1	0.03	2.9	<0.1	<0.05	5	<0.5	<0.2
11SHS392	Soil		9	0.14	182	0.075	<1	1.42	0.013	0.08	<0.1	0.01	1.5	<0.1	<0.05	5	<0.5	<0.2
11SHS393	Soil		12	0.21	191	0.077	1	2.00	0.014	0.07	<0.1	0.02	2.1	<0.1	<0.05	6	<0.5	<0.2
11SHS394	Soil		14	0.26	161	0.061	3	1.67	0.012	0.17	<0.1	0.05	4.7	<0.1	<0.05	5	<0.5	<0.2
11SHS395	Soil		10	0.15	175	0.080	2	1.03	0.016	0.14	<0.1	0.01	2.0	<0.1	<0.05	4	<0.5	<0.2
11SHS396	Soil		15	0.23	165	0.089	2	1.42	0.015	0.09	<0.1	0.03	3.8	<0.1	<0.05	4	<0.5	<0.2
11SHS397	Soil		11	0.17	249	0.074	2	1.26	0.012	0.13	<0.1	0.03	2.3	<0.1	<0.05	4	<0.5	<0.2
11SHS398	Soil		10	0.17	130	0.068	2	1.41	0.014	0.11	<0.1	0.03	2.8	<0.1	<0.05	4	0.5	<0.2
11SHS399	Soil		10	0.17	130	0.070	2	1.49	0.014	0.11	<0.1	0.04	3.1	<0.1	<0.05	5	<0.5	<0.2
11SHS400	Soil		13	0.19	193	0.098	2	1.28	0.015	0.12	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11SHS401	Soil		12	0.20	167	0.096	2	1.30	0.014	0.15	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11SHS402	Soil		12	0.21	165	0.071	3	1.34	0.012	0.10	<0.1	0.05	2.8	<0.1	<0.05	4	<0.5	<0.2
11SHS403	Soil		10	0.13	155	0.082	1	1.07	0.015	0.08	<0.1	0.01	1.5	<0.1	<0.05	4	<0.5	<0.2
11SHS404	Soil		10	0.15	335	0.053	2	1.73	0.014	0.08	<0.1	0.05	1.9	<0.1	<0.05	6	<0.5	<0.2
11SHS405	Soil		13	0.19	197	0.082	2	1.07	0.012	0.10	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11SHS406	Soil		6	0.08	213	0.054	2	0.96	0.020	0.10	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
11SHS407	Soil		10	0.14	150	0.087	2	0.92	0.014	0.14	<0.1	0.02	2.4	<0.1	<0.05	3	<0.5	<0.2
11SHS408	Soil		9	0.18	154	0.065	2	2.07	0.018	0.07	<0.1	0.04	1.7	<0.1	<0.05	7	<0.5	<0.2



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Project: Shovelnose
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CERTIFICATE OF ANALYSIS

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11SHS409	Soil	0.5	6.2	7.1	121	<0.1	4.3	2.9	1033	1.20	2.1	<0.5	0.7	46	0.3	<0.1	<0.1	26	0.51	0.069	7
11SHS410	Soil	0.4	5.0	6.3	97	<0.1	3.6	2.7	406	1.36	1.7	<0.5	0.8	24	<0.1	0.1	<0.1	33	0.19	0.021	5
11SHS411	Soil	0.5	5.5	7.9	80	<0.1	3.5	3.4	698	1.60	1.8	<0.5	1.1	82	0.2	0.1	<0.1	34	0.32	0.021	10
11SHS412	Soil	0.8	6.7	5.5	33	<0.1	4.4	4.1	605	1.54	2.3	<0.5	0.6	32	<0.1	<0.1	0.1	40	0.30	0.021	6
11SHS413	Soil	0.7	8.1	6.1	50	<0.1	5.7	4.4	515	1.76	2.3	1607	0.9	33	<0.1	0.2	0.1	43	0.37	0.015	6
11SHS414	Soil	0.8	10.6	7.0	66	<0.1	6.1	6.2	1231	1.91	3.4	1.2	1.1	42	0.2	0.2	<0.1	49	0.39	0.052	7
11SHS415	Soil	0.6	19.2	6.2	97	0.1	11.9	6.9	855	2.42	2.7	<0.5	1.3	52	<0.1	0.2	0.1	61	0.47	0.101	11
11SHS416	Soil	0.6	19.7	6.1	52	<0.1	14.6	8.2	302	2.90	3.0	0.9	1.4	57	<0.1	0.3	<0.1	80	0.37	0.037	8
11SHS417	Soil	0.7	17.7	7.7	89	<0.1	8.8	7.3	1048	2.38	3.8	0.7	1.2	49	0.2	0.2	0.1	60	0.35	0.081	11
11SHS418	Soil	0.6	12.4	6.9	90	<0.1	7.5	5.9	558	2.38	2.0	13.7	1.2	30	0.1	0.2	0.1	61	0.26	0.048	8



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CERTIFICATE OF ANALYSIS

VAN11004494.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
11SHS409	Soil	6	0.12	217	0.061	4	1.34	0.017	0.17	<0.1	0.03	1.5	<0.1	<0.05	5	<0.5	<0.2
11SHS410	Soil	7	0.11	119	0.092	<1	1.05	0.018	0.10	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
11SHS411	Soil	8	0.17	153	0.122	1	1.54	0.021	0.25	<0.1	0.02	2.9	<0.1	<0.05	5	<0.5	<0.2
11SHS412	Soil	9	0.13	103	0.075	2	1.20	0.014	0.09	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11SHS413	Soil	10	0.16	162	0.082	2	1.41	0.017	0.10	<0.1	0.03	2.2	<0.1	<0.05	5	<0.5	<0.2
11SHS414	Soil	12	0.19	183	0.084	2	1.16	0.013	0.13	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11SHS415	Soil	20	0.30	193	0.089	1	1.91	0.016	0.13	<0.1	0.02	3.7	<0.1	<0.05	6	<0.5	<0.2
11SHS416	Soil	25	0.39	134	0.134	1	1.38	0.013	0.10	<0.1	0.02	4.0	<0.1	<0.05	5	<0.5	<0.2
11SHS417	Soil	15	0.29	201	0.072	1	1.92	0.011	0.10	<0.1	0.03	3.6	<0.1	<0.05	6	<0.5	<0.2
11SHS418	Soil	14	0.22	171	0.088	2	1.88	0.014	0.09	<0.1	0.02	2.9	<0.1	<0.05	6	<0.5	<0.2



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QUALITY CONTROL REPORT

VAN11004494.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Pulp Duplicates																					
11DRS049	Soil	0.9	10.8	6.8	78	<0.1	6.3	5.6	927	1.82	2.4	<0.5	0.8	53	0.2	0.2	0.1	47	0.43	0.051	6
REP 11DRS049	QC	0.8	10.8	7.0	83	<0.1	6.5	5.9	951	1.88	2.6	<0.5	0.7	55	0.2	0.2	0.1	49	0.46	0.054	6
11DRS058	Soil	0.5	9.9	8.5	82	<0.1	5.1	6.0	963	2.06	2.4	<0.5	1.3	53	0.2	0.2	0.1	46	0.29	0.100	6
REP 11DRS058	QC	0.4	9.8	8.9	83	<0.1	5.0	5.8	937	2.05	2.4	0.8	1.4	52	0.2	0.2	0.1	45	0.29	0.099	6
11DRS087	Soil	0.6	31.3	20.5	46	<0.1	10.1	8.5	479	2.60	5.0	1.9	1.5	66	0.1	0.3	<0.1	71	0.59	0.053	11
REP 11DRS087	QC	0.5	29.7	21.0	44	<0.1	10.0	8.1	455	2.47	4.7	1.8	1.5	63	0.1	0.3	<0.1	67	0.57	0.051	11
11DRS104	Soil	0.4	9.5	6.6	47	<0.1	5.4	5.8	949	1.98	1.9	1.2	0.7	39	0.1	0.2	<0.1	56	0.39	0.015	4
REP 11DRS104	QC	0.4	9.6	6.4	49	<0.1	5.7	5.9	976	2.02	2.0	0.5	0.7	40	<0.1	0.2	<0.1	58	0.41	0.015	4
11DRS121	Soil	0.7	13.2	6.3	61	<0.1	6.7	5.8	516	2.20	2.6	0.9	1.0	59	0.1	0.2	<0.1	58	0.44	0.031	6
REP 11DRS121	QC	0.7	13.1	6.3	61	<0.1	6.8	5.9	510	2.16	2.6	<0.5	1.0	60	0.1	0.2	<0.1	58	0.43	0.029	7
11DRS136	Soil	1.0	10.8	9.3	102	<0.1	8.3	6.7	2253	2.10	3.7	<0.5	1.4	24	0.2	0.2	0.1	49	0.24	0.090	12
REP 11DRS136	QC	1.0	11.2	9.7	104	0.1	9.2	6.6	2283	2.09	3.5	1.2	1.5	24	0.2	0.2	0.1	49	0.23	0.089	11
11SHS285	Soil	0.7	16.1	7.1	57	0.1	8.0	6.5	645	2.25	3.3	<0.5	1.0	46	0.2	0.3	<0.1	61	0.55	0.032	11
REP 11SHS285	QC	0.7	16.4	6.8	56	0.1	7.8	6.1	647	2.24	3.5	<0.5	1.0	45	0.2	0.3	<0.1	60	0.55	0.033	11
11SHS302	Soil	0.4	12.9	5.8	66	<0.1	7.1	5.6	482	2.44	2.6	<0.5	0.9	40	<0.1	0.2	<0.1	69	0.30	0.039	4
REP 11SHS302	QC	0.5	12.3	5.9	63	<0.1	6.7	5.6	470	2.44	2.5	<0.5	1.1	37	<0.1	0.2	<0.1	70	0.31	0.040	4
11SHS323	Soil	0.5	10.8	4.7	57	<0.1	6.2	5.1	475	2.10	1.5	9.7	0.7	32	<0.1	0.2	<0.1	59	0.27	0.042	3
REP 11SHS323	QC	0.5	10.5	4.6	55	<0.1	5.9	5.2	470	2.09	1.7	9.4	0.7	32	<0.1	0.2	<0.1	58	0.27	0.041	3
11SHS340	Soil	0.4	12.7	5.0	46	<0.1	7.4	5.3	250	2.56	2.7	1.7	1.3	45	<0.1	0.3	<0.1	74	0.30	0.038	5
REP 11SHS340	QC	0.4	12.9	4.9	45	<0.1	8.2	5.4	246	2.55	2.5	1.3	1.2	45	<0.1	0.3	<0.1	76	0.30	0.037	5
11SHS353	Soil	0.7	22.5	5.5	62	<0.1	8.6	10.6	781	2.71	4.1	<0.5	0.7	47	0.1	0.2	<0.1	74	0.50	0.058	10
REP 11SHS353	QC	0.8	22.7	5.5	61	<0.1	8.7	10.1	794	2.70	3.8	<0.5	0.7	47	0.2	0.2	<0.1	75	0.52	0.062	10
11SHS368	Soil	0.3	6.2	6.0	58	<0.1	4.4	4.9	345	2.08	1.4	0.7	1.2	37	<0.1	0.1	<0.1	42	0.33	0.022	8
REP 11SHS368	QC	0.2	6.1	6.6	57	<0.1	4.5	4.8	353	2.05	1.4	<0.5	1.2	37	<0.1	0.1	0.1	41	0.33	0.022	8
11SHS393	Soil	0.5	11.9	7.0	87	<0.1	7.1	5.6	775	2.12	3.3	<0.5	1.1	25	0.2	0.2	0.1	51	0.27	0.134	6
REP 11SHS393	QC	0.6	11.5	6.7	87	<0.1	7.4	5.8	759	2.12	3.3	<0.5	1.0	25	0.1	0.2	0.1	52	0.26	0.136	6
11SHS410	Soil	0.4	5.0	6.3	97	<0.1	3.6	2.7	406	1.36	1.7	<0.5	0.8	24	<0.1	0.1	<0.1	33	0.19	0.021	5
REP 11SHS410	QC	0.4	4.7	6.1	96	<0.1	3.4	2.7	391	1.33	1.8	<0.5	0.8	23	<0.1	0.1	<0.1	33	0.18	0.020	4

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Acme Analytical Laboratories (Vancouver) Ltd.

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Client: **Westhaven Ventures Inc.**
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 24, 2011

Page: 1 of 2 Part 2

QUALITY CONTROL REPORT

VAN11004494.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																	
11DRS049	Soil	10	0.21	190	0.069	2	1.47	0.019	0.11	<0.1	0.05	2.0	<0.1	<0.05	5	0.6	<0.2
REP 11DRS049	QC	10	0.22	193	0.074	3	1.55	0.017	0.12	<0.1	0.04	2.2	<0.1	<0.05	5	0.8	<0.2
11DRS058	Soil	8	0.22	194	0.116	1	2.03	0.019	0.09	<0.1	0.02	2.7	<0.1	<0.05	7	<0.5	<0.2
REP 11DRS058	QC	8	0.22	194	0.114	1	2.09	0.019	0.09	<0.1	0.02	2.6	<0.1	<0.05	7	0.5	<0.2
11DRS087	Soil	18	0.43	140	0.061	2	1.35	0.017	0.11	<0.1	0.05	5.9	<0.1	<0.05	4	<0.5	<0.2
REP 11DRS087	QC	17	0.42	138	0.058	2	1.29	0.017	0.11	<0.1	0.05	5.7	<0.1	<0.05	4	<0.5	<0.2
11DRS104	Soil	10	0.18	211	0.066	2	0.96	0.010	0.11	<0.1	0.02	2.0	<0.1	<0.05	3	<0.5	<0.2
REP 11DRS104	QC	11	0.18	210	0.067	2	1.02	0.010	0.11	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11DRS121	Soil	13	0.22	158	0.085	1	1.30	0.020	0.12	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
REP 11DRS121	QC	13	0.23	154	0.087	3	1.27	0.017	0.11	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11DRS136	Soil	12	0.21	206	0.065	<1	2.45	0.027	0.09	<0.1	0.03	2.6	0.2	<0.05	7	<0.5	<0.2
REP 11DRS136	QC	13	0.22	217	0.066	2	2.47	0.022	0.08	<0.1	0.03	2.5	0.1	<0.05	7	<0.5	<0.2
11SHS285	Soil	14	0.24	163	0.080	2	1.25	0.016	0.12	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS285	QC	14	0.25	159	0.083	2	1.30	0.016	0.13	<0.1	0.03	3.2	<0.1	<0.05	4	<0.5	<0.2
11SHS302	Soil	14	0.21	187	0.094	2	1.40	0.019	0.15	0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS302	QC	14	0.21	184	0.096	2	1.38	0.018	0.15	<0.1	0.10	2.9	<0.1	<0.05	4	<0.5	<0.2
11SHS323	Soil	12	0.23	138	0.098	2	1.34	0.019	0.07	<0.1	0.02	2.3	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS323	QC	12	0.22	140	0.102	1	1.31	0.016	0.08	<0.1	0.04	2.3	<0.1	<0.05	4	<0.5	<0.2
11SHS340	Soil	17	0.29	121	0.119	1	1.05	0.014	0.12	<0.1	<0.01	3.1	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS340	QC	17	0.29	123	0.120	<1	1.04	0.012	0.12	<0.1	<0.01	3.2	<0.1	<0.05	4	<0.5	<0.2
11SHS353	Soil	16	0.33	169	0.056	4	1.42	0.015	0.25	<0.1	0.02	4.7	<0.1	<0.05	4	<0.5	<0.2
REP 11SHS353	QC	16	0.33	169	0.057	2	1.44	0.015	0.26	<0.1	0.02	4.9	<0.1	<0.05	4	<0.5	<0.2
11SHS368	Soil	7	0.28	218	0.152	2	1.96	0.017	0.15	<0.1	<0.01	2.5	<0.1	<0.05	6	<0.5	<0.2
REP 11SHS368	QC	7	0.27	220	0.150	<1	1.98	0.018	0.16	<0.1	0.01	2.6	<0.1	<0.05	6	<0.5	<0.2
11SHS393	Soil	12	0.21	191	0.077	1	2.00	0.014	0.07	<0.1	0.02	2.1	<0.1	<0.05	6	<0.5	<0.2
REP 11SHS393	QC	12	0.21	189	0.082	2	1.97	0.012	0.07	<0.1	0.03	2.0	<0.1	<0.05	6	<0.5	<0.2
11SHS410	Soil	7	0.11	119	0.092	<1	1.05	0.018	0.10	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2
REP 11SHS410	QC	7	0.11	120	0.092	2	1.01	0.018	0.10	<0.1	0.01	1.7	<0.1	<0.05	3	<0.5	<0.2



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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 24, 2011

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QUALITY CONTROL REPORT

VAN11004494.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Reference Materials																					
STD DS8	Standard	12.0	109.6	115.4	313	1.8	36.4	7.4	597	2.40	25.4	111.6	6.3	66	2.4	5.5	6.3	41	0.68	0.078	14
STD DS8	Standard	13.0	104.1	123.5	311	1.8	35.8	7.1	605	2.36	24.6	108.6	7.0	75	2.4	5.5	6.7	41	0.68	0.075	17
STD DS8	Standard	12.9	107.6	129.7	309	1.8	37.4	7.4	614	2.47	25.5	112.8	7.0	71	2.3	5.8	6.9	42	0.71	0.079	17
STD DS8	Standard	14.1	114.5	121.9	319	1.8	39.7	8.1	642	2.59	27.1	114.1	8.0	79	2.5	6.3	7.3	45	0.77	0.087	19
STD DS8	Standard	12.8	108.8	117.0	300	1.8	36.6	7.4	596	2.35	24.4	111.5	7.1	77	2.3	5.9	6.5	41	0.69	0.078	16
STD DS8	Standard	11.7	100.0	118.8	289	1.7	35.4	7.0	573	2.29	23.7	112.6	6.8	72	2.2	5.7	6.5	38	0.66	0.075	15
STD DS8	Standard	13.7	114.2	129.5	315	1.9	39.2	7.7	629	2.49	25.6	118.2	7.4	75	2.1	6.1	7.2	44	0.72	0.078	17
STD DS8	Standard	12.6	104.0	119.9	277	1.7	35.5	6.9	543	2.18	23.0	123.1	6.8	60	2.3	4.9	6.1	40	0.62	0.064	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



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Project: Shovelnose
 Report Date: November 24, 2011

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QUALITY CONTROL REPORT

VAN11004494.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																	
STD DS8	Standard	115	0.61	288	0.112	3	0.97	0.117	0.46	3.1	0.21	2.5	5.3	0.16	5	5.0	4.6
STD DS8	Standard	114	0.60	282	0.117	2	0.96	0.128	0.44	2.9	0.19	2.8	5.4	0.14	5	4.9	4.2
STD DS8	Standard	115	0.60	284	0.123	3	0.93	0.100	0.43	3.0	0.20	2.8	5.7	0.13	5	5.1	4.9
STD DS8	Standard	122	0.71	305	0.128	2	1.07	0.112	0.46	3.1	0.22	2.9	5.4	0.15	5	5.5	5.1
STD DS8	Standard	114	0.65	270	0.118	3	0.96	0.102	0.43	2.9	0.19	3.0	5.0	0.13	5	5.1	4.6
STD DS8	Standard	109	0.58	270	0.119	3	0.90	0.098	0.41	2.9	0.18	2.3	5.2	0.14	5	4.9	4.9
STD DS8	Standard	120	0.64	287	0.123	<1	1.00	0.104	0.44	3.1	0.20	2.5	5.4	0.14	5	5.4	4.7
STD DS8	Standard	109	0.54	249	0.115	2	0.82	0.083	0.36	2.8	0.19	2.3	5.2	0.14	4	4.6	4.7
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



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Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: September 06, 2011
Report Date: November 26, 2011
Page: 1 of 10

CERTIFICATE OF ANALYSIS

VAN11004495.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 4
P.O. Number
Number of Samples: 264

SAMPLE DISPOSAL

RTRN-PLP Return

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	264	Dry at 60C			VAN
SS80	264	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	264	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

VAN11004495.1

Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	
11LMS046	Soil	0.4	5.3	5.2	54	<0.1	4.9	3.5	403	1.53	1.3	<0.5	0.7	20	<0.1	0.1	0.1	37	0.19	0.031	4
11LMS047	Soil	0.3	6.9	12.9	132	<0.1	4.3	3.6	766	1.48	2.2	<0.5	0.8	23	0.4	<0.1	0.1	33	0.22	0.159	4
11LMS048	Soil	0.5	20.9	5.4	56	<0.1	11.3	6.9	273	3.01	4.5	<0.5	1.6	42	<0.1	0.3	0.1	87	0.33	0.048	6
11LMS049	Soil	0.4	26.4	7.0	54	0.1	7.8	6.2	391	2.02	4.6	0.6	0.9	73	0.2	0.2	<0.1	49	0.74	0.055	18
11LMS050	Soil	1.0	20.0	18.6	103	0.2	7.3	8.9	1554	2.37	8.5	<0.5	0.4	40	0.5	0.3	0.2	54	0.50	0.094	9
11LMS051	Soil	1.1	20.7	18.2	100	0.1	6.9	8.7	1538	2.35	8.3	<0.5	0.5	38	0.4	0.3	0.2	53	0.50	0.093	9
11LMS052	Soil	0.5	19.6	9.7	67	<0.1	7.1	6.2	1146	2.04	3.2	<0.5	1.6	45	0.3	0.2	0.1	45	0.56	0.023	42
11LMS053	Soil	0.7	12.1	6.7	69	<0.1	5.0	4.8	864	1.96	2.7	<0.5	0.6	40	0.2	0.2	<0.1	53	0.42	0.038	6
11LMS054	Soil	0.9	10.7	8.5	50	<0.1	5.2	4.8	1141	1.76	3.2	<0.5	0.8	53	0.1	0.2	<0.1	46	0.55	0.024	12
11LMS055	Soil	0.6	9.1	7.3	127	<0.1	7.9	5.6	1006	1.99	3.0	<0.5	0.7	31	0.2	0.2	<0.1	46	0.26	0.140	6
11LMS056	Soil	0.4	8.2	5.3	62	<0.1	5.4	4.7	618	1.89	2.3	<0.5	0.7	30	0.1	0.2	<0.1	49	0.31	0.027	5
11LMS057	Soil	0.6	7.5	4.8	40	<0.1	4.1	4.2	388	1.64	2.3	<0.5	0.6	55	<0.1	0.1	<0.1	43	0.28	0.018	6
11LMS058	Soil	0.4	6.2	7.1	100	<0.1	3.8	3.4	765	1.51	1.8	1.3	0.8	31	0.2	0.2	<0.1	34	0.31	0.036	6
11LMS059	Soil	0.4	11.4	4.5	103	<0.1	7.1	5.0	776	2.10	1.6	<0.5	0.8	30	0.2	0.2	<0.1	62	0.30	0.032	4
11LMS061	Soil	0.4	11.4	6.4	105	0.1	5.9	5.6	531	2.03	2.3	<0.5	0.9	22	0.2	0.2	<0.1	50	0.21	0.098	4
11LMS062	Soil	0.5	10.1	5.9	50	<0.1	5.1	5.3	435	2.27	2.0	<0.5	0.9	33	<0.1	0.3	<0.1	64	0.28	0.020	4
11LMS063	Soil	0.4	9.5	5.2	58	<0.1	4.7	5.4	496	1.97	1.6	<0.5	0.6	31	0.1	0.2	<0.1	53	0.35	0.029	4
11LMS064	Soil	0.5	11.7	5.7	60	<0.1	5.5	5.4	319	2.19	1.6	<0.5	0.9	27	<0.1	0.2	<0.1	63	0.22	0.034	7
11LMS065	Soil	0.3	15.3	4.0	53	<0.1	13.6	7.9	245	1.86	2.5	<0.5	0.7	30	0.1	<0.1	<0.1	45	0.44	0.033	5
11LMS066	Soil	0.6	13.3	6.5	46	<0.1	6.8	6.7	559	2.03	1.7	<0.5	0.8	38	0.2	0.2	<0.1	50	0.61	0.019	7
11LMS067	Soil	0.5	19.1	6.8	53	<0.1	7.1	6.8	745	2.16	3.2	<0.5	0.8	59	0.2	0.2	<0.1	51	1.01	0.032	9
11LMS068	Soil	0.4	17.3	4.1	59	<0.1	18.9	9.3	357	3.09	3.4	<0.5	1.0	48	<0.1	0.2	<0.1	82	0.41	0.044	7
11LMS069	Soil	1.3	17.3	7.1	89	<0.1	8.0	9.1	1307	2.24	4.5	<0.5	0.5	47	0.2	0.2	0.1	58	0.51	0.148	7
11LMS070	Soil	0.6	14.8	5.3	50	<0.1	6.9	7.4	675	2.39	2.5	<0.5	0.9	49	0.1	0.2	<0.1	69	0.50	0.024	6
11LMS071	Soil	0.5	5.4	5.4	80	<0.1	4.6	3.4	578	1.61	1.6	<0.5	0.8	19	0.2	0.1	<0.1	43	0.20	0.020	4
11LMS072	Soil	0.4	6.1	5.8	90	<0.1	4.5	3.6	524	1.64	1.0	<0.5	0.8	16	<0.1	0.1	<0.1	43	0.17	0.034	4
11LMS073	Soil	0.6	8.7	18.2	122	<0.1	5.4	5.5	1396	2.31	3.0	<0.5	1.3	37	0.3	0.2	0.1	61	0.33	0.041	10
11LMS074	Soil	1.2	7.5	7.0	100	<0.1	3.6	3.0	1301	1.31	1.8	1.8	0.3	35	0.2	0.1	<0.1	31	0.46	0.041	4
11LMS075	Soil	0.5	11.9	7.2	73	<0.1	6.4	6.2	644	2.97	3.7	106.9	1.0	31	0.1	0.3	0.1	93	0.24	0.050	5
11LMS076	Soil	0.6	17.6	7.8	74	0.1	8.3	6.2	880	2.22	3.8	<0.5	0.8	45	0.1	0.2	0.1	50	0.46	0.039	10

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 26, 2011

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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
11LMS046	Soil	8	0.16	100	0.060	1	1.31	0.013	0.06	<0.1	0.01	1.5	<0.1	<0.05	5	<0.5	<0.2
11LMS047	Soil	6	0.14	160	0.079	1	1.58	0.020	0.06	<0.1	0.02	1.5	<0.1	<0.05	6	<0.5	<0.2
11LMS048	Soil	22	0.35	165	0.139	2	1.34	0.035	0.16	<0.1	0.02	5.5	<0.1	<0.05	4	<0.5	<0.2
11LMS049	Soil	15	0.29	217	0.039	2	1.93	0.024	0.10	<0.1	0.09	5.9	<0.1	<0.05	5	<0.5	<0.2
11LMS050	Soil	13	0.24	210	0.056	2	1.44	0.013	0.10	<0.1	0.04	2.3	<0.1	<0.05	5	<0.5	<0.2
11LMS051	Soil	13	0.25	212	0.051	2	1.40	0.012	0.10	<0.1	0.04	2.2	<0.1	<0.05	5	<0.5	<0.2
11LMS052	Soil	11	0.23	149	0.063	2	1.58	0.016	0.17	<0.1	0.03	4.0	<0.1	<0.05	5	<0.5	<0.2
11LMS053	Soil	11	0.16	181	0.081	3	0.86	0.012	0.12	<0.1	0.04	2.2	<0.1	<0.05	3	<0.5	<0.2
11LMS054	Soil	10	0.18	164	0.079	2	1.13	0.015	0.09	<0.1	0.05	2.7	<0.1	<0.05	4	<0.5	<0.2
11LMS055	Soil	12	0.22	163	0.057	1	1.85	0.014	0.08	<0.1	0.03	1.8	<0.1	<0.05	6	<0.5	<0.2
11LMS056	Soil	11	0.19	123	0.073	1	1.14	0.015	0.07	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11LMS057	Soil	9	0.18	87	0.075	1	1.02	0.014	0.13	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11LMS058	Soil	7	0.12	130	0.061	2	1.12	0.020	0.15	<0.1	0.03	1.5	<0.1	<0.05	4	<0.5	<0.2
11LMS059	Soil	14	0.21	154	0.107	2	1.11	0.016	0.09	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11LMS061	Soil	11	0.19	153	0.072	2	1.27	0.015	0.06	<0.1	0.03	2.4	<0.1	<0.05	4	<0.5	<0.2
11LMS062	Soil	12	0.18	140	0.092	1	0.91	0.015	0.11	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11LMS063	Soil	10	0.16	159	0.060	2	1.03	0.017	0.07	<0.1	0.02	1.9	<0.1	<0.05	3	<0.5	<0.2
11LMS064	Soil	12	0.20	116	0.081	1	0.93	0.013	0.06	<0.1	0.02	2.6	<0.1	<0.05	3	<0.5	<0.2
11LMS065	Soil	14	0.30	115	0.109	2	1.95	0.019	0.05	<0.1	0.03	3.0	<0.1	<0.05	6	<0.5	<0.2
11LMS066	Soil	16	0.22	142	0.072	2	1.29	0.016	0.13	<0.1	0.04	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS067	Soil	14	0.27	133	0.079	3	1.69	0.022	0.08	<0.1	0.07	3.9	<0.1	<0.05	5	<0.5	<0.2
11LMS068	Soil	33	0.59	113	0.102	1	1.97	0.026	0.14	<0.1	0.03	6.1	<0.1	<0.05	6	<0.5	<0.2
11LMS069	Soil	15	0.26	213	0.063	2	2.10	0.010	0.16	<0.1	0.04	3.0	<0.1	<0.05	6	<0.5	<0.2
11LMS070	Soil	14	0.23	161	0.113	2	1.32	0.021	0.11	<0.1	0.03	3.6	<0.1	<0.05	4	<0.5	<0.2
11LMS071	Soil	8	0.13	220	0.084	1	1.28	0.018	0.10	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11LMS072	Soil	8	0.14	206	0.074	<1	1.11	0.015	0.07	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11LMS073	Soil	12	0.24	199	0.119	2	1.62	0.015	0.17	<0.1	0.02	3.6	<0.1	<0.05	5	<0.5	<0.2
11LMS074	Soil	6	0.12	217	0.058	2	1.02	0.015	0.07	<0.1	0.06	1.3	<0.1	<0.05	4	<0.5	<0.2
11LMS075	Soil	16	0.20	124	0.105	1	1.08	0.012	0.11	<0.1	0.03	2.7	<0.1	<0.05	4	<0.5	<0.2
11LMS076	Soil	14	0.27	168	0.058	<1	1.98	0.017	0.08	<0.1	0.10	4.3	<0.1	<0.05	6	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
				ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm		
				0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1
11LMS077	Soil			0.6	12.4	6.3	69	<0.1	9.5	6.1	600	2.14	2.0	<0.5	0.8	40	0.1	0.2	<0.1	54	0.28	0.047	5
11LMS078	Soil			0.5	7.9	5.2	92	<0.1	5.1	4.4	787	1.68	1.5	1.4	0.7	23	0.1	0.2	<0.1	44	0.25	0.066	3
11LMS079	Soil			0.8	17.6	8.0	85	<0.1	6.2	6.7	923	2.07	4.0	<0.5	0.4	49	0.3	0.2	<0.1	50	0.50	0.059	9
11LMS080	Soil			0.7	25.7	6.5	59	0.2	8.0	5.8	731	1.75	3.8	<0.5	0.7	61	0.2	0.2	<0.1	41	0.81	0.035	18
11LMS081	Soil			0.6	12.8	5.8	90	<0.1	4.8	4.1	1037	1.83	2.4	<0.5	0.6	43	0.2	0.2	<0.1	53	0.46	0.072	4
11LMS082	Soil			0.7	11.3	5.3	64	<0.1	5.5	4.6	727	1.78	2.2	<0.5	0.9	30	0.1	0.1	<0.1	46	0.21	0.063	5
11LMS083	Soil			0.4	10.4	6.0	62	<0.1	5.4	4.4	545	1.88	2.7	0.8	1.1	36	0.1	0.2	0.1	55	0.20	0.029	5
11LMS084	Soil			0.4	7.6	4.4	67	<0.1	5.3	3.9	384	1.65	2.3	0.8	0.7	40	0.1	0.1	<0.1	48	0.22	0.073	3
11LMS085	Soil			0.5	13.1	5.7	62	<0.1	8.0	6.0	339	2.13	2.2	0.5	1.3	33	0.1	0.2	0.1	55	0.35	0.032	7
11LMS086	Soil			0.8	14.4	6.2	98	<0.1	8.0	6.4	1415	2.15	3.8	0.8	0.9	46	0.3	0.2	0.1	57	0.41	0.058	7
11LMS087	Soil			0.6	18.2	9.8	99	<0.1	6.3	8.5	1312	2.42	5.8	<0.5	1.2	50	0.4	0.3	0.1	59	0.61	0.092	13
11LMS088	Soil			0.6	12.0	4.9	69	<0.1	6.1	6.4	670	2.13	2.2	0.6	0.7	30	0.1	0.2	<0.1	63	0.25	0.059	3
11LMS089	Soil			0.3	81.4	6.3	51	0.2	26.0	9.8	527	2.93	5.3	0.9	1.6	78	0.3	0.2	0.1	60	0.91	0.061	11
11LMS090	Soil			0.6	21.7	8.5	86	<0.1	10.0	7.2	461	2.67	4.4	1.0	1.5	24	0.1	0.2	0.1	73	0.21	0.170	7
11LMS091	Soil			0.5	51.0	4.1	79	<0.1	89.4	27.2	714	4.84	4.7	1.1	1.8	73	<0.1	0.1	<0.1	100	0.97	0.087	10
11LMS092	Soil			0.5	13.2	6.3	212	<0.1	7.5	6.0	358	2.29	2.8	<0.5	0.8	31	0.5	0.2	<0.1	69	0.25	0.039	4
11LMS093	Soil			0.3	7.6	4.9	65	<0.1	5.3	4.3	593	1.67	2.9	<0.5	0.6	30	0.1	<0.1	<0.1	45	0.25	0.048	3
11LMS094	Soil			0.4	6.6	5.8	54	<0.1	2.3	2.4	385	1.47	3.8	<0.5	1.1	14	<0.1	0.1	0.1	27	0.21	0.036	8
11LMS095	Soil			0.4	15.3	5.6	67	<0.1	10.4	7.3	467	2.46	3.1	<0.5	1.1	51	0.3	0.2	0.1	69	0.50	0.034	7
11LMS098	Soil			0.3	10.4	5.0	72	<0.1	6.3	5.2	581	2.06	2.5	<0.5	0.9	39	0.2	0.2	<0.1	56	0.33	0.041	4
11LMS099	Soil			0.6	69.9	8.8	122	0.6	11.5	6.7	1136	2.29	5.3	1.0	1.5	186	0.9	0.3	0.4	38	1.47	0.048	38
11LMS100	Soil			0.6	14.7	6.0	69	<0.1	5.9	6.9	752	2.16	3.4	0.7	0.8	30	0.2	0.2	<0.1	61	0.27	0.055	5
11LMS101	Soil			0.5	19.3	7.0	60	<0.1	7.2	7.6	628	2.45	4.6	0.9	1.1	52	0.1	0.3	<0.1	67	0.45	0.051	10
11LMS102	Soil			0.4	9.6	4.3	60	<0.1	3.8	4.0	354	1.98	2.5	<0.5	0.8	25	<0.1	0.2	<0.1	58	0.23	0.024	4
11LMS103	Soil			0.4	9.6	4.3	59	<0.1	3.9	4.2	361	2.00	2.4	<0.5	0.8	25	<0.1	0.2	<0.1	60	0.24	0.025	4
11LMS104	Soil			0.5	13.4	6.1	60	<0.1	5.7	5.9	352	2.36	4.0	<0.5	1.1	30	<0.1	0.3	<0.1	69	0.25	0.052	5
11LMS105	Soil			0.7	8.5	6.9	66	<0.1	4.0	4.1	691	1.66	2.2	6.2	0.7	45	<0.1	0.2	<0.1	43	0.24	0.028	4
11LMS106	Soil			0.4	16.3	4.8	78	<0.1	8.8	6.2	359	2.47	2.7	<0.5	1.0	31	0.1	0.2	<0.1	79	0.30	0.061	4
11LMS107	Soil			0.7	10.7	5.2	100	<0.1	6.9	4.7	919	1.72	2.4	0.6	0.8	35	0.2	0.1	<0.1	48	0.32	0.058	4
11LMS108	Soil			0.3	6.4	4.4	82	<0.1	4.8	3.2	361	1.49	1.7	0.5	0.7	22	<0.1	0.1	<0.1	40	0.14	0.039	3

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Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
11LMS077	Soil	16	0.24	156	0.102	1	1.26	0.016	0.10	<0.1	0.03	2.5	<0.1	<0.05	4	<0.5	<0.2
11LMS078	Soil	10	0.17	161	0.080	<1	1.10	0.017	0.09	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11LMS079	Soil	11	0.22	157	0.055	2	1.13	0.012	0.13	<0.1	0.04	2.2	<0.1	<0.05	3	<0.5	<0.2
11LMS080	Soil	12	0.24	111	0.055	2	1.40	0.019	0.09	<0.1	0.05	3.4	<0.1	<0.05	4	<0.5	<0.2
11LMS081	Soil	11	0.15	191	0.082	4	0.95	0.024	0.13	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11LMS082	Soil	11	0.15	143	0.082	1	1.33	0.018	0.19	<0.1	0.01	2.4	<0.1	<0.05	4	<0.5	<0.2
11LMS083	Soil	11	0.19	153	0.106	2	0.95	0.021	0.08	<0.1	<0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11LMS084	Soil	11	0.18	147	0.085	2	1.15	0.016	0.08	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11LMS085	Soil	14	0.26	74	0.104	3	1.31	0.023	0.17	<0.1	0.02	3.5	<0.1	<0.05	5	<0.5	<0.2
11LMS086	Soil	13	0.27	157	0.098	3	1.28	0.015	0.18	<0.1	0.03	3.4	<0.1	<0.05	5	<0.5	<0.2
11LMS087	Soil	11	0.28	244	0.091	2	1.75	0.017	0.16	<0.1	0.03	5.2	<0.1	<0.05	7	<0.5	<0.2
11LMS088	Soil	12	0.24	193	0.101	2	1.37	0.017	0.12	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11LMS089	Soil	31	0.80	346	0.098	3	2.59	0.048	0.09	<0.1	0.03	8.5	<0.1	<0.05	6	0.7	<0.2
11LMS090	Soil	16	0.27	212	0.096	1	2.55	0.015	0.05	<0.1	0.04	4.2	<0.1	<0.05	7	<0.5	<0.2
11LMS091	Soil	101	3.12	124	0.173	2	2.17	0.049	0.07	<0.1	0.04	12.6	<0.1	<0.05	6	<0.5	<0.2
11LMS092	Soil	12	0.22	180	0.095	1	1.41	0.023	0.05	<0.1	0.03	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS093	Soil	10	0.19	206	0.091	2	1.15	0.019	0.14	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11LMS094	Soil	3	0.09	256	0.015	2	0.85	0.008	0.08	<0.1	<0.01	1.7	0.1	<0.05	3	<0.5	<0.2
11LMS095	Soil	20	0.32	154	0.087	3	1.30	0.028	0.18	<0.1	0.02	4.3	<0.1	<0.05	4	<0.5	<0.2
11LMS098	Soil	14	0.23	191	0.084	2	1.15	0.026	0.17	<0.1	0.02	3.2	<0.1	<0.05	4	<0.5	<0.2
11LMS099	Soil	14	0.47	382	0.025	4	2.75	0.024	0.11	<0.1	0.13	7.9	<0.1	<0.05	6	1.1	<0.2
11LMS100	Soil	12	0.23	161	0.095	2	1.08	0.015	0.11	<0.1	0.03	2.9	<0.1	<0.05	4	<0.5	<0.2
11LMS101	Soil	13	0.27	182	0.074	3	1.22	0.018	0.08	<0.1	0.05	4.4	<0.1	<0.05	4	<0.5	<0.2
11LMS102	Soil	9	0.15	115	0.073	1	0.84	0.018	0.09	<0.1	<0.01	2.9	<0.1	<0.05	3	<0.5	<0.2
11LMS103	Soil	9	0.15	114	0.077	2	0.85	0.015	0.09	<0.1	<0.01	2.8	<0.1	<0.05	3	<0.5	<0.2
11LMS104	Soil	13	0.22	143	0.104	2	0.92	0.017	0.11	<0.1	0.02	3.2	<0.1	<0.05	3	<0.5	<0.2
11LMS105	Soil	8	0.20	109	0.062	<1	0.86	0.015	0.09	<0.1	0.02	1.9	<0.1	<0.05	4	<0.5	<0.2
11LMS106	Soil	17	0.32	136	0.132	2	1.29	0.021	0.09	<0.1	0.01	3.8	<0.1	<0.05	4	<0.5	<0.2
11LMS107	Soil	12	0.23	193	0.095	2	1.18	0.018	0.08	<0.1	0.02	2.4	<0.1	<0.05	4	<0.5	<0.2
11LMS108	Soil	9	0.13	109	0.091	1	0.98	0.018	0.09	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit	MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11LMS109	Soil	0.5	14.6	5.0	56	<0.1	5.5	5.9	570	1.99	1.9	<0.5	1.0	38	0.1	0.2	<0.1	57	0.38	0.031	6
11LMS110	Soil	0.6	21.3	6.2	54	<0.1	7.5	7.7	709	2.02	2.6	<0.5	0.8	60	0.2	0.2	<0.1	55	0.47	0.034	7
11LMS111	Soil	0.5	10.7	5.4	89	<0.1	5.1	4.7	538	1.94	1.6	<0.5	1.1	25	0.1	0.2	<0.1	52	0.33	0.030	6
11LMS112	Soil	0.3	7.9	5.8	61	<0.1	3.1	3.3	370	1.64	2.2	<0.5	1.3	16	<0.1	0.1	0.1	29	0.22	0.037	10
11LMS113	Soil	0.4	14.7	6.4	67	<0.1	5.1	6.5	383	2.42	5.0	<0.5	1.1	51	<0.1	0.2	<0.1	56	0.27	0.071	5
11LMS114	Soil	0.7	20.7	7.7	49	<0.1	7.0	8.2	758	2.42	4.5	<0.5	1.5	78	0.2	0.3	0.1	58	0.52	0.035	13
11LMS115	Soil	0.7	15.2	5.4	55	<0.1	5.6	8.2	804	2.35	5.0	<0.5	1.2	43	0.1	0.2	<0.1	57	0.44	0.046	8
11LMS116	Soil	0.5	13.5	4.5	76	<0.1	5.5	4.8	526	1.96	2.9	<0.5	0.8	27	0.1	0.3	<0.1	53	0.28	0.044	4
11LMS117	Soil	0.5	35.7	7.6	74	<0.1	8.7	20.3	1306	3.47	6.8	<0.5	1.0	45	0.2	0.3	<0.1	84	0.53	0.091	13
11LMS118	Soil	0.5	28.4	6.2	79	<0.1	7.1	12.9	1025	2.42	9.0	<0.5	0.9	39	0.2	0.1	<0.1	56	0.62	0.079	12
11LMS119	Soil	0.4	15.8	4.6	73	<0.1	15.3	10.5	507	2.79	3.0	<0.5	1.0	43	<0.1	<0.1	<0.1	69	0.37	0.053	6
11LMS120	Soil	0.5	25.1	6.1	60	<0.1	8.0	10.1	928	2.60	5.4	1.0	0.9	55	0.2	0.2	<0.1	64	0.61	0.079	15
11LMS121	Soil	0.3	9.2	8.5	65	<0.1	5.5	5.4	364	2.43	1.6	<0.5	1.3	96	<0.1	<0.1	0.1	47	0.31	0.033	7
11LMS122	Soil	0.5	7.3	7.5	66	<0.1	3.5	4.3	489	1.79	1.3	0.6	1.1	172	0.2	<0.1	<0.1	28	0.47	0.033	11
11LMS123	Soil	0.7	18.1	11.4	50	<0.1	6.6	6.0	535	2.10	2.9	0.8	0.8	49	0.4	0.2	<0.1	53	0.60	0.033	11
11LMS124	Soil	0.5	17.7	6.5	99	<0.1	8.3	6.3	526	2.08	2.3	<0.5	1.1	24	0.2	0.1	<0.1	54	0.29	0.123	4
11LMS125	Soil	0.8	15.0	7.0	61	<0.1	6.3	7.1	850	2.10	2.4	<0.5	0.7	73	0.2	0.2	<0.1	56	0.49	0.052	8
11LMS126	Soil	0.7	19.6	7.7	72	<0.1	7.2	7.6	907	2.00	3.2	<0.5	0.9	69	0.3	0.2	<0.1	48	0.61	0.051	10
11LMS127	Soil	0.6	31.3	6.5	90	<0.1	10.3	9.9	1099	3.03	3.6	4.6	1.1	46	0.2	0.3	<0.1	85	0.54	0.060	10
11LMS128	Soil	0.8	16.0	6.0	84	<0.1	8.5	7.8	782	2.62	2.2	<0.5	1.1	31	0.2	0.2	<0.1	70	0.33	0.051	7
11LMS129	Soil	0.5	17.2	6.9	117	<0.1	8.5	6.1	889	2.04	2.2	1.1	1.1	28	0.3	0.1	<0.1	56	0.27	0.161	6
11LMS130	Soil	0.3	42.6	6.2	57	<0.1	19.7	17.0	1031	3.90	3.9	<0.5	1.2	83	0.1	0.1	<0.1	119	0.98	0.087	8
11LMS131	Soil	0.5	17.7	6.7	67	<0.1	8.1	8.3	895	2.57	3.8	2.4	1.2	30	0.1	0.2	0.1	66	0.31	0.075	10
11LMS132	Soil	1.3	12.7	7.1	54	<0.1	6.9	6.0	445	2.78	4.4	3.7	1.6	24	<0.1	0.3	<0.1	71	0.30	0.035	9
11LMS133	Soil	0.3	8.6	5.0	56	<0.1	5.0	4.5	232	1.90	1.2	0.6	1.1	23	<0.1	<0.1	<0.1	48	0.17	0.048	4
11LMS134	Soil	0.2	8.2	7.1	68	<0.1	5.8	5.3	502	2.09	1.6	<0.5	1.1	41	<0.1	0.1	0.1	48	0.24	0.037	6
11LMS135	Soil	0.2	4.4	4.4	64	<0.1	4.3	2.9	350	1.43	1.0	<0.5	0.6	21	<0.1	<0.1	<0.1	35	0.20	0.019	3
11LMS136	Soil	0.2	12.0	4.7	83	<0.1	7.2	7.6	661	2.15	2.0	<0.5	0.9	18	0.1	<0.1	<0.1	57	0.25	0.128	4
11LMS137	Soil	0.6	15.4	5.5	57	<0.1	6.5	5.9	622	2.18	2.0	<0.5	1.0	37	0.2	0.1	<0.1	61	0.41	0.021	7
11LMS138	Soil	0.3	6.6	4.9	86	<0.1	5.7	3.9	353	1.67	1.5	3.7	0.7	16	<0.1	<0.1	<0.1	44	0.18	0.123	3

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Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

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Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11LMS109	Soil	13	0.24	166	0.098	2	1.10	0.020	0.13	<0.1	0.02	3.7	<0.1	<0.05	3	<0.5	<0.2
11LMS110	Soil	14	0.26	188	0.081	2	1.43	0.021	0.09	<0.1	0.03	3.5	<0.1	<0.05	4	<0.5	<0.2
11LMS111	Soil	10	0.17	246	0.078	1	1.07	0.017	0.11	<0.1	0.02	2.9	<0.1	<0.05	4	<0.5	<0.2
11LMS112	Soil	6	0.19	221	0.025	<1	1.12	0.011	0.16	<0.1	0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11LMS113	Soil	9	0.27	173	0.114	<1	1.94	0.018	0.08	<0.1	0.02	2.9	<0.1	<0.05	6	<0.5	<0.2
11LMS114	Soil	14	0.31	287	0.094	2	1.79	0.024	0.17	<0.1	0.03	5.2	<0.1	<0.05	5	<0.5	<0.2
11LMS115	Soil	11	0.26	137	0.063	3	1.55	0.023	0.18	<0.1	0.02	4.8	<0.1	<0.05	5	<0.5	<0.2
11LMS116	Soil	12	0.20	186	0.090	2	1.04	0.020	0.13	<0.1	0.01	3.1	<0.1	<0.05	3	<0.5	<0.2
11LMS117	Soil	16	0.67	215	0.019	<1	2.51	0.019	0.24	<0.1	0.19	9.7	<0.1	<0.05	7	<0.5	<0.2
11LMS118	Soil	11	0.26	129	0.023	2	1.79	0.024	0.27	<0.1	0.03	6.6	<0.1	<0.05	5	<0.5	<0.2
11LMS119	Soil	28	0.61	176	0.062	2	2.61	0.024	0.17	<0.1	0.02	6.9	<0.1	<0.05	7	<0.5	<0.2
11LMS120	Soil	14	0.32	218	0.065	3	2.08	0.018	0.22	<0.1	0.03	6.4	<0.1	<0.05	6	<0.5	<0.2
11LMS121	Soil	9	0.32	162	0.135	1	2.70	0.018	0.16	<0.1	0.02	2.5	<0.1	<0.05	8	<0.5	<0.2
11LMS122	Soil	5	0.27	223	0.096	2	1.83	0.015	0.27	<0.1	0.02	2.4	<0.1	<0.05	5	<0.5	<0.2
11LMS123	Soil	12	0.25	135	0.079	3	1.41	0.021	0.12	<0.1	0.04	3.3	<0.1	<0.05	4	<0.5	<0.2
11LMS124	Soil	13	0.26	160	0.088	2	1.82	0.020	0.12	<0.1	0.01	2.8	<0.1	<0.05	6	<0.5	<0.2
11LMS125	Soil	11	0.27	242	0.090	3	1.38	0.016	0.15	<0.1	0.04	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS126	Soil	11	0.28	312	0.085	3	1.84	0.019	0.16	<0.1	0.04	3.6	<0.1	<0.05	5	<0.5	<0.2
11LMS127	Soil	18	0.36	253	0.087	3	1.64	0.019	0.22	<0.1	0.04	5.5	<0.1	<0.05	5	<0.5	<0.2
11LMS128	Soil	15	0.31	170	0.084	2	1.40	0.016	0.17	<0.1	0.02	4.1	<0.1	<0.05	4	<0.5	<0.2
11LMS129	Soil	12	0.24	175	0.089	2	1.70	0.020	0.07	<0.1	0.01	3.3	<0.1	<0.05	5	<0.5	<0.2
11LMS130	Soil	29	1.20	125	0.199	2	3.21	0.055	0.13	<0.1	0.03	10.4	<0.1	<0.05	10	<0.5	<0.2
11LMS131	Soil	15	0.30	127	0.085	2	2.88	0.021	0.11	<0.1	0.02	4.3	<0.1	<0.05	8	<0.5	<0.2
11LMS132	Soil	13	0.26	71	0.091	1	1.51	0.015	0.12	<0.1	<0.01	3.3	0.1	<0.05	5	<0.5	<0.2
11LMS133	Soil	9	0.19	130	0.070	<1	1.60	0.016	0.06	<0.1	0.02	1.7	<0.1	<0.05	5	<0.5	<0.2
11LMS134	Soil	9	0.27	148	0.091	<1	1.93	0.018	0.08	<0.1	0.03	1.9	<0.1	<0.05	7	<0.5	<0.2
11LMS135	Soil	8	0.12	59	0.074	2	1.01	0.016	0.10	<0.1	0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
11LMS136	Soil	10	0.49	148	0.129	1	1.79	0.021	0.08	<0.1	0.03	3.2	<0.1	<0.05	7	<0.5	<0.2
11LMS137	Soil	12	0.20	230	0.092	2	1.33	0.022	0.07	<0.1	0.04	3.2	<0.1	<0.05	4	<0.5	<0.2
11LMS138	Soil	8	0.13	176	0.073	<1	1.34	0.021	0.06	<0.1	0.03	1.2	<0.1	<0.05	5	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11LMS139	Soil	0.3	5.9	4.9	91	<0.1	4.7	3.1	406	1.45	1.3	<0.5	0.7	18	0.1	<0.1	<0.1	37	0.18	0.094	4
11LMS140	Soil	0.5	7.0	5.3	68	<0.1	4.2	4.2	751	1.72	1.3	<0.5	1.0	25	0.2	0.1	<0.1	44	0.28	0.030	6
11LMS141	Soil	0.4	20.0	5.3	174	<0.1	3.7	5.3	1283	1.66	3.0	<0.5	0.5	60	0.2	0.2	<0.1	30	0.53	0.131	6
11LMS142	Soil	0.4	9.7	6.4	75	<0.1	4.8	4.7	1084	2.07	2.2	<0.5	0.8	24	0.2	0.1	0.1	49	0.33	0.039	5
11LMS143	Soil	0.3	7.5	5.6	82	<0.1	5.4	4.4	663	1.71	1.4	<0.5	0.8	18	0.3	0.2	<0.1	39	0.18	0.053	4
11LMS144	Soil	0.7	21.8	12.4	240	0.1	5.5	6.8	2770	2.21	5.9	<0.5	0.9	51	0.9	0.2	0.1	45	0.88	0.343	8
11LMS145	Soil	0.5	14.2	8.0	138	<0.1	5.9	5.9	1357	2.14	2.5	1.6	0.5	38	0.7	0.2	<0.1	52	0.37	0.081	7
11LMS146	Soil	0.8	12.0	7.3	65	<0.1	5.3	5.8	1051	2.10	4.4	<0.5	1.0	38	0.2	0.2	0.1	47	0.42	0.039	12
11LMS147	Soil	0.5	14.8	9.3	144	<0.1	4.9	5.9	1473	1.99	6.2	<0.5	0.3	38	0.4	0.2	<0.1	39	0.52	0.088	10
11LMS148	Soil	0.6	29.5	7.0	62	<0.1	8.4	7.9	814	2.35	3.7	<0.5	0.7	91	0.3	0.3	<0.1	63	1.03	0.052	9
11LMS149	Soil	1.3	17.8	5.9	72	<0.1	9.0	7.5	713	2.13	2.4	<0.5	0.9	44	0.2	0.2	<0.1	54	0.40	0.037	8
11LMS150	Soil	0.5	7.7	4.2	78	<0.1	7.3	4.4	465	1.82	1.7	<0.5	0.7	33	<0.1	0.1	<0.1	49	0.23	0.024	3
11LMS151	Soil	0.4	13.3	4.5	81	<0.1	10.4	6.1	543	2.23	1.9	<0.5	1.1	35	0.1	0.1	<0.1	58	0.25	0.118	7
11LMS152	Soil	0.4	12.7	4.7	87	<0.1	9.7	5.6	625	2.11	2.0	<0.5	1.1	31	<0.1	0.2	<0.1	54	0.23	0.100	6
11LMS153	Soil	0.3	6.7	5.6	89	<0.1	4.2	3.5	600	1.72	2.2	<0.5	1.0	23	0.1	0.1	<0.1	38	0.27	0.041	7
11LMS154	Soil	1.0	15.7	7.4	68	<0.1	5.7	6.3	1204	1.86	3.3	<0.5	0.6	49	0.2	0.2	<0.1	45	0.42	0.041	8
11LMS155	Soil	0.7	7.8	8.4	59	<0.1	4.7	4.4	744	1.88	2.0	<0.5	1.1	30	0.1	0.2	0.1	46	0.37	0.026	6
11LMS156	Soil	0.6	7.3	8.0	57	<0.1	4.5	4.0	712	1.80	1.9	<0.5	1.1	29	0.1	0.2	<0.1	43	0.34	0.025	6
11LMS157	Soil	0.5	15.1	7.8	77	<0.1	9.6	4.1	992	1.51	1.7	<0.5	0.6	25	0.3	0.2	0.1	41	0.32	0.055	6
11LMS158	Soil	0.6	6.1	6.3	59	<0.1	3.2	4.2	715	1.01	1.3	0.8	0.5	39	<0.1	<0.1	<0.1	29	0.45	0.026	3
11LMS159	Soil	0.4	19.9	8.7	79	<0.1	7.9	7.2	697	2.17	4.9	<0.5	1.4	38	0.2	0.2	0.1	55	0.33	0.168	13
11LMS160	Soil	0.4	8.1	4.6	94	<0.1	5.3	3.6	530	1.54	1.9	<0.5	0.7	24	0.1	0.1	<0.1	45	0.25	0.043	4
11LMS161	Soil	0.9	11.1	5.9	111	<0.1	6.0	4.5	1015	1.74	2.0	<0.5	0.9	24	0.4	0.1	<0.1	51	0.27	0.041	5
11LMS162	Soil	1.0	13.6	6.3	65	<0.1	7.0	6.2	650	2.04	2.8	0.7	0.9	25	0.2	0.2	<0.1	62	0.36	0.023	7
11LMS163	Soil	0.5	12.1	6.5	77	<0.1	5.2	4.4	476	1.77	2.7	0.7	1.1	27	0.2	0.2	<0.1	52	0.35	0.028	6
11LMS164	Soil	1.2	13.2	6.9	40	<0.1	4.5	4.6	736	1.56	3.8	0.5	0.8	38	0.1	0.2	<0.1	43	0.45	0.021	10
11LMS165	Soil	1.1	16.9	5.9	72	<0.1	6.5	6.4	557	1.87	3.5	0.8	0.9	60	0.2	0.2	<0.1	52	0.53	0.082	7
11LMS166	Soil	0.8	16.1	7.0	50	<0.1	5.9	5.8	598	1.96	3.3	1.7	1.1	44	0.1	0.2	0.1	52	0.45	0.022	11
11LMS167	Soil	0.5	15.7	6.5	90	<0.1	7.8	5.3	785	1.98	4.2	0.7	1.2	36	0.2	0.2	0.1	53	0.30	0.108	6
11LMS168	Soil	0.6	14.2	8.8	78	<0.1	6.1	4.8	805	1.80	3.7	2.1	1.2	44	0.2	0.3	<0.1	53	0.35	0.040	8

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 26, 2011

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11LMS139	Soil			7	0.12	161	0.066	1	1.33	0.021	0.07	<0.1	0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
11LMS140	Soil			8	0.14	263	0.064	1	0.97	0.015	0.14	<0.1	0.03	1.9	<0.1	<0.05	4	<0.5	<0.2
11LMS141	Soil			5	0.12	479	0.031	3	1.11	0.014	0.12	<0.1	0.04	2.1	<0.1	<0.05	4	<0.5	<0.2
11LMS142	Soil			8	0.16	196	0.046	1	1.07	0.011	0.14	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11LMS143	Soil			8	0.15	236	0.047	<1	1.49	0.013	0.08	<0.1	0.02	1.3	<0.1	<0.05	5	<0.5	<0.2
11LMS144	Soil			9	0.20	552	0.053	5	2.18	0.013	0.21	<0.1	0.05	2.3	<0.1	<0.05	6	<0.5	<0.2
11LMS145	Soil			10	0.21	236	0.060	<1	1.38	0.012	0.11	<0.1	0.02	2.3	<0.1	<0.05	5	<0.5	<0.2
11LMS146	Soil			9	0.21	176	0.055	1	1.26	0.011	0.18	<0.1	0.03	2.7	<0.1	<0.05	5	<0.5	<0.2
11LMS147	Soil			7	0.17	291	0.038	2	1.18	0.011	0.17	<0.1	0.04	1.9	<0.1	<0.05	4	<0.5	<0.2
11LMS148	Soil			14	0.32	222	0.075	5	1.31	0.015	0.21	0.1	0.04	3.7	<0.1	<0.05	4	<0.5	<0.2
11LMS149	Soil			14	0.29	131	0.085	2	1.20	0.016	0.15	<0.1	0.03	3.1	<0.1	<0.05	4	<0.5	<0.2
11LMS150	Soil			12	0.20	135	0.094	<1	1.21	0.016	0.09	<0.1	<0.01	1.7	<0.1	<0.05	5	<0.5	<0.2
11LMS151	Soil			17	0.27	121	0.082	1	1.71	0.016	0.10	<0.1	0.01	3.2	<0.1	<0.05	6	<0.5	<0.2
11LMS152	Soil			16	0.27	121	0.080	1	1.65	0.016	0.10	<0.1	0.02	2.9	<0.1	<0.05	5	<0.5	<0.2
11LMS153	Soil			8	0.18	128	0.047	<1	1.22	0.013	0.11	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2
11LMS154	Soil			10	0.21	170	0.065	1	1.17	0.013	0.14	<0.1	0.03	2.5	<0.1	<0.05	4	<0.5	<0.2
11LMS155	Soil			9	0.17	198	0.075	2	1.21	0.013	0.14	<0.1	0.03	2.2	<0.1	<0.05	4	<0.5	<0.2
11LMS156	Soil			9	0.16	187	0.073	1	1.15	0.014	0.13	<0.1	0.02	2.2	<0.1	<0.05	4	<0.5	<0.2
11LMS157	Soil			8	0.16	227	0.058	2	1.15	0.012	0.05	<0.1	0.04	1.5	<0.1	<0.05	4	<0.5	<0.2
11LMS158	Soil			7	0.14	119	0.048	1	0.73	0.013	0.08	<0.1	0.02	1.6	<0.1	<0.05	3	<0.5	<0.2
11LMS159	Soil			13	0.31	167	0.073	1	1.87	0.013	0.09	<0.1	0.02	3.5	<0.1	<0.05	6	<0.5	<0.2
11LMS160	Soil			10	0.18	167	0.084	3	0.92	0.016	0.12	<0.1	0.01	2.1	<0.1	<0.05	3	<0.5	<0.2
11LMS161	Soil			11	0.20	241	0.086	2	0.90	0.018	0.08	<0.1	0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
11LMS162	Soil			14	0.25	180	0.085	2	1.25	0.011	0.10	<0.1	0.02	2.7	<0.1	<0.05	4	<0.5	<0.2
11LMS163	Soil			11	0.19	129	0.090	2	1.05	0.013	0.10	<0.1	0.01	2.8	<0.1	<0.05	3	<0.5	<0.2
11LMS164	Soil			9	0.16	142	0.066	2	0.95	0.013	0.10	<0.1	0.03	2.6	<0.1	<0.05	3	0.5	<0.2
11LMS165	Soil			12	0.24	177	0.093	4	1.01	0.014	0.18	<0.1	0.03	3.1	<0.1	<0.05	3	<0.5	<0.2
11LMS166	Soil			11	0.24	126	0.089	1	1.35	0.016	0.12	<0.1	0.03	3.5	<0.1	<0.05	4	<0.5	<0.2
11LMS167	Soil			14	0.24	213	0.088	2	1.41	0.016	0.12	<0.1	0.01	2.5	<0.1	<0.05	5	<0.5	<0.2
11LMS168	Soil			11	0.20	157	0.086	2	0.99	0.015	0.08	<0.1	0.04	2.7	<0.1	<0.05	3	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 26, 2011

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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
11LMS169	Soil	0.4	6.2	5.6	97	<0.1	4.6	3.2	655	1.26	1.4	<0.5	0.9	33	0.2	<0.1	<0.1	32	0.24	0.059	4
11LMS170	Soil	0.5	9.0	5.1	101	<0.1	5.1	3.2	832	1.31	1.3	<0.5	0.8	20	0.2	0.1	<0.1	36	0.16	0.081	5
11LMS171	Soil	0.9	13.8	7.9	73	<0.1	4.5	4.9	1083	1.52	5.0	1.0	0.4	55	0.3	0.2	<0.1	44	0.66	0.065	6
11LMS172	Soil	0.5	12.7	6.6	46	<0.1	5.4	4.6	268	2.08	3.9	0.8	1.5	35	<0.1	0.3	<0.1	63	0.28	0.024	10
11LMS173	Soil	0.4	10.3	9.6	91	<0.1	4.8	4.7	1033	1.56	2.6	<0.5	1.2	31	0.2	0.1	0.1	38	0.37	0.071	12
11LMS174	Soil	0.6	5.3	6.3	84	<0.1	3.3	2.7	750	1.30	1.2	<0.5	0.7	30	0.2	0.1	<0.1	36	0.31	0.032	4
11LMS175	Soil	0.4	7.5	8.6	64	<0.1	3.9	3.6	500	1.57	2.0	<0.5	1.2	38	0.1	0.2	<0.1	44	0.29	0.028	6
11LMS176	Soil	0.8	11.5	6.3	60	<0.1	5.8	5.3	407	1.94	2.3	<0.5	1.3	28	0.1	0.2	0.1	55	0.21	0.039	5
11LMS177	Soil	0.4	6.3	4.5	107	<0.1	4.3	3.2	482	1.35	0.9	5.0	0.7	23	0.1	<0.1	<0.1	32	0.22	0.157	3
11LMS178	Soil	0.5	17.9	6.5	56	<0.1	9.1	6.4	398	2.44	4.4	<0.5	1.4	43	0.1	0.3	<0.1	71	0.32	0.060	11
11LMS179	Soil	1.2	12.2	7.6	54	<0.1	6.0	5.2	949	1.60	1.5	0.6	0.7	54	0.2	0.2	0.1	45	0.57	0.021	8
11LMS180	Soil	0.5	6.5	5.6	86	<0.1	5.4	3.5	629	1.35	<0.5	<0.5	0.8	21	0.1	<0.1	<0.1	35	0.16	0.109	3
11LMS181	Soil	0.5	14.0	5.7	52	<0.1	6.5	5.7	328	2.23	1.6	1.0	1.2	41	<0.1	0.2	<0.1	63	0.27	0.027	7
11LMS182	Soil	0.6	9.7	7.2	137	<0.1	6.1	4.9	1482	1.69	0.8	<0.5	1.0	25	0.3	0.1	0.1	44	0.28	0.059	7
11EHS716	Soil	0.4	11.7	6.3	47	<0.1	4.9	4.5	265	1.60	<0.5	2.2	0.7	25	<0.1	0.1	<0.1	49	0.19	0.025	5
11EHS717	Soil	0.5	11.7	6.0	58	<0.1	5.9	5.4	476	2.07	<0.5	<0.5	0.9	32	<0.1	0.2	<0.1	66	0.23	0.046	3
11EHS718	Soil	0.6	9.0	4.4	58	<0.1	3.9	4.3	540	1.69	<0.5	<0.5	0.6	30	<0.1	0.2	<0.1	51	0.33	0.034	3
11EHS719	Soil	0.4	9.5	5.4	50	<0.1	4.7	4.8	281	2.11	<0.5	0.8	0.9	26	<0.1	0.3	<0.1	62	0.23	0.027	3
11EHS720	Soil	0.8	14.1	6.4	46	<0.1	4.9	6.0	592	1.96	<0.5	<0.5	0.9	30	0.1	0.2	<0.1	57	0.28	0.025	4
11EHS721	Soil	0.8	15.4	6.0	40	<0.1	5.7	6.9	533	1.96	0.7	<0.5	0.9	50	<0.1	0.2	<0.1	56	0.36	0.019	6
11EHS722	Soil	0.7	13.9	3.9	100	<0.1	4.8	3.9	960	1.50	0.8	<0.5	0.7	32	0.2	0.3	<0.1	42	0.46	0.048	3
11EHS723	Soil	0.6	16.8	5.9	45	<0.1	4.4	8.2	753	2.07	2.6	1.1	0.6	40	0.2	0.2	<0.1	53	0.41	0.036	5
11EHS724	Soil	0.4	45.1	5.6	68	<0.1	5.3	13.0	709	3.23	7.5	0.6	1.6	26	0.1	0.3	<0.1	65	0.37	0.048	10
11EHS725	Soil	0.4	11.2	5.0	64	<0.1	3.8	8.3	409	2.35	<0.5	<0.5	0.6	37	<0.1	0.2	<0.1	63	0.23	0.047	4
11EHS726	Soil	0.4	9.9	5.3	83	0.1	3.6	6.1	711	1.99	1.0	0.8	0.5	32	0.1	0.1	<0.1	53	0.33	0.039	3
11EHS727	Soil	0.4	12.2	4.9	68	<0.1	5.1	5.5	482	2.48	1.2	<0.5	1.3	25	<0.1	0.2	<0.1	67	0.28	0.022	6
11EHS728	Soil	0.8	15.3	8.9	60	<0.1	5.6	7.8	1001	2.73	3.3	<0.5	2.0	30	0.2	0.2	0.1	58	0.37	0.042	14
11EHS729	Soil	0.6	12.4	5.0	56	<0.1	5.8	5.8	461	2.18	2.0	0.7	0.8	37	<0.1	0.2	<0.1	61	0.36	0.026	4
11EHS730	Soil	0.6	10.3	5.2	47	<0.1	5.2	6.0	413	2.44	1.6	0.6	0.8	39	0.1	0.2	<0.1	73	0.36	0.023	3
11EHS731	Soil	0.4	10.8	4.7	63	<0.1	5.9	5.2	412	2.06	1.9	0.5	0.8	35	<0.1	0.1	<0.1	58	0.36	0.055	3

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VAN11004495.1

Method Analyte Unit MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
11LMS169	Soil	7	0.15	154	0.063	1	1.25	0.024	0.09	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5	<0.2
11LMS170	Soil	7	0.12	183	0.065	1	1.16	0.020	0.09	<0.1	0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11LMS171	Soil	9	0.18	200	0.066	4	0.95	0.012	0.11	<0.1	0.03	1.8	<0.1	0.06	3	<0.5	<0.2
11LMS172	Soil	13	0.23	98	0.116	2	1.08	0.030	0.12	<0.1	0.02	3.6	<0.1	<0.05	4	<0.5	<0.2
11LMS173	Soil	8	0.20	171	0.080	2	1.86	0.023	0.12	<0.1	0.02	2.4	<0.1	<0.05	6	<0.5	<0.2
11LMS174	Soil	7	0.12	141	0.084	2	0.91	0.017	0.11	<0.1	0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
11LMS175	Soil	9	0.16	110	0.118	2	0.96	0.012	0.14	<0.1	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2
11LMS176	Soil	12	0.21	126	0.110	1	1.26	0.015	0.08	<0.1	0.01	2.7	<0.1	<0.05	4	<0.5	<0.2
11LMS177	Soil	7	0.14	229	0.064	1	1.26	0.020	0.06	<0.1	0.01	1.5	<0.1	<0.05	4	<0.5	<0.2
11LMS178	Soil	17	0.31	106	0.097	1	1.27	0.023	0.11	<0.1	0.03	4.3	<0.1	<0.05	5	<0.5	<0.2
11LMS179	Soil	11	0.20	158	0.077	2	0.95	0.014	0.12	<0.1	0.04	2.4	<0.1	<0.05	3	<0.5	<0.2
11LMS180	Soil	7	0.15	136	0.080	1	1.39	0.023	0.06	<0.1	0.01	1.4	<0.1	<0.05	5	<0.5	<0.2
11LMS181	Soil	13	0.27	132	0.108	2	1.18	0.018	0.15	<0.1	0.02	3.5	<0.1	<0.05	4	<0.5	<0.2
11LMS182	Soil	9	0.20	315	0.084	2	1.63	0.017	0.12	<0.1	0.03	2.2	<0.1	<0.05	5	<0.5	<0.2
11EHS716	Soil	10	0.18	104	0.080	2	0.94	0.017	0.05	<0.1	0.03	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS717	Soil	12	0.21	154	0.112	2	1.12	0.017	0.08	<0.1	0.03	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS718	Soil	9	0.17	115	0.093	2	0.77	0.016	0.11	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
11EHS719	Soil	11	0.17	124	0.125	2	0.96	0.019	0.09	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11EHS720	Soil	10	0.22	127	0.085	2	1.13	0.016	0.10	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11EHS721	Soil	13	0.27	134	0.091	2	1.35	0.025	0.10	<0.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
11EHS722	Soil	10	0.18	249	0.074	4	0.79	0.015	0.16	<0.1	0.02	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS723	Soil	8	0.22	166	0.046	2	1.08	0.016	0.14	<0.1	0.02	2.6	<0.1	<0.05	3	<0.5	<0.2
11EHS724	Soil	9	0.27	144	0.014	2	1.32	0.020	0.11	<0.1	0.01	6.6	<0.1	<0.05	4	<0.5	<0.2
11EHS725	Soil	9	0.26	113	0.105	2	1.10	0.021	0.10	<0.1	0.01	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS726	Soil	8	0.23	165	0.059	2	0.97	0.020	0.15	<0.1	0.03	1.8	<0.1	<0.05	3	0.6	<0.2
11EHS727	Soil	10	0.26	130	0.086	1	1.10	0.020	0.18	<0.1	0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS728	Soil	9	0.28	144	0.063	1	2.17	0.019	0.13	<0.1	0.03	4.7	<0.1	<0.05	7	<0.5	<0.2
11EHS729	Soil	12	0.24	185	0.101	2	1.24	0.023	0.09	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS730	Soil	12	0.24	143	0.112	3	1.06	0.022	0.10	<0.1	0.02	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS731	Soil	12	0.23	163	0.087	1	1.20	0.021	0.09	<0.1	0.03	2.4	<0.1	<0.05	4	<0.5	<0.2

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

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Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001		
11EHS732	Soil	0.5	8.4	5.5	82	<0.1	7.0	4.9	633	1.96	1.7	0.6	0.7	25	<0.1	0.1	<0.1	54	0.24	0.039	3
11EHS733	Soil	0.5	10.2	5.5	79	<0.1	4.8	5.0	770	2.01	2.2	<0.5	0.9	34	0.2	<0.1	<0.1	55	0.27	0.074	3
11EHS734	Soil	0.6	12.0	5.2	67	<0.1	5.8	5.5	791	2.33	1.7	0.8	1.0	29	0.1	<0.1	<0.1	68	0.26	0.036	4
11EHS735	Soil	0.6	12.7	5.0	63	<0.1	6.5	6.6	574	2.48	1.9	<0.5	1.0	34	0.2	0.2	<0.1	74	0.39	0.033	4
11EHS736	Soil	0.9	12.8	7.9	120	<0.1	6.6	5.5	1642	1.96	3.7	<0.5	1.0	49	0.4	0.1	<0.1	45	0.44	0.142	6
11EHS737	Soil	0.7	15.0	5.3	60	<0.1	6.5	5.5	224	2.10	2.4	0.6	1.0	41	0.1	0.1	<0.1	52	0.27	0.027	14
11EHS738	Soil	0.5	7.6	5.9	91	<0.1	5.1	4.0	772	1.63	1.6	1.1	0.8	24	0.2	0.1	<0.1	42	0.20	0.057	4
11EHS739	Soil	0.4	10.2	6.3	86	<0.1	5.2	4.9	806	2.19	2.8	<0.5	1.0	39	0.2	0.1	<0.1	57	0.48	0.053	6
11EHS740	Soil	0.6	8.4	6.5	92	<0.1	6.1	5.0	1266	2.09	2.0	<0.5	1.2	29	0.1	0.2	<0.1	57	0.35	0.037	8
11EHS741	Soil	0.7	9.0	7.1	67	<0.1	5.6	5.0	654	2.07	2.7	0.9	0.9	33	0.2	0.2	<0.1	51	0.39	0.060	5
11EHS742	Soil	0.5	9.9	4.9	81	<0.1	7.3	5.4	438	2.09	1.7	<0.5	1.0	38	0.1	<0.1	<0.1	54	0.25	0.049	4
11EHS743	Soil	1.8	36.5	8.1	94	0.1	11.4	10.5	1208	2.72	6.4	0.8	0.7	35	0.4	0.1	<0.1	60	0.66	0.098	15
11EHS744	Soil	1.9	17.9	26.2	125	0.1	7.3	9.3	2212	2.72	7.0	1.2	0.7	39	0.6	0.4	0.1	58	0.49	0.073	14
11EHS745	Soil	1.2	19.8	7.9	67	0.1	7.1	8.4	829	2.62	4.7	<0.5	1.1	57	0.2	0.2	<0.1	67	0.62	0.037	12
11EHS746	Soil	0.7	13.8	5.8	113	<0.1	6.6	6.1	1098	2.38	1.9	<0.5	1.1	27	0.2	0.2	0.1	62	0.29	0.062	6
11EHS747	Soil	0.7	11.5	10.9	119	<0.1	4.5	5.2	2864	1.84	2.0	<0.5	0.8	77	0.4	0.2	<0.1	36	0.68	0.039	11
11EHS748	Soil	0.4	18.4	6.1	111	<0.1	4.4	7.9	1239	2.88	5.9	0.9	1.2	54	0.4	0.2	<0.1	47	0.62	0.190	19
11EHS749	Soil	0.5	3.6	4.9	54	<0.1	2.1	2.2	256	1.83	1.9	<0.5	0.6	10	<0.1	<0.1	<0.1	23	0.19	0.041	7
11EHS750	Soil	0.6	15.1	8.9	111	<0.1	6.0	6.6	1813	2.00	2.6	<0.5	0.4	49	0.3	0.2	<0.1	43	0.65	0.081	9
11EHS751	Soil	0.5	7.5	5.4	62	<0.1	5.3	4.5	404	1.95	1.9	<0.5	0.7	17	0.1	0.1	<0.1	52	0.22	0.026	3
11EHS752	Soil	0.5	7.5	5.8	60	<0.1	5.6	4.4	346	2.03	2.3	<0.5	0.7	18	0.1	0.1	<0.1	55	0.23	0.025	4
11EHS753	Soil	0.5	7.0	6.4	144	<0.1	4.3	3.5	1602	1.62	1.9	<0.5	0.8	20	0.2	<0.1	<0.1	43	0.28	0.034	4
11EHS754	Soil	0.5	15.8	8.0	148	0.1	10.1	5.8	476	2.32	3.6	<0.5	1.7	20	0.2	0.1	<0.1	55	0.20	0.209	4
11EHS755	Soil	0.2	3.1	5.1	116	<0.1	3.6	3.1	1098	0.96	0.8	24.0	0.6	17	0.7	<0.1	<0.1	29	0.23	0.084	3
11EHS756	Soil	0.4	6.1	4.8	61	<0.1	5.2	4.2	272	1.56	0.9	<0.5	0.8	21	<0.1	<0.1	<0.1	49	0.23	0.008	3
11EHS757	Soil	0.8	9.0	5.0	88	<0.1	6.3	5.7	312	1.48	1.1	<0.5	1.0	26	0.1	0.1	<0.1	48	0.26	0.048	3
11EHS758	Soil	0.5	17.4	9.0	64	<0.1	7.0	8.2	722	3.22	3.6	<0.5	1.3	26	<0.1	0.5	<0.1	89	0.31	0.047	7
11EHS759	Soil	0.4	8.4	4.9	32	<0.1	4.9	4.1	220	1.97	1.0	<0.5	0.8	26	<0.1	0.1	<0.1	56	0.31	0.013	4
11EHS760	Soil	0.4	9.7	5.7	99	<0.1	7.3	5.5	766	2.18	2.0	<0.5	0.9	29	<0.1	0.1	<0.1	60	0.31	0.061	3
11EHS761	Soil	0.5	11.7	5.9	46	<0.1	4.9	4.8	568	1.92	2.0	<0.5	1.1	37	<0.1	0.1	<0.1	50	0.55	0.025	7

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Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

VAN11004495.1

Method Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
			Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
			ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
			1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS732	Soil		12	0.20	184	0.098	<1	1.26	0.019	0.09	<0.1	0.14	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS733	Soil		11	0.18	193	0.099	2	1.11	0.018	0.13	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11EHS734	Soil		12	0.21	206	0.112	2	1.30	0.019	0.12	<0.1	0.03	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS735	Soil		14	0.25	159	0.119	2	0.96	0.020	0.12	<0.1	0.02	3.2	<0.1	<0.05	3	<0.5	<0.2
11EHS736	Soil		10	0.22	390	0.078	1	1.90	0.015	0.14	<0.1	0.04	2.3	<0.1	<0.05	6	<0.5	<0.2
11EHS737	Soil		12	0.24	117	0.090	<1	1.37	0.017	0.15	<0.1	0.03	3.3	<0.1	<0.05	5	0.5	<0.2
11EHS738	Soil		10	0.18	132	0.083	2	1.27	0.018	0.14	<0.1	0.02	1.7	<0.1	<0.05	4	0.7	<0.2
11EHS739	Soil		12	0.20	232	0.085	2	1.18	0.013	0.13	<0.1	0.03	2.3	<0.1	<0.05	4	0.5	<0.2
11EHS740	Soil		13	0.21	227	0.091	<1	1.40	0.015	0.09	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS741	Soil		10	0.24	148	0.066	<1	1.32	0.013	0.11	<0.1	0.04	2.1	<0.1	<0.05	5	<0.5	<0.2
11EHS742	Soil		14	0.27	137	0.099	<1	1.38	0.015	0.13	<0.1	<0.01	2.4	<0.1	<0.05	5	<0.5	<0.2
11EHS743	Soil		16	0.37	161	0.059	1	2.07	0.021	0.15	<0.1	0.02	3.9	<0.1	<0.05	7	<0.5	<0.2
11EHS744	Soil		12	0.25	299	0.057	<1	1.65	0.013	0.16	<0.1	0.04	3.4	<0.1	<0.05	5	0.9	0.2
11EHS745	Soil		14	0.26	231	0.075	2	1.59	0.016	0.16	<0.1	0.04	4.3	<0.1	<0.05	5	0.5	<0.2
11EHS746	Soil		12	0.27	267	0.077	1	1.68	0.015	0.16	<0.1	0.02	2.6	0.1	<0.05	6	1.0	<0.2
11EHS747	Soil		7	0.18	376	0.052	2	1.45	0.016	0.14	<0.1	0.04	2.1	<0.1	<0.05	6	0.7	<0.2
11EHS748	Soil		7	0.23	307	0.022	<1	1.68	0.014	0.19	<0.1	0.04	6.5	<0.1	<0.05	5	0.9	<0.2
11EHS749	Soil		3	0.07	195	0.011	<1	0.64	0.007	0.11	<0.1	0.01	1.4	<0.1	<0.05	2	0.7	<0.2
11EHS750	Soil		9	0.23	518	0.035	1	1.37	0.015	0.10	<0.1	0.06	2.3	<0.1	<0.05	4	0.5	<0.2
11EHS751	Soil		10	0.17	122	0.068	<1	1.11	0.019	0.08	<0.1	0.02	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS752	Soil		11	0.19	116	0.072	<1	1.18	0.019	0.09	<0.1	0.01	1.9	<0.1	<0.05	4	0.7	<0.2
11EHS753	Soil		8	0.12	530	0.063	2	1.16	0.017	0.10	<0.1	0.02	1.4	<0.1	<0.05	4	0.5	<0.2
11EHS754	Soil		12	0.25	347	0.085	<1	2.61	0.017	0.08	<0.1	0.03	3.0	<0.1	<0.05	7	<0.5	<0.2
11EHS755	Soil		4	0.08	242	0.068	<1	0.96	0.029	0.04	<0.1	0.02	0.8	<0.1	<0.05	4	<0.5	<0.2
11EHS756	Soil		10	0.17	208	0.063	<1	1.26	0.020	0.05	<0.1	0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
11EHS757	Soil		10	0.17	231	0.083	3	1.22	0.023	0.08	<0.1	0.02	1.9	<0.1	<0.05	4	0.5	<0.2
11EHS758	Soil		13	0.33	185	0.059	2	1.47	0.011	0.11	<0.1	0.02	3.7	<0.1	<0.05	5	0.7	<0.2
11EHS759	Soil		12	0.18	84	0.086	1	0.99	0.023	0.06	<0.1	0.02	2.0	<0.1	<0.05	4	0.7	<0.2
11EHS760	Soil		12	0.23	240	0.085	2	1.39	0.022	0.11	<0.1	0.06	2.2	<0.1	<0.05	5	<0.5	<0.2
11EHS761	Soil		10	0.20	197	0.070	2	1.35	0.021	0.14	<0.1	0.03	3.0	<0.1	<0.05	4	0.6	<0.2

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CERTIFICATE OF ANALYSIS

VAN11004495.1

Method	Analyte	Unit	MDL	1DX15 Mo	1DX15 Cu	1DX15 Pb	1DX15 Zn	1DX15 Ag	1DX15 Ni	1DX15 Co	1DX15 Mn	1DX15 Fe	1DX15 As	1DX15 Au	1DX15 Th	1DX15 Sr	1DX15 Cd	1DX15 Sb	1DX15 Bi	1DX15 V	1DX15 Ca	1DX15 P	1DX15 La
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
				0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
11EHS762	Soil			0.2	5.1	4.7	116	<0.1	3.0	3.3	477	1.40	1.4	1.1	0.7	35	<0.1	<0.1	0.2	27	0.26	0.083	6
11EHS763	Soil			0.4	6.8	3.6	43	<0.1	3.7	4.0	335	1.78	1.4	3.7	0.5	26	<0.1	0.2	0.1	51	0.17	0.038	3
11EHS764	Soil			0.7	24.1	5.6	46	<0.1	9.8	9.5	664	2.64	4.5	<0.5	1.0	63	0.1	0.4	0.1	64	0.77	0.048	11
11EHS765	Soil			0.5	12.3	3.9	70	<0.1	5.6	4.9	527	1.96	2.0	1.3	0.8	27	0.1	0.3	0.1	54	0.25	0.034	4
11EHS766	Soil			1.1	21.7	5.4	72	<0.1	10.7	9.2	832	2.19	2.3	<0.5	1.0	40	0.2	0.2	0.1	58	0.45	0.036	9
11EHS767	Soil			0.6	23.7	6.0	137	<0.1	9.2	8.4	1310	2.12	2.2	2.3	1.1	45	0.4	0.2	0.1	57	0.53	0.079	8
11EHS768	Soil			0.6	19.7	6.0	76	<0.1	6.1	8.3	869	1.95	5.0	0.8	0.5	45	0.2	0.1	0.1	43	0.67	0.077	9
11EHS769	Soil			0.7	27.0	5.4	92	<0.1	11.9	11.3	1085	2.36	3.0	1.3	0.7	205	0.4	0.2	0.1	61	0.83	0.079	8
11EHS770	Soil			0.7	17.9	5.4	64	<0.1	7.8	9.3	838	2.21	3.9	<0.5	0.4	41	<0.1	0.2	0.1	53	0.40	0.068	6
11EHS771	Soil			0.4	17.1	5.6	75	<0.1	6.3	6.5	385	2.46	4.3	<0.5	1.1	84	0.1	0.2	0.1	58	0.35	0.070	8
11EHS772	Soil			0.3	41.4	6.2	48	<0.1	17.6	9.0	875	2.43	3.5	1.2	1.3	74	0.1	0.2	0.1	50	0.96	0.041	16
11EHS773	Soil			0.5	22.6	4.3	113	<0.1	7.6	7.4	2044	1.88	3.4	<0.5	0.5	49	0.3	0.1	0.1	48	0.60	0.257	6
11EHS774	Soil			0.4	20.2	5.5	78	<0.1	10.4	9.3	981	2.32	2.6	3.0	1.1	30	0.1	<0.1	0.1	58	0.44	0.176	6
11EHS775	Soil			0.6	23.6	6.6	77	<0.1	8.0	9.6	968	2.69	3.3	<0.5	1.2	45	0.2	0.2	0.1	68	0.57	0.057	10
11EHS776	Soil			0.5	34.4	5.5	50	<0.1	7.1	7.3	840	1.85	3.6	<0.5	0.7	63	0.3	0.2	0.1	44	0.75	0.055	10
11EHS777	Soil			0.8	12.9	4.7	47	<0.1	5.9	6.4	623	2.14	1.5	2.2	0.9	31	0.1	0.2	<0.1	56	0.32	0.025	6
11EHS778	Soil			0.7	13.9	16.5	68	<0.1	3.7	6.0	3482	1.70	4.4	<0.5	0.8	142	0.7	0.1	0.1	22	1.38	0.242	18
11EHS779	Soil			0.5	23.0	5.1	79	<0.1	7.3	7.9	611	2.05	5.4	1.7	0.5	99	0.3	0.3	<0.1	48	1.38	0.097	10
11EHS780	Soil			0.2	4.9	3.6	68	<0.1	3.3	2.4	248	1.20	2.0	<0.5	1.6	34	<0.1	<0.1	0.1	20	0.20	0.046	8
11EHS781	Soil			0.5	18.7	5.8	52	<0.1	4.7	5.3	628	1.39	3.4	1.0	0.6	195	0.2	0.2	<0.1	30	0.86	0.043	11
11EHS782	Soil			0.3	15.4	6.5	87	<0.1	5.3	6.0	1065	2.12	2.2	0.8	0.9	51	0.2	0.1	0.2	56	0.37	0.050	9
11EHS783	Soil			0.5	11.9	6.5	88	<0.1	4.9	4.5	1527	1.55	1.9	<0.5	0.8	71	0.2	0.1	0.1	37	0.40	0.091	6
11EHS784	Soil			0.3	8.1	5.0	81	<0.1	4.4	3.9	755	1.64	2.1	<0.5	1.1	13	<0.1	<0.1	0.1	40	0.16	0.256	6
11EHS785	Soil			0.3	14.9	7.3	93	<0.1	5.5	6.4	1112	2.28	3.1	<0.5	1.2	42	0.2	0.2	0.1	53	0.38	0.122	9
11EHS786	Soil			0.3	8.1	6.1	79	<0.1	5.3	4.3	512	1.75	2.0	<0.5	0.9	18	0.1	0.1	0.1	44	0.22	0.078	5
11EHS787	Soil			0.5	8.2	7.0	49	<0.1	4.1	4.4	681	1.75	1.9	<0.5	0.7	44	0.1	0.2	<0.1	44	0.49	0.029	7
11EHS788	Soil			0.7	14.1	8.0	76	<0.1	7.6	6.9	1085	2.37	9.6	3.7	1.4	20	0.1	0.2	0.1	57	0.17	0.113	7
11EHS789	Soil			2.1	20.3	5.4	57	<0.1	6.0	6.4	909	1.75	2.2	<0.5	0.6	62	0.3	0.2	<0.1	49	0.81	0.042	6
11EHS790	Soil			0.6	13.8	5.4	100	<0.1	6.7	4.6	945	1.56	2.2	<0.5	0.8	38	0.2	0.2	0.1	38	0.45	0.069	5
11EHS791	Soil			0.7	7.9	5.0	43	<0.1	4.2	4.6	352	1.56	1.3	1.1	0.8	28	0.2	0.2	<0.1	42	0.28	0.013	4

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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 26, 2011

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		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS762	Soil	4	0.20	311	0.048	3	1.60	0.017	0.12	<0.1	0.02	1.3	<0.1	<0.05	5	<0.5	<0.2
11EHS763	Soil	9	0.14	92	0.080	2	0.67	0.014	0.09	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11EHS764	Soil	17	0.37	160	0.042	4	1.16	0.016	0.14	<0.1	0.07	4.4	<0.1	<0.05	4	<0.5	<0.2
11EHS765	Soil	12	0.21	165	0.088	2	0.91	0.017	0.15	<0.1	0.02	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS766	Soil	17	0.31	203	0.078	4	1.05	0.014	0.21	<0.1	0.03	3.7	<0.1	<0.05	3	<0.5	<0.2
11EHS767	Soil	13	0.29	307	0.084	3	1.62	0.013	0.13	<0.1	0.02	3.7	<0.1	<0.05	5	<0.5	<0.2
11EHS768	Soil	10	0.28	229	0.034	3	1.75	0.015	0.24	<0.1	0.02	3.2	<0.1	<0.05	5	<0.5	<0.2
11EHS769	Soil	18	0.48	379	0.063	4	1.55	0.013	0.27	<0.1	0.04	4.3	<0.1	<0.05	4	<0.5	<0.2
11EHS770	Soil	14	0.28	192	0.039	3	1.51	0.016	0.18	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS771	Soil	13	0.39	187	0.035	2	1.71	0.014	0.18	<0.1	0.02	3.5	<0.1	<0.05	5	<0.5	<0.2
11EHS772	Soil	21	0.56	172	0.058	2	2.76	0.041	0.06	<0.1	0.03	4.5	<0.1	<0.05	7	<0.5	<0.2
11EHS773	Soil	17	0.22	234	0.046	2	1.72	0.015	0.11	<0.1	0.03	3.2	<0.1	<0.05	5	<0.5	<0.2
11EHS774	Soil	24	0.34	102	0.078	2	2.89	0.025	0.07	<0.1	0.02	4.4	<0.1	<0.05	7	<0.5	<0.2
11EHS775	Soil	17	0.37	203	0.067	3	1.62	0.017	0.24	<0.1	0.03	5.5	<0.1	<0.05	5	<0.5	<0.2
11EHS776	Soil	12	0.32	228	0.049	3	1.41	0.015	0.20	<0.1	0.04	3.3	<0.1	<0.05	4	<0.5	<0.2
11EHS777	Soil	13	0.23	155	0.080	3	0.98	0.015	0.15	<0.1	<0.01	3.0	<0.1	<0.05	3	<0.5	<0.2
11EHS778	Soil	5	0.19	320	0.033	8	1.12	0.016	0.13	<0.1	0.16	4.5	<0.1	<0.05	4	<0.5	<0.2
11EHS779	Soil	11	0.46	193	0.022	7	1.02	0.025	0.12	<0.1	0.07	2.7	<0.1	0.05	3	0.6	<0.2
11EHS780	Soil	4	0.09	49	0.025	<1	1.30	0.036	0.29	<0.1	<0.01	1.1	<0.1	<0.05	4	<0.5	<0.2
11EHS781	Soil	8	0.22	422	0.037	3	1.28	0.028	0.19	<0.1	0.02	2.1	<0.1	<0.05	3	0.5	<0.2
11EHS782	Soil	10	0.22	186	0.069	2	1.48	0.014	0.12	<0.1	0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS783	Soil	9	0.19	206	0.056	2	1.54	0.016	0.15	<0.1	0.03	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS784	Soil	8	0.13	143	0.073	2	1.85	0.019	0.04	<0.1	0.02	1.7	<0.1	<0.05	6	<0.5	<0.2
11EHS785	Soil	10	0.31	163	0.062	1	1.97	0.013	0.10	<0.1	0.02	2.9	<0.1	<0.05	6	<0.5	<0.2
11EHS786	Soil	8	0.23	90	0.096	1	1.73	0.017	0.05	<0.1	0.01	1.8	<0.1	<0.05	7	<0.5	<0.2
11EHS787	Soil	8	0.22	106	0.092	2	1.14	0.011	0.13	<0.1	0.03	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS788	Soil	12	0.29	145	0.094	1	2.52	0.012	0.05	<0.1	0.04	2.3	0.1	<0.05	8	<0.5	<0.2
11EHS789	Soil	10	0.25	202	0.059	5	0.91	0.014	0.23	<0.1	0.04	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS790	Soil	10	0.22	211	0.060	1	1.09	0.015	0.14	<0.1	0.02	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS791	Soil	8	0.16	117	0.062	1	0.91	0.014	0.13	<0.1	0.02	1.5	<0.1	<0.05	3	<0.5	<0.2

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Project: Shovelnose
 Report Date: November 26, 2011

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		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
11EHS792	Soil	0.4	9.8	7.0	67	<0.1	5.3	5.0	741	1.98	1.9	<0.5	0.9	33	0.2	0.2	<0.1	54	0.27	0.032	6
11EHS793	Soil	0.6	9.0	6.1	115	<0.1	3.6	4.4	1813	1.66	1.7	0.6	0.7	38	0.3	0.1	<0.1	36	0.46	0.072	6
11EHS794	Soil	0.5	12.4	5.0	36	<0.1	5.1	6.5	472	1.93	1.1	<0.5	0.9	83	<0.1	0.2	<0.1	52	0.65	0.019	8
11EHS795	Soil	0.4	6.4	5.0	58	<0.1	4.6	4.3	568	1.79	1.0	<0.5	0.6	16	<0.1	0.2	<0.1	48	0.16	0.030	3
11EHS796	Soil	0.4	7.3	5.6	72	<0.1	5.6	4.2	415	1.81	1.5	3.0	0.6	23	0.2	0.2	<0.1	48	0.22	0.037	4
11EHS797	Soil	0.6	11.2	6.3	57	<0.1	5.5	6.4	835	1.76	2.5	<0.5	0.8	48	0.2	0.2	<0.1	48	0.56	0.026	7
11EHS798	Soil	0.3	6.0	5.3	70	<0.1	4.4	3.6	566	1.48	1.5	1.7	0.8	17	0.2	0.1	0.1	44	0.19	0.040	3
11EHS799	Soil	0.2	3.8	5.3	60	<0.1	2.3	1.9	313	1.11	1.0	<0.5	0.9	16	0.1	<0.1	<0.1	26	0.23	0.021	5
11EHS800	Soil	0.6	13.0	7.1	53	<0.1	5.6	5.5	943	1.87	2.3	0.7	0.7	33	0.1	0.2	0.1	58	0.35	0.024	4
11EHS801	Soil	0.5	14.2	4.7	48	<0.1	5.9	5.5	730	1.77	2.4	0.8	0.9	37	0.1	0.1	<0.1	52	0.42	0.019	6
11EHS802	Soil	0.5	14.3	4.8	49	<0.1	6.3	5.8	681	2.00	2.5	1.0	1.0	36	0.1	0.1	<0.1	58	0.40	0.019	6
11EHS803	Soil	0.4	11.8	6.5	43	<0.1	7.1	5.3	280	2.30	2.7	1.6	1.3	24	<0.1	0.2	0.1	71	0.25	0.023	5
11EHS804	Soil	0.7	16.2	6.5	20	<0.1	4.7	4.8	734	0.99	2.4	0.8	0.3	99	0.2	0.1	<0.1	22	1.81	0.061	3
11EHS805	Soil	0.5	11.5	6.6	36	<0.1	6.7	6.0	284	2.50	2.5	0.6	1.0	29	<0.1	0.2	<0.1	78	0.23	0.009	4
11EHS806	Soil	0.3	5.3	4.3	93	<0.1	4.6	3.3	470	1.37	1.7	0.5	0.9	15	<0.1	<0.1	<0.1	35	0.21	0.153	4
11EHS807	Soil	0.7	10.2	8.5	112	<0.1	5.8	5.3	1245	1.97	3.0	1.2	1.0	23	0.3	0.2	0.1	54	0.32	0.046	5
11EHS808	Soil	0.3	7.9	6.2	66	<0.1	5.2	4.1	363	1.91	1.9	1.0	0.9	20	<0.1	0.1	<0.1	54	0.19	0.024	5
11EHS809	Soil	0.4	8.8	5.0	74	<0.1	5.0	4.1	605	1.79	2.6	<0.5	0.7	27	<0.1	0.2	<0.1	53	0.30	0.049	3
11EHS810	Soil	0.9	10.5	6.1	69	<0.1	6.2	5.4	566	2.16	2.5	0.8	1.1	26	0.1	0.2	<0.1	62	0.25	0.054	4
11EHS811	Soil	1.3	13.1	7.1	84	<0.1	6.0	5.5	347	2.01	2.2	0.6	1.2	60	0.2	0.2	0.1	54	0.44	0.023	8
11EHS812	Soil	0.5	6.7	7.4	101	<0.1	5.0	4.4	835	1.84	1.4	<0.5	0.9	20	0.2	0.2	<0.1	48	0.20	0.021	4
11EHS813	Soil	0.8	15.7	6.5	201	<0.1	5.1	3.8	2215	1.64	1.9	<0.5	0.7	39	0.7	0.1	<0.1	43	0.38	0.045	7
11EHS814	Soil	0.8	17.0	6.3	86	<0.1	7.6	7.7	956	2.15	2.7	0.5	0.9	38	0.3	0.2	<0.1	59	0.38	0.054	7
11EHS815	Soil	0.7	12.2	6.9	99	<0.1	6.9	6.6	761	2.03	2.1	1.3	1.2	42	0.3	0.2	<0.1	55	0.51	0.032	7
11EHS816	Soil	0.6	10.2	6.2	143	<0.1	8.3	6.2	531	1.98	1.9	<0.5	1.5	22	0.1	0.1	0.1	51	0.18	0.109	5
11EHS817	Soil	0.8	15.1	7.5	105	<0.1	7.3	6.4	1463	2.05	2.8	<0.5	1.1	34	0.3	0.2	0.1	53	0.26	0.055	8
11EHS818	Soil	1.3	10.2	5.6	43	<0.1	9.7	6.1	469	2.01	1.4	<0.5	1.1	44	<0.1	0.1	<0.1	56	0.31	0.013	6
11EHS819	Soil	0.5	7.8	6.1	51	<0.1	4.7	4.0	535	1.83	2.5	0.6	0.9	31	<0.1	0.1	0.1	47	0.21	0.053	5
11EHS820	Soil	0.7	6.8	9.8	136	<0.1	5.6	4.1	1463	1.45	1.5	<0.5	0.9	26	0.2	0.1	0.1	32	0.44	0.065	5
11EHS821	Soil	0.4	5.5	5.7	75	<0.1	5.2	3.8	478	1.61	1.5	<0.5	0.9	19	<0.1	<0.1	<0.1	45	0.17	0.029	4

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Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm		
				1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS792	Soil			10	0.19	160	0.065	2	0.98	0.011	0.11	<0.1	0.02	2.2	<0.1	<0.05	3	<0.5	<0.2
11EHS793	Soil			6	0.19	274	0.050	1	1.33	0.013	0.12	<0.1	0.04	1.7	<0.1	<0.05	5	<0.5	<0.2
11EHS794	Soil			10	0.35	136	0.105	2	1.36	0.020	0.09	<0.1	0.02	3.4	<0.1	<0.05	4	<0.5	<0.2
11EHS795	Soil			8	0.16	172	0.052	<1	1.15	0.015	0.05	<0.1	0.01	1.1	<0.1	<0.05	4	<0.5	<0.2
11EHS796	Soil			9	0.17	133	0.050	<1	1.36	0.014	0.06	<0.1	0.02	1.5	<0.1	<0.05	4	<0.5	<0.2
11EHS797	Soil			10	0.18	204	0.056	2	0.84	0.022	0.16	<0.1	0.03	2.5	<0.1	<0.05	3	<0.5	<0.2
11EHS798	Soil			8	0.12	204	0.062	2	0.96	0.012	0.08	<0.1	0.01	1.2	<0.1	<0.05	3	<0.5	<0.2
11EHS799	Soil			4	0.06	233	0.026	2	0.67	0.011	0.12	<0.1	<0.01	1.0	<0.1	<0.05	2	<0.5	<0.2
11EHS800	Soil			11	0.17	225	0.077	2	0.89	0.012	0.09	<0.1	0.04	1.9	<0.1	<0.05	3	<0.5	<0.2
11EHS801	Soil			12	0.17	255	0.085	3	0.91	0.018	0.12	<0.1	0.03	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS802	Soil			13	0.18	248	0.096	3	1.00	0.021	0.12	<0.1	0.02	2.7	<0.1	<0.05	3	<0.5	<0.2
11EHS803	Soil			14	0.19	232	0.099	2	1.01	0.014	0.11	<0.1	0.05	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS804	Soil			8	0.21	138	0.034	6	0.83	0.011	0.07	<0.1	0.08	1.4	<0.1	0.15	2	0.5	<0.2
11EHS805	Soil			16	0.19	91	0.105	2	1.04	0.014	0.06	<0.1	0.01	2.3	<0.1	<0.05	3	<0.5	<0.2
11EHS806	Soil			6	0.10	272	0.064	2	1.30	0.018	0.08	<0.1	0.02	1.1	<0.1	<0.05	4	<0.5	<0.2
11EHS807	Soil			10	0.14	299	0.069	2	1.32	0.014	0.09	<0.1	0.03	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS808	Soil			10	0.14	171	0.087	1	1.00	0.013	0.09	<0.1	0.02	1.6	<0.1	<0.05	3	<0.5	<0.2
11EHS809	Soil			10	0.15	188	0.067	2	0.99	0.013	0.09	<0.1	0.03	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS810	Soil			12	0.18	200	0.081	2	1.11	0.011	0.12	<0.1	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2
11EHS811	Soil			11	0.22	157	0.067	2	1.31	0.011	0.11	<0.1	0.03	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS812	Soil			10	0.15	180	0.066	1	1.11	0.012	0.09	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2
11EHS813	Soil			9	0.14	627	0.065	2	1.18	0.012	0.09	<0.1	0.03	1.7	<0.1	<0.05	4	<0.5	<0.2
11EHS814	Soil			13	0.22	189	0.077	2	1.15	0.012	0.19	<0.1	0.02	2.8	<0.1	<0.05	4	<0.5	<0.2
11EHS815	Soil			12	0.20	174	0.084	3	1.07	0.014	0.14	<0.1	0.03	2.6	<0.1	<0.05	3	<0.5	<0.2
11EHS816	Soil			11	0.21	181	0.079	<1	1.95	0.014	0.10	<0.1	0.02	2.2	<0.1	<0.05	6	<0.5	<0.2
11EHS817	Soil			13	0.22	209	0.072	1	1.54	0.015	0.09	<0.1	0.03	2.8	<0.1	<0.05	5	<0.5	<0.2
11EHS818	Soil			17	0.24	127	0.091	1	1.06	0.013	0.08	<0.1	0.02	2.4	<0.1	<0.05	3	<0.5	<0.2
11EHS819	Soil			10	0.16	72	0.063	<1	1.30	0.014	0.08	<0.1	0.03	1.5	<0.1	<0.05	4	<0.5	<0.2
11EHS820	Soil			7	0.14	344	0.051	2	1.37	0.016	0.11	<0.1	0.04	1.4	<0.1	<0.05	4	<0.5	<0.2
11EHS821	Soil			10	0.13	179	0.065	<1	1.01	0.012	0.06	<0.1	0.01	1.4	<0.1	<0.05	4	<0.5	<0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

VAN11004495.1

Method	Analyte	Unit	MDL	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15		
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
				ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm		
				0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
11EHS822	Soil			0.4	6.9	6.6	93	<0.1	5.6	4.3	877	1.53	1.6	0.8	1.0	20	0.2	0.1	0.1	39	0.16	0.050	4	
11EHS823	Soil			1.2	17.4	14.1	97	0.1	6.1	6.3	1357	1.99	4.1	0.8	0.4	43	0.4	0.2	0.1	45	0.56	0.135	9	
11EHS824	Soil			0.2	4.5	5.0	44	<0.1	3.7	4.0	304	1.36	1.4	0.6	0.7	16	<0.1	<0.1	<0.1	33	0.26	0.014	7	
11EHS825	Soil			1.3	15.9	11.7	61	0.1	5.2	8.3	826	2.04	8.1	<0.5	1.4	50	0.1	0.2	0.1	45	0.59	0.053	11	
11EHS826	Soil			0.6	11.3	13.8	64	<0.1	5.6	6.7	991	2.07	4.2	<0.5	2.1	65	0.1	0.3	0.2	43	0.52	0.031	15	
11EHS827	Soil			0.6	11.6	10.6	104	<0.1	4.0	7.1	1983	1.94	4.9	<0.5	1.4	134	0.3	0.2	0.2	35	0.45	0.057	13	
11EHS828	Soil			0.4	6.8	4.3	65	<0.1	4.0	3.1	374	1.46	1.3	4.1	0.8	32	<0.1	0.1	<0.1	38	0.28	0.019	4	
11EHS829	Soil			0.7	15.4	9.0	85	<0.1	6.2	6.2	1132	1.81	3.9	1.1	0.9	62	0.2	0.2	0.1	43	0.61	0.123	9	
11EHS830	Soil			0.3	9.6	8.9	61	<0.1	5.0	4.9	542	2.04	2.4	0.9	1.4	52	0.2	0.2	0.1	52	0.45	0.033	10	
11EHS831	Soil			0.6	7.7	17.3	81	<0.1	3.9	4.9	1418	1.77	2.5	1.0	1.2	49	0.3	0.2	<0.1	43	0.33	0.029	8	
11EHS832	Soil			0.7	11.6	10.0	50	<0.1	6.0	5.6	482	2.26	3.9	10.3	1.6	39	0.1	0.3	0.1	58	0.36	0.034	10	
11EHS833	Soil			0.5	8.4	9.2	64	<0.1	6.3	4.8	1057	1.87	1.9	<0.5	1.4	24	0.2	0.1	0.1	46	0.22	0.042	7	
11EHS834	Soil			0.6	10.4	7.9	97	<0.1	7.7	5.9	1095	2.23	3.1	1.2	1.4	19	<0.1	0.2	0.1	55	0.21	0.098	9	
11EHS835	Soil			0.6	11.8	6.2	72	<0.1	5.7	5.0	511	1.88	3.3	0.8	0.9	41	0.1	0.2	0.1	42	0.45	0.061	7	
11EHS836	Soil			0.5	6.0	5.5	73	<0.1	4.8	2.7	561	1.35	1.9	<0.5	0.7	19	<0.1	0.1	<0.1	33	0.19	0.060	4	
11EHS837	Soil			0.4	8.1	5.0	38	<0.1	7.0	4.1	198	2.00	2.1	<0.5	0.8	25	<0.1	0.2	<0.1	51	0.22	0.027	5	
11EHS838	Soil			0.5	13.2	5.1	102	<0.1	13.3	6.5	542	2.34	2.2	<0.5	1.0	35	0.1	0.2	0.1	59	0.31	0.062	6	
11EHS839	Soil			0.4	7.6	4.9	87	<0.1	5.8	4.5	648	1.97	1.9	0.9	0.8	28	0.1	0.2	0.1	50	0.26	0.035	4	
11EHS840	Soil			0.9	11.7	6.4	61	<0.1	6.3	6.3	753	2.09	2.2	1.1	0.9	41	0.1	0.2	<0.1	55	0.38	0.028	7	
11EHS841	Soil			0.7	8.5	5.9	133	<0.1	6.8	4.8	948	1.92	2.6	0.7	1.0	28	0.2	0.2	0.1	50	0.27	0.084	5	
11EHS842	Soil			0.4	9.9	5.6	63	<0.1	7.0	4.5	267	2.22	2.2	1.0	1.0	29	0.1	0.2	<0.1	62	0.25	0.039	6	
11EHS843	Soil			0.5	9.6	6.6	111	<0.1	6.8	4.8	931	2.06	2.3	<0.5	0.8	31	0.7	0.2	<0.1	53	0.37	0.045	5	
11EHS844	Soil			0.8	21.5	6.4	90	<0.1	10.5	9.3	859	2.56	3.5	1.1	1.2	50	0.2	0.2	<0.1	67	0.58	0.080	10	
11EHS845	Soil			0.9	9.2	7.0	66	<0.1	7.4	5.6	702	2.18	2.1	<0.5	1.1	21	<0.1	0.2	0.1	55	0.23	0.042	6	



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Project: Shovelnose
Report Date: November 26, 2011

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CERTIFICATE OF ANALYSIS

VAN11004495.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
11EHS822	Soil	8	0.12	186	0.073	1	1.34	0.015	0.05	<0.1	0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
11EHS823	Soil	10	0.22	197	0.044	2	1.57	0.010	0.15	<0.1	0.03	1.6	<0.1	<0.05	5	<0.5	<0.2
11EHS824	Soil	5	0.08	158	0.027	<1	1.20	0.021	0.09	<0.1	0.02	1.4	<0.1	<0.05	4	<0.5	<0.2
11EHS825	Soil	9	0.26	104	0.081	<1	2.50	0.014	0.06	0.1	0.03	4.3	<0.1	<0.05	8	<0.5	<0.2
11EHS826	Soil	12	0.28	91	0.092	<1	2.16	0.010	0.19	<0.1	0.03	2.8	<0.1	<0.05	7	<0.5	<0.2
11EHS827	Soil	6	0.24	191	0.121	1	2.04	0.013	0.20	0.1	0.05	2.9	<0.1	<0.05	6	<0.5	<0.2
11EHS828	Soil	9	0.14	134	0.089	2	0.94	0.015	0.14	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
11EHS829	Soil	10	0.23	268	0.058	2	1.39	0.013	0.17	<0.1	0.05	2.5	<0.1	<0.05	4	<0.5	<0.2
11EHS830	Soil	10	0.22	107	0.142	2	1.52	0.017	0.21	<0.1	0.02	3.4	<0.1	<0.05	5	<0.5	<0.2
11EHS831	Soil	8	0.18	105	0.126	2	1.32	0.018	0.16	<0.1	0.02	3.0	<0.1	<0.05	4	<0.5	<0.2
11EHS832	Soil	12	0.24	91	0.116	2	1.13	0.013	0.14	<0.1	0.01	3.1	<0.1	<0.05	4	<0.5	<0.2
11EHS833	Soil	10	0.19	166	0.082	1	1.81	0.011	0.10	<0.1	0.02	1.9	<0.1	<0.05	6	<0.5	<0.2
11EHS834	Soil	13	0.21	183	0.076	2	2.23	0.012	0.09	<0.1	0.02	2.8	0.1	<0.05	7	<0.5	<0.2
11EHS835	Soil	10	0.17	195	0.065	2	1.56	0.017	0.10	<0.1	0.02	2.5	<0.1	<0.05	5	<0.5	<0.2
11EHS836	Soil	9	0.12	190	0.061	2	1.21	0.015	0.08	<0.1	0.01	1.1	<0.1	<0.05	4	<0.5	<0.2
11EHS837	Soil	15	0.19	135	0.090	1	1.10	0.016	0.07	<0.1	<0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11EHS838	Soil	19	0.30	169	0.112	2	1.75	0.017	0.12	<0.1	<0.01	2.4	0.1	<0.05	5	<0.5	<0.2
11EHS839	Soil	11	0.18	145	0.089	2	1.30	0.017	0.13	<0.1	0.01	1.8	<0.1	<0.05	4	<0.5	<0.2
11EHS840	Soil	12	0.21	136	0.092	2	1.28	0.017	0.12	<0.1	0.03	2.6	<0.1	<0.05	4	<0.5	<0.2
11EHS841	Soil	13	0.19	207	0.083	2	1.57	0.013	0.10	<0.1	0.02	1.8	<0.1	<0.05	5	<0.5	<0.2
11EHS842	Soil	14	0.20	120	0.087	<1	1.51	0.015	0.11	<0.1	0.01	2.1	<0.1	<0.05	5	<0.5	<0.2
11EHS843	Soil	12	0.19	224	0.079	2	1.15	0.013	0.12	<0.1	0.02	2.1	<0.1	<0.05	4	<0.5	<0.2
11EHS844	Soil	18	0.36	174	0.094	2	1.65	0.018	0.21	<0.1	0.02	3.9	<0.1	<0.05	5	<0.5	<0.2
11EHS845	Soil	13	0.25	146	0.072	<1	1.88	0.013	0.11	<0.1	0.02	1.8	<0.1	<0.05	6	<0.5	<0.2



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Project: Shovelnose
 Report Date: November 26, 2011

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QUALITY CONTROL REPORT

VAN11004495.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
Pulp Duplicates																					
11LMS049	Soil	0.4	26.4	7.0	54	0.1	7.8	6.2	391	2.02	4.6	0.6	0.9	73	0.2	0.2	<0.1	49	0.74	0.055	18
REP 11LMS049	QC	0.4	27.0	7.1	52	0.1	8.4	6.1	427	2.06	4.6	0.9	1.0	75	0.2	0.2	<0.1	51	0.75	0.058	18
11LMS065	Soil	0.3	15.3	4.0	53	<0.1	13.6	7.9	245	1.86	2.5	<0.5	0.7	30	0.1	<0.1	<0.1	45	0.44	0.033	5
REP 11LMS065	QC	0.3	15.4	3.8	55	<0.1	12.8	8.0	240	1.81	2.4	<0.5	0.7	31	<0.1	<0.1	<0.1	45	0.44	0.034	5
11LMS102	Soil	0.4	9.6	4.3	60	<0.1	3.8	4.0	354	1.98	2.5	<0.5	0.8	25	<0.1	0.2	<0.1	58	0.23	0.024	4
REP 11LMS102	QC	0.5	9.6	4.2	59	<0.1	3.6	4.0	360	1.97	2.1	<0.5	0.7	25	<0.1	0.2	<0.1	57	0.24	0.026	4
11LMS108	Soil	0.3	6.4	4.4	82	<0.1	4.8	3.2	361	1.49	1.7	0.5	0.7	22	<0.1	0.1	<0.1	40	0.14	0.039	3
REP 11LMS108	QC	0.3	6.8	4.5	87	<0.1	4.9	3.4	371	1.55	2.0	<0.5	0.8	24	<0.1	0.1	<0.1	42	0.15	0.041	3
11LMS121	Soil	0.3	9.2	8.5	65	<0.1	5.5	5.4	364	2.43	1.6	<0.5	1.3	96	<0.1	<0.1	0.1	47	0.31	0.033	7
REP 11LMS121	QC	0.3	8.8	8.3	58	<0.1	5.1	5.1	335	2.26	1.6	<0.5	1.2	90	0.1	0.1	0.1	43	0.30	0.032	7
11LMS153	Soil	0.3	6.7	5.6	89	<0.1	4.2	3.5	600	1.72	2.2	<0.5	1.0	23	0.1	0.1	<0.1	38	0.27	0.041	7
REP 11LMS153	QC	0.4	6.5	5.4	88	<0.1	4.4	3.4	627	1.73	2.4	0.7	1.0	24	<0.1	0.1	<0.1	38	0.27	0.043	8
11LMS168	Soil	0.6	14.2	8.8	78	<0.1	6.1	4.8	805	1.80	3.7	2.1	1.2	44	0.2	0.3	<0.1	53	0.35	0.040	8
REP 11LMS168	QC	0.6	14.1	8.6	75	<0.1	5.6	4.6	813	1.77	3.8	<0.5	1.1	43	0.3	0.2	0.1	50	0.34	0.041	7
11EHS718	Soil	0.6	9.0	4.4	58	<0.1	3.9	4.3	540	1.69	<0.5	<0.5	0.6	30	<0.1	0.2	<0.1	51	0.33	0.034	3
REP 11EHS718	QC	0.6	8.4	4.4	58	<0.1	3.8	4.3	553	1.74	<0.5	0.6	0.6	30	0.1	0.2	<0.1	53	0.33	0.035	3
11EHS743	Soil	1.8	36.5	8.1	94	0.1	11.4	10.5	1208	2.72	6.4	0.8	0.7	35	0.4	0.1	<0.1	60	0.66	0.098	15
REP 11EHS743	QC	1.6	36.1	8.3	93	<0.1	11.9	10.6	1194	2.80	6.9	1.2	0.6	35	0.3	0.1	<0.1	60	0.67	0.102	15
11EHS759	Soil	0.4	8.4	4.9	32	<0.1	4.9	4.1	220	1.97	1.0	<0.5	0.8	26	<0.1	0.1	<0.1	56	0.31	0.013	4
REP 11EHS759	QC	0.3	7.9	5.2	33	<0.1	5.1	4.1	223	1.99	1.3	<0.5	0.8	27	<0.1	0.1	<0.1	58	0.30	0.013	4
11EHS763	Soil	0.4	6.8	3.6	43	<0.1	3.7	4.0	335	1.78	1.4	3.7	0.5	26	<0.1	0.2	0.1	51	0.17	0.038	3
REP 11EHS763	QC	0.5	6.9	3.7	45	<0.1	3.4	4.0	333	1.72	1.5	1.3	0.6	27	<0.1	0.2	0.1	50	0.17	0.039	3
11EHS795	Soil	0.4	6.4	5.0	58	<0.1	4.6	4.3	568	1.79	1.0	<0.5	0.6	16	<0.1	0.2	<0.1	48	0.16	0.030	3
REP 11EHS795	QC	0.3	6.5	5.3	60	<0.1	5.1	4.4	561	1.89	1.2	0.6	0.6	17	<0.1	0.1	<0.1	50	0.16	0.030	3
11EHS809	Soil	0.4	8.8	5.0	74	<0.1	5.0	4.1	605	1.79	2.6	<0.5	0.7	27	<0.1	0.2	<0.1	53	0.30	0.049	3
REP 11EHS809	QC	0.4	9.0	4.9	75	<0.1	5.2	4.1	597	1.77	2.7	<0.5	0.7	26	0.2	0.2	<0.1	53	0.28	0.048	4
11EHS827	Soil	0.6	11.6	10.6	104	<0.1	4.0	7.1	1983	1.94	4.9	<0.5	1.4	134	0.3	0.2	0.2	35	0.45	0.057	13
REP 11EHS827	QC	0.5	11.7	11.1	106	<0.1	4.5	7.4	2089	2.01	5.2	1.1	1.5	141	0.3	0.2	0.2	36	0.47	0.057	13

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Client: **Westhaven Ventures Inc.**
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 26, 2011

Page: 1 of 2 Part 2

QUALITY CONTROL REPORT

VAN11004495.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																	
11LMS049	Soil	15	0.29	217	0.039	2	1.93	0.024	0.10	<0.1	0.09	5.9	<0.1	<0.05	5	<0.5	<0.2
REP 11LMS049	QC	15	0.30	216	0.047	2	1.85	0.020	0.10	<0.1	0.08	5.9	<0.1	<0.05	5	<0.5	<0.2
11LMS065	Soil	14	0.30	115	0.109	2	1.95	0.019	0.05	<0.1	0.03	3.0	<0.1	<0.05	6	<0.5	<0.2
REP 11LMS065	QC	14	0.30	111	0.108	2	2.01	0.020	0.06	<0.1	0.03	2.9	<0.1	<0.05	6	<0.5	<0.2
11LMS102	Soil	9	0.15	115	0.073	1	0.84	0.018	0.09	<0.1	<0.01	2.9	<0.1	<0.05	3	<0.5	<0.2
REP 11LMS102	QC	9	0.15	116	0.076	2	0.88	0.018	0.09	<0.1	0.01	3.0	<0.1	<0.05	3	<0.5	<0.2
11LMS108	Soil	9	0.13	109	0.091	1	0.98	0.018	0.09	<0.1	<0.01	1.8	<0.1	<0.05	3	<0.5	<0.2
REP 11LMS108	QC	9	0.14	116	0.097	1	1.02	0.023	0.09	<0.1	<0.01	1.9	<0.1	<0.05	4	<0.5	<0.2
11LMS121	Soil	9	0.32	162	0.135	1	2.70	0.018	0.16	<0.1	0.02	2.5	<0.1	<0.05	8	<0.5	<0.2
REP 11LMS121	QC	8	0.31	155	0.126	<1	2.58	0.017	0.15	<0.1	0.02	2.3	<0.1	<0.05	8	<0.5	<0.2
11LMS153	Soil	8	0.18	128	0.047	<1	1.22	0.013	0.11	<0.1	0.02	1.9	<0.1	<0.05	5	<0.5	<0.2
REP 11LMS153	QC	8	0.18	131	0.049	1	1.25	0.014	0.11	<0.1	0.01	2.0	<0.1	<0.05	5	<0.5	<0.2
11LMS168	Soil	11	0.20	157	0.086	2	0.99	0.015	0.08	<0.1	0.04	2.7	<0.1	<0.05	3	<0.5	<0.2
REP 11LMS168	QC	11	0.20	152	0.086	2	0.99	0.014	0.08	<0.1	0.05	2.8	<0.1	<0.05	3	<0.5	<0.2
11EHS718	Soil	9	0.17	115	0.093	2	0.77	0.016	0.11	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
REP 11EHS718	QC	9	0.18	115	0.096	1	0.79	0.019	0.11	<0.1	0.01	2.0	<0.1	<0.05	3	<0.5	<0.2
11EHS743	Soil	16	0.37	161	0.059	1	2.07	0.021	0.15	<0.1	0.02	3.9	<0.1	<0.05	7	<0.5	<0.2
REP 11EHS743	QC	17	0.38	165	0.064	2	2.15	0.023	0.15	<0.1	0.03	3.9	<0.1	<0.05	7	<0.5	<0.2
11EHS759	Soil	12	0.18	84	0.086	1	0.99	0.023	0.06	<0.1	0.02	2.0	<0.1	<0.05	4	0.7	<0.2
REP 11EHS759	QC	12	0.19	86	0.091	2	1.04	0.023	0.07	<0.1	0.03	1.9	<0.1	<0.05	4	0.6	<0.2
11EHS763	Soil	9	0.14	92	0.080	2	0.67	0.014	0.09	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
REP 11EHS763	QC	9	0.14	95	0.081	3	0.68	0.013	0.09	<0.1	0.02	1.7	<0.1	<0.05	2	<0.5	<0.2
11EHS795	Soil	8	0.16	172	0.052	<1	1.15	0.015	0.05	<0.1	0.01	1.1	<0.1	<0.05	4	<0.5	<0.2
REP 11EHS795	QC	9	0.16	172	0.059	1	1.15	0.019	0.05	<0.1	0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
11EHS809	Soil	10	0.15	188	0.067	2	0.99	0.013	0.09	<0.1	0.03	1.8	<0.1	<0.05	3	<0.5	<0.2
REP 11EHS809	QC	10	0.14	188	0.062	1	0.98	0.014	0.08	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2
11EHS827	Soil	6	0.24	191	0.121	1	2.04	0.013	0.20	0.1	0.05	2.9	<0.1	<0.05	6	<0.5	<0.2
REP 11EHS827	QC	6	0.25	202	0.125	1	2.11	0.013	0.21	0.1	0.05	3.0	<0.1	<0.05	6	<0.5	<0.2



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Vancouver BC V6E 2M6 Canada

Project: Shovelnose

Report Date: November 26, 2011

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QUALITY CONTROL REPORT

VAN11004495.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Reference Materials																					
STD DS8	Standard	14.2	110.7	128.8	322	1.9	39.1	7.7	638	2.58	25.4	114.9	6.7	66	2.3	5.8	6.7	43	0.70	0.086	16
STD DS8	Standard	12.7	106.4	127.8	302	1.8	36.8	7.2	599	2.39	22.8	118.2	7.4	70	2.2	5.2	6.8	41	0.68	0.073	16
STD DS8	Standard	12.7	121.9	121.6	306	1.7	37.0	7.6	563	2.35	28.1	115.8	6.9	63	2.6	5.9	7.4	42	0.64	0.079	14
STD DS8	Standard	13.1	107.2	124.1	311	1.9	36.6	7.4	601	2.41	26.3	112.8	6.5	69	2.4	5.3	6.7	42	0.69	0.079	15
STD DS8	Standard	12.1	107.0	119.8	309	1.7	35.8	7.4	615	2.37	26.1	131.0	6.0	64	2.3	5.6	6.8	40	0.66	0.077	13
STD DS8	Standard	13.4	112.4	127.7	307	1.8	38.7	7.7	604	2.47	25.8	111.1	7.5	66	2.3	5.6	7.2	42	0.66	0.072	14
STD DS8	Standard	13.9	115.5	137.5	332	2.0	39.0	8.0	647	2.59	28.4	119.7	7.7	65	2.5	5.0	5.9	44	0.75	0.084	16
STD DS8	Standard	12.8	117.9	123.5	300	1.8	36.6	7.4	582	2.37	29.3	111.7	7.1	64	2.6	5.9	7.4	42	0.67	0.086	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



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Project: Shovelnose
 Report Date: November 26, 2011

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QUALITY CONTROL REPORT

VAN11004495.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																	
STD DS8	Standard	123	0.60	293	0.120	3	0.92	0.088	0.41	3.2	0.20	2.1	5.7	0.16	5	5.3	5.0
STD DS8	Standard	113	0.60	266	0.125	3	0.91	0.087	0.40	3.1	0.20	2.3	5.5	0.14	5	4.5	4.6
STD DS8	Standard	115	0.58	264	0.127	3	0.93	0.107	0.40	2.8	0.18	2.6	5.2	0.14	5	5.0	4.8
STD DS8	Standard	116	0.60	277	0.121	2	0.93	0.106	0.44	3.0	0.21	3.2	5.6	0.15	5	5.6	4.9
STD DS8	Standard	113	0.58	269	0.110	4	0.90	0.099	0.42	2.8	0.18	2.0	5.2	0.14	5	4.4	4.3
STD DS8	Standard	121	0.58	260	0.118	2	0.88	0.092	0.41	2.8	0.18	2.2	5.3	0.16	4	4.8	5.0
STD DS8	Standard	123	0.66	313	0.129	2	0.98	0.101	0.45	3.1	0.18	2.7	5.8	0.10	5	6.0	5.1
STD DS8	Standard	114	0.59	300	0.129	3	0.96	0.116	0.44	3.0	0.20	3.7	5.5	0.14	5	5.0	4.4
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

APPENDIX 6

2011 STREAM SAMPLE ANALYTICAL CERTIFICATES

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO:

AGAT WORK ORDER: 11T540617

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Feb 29, 2012

PAGES (INCLUDING COVER): 10

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11T540617

PROJECT NO:

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 19, 2011

DATE RECEIVED: Oct 19, 2011

DATE REPORTED: Feb 29, 2012

SAMPLE TYPE: Soil

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.001	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
88600 (-150)	1.07	0.17	2.68	11.7	0.002	<5	389	0.98	0.11	1.42	0.35	43.1	12.9	39.1
88601 (-150)	1.68	0.25	1.91	5.1	0.002	<5	197	0.70	0.08	1.13	0.32	25.9	7.2	20.0
88602 (-150)	1.40	0.18	2.03	12.0	<0.001	<5	439	0.71	0.07	0.70	0.18	37.4	14.1	48.4
88603 (-150)	1.54	0.15	2.32	7.7	0.002	5	436	0.57	0.05	1.32	0.23	25.6	22.0	28.1
88604 (-150)	1.52	0.12	1.64	8.3	0.001	<5	309	0.44	0.05	0.89	0.15	22.4	18.8	52.1
88605 (-150)	1.69	0.12	1.46	8.6	0.001	<5	300	0.40	0.04	0.76	0.12	20.3	14.8	36.4
88606 (-150)	1.30	0.14	1.52	4.1	0.001	<5	365	0.34	0.05	1.12	0.08	15.6	8.9	41.4
88607 (-150)	1.29	0.42	1.90	14.8	0.002	<5	819	0.72	0.09	0.71	0.41	40.1	17.0	50.8
88608 (-150)	1.45	0.29	1.97	4.2	0.001	<5	300	0.68	0.09	0.85	0.41	24.9	10.9	38.1
88609 (-150)	1.43	0.16	1.18	5.2	0.002	<5	220	0.49	0.09	0.72	0.25	21.4	11.5	42.9
88610 (-150)	1.40	0.15	1.41	8.8	0.002	<5	362	0.52	0.08	0.91	0.28	24.3	14.2	37.0
88611 (-150)	1.88	0.16	1.50	6.9	0.002	5	269	0.44	0.06	0.90	0.17	25.3	13.7	51.2
88612 (-150)	1.31	0.22	1.56	16.0	0.002	<5	479	0.65	0.08	0.70	0.32	25.2	11.3	42.1
88613 (-150)	1.70	0.15	1.88	5.6	0.002	6	208	0.55	0.08	0.90	0.18	18.3	13.9	43.1
88614 (-150)	1.66	0.10	1.64	4.4	<0.001	<5	192	0.30	0.03	1.05	0.14	14.9	12.9	42.5
88615 (-150)	1.86	0.10	1.72	3.4	0.001	<5	113	0.29	0.03	0.84	0.12	13.8	13.8	41.3
88616 (-150)	1.56	0.11	1.67	4.1	0.001	<5	155	0.30	0.04	1.15	0.24	14.3	12.2	39.4
88617 (-150)	1.60	0.09	1.66	5.0	0.001	<5	204	0.30	0.03	1.42	0.12	15.1	13.4	41.4
88618 (-150)	1.55	0.11	1.92	4.5	<0.001	<5	243	0.31	0.03	1.39	0.17	14.5	13.3	35.2
88619 (-150)	1.17	0.11	1.26	5.1	0.002	8	250	0.31	0.05	2.15	0.23	17.3	11.9	38.4
88620 (-150)	1.43	0.13	1.60	4.4	<0.001	9	207	0.33	0.05	2.63	0.23	15.4	11.3	24.2
88621 (-150)	1.51	0.10	1.00	5.0	0.001	9	144	0.28	0.05	2.23	0.23	12.7	8.9	25.3
88622 (-150)	2.07	0.08	1.50	9.2	0.001	6	1130	0.25	0.04	1.74	0.08	15.5	15.7	45.6
88623 (-150)	1.45	0.11	1.88	7.1	<0.001	9	211	0.33	0.05	1.54	0.17	18.3	15.8	27.8
88624 (-150)	1.38	0.11	1.94	7.4	0.002	9	212	0.36	0.05	1.58	0.19	18.3	15.7	27.2
88625 (-150)	1.23	0.23	2.48	4.3	0.001	<5	273	0.66	0.07	1.10	0.22	19.5	10.9	35.1
88627 (-150)	1.07	0.14	1.83	8.0	<0.001	<5	84	0.38	0.05	0.88	0.21	10.0	10.0	37.8
88629 (-150)	1.04	0.12	1.19	6.1	<0.001	7	303	0.56	0.07	1.01	0.23	21.3	7.4	27.7

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11T540617

PROJECT NO:

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 19, 2011

DATE RECEIVED: Oct 19, 2011

DATE REPORTED: Feb 29, 2012

SAMPLE TYPE: Soil

Sample Description	Analyte: Unit: RDL:	Cs ppm 0.05	Cu ppm 0.1	Fe % 0.01	Ga ppm 0.05	Ge ppm 0.05	Hf ppm 0.02	Hg ppm 0.01	In ppm 0.005	K % 0.01	La ppm 0.1	Li ppm 0.1	Mg % 0.01	Mn ppm 1	Mo ppm 0.05
88600 (-150)		1.49	29.7	4.16	8.80	0.13	0.07	0.08	0.037	0.17	25.9	18.1	0.49	4380	1.34
88601 (-150)		0.99	35.5	2.44	5.76	0.11	0.09	0.09	0.027	0.12	26.4	24.2	0.32	931	1.12
88602 (-150)		0.98	38.1	3.52	6.68	0.10	0.08	0.03	0.029	0.14	14.1	13.9	0.42	3550	1.20
88603 (-150)		0.36	43.5	4.60	7.30	0.10	0.09	0.06	0.035	0.21	11.1	10.6	0.87	2130	0.58
88604 (-150)		0.43	36.8	4.82	5.67	0.10	0.06	0.03	0.028	0.12	9.3	6.7	0.63	2130	0.79
88605 (-150)		0.40	30.8	3.85	5.31	0.09	0.06	0.03	0.025	0.10	8.2	6.6	0.51	1970	0.54
88606 (-150)		0.28	37.9	2.77	4.70	0.08	0.07	0.03	0.021	0.10	6.4	6.6	0.50	2300	0.73
88607 (-150)		0.30	40.6	4.87	5.83	0.12	0.08	0.05	0.026	0.19	13.2	8.6	0.37	4210	1.64
88608 (-150)		0.53	87.7	3.31	7.13	0.10	0.11	0.03	0.030	0.12	10.9	25.0	0.54	1750	0.73
88609 (-150)		0.32	38.5	3.41	4.90	0.09	0.05	0.04	0.027	0.12	9.5	6.0	0.46	1340	0.83
88610 (-150)		0.42	38.3	3.94	5.09	0.09	0.07	0.03	0.024	0.11	10.1	8.4	0.57	2410	0.87
88611 (-150)		0.32	39.2	3.68	5.08	0.09	0.11	0.05	0.023	0.12	8.9	7.5	0.47	1850	0.80
88612 (-150)		0.56	43.5	3.63	5.16	0.10	0.09	0.03	0.026	0.12	14.1	14.1	0.41	1180	0.63
88613 (-150)		2.14	45.3	3.97	6.06	0.09	0.11	0.03	0.023	0.13	10.5	26.4	0.88	1140	0.79
88614 (-150)		0.54	28.9	3.89	6.35	0.09	0.18	0.02	0.025	0.08	6.0	10.7	0.93	1470	0.67
88615 (-150)		0.61	33.5	3.92	6.93	0.09	0.17	0.02	0.024	0.07	5.2	9.9	1.02	1170	0.65
88616 (-150)		0.69	37.8	3.68	6.27	0.09	0.16	0.03	0.025	0.08	5.8	10.2	0.89	1240	0.68
88617 (-150)		0.56	27.0	3.88	6.49	0.09	0.21	0.02	0.025	0.08	6.0	11.9	0.98	2000	0.70
88618 (-150)		0.59	29.4	4.25	6.59	0.09	0.16	0.02	0.024	0.07	5.9	11.7	1.04	1970	0.63
88619 (-150)		0.65	42.6	3.18	5.00	0.09	0.10	0.04	0.021	0.11	7.0	7.9	0.67	2710	0.88
88620 (-150)		0.63	71.3	3.07	5.81	0.07	0.14	0.05	0.022	0.08	6.5	11.8	0.72	855	0.50
88621 (-150)		0.45	43.9	2.68	4.32	0.06	0.11	0.04	0.020	0.08	5.5	8.4	0.51	809	0.74
88622 (-150)		0.47	30.4	5.39	6.22	0.10	0.15	0.02	0.026	0.09	6.3	9.3	0.97	8370	1.07
88623 (-150)		0.38	47.9	4.03	6.55	0.09	0.15	0.03	0.029	0.09	7.4	11.4	0.83	2270	0.56
88624 (-150)		0.38	48.5	4.04	6.60	0.09	0.14	0.03	0.029	0.09	7.3	11.5	0.84	2150	0.55
88625 (-150)		0.47	70.1	3.85	7.31	0.09	0.12	0.05	0.033	0.13	10.7	20.5	0.63	1130	0.60
88627 (-150)		1.02	38.0	3.55	5.60	0.09	0.11	0.03	0.022	0.07	6.2	14.0	0.82	662	0.92
88629 (-150)		1.06	32.5	2.87	4.38	0.09	0.08	0.04	0.024	0.15	14.8	13.2	0.44	852	1.12

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11T540617

PROJECT NO:

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 19, 2011

DATE RECEIVED: Oct 19, 2011

DATE REPORTED: Feb 29, 2012

SAMPLE TYPE: Soil

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
88600 (-150)	0.04	1.36	12.3	737	18.5	11.5	<0.001	0.078	0.36	9.8	0.7	0.8	114	<0.01
88601 (-150)	0.03	0.99	11.6	563	7.3	9.0	<0.001	0.155	0.33	6.9	0.7	0.6	79.7	<0.01
88602 (-150)	0.05	0.68	13.5	437	6.8	12.4	<0.001	0.025	0.27	8.1	0.4	0.7	65.0	<0.01
88603 (-150)	0.07	0.84	16.1	696	5.5	6.8	<0.001	0.071	0.25	13.8	0.5	0.9	108	<0.01
88604 (-150)	0.06	0.54	17.4	667	5.0	6.8	<0.001	0.040	0.28	9.8	0.4	0.8	71.9	<0.01
88605 (-150)	0.04	0.51	12.4	600	4.8	6.5	<0.001	0.032	0.29	8.5	0.3	0.6	67.6	<0.01
88606 (-150)	0.04	0.61	8.9	632	4.7	5.6	0.002	0.100	0.17	6.7	0.5	1.0	80.4	<0.01
88607 (-150)	0.03	0.51	14.6	604	9.9	10.9	0.001	0.038	0.67	7.8	0.6	0.6	73.1	<0.01
88608 (-150)	0.02	0.77	14.0	494	6.1	10.0	<0.001	0.034	0.27	9.0	0.4	0.8	91.5	<0.01
88609 (-150)	0.02	0.53	12.9	559	10.5	6.4	<0.001	0.027	0.37	7.4	0.4	0.5	79.5	<0.01
88610 (-150)	0.03	0.64	14.5	621	7.4	6.6	<0.001	0.034	0.34	7.5	0.4	0.5	92.0	<0.01
88611 (-150)	0.05	0.77	13.5	475	6.1	7.4	<0.001	0.033	0.26	7.6	0.3	0.7	64.7	<0.01
88612 (-150)	0.03	0.72	11.4	558	8.0	9.2	<0.001	0.030	0.31	8.0	0.5	0.7	71.7	<0.01
88613 (-150)	0.16	0.82	12.7	582	5.9	7.4	<0.001	0.033	0.33	7.1	0.4	0.6	104	<0.01
88614 (-150)	0.06	0.83	11.8	437	4.3	4.8	0.001	0.050	0.29	8.3	0.5	0.7	56.3	<0.01
88615 (-150)	0.07	0.51	11.1	303	4.9	4.9	<0.001	0.019	0.27	8.4	0.3	0.6	40.9	<0.01
88616 (-150)	0.05	0.96	11.4	360	4.7	4.9	0.003	0.048	0.31	8.3	0.7	0.7	45.6	<0.01
88617 (-150)	0.06	0.81	13.4	489	4.5	4.6	0.002	0.047	0.28	8.6	0.6	1.0	65.4	<0.01
88618 (-150)	0.06	0.90	13.2	422	4.5	5.2	0.002	0.057	0.29	8.4	0.7	0.6	66.7	<0.01
88619 (-150)	0.04	0.83	12.1	807	4.9	6.3	0.007	0.104	0.42	6.3	0.9	1.4	114	<0.01
88620 (-150)	0.04	0.82	10.6	636	5.1	6.1	<0.001	0.097	0.39	6.7	0.9	0.6	131	<0.01
88621 (-150)	0.03	0.65	8.0	662	5.5	4.8	<0.001	0.083	0.48	5.3	0.7	0.5	111	<0.01
88622 (-150)	0.05	0.48	11.1	549	4.1	4.3	0.001	0.053	0.38	8.6	0.4	0.9	99.2	<0.01
88623 (-150)	0.05	0.85	12.5	697	4.2	5.0	0.002	0.072	0.26	9.7	0.9	0.6	157	<0.01
88624 (-150)	0.05	0.84	12.5	681	4.2	5.3	0.002	0.076	0.27	9.9	0.9	0.5	160	<0.01
88625 (-150)	0.03	0.88	13.9	440	6.0	8.3	<0.001	0.044	0.33	11.0	0.5	0.7	105	<0.01
88627 (-150)	0.02	0.67	17.8	222	5.0	6.9	<0.001	0.032	0.37	6.3	0.5	0.5	25.2	<0.01
88629 (-150)	0.03	0.71	8.7	512	6.6	10.1	<0.001	0.059	0.50	4.9	0.4	0.6	79.9	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11T540617

PROJECT NO:

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 19, 2011	DATE RECEIVED: Oct 19, 2011					DATE REPORTED: Feb 29, 2012					SAMPLE TYPE: Soil
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
88600 (-150)	0.04	1.3	0.078	0.12	1.07	82.8	0.21	32.2	110	2.7	
88601 (-150)	0.02	0.9	0.075	0.07	2.18	73.4	0.12	31.9	79.0	3.6	
88602 (-150)	0.02	1.5	0.071	0.12	1.35	107	0.12	18.0	59.7	3.9	
88603 (-150)	0.02	1.0	0.120	0.06	1.35	168	0.07	21.7	103	4.1	
88604 (-150)	0.02	1.0	0.095	0.05	0.61	153	0.12	13.2	83.7	2.6	
88605 (-150)	0.02	1.1	0.081	0.05	0.53	127	0.09	11.0	67.2	3.1	
88606 (-150)	0.01	1.1	0.078	0.04	0.55	66.0	0.08	10.4	53.4	3.2	
88607 (-150)	0.07	1.0	0.017	0.13	1.29	120	0.12	25.1	96.8	3.3	
88608 (-150)	0.03	1.0	0.078	0.06	1.80	111	0.15	24.7	107	3.9	
88609 (-150)	0.05	1.0	0.053	0.07	0.71	112	0.13	23.2	99.4	2.0	
88610 (-150)	0.04	1.1	0.079	0.07	0.90	127	0.14	18.8	75.0	3.0	
88611 (-150)	0.02	1.0	0.104	0.05	0.69	123	0.14	12.1	55.5	4.2	
88612 (-150)	0.04	1.1	0.059	0.06	0.96	125	0.15	25.4	91.4	3.4	
88613 (-150)	0.02	1.2	0.107	0.04	1.61	144	0.21	18.6	69.2	4.7	
88614 (-150)	0.01	0.7	0.181	0.03	0.39	121	0.13	11.0	67.9	7.2	
88615 (-150)	0.01	0.7	0.181	0.03	0.36	132	0.11	10.4	72.3	7.3	
88616 (-150)	0.01	0.6	0.178	0.04	0.46	112	0.12	11.7	72.8	6.5	
88617 (-150)	0.01	0.7	0.187	0.03	0.37	118	0.13	11.1	69.4	8.3	
88618 (-150)	0.01	0.6	0.199	0.04	0.39	122	0.11	10.7	72.0	6.3	
88619 (-150)	0.01	0.7	0.120	0.05	0.88	122	0.15	10.0	91.2	3.9	
88620 (-150)	0.01	0.6	0.140	0.05	0.50	111	0.12	11.4	37.3	5.0	
88621 (-150)	0.01	0.6	0.095	0.06	0.50	103	0.13	8.76	57.4	3.9	
88622 (-150)	0.02	0.9	0.186	0.03	0.44	169	0.14	10.8	59.6	7.4	
88623 (-150)	0.03	0.8	0.155	0.05	0.41	133	0.10	11.7	65.5	5.9	
88624 (-150)	0.03	0.8	0.150	0.04	0.42	131	0.09	12.0	63.8	5.7	
88625 (-150)	0.02	1.2	0.108	0.05	0.78	120	0.12	22.2	66.4	5.3	
88627 (-150)	0.01	0.7	0.106	0.06	0.29	102	0.09	9.88	50.2	4.1	
88629 (-150)	0.02	0.6	0.072	0.06	0.67	90.3	0.15	16.8	57.9	2.6	

Comments: RDL - Reported Detection Limit

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11T540617

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis												
RPT Date: Feb 29, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2817555	0.170	0.177	4.0%	0.06				80%	120%	
Al	1	2817555	2.68	2.72	1.5%	< 0.01	0.462	0.359	129%	80%	120%	
As	1	2817555	11.7	11.1	5.3%	0.4				80%	120%	
Au	1	2817555	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
B	1	2817555	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2817555	389	377	3.1%	< 1				80%	120%	
Be	1	2817555	0.98	0.99	1.0%	< 0.05				80%	120%	
Bi	1	2817555	0.105	0.102	2.9%	< 0.01				80%	120%	
Ca	1	2817555	1.42	1.39	2.1%	< 0.01				80%	120%	
Cd	1	2817555	0.35	0.35	0.0%	< 0.01				80%	120%	
Ce	1	2817555	43.1	42.0	2.6%	< 0.01				80%	120%	
Co	1	2817555	12.9	12.8	0.8%	< 0.1	5.1	5.0	101%	80%	120%	
Cr	1	2817555	39.1	39.4	0.8%	< 0.5				80%	120%	
Cs	1	2817555	1.49	1.64	9.6%	< 0.05				80%	120%	
Cu	1	2817555	29.7	28.4	4.5%	0.7	3687	3700	99%	80%	120%	
Fe	1	2817555	4.16	4.07	2.2%	< 0.01				80%	120%	
Ga	1	2817555	8.80	8.83	0.3%	< 0.05				80%	120%	
Ge	1	2817555	0.125	0.117	6.6%	0.05				80%	120%	
Hf	1	2817555	0.07	0.07	0.0%	< 0.02				80%	120%	
Hg	1	2817555	0.076	0.071	6.8%	< 0.01				80%	120%	
In	1	2817555	0.0365	0.0362	0.8%	< 0.005				80%	120%	
K	1	2817555	0.171	0.179	4.6%	< 0.01				80%	120%	
La	1	2817555	25.9	25.4	1.9%	< 0.1				80%	120%	
Li	1	2817555	18.1	18.8	3.8%	< 0.1				80%	120%	
Mg	1	2817555	0.487	0.475	2.5%	< 0.01				80%	120%	
Mn	1	2817555	4380	4310	1.6%	< 1				80%	120%	
Mo	1	2817555	1.34	1.30	3.0%	< 0.05				80%	120%	
Na	1	2817555	0.04	0.04	0.0%	< 0.01				80%	120%	
Nb	1	2817555	1.36	1.39	2.2%	< 0.05				80%	120%	
Ni	1	2817555	12.3	12.2	0.8%	< 0.2	9	7	125%	80%	120%	
P	1	2817555	737	700	5.1%	< 10				80%	120%	
Pb	1	2817555	18.5	18.2	1.6%	< 0.1				80%	120%	
Rb	1	2817555	11.5	12.7	9.9%	< 0.1				80%	120%	
Re	1	2817555	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2817555	0.0779	0.0761	2.3%	< 0.005				80%	120%	
Sb	1	2817555	0.364	0.371	1.9%	< 0.05				80%	120%	
Sc	1	2817555	9.77	9.96	1.9%	< 0.1				80%	120%	
Se	1	2817555	0.7	0.8	13.3%	< 0.2	0.7	0.8	86%	80%	120%	
Sn	1	2817555	0.8	0.8	0.0%	< 0.2				80%	120%	
Sr	1	2817555	114	112	1.8%	< 0.2	341	390	87%	80%	120%	
Ta	1	2817555	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2817555	0.04	0.04	0.0%	< 0.01				80%	120%	
Th	1	2817555	1.3	1.3	0.0%	< 0.1				80%	120%	
Ti	1	2817555	0.0779	0.0846	8.2%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11T540617

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Feb 29, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2817555	0.12	0.12	0.0%	< 0.02				80%	120%	
U	1	2817555	1.07	1.04	2.8%	< 0.05	0.9	0.8	108%	80%	120%	
V	1	2817555	82.8	83.1	0.4%	< 0.5				80%	120%	
W	1	2817555	0.21	0.21	0.0%	< 0.05				80%	120%	
Y	1	2817555	32.2	31.9	0.9%	< 0.05		7		80%	120%	
Zn	1	2817555	110	108	1.8%	0.7				80%	120%	
Zr	1	2817555	2.7	2.6	3.8%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2817580	0.23	0.23	0.0%	0.04				80%	120%	
Al	1	2817580	2.48	2.31	7.1%	< 0.01				80%	120%	
As	1	2817580	4.3	4.4	2.3%	0.3				80%	120%	
Au	1	2817580	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
B	1	2817580	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2817580	273	261	4.5%	< 1				80%	120%	
Be	1	2817580	0.657	0.653	0.6%	< 0.05				80%	120%	
Bi	1	2817580	0.07	0.07	0.0%	< 0.01				80%	120%	
Ca	1	2817580	1.10	1.04	5.6%	< 0.01				80%	120%	
Cd	1	2817580	0.22	0.22	0.0%	< 0.01				80%	120%	
Ce	1	2817580	19.5	19.6	0.5%	< 0.01				80%	120%	
Co	1	2817580	10.9	10.6	2.8%	< 0.1	5.2	5.0	104%	80%	120%	
Cr	1	2817580	35.1	34.4	2.0%	< 0.5				80%	120%	
Cs	1	2817580	0.47	0.47	0.0%	< 0.05				80%	120%	
Cu	1	2817580	70.1	70.1	0.0%	< 0.1	3770	3700	101%	80%	120%	
Fe	1	2817580	3.85	3.64	5.6%	< 0.01				80%	120%	
Ga	1	2817580	7.31	7.37	0.8%	< 0.05				80%	120%	
Ge	1	2817580	0.09	0.09	0.0%	< 0.05				80%	120%	
Hf	1	2817580	0.12	0.12	0.0%	< 0.02				80%	120%	
Hg	1	2817580	0.05	0.05	0.0%	< 0.01	1.5	1.3	118%	80%	120%	
In	1	2817580	0.033	0.032	3.1%	< 0.005				80%	120%	
K	1	2817580	0.13	0.13	0.0%	< 0.01				80%	120%	
La	1	2817580	10.7	10.8	0.9%	< 0.1				80%	120%	
Li	1	2817580	20.5	20.5	0.0%	< 0.1				80%	120%	
Mg	1	2817580	0.63	0.61	3.2%	< 0.01				80%	120%	
Mn	1	2817580	1130	1070	5.5%	< 1				80%	120%	
Mo	1	2817580	0.597	0.615	3.0%	< 0.05				80%	120%	
Na	1	2817580	0.03	0.03	0.0%	< 0.01				80%	120%	
Nb	1	2817580	0.882	0.872	1.1%	< 0.05				80%	120%	
Ni	1	2817580	13.9	13.7	1.4%	< 0.2	9	7	129%	80%	120%	
P	1	2817580	440	436	0.9%	< 10				80%	120%	
Pb	1	2817580	6.0	6.0	0.0%	< 0.1				80%	120%	
Rb	1	2817580	8.3	8.3	0.0%	< 0.1	10	13	79%	80%	120%	
Re	1	2817580	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2817580	0.044	0.042	4.7%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11T540617

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)

RPT Date: Feb 29, 2012		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
						Lower				Upper	
Sb	1	2817580	0.33	0.33	0.0%	< 0.05				80%	120%
Sc	1	2817580	11.0	10.8	1.8%	< 0.1				80%	120%
Se	1	2817580	0.5	0.5	0.0%	< 0.2	0.7	0.8	85%	80%	120%
Sn	1	2817580	0.7	0.7	0.0%	< 0.2				80%	120%
Sr	1	2817580	105	105	0.0%	< 0.2	335	390	86%	80%	120%
Ta	1	2817580	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Te	1	2817580	0.02	0.02	0.0%	< 0.01				80%	120%
Th	1	2817580	1.2	1.2	0.0%	< 0.1	1.4	1.4	103%	80%	120%
Ti	1	2817580	0.108	0.101	6.7%	< 0.005				80%	120%
Tl	1	2817580	0.05	0.05	0.0%	< 0.02				80%	120%
U	1	2817580	0.78	0.78	0.0%	< 0.05	0.8	0.8	97%	80%	120%
V	1	2817580	120	119	0.8%	< 0.5				80%	120%
W	1	2817580	0.118	0.114	3.4%	< 0.05				80%	120%
Y	1	2817580	22.2	22.6	1.8%	< 0.05		7		80%	120%
Zn	1	2817580	66.4	66.7	0.5%	< 0.5				80%	120%
Zr	1	2817580	5.3	5.3	0.0%	< 0.5				80%	120%
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Co	1					< 0.1	5.3	5.0	107%	80%	120%
Cu	1					< 0.1	3984	3700	107%	80%	120%
Hg	1					< 0.01	1.4	1.3	106%	80%	120%
Rb	1					< 0.1	12	13	95%	80%	120%
Se	1					< 0.2	0.7	0.8	85%	80%	120%
Sr	1					< 0.2	342	390	88%	80%	120%
Th	1					< 0.1	1.8	1.4	129%	80%	120%
U	1					< 0.05	0.8	0.8	104%	80%	120%

Certified By:



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11T540617

PROJECT NO:

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11T540617

PROJECT NO:

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS

APPENDIX 7

2011 ROCK/TRENCH SAMPLE ANALYTICAL CERTIFICATES

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V526516

SOLID ANALYSIS REVIEWED BY: Ron Cardinall, Certified Assayer - Director - Technical Services (Mining)

DATE REPORTED: Sep 09, 2011

PAGES (INCLUDING COVER): 9

Should you require any information regarding this analysis please contact your client services representative at (905) 501 9998, or at 1-800-856-6261

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
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FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 07, 2011

DATE RECEIVED: Sep 07, 2011

DATE REPORTED: Sep 09, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
11LSP017	<0.2	0.62	5	<5	44	0.7	<1	0.15	<0.5	34	1.4	63.7	14.6	1.16
11LSP018	<0.2	1.08	14	<5	52	0.9	<1	0.55	<0.5	42	2.0	49.7	6.3	1.37
11LSP019	<0.2	0.59	8	<5	35	0.6	<1	1.96	<0.5	32	1.4	87.4	30.8	1.19
11LSP020	<0.2	0.76	8	<5	42	0.5	<1	1.44	<0.5	29	1.7	76.2	4.6	1.42
11LSP021	<0.2	0.62	9	<5	58	<0.5	<1	0.22	<0.5	31	2.0	58.2	3.7	1.46
11LSP022	<0.2	0.69	8	<5	79	0.6	<1	0.20	<0.5	28	2.9	79.9	27.1	1.54
11LSP023	<0.2	0.61	63	<5	78	0.5	<1	1.53	<0.5	32	6.7	80.8	7.7	1.43
11LSP024	<0.2	0.64	10	<5	74	<0.5	<1	0.15	<0.5	30	2.5	84.9	13.9	1.74
11LSP025	0.2	0.57	10	<5	110	<0.5	<1	0.07	<0.5	27	1.9	69.3	4.8	1.34
11ADP014	<0.2	0.45	39	<5	62	0.5	<1	22.3	<0.5	19	9.7	5.5	6.2	3.52
11KRP013	1.6	0.17	3	<5	34	<0.5	<1	0.26	<0.5	5	0.8	191	9.6	0.44
11KRP014	1.4	0.18	4	<5	34	<0.5	<1	0.45	<0.5	7	0.9	215	29.6	0.46
11KRP015	<0.2	1.54	9	<5	140	<0.5	<1	5.53	<0.5	12	6.3	99.1	47.1	2.55
11KRP016	3.1	0.36	4	<5	38	<0.5	<1	0.03	<0.5	8	0.8	166	18.0	0.80
11KRP017	2.2	0.38	4	<5	50	<0.5	<1	0.07	<0.5	11	1.0	122	26.8	0.93

Certified By:

Ron Cardinal



Certificate of Analysis

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

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 MISSISSAUGA, ONTARIO
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 07, 2011		DATE RECEIVED: Sep 07, 2011						DATE REPORTED: Sep 09, 2011				SAMPLE TYPE: Rock			
Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
11LSP017	<5	<1	<1	0.23	15	2	0.05	535	2.5	<0.01	5.2	42	7.5	23	
11LSP018	<5	<1	<1	0.35	19	2	0.10	505	3.5	0.01	1.7	45	9.6	36	
11LSP019	<5	<1	<1	0.27	14	2	0.05	844	2.5	0.01	5.6	74	6.0	31	
11LSP020	<5	<1	<1	0.28	12	3	0.06	1250	4.2	0.02	1.6	105	6.3	29	
11LSP021	<5	<1	<1	0.19	14	6	0.04	465	8.8	0.03	1.4	108	10.4	15	
11LSP022	<5	<1	<1	0.26	13	5	0.05	705	6.6	0.02	6.7	112	4.5	24	
11LSP023	<5	<1	<1	0.28	15	4	0.05	836	11.3	0.02	3.9	246	4.1	28	
11LSP024	<5	<1	<1	0.22	13	5	0.04	597	13.8	0.04	4.9	168	5.0	18	
11LSP025	<5	<1	<1	0.22	12	5	0.03	496	23.6	0.04	1.7	154	7.0	16	
11ADP014	7	<1	<1	0.09	5	4	0.20	11700	6.5	<0.01	5.8	135	0.7	24	
11KRP013	<5	<1	2	0.10	2	1	0.01	415	0.9	0.01	3.2	35	3.2	<10	
11KRP014	<5	<1	<1	0.10	3	1	0.01	433	1.3	0.01	7.0	48	3.1	<10	
11KRP015	<5	<1	2	0.25	5	12	1.05	569	2.8	0.09	25.8	665	3.2	31	
11KRP016	<5	<1	2	0.17	4	2	0.01	224	0.8	0.03	3.1	95	9.3	12	
11KRP017	<5	<1	1	0.19	5	2	0.02	300	1.0	0.03	2.5	112	7.0	13	

Certified By:

Ron Cardinal



Certificate of Analysis

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 07, 2011

DATE RECEIVED: Sep 07, 2011

DATE REPORTED: Sep 09, 2011

SAMPLE TYPE: Rock

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
11LSP017		0.073	<1	1.1	<10	<5	11.9	<10	<10	<5	<0.01	<5	<5	5.5	<1
11LSP018		0.068	<1	1.4	<10	<5	19.1	<10	<10	<5	<0.01	<5	<5	7.2	<1
11LSP019		0.183	2	1.4	<10	<5	43.6	<10	<10	<5	<0.01	<5	<5	5.1	<1
11LSP020		0.145	2	1.6	<10	<5	54.0	<10	<10	<5	<0.01	<5	<5	6.4	<1
11LSP021		0.173	<1	1.5	<10	<5	26.8	<10	<10	<5	<0.01	<5	<5	7.0	<1
11LSP022		0.098	<1	1.7	<10	<5	29.5	<10	<10	<5	<0.01	<5	<5	8.8	<1
11LSP023		0.131	4	2.3	<10	<5	25.7	<10	<10	<5	<0.01	<5	<5	13.7	<1
11LSP024		0.062	<1	1.9	<10	<5	25.8	<10	<10	<5	<0.01	<5	<5	10.3	<1
11LSP025		0.055	<1	1.5	<10	<5	22.6	<10	<10	<5	<0.01	<5	<5	8.3	<1
11ADP014		0.366	6	7.7	<10	20	256	<10	<10	<5	<0.01	<5	<5	38.2	<1
11KRP013		0.008	<1	0.7	<10	<5	6.2	<10	<10	<5	<0.01	<5	<5	2.6	<1
11KRP014		0.011	<1	0.8	<10	<5	6.0	<10	<10	<5	<0.01	<5	<5	3.1	<1
11KRP015		0.219	<1	7.1	<10	<5	108	<10	<10	<5	0.16	<5	<5	90.1	<1
11KRP016		0.015	<1	1.1	<10	<5	6.2	<10	<10	<5	<0.01	<5	<5	3.6	<1
11KRP017		0.007	<1	1.2	<10	<5	7.0	<10	<10	<5	<0.01	<5	<5	6.7	<1

Certified By:

Ron Cardinali



Certificate of Analysis

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 07, 2011

DATE RECEIVED: Sep 07, 2011

DATE REPORTED: Sep 09, 2011

SAMPLE TYPE: Rock

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
11LSP017	7	42.4	<5
11LSP018	9	40.4	<5
11LSP019	9	51.8	<5
11LSP020	11	47.8	<5
11LSP021	8	42.6	<5
11LSP022	8	46.3	<5
11LSP023	8	28.3	<5
11LSP024	6	48.3	<5
11LSP025	5	45.9	<5
11ADP014	12	26.1	<5
11KRP013	2	13.3	<5
11KRP014	3	16.7	<5
11KRP015	9	47.2	8
11KRP016	3	28.8	<5
11KRP017	3	31.9	<5

Comments: RDL - Reported Detection Limit

Certified By:

Ron Cardinali



Certificate of Analysis

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 07, 2011

DATE RECEIVED: Sep 07, 2011

DATE REPORTED: Sep 09, 2011

SAMPLE TYPE: Rock

Sample Description	Analyte:	Sample	Au
	RDL:	Login Weight	ppm
	Unit:	kg	
11LSP017		3.58	0.020
11LSP018		2.20	0.019
11LSP019		0.83	0.019
11LSP020		1.19	0.008
11LSP021		1.24	0.009
11LSP022		1.56	0.003
11LSP023		0.83	0.006
11LSP024		1.04	0.013
11LSP025		2.16	0.032
11ADP014		2.51	0.007
11KRP013		0.68	0.019
11KRP014		0.65	0.025
11KRP015		0.52	<0.002
11KRP016		0.69	0.017
11KRP017		0.60	0.015

Comments: RDL - Reported Detection Limit

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date:		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2681099	0.020	0.025	22.2%	< 0.002	0.087	0.0849	102%	80%	120%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2681111	< 0.002	< 0.002		< 0.002	0.0811	0.0849	95%	80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2681099	< 0.2	0.2		< 0.2				80%	120%
Al	1	2681099	0.62	0.67	7.8%	< 0.01				80%	120%
As	1	2681099	5	4	22.2%	< 1				80%	120%
B	1	2681099	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2681099	44	45	2.2%	< 1				80%	120%
Be	1	2681099	0.7	0.7	0.0%	< 0.5				80%	120%
Bi	1	2681099	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2681099	0.15	0.15	0.0%	< 0.01				80%	120%
Cd	1	2681099	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2681099	34	35	2.9%	< 1				80%	120%
Co	1	2681099	1.4	1.4	0.0%	< 0.5				80%	120%
Cr	1	2681099	63.7	70.2	9.7%	< 0.5				80%	120%
Cu	1	2681099	14.6	19.8		< 0.5				80%	120%
Fe	1	2681099	1.16	1.18	1.7%	< 0.01				80%	120%
Ga	1	2681099	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2681099	< 1	< 1	0.0%	< 1				80%	120%
In	1	2681099	< 1	2		< 1				80%	120%
K	1	2681099	0.23	0.26	12.2%	< 0.01				80%	120%
La	1	2681099	15	16	6.5%	< 1				80%	120%
Li	1	2681099	2	2	0.0%	< 1				80%	120%
Mg	1	2681099	0.054	0.057	5.4%	< 0.01				80%	120%
Mn	1	2681099	535	537	0.4%	< 1				80%	120%
Mo	1	2681099	2.55	3.09	19.1%	< 0.5				80%	120%
Na	1	2681099	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Ni	1	2681099	5.25	6.36	19.1%	< 0.5				80%	120%
P	1	2681099	42	48	13.3%	< 10				80%	120%
Pb	1	2681099	7.5	7.7	2.6%	0.7				80%	120%
Rb	1	2681099	23	26	12.2%	< 10				80%	120%
S	1	2681099	0.073	0.073	0.0%	< 0.005				80%	120%
Sb	1	2681099	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2681099	1.14	1.29	12.3%	< 0.5				80%	120%
Se	1	2681099	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2681099	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2681099	11.9	13.7	14.1%	1.4				80%	120%
Ta	1	2681099	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2681099	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2681099	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2681099	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Tl	1	2681099	< 5	< 5	0.0%	< 5				80%	120%

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

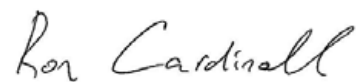
AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)										
RPT Date:		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
									Lower	Upper
U	1	2681099	< 5	< 5	0.0%	< 5			80%	120%
V	1	2681099	5.52	6.08	9.7%	< 0.5			80%	120%
W	1	2681099	< 1	< 1	0.0%	< 1			80%	120%
Y	1	2681099	7	8	13.3%	< 1			80%	120%
Zn	1	2681099	42.4	41.0	3.4%	< 0.5			80%	120%
Zr	1	2681099	< 5	< 5	0.0%	< 5			80%	120%

Certified By:



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V526516

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12020		ICP/OES
Al	MIN-200-12020		ICP/OES
As	MIN-200-12020		ICP/OES
B	MIN-200-12020		ICP/OES
Ba	MIN-200-12020		ICP/OES
Be	MIN-200-12020		ICP/OES
Bi	MIN-200-12020		ICP/OES
Ca	MIN-200-12020		ICP/OES
Cd	MIN-200-12020		ICP/OES
Ce	MIN-200-12020		ICP/OES
Co	MIN-200-12020		ICP/OES
Cr	MIN-200-12020		ICP/OES
Cu	MIN-200-12020		ICP/OES
Fe	MIN-200-12020		ICP/OES
Ga	MIN-200-12020		ICP/OES
Hg	MIN-200-12020		ICP/OES
In	MIN-200-12020		ICP/OES
K	MIN-200-12020		ICP/OES
La	MIN-200-12020		ICP/OES
Li	MIN-200-12020		ICP/OES
Mg	MIN-200-12020		ICP/OES
Mn	MIN-200-12020		ICP/OES
Mo	MIN-200-12020		ICP/OES
Na	MIN-200-12020		ICP/OES
Ni	MIN-200-12020		ICP/OES
P	MIN-200-12020		ICP/OES
Pb	MIN-200-12020		ICP/OES
Rb	MIN-200-12020		ICP/OES
S	MIN-200-12020		ICP/OES
Sb	MIN-200-12020		ICP/OES
Sc	MIN-200-12020		ICP/OES
Se	MIN-200-12020		ICP/OES
Sn	MIN-200-12020		ICP/OES
Sr	MIN-200-12020		ICP/OES
Ta	MIN-200-12020		ICP/OES
Te	MIN-200-12020		ICP/OES
Th	MIN-200-12020		ICP/OES
Ti	MIN-200-12020		ICP/OES
Tl	MIN-200-12020		ICP/OES
U	MIN-200-12020		ICP/OES
V	MIN-200-12020		ICP/OES
W	MIN-200-12020		ICP/OES
Y	MIN-200-12020		ICP/OES
Zn	MIN-200-12020		ICP/OES
Zr	MIN-200-12020		ICP/OES
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO:

AGAT WORK ORDER: 11V526992

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Sep 14, 2011

PAGES (INCLUDING COVER): 7

Should you require any information regarding this analysis please contact your client services representative at (905) 501 9998, or at 1-800-856-6261

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V526992

PROJECT NO:

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 08, 2011

DATE RECEIVED: Sep 08, 2011

DATE REPORTED: Sep 14, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description	RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5
11ADP020	<0.2	1.44	5	<5	95	<0.5	<1	0.68	<0.5	15	5.8	39.4	38.8	3.12
11ADP021	<0.2	1.24	17	<5	75	<0.5	<1	0.27	<0.5	17	7.1	64.6	11.6	3.22
11ADP022	<0.2	2.57	7	<5	43	<0.5	<1	2.44	<0.5	14	12.7	26.8	83.1	4.19
11ADP023	<0.2	1.78	3	<5	64	<0.5	<1	0.37	<0.5	17	5.7	47.0	5.0	3.45
11SMP005	<0.2	2.57	5	<5	13	<0.5	<1	0.12	<0.5	15	48.9	120	70.2	6.76
11SMP006	<0.2	2.18	16	<5	97	<0.5	<1	0.69	<0.5	16	7.9	23.7	27.1	3.88
11SMP007	<0.2	1.86	4	<5	179	<0.5	<1	0.21	<0.5	9	5.7	44.6	13.7	3.51
11SMP014	0.4	1.18	10	<5	32	<0.5	<1	0.89	<0.5	17	6.9	35.4	28.4	3.36
Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5
11ADP020	<5	<1	<1	0.06	5	4	0.88	757	0.5	0.05	0.8	762	1.8	<10
11ADP021	<5	<1	<1	0.06	5	4	0.66	982	10.1	0.05	1.1	888	3.8	<10
11ADP022	<5	<1	<1	0.15	5	8	2.12	1280	0.6	0.02	10.5	559	4.7	12
11ADP023	<5	<1	<1	0.17	5	3	1.20	978	0.7	0.04	0.7	855	2.3	<10
11SMP005	<5	<1	<1	0.10	5	11	1.46	1690	<0.5	0.02	85.0	694	4.1	<10
11SMP006	<5	<1	<1	0.12	5	8	1.77	1090	0.7	0.03	8.5	814	4.1	<10
11SMP007	<5	<1	<1	0.11	3	8	1.42	844	0.6	0.02	2.5	680	27.6	<10
11SMP014	<5	<1	<1	0.13	6	4	0.75	840	0.8	0.03	1.6	884	10.6	<10
Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5
11ADP020	0.025	<1	4.9	<10	<5	10.2	<10	<10	<5	<0.01	<5	<5	45.1	<1
11ADP021	0.027	<1	3.5	<10	<5	8.4	<10	<10	<5	<0.01	<5	<5	26.3	<1
11ADP022	0.056	<1	6.9	<10	<5	13.8	<10	<10	<5	<0.01	<5	<5	95.8	<1
11ADP023	0.006	<1	4.6	<10	<5	11.0	<10	<10	<5	<0.01	<5	<5	40.2	<1
11SMP005	0.052	<1	17.0	<10	<5	7.4	<10	<10	<5	<0.01	<5	<5	185	<1
11SMP006	0.046	<1	4.7	<10	<5	9.8	<10	<10	<5	<0.01	<5	<5	39.7	<1
11SMP007	0.021	<1	3.9	<10	<5	13.3	<10	<10	<5	<0.01	<5	<5	45.4	<1
11SMP014	0.035	<1	4.7	<10	<5	19.4	<10	<10	<5	<0.01	<5	<5	42.6	<1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V526992

PROJECT NO:

5623 McADAM ROAD
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1N9
 TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP-OES finish (201073)

DATE SAMPLED: Sep 08, 2011		DATE RECEIVED: Sep 08, 2011		DATE REPORTED: Sep 14, 2011		SAMPLE TYPE: Rock	
Analyte:	Y	Zn	Zr				
Unit:	ppm	ppm	ppm				
Sample Description	RDL:						
11ADP020	11	69.3	<5				
11ADP021	13	58.7	<5				
11ADP022	15	87.3	<5				
11ADP023	14	99.9	<5				
11SMP005	11	89.0	<5				
11SMP006	15	80.4	<5				
11SMP007	9	118	<5				
11SMP014	16	98.4	<5				

Comments: RDL - Reported Detection Limit

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V526992

PROJECT NO:

5623 McADAM ROAD
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 08, 2011

DATE RECEIVED: Sep 08, 2011

DATE REPORTED: Sep 14, 2011

SAMPLE TYPE: Rock

Sample Description	Analyte:	Sample	Au
	RDL:	Login Weight	
	Unit:	kg	ppm
11ADP020		1.94	<0.002
11ADP021		1.18	0.004
11ADP022		1.16	<0.002
11ADP023		1.09	<0.002
11SMP005		0.81	<0.002
11SMP006		1.38	<0.002
11SMP007		0.88	<0.002
11SMP014		1.13	<0.002

Comments: RDL - Reported Detection Limit

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V526992

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date: Sep 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2685461	< 0.002	< 0.002	0.0%	< 0.002	0.318	0.321	99%	80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2685461	< 0.2	< 0.2	0.0%	< 0.2	8	7	116%	80%	120%
Al	1	2685461	1.44	1.40	2.8%	< 0.01	0.309	0.359	86%	80%	120%
As	1	2685461	5	5	0.0%	< 1				80%	120%
B	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2685461	95	93	2.1%	< 1				80%	120%
Be	1	2685461	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Bi	1	2685461	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2685461	0.676	0.662	2.1%	< 0.01	0.6	0.635	94%	80%	120%
Cd	1	2685461	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2685461	15	15	0.0%	< 1				80%	120%
Co	1	2685461	5.8	5.8	0.0%	< 0.5	5.3	5.0	107%	80%	120%
Cr	1	2685461	39.4	39.3	0.3%	< 0.5				80%	120%
Cu	1	2685461	38.8	36.7	5.6%	< 0.5	4591	4700	98%	80%	120%
Fe	1	2685461	3.12	3.06	1.9%	< 0.01	1.21	1.31	92%	80%	120%
Ga	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2685461	< 1	< 1	0.0%	< 1	1.5	1.3	115%	80%	120%
In	1	2685461	< 1	< 1	0.0%	< 1				80%	120%
K	1	2685461	0.06	0.06	0.0%	< 0.01	0.15	0.18	82%	80%	120%
La	1	2685461	5	5	0.0%	< 1				80%	120%
Li	1	2685461	4	4	0.0%	< 1				80%	120%
Mg	1	2685461	0.88	0.87	1.1%	< 0.01	0.091	0.098	93%	80%	120%
Mn	1	2685461	757	749	1.1%	< 1				80%	120%
Mo	1	2685461	0.5	0.6	18.2%	< 0.5	253	280	90%	80%	120%
Na	1	2685461	0.05	0.05	0.0%	< 0.01				80%	120%
Ni	1	2685461	0.8	0.8	0.0%	< 0.5	6	7	92%	80%	120%
P	1	2685461	762	770	1.0%	< 10				80%	120%
Pb	1	2685461	1.81	1.52	17.4%	< 0.5	36	30	121%	80%	120%
Rb	1	2685461	< 10	< 10	0.0%	< 10				80%	120%
S	1	2685461	0.0246	0.0229	7.2%	< 0.005	0.563	0.621	91%	80%	120%
Sb	1	2685461	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2685461	4.90	4.81	1.9%	< 0.5				80%	120%
Se	1	2685461	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2685461	10.2	10.2	0.0%	2.8				80%	120%
Ta	1	2685461	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2685461	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2685461	< 0.01	< 0.01	0.0%	< 0.01	0.009	0.011	86%	80%	120%
Tl	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
U	1	2685461	< 5	< 5	0.0%	< 5				80%	120%
V	1	2685461	45.1	44.6	1.1%	< 0.5				80%	120%

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V526992

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)

RPT Date: Sep 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
						Lower				Upper
W	1	2685461	< 1	< 1	0.0%	< 1			80%	120%
Y	1	2685461	11	11	0.0%	< 1			80%	120%
Zn	1	2685461	69.3	68.8	0.7%	< 0.5			80%	120%
Zr	1	2685461	< 5	< 5	0.0%	< 5			80%	120%

Certified By:



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V526992

PROJECT NO:

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12020		ICP/OES
Al	MIN-200-12020		ICP/OES
As	MIN-200-12020		ICP/OES
B	MIN-200-12020		ICP/OES
Ba	MIN-200-12020		ICP/OES
Be	MIN-200-12020		ICP/OES
Bi	MIN-200-12020		ICP/OES
Ca	MIN-200-12020		ICP/OES
Cd	MIN-200-12020		ICP/OES
Ce	MIN-200-12020		ICP/OES
Co	MIN-200-12020		ICP/OES
Cr	MIN-200-12020		ICP/OES
Cu	MIN-200-12020		ICP/OES
Fe	MIN-200-12020		ICP/OES
Ga	MIN-200-12020		ICP/OES
Hg	MIN-200-12020		ICP/OES
In	MIN-200-12020		ICP/OES
K	MIN-200-12020		ICP/OES
La	MIN-200-12020		ICP/OES
Li	MIN-200-12020		ICP/OES
Mg	MIN-200-12020		ICP/OES
Mn	MIN-200-12020		ICP/OES
Mo	MIN-200-12020		ICP/OES
Na	MIN-200-12020		ICP/OES
Ni	MIN-200-12020		ICP/OES
P	MIN-200-12020		ICP/OES
Pb	MIN-200-12020		ICP/OES
Rb	MIN-200-12020		ICP/OES
S	MIN-200-12020		ICP/OES
Sb	MIN-200-12020		ICP/OES
Sc	MIN-200-12020		ICP/OES
Se	MIN-200-12020		ICP/OES
Sn	MIN-200-12020		ICP/OES
Sr	MIN-200-12020		ICP/OES
Ta	MIN-200-12020		ICP/OES
Te	MIN-200-12020		ICP/OES
Th	MIN-200-12020		ICP/OES
Ti	MIN-200-12020		ICP/OES
Tl	MIN-200-12020		ICP/OES
U	MIN-200-12020		ICP/OES
V	MIN-200-12020		ICP/OES
W	MIN-200-12020		ICP/OES
Y	MIN-200-12020		ICP/OES
Zn	MIN-200-12020		ICP/OES
Zr	MIN-200-12020		ICP/OES
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO:

AGAT WORK ORDER: 11V539066

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 27, 2011

PAGES (INCLUDING COVER): 7

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V539066

PROJECT NO:

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Oct 27, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.1	0.5	0.05
88626	<0.01	1.08	4.0	<0.01	7	15	0.61	0.04	5.34	0.37	46.3	18.8	64.2	0.81
88630	0.02	1.36	3.5	<0.01	<5	59	0.13	0.02	0.86	0.26	16.1	9.3	83.3	0.53
88631	0.32	0.12	13.0	<0.01	<5	1220	0.09	0.02	0.02	0.18	7.51	3.8	236	0.28
88632	0.03	1.33	4.4	<0.01	<5	1040	0.11	0.02	0.89	0.08	3.93	9.7	139	0.30
88633	0.21	1.06	14.3	0.01	<5	190	0.06	0.04	0.19	0.53	40.3	8.3	93.6	<0.05
88634	0.01	0.67	3.5	<0.01	6	84	0.52	0.02	0.15	0.03	11.1	1.6	60.9	0.68

Analyte:	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Sample Description	RDL:	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
88626	36.4	3.82	6.44	0.06	0.03	0.02	0.040	0.07	23.5	1.7	0.95	1030	1.65	0.04
88630	18.4	3.75	7.89	0.13	0.27	<0.01	0.039	0.18	5.9	8.7	1.01	504	1.52	0.11
88631	128	0.91	1.01	0.06	0.04	0.05	0.025	0.08	3.7	0.4	0.02	330	8.20	0.01
88632	41.9	7.01	6.43	0.09	0.03	<0.01	0.024	0.11	2.2	2.8	0.72	456	1.58	0.04
88633	27.1	2.62	5.36	0.09	0.08	0.01	0.025	0.07	20.0	3.2	0.53	589	24.2	0.07
88634	4.7	1.23	2.68	0.07	0.28	0.08	0.013	0.30	4.5	3.6	0.07	212	0.94	0.05

Analyte:	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.1	0.01
88626	0.13	49.1	1210	16.0	3.4	<0.001	0.068	2.79	9.7	<0.2	0.7	67.3	<0.01	<0.01
88630	0.24	5.8	852	3.0	3.4	0.002	0.891	0.61	12.2	0.5	0.7	22.6	<0.01	0.02
88631	0.08	5.3	80	109	2.7	<0.001	0.052	0.80	1.0	0.2	0.2	18.3	<0.01	<0.01
88632	0.05	22.8	503	3.1	2.3	0.001	0.199	0.17	11.3	0.7	0.2	42.9	<0.01	0.04
88633	<0.05	3.1	688	12.3	1.2	0.001	0.053	0.55	3.0	<0.2	0.3	10.1	<0.01	<0.01
88634	0.08	2.3	63	5.8	15.0	<0.001	<0.005	0.10	2.6	<0.2	0.4	14.3	<0.01	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539066

PROJECT NO:

5623 McADAM ROAD
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1N9
 TEL (905)501-9998
 FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Oct 27, 2011

SAMPLE TYPE: Rock

Analyte:	Th	Ti	Tl	U	V	W	Y	Zn	Zr	Sample Login Weight
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	kg
Sample Description RDL:	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	0.01
88626	1.6	0.006	0.03	0.41	98.9	0.10	9.69	133	1.6	2.64
88630	0.6	0.263	0.14	0.19	77.5	0.13	20.8	57.8	6.3	1.43
88631	0.2	<0.005	<0.02	0.08	9.0	0.10	2.66	61.2	1.5	0.53
88632	0.2	<0.005	0.06	0.09	139	<0.05	3.23	39.0	0.8	0.55
88633	0.4	<0.005	0.03	0.10	24.8	<0.05	10.8	55.5	3.1	1.33
88634	2.7	0.007	0.06	0.44	11.5	<0.05	4.63	21.8	10.2	3.45

Comments: RDL - Reported Detection Limit

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539066

PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date: Oct 27, 2011			REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits	
							Lower			Upper	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Ag	1	2801842	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
Al	1	2801842	1.08	1.08	0.0%	< 0.01			80%	120%	
As	1	2801842	4.0	4.0	0.0%	0.2			80%	120%	
Au	1	2801842	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
B	1	2801842	7	7	0.0%	< 5			80%	120%	
Ba	1	2801842	15	15	0.0%	< 1			80%	120%	
Be	1	2801842	0.612	0.652	6.3%	< 0.05			80%	120%	
Bi	1	2801842	0.036	0.035	2.8%	< 0.01			80%	120%	
Ca	1	2801842	5.34	5.39	0.9%	< 0.01			80%	120%	
Cd	1	2801842	0.368	0.376	2.2%	< 0.01			80%	120%	
Ce	1	2801842	46.3	45.8	1.1%	0.02			80%	120%	
Co	1	2801842	18.8	18.7	0.5%	< 0.1			80%	120%	
Cr	1	2801842	64.2	60.6	5.8%	< 0.5			80%	120%	
Cs	1	2801842	0.813	0.836	2.8%	< 0.05			80%	120%	
Cu	1	2801842	36.4	35.1	3.6%	< 0.1	3703	3700	100%	80%	120%
Fe	1	2801842	3.82	3.78	1.1%	< 0.01			80%	120%	
Ga	1	2801842	6.44	6.47	0.5%	< 0.05			80%	120%	
Ge	1	2801842	0.062	0.072	14.9%	< 0.05			80%	120%	
Hf	1	2801842	0.035	0.035	0.0%	< 0.02			80%	120%	
Hg	1	2801842	0.02	0.02	0.0%	< 0.01			80%	120%	
In	1	2801842	0.040	0.040	0.0%	< 0.005			80%	120%	
K	1	2801842	0.07	0.07	0.0%	< 0.01			80%	120%	
La	1	2801842	23.5	23.1	1.7%	< 0.1			80%	120%	
Li	1	2801842	1.7	1.7	0.0%	< 0.1			80%	120%	
Mg	1	2801842	0.948	0.944	0.4%	< 0.01			80%	120%	
Mn	1	2801842	1030	987	4.3%	< 1			80%	120%	
Mo	1	2801842	1.65	1.65	0.0%	< 0.05			80%	120%	
Na	1	2801842	0.035	0.035	0.0%	< 0.01			80%	120%	
Nb	1	2801842	0.13	0.13	0.0%	< 0.05			80%	120%	
Ni	1	2801842	49.1	49.4	0.6%	< 0.2			80%	120%	
P	1	2801842	1210	1200	0.8%	< 10			80%	120%	
Pb	1	2801842	16.0	16.1	0.6%	< 0.1			80%	120%	
Rb	1	2801842	3.4	3.5	2.9%	< 0.1	11	13	82%	80%	120%
Re	1	2801842	< 0.001	< 0.001	0.0%	< 0.001			80%	120%	
S	1	2801842	0.068	0.068	0.0%	< 0.005			80%	120%	
Sb	1	2801842	2.79	2.96	5.9%	< 0.05			80%	120%	
Sc	1	2801842	9.7	9.7	0.0%	< 0.1			80%	120%	
Se	1	2801842	< 0.2	< 0.2	0.0%	0.3	0.7	0.8	93%	80%	120%
Sn	1	2801842	0.7	0.7	0.0%	< 0.2			80%	120%	
Sr	1	2801842	67.3	68.4	1.6%	< 0.2	302	390	77%	80%	120%
Ta	1	2801842	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
Te	1	2801842	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
Th	1	2801842	1.6	1.6	0.0%	< 0.1			80%	120%	
Ti	1	2801842	0.006	0.006	0.0%	< 0.005			80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539066

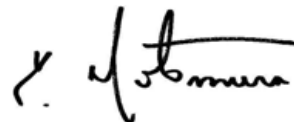
PROJECT NO:

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)

RPT Date: Oct 27, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
						Lower				Upper	
Tl	1	2801842	0.03	0.03	0.0%	< 0.02				80%	120%
U	1	2801842	0.41	0.41	0.0%	< 0.05	0.9	0.8	113%	80%	120%
V	1	2801842	98.9	97.6	1.3%	< 0.5				80%	120%
W	1	2801842	0.104	0.106	1.9%	< 0.05				80%	120%
Y	1	2801842	9.69	9.71	0.2%	< 0.05		7		80%	120%
Zn	1	2801842	133	132	0.8%	< 0.5				80%	120%
Zr	1	2801842	1.57	1.53	2.6%	< 0.5				80%	120%

Certified By:



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539066

PROJECT NO:

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS
Y	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539066

PROJECT NO:

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Sample Login Weight	MIN-12009		BALANCE



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

www.acmelab.com

Client: Westhaven Ventures Inc.

1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6 Canada

Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: August 26, 2011
Report Date: October 27, 2011
Page: 1 of 5

CERTIFICATE OF ANALYSIS

VAN11004228.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 1
P.O. Number
Number of Samples: 119

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	111	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	119	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
3A01	119	Ignite samples, acid digest, Au by ICP-MS	15	Completed	VAN

ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Acme Analytical Laboratories (Vancouver) Ltd.
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www.acmelab.com

Client: **Westhaven Ventures Inc.**
 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: October 27, 2011

Page: 2 of 5 Part 1

CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
11LSP001	Rock Pulp	0.12	6.6	327.2	170.9	76	35.4	41.1	11.6	158	4.06	436.7	2504	0.8	46	0.9	87.5	23.9	21	0.34	0.032
11LSP002	Rock	1.67	4.7	3.1	6.8	38	<0.1	0.8	1.4	248	1.25	8.3	3.6	1.0	24	<0.1	0.4	0.1	4	0.03	0.019
11LSP003	Rock	1.34	5.9	2.3	7.7	37	<0.1	0.6	1.7	209	1.19	9.3	3.5	1.0	20	<0.1	0.4	<0.1	3	0.03	0.015
11LSP004	Rock	2.38	7.9	1.8	3.7	17	<0.1	0.5	0.6	85	0.80	9.9	6.6	0.8	14	<0.1	0.3	<0.1	<2	0.04	0.014
11LSP005	Rock	1.47	8.8	1.2	3.0	14	<0.1	0.5	0.6	204	0.95	6.4	1.6	0.8	23	<0.1	0.2	<0.1	<2	0.03	0.010
11LSP006	Rock	3.16	6.8	2.0	4.8	29	0.2	0.8	1.5	260	0.80	7.6	51.6	1.0	20	<0.1	0.3	0.1	3	0.07	0.026
11LSP007	Rock	2.03	4.1	1.3	5.7	21	<0.1	0.5	0.5	308	0.96	7.1	7.1	1.2	11	<0.1	0.2	<0.1	<2	0.03	0.010
11LSP008	Rock	2.64	8.8	1.2	6.8	24	0.1	0.5	0.7	129	0.84	7.7	10.5	0.9	14	<0.1	0.3	<0.1	<2	0.04	0.015
11LSP009	Rock	2.69	12.3	2.1	7.5	33	0.1	0.6	0.9	223	1.06	6.5	12.7	1.0	14	<0.1	0.6	0.1	<2	0.04	0.011
11LSP010	Rock	1.38	31.0	2.2	8.0	26	0.3	0.6	0.7	185	1.02	8.9	16.1	1.7	14	<0.1	0.8	<0.1	<2	0.03	0.015
11LSP011	Rock	1.38	30.8	2.4	7.3	25	0.2	0.5	0.6	159	0.96	8.0	13.0	1.7	14	<0.1	0.9	<0.1	<2	0.03	0.013
11LSP012	Rock	2.54	48.0	1.6	8.6	30	0.3	0.7	0.8	211	0.97	9.4	7.8	1.9	19	<0.1	0.7	<0.1	<2	0.04	0.015
11LSP013	Rock	1.69	8.1	2.9	6.6	31	0.1	1.5	1.8	220	1.01	6.7	58.0	1.2	45	<0.1	0.5	<0.1	4	0.05	0.018
11LSP014	Rock	2.46	10.1	2.6	6.2	28	0.2	1.2	1.3	230	1.08	18.5	34.6	1.2	24	<0.1	0.4	<0.1	3	0.07	0.019
11LSP015	Rock	0.33	1.6	40.1	2.9	43	<0.1	27.4	9.3	439	2.24	5.9	3.1	1.7	106	0.3	0.5	<0.1	74	5.10	0.085
11LSP016	Rock	1.43	7.7	3.7	7.5	43	0.1	1.6	2.1	319	1.53	8.6	22.7	1.6	30	<0.1	0.5	<0.1	4	0.05	0.014
11LSP026	Rock Pulp	0.12	6.2	378.9	161.3	59	43.8	29.4	10.2	126	3.81	483.0	4313	0.7	33	0.7	133.7	27.2	18	0.24	0.023
11LSP027	Rock	1.89	15.4	2.7	7.8	42	0.1	1.1	1.9	425	1.22	7.5	7.1	0.9	20	0.1	0.6	0.1	7	0.07	0.021
11LSP028	Rock	2.41	13.2	2.2	7.7	36	0.2	0.8	1.8	218	1.00	6.1	8.1	0.9	26	<0.1	0.6	0.1	4	0.07	0.023
11LSP029	Rock	2.20	29.6	1.7	9.3	42	0.3	0.9	2.2	324	1.26	8.2	4.4	0.8	26	<0.1	0.6	<0.1	4	0.08	0.033
11LSP030	Rock	2.78	107.3	4.8	11.1	40	3.7	1.5	2.6	425	1.15	10.3	83.7	1.0	28	<0.1	1.1	0.2	6	0.09	0.016
11LSP031	Rock	2.38	30.5	3.0	7.5	36	0.7	1.2	2.3	571	1.20	6.0	58.9	0.9	28	<0.1	0.5	0.1	4	0.06	0.011
11LSP032	Rock	2.25	25.4	2.4	8.6	51	0.4	1.0	2.2	385	1.18	6.6	27.3	0.8	22	<0.1	0.6	0.1	4	0.06	0.016
11LSP033	Rock	2.01	14.7	3.2	10.7	67	0.2	1.0	2.5	474	1.12	8.3	7.4	1.0	21	0.1	0.7	0.1	5	0.06	0.020
11LSP034	Rock	2.97	22.5	3.8	9.8	50	0.4	0.9	2.4	350	1.19	9.8	60.9	1.0	27	0.1	0.7	0.1	5	0.05	0.017
11LSP035	Rock	1.95	52.2	2.9	8.6	44	0.8	0.9	2.2	371	1.17	9.9	99.8	0.9	20	<0.1	0.7	0.1	5	0.05	0.018
11LSP036	Rock	2.75	13.6	2.9	8.9	40	0.6	0.8	2.0	457	1.21	10.3	76.5	0.9	22	<0.1	0.6	0.1	5	0.06	0.021
11LSP037	Rock	1.64	12.7	4.2	8.4	42	1.4	1.1	2.1	959	1.49	14.3	461.1	0.9	24	<0.1	0.5	0.1	5	0.11	0.024
11LSP038	Rock	2.57	3.3	2.2	9.0	53	0.2	1.1	2.3	656	1.28	8.5	2.5	0.9	17	0.1	0.3	0.1	3	0.16	0.024
11LSP039	Rock	1.79	2.6	3.9	8.7	46	0.3	1.0	2.4	641	1.43	13.9	26.0	1.0	18	<0.1	0.4	0.1	4	0.09	0.025

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	3A	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.01	0.05	1	0.5	0.2	0.5	
11LSP001	Rock Pulp	4	126	0.52	55	0.047	<1	0.89	0.102	0.04	4.4	0.92	1.2	0.8	1.31	6	11.5	23.7	2275
11LSP002	Rock	8	3	0.03	244	<0.001	1	0.37	0.041	0.15	<0.1	<0.01	0.5	<0.1	<0.05	1	<0.5	<0.2	3.0
11LSP003	Rock	6	2	0.02	70	<0.001	<1	0.32	0.039	0.16	<0.1	<0.01	0.5	<0.1	<0.05	1	<0.5	<0.2	2.9
11LSP004	Rock	9	2	0.02	73	<0.001	<1	0.30	0.044	0.15	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	4.6
11LSP005	Rock	10	3	0.02	1000	<0.001	<1	0.28	0.044	0.12	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	2.1
11LSP006	Rock	13	3	0.02	1856	<0.001	<1	0.37	0.025	0.21	<0.1	<0.01	0.4	<0.1	<0.05	1	<0.5	<0.2	37.6
11LSP007	Rock	15	3	0.02	166	<0.001	<1	0.29	0.048	0.12	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	5.2
11LSP008	Rock	12	3	0.02	421	<0.001	<1	0.29	0.033	0.14	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2	7.1
11LSP009	Rock	13	2	0.02	74	<0.001	<1	0.28	0.042	0.14	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	23.0
11LSP010	Rock	15	3	0.02	128	<0.001	<1	0.27	0.034	0.13	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	8.5
11LSP011	Rock	14	3	0.02	103	<0.001	<1	0.29	0.037	0.15	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	7.2
11LSP012	Rock	15	3	0.02	265	<0.001	<1	0.30	0.037	0.14	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	15.8
11LSP013	Rock	14	2	0.03	1135	<0.001	<1	0.45	0.022	0.17	<0.1	<0.01	0.4	<0.1	0.06	1	<0.5	<0.2	33.2
11LSP014	Rock	14	3	0.03	371	<0.001	<1	0.38	0.025	0.16	<0.1	0.01	0.4	<0.1	0.07	<1	<0.5	<0.2	26.5
11LSP015	Rock	8	38	0.94	135	0.103	3	1.45	0.091	0.24	0.2	0.02	3.7	<0.1	0.11	5	0.6	<0.2	2.2
11LSP016	Rock	16	3	0.04	337	0.001	<1	0.47	0.019	0.16	<0.1	0.02	0.6	<0.1	0.07	1	<0.5	<0.2	13.1
11LSP026	Rock Pulp	3	111	0.37	46	0.035	<1	0.82	0.077	0.03	2.8	1.43	1.1	0.6	1.46	5	11.9	34.0	4033
11LSP027	Rock	14	3	0.03	127	<0.001	1	0.39	0.039	0.17	<0.1	0.01	0.6	<0.1	<0.05	1	<0.5	<0.2	9.1
11LSP028	Rock	14	3	0.03	455	<0.001	<1	0.38	0.037	0.18	<0.1	0.02	0.6	<0.1	0.06	<1	<0.5	<0.2	7.1
11LSP029	Rock	14	2	0.03	245	<0.001	<1	0.40	0.029	0.19	<0.1	0.01	0.6	0.1	0.06	1	<0.5	<0.2	6.7
11LSP030	Rock	16	1	0.05	411	0.001	<1	0.48	0.019	0.21	<0.1	0.02	0.7	0.4	<0.05	1	<0.5	<0.2	67.4
11LSP031	Rock	15	2	0.04	394	<0.001	<1	0.40	0.024	0.21	<0.1	0.02	0.7	0.3	<0.05	1	<0.5	<0.2	56.7
11LSP032	Rock	15	2	0.03	181	<0.001	<1	0.41	0.025	0.23	<0.1	0.02	0.5	0.1	<0.05	1	<0.5	<0.2	10.9
11LSP033	Rock	16	2	0.04	185	<0.001	1	0.45	0.024	0.23	<0.1	0.03	0.7	0.1	<0.05	1	<0.5	<0.2	4.4
11LSP034	Rock	17	2	0.04	139	<0.001	<1	0.48	0.029	0.22	<0.1	0.04	0.6	0.1	<0.05	1	<0.5	<0.2	37.3
11LSP035	Rock	15	2	0.04	87	<0.001	1	0.40	0.025	0.21	<0.1	0.03	0.6	0.2	<0.05	1	<0.5	<0.2	70.3
11LSP036	Rock	14	2	0.04	267	<0.001	<1	0.44	0.022	0.22	<0.1	0.02	0.6	0.1	<0.05	1	<0.5	<0.2	55.4
11LSP037	Rock	14	2	0.05	514	<0.001	1	0.42	0.027	0.21	<0.1	0.03	0.6	0.1	0.08	1	<0.5	<0.2	288.2
11LSP038	Rock	14	2	0.04	122	<0.001	1	0.36	0.020	0.20	<0.1	0.02	0.5	<0.1	0.09	1	<0.5	<0.2	2.1
11LSP039	Rock	14	2	0.05	125	<0.001	<1	0.40	0.024	0.21	<0.1	0.02	0.6	<0.1	0.10	1	<0.5	<0.2	15.4



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Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
11LSP040	Rock	0.33	1.6	41.4	2.8	42	0.1	27.3	9.0	428	2.14	6.5	2.4	1.5	102	0.2	0.5	<0.1	72	5.02	0.076
11LSP041	Rock	1.82	2.7	3.0	9.2	51	0.1	1.0	2.3	735	1.33	7.9	3.1	1.1	17	0.1	0.3	0.1	4	0.12	0.026
11LSP042	Rock	2.13	5.8	3.0	9.5	49	0.2	1.5	2.2	564	1.21	9.5	21.9	1.0	18	<0.1	0.3	0.1	4	0.11	0.024
11LSP043	Rock	2.57	4.6	5.2	9.9	47	0.1	3.1	2.3	627	1.39	8.1	10.9	1.0	17	<0.1	0.4	0.1	7	0.11	0.025
11LSP044	Rock	1.83	9.1	4.5	10.0	46	0.2	2.9	2.4	544	1.32	8.2	71.7	1.2	20	0.1	0.4	0.1	9	0.10	0.028
11LSP045	Rock	2.78	22.7	3.3	9.1	42	0.5	1.5	2.9	491	1.45	9.3	136.9	1.1	19	<0.1	0.5	0.1	8	0.08	0.026
11LSP046	Rock	2.17	10.7	2.7	8.9	46	0.3	1.2	2.3	429	1.36	10.8	27.6	1.1	18	<0.1	0.4	0.1	4	0.07	0.025
11LSP047	Rock	2.69	10.9	3.3	9.2	50	0.3	1.1	2.3	593	1.48	9.6	30.9	1.1	17	<0.1	0.5	0.1	6	0.07	0.023
11LSP048	Rock	1.76	16.7	2.7	9.5	43	0.3	1.1	2.6	616	1.48	10.3	17.8	1.0	16	<0.1	0.5	0.1	6	0.08	0.024
11LSP049	Rock	2.63	2.8	3.3	8.3	42	0.1	1.2	2.2	534	1.30	6.6	7.1	1.0	14	<0.1	0.3	0.1	6	0.09	0.029
11LSP050	Rock	1.02	4.8	3.5	9.3	51	0.2	1.1	2.7	583	1.42	9.5	20.8	1.2	17	<0.1	0.3	0.1	6	0.09	0.031
11LSP051	Rock Pulp	0.11	3.9	174.0	10.6	97	1.2	81.5	26.7	3908	10.46	4279	6995	2.2	87	0.2	7.0	0.2	99	3.17	0.202
11LSP052	Rock	1.26	10.7	3.9	11.8	38	0.3	1.0	2.8	265	1.70	10.7	20.2	0.9	19	<0.1	0.5	0.1	4	0.09	0.026
11LSP053	Rock	1.59	4.1	5.3	10.6	55	0.2	1.3	4.3	723	1.71	7.5	6.2	1.1	15	<0.1	0.3	0.1	5	0.13	0.037
11LSP054	Rock	2.47	2.8	4.9	9.0	48	0.1	1.3	2.8	497	1.56	5.6	65.5	0.9	17	<0.1	0.2	0.1	6	0.11	0.032
11LSP055	Rock	1.52	2.3	4.3	8.6	51	<0.1	1.4	2.9	696	1.50	4.0	7.6	0.9	13	0.1	0.2	0.1	5	0.13	0.035
11LSP056	Rock	2.11	4.0	4.9	9.6	51	0.2	1.8	3.0	779	1.45	5.1	9.0	1.0	19	0.1	0.3	0.1	5	0.15	0.040
11LSP057	Rock	1.62	3.8	6.1	8.6	44	0.2	3.8	3.4	532	1.50	6.9	43.0	1.0	17	0.1	0.3	<0.1	9	0.20	0.035
11LSP058	Rock	1.65	3.3	11.4	10.1	51	0.2	8.1	5.3	857	1.91	6.4	10.4	1.3	40	0.2	0.5	0.1	20	0.34	0.047
11LSP059	Rock	1.36	4.2	10.5	9.9	47	0.2	6.7	5.0	780	1.77	6.4	9.1	1.3	24	0.2	0.5	0.1	15	0.27	0.046
11LSP060	Rock	2.30	3.5	7.8	8.8	54	0.1	6.7	4.6	780	1.77	5.8	10.7	1.0	41	0.2	0.4	0.1	10	0.24	0.038
11LSP061	Rock	2.31	3.3	8.3	8.5	55	0.1	6.5	4.7	806	1.90	5.4	6.8	1.1	41	0.1	0.4	<0.1	12	0.24	0.035
11LSP062	Rock	1.34	4.0	9.4	8.6	53	0.2	4.7	4.8	822	1.88	6.2	12.1	1.2	32	0.1	0.3	<0.1	18	0.25	0.037
11LSP063	Rock	2.14	4.5	11.9	8.5	47	0.2	5.9	5.0	776	1.91	8.6	45.0	1.1	32	0.2	0.3	0.1	20	0.18	0.026
11MKP001	Rock Pulp	0.12	3.6	169.0	9.7	94	1.1	83.0	25.4	3729	10.42	4136	6430	2.1	81	0.2	6.5	0.2	97	3.12	0.184
11MKP002	Rock	1.16	1.4	4.7	6.3	35	0.2	0.7	1.8	407	1.03	6.1	12.6	0.7	6	<0.1	0.2	<0.1	3	0.06	0.026
11MKP003	Rock	1.04	2.0	7.5	7.4	38	0.9	0.7	1.6	447	1.14	8.1	326.2	0.8	6	<0.1	0.4	<0.1	3	0.07	0.043
11MKP004	Rock	0.37	3.1	2.3	7.8	20	0.3	0.6	1.3	159	0.96	10.7	15.6	0.7	7	<0.1	0.4	0.1	2	0.04	0.025
11MKP005	Rock	0.68	1.3	4.7	6.1	36	0.2	0.9	1.6	371	1.08	4.6	1.4	0.7	6	<0.1	0.2	0.1	4	0.05	0.026
11MKP006	Rock	0.71	1.0	15.4	7.8	36	1.3	0.7	1.5	395	1.03	4.7	10.8	0.7	6	<0.1	0.4	<0.1	4	0.05	0.023

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Project: Shovelnose
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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	3A
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.1	0.05	1	0.5	0.2	0.5	
11LSP040	Rock	7	35	0.91	224	0.092	3	1.37	0.073	0.23	0.2	0.03	3.5	<0.1	0.11	4	<0.5	<0.2	2.1
11LSP041	Rock	15	1	0.05	105	<0.001	<1	0.42	0.022	0.22	<0.1	0.02	0.7	<0.1	0.08	1	<0.5	<0.2	4.3
11LSP042	Rock	15	2	0.06	97	<0.001	1	0.43	0.020	0.22	<0.1	0.02	0.6	<0.1	<0.05	1	<0.5	<0.2	13.4
11LSP043	Rock	15	3	0.05	75	<0.001	3	0.41	0.029	0.20	<0.1	0.02	0.7	<0.1	<0.05	1	<0.5	<0.2	20.2
11LSP044	Rock	17	3	0.04	70	<0.001	3	0.45	0.032	0.22	<0.1	0.03	0.8	0.1	<0.05	1	0.8	<0.2	36.7
11LSP045	Rock	14	3	0.06	76	0.001	3	0.46	0.027	0.22	<0.1	0.03	0.8	0.1	0.06	1	0.9	<0.2	117.0
11LSP046	Rock	14	2	0.04	73	<0.001	2	0.41	0.028	0.22	<0.1	0.02	0.6	0.1	0.05	1	0.6	<0.2	17.9
11LSP047	Rock	15	2	0.04	60	<0.001	2	0.40	0.029	0.21	<0.1	0.02	0.7	0.1	<0.05	1	0.8	<0.2	41.3
11LSP048	Rock	14	1	0.04	56	<0.001	3	0.40	0.030	0.21	<0.1	0.03	0.7	0.1	<0.05	1	0.6	<0.2	11.0
11LSP049	Rock	14	2	0.04	50	<0.001	2	0.40	0.028	0.21	<0.1	0.01	0.6	<0.1	<0.05	1	0.6	<0.2	3.6
11LSP050	Rock	14	1	0.04	58	<0.001	2	0.43	0.024	0.22	<0.1	0.02	0.8	<0.1	<0.05	1	0.7	<0.2	41.8
11LSP051	Rock Pulp	8	71	2.17	83	0.071	7	2.36	0.094	0.10	1.2	0.02	6.6	<0.1	3.09	7	4.2	0.3	6434
11LSP052	Rock	10	2	0.03	426	<0.001	2	0.38	0.018	0.21	<0.1	0.01	0.6	<0.1	0.06	1	0.7	<0.2	37.8
11LSP053	Rock	13	1	0.04	121	<0.001	2	0.43	0.014	0.22	<0.1	0.02	0.9	<0.1	<0.05	1	0.8	<0.2	4.8
11LSP054	Rock	11	2	0.03	79	<0.001	3	0.42	0.019	0.22	<0.1	0.02	0.8	<0.1	<0.05	1	0.7	<0.2	71.1
11LSP055	Rock	11	1	0.04	149	<0.001	1	0.42	0.014	0.24	<0.1	0.01	0.9	<0.1	<0.05	1	0.5	<0.2	8.8
11LSP056	Rock	13	2	0.04	943	<0.001	2	0.45	0.013	0.23	<0.1	0.03	0.9	<0.1	<0.05	1	0.8	<0.2	8.6
11LSP057	Rock	13	2	0.05	452	0.001	1	0.49	0.014	0.19	<0.1	0.02	1.0	<0.1	<0.05	2	0.8	<0.2	70.9
11LSP058	Rock	17	5	0.15	191	0.010	2	0.81	0.023	0.20	<0.1	0.03	2.1	<0.1	0.06	3	0.9	<0.2	9.4
11LSP059	Rock	15	4	0.10	174	0.004	2	0.70	0.015	0.20	<0.1	0.03	1.7	<0.1	<0.05	2	1.0	<0.2	13.1
11LSP060	Rock	14	4	0.08	875	0.003	2	0.63	0.017	0.22	<0.1	0.03	1.5	<0.1	0.06	2	0.9	<0.2	8.4
11LSP061	Rock	13	4	0.09	885	0.005	2	0.65	0.017	0.19	<0.1	0.04	1.7	<0.1	0.08	2	1.0	<0.2	8.9
11LSP062	Rock	12	5	0.12	361	0.008	2	0.73	0.020	0.19	<0.1	0.06	2.0	<0.1	<0.05	2	0.5	<0.2	36.5
11LSP063	Rock	10	7	0.14	138	0.008	3	0.85	0.025	0.22	<0.1	0.07	2.0	0.1	<0.05	2	0.5	<0.2	95.0
11MKP001	Rock Pulp	7	69	2.14	81	0.075	8	2.43	0.102	0.10	1.2	0.02	6.4	<0.1	3.13	7	4.3	0.2	6751
11MKP002	Rock	13	2	0.03	28	<0.001	1	0.29	0.018	0.19	<0.1	0.01	0.5	<0.1	<0.05	1	0.6	<0.2	9.3
11MKP003	Rock	11	2	0.03	39	0.003	1	0.32	0.017	0.20	<0.1	0.03	0.7	0.1	<0.05	1	0.6	<0.2	44.0
11MKP004	Rock	11	2	0.03	32	0.001	1	0.30	0.016	0.22	<0.1	0.02	0.6	<0.1	<0.05	1	<0.5	<0.2	18.4
11MKP005	Rock	11	2	0.02	48	0.001	<1	0.35	0.022	0.19	<0.1	0.02	0.6	<0.1	<0.05	1	0.7	<0.2	11.6
11MKP006	Rock	10	2	0.02	47	0.001	<1	0.33	0.023	0.18	<0.1	0.03	0.6	<0.1	<0.05	<1	<0.5	0.4	13.6

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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
11MKP007	Rock	0.49	1.4	3.9	7.5	43	<0.1	0.9	2.6	561	1.17	3.5	3.2	0.8	8	<0.1	0.2	0.1	4	0.06	0.024
11MKP008	Rock	0.90	0.3	4.9	6.0	41	0.2	1.4	3.3	471	1.46	3.6	31.6	0.9	10	<0.1	0.2	0.1	13	0.07	0.030
11MKP009	Rock	0.96	0.2	4.1	3.8	40	0.2	1.5	2.7	580	1.35	1.7	26.2	1.0	9	<0.1	0.1	<0.1	10	0.06	0.023
11MKP010	Rock	0.51	0.3	4.7	5.0	44	0.2	1.4	3.1	545	1.43	2.2	16.9	0.9	11	<0.1	0.1	<0.1	11	0.07	0.028
11MKP011	Rock	0.48	0.3	4.9	5.3	44	0.2	1.5	2.8	548	1.54	2.1	28.5	1.0	11	<0.1	0.1	<0.1	12	0.08	0.027
11MKP012	Rock	0.74	0.3	8.0	5.7	49	0.3	2.7	2.7	507	1.34	2.4	8.6	0.8	11	<0.1	0.1	<0.1	10	0.09	0.029
11MKP013	Rock	1.76	0.3	6.2	3.5	39	0.2	2.6	2.6	487	1.32	2.1	3.7	0.9	11	<0.1	0.1	<0.1	11	0.08	0.028
11MKP014	Rock	2.67	0.2	6.7	5.0	41	0.2	1.7	3.0	456	1.39	3.1	17.7	0.8	12	<0.1	0.1	<0.1	12	0.08	0.024
11MKP015	Rock Pulp	1.31	4.0	179.6	10.7	99	1.1	90.9	28.9	3927	10.20	4430	6592	2.3	93	0.2	7.6	0.4	101	3.71	0.215
11MKP016	Rock	2.07	0.6	9.2	4.9	46	0.2	1.7	2.5	473	1.37	2.8	10.5	0.8	10	<0.1	0.2	<0.1	11	0.07	0.024
11MKP017	Rock	2.06	0.5	6.6	4.2	43	0.3	2.7	2.4	480	1.35	2.0	31.5	0.9	14	0.1	0.1	<0.1	12	0.10	0.026
11MKP018	Rock	3.17	0.4	4.6	5.9	44	0.2	1.7	2.3	451	1.39	1.7	46.7	0.9	13	<0.1	0.1	<0.1	11	0.14	0.024
11MKP019	Rock	0.77	0.5	6.8	7.6	46	0.3	4.5	3.0	576	1.67	7.3	7.9	1.2	17	<0.1	0.2	0.1	16	0.15	0.034
11MKP020	Rock	1.39	0.5	6.4	4.9	31	0.3	3.1	2.2	430	1.13	3.6	34.1	1.1	15	<0.1	0.1	<0.1	12	0.11	0.022
11MKP021	Rock	1.90	0.3	5.4	4.6	46	0.1	1.6	3.5	474	1.57	3.1	2.8	1.1	11	<0.1	0.2	<0.1	11	0.07	0.024
11MKP022	Rock	1.02	0.4	7.1	5.5	42	0.2	2.8	2.7	467	1.40	2.6	15.0	1.4	17	<0.1	0.2	<0.1	13	0.15	0.038
11MKP023	Rock	1.11	0.5	7.2	5.1	50	0.3	2.4	3.5	542	1.75	4.4	15.0	1.1	12	<0.1	0.2	0.1	13	0.07	0.030
11MKP024	Rock	1.83	0.3	7.3	5.7	46	0.3	1.7	3.8	541	1.65	6.8	92.0	1.1	12	<0.1	0.2	<0.1	15	0.07	0.027
11MKP025	Rock	3.36	0.3	4.5	3.4	49	<0.1	1.1	3.1	635	1.68	2.5	13.3	1.0	9	<0.1	0.2	<0.1	14	0.05	0.028
11MKP026	Rock Pulp	0.12	6.7	388.4	160.7	60	42.2	29.6	9.9	132	3.86	467.4	3920	0.7	36	0.6	125.1	25.5	18	0.29	0.021
11MKP027	Rock	1.94	0.4	5.2	3.4	47	0.2	1.2	2.7	491	1.54	3.3	181.3	0.9	8	<0.1	0.2	<0.1	14	0.04	0.027
11MKP028	Rock	1.56	0.3	4.7	4.4	49	0.2	1.7	3.0	668	1.48	1.8	33.5	1.0	11	<0.1	0.1	<0.1	11	0.05	0.024
11ADP001	Rock	1.14	6.9	1.4	6.5	3	0.5	0.9	0.2	64	0.66	45.7	76.7	1.3	17	<0.1	1.7	<0.1	3	0.02	0.008
11ADP002	Rock	0.47	22.9	4.8	1.8	10	0.5	0.9	0.6	101	0.67	50.7	6696	0.3	3	<0.1	1.2	<0.1	8	0.05	0.009
11ADP003	Rock	0.55	3.1	3.4	8.2	37	<0.1	0.3	0.6	335	0.71	3.1	13.9	1.1	7	<0.1	0.2	<0.1	<2	0.05	0.012
11ADP004	Rock	0.72	4.0	1.3	5.6	24	<0.1	0.3	0.5	196	0.80	6.5	11.6	0.6	15	<0.1	0.3	0.2	<2	0.02	0.008
11ADP005	Rock	0.45	1.6	1.3	7.2	6	0.4	0.5	0.7	84	0.53	30.3	24.6	0.7	23	<0.1	1.0	<0.1	<2	0.01	0.005
11ADP006	Rock	0.90	0.2	0.8	7.7	50	<0.1	0.6	2.0	941	1.28	0.6	2.2	1.9	19	<0.1	<0.1	0.1	7	0.69	0.035
11ADP007	Rock	0.75	0.6	2.2	5.1	26	<0.1	0.2	0.4	202	0.81	5.2	1.1	2.2	9	<0.1	0.4	<0.1	<2	0.03	0.016
11ADP008	Rock	0.51	0.4	1.3	5.2	36	<0.1	1.9	4.6	557	1.75	2.5	<0.5	1.6	6	<0.1	0.1	<0.1	16	0.06	0.045

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Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method Analyte	Unit	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	3A	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
MDL	MDL	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb	
11MKP007	Rock	14	2	0.03	49	0.001	<1	0.36	0.021	0.21	<0.1	0.02	0.7	0.1	<0.05	1	0.5	<0.2	3.3
11MKP008	Rock	7	2	0.02	65	0.001	<1	0.38	0.039	0.15	<0.1	<0.01	1.1	<0.1	<0.05	1	0.6	<0.2	117.2
11MKP009	Rock	7	3	0.02	57	0.001	<1	0.35	0.040	0.16	<0.1	<0.01	0.9	<0.1	<0.05	1	<0.5	<0.2	25.4
11MKP010	Rock	10	3	0.03	60	0.002	1	0.41	0.038	0.16	<0.1	<0.01	1.1	<0.1	<0.05	1	0.5	<0.2	34.3
11MKP011	Rock	10	3	0.03	53	0.002	2	0.42	0.037	0.16	<0.1	0.01	1.1	<0.1	<0.05	1	0.5	<0.2	17.7
11MKP012	Rock	8	<1	0.03	52	0.001	<1	0.38	0.040	0.15	<0.1	0.02	0.9	0.2	<0.05	1	0.8	<0.2	11.0
11MKP013	Rock	8	3	0.03	50	0.002	1	0.40	0.043	0.15	<0.1	<0.01	0.9	0.1	<0.05	1	0.5	<0.2	6.3
11MKP014	Rock	6	3	0.03	56	0.002	1	0.39	0.047	0.15	<0.1	0.02	1.0	<0.1	<0.05	1	0.5	<0.2	8.5
11MKP015	Rock Pulp	8	79	2.12	75	0.088	9	2.40	0.095	0.09	1.2	0.01	7.5	<0.1	3.05	7	3.6	0.2	6429
11MKP016	Rock	6	3	0.02	47	0.002	1	0.36	0.047	0.16	0.3	<0.01	0.9	<0.1	<0.05	1	<0.5	<0.2	16.5
11MKP017	Rock	7	3	0.03	51	0.003	1	0.41	0.038	0.15	0.3	<0.01	1.0	<0.1	<0.05	2	<0.5	<0.2	37.2
11MKP018	Rock	7	3	0.04	50	0.002	1	0.44	0.036	0.16	0.2	<0.01	1.1	<0.1	<0.05	2	<0.5	<0.2	42.8
11MKP019	Rock	12	3	0.09	68	0.004	1	0.51	0.032	0.16	<0.1	0.01	1.5	0.1	<0.05	2	<0.5	<0.2	7.9
11MKP020	Rock	11	3	0.04	56	0.003	<1	0.39	0.033	0.15	<0.1	<0.01	1.0	<0.1	<0.05	2	<0.5	<0.2	14.1
11MKP021	Rock	11	2	0.03	44	0.002	1	0.40	0.030	0.19	<0.1	<0.01	1.2	0.1	<0.05	2	0.5	<0.2	3.3
11MKP022	Rock	11	3	0.06	53	0.004	1	0.55	0.034	0.18	<0.1	<0.01	1.4	<0.1	<0.05	2	<0.5	<0.2	17.2
11MKP023	Rock	10	4	0.03	54	0.002	1	0.39	0.034	0.16	<0.1	<0.01	1.3	<0.1	<0.05	2	<0.5	<0.2	39.9
11MKP024	Rock	9	5	0.03	51	0.002	2	0.41	0.031	0.18	<0.1	<0.01	1.4	<0.1	<0.05	2	<0.5	<0.2	37.2
11MKP025	Rock	4	3	0.03	59	0.002	1	0.47	0.033	0.19	0.1	<0.01	1.2	<0.1	<0.05	2	<0.5	<0.2	18.3
11MKP026	Rock Pulp	3	116	0.37	53	0.041	<1	0.91	0.087	0.03	2.4	1.36	1.3	0.6	1.45	5	12.0	32.7	4267
11MKP027	Rock	3	4	0.03	35	0.002	<1	0.42	0.030	0.19	<0.1	<0.01	1.1	<0.1	<0.05	1	<0.5	<0.2	87.8
11MKP028	Rock	7	3	0.03	53	0.002	<1	0.40	0.031	0.17	<0.1	<0.01	1.3	<0.1	<0.05	1	<0.5	<0.2	47.4
11ADP001	Rock	9	3	<0.01	134	0.001	<1	0.20	0.003	0.25	<0.1	0.02	0.4	0.2	0.15	1	2.5	<0.2	57.3
11ADP002	Rock	2	7	0.05	46	0.001	<1	0.15	0.003	0.07	<0.1	1.13	0.5	0.2	0.10	1	1.0	3.5	6825
11ADP003	Rock	17	2	0.03	34	<0.001	<1	0.34	0.013	0.26	<0.1	<0.01	0.3	0.1	<0.05	1	<0.5	<0.2	15.0
11ADP004	Rock	6	2	0.02	60	<0.001	<1	0.25	0.025	0.15	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2	15.1
11ADP005	Rock	3	2	<0.01	55	<0.001	<1	0.17	0.002	0.17	<0.1	0.02	0.2	<0.1	<0.05	<1	<0.5	<0.2	16.5
11ADP006	Rock	15	2	0.05	85	0.003	1	0.39	0.037	0.24	<0.1	<0.01	0.9	<0.1	<0.05	2	<0.5	<0.2	2.1
11ADP007	Rock	12	2	0.01	36	<0.001	<1	0.19	0.036	0.09	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2	3.4
11ADP008	Rock	4	4	0.02	64	0.003	1	0.38	0.053	0.20	<0.1	<0.01	1.6	<0.1	<0.05	1	<0.5	<0.2	1.3

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Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
11ADP009	Rock	0.65	0.2	2.2	4.8	27	<0.1	0.9	1.1	335	0.98	0.6	<0.5	2.9	11	<0.1	<0.1	<0.1	5	0.24	0.020
11ADP010	Rock	0.74	4.1	2.0	6.3	33	<0.1	0.6	1.5	159	1.05	4.0	4.2	1.1	15	0.1	0.4	<0.1	5	0.09	0.028
11ADP011	Rock	0.76	0.2	4.1	4.7	62	<0.1	2.1	5.1	770	2.12	0.7	<0.5	0.7	6	<0.1	<0.1	<0.1	20	0.14	0.049
11ADP012	Rock	0.71	0.9	2.3	6.7	65	<0.1	1.5	2.6	787	1.75	3.0	<0.5	2.5	10	<0.1	0.2	<0.1	19	0.21	0.042
11ADP013	Rock Pulp	0.10	5.4	289.9	151.6	65	30.2	34.4	9.8	143	3.65	368.9	2151	0.8	45	0.7	68.9	19.9	19	0.33	0.026
11AGP001	Rock	0.43	24.0	3.1	9.4	48	0.4	1.0	2.1	428	1.43	7.5	146.1	1.0	23	0.1	0.5	0.1	6	0.07	0.045
11AGP002	Rock	0.60	0.3	5.3	8.3	66	<0.1	2.3	5.1	1095	1.96	1.0	<0.5	0.7	6	0.2	<0.1	0.2	14	0.15	0.050
11AGP003	Rock	1.35	0.6	0.8	7.4	30	<0.1	0.4	0.4	321	0.94	15.7	0.6	2.3	3	<0.1	0.4	0.2	9	0.03	0.012
11AGP004	Rock	0.96	0.3	32.8	0.9	46	<0.1	9.1	12.6	565	2.75	1.8	<0.5	0.6	41	<0.1	<0.1	<0.1	77	1.34	0.060
11AGP005	Rock	1.02	0.2	3.0	5.9	33	<0.1	0.8	2.3	133	1.56	2.6	<0.5	1.8	7	<0.1	0.3	<0.1	11	0.08	0.032
11AGP006	Rock	0.69	0.2	4.7	3.6	30	<0.1	1.3	3.2	370	1.30	0.6	<0.5	1.4	9	<0.1	<0.1	<0.1	14	0.10	0.034
11AGP007	Rock	0.58	0.3	3.9	5.6	51	<0.1	1.2	2.1	536	1.19	5.5	<0.5	1.5	7	<0.1	0.2	<0.1	7	0.04	0.025
11AGP008	Rock	0.84	0.5	2.6	4.2	41	<0.1	0.4	0.8	516	1.08	1.9	<0.5	3.6	7	<0.1	<0.1	<0.1	6	0.08	0.036
11AGP009	Rock	0.79	7.7	3.9	6.8	38	0.1	1.0	1.7	298	1.34	6.6	7.2	1.0	7	<0.1	0.6	0.1	8	0.07	0.034
11AGP010	Rock	0.96	6.4	1.3	8.7	27	0.2	0.5	0.8	227	1.10	11.9	6.6	1.0	13	<0.1	0.3	0.2	2	0.03	0.011
11AGP011	Rock	0.73	4.1	4.4	9.8	35	0.3	0.8	1.4	281	1.16	20.0	23.6	0.8	12	<0.1	0.7	<0.1	8	0.04	0.038
11AGP012	Rock	0.86	1.0	1.2	7.5	45	<0.1	0.9	2.2	605	1.17	1.5	2.6	0.9	7	<0.1	0.2	0.1	9	0.15	0.040
11AGP013	Rock	0.76	0.3	1.0	7.9	60	<0.1	1.3	2.3	773	1.26	0.6	<0.5	0.9	8	0.1	0.1	<0.1	11	0.12	0.048
11AGP014	Rock	0.63	0.2	0.5	5.1	16	<0.1	0.3	0.3	327	0.58	<0.5	1.8	2.1	3	<0.1	<0.1	<0.1	<2	0.06	0.015
11AGP015	Rock	1.03	2.1	1.4	5.3	22	<0.1	0.4	0.7	339	0.86	6.6	2.6	1.8	7	<0.1	0.2	<0.1	<2	0.02	0.014
11AGP016	Rock Pulp	0.11	5.8	370.0	159.9	57	42.2	29.3	9.9	123	3.70	465.8	4045	0.7	31	0.5	119.1	28.0	17	0.24	0.020
11AGP017	Rock	0.52	1.4	44.1	2.6	36	0.1	24.8	8.5	402	2.01	5.0	4.6	1.5	91	0.2	0.4	<0.1	67	4.79	0.076
11KRP007	Rock	0.60	7.7	2.3	4.0	30	0.1	3.3	7.1	1179	1.51	44.8	6.8	0.8	64	<0.1	0.9	0.2	8	3.18	0.024
11KRP008	Rock	1.24	35.6	2.8	6.6	39	0.3	3.7	5.4	365	1.60	41.5	128.4	1.1	17	<0.1	1.3	0.1	7	0.25	0.031
11KRP009	Rock	0.60	9.0	2.0	5.1	48	0.1	1.5	2.3	470	1.47	6.1	7.5	0.9	22	0.1	0.2	0.1	6	0.29	0.020
11KRP010	Rock	0.60	5.9	3.3	5.9	22	0.3	0.9	1.3	293	0.84	32.1	60.7	0.9	8	<0.1	0.5	<0.1	4	0.05	0.019
11KRP011	Rock	0.92	0.5	2.3	4.7	25	<0.1	1.2	1.6	1377	0.86	4.5	7.1	0.7	22	0.2	0.1	<0.1	3	0.67	0.036
11KRP012	Rock	0.80	1.1	2.8	5.3	33	0.2	0.9	1.8	326	1.08	15.6	23.4	0.8	6	<0.1	0.3	<0.1	5	0.04	0.020
11EHP100	Rock	1.83	0.6	30.4	7.4	48	4.8	1.8	3.3	520	1.50	5.2	31.1	0.5	7	0.1	1.9	0.2	10	0.17	0.049



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Project: Shovelnose
 Report Date: October 27, 2011

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CERTIFICATE OF ANALYSIS

VAN11004228.1

Method	Analyte	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	3A
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.1	0.05	1	0.5	0.2	0.5	
11ADP009	Rock	12	2	0.02	48	<0.001	<1	0.32	0.043	0.20	<0.1	<0.01	0.7	<0.1	<0.05	1	<0.5	<0.2	1.8
11ADP010	Rock	10	1	0.03	334	<0.001	1	0.41	0.014	0.26	<0.1	<0.01	0.6	<0.1	<0.05	1	<0.5	<0.2	3.6
11ADP011	Rock	5	3	0.55	63	0.002	<1	1.19	0.029	0.23	<0.1	<0.01	1.7	<0.1	<0.05	6	<0.5	<0.2	1.3
11ADP012	Rock	19	2	0.28	92	0.155	<1	0.73	0.112	0.21	0.3	<0.01	2.3	<0.1	<0.05	7	<0.5	<0.2	0.6
11ADP013	Rock Pulp	4	117	0.46	72	0.047	<1	0.89	0.106	0.03	3.6	0.76	1.3	0.6	1.13	6	8.2	18.2	2337
11AGP001	Rock	13	1	0.04	985	<0.001	<1	0.38	0.021	0.23	<0.1	<0.01	0.7	0.1	<0.05	1	<0.5	<0.2	67.7
11AGP002	Rock	9	3	0.36	93	0.003	<1	1.05	0.032	0.23	<0.1	<0.01	1.4	<0.1	<0.05	5	<0.5	<0.2	2.3
11AGP003	Rock	18	4	0.02	83	0.020	1	0.32	0.057	0.21	0.3	<0.01	0.4	<0.1	<0.05	2	<0.5	<0.2	1.0
11AGP004	Rock	3	11	1.08	28	0.188	1	1.95	0.051	0.06	<0.1	<0.01	5.0	<0.1	<0.05	6	<0.5	<0.2	1.2
11AGP005	Rock	7	2	0.02	26	<0.001	<1	0.36	0.038	0.20	<0.1	<0.01	1.0	<0.1	<0.05	1	<0.5	<0.2	1.2
11AGP006	Rock	11	2	0.03	37	0.001	1	0.34	0.040	0.18	<0.1	<0.01	0.8	<0.1	<0.05	1	<0.5	<0.2	<0.5
11AGP007	Rock	10	3	0.01	94	0.002	<1	0.19	0.045	0.10	<0.1	<0.01	1.3	<0.1	<0.05	<1	<0.5	<0.2	0.6
11AGP008	Rock	20	2	0.02	85	0.005	1	0.36	0.064	0.15	<0.1	<0.01	0.9	<0.1	<0.05	2	<0.5	<0.2	<0.5
11AGP009	Rock	6	2	0.03	61	<0.001	<1	0.36	0.023	0.19	<0.1	0.02	0.7	<0.1	<0.05	1	<0.5	<0.2	8.7
11AGP010	Rock	10	2	0.01	56	<0.001	<1	0.21	0.027	0.11	<0.1	0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2	7.0
11AGP011	Rock	11	2	0.02	80	<0.001	<1	0.29	0.026	0.16	<0.1	0.02	0.7	<0.1	<0.05	<1	<0.5	<0.2	23.5
11AGP012	Rock	14	2	0.15	88	0.005	<1	0.74	0.046	0.32	<0.1	0.01	1.1	<0.1	<0.05	3	0.6	<0.2	1.6
11AGP013	Rock	12	2	0.19	135	0.007	<1	0.76	0.053	0.31	<0.1	<0.01	1.5	<0.1	<0.05	4	<0.5	<0.2	<0.5
11AGP014	Rock	16	2	0.01	46	0.006	<1	0.20	0.046	0.13	<0.1	<0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2	<0.5
11AGP015	Rock	12	2	0.01	42	0.001	<1	0.21	0.041	0.10	<0.1	<0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2	1.9
11AGP016	Rock Pulp	3	107	0.35	38	0.036	<1	0.78	0.076	0.03	2.3	1.37	1.1	0.6	1.39	5	10.8	29.2	4136
11AGP017	Rock	7	33	0.83	115	0.098	2	1.25	0.069	0.22	0.2	0.01	3.3	<0.1	0.10	4	0.8	<0.2	0.8
11KRP007	Rock	11	2	0.05	301	<0.001	<1	0.24	0.027	0.13	<0.1	0.08	1.2	<0.1	0.18	<1	<0.5	<0.2	5.8
11KRP008	Rock	14	2	0.03	325	<0.001	<1	0.26	0.024	0.15	<0.1	0.06	0.7	0.1	0.10	<1	<0.5	<0.2	121.4
11KRP009	Rock	14	2	0.04	204	<0.001	<1	0.28	0.030	0.14	<0.1	0.02	0.7	<0.1	0.25	<1	<0.5	<0.2	10.5
11KRP010	Rock	7	2	0.01	64	<0.001	<1	0.17	0.010	0.13	<0.1	0.01	0.5	0.1	<0.05	<1	<0.5	<0.2	50.2
11KRP011	Rock	7	3	0.03	116	0.001	<1	0.23	0.021	0.13	<0.1	<0.01	0.6	<0.1	<0.05	<1	<0.5	<0.2	4.4
11KRP012	Rock	10	2	0.02	54	<0.001	<1	0.23	0.020	0.14	<0.1	<0.01	0.5	<0.1	<0.05	<1	0.7	<0.2	28.7
11EHP100	Rock	8	5	0.34	72	0.002	<1	0.73	0.017	0.17	<0.1	<0.01	1.0	<0.1	<0.05	3	<0.5	2.7	9.4

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



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Project: Shovelnose
Report Date: October 27, 2011

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QUALITY CONTROL REPORT

VAN11004228.1

Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																					
11LSP016	Rock	1.43	7.7	3.7	7.5	43	0.1	1.6	2.1	319	1.53	8.6	22.7	1.6	30	<0.1	0.5	<0.1	4	0.05	0.014
REP 11LSP016	QC		7.9	3.7	7.4	41	0.1	1.5	2.1	324	1.57	8.7	14.1	1.6	30	<0.1	0.4	<0.1	4	0.05	0.013
11LSP038	Rock	2.57	3.3	2.2	9.0	53	0.2	1.1	2.3	656	1.28	8.5	2.5	0.9	17	0.1	0.3	0.1	3	0.16	0.024
REP 11LSP038	QC																				
11LSP041	Rock	1.82	2.7	3.0	9.2	51	0.1	1.0	2.3	735	1.33	7.9	3.1	1.1	17	0.1	0.3	0.1	4	0.12	0.026
REP 11LSP041	QC		2.5	3.0	9.2	49	0.1	1.1	2.2	736	1.34	7.6	2.8	1.1	17	0.1	0.3	0.1	4	0.11	0.027
11LSP053	Rock	1.59	4.1	5.3	10.6	55	0.2	1.3	4.3	723	1.71	7.5	6.2	1.1	15	<0.1	0.3	0.1	5	0.13	0.037
REP 11LSP053	QC																				
11LSP055	Rock	1.52	2.3	4.3	8.6	51	<0.1	1.4	2.9	696	1.50	4.0	7.6	0.9	13	0.1	0.2	0.1	5	0.13	0.035
REP 11LSP055	QC		2.4	4.3	9.1	51	<0.1	1.4	3.0	723	1.48	4.3	6.1	0.9	13	<0.1	0.2	0.1	5	0.13	0.034
11LSP056	Rock	2.11	4.0	4.9	9.6	51	0.2	1.8	3.0	779	1.45	5.1	9.0	1.0	19	0.1	0.3	0.1	5	0.15	0.040
REP 11LSP056	QC																				
11MKP009	Rock	0.96	0.2	4.1	3.8	40	0.2	1.5	2.7	580	1.35	1.7	26.2	1.0	9	<0.1	0.1	<0.1	10	0.06	0.023
REP 11MKP009	QC		0.3	4.0	3.8	38	0.2	1.4	2.6	570	1.33	1.9	27.6	0.9	9	<0.1	0.1	<0.1	10	0.05	0.023
11MKP022	Rock	1.02	0.4	7.1	5.5	42	0.2	2.8	2.7	467	1.40	2.6	15.0	1.4	17	<0.1	0.2	<0.1	13	0.15	0.038
REP 11MKP022	QC		0.6	7.3	5.9	44	0.1	3.4	2.8	494	1.54	3.1	40.3	1.4	18	<0.1	0.2	0.1	14	0.15	0.038
11ADP013	Rock Pulp	0.10	5.4	289.9	151.6	65	30.2	34.4	9.8	143	3.65	368.9	2151	0.8	45	0.7	68.9	19.9	19	0.33	0.026
REP 11ADP013	QC		6.1	321.7	159.5	73	33.1	38.0	10.8	160	4.00	407.1	2247	0.8	50	0.9	75.0	21.0	22	0.36	0.028
11AGP010	Rock	0.96	6.4	1.3	8.7	27	0.2	0.5	0.8	227	1.10	11.9	6.6	1.0	13	<0.1	0.3	0.2	2	0.03	0.011
REP 11AGP010	QC		6.6	1.7	9.7	27	0.2	0.5	0.8	225	1.10	11.6	4.7	0.9	14	<0.1	0.3	0.1	2	0.03	0.011
11AGP012	Rock	0.86	1.0	1.2	7.5	45	<0.1	0.9	2.2	605	1.17	1.5	2.6	0.9	7	<0.1	0.2	0.1	9	0.15	0.040
REP 11AGP012	QC																				
11KRP008	Rock	1.24	35.6	2.8	6.6	39	0.3	3.7	5.4	365	1.60	41.5	128.4	1.1	17	<0.1	1.3	0.1	7	0.25	0.031
REP 11KRP008	QC		35.1	2.7	6.5	36	0.3	3.9	5.0	353	1.55	39.4	111.6	1.0	17	<0.1	1.3	0.1	7	0.24	0.030
Core Reject Duplicates																					
11LSP027	Rock	1.89	15.4	2.7	7.8	42	0.1	1.1	1.9	425	1.22	7.5	7.1	0.9	20	0.1	0.6	0.1	7	0.07	0.021
DUP 11LSP027	QC		15.6	2.2	8.8	43	0.2	0.9	1.8	406	1.22	6.9	20.4	0.9	18	<0.1	0.5	0.1	7	0.06	0.020
11LSP062	Rock	1.34	4.0	9.4	8.6	53	0.2	4.7	4.8	822	1.88	6.2	12.1	1.2	32	0.1	0.3	<0.1	18	0.25	0.037



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Project: Shovelnose
Report Date: October 27, 2011

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QUALITY CONTROL REPORT

VAN11004228.1

Method	Analyte	Unit	MDL	1DX15 La ppm	1DX15 Cr ppm	1DX15 Mg %	1DX15 Ba ppm	1DX15 Ti %	1DX15 B ppm	1DX15 Al %	1DX15 Na %	1DX15 K %	1DX15 W ppm	1DX15 Hg ppm	1DX15 Sc ppm	1DX15 Ti ppm	1DX15 S %	1DX15 Ga ppm	1DX15 Se ppm	1DX15 Te ppm	3A Au ppb
Pulp Duplicates																					
11LSP016	Rock			16	3	0.04	337	0.001	<1	0.47	0.019	0.16	<0.1	0.02	0.6	<0.1	0.07	1	<0.5	<0.2	13.1
REP 11LSP016	QC			16	3	0.04	335	0.001	<1	0.49	0.019	0.17	<0.1	0.02	0.6	<0.1	0.07	<1	<0.5	<0.2	
11LSP038	Rock			14	2	0.04	122	<0.001	1	0.36	0.020	0.20	<0.1	0.02	0.5	<0.1	0.09	1	<0.5	<0.2	2.1
REP 11LSP038	QC																				3.1
11LSP041	Rock			15	1	0.05	105	<0.001	<1	0.42	0.022	0.22	<0.1	0.02	0.7	<0.1	0.08	1	<0.5	<0.2	4.3
REP 11LSP041	QC			14	2	0.05	101	<0.001	<1	0.40	0.022	0.22	<0.1	0.01	0.6	<0.1	0.08	1	<0.5	<0.2	
11LSP053	Rock			13	1	0.04	121	<0.001	2	0.43	0.014	0.22	<0.1	0.02	0.9	<0.1	<0.05	1	0.8	<0.2	4.8
REP 11LSP053	QC																				6.6
11LSP055	Rock			11	1	0.04	149	<0.001	1	0.42	0.014	0.24	<0.1	0.01	0.9	<0.1	<0.05	1	0.5	<0.2	8.8
REP 11LSP055	QC			11	1	0.04	155	<0.001	2	0.41	0.014	0.23	<0.1	0.02	0.8	<0.1	<0.05	1	0.8	<0.2	
11LSP056	Rock			13	2	0.04	943	<0.001	2	0.45	0.013	0.23	<0.1	0.03	0.9	<0.1	<0.05	1	0.8	<0.2	8.6
REP 11LSP056	QC																				20.3
11MKP009	Rock			7	3	0.02	57	0.001	<1	0.35	0.040	0.16	<0.1	<0.01	0.9	<0.1	<0.05	1	<0.5	<0.2	25.4
REP 11MKP009	QC			7	3	0.02	56	0.001	<1	0.36	0.040	0.16	<0.1	0.01	0.9	<0.1	<0.05	1	0.5	<0.2	
11MKP022	Rock			11	3	0.06	53	0.004	1	0.55	0.034	0.18	<0.1	<0.01	1.4	<0.1	<0.05	2	<0.5	<0.2	17.2
REP 11MKP022	QC			12	4	0.06	56	0.004	1	0.57	0.035	0.19	<0.1	<0.01	1.4	<0.1	<0.05	2	<0.5	<0.2	20.0
11ADP013	Rock Pulp			4	117	0.46	72	0.047	<1	0.89	0.106	0.03	3.6	0.76	1.3	0.6	1.13	6	8.2	18.2	2337
REP 11ADP013	QC			4	130	0.51	75	0.054	<1	0.99	0.119	0.04	3.8	0.80	1.5	0.7	1.28	6	9.5	19.1	
11AGP010	Rock			10	2	0.01	56	<0.001	<1	0.21	0.027	0.11	<0.1	0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2	7.0
REP 11AGP010	QC			10	2	0.01	53	<0.001	<1	0.21	0.028	0.12	<0.1	<0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2	
11AGP012	Rock			14	2	0.15	88	0.005	<1	0.74	0.046	0.32	<0.1	0.01	1.1	<0.1	<0.05	3	0.6	<0.2	1.6
REP 11AGP012	QC																				0.5
11KRP008	Rock			14	2	0.03	325	<0.001	<1	0.26	0.024	0.15	<0.1	0.06	0.7	0.1	0.10	<1	<0.5	<0.2	121.4
REP 11KRP008	QC			13	2	0.03	294	<0.001	<1	0.25	0.023	0.14	<0.1	0.05	0.7	0.1	0.10	<1	1.1	<0.2	
Core Reject Duplicates																					
11LSP027	Rock			14	3	0.03	127	<0.001	1	0.39	0.039	0.17	<0.1	0.01	0.6	<0.1	<0.05	1	<0.5	<0.2	9.1
DUP 11LSP027	QC			14	2	0.03	127	<0.001	<1	0.35	0.037	0.16	<0.1	0.02	0.6	<0.1	<0.05	<1	<0.5	<0.2	22.6
11LSP062	Rock			12	5	0.12	361	0.008	2	0.73	0.020	0.19	<0.1	0.06	2.0	<0.1	<0.05	2	0.5	<0.2	36.5



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 1095 - 1920 W. Pender St.
 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: October 27, 2011

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QUALITY CONTROL REPORT

VAN11004228.1

		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
DUP 11LSP062	QC		4.1	10.3	8.7	58	0.1	5.0	5.2	857	1.94	6.6	9.9	1.2	32	0.1	0.3	0.1	19	0.28	0.040
11ADP006	Rock	0.90	0.2	0.8	7.7	50	<0.1	0.6	2.0	941	1.28	0.6	2.2	1.9	19	<0.1	<0.1	0.1	7	0.69	0.035
DUP 11ADP006	QC		0.1	0.9	7.7	54	<0.1	0.8	1.8	907	1.31	<0.5	<0.5	1.8	20	0.2	<0.1	<0.1	7	0.67	0.041
Reference Materials																					
STD CDN-PGMS-19	Standard																				
STD CDN-PGMS-19	Standard																				
STD CDN-PGMS-19	Standard																				
STD CDN-PGMS-19	Standard																				
STD CDN-PGMS-19	Standard																				
STD DS8	Standard		13.1	110.1	120.2	337	1.8	40.3	8.0	629	2.57	27.4	124.6	6.0	65	2.4	5.6	6.7	43	0.72	0.081
STD DS8	Standard		12.0	99.9	113.4	289	1.6	36.4	7.0	573	2.37	23.0	98.6	6.5	63	2.1	5.2	5.6	40	0.71	0.070
STD DS8	Standard		12.0	109.1	116.9	312	1.8	36.4	7.3	594	2.54	25.5	111.2	6.5	59	2.6	5.7	6.5	41	0.72	0.076
STD DS8	Standard		13.3	106.6	120.7	304	1.8	37.5	7.6	597	2.47	24.5	114.2	6.7	64	2.1	5.7	6.8	41	0.72	0.075
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
STD CDN-PGMS-19																					
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank																				
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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: October 27, 2011

Page: 2 of 3 **Part** 2

QUALITY CONTROL REPORT

VAN11004228.1

		1DX15 La ppm	1DX15 Cr ppm	1DX15 Mg %	1DX15 Ba ppm	1DX15 Ti %	1DX15 B ppm	1DX15 Al %	1DX15 Na %	1DX15 K %	1DX15 W ppm	1DX15 Hg ppm	1DX15 Sc ppm	1DX15 Ti ppm	1DX15 S %	1DX15 Ga ppm	1DX15 Se ppm	1DX15 Te ppm	3A Au ppb	
DUP 11LSP062	QC	13	6	0.14	376	0.007	2	0.78	0.021	0.20	<0.1	0.06	2.2	0.1	<0.05	2	1.2	<0.2	16.9	
11ADP006	Rock	15	2	0.05	85	0.003	1	0.39	0.037	0.24	<0.1	<0.01	0.9	<0.1	<0.05	2	<0.5	<0.2	2.1	
DUP 11ADP006	QC	15	2	0.05	100	0.004	1	0.40	0.041	0.23	<0.1	<0.01	1.0	<0.1	<0.05	2	<0.5	<0.2	1.9	
Reference Materials																				
STD CDN-PGMS-19	Standard																			166.4
STD CDN-PGMS-19	Standard																			239.7
STD CDN-PGMS-19	Standard																			235.5
STD CDN-PGMS-19	Standard																			196.3
STD CDN-PGMS-19	Standard																			182.9
STD DS8	Standard	14	114	0.63	273	0.107	3	0.95	0.087	0.43	3.1	0.19	2.0	5.5	0.17	5	5.9	5.1		
STD DS8	Standard	16	113	0.58	254	0.112	4	0.90	0.084	0.39	2.7	0.15	2.2	4.7	0.15	4	4.4	4.2		
STD DS8	Standard	15	110	0.62	281	0.112	3	0.96	0.091	0.42	3.1	0.21	2.0	5.3	0.16	5	5.5	4.7		
STD DS8	Standard	15	116	0.60	271	0.120	1	0.88	0.084	0.40	3.1	0.19	2.1	5.0	0.16	5	5.0	4.9		
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5		
STD CDN-PGMS-19																				230
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																			<0.5
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Project: Shovelnose
Report Date: October 27, 2011

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QUALITY CONTROL REPORT

VAN11004228.1

		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Prep Wash																					
G1	Prep Blank	<0.01	0.2	2.4	3.4	43	<0.1	1.7	3.6	537	1.94	<0.5	0.5	5.1	67	<0.1	<0.1	<0.1	37	0.63	0.076
G1	Prep Blank	<0.01	0.2	2.2	3.2	42	<0.1	1.8	3.8	521	1.92	<0.5	<0.5	5.3	70	<0.1	<0.1	<0.1	37	0.63	0.080



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QUALITY CONTROL REPORT

VAN11004228.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	3A	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb
Prep Wash		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.5
G1	Prep Blank	14	5	0.49	131	0.103	2	0.94	0.091	0.44	<0.1	<0.01	1.6	0.3	<0.05	5	<0.5	<0.2	<0.5
G1	Prep Blank	15	5	0.48	131	0.110	2	0.93	0.092	0.43	<0.1	<0.01	1.7	0.3	<0.05	5	<0.5	<0.2	<0.5



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Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: August 30, 2011
Report Date: November 07, 2011
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN11004340.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 3
P.O. Number
Number of Samples: 19

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	18	Crush, split and pulverize 250 g rock to 200 mesh			VAN
3A01	19	Ignite samples, acid digest, Au by ICP-MS	15	Completed	VAN
1DX2	19	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS



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Project: Shovelnose
 Report Date: November 07, 2011

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CERTIFICATE OF ANALYSIS

VAN11004340.1

Method	WGHT	3A	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.5	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
11ADP015	Rock	0.29	<0.5	1.4	39.2	9.7	48	<0.1	24.6	8.3	392	1.95	6.7	0.6	1.5	92	0.3	0.4	<0.1	62	4.77
11ADP016	Rock	0.91	12.6	0.2	7.2	9.5	48	0.5	0.9	3.2	407	1.53	11.2	16.3	1.5	10	0.2	0.4	0.1	12	0.15
11ADP017	Rock	1.08	<0.5	0.3	2.2	11.2	31	<0.1	0.8	0.7	197	0.62	6.2	<0.5	1.4	11	0.1	0.4	<0.1	4	0.08
11ADP018	Rock	1.05	<0.5	0.5	2.8	7.2	63	<0.1	3.1	4.5	645	1.85	0.9	<0.5	0.8	9	0.1	<0.1	<0.1	24	0.31
11ADP019	Rock	1.21	1.7	1.5	3.6	14.3	67	<0.1	1.4	3.0	656	1.49	11.3	1.1	1.2	13	0.2	0.3	0.1	13	0.37
11ADP024	Rock	1.38	<0.5	0.5	2.8	7.4	14	<0.1	0.4	0.3	160	0.61	2.0	<0.5	1.8	10	<0.1	0.2	<0.1	3	0.31
11ADP025	Rock	1.29	<0.5	0.5	1.7	7.5	17	<0.1	0.5	0.6	111	0.99	6.5	<0.5	3.2	5	<0.1	0.3	<0.1	7	0.10
11ADP026	Rock Pulp	0.06	2366	5.7	305.5	152.5	69	31.8	34.8	10.1	150	3.96	386.7	2365	0.8	44	0.8	72.6	23.2	20	0.29
11ADP027	Rock	1.30	<0.5	0.3	2.7	7.7	12	<0.1	0.5	0.2	198	0.41	1.9	0.9	2.8	13	<0.1	0.2	<0.1	<2	0.85
11SMP001	Rock	0.67	<0.5	0.4	1.4	6.8	33	<0.1	0.9	1.3	397	0.93	4.0	<0.5	1.3	9	<0.1	0.1	0.1	6	0.08
11SMP002	Rock	1.08	3.6	0.2	3.4	6.7	54	0.2	1.2	2.6	312	1.41	6.1	4.8	1.8	6	<0.1	0.2	0.2	10	0.07
11SMP003	Rock	1.76	<0.5	1.0	4.6	7.2	30	<0.1	1.8	2.6	289	1.05	7.8	<0.5	0.9	7	<0.1	0.2	0.1	14	0.23
11SMP004	Rock	1.41	<0.5	0.6	1.7	6.6	60	<0.1	2.2	3.7	500	1.71	1.1	<0.5	0.9	10	0.1	<0.1	0.1	19	0.26
11SMP008	Rock	0.94	<0.5	0.5	3.4	6.4	15	<0.1	0.6	0.4	128	0.72	6.8	<0.5	1.6	7	<0.1	0.2	<0.1	3	0.05
11SMP009	Rock	0.82	<0.5	0.8	3.0	6.5	21	<0.1	0.5	0.6	117	0.99	9.9	<0.5	5.4	5	<0.1	0.4	<0.1	4	0.09
11SMP010	Rock	1.12	<0.5	0.7	3.4	9.6	13	<0.1	0.5	0.5	259	1.06	6.0	<0.5	1.9	13	<0.1	0.4	<0.1	5	0.67
11SMP011	Rock	0.86	<0.5	0.8	4.5	8.9	11	<0.1	0.3	0.5	218	0.96	6.1	<0.5	2.3	13	<0.1	0.4	<0.1	4	0.72
11SMP012	Rock	0.85	<0.5	0.4	3.6	6.7	35	<0.1	0.7	0.8	403	1.09	4.0	<0.5	4.3	10	<0.1	0.4	<0.1	4	0.16
11SMP013	Rock	0.84	<0.5	0.5	3.5	5.1	18	<0.1	0.4	0.5	183	0.80	2.2	<0.5	1.7	16	<0.1	0.1	<0.1	3	0.07



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Project: Shovelnose
 Report Date: November 07, 2011

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CERTIFICATE OF ANALYSIS

VAN11004340.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
11ADP015	Rock	0.073	7	33	0.81	116	0.096	2	1.26	0.076	0.22	0.1	0.03	3.2	<0.1	0.10	4	<0.5	<0.2
11ADP016	Rock	0.059	10	1	0.02	89	0.003	1	0.27	0.035	0.14	<0.1	<0.01	1.1	<0.1	0.08	1	<0.5	<0.2
11ADP017	Rock	0.011	7	2	0.03	109	0.005	1	0.28	0.061	0.15	0.1	0.02	0.3	<0.1	<0.05	1	<0.5	<0.2
11ADP018	Rock	0.048	16	6	0.42	99	0.011	<1	0.80	0.064	0.16	<0.1	<0.01	1.8	<0.1	<0.05	6	<0.5	<0.2
11ADP019	Rock	0.044	14	3	0.16	115	0.010	<1	0.63	0.062	0.16	<0.1	0.04	1.4	<0.1	<0.05	3	<0.5	<0.2
11ADP024	Rock	0.006	5	1	0.04	48	0.005	3	0.40	0.046	0.25	<0.1	0.07	1.4	<0.1	<0.05	2	<0.5	<0.2
11ADP025	Rock	0.007	12	2	0.05	53	0.010	4	0.47	0.059	0.24	<0.1	0.01	1.1	<0.1	<0.05	2	<0.5	<0.2
11ADP026	Rock Pulp	0.028	4	114	0.50	74	0.045	<1	0.86	0.099	0.03	3.8	0.79	0.8	0.7	1.22	6	9.4	20.6
11ADP027	Rock	0.011	6	2	0.04	97	0.002	4	0.36	0.045	0.25	<0.1	0.07	0.9	<0.1	<0.05	1	<0.5	<0.2
11SMP001	Rock	0.035	8	2	0.01	84	0.001	1	0.33	0.050	0.18	<0.1	<0.01	0.6	<0.1	<0.05	1	<0.5	<0.2
11SMP002	Rock	0.047	13	3	0.02	34	0.002	<1	0.27	0.035	0.13	<0.1	<0.01	1.0	<0.1	<0.05	1	<0.5	<0.2
11SMP003	Rock	0.022	11	5	0.15	26	0.034	<1	1.62	0.695	0.19	<0.1	0.02	2.4	<0.1	<0.05	3	<0.5	<0.2
11SMP004	Rock	0.042	15	5	0.28	151	0.007	<1	0.83	0.085	0.22	<0.1	<0.01	1.8	<0.1	<0.05	5	<0.5	<0.2
11SMP008	Rock	0.016	3	2	0.05	69	0.006	3	0.40	0.058	0.24	<0.1	0.02	1.4	<0.1	<0.05	2	<0.5	<0.2
11SMP009	Rock	0.022	16	2	0.07	106	0.014	5	0.52	0.059	0.28	0.2	0.02	1.6	<0.1	<0.05	2	<0.5	<0.2
11SMP010	Rock	0.021	4	2	0.04	51	0.015	5	0.46	0.051	0.25	0.1	0.07	1.7	<0.1	<0.05	1	<0.5	<0.2
11SMP011	Rock	0.021	6	1	0.03	38	0.013	5	0.43	0.048	0.24	0.1	0.08	1.7	<0.1	<0.05	1	<0.5	<0.2
11SMP012	Rock	0.011	13	2	0.07	90	0.010	4	0.54	0.066	0.25	<0.1	0.08	1.6	<0.1	<0.05	2	<0.5	<0.2
11SMP013	Rock	0.011	5	1	0.05	49	0.004	4	0.55	0.052	0.27	<0.1	0.07	1.2	<0.1	<0.05	2	<0.5	<0.2



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Client: **Westhaven Ventures Inc.**

1095 - 1920 W. Pender St.

Vancouver BC V6E 2M6 Canada

Project: Shovelnose

Report Date: November 07, 2011

Page: 1 of 1 Part 1

QUALITY CONTROL REPORT

VAN11004340.1

Method	WGHT	3A	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.5	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
Pulp Duplicates																					
11ADP025	Rock	1.29	<0.5	0.5	1.7	7.5	17	<0.1	0.5	0.6	111	0.99	6.5	<0.5	3.2	5	<0.1	0.3	<0.1	7	0.10
REP 11ADP025	QC			0.5	2.1	8.3	21	<0.1	0.5	0.7	125	1.10	7.2	<0.5	3.6	6	<0.1	0.4	<0.1	8	0.10
11SMP002	Rock	1.08	3.6	0.2	3.4	6.7	54	0.2	1.2	2.6	312	1.41	6.1	4.8	1.8	6	<0.1	0.2	0.2	10	0.07
REP 11SMP002	QC			0.3	3.2	6.8	54	0.2	1.3	2.5	310	1.40	5.8	4.0	1.8	6	<0.1	0.2	0.1	10	0.07
11SMP012	Rock	0.85	<0.5	0.4	3.6	6.7	35	<0.1	0.7	0.8	403	1.09	4.0	<0.5	4.3	10	<0.1	0.4	<0.1	4	0.16
REP 11SMP012	QC		<0.5																		
11SMP013	Rock	0.84	<0.5	0.5	3.5	5.1	18	<0.1	0.4	0.5	183	0.80	2.2	<0.5	1.7	16	<0.1	0.1	<0.1	3	0.07
REP 11SMP013	QC			0.6	3.1	5.3	19	<0.1	0.4	0.5	185	0.81	1.9	<0.5	1.8	17	<0.1	0.1	<0.1	3	0.07
Reference Materials																					
STD CDN-PGMS-19	Standard	193.7																			
STD DS8	Standard		13.7	109.6	121.7	311	1.7	37.6	7.5	604	2.48	24.7	111.4	6.9	66	2.4	5.6	6.5	42	0.71	
STD DS8	Standard		12.5	110.7	131.6	313	1.8	36.4	7.4	582	2.45	26.0	103.9	6.8	61	2.4	5.4	7.3	38	0.65	
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	
STD CDN-PGMS-19		230																			
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	
BLK	Blank	<0.5																			
BLK	Blank	<0.5																			
Prep Wash																					
G1	Prep Blank	<0.01	<0.5	0.1	2.4	61.6	118	0.1	3.2	3.8	509	1.82	3.5	<0.5	4.5	56	0.4	0.4	<0.1	32	0.43
G1	Prep Blank	<0.01	<0.5	0.1	2.2	14.8	67	<0.1	3.1	4.0	530	1.88	<0.5	<0.5	4.6	54	0.1	0.1	<0.1	34	0.42



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 Vancouver BC V6E 2M6 Canada

Project: Shovelnose
Report Date: November 07, 2011

Page: 1 of 1 Part 2

QUALITY CONTROL REPORT

VAN11004340.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																				
11ADP025	Rock	0.007	12	2	0.05	53	0.010	4	0.47	0.059	0.24	<0.1	0.01	1.1	<0.1	<0.05	2	<0.5	<0.2	
REP 11ADP025	QC	0.007	13	2	0.05	58	0.012	4	0.51	0.066	0.26	<0.1	0.02	1.2	<0.1	<0.05	2	<0.5	<0.2	
11SMP002	Rock	0.047	13	3	0.02	34	0.002	<1	0.27	0.035	0.13	<0.1	<0.01	1.0	<0.1	<0.05	1	<0.5	<0.2	
REP 11SMP002	QC	0.047	13	3	0.02	35	0.002	<1	0.26	0.034	0.13	<0.1	0.01	1.0	<0.1	<0.05	<1	<0.5	<0.2	
11SMP012	Rock	0.011	13	2	0.07	90	0.010	4	0.54	0.066	0.25	<0.1	0.08	1.6	<0.1	<0.05	2	<0.5	<0.2	
REP 11SMP012	QC																			
11SMP013	Rock	0.011	5	1	0.05	49	0.004	4	0.55	0.052	0.27	<0.1	0.07	1.2	<0.1	<0.05	2	<0.5	<0.2	
REP 11SMP013	QC	0.011	5	1	0.05	50	0.004	5	0.56	0.052	0.27	<0.1	0.08	1.2	<0.1	<0.05	2	<0.5	<0.2	
Reference Materials																				
STD CDN-PGMS-19	Standard																			
STD DS8	Standard	0.078	15	120	0.60	269	0.116	3	0.95	0.093	0.41	2.8	0.19	2.1	5.3	0.17	4	6.1	5.1	
STD DS8	Standard	0.081	13	112	0.60	266	0.108	3	0.86	0.081	0.39	3.1	0.20	1.8	5.7	0.16	4	4.9	5.0	
STD DS8 Expected		0.08	14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5	
STD CDN-PGMS-19																				
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
BLK	Blank																			
BLK	Blank																			
Prep Wash																				
G1	Prep Blank	0.065	9	7	0.53	192	0.116	<1	0.94	0.091	0.45	<0.1	0.02	1.7	0.3	<0.05	5	<0.5	<0.2	
G1	Prep Blank	0.065	10	7	0.53	196	0.118	1	0.89	0.085	0.45	<0.1	0.02	1.6	0.3	<0.05	5	<0.5	<0.2	



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Client: Westhaven Ventures Inc.

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Submitted By: Gareth Thomas
Receiving Lab: Canada-Vancouver
Received: September 06, 2011
Report Date: October 23, 2011
Page: 1 of 3

CERTIFICATE OF ANALYSIS

VAN11004496.1

CLIENT JOB INFORMATION

Project: Shovelnose
Shipment ID: 5
P.O. Number
Number of Samples: 31

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	29	Crush, split and pulverize 250 g rock to 200 mesh			VAN
3A01	31	Ignite samples, acid digest, Au by ICP-MS	15	Completed	VAN
1DX2	31	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT Dispose of Reject After 90 days

ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Westhaven Ventures Inc.
1095 - 1920 W. Pender St.
Vancouver BC V6E 2M6
Canada

CC: Kris Raffle



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: Shovelnose
 Report Date: October 23, 2011

Page: 2 of 3 Part 1

CERTIFICATE OF ANALYSIS

VAN11004496.1

Method	WGHT	3A	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.5	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
11CHP100	Rock	2.93	0.7	0.2	0.7	4.8	32	0.1	0.4	0.3	410	0.48	5.2	3.1	1.9	9	0.1	<0.1	<0.1	<2	0.07
11SHP001	Rock Pulp	0.06	2396	6.0	304.2	153.9	73	31.5	36.6	10.6	145	3.73	385.5	2316	0.7	42	0.7	72.7	21.3	19	0.30
11SHP002	Rock	2.02	0.8	0.6	7.3	6.6	69	<0.1	2.7	4.7	749	1.89	5.3	1.4	0.8	14	0.2	0.1	<0.1	28	0.41
11SHP003	Rock	1.21	<0.5	0.3	6.6	5.6	57	<0.1	2.7	6.2	708	2.28	2.4	2.4	1.4	40	0.1	0.2	<0.1	36	0.66
11SHP004	Rock	1.89	<0.5	0.3	3.5	6.2	44	<0.1	1.6	3.6	517	1.65	3.9	1.2	0.9	46	<0.1	0.1	<0.1	22	0.82
11SHP005	Rock	2.16	0.7	0.4	2.8	3.8	46	<0.1	1.7	3.3	522	1.56	1.3	1.0	0.8	18	<0.1	<0.1	<0.1	15	0.22
11SHP006	Rock	0.84	<0.5	0.3	1.9	4.1	56	<0.1	1.5	3.9	615	1.75	2.3	0.8	1.1	6	<0.1	<0.1	<0.1	11	0.14
11SHP007	Rock	1.92	<0.5	0.4	1.0	5.6	37	<0.1	0.6	1.7	602	1.10	1.6	1.6	1.3	8	<0.1	0.2	<0.1	6	0.06
11SHP008	Rock	1.66	<0.5	0.7	5.3	6.9	48	<0.1	1.7	3.6	564	1.45	2.8	1.7	1.2	8	<0.1	0.1	0.1	15	0.36
11SHP009	Rock	1.25	<0.5	0.5	4.1	5.0	42	<0.1	2.0	3.9	636	1.53	1.4	1.1	0.8	12	0.1	<0.1	<0.1	18	0.76
11SHP010	Rock	1.66	<0.5	1.1	1.7	12.2	65	<0.1	0.4	1.3	572	1.21	9.5	2.2	2.0	9	0.3	0.5	<0.1	9	0.17
11SHP011	Rock	1.27	<0.5	0.8	5.3	8.7	45	<0.1	1.9	3.2	349	1.48	2.7	0.8	1.2	6	<0.1	0.1	0.1	15	0.14
11SHP012	Rock	1.04	3.0	0.7	3.6	8.5	38	<0.1	1.5	2.6	284	1.28	3.6	1.0	1.1	6	<0.1	0.1	0.1	12	0.12
11SMP015	Rock	1.30	<0.5	0.5	6.8	7.1	44	0.1	2.5	5.0	483	1.78	4.7	2.5	0.8	9	<0.1	0.1	0.1	24	0.24
11SMP016	Rock	1.42	<0.5	1.2	4.9	6.4	55	<0.1	1.7	3.4	621	1.64	1.6	0.7	0.9	7	0.2	0.1	<0.1	20	0.12
11SMP017	Rock	0.16	<0.5	1.5	37.4	2.8	38	<0.1	25.0	8.6	381	2.12	4.9	2.2	1.4	90	0.2	0.4	<0.1	70	5.00
11SMP018	Rock	0.88	<0.5	0.4	0.8	6.5	13	<0.1	0.3	0.6	450	0.85	5.0	<0.5	3.8	23	<0.1	0.2	<0.1	6	0.11
11SMP019	Rock	1.43	1.1	0.8	11.3	6.8	66	<0.1	4.4	7.5	811	2.72	5.7	1.1	1.6	14	<0.1	0.3	<0.1	58	0.39
11SMP020	Rock	1.31	<0.5	0.3	5.1	6.6	47	<0.1	2.4	4.5	591	1.84	3.9	1.4	1.0	31	<0.1	<0.1	<0.1	24	0.67
11SMP021	Rock	2.17	<0.5	0.3	6.5	9.9	65	<0.1	2.7	5.9	683	2.51	2.1	<0.5	0.7	17	<0.1	<0.1	0.1	39	0.30
11SMP022	Rock	1.14	<0.5	0.3	6.7	9.5	46	<0.1	3.1	4.4	533	1.65	2.2	<0.5	1.7	9	<0.1	0.1	0.1	13	0.25
11SMP023	Rock	1.30	0.7	0.8	3.1	5.3	61	<0.1	2.2	4.2	749	1.77	2.6	0.9	0.9	14	0.2	<0.1	<0.1	22	0.36
11SMP024	Rock	1.26	2.4	0.8	3.3	5.8	55	<0.1	1.9	3.9	670	1.71	2.4	0.8	1.1	18	0.1	0.2	<0.1	19	1.00
11SMP025	Rock	1.30	<0.5	0.6	1.6	8.6	71	<0.1	0.7	6.0	912	3.47	1.4	<0.5	1.1	105	0.2	0.2	<0.1	57	0.90
11SMP026	Rock Pulp	0.06	6515	3.8	158.3	10.3	86	1.1	82.8	25.7	3441	9.48	4012	6474	2.1	76	0.2	6.3	0.2	92	2.94
11SMP027	Rock	0.97	3.7	0.1	4.6	4.3	35	<0.1	1.8	4.0	346	1.53	3.6	2.4	2.6	142	<0.1	0.1	<0.1	9	0.82
11SMP028	Rock	1.26	<0.5	0.3	0.5	8.3	67	<0.1	0.2	0.4	199	0.64	2.3	<0.5	3.2	7	<0.1	0.1	<0.1	<2	0.06
11SMP029	Rock	1.04	2.7	0.3	0.8	5.2	41	<0.1	0.6	1.7	360	1.02	0.7	<0.5	0.9	14	<0.1	<0.1	<0.1	4	0.41
11SMP030	Rock	1.28	1.6	0.2	2.2	4.6	36	<0.1	1.0	3.2	430	1.45	0.8	1.6	1.3	29	<0.1	0.4	<0.1	10	0.94
11SMP031	Rock	1.29	0.8	0.9	4.2	10.4	40	<0.1	1.5	3.0	380	1.37	4.5	<0.5	1.3	17	<0.1	0.2	0.1	17	0.36

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Project: Shovelnose
 Report Date: October 23, 2011

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CERTIFICATE OF ANALYSIS

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Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
11CHP100	Rock	0.005	5	1	0.02	58	0.002	2	0.34	0.052	0.22	<0.1	0.01	0.5	<0.1	<0.05	1	<0.5	<0.2
11SHP001	Rock Pulp	0.028	4	110	0.47	67	0.042	<1	0.77	0.095	0.03	3.8	0.79	1.2	0.7	1.21	6	9.3	20.7
11SHP002	Rock	0.044	12	6	0.43	94	0.075	<1	0.83	0.081	0.14	0.2	<0.01	2.3	<0.1	<0.05	6	<0.5	<0.2
11SHP003	Rock	0.059	11	4	0.57	55	0.103	<1	1.52	0.040	0.19	<0.1	<0.01	3.7	<0.1	<0.05	7	<0.5	<0.2
11SHP004	Rock	0.040	10	4	0.33	42	0.087	<1	1.49	0.058	0.20	0.2	<0.01	2.1	<0.1	<0.05	7	<0.5	<0.2
11SHP005	Rock	0.039	14	4	0.33	76	0.011	<1	0.73	0.081	0.20	<0.1	<0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
11SHP006	Rock	0.056	7	<1	0.03	131	<0.001	<1	0.41	0.051	0.17	<0.1	<0.01	2.0	<0.1	<0.05	1	<0.5	<0.2
11SHP007	Rock	0.020	11	2	0.02	139	0.002	1	0.40	0.088	0.21	<0.1	0.04	0.9	<0.1	<0.05	1	<0.5	<0.2
11SHP008	Rock	0.037	15	4	0.30	45	0.004	<1	0.83	0.057	0.21	<0.1	0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
11SHP009	Rock	0.035	16	5	0.41	64	0.009	<1	0.87	0.056	0.19	<0.1	<0.01	1.7	<0.1	<0.05	4	<0.5	<0.2
11SHP010	Rock	0.030	18	1	0.17	55	0.004	<1	0.64	0.082	0.14	<0.1	0.05	0.9	<0.1	<0.05	4	<0.5	<0.2
11SHP011	Rock	0.041	10	4	0.24	44	0.027	<1	0.79	0.059	0.25	<0.1	<0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
11SHP012	Rock	0.037	8	3	0.20	44	0.021	<1	0.71	0.056	0.24	<0.1	<0.01	1.3	<0.1	<0.05	4	<0.5	<0.2
11SMP015	Rock	0.048	13	4	0.13	119	0.002	<1	0.76	0.072	0.12	<0.1	0.03	2.5	<0.1	<0.05	4	<0.5	<0.2
11SMP016	Rock	0.046	17	3	0.07	101	0.005	1	0.58	0.103	0.18	<0.1	0.01	2.2	<0.1	<0.05	3	<0.5	<0.2
11SMP017	Rock	0.075	7	35	0.88	130	0.105	4	1.43	0.095	0.26	0.2	0.01	3.9	<0.1	0.12	4	<0.5	<0.2
11SMP018	Rock	0.009	10	<1	0.05	61	0.013	1	0.45	0.059	0.14	<0.1	<0.01	0.9	<0.1	<0.05	2	<0.5	<0.2
11SMP019	Rock	0.081	14	9	0.60	51	0.136	1	0.97	0.059	0.14	0.1	0.03	5.2	<0.1	<0.05	8	<0.5	<0.2
11SMP020	Rock	0.038	19	5	0.38	54	0.012	<1	1.28	0.055	0.13	<0.1	<0.01	2.0	<0.1	<0.05	6	<0.5	<0.2
11SMP021	Rock	0.064	13	4	0.43	85	0.002	<1	1.32	0.038	0.10	<0.1	<0.01	2.1	<0.1	<0.05	8	<0.5	<0.2
11SMP022	Rock	0.032	11	3	0.27	68	0.003	<1	0.91	0.035	0.18	<0.1	0.02	1.1	<0.1	<0.05	4	<0.5	<0.2
11SMP023	Rock	0.041	14	5	0.42	112	0.036	<1	0.90	0.064	0.18	<0.1	<0.01	2.0	<0.1	<0.05	5	<0.5	<0.2
11SMP024	Rock	0.043	17	4	0.37	69	0.005	<1	0.87	0.068	0.19	<0.1	0.02	1.6	<0.1	<0.05	5	<0.5	<0.2
11SMP025	Rock	0.150	17	1	0.68	77	0.235	1	1.47	0.064	0.14	<0.1	<0.01	7.3	<0.1	<0.05	9	<0.5	<0.2
11SMP026	Rock Pulp	0.179	8	71	1.95	79	0.075	7	2.26	0.100	0.10	1.2	<0.01	6.3	<0.1	2.94	6	3.2	<0.2
11SMP027	Rock	0.024	13	2	0.22	75	0.002	1	1.47	0.393	0.17	<0.1	0.02	1.2	<0.1	<0.05	3	<0.5	<0.2
11SMP028	Rock	0.018	20	1	0.06	49	0.008	<1	0.40	0.107	0.15	<0.1	<0.01	0.7	<0.1	<0.05	2	<0.5	<0.2
11SMP029	Rock	0.027	6	<1	0.04	459	<0.001	3	0.46	0.068	0.24	<0.1	<0.01	1.1	<0.1	<0.05	1	<0.5	<0.2
11SMP030	Rock	0.027	11	1	0.21	539	<0.001	4	0.40	0.055	0.22	<0.1	<0.01	1.8	<0.1	<0.05	1	<0.5	<0.2
11SMP031	Rock	0.038	15	4	0.24	67	0.120	<1	1.12	0.114	0.31	0.2	<0.01	2.4	<0.1	<0.05	5	<0.5	<0.2

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CERTIFICATE OF ANALYSIS

VAN11004496.1

Method	WGHT	3A	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.5	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
11SMP032	Rock	1.05	<0.5	0.8	6.3	5.6	57	<0.1	2.9	4.4	666	1.68	2.6	1.0	1.0	10	0.1	<0.1	<0.1	20	0.18



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CERTIFICATE OF ANALYSIS

VAN11004496.1

Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
11SMP032	Rock	0.051	11	7	0.38	79	0.006	<1	1.01	0.077	0.19	<0.1	<0.01	2.1	<0.1	<0.05	6	<0.5	<0.2



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QUALITY CONTROL REPORT

VAN11004496.1

Method	WGHT	3A	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL	0.01	0.5	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	
Pulp Duplicates																					
11SHP007	Rock	1.92	<0.5	0.4	1.0	5.6	37	<0.1	0.6	1.7	602	1.10	1.6	1.6	1.3	8	<0.1	0.2	<0.1	6	0.06
REP 11SHP007	QC			0.4	1.1	6.1	41	<0.1	0.6	1.7	589	1.09	1.3	<0.5	1.4	8	<0.1	0.2	<0.1	6	0.06
11SMP021	Rock	2.17	<0.5	0.3	6.5	9.9	65	<0.1	2.7	5.9	683	2.51	2.1	<0.5	0.7	17	<0.1	<0.1	0.1	39	0.30
REP 11SMP021	QC		<0.5																		
11SMP027	Rock	0.97	3.7	0.1	4.6	4.3	35	<0.1	1.8	4.0	346	1.53	3.6	2.4	2.6	142	<0.1	0.1	<0.1	9	0.82
REP 11SMP027	QC			0.2	4.6	4.2	35	<0.1	2.0	4.1	347	1.53	3.0	<0.5	2.7	137	<0.1	<0.1	0.1	9	0.82
Core Reject Duplicates																					
11SHP005	Rock	2.16	0.7	0.4	2.8	3.8	46	<0.1	1.7	3.3	522	1.56	1.3	1.0	0.8	18	<0.1	<0.1	<0.1	15	0.22
DUP 11SHP005	QC		<0.5	0.3	2.7	3.8	49	<0.1	1.7	3.3	537	1.59	1.4	2.2	0.8	22	<0.1	<0.1	<0.1	16	0.23
Reference Materials																					
STD CDN-PGMS-19	Standard		184.2																		
STD DS8	Standard			12.6	106.2	121.7	305	1.7	36.7	7.1	581	2.37	23.9	110.7	6.3	59	2.4	5.1	6.3	39	0.67
STD DS8 Expected				13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7
STD CDN-PGMS-19			230																		
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	
BLK	Blank		<0.5																		
BLK	Blank		<0.5																		
Prep Wash																					
G1	Prep Blank	<0.01	<0.5	<0.1	2.9	3.1	51	<0.1	2.2	3.6	523	1.81	<0.5	0.6	5.0	53	<0.1	<0.1	<0.1	34	0.41
G1	Prep Blank	<0.01	<0.5	0.1	2.4	2.8	48	<0.1	2.1	3.7	513	1.84	<0.5	1.3	4.8	53	<0.1	<0.1	<0.1	34	0.43



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QUALITY CONTROL REPORT

VAN11004496.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																			
11SHP007	Rock	0.020	11	2	0.02	139	0.002	1	0.40	0.088	0.21	<0.1	0.04	0.9	<0.1	<0.05	1	<0.5	<0.2
REP 11SHP007	QC	0.022	11	2	0.02	146	0.002	2	0.41	0.088	0.21	0.1	0.04	0.9	<0.1	<0.05	1	<0.5	<0.2
11SMP021	Rock	0.064	13	4	0.43	85	0.002	<1	1.32	0.038	0.10	<0.1	<0.01	2.1	<0.1	<0.05	8	<0.5	<0.2
REP 11SMP021	QC																		
11SMP027	Rock	0.024	13	2	0.22	75	0.002	1	1.47	0.393	0.17	<0.1	0.02	1.2	<0.1	<0.05	3	<0.5	<0.2
REP 11SMP027	QC	0.024	13	2	0.22	73	0.002	1	1.46	0.391	0.17	<0.1	0.02	1.2	<0.1	<0.05	3	<0.5	<0.2
Core Reject Duplicates																			
11SHP005	Rock	0.039	14	4	0.33	76	0.011	<1	0.73	0.081	0.20	<0.1	<0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
DUP 11SHP005	QC	0.039	13	4	0.33	84	0.012	<1	0.75	0.079	0.22	<0.1	<0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
Reference Materials																			
STD CDN-PGMS-19	Standard																		
STD DS8	Standard	0.078	13	106	0.58	244	0.105	2	0.87	0.084	0.41	2.9	0.18	2.0	5.4	0.16	4	4.5	4.7
STD DS8 Expected		0.08	14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
STD CDN-PGMS-19																			
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank																		
BLK	Blank																		
Prep Wash																			
G1	Prep Blank	0.067	11	5	0.47	140	0.105	<1	0.82	0.074	0.45	<0.1	<0.01	1.8	0.3	<0.05	4	<0.5	<0.2
G1	Prep Blank	0.066	11	5	0.46	136	0.100	<1	0.82	0.079	0.44	<0.1	<0.01	1.7	0.3	<0.05	4	<0.5	<0.2

APPENDIX 8

2011 DIAMOND DRILL HOLE LOGS

2011 Shovelnose Diamond Drill Hole Collar Information

Drill Hole	Northing*	Easting*	Elevation	Azimuth	Dip	Depth (m)	Size	Casing
11-SH-001	5524355	653714	1453	110	-60	79.25	BTW	Removed
11-SH-002	5524398	653722	1464	120	-60	88.39	BTW	Removed
11-SH-003	5524305	653817	1461	110	-55	104.25	BTW	Removed
11-SH-004	5524452	652402	1393	110	-45	92.35	BTW	Removed
11-SH-005	5524482	652644	1419	110	-43	95.40	BTW	Removed
11-SH-006	5524548	652711	1421	110	-45	58.83	BTW	Removed
11-SH-007	5524543	654174	1446	250	-70	87.17	BTW	Removed

*UTM NAD 1983 Zone 10

11-SH-001 Lithology Log

Hole_ID	Fr (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-001	0.00	6.11	OB	OB	Overburden	
11-SH-001	6.11	18.29	felsic tuff	crystal lithic rhyolite tuff + siliceous fragments	Volcanics rhyolite crystal tuff; beige-tan to rusty orange & dark grey; clast supported 20-40%; ~0.5-1% veinlets/stringers of grey quartz +/- weak-moderate carbonate, 0-1cm thick, 25-80 deg, at times trace finely disseminated pyrite; 1-3% hard black mafic subangular-subrounded clasts up to 1 cm (weak-moderately magnetic - magnetite?); 1-5% soft chlorite-altered subangular clasts up to 2 cm, greasy, green; 15-30% sub-angular peach-pink/rarely creamy-beige feldspar crystals up to 3 cm, at times clay-altered & soft but usually hard; 1-5% siliceous fragments up to 3 cm, grey, cherty, hard, subrounded-subangular; matrix is weakly clay altered, pervasive with localized intervals of moderate clay alteration; matrix & clasts are limonite/iron-oxide altered, weak-strong, patchy to pervasive bands with fluidal margins, often associated with fracture planes; some clasts are heterolithic; weathered out rounded pits (Fe-Ox); silicification associated w/ veinlets/stringers of quartz;	very weak
11-SH-001	18.29	36.13	felsic tuff	crystal lithic rhyolite tuff + siliceous fragments	continued from above but with greater variability in clast size, particularly feldspar and siliceous fragments (up to 3-4 cm); potassic + clay altered matrix, weak pervasive; rare purple-maroon soft alteration, could have been primary feldspar?; trace to 1% pyrite along clast-matrix contacts starting between 23.65 - 23.95 and starting ~ 36 ; rare green/chlorite clasts; locally moderate clay and alteration of clasts (ie. at 26.5 m; primary feldspar?); large clasts up to 5 cm (with lithics inside) starting ~ 30 cm;	very weak
11-SH-001	36.13	47	felsic tuff	crystal lithic rhyolite tuff + siliceous fragments	continued from above; clay-rich, clast supported, heterolithic felsic/rhyolite tuff; decrease in limonite/Fe-oxide alteration (rare bands up to 20 cm with fluidal margins), mostly on fractures or as fracture haloes up to 2 cm thick; weak pervasive potassic altered matrix, strong clay altered matrix; trace to 1% pyrite, possibly arsenopyrite? (dark grey cubic), finely disseminated, often along clast/matrix margins; patchy chlorite alteration in matrix and associated with clasts moderate intensity; rare siliceous fragments (<1%) up to 1 cm, sub-rounded to subangular; weathered out pits due to strong clay alteration;	very weak
11-SH-001	47	56.49	felsic tuff	crystal lithic rhyolite tuff	continued from above; somewhat more matrix supported; clasts are noticeably smaller, up to 1 cm, rarely up to 2 cm; weak patchy siliceous alteration; up to 40% clasts, mostly feldspar, up to 5% hard mafic (black, weak-moderately magnetic - magnetite?) mineral, rare dark red/maroon soft clasts; no siliceous fragments; weak clay and potassic altered matrix; rare patches of chlorite in matrix; dark red minerals are hematite altered?;	very weak
11-SH-001	56.49	57	welded tuff	welded tuff	welded felsic tuff; light grey/peach matrix; clast rich; trace pyrite; 1% subrounded black clasts up to 5 mm; typically < 2 mm+E6 diameter; 20-30% feldspar (light peach-pink clasts as fiamme (squashed clasts), weak to moderate clay-altered (white infill), oriented 40-50 deg TCA; 5% fresh(er) subangular peach feldspars (not as fiamme); matrix is composed mainly of quartz-feldspar and clay/sericite/chlorite	
11-SH-001	57	67.06	pyroclastic breccia	volcaniclastic	volcaniclastic (sedimentary) pyroclastic (breccia?); grey-tan to peach-grey & dark grey/black; poorly sorted with mm up to 10 cm heterolithic subrounded to subangular clasts; clast size generally increases downhole; rare <0.5% veinlets/stringers of weak-moderate carbonate +/- grey quartz, 50-80 deg TCA, <3 mm thick, nil to trace sulphides; rare dismembered patches of quartz; weak to moderately fractured; mm to 5 cm peach-orange feldspathic/chalcedonic? heterolithic clasts; mm to 3-4 cm dark-grey/brown/black sedimentary or mafic rock, sometimes >7 hardness and layering visible, sometimes softer, (mud-siltstone? obsidian? chlorite-graphite?); matrix is made up of quartz-clay-sericite; mostly weak-moderate clay altered with siliceous patches; rare chlorite as fracture infill or patches; trace sulphides (pyrite);	very weak
11-SH-001	67.06	67.88	welded tuff	welded tuff	welded crystal tuff; grey-beige-peach to maroon-grey; fine to coarse grained matrix with 10-15% flattened, deformed clay-sericite and rarely chloritised altered feldspars/chalcedony? (fiamme) up to 3cm long with a preferred orientation of 45-50 deg TCA; 2-5% subangular dark red/maroon clasts; clay-quartz-sericite altered matrix with patchy to pervasive silicification overprint; patchy hematite or red clay (maroon-grey color); no veining; nil sulphides; upper contact not recovered (marked by a clay gouge breccia 5 cm prior to start of interval); non-magnetic	weak-mod
11-SH-001	67.88	78.3	pyroclastic breccia	volcaniclastic	volcaniclastic (sedimentary) Pyroclastic (breccia?); grey-tan to orange-peach-beige; poorly sorted with heterolithic clasts composed of moderately sorted grains; rare large feldspathic blocks up to 10-15 cm; rare mafic blocks with 10% coarse clasts/crystals of pink and white feldspar, all between 70.1 - 71.3 m; matrix is composed of quartz-feldspar-sericite-clay and rare chlorite with fine to coarse (<5 mm) crystals; 20% heterolithic clasts 5 mm - 2 cm; moderately pervasive intervals up to 3 m long of potassic/hematite/clay alteration (orange-peach); weak-moderate pervasive siliceous intervals; trace pyrite; <0.5% veinlets of carbonate +/- grey quartz	very weak
11-SH-001	78.3	79.25	welded tuff	welded tuff	welded crystal tuff; similar to previous interval (67.06 - 67.88) but with more intense hematite (dark maroon) alteration penetrating the flattened feldspar clasts (fiamme); more intense silicification overprint	weak-mod
11-SH-001	79.25	79.25	EOH	EOH	EOH	

11-SH-001 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-001	6.11	15.24	limonite/Fe-oxide + clay	weak-strong limonite/Fe-oxide, associated with clasts and fracture-controlled, fluidal alteration contacts around bands commonly >10 cm; clay-altered matrix when not oxidized as grey-beige color, soft
11-SH-001	15.24	15.95	silicification + limonite/Fe-oxide	moderate silicification overprinting limonite/Fe-oxide; hard
11-SH-001	15.95	36.20	limonite/Fe-oxide + clay-sericite + potassic + silicification	weak to moderate limonite/Fe-oxide as bands up to 1.5 m around fractures with fluidal margins usually snaking around clasts, also affecting individual clasts and matrix, rusty orange; weak to moderate clay altered matrix, at times altered k-spar is clay-sericite rich; weakly pervasive potassic (peach-pink) altered matrix (distinct change from grey-beige to peach-beige); patchy siliceous alteration associated with some veinlets, locally strong intervals up to 1 m as well
11-SH-001	36.20	47.00	potassic + clay + chlorite + limonite/Fe-oxide	weak to moderate clay altered matrix (beige-white); weak pervasive potassic altered matrix and clasts (peach-white); patchy chlorite often with clay (light pastel green) as gouge; limonite/Fe-oxide as fracture controlled haloes
11-SH-001	47	56.6	potassic + clay + silicification + chlorite	weak to moderate clay-potassic altered matrix, clasts as well (many k-spar fragments); siliceous patches around veinlets and rarely matrix support around clasts; rare weak chlorite in matrix
11-SH-001	56.6	57	clay-sericite + chlorite + potassic	weak to moderate clay (grey-beige) alteration, pervasive (matrix and clasts); weak-moderate patchy chlorite (pastel green) in matrix; weak-moderate potassic (light peach-pink) alteration in matrix and clasts
11-SH-001	57	67.06	clay-quartz-sericite + chlorite + potassic	weak to moderate patchy to pervasive clay alteration associated with matrix and clasts (beige-grey); patchy moderate silicification (grey, hard); weak patchy chlorite, mostly fracture controlled (pastel green to dark grey); weak patchy to pervasive potassic alteration (beige-peach-pink)
11-SH-001	67.06	67.85	clay-quartz-sericite + potassic/hematite/red-clay + silicification	moderate pervasive clay-quartz-sericite (grey-beige) matrix with siliceous overprinting; feldspars moderately clay-sericite altered (beige-peach) with weak chlorite (pastel green); patchy to pervasive hematite/potassic/red-clay alteration (dark maroon-grey color)
11-SH-001	67.85	78.3	clay-quartz-feldspar-sericite + potassic/hematite + silicification	moderate to strong pervasive clay-quartz-feldspar-sericite alteration affecting matrix with pervasive patches of potassic/hematite alteration and weak-moderate patchy siliceous overprints
11-SH-001	78.3	79.25	hematite + silicification + potassic	weak-moderate potassic alteration overprinted by intensely pervasive hematite-quartz alteration penetrating feldspar/chalcedony fiamme clasts
11-SH-001	79.25	79.25	EOH	EOH

11-SH-001 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-001	8.78		vnlt	50		1-2 mm grey quartz stringer
11-SH-001	10.25		vnlt	80		1-2 mm grey quartz vnlt
11-SH-001	11.55		vnlt	70		1-2 mm grey quartz stringer + trace finely disseminated pyrite
11-SH-001	11.80	13.25	fol/fab	40	mod	variation in angle (+/- 5 deg) and intensity
11-SH-001	13.08	13.99	brkn		weak-mod	broken zone with quartz and k-spar veining; minor clay gouge
11-SH-001	13.99	14.00	vnlt	80		1 cm quartz + k-spar within broken zone, approximately subvertical
11-SH-001	14.13		vnlt	70		0.5 cm grey quartz; vugs on margins (with limonite)
11-SH-001	15.10		vnlt	70		2-3 mm quartz vein; vugs in centre of vein; drusy quartz and limonite infill
11-SH-001	15.15		vnlt	70		1-2 mm quartz; vugs in centre of vein; drusy quartz and limonite infill
11-SH-001	15.20		vnlt	40		1-2 mm quartz; irregular and following fractures
11-SH-001	15.24	15.95	brkn		weak-mod	broken core; pieces < 5 cm; 1-2 mm grey quartz vein visible in broken pieces
11-SH-001	17.02	18.29	brkn		weak-mod	broken core; pieces < 5 cm, wk clay gouge in fractures (oxidized)
11-SH-001	18.75		str	25		1 mm quartz-carbonate stringer; irregular; 20-30 deg TCA
11-SH-001	18.80		vnlt	52		1-2 mm quartz-carbonate stringer; 50-55 deg TCA
11-SH-001	19.15		gouge			clay gouge; irregular 20-40 deg TCA; 1 mm - 1 cm; white-beige clay
11-SH-001	20.50		alt band	50		limonite/Fe-oxide alteration band; irregular and fluidal
11-SH-001	21.30	21.34	brkn + gouge		mod	broken core + white clay gouge (not all recovered) up to 1 cm thick
11-SH-001	21.46		vnlt	65		1-3 mm white-grey quartz; irregular with local chlorite and clay
11-SH-001	22.14		gouge	70	mod	1-5 mm white-grey clay gouge
11-SH-001	22.71		gouge	50	mod	5 mm white-grey clay gouge with clasts up to 3 mm
11-SH-001	23.34	23.64	vnlt	32		3 vnlt; 1-3 mm thick; trace pyrite; vein orientations vary 25-45 deg TCA
11-SH-001	24.90	25.35	alt band	50-60		limonite/Fe-oxide alteration band; fluidal margins
11-SH-001	26.05	26.30	brkn			broken core with oxidized clay on fractures
	27.92		vnlt	60		1 mm quartz-carbonate vnlt/fracture filling
11-SH-001	28.34	28.64	brkn + gouge		mod	brkn core with green-white clay gouge
11-SH-001	29.32		vnlt	50		vnlt with vuggy voids; 0.5 - 1 cm thick; manganese/Fe-oxide/limonite in vuggy quartz surface
11-SH-001	30.28	30.31	vnlt	77		1-5 mm grey-white quartz vnlt (2); trace finely disseminated pyrite; 75-80 deg TCA
11-SH-001	31.55	31.75	alt band	40		limonite/Fe-oxide alteration band; fluidal margins
11-SH-001	32.35	32.55	fabric	37	weak	weak fabric/compaction/welding at 35-40 deg TCA with dark grey/black disseminated mineral (chlorite?) + clay along fabric
11-SH-001	35.80	35.95	vnlt	75		3-4 vnlt, 1-3 mm thick; 70-80 deg TCA; trace pyrite; host rock is silicified
11-SH-001	37.55	37.80	gouge	7		1-3 mm clay gouge; pastel/light green
11-SH-001	38.23	38.28	vnlt	45		3 mm and 5-10 mm vnlt; 40 and 50 deg TCA; trace pyrite and maybe arsenopyrite?
11-SH-001	38.44		vnlt	55		5 mm grey quartz; trace pyrite
11-SH-001	39.32	39.47	brkn + gouge			broken core with pastel green clay on fractures and in matrix
11-SH-001	39.87	39.92	fracture	35		limonite/Fe-oxide altered fracture
11-SH-001	40.00		vnlt	42		5 mm vnlt with carbonate and limonite/Fe-oxide inside a hairline fracture
11-SH-001	40.05	40.20	gouge			fractured surfaces have up to 4 mm of beige-white clay gouge
11-SH-001	40.44		fracture + alt band	20		Fe-oxide/limonite band halo around fracture up to 2 cm thick
11-SH-001	43.55	43.68	vnlt	80		two 2-3 mm grey quartz vnlt; trace pyrite; carbonate

11-SH-001 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-001	43.88		vnlt	35		1 mm grey quartz vnlt with weak carbonate, undulating contacts
11-SH-001	44.07	44.22	bx vnlt	50		two breccia vnlt; dismembered quartz-carbonate with breccia siliceous/cherty angular host (up to 1 cm thick); 50-55 deg TCA; 1 vnlt, 1-2 mm grey quartz with weak carbonate (45 deg TCA
11-SH-001	44.40		vnlt	67		1-6 mm vnlt; moderate-strong carbonate; weak rare vuggy texture
11-SH-001	45.50		vnlt	30		2 vnlt; 1 mm thick each; 40 and 15-40 deg TCA (irregular, undulating contacts
11-SH-001	45.90	47.00	bx			subrounded clast supported breccia?
11-SH-001	47.70	47.85	vnlt	50		3-4 vnlt, 1-5 mm, fine drusy quartz; 15 and 60-70 deg TCA
11-SH-001	48.35	48.70	stwk/vnlt	40		7-8 vnlt; 1-7 mm thick; weak stockwork; weak brecciated with host clasts up to 3-4 mm within veining; some voids up to 2 mm
11-SH-001	44.52	50.80	brkn		weak-mod	weak to moderate broken/blocky core; broken core contains quartz material
11-SH-001	48.77	50.00	vnlt	10		2 vnlt oriented 10 deg TCA; mm-thick; broken core contains quartz material, up to 1 cm thick but no measurements possible
11-SH-001	51.34		vnlt	75		1 mm thick; trace pyrite
11-SH-001	51.82		brkn/vnlt			broken core contains quartz material up to 1 cm thick
11-SH-001	52.67	52.73	vnlt	67		1: 1 cm thick vn, grey quartz, trace to 1% finely disseminated pyrite; 65 deg TCA; fine drusy quartz visible on fracture plane within in vein (core is broken); 2: 2-3 mm vnlt; grey quartz; 70 deg TCA
11-SH-001	53.00	53.10	bx			breccia host rock as subrounded clasts with siliceous matrix infill; trace pyrite
11-SH-001	53.90		fol/fab	25	weak	k-feldspar clasts weakly oriented
11-SH-001	54.23	56.00	brkn		mod	moderate blocky/broken core
11-SH-001	56.49		ctc	52		contact between lithic felsic tuff and welded tuff
11-SH-001	57		ctc	70	mod	moderately sharp contact
11-SH-001	61.38	61.58	vnlt	80		two 1-2 mm vnlt of grey quartz and carbonate
11-SH-001	61.68		str	50		<1mm stringer of quartz-carbonate, weak carbonate infill +/- 1 m at
11-SH-001	63.6		fracture	15	weak	mm sized fracture with weak chlorite infill
11-SH-001	64.37		vnlt	30		3 parallel vnlt 1-2 mm thick of grey quartz and moderate carbonate
11-SH-001	67.1		def/fab	50	mod	deformation/preferred mineral orientation
11-SH-001	67.88		ctc	45	strong	sharp contact
11-SH-001	71.55		flt	25	weak	sharp fault with 0.5 cm movement (reverse, footwall shifted up)
11-SH-001	71.75	74	vnlt	60		5 vnlt, mm-sized, mostly carbonate +/- quartz; may just be filling in hairline fractures
11-SH-001	77.75	78.05	vnlt	40		dismembered carbonate material infilling fractures at about 35 - 45 deg TCA; 2 distinct locations, up to 1 cm thick
11-SH-001	78.3	79.25	flt/vnlt/def	0-70	mod	orientation of flattened clasts changes from 30 deg TCA to

11-SH-001 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-001	6.11	9.14	3.03	3.03	100.00	1.79	59.08	6
11-SH-001	9.14	12.19	3.05	2.38	78.03	1.25	52.52	5
11-SH-001	12.19	15.24	3.05	1.84	60.33	0.91	49.46	5
11-SH-001	15.24	18.29	3.05	1.47	48.20	0.32	21.77	3
11-SH-001	18.29	21.34	3.05	2.84	93.11	2.51	88.38	10
11-SH-001	21.34	24.38	3.04	2.90	95.39	2.41	83.10	9
11-SH-001	24.38	27.43	3.05	2.78	91.15	1.80	64.75	7
11-SH-001	27.43	30.48	3.05	2.64	86.56	1.96	74.24	10
11-SH-001	30.48	33.53	3.05	2.93	96.07	2.77	94.54	9
11-SH-001	33.53	36.58	3.05	2.54	83.28	0.97	38.19	8
11-SH-001	36.58	39.62	3.04	2.94	96.71	2.07	70.41	8
11-SH-001	39.62	42.67	3.05	2.76	90.49	2.34	84.78	9
11-SH-001	42.67	45.72	3.05	2.94	96.39	1.64	55.78	6
11-SH-001	45.72	48.77	3.05	2.85	93.44	1.45	50.88	11
11-SH-001	48.77	51.82	3.05	2.45	80.33	0.44	17.96	3
11-SH-001	51.82	54.86	3.04	2.62	86.18	1.47	56.11	8
11-SH-001	54.86	57.91	3.05	2.29	75.08	0.59	25.76	4
11-SH-001	57.91	60.96	3.05	2.21	72.46	1.01	45.70	7
11-SH-001	60.96	64.01	3.05	2.97	97.38	1.79	60.27	9
11-SH-001	64.01	67.06	3.05	2.42	79.34	1.06	43.80	8
11-SH-001	67.06	70.10	3.04	2.81	92.43	2.14	76.16	9
11-SH-001	70.10	73.15	3.05	2.99	98.03	1.64	54.85	9
11-SH-001	73.15	76.20	3.05	3.03	99.34	2.12	69.97	10
11-SH-001	76.20	79.25	3.05	3.02	99.02	2.57	85.10	10

11-SH-001 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-001	7	0.05
11-SH-001	8	0.12
11-SH-001	9	0.38
11-SH-001	10	0.18
11-SH-001	11	0.51
11-SH-001	12	0.51
11-SH-001	13	0.09
11-SH-001	14	0.45
11-SH-001	15	0.32
11-SH-001	16	0.07
11-SH-001	17	0.27
11-SH-001	18	0.23
11-SH-001	19	0.31
11-SH-001	20	0.1
11-SH-001	21	0.12
11-SH-001	22	0.23
11-SH-001	23	0.07
11-SH-001	24	0.07
11-SH-001	25	0.16
11-SH-001	26	0.69
11-SH-001	27	0.73
11-SH-001	28	0.14
11-SH-001	29	0.42
11-SH-001	30	0.07
11-SH-001	31	0.4
11-SH-001	32	0.6
11-SH-001	33	0.29
11-SH-001	34	0.03
11-SH-001	35	0.4
11-SH-001	36	0.71
11-SH-001	37	0.34
11-SH-001	38	0.03
11-SH-001	39	0.62
11-SH-001	40	0.14
11-SH-001	41	0.32
11-SH-001	42	0.45
11-SH-001	43	0.01
11-SH-001	44	0.69
11-SH-001	45	0.03

11-SH-001 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-001	46	0.21
11-SH-001	47	0.49
11-SH-001	48	0.31
11-SH-001	49	0.1
11-SH-001	50	0.09
11-SH-001	51	0.23
11-SH-001	52	0.21
11-SH-001	53	0.23
11-SH-001	54	0.34
11-SH-001	55	0.29
11-SH-001	56	0.03
11-SH-001	57	0.8
11-SH-001	58	0.31
11-SH-001	59	0.47
11-SH-001	60	0.49
11-SH-001	61	0.03
11-SH-001	62	0
11-SH-001	63	0.01
11-SH-001	64	0
11-SH-001	65	0
11-SH-001	66	0.01
11-SH-001	67	0.01
11-SH-001	68	0
11-SH-001	69	0.78
11-SH-001	70	0.62
11-SH-001	71	0.56
11-SH-001	72	0
11-SH-001	73	0
11-SH-001	74	0.38
11-SH-001	75	0.64
11-SH-001	76	0
11-SH-001	77	0
11-SH-001	78	0
11-SH-001	79	0.27

11-SH-002 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-002	0.00	5.35	OB	OB	overburden	
11-SH-002	5.35	43.34	Vry/PFclt/PS4	crystal lithic rhyolite tuff + siliceous fragments	Volcanics rhyolite crystal tuff; beige-tan to rusty orange & dark grey; clast supported 20-40%; clast sizes generally start to increase ~0.5-1% veinlets/stringers of grey quartz +/- weak-moderate carbonate, 0-4cm thick, 30-80 deg, at times trace finely disseminated pyrite, affected by limonite/Fe-oxidation as quartz veins often have rusty orange patches, particularly along contact margins; 1-3%, locally up to 5%, hard black mafic subangular-subrounded clasts up to 1 cm, weak-moderately magnetic; 1-3% soft chlorite-altered subangular clasts up to 2 cm, greasy, green; 10-20% sub-angular peach-pink/rarely creamy-beige feldspar crystals up to 3 cm, at times clay-altered & soft but usually hard; 1-5% siliceous fragments up to 3 cm, locally up to 10%, grey, cherty, hard, subrounded-subangular; matrix is weakly clay altered, pervasive with localized intervals of moderate clay alteration; matrix & clasts are limonite/iron-oxide altered, weak-strong, patchy to pervasive bands with fluidal margins, often associated with fracture planes and veining; some clasts are heterolithic; weathered out rounded pits (Fe-Ox); non-magnetic; moderate patches and intervals of silicification associated w/ veinlets/stringers of quartz;	
11-SH-002	43.34	45.27	rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	volcanics rhyolite crystal tuff; same as before but more clast rich, 40 - 70% clasts, with larger more angular clasts; higher concentration of clasts near contacts; more moderately pervasive silicification	
11-SH-002	45.27	45.72	breccia zone	breccia	brecciated, heterolithic clast supported (subrounded up 7-8 cm); weak matrix up to 5 mm across composed of chlorite-clay-sericite (dark grey-beige); clasts are weak-moderate pervasive clay+potassic-altered (light peach-beige) rhyolite tuff and welded tuff clasts are weak-moderate pervasive chlorite altered (light green-grey); trace finely disseminated pyrite; upper contact @ 40 degrees TCA	
11-SH-002	45.72	46.47	welded tuff	welded tuff	welded, matrix supported rhyolite tuff; peach-beige and grey; 30% clasts up to 2 cm; 10-15% siliceous fragments; matrix composed of clay, feldspar, qtz; patchy chlorite alteration with weak pervasive silicification of matrix; clasts exhibit preferred orientation (flattening) at 35-40 degrees TCA; upper contact @ 30 degrees TCA; large, unflattened (unwelded), angular, clay-altered (feldspar?) clasts up to 4cm diameter; locally weak brecciation; weak limonite iron oxide fracture controlled haloes up to 1cm	
11-SH-002	46.47	47.49	siliceous crystal rhyolite tuff	crystal lithic rhyolite tuff	matrix supported rhyolite tuff; peach-orange and grey; feldspar, mafic, chalcedonic, siliceous, and rare heterolithic clasts up to 2 cm; weak foliation (deformation fabric) characterized by grey coloration @ 20-40 degrees TCA; weak limonite fracture coating, lacking haloes; upper contact @ 55 degrees TCA	
11-SH-002	47.49	48.05	welded tuff	welded tuff	welded, matrix supported rhyolite tuff; beige-light peach and grey; 30% clasts up to 2 cm; 10-15% siliceous fragments; matrix composed of clay, feldspar, qtz; patchy chlorite alteration with weak pervasive silicification of matrix; clasts exhibit preferred orientation (flattening) at 35-40 degrees TCA; upper contact @ 35-40 degrees TCA; lower contact @ 30 degrees TCA large, unflattened (unwelded), angular, clay-altered (feldspar?) clasts up to 4cm diameter; locally weak brecciation; weak limonite/iron oxide fracture controlled haloes up to 1cm; weak preferred orientation of flattened clasts at about 10-20 deg TCA;	
11-SH-002	48.05	50.6	siliceous crystal rhyolite tuff + welded tuff blocks	volcaniclastic	breccia flow with crystal lithic tuff and large blocks up to 10 cm of welded tuff (with oriented flattened clasts) and large lithics up to 3 cm; rare crystal-rich (up to 3 mm) mafic infill within brecciated blocks; it's possible that the small intervals of welded tuff are just much larger blocks and that between 45.72 to 54.6 m is a breccia pyroclastic flow unit encompassing the large heterolithic blocks and clasts in a rhyolite tuff matrix; rare veining, up to 2 mm, 60 - 65 deg TCA, quartz-carbonate;	
11-SH-002	50.6	51.09	welded tuff	welded tuff	welded crystal rhyolite tuff; matrix is clay-altered with siliceous overprint grading to pervasive silicification; flattened feldspar crystals are oriented at about 45 deg, moderately clay and chlorite altered;	
11-SH-002	51.09	54.6	rhyolite/welded tuff breccia	volcaniclastic	weakly brecciated crystal rhyolite tuff and welded tuff; clay-altered; weak white clay gouge mm-sized to strong up to 7 cm beige-grey clay gouge oriented 25 - 40 deg TCA; moderately fractured;	
11-SH-002	54.6	70.28	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	beige - light peach with green and green; fine to medium grained ash matrix; clay-sericite altered with a pervasive moderate siliceous overprint; nil to trace finely disseminated pyrite; matrix supported; 20-40% clasts up to 3 cm across; up to 5% siliceous fragments; rare stringers of quartz +/- carbonate up to 2 mm thick; dark grey/black mafic crystal rich (up to 20%) blocks up to 20 cm (or lithology interval?) at ~ 66.7 - 67.5 m, intermixed with crystal lithic rhyolite tuff	
11-SH-002	70.28	77.35	rhyolite/welded tuff (pyroclastic) breccia	brecciated crystal lithic rhyolite tuff + siliceous fragments and welded tuff	moderately brecciated crystal rhyolite tuff and welded (flattened crystals) tuff; moderately intense clay-altered with abundant gouge; patchy moderate hematite (dark maroon) mostly in the first 3 m; weak patchy-pervasive potassic alteration (light peach-beige); 5%, up to 15% (locally) siliceous fragments up to 1 cm across; rare veining and quartz-carbonate breccia infill; trace finely disseminated pyrite	
11-SH-002	77.35	81.29	pyroclastic breccia	volcaniclastic	dark grey, beige-pink-peach; coarse grained matrix supported breccia with moderate to strong pervasive silicified rhyolite tuff and moderately clay altered welded tuff clasts up to 10 cm that have also been pervasively silicified; quartz-carbonate veining (carbonate dominant) is common from 80m, presenting as veinlets and stringers up to 1cm thick; vein modes are planar, boudinage, and semi-stockwork (in brecciated zones); veins are oriented at 40-60 degrees TCA	

11-SH-002 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-002	81.29	81.84	breccia fault gouge	fault gouge	large interval of fault gouge; likely recovery loss through this section as this run is only 2.62/3 m recovery; medium grey-beige with ~20% clasts up to 2 cm, but mostly <0.5 cm; clasts are weakly silicified	
11-SH-002	81.84	82.75	rhyolite/welded tuff (pyroclastic) breccia	volcaniclastic	grey to beige-pink; very coarse, very poorly sorted, matrix supported volcanic breccia; clasts of welded rhyolite tuff, unwelded rhyolite tuff, chalcedony, feldspar and mafic crystals, and other (mafic?) volcanic lithics; minor carbonate stringers; pervasively silicified; fractures common at 40-50 degrees TCA; highly fractured with large welded tuff clasts as most competent pieces	
11-SH-002	82.75	87.66	rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	poorly sorted, coarse grained, matrix supported rhyolite tuff; clasts of weak to moderately clay altered feldspar, welded tuff, hard mafic mineral, occasional siliceous fragments, and other mafic lithics; clasts are typically sub-rounded to sub-angular; clay alteration has been overprinted by moderate silicification; rare quartz-carbonate stringers (quartz dominant) showing no preferred orientation; highly fractured from beginning of interval to 85m	
11-SH-002	87.66	88.39	volcanic breccia	breccia	orange to grey, moderately to strongly silicified volcanic breccia; minor clay gouge at end of interval; matrix is more strongly silicified than clasts; trace finely disseminated pyrite on fractures; minor irregular, < 1 mm stringers	
11-SH-002	88.39	88.39	EOH	EOH	EOH	

11-SH-002 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-002	5.35	17	limonite/Fe-oxide + clay	weak-strong limonite/Fe-oxide, associated with clasts and fracture-controlled, fluidal alteration contacts around bands commonly >10 cm; clay-altered matrix when not oxidized as grey-beige color, soft
11-SH-002	17	19	limonite/Fe-oxide + clay + siliceous overprint	siliceous overprint due to quartz veining
11-SH-002	19	43	limonite/Fe-oxide + clay-sericite + potassic + silicification	weak to moderate limonite/Fe-oxide as bands up to 1.5 m around fractures with fluidal margins usually snaking around clasts, also affecting individual clasts and matrix, rusty orange; weak to moderate clay altered matrix, at times altered k-spar is clay-sericite rich; weakly pervasive potassic (peach-pink) altered matrix (distinct change from grey-beige to peach-beige); patchy siliceous alteration associated with some veinlets, locally strong intervals up to 1 m as well
11-SH-002	43	51.62	limonite/Fe-oxide + clay-sericite + potassic/hematite + silicification	weak limonite/Fe-oxide mostly fracture controlled and as fracture haloes up to 3 cm thick; weak clay-sericite matrix that has been overprinted by weak potassic/hematite (peach-maroon color) and moderate to strong patchy-pervasive silicification overprint
11-SH-002	51.62	54.6	clay-sericite + potassic + silicification	clay-sericite altered matrix with several moderate clay gouges up to 7 cm thick; weak patchy potassic alteration (beige-peach color) with moderate to strong patchy to pervasive siliceous overprint
11-SH-002	54.6	61.6	clay-sericite + potassic + silicification	clay-sericite altered matrix with a weak potassic overprint (peach color); moderate pervasive siliceous overprint
11-SH-002	61.6	64.95	clay-sericite + potassic + silicification + chlorite	same as above but an abrupt increase in chlorite altered clasts (bright pastel green color; up to 15%, 3-4 mm); chlorite clay gouge @ 64.6 m up to 2 cm
11-SH-002	64.95	70.28	clay-sericite + potassic + silicification	same as 54.6 - 61.6 m
11-SH-002	70.28	77.35	clay-sericite + potassic + hematite	moderate pervasive clay altered matrix and clasts (grey-beige); weak to moderate patchy hematite (maroon-red) alteration up to ~ 73 m and rare patches afterwards; weak pervasive potassic overprint (beige-peach) within matrix;
11-SH-002	77.35	81.29	clay-sericite + silicification + carbonate	initial clay-sericite alteration has likely been strongly overprinted by silicification resulting in a dark grey matrix ?; carbonate veining as alteration for about 1 m prior to upcoming fault gouge, boudinaged/dismembered veinlets up to 1 cm thick, mostly <0.5 cm, weakly stockworked;
11-SH-002	81.29	81.84	clay + potassic + silicification	fault zone; clay gouge with clasts showing weak potassic alteration and weak silicification
11-SH-002	81.84	88.39	clay-sericite + silicification + potassic	weak clay-sericite altered matrix overprinted by moderate to strong pervasive silicification; weak pervasive to patchy potassic (peach) alteration
11-SH-002	88.39	88.39	EOH	EOH

11-SH-002 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-002	8.2		gouge	70	mod	beige-grey clay gouge up to 2 cm thick, contact is not clear but it is close to vertical
11-SH-002	8.58		alt band	40		dark rusty orange and grey (Fe-ox/limonite alteration) margin (quite sharp instead of the usual fluidal alteration margins) measurement; same orientation as fracturing
11-SH-002	11.6		alt band	60		fluidal alteration margin averages at about 60 deg TCA
11-SH-002	13.41	13.51	vnlt	78		3 vnlt, 1 mm thick, 75 to 80 deg TCA; weak colloform banding
11-SH-002	14.7		gouge	75	mod	yellow-beige clay gouge, approximate orientation as it is difficult to measure, up to 1 cm thick
11-SH-002	14.75		vnlt	75		0.5 - 1 cm vnlt, fine drusy quartz;
11-SH-002	15	15.7	brkn + vn	80	mod	moderately broken core with quartz vein material, some measurable at about 80 deg TCA; one chunk is up to 3 cm thick with weak colloform banding;
11-SH-002	16.25		vnlt	80		1 cm vnlt of quartz-feldspar (peach-grey)
11-SH-002	10.25		gouge			up to 1 cm thick gouge
11-SH-002	18.2	18.25	vn	75		2.6-4 cm vein; 70 - 80 deg contacts; moderately limonite/Fe-ox (oxide staining); weak patchy clay found in vugs, moderately vuggy, weak fine drusy quartz; k-feldspar mm-sized on edges and cross-cutting veins (adularia? Peach-pink color); pervasive silicification around vein up to 1.5 m;
11-SH-002	18.3	18.34	vn	60		2-3 cm vein; 55-65 deg TCA; heavily weathered (limonite/Fe-oxide), difficult to discern contacts; weakly vuggy and fine drusy quartz;
11-SH-002	18.4	18.45	vnlt	62		2 vnlt, one 50-60 deg TCA, other 70-75 deg TCA; mm-sized; very weakly colloform banded
11-SH-002	23.1		gouge	20	mod	up to 1 cm thick gouge, yellow-beige
11-SH-002	25.7		alt band	30		alteration orientation within limonite/Fe-ox banding
11-SH-002	26.22		gouge	50	mod	dirty peach-beige clay gouge up to 1.5 cm thick
11-SH-002	26.5		gouge	40	mod	dirty peach-grey clay gouge up to 2 cm thick with lithic clasts up to 5 mm
11-SH-002	26.8		vnlt	60		1-3 mm vnlt of grey quartz; weak to moderately vuggy (voids up to 3-4 mm across)
11-SH-002	28.3	28.5	alt band	45		alteration banding and margins, 40, 35 and 55 deg TCA, weakly fluidal
11-SH-002	29.15		vnlt	55		3-5 mm vnlt, grey quartz and green chlorite; moderately patchy vuggy up to 5 mm gaps 2 cm across; strongly limonite/Fe-ox weathered
11-SH-002	30.78		vnlt	80		1 mm vnlt, grey quartz
11-SH-002	31.93		vnlt	80		1-2 mm grey quartz; moderately limonite/Fe-oxide altered
11-SH-002	34.1		vnlt	70		1 mm vnlt, grey quartz, moderately vuggy, weak very fine drusy quartz
11-SH-002	34.45		fracture	40		fracture plane
11-SH-002	35.8		gouge	40	weak	mm-sized gouge, light grey clay
11-SH-002	37.9		alteration banding	30		fluidal alteration margin
11-SH-002	39.19		vnlt	80		3-5mm vnlt with moderate limonite/Fe-oxide/manganese staining; weakly vuggy, weak fine drusy quartz
11-SH-002	39.32		fracture	30		fracture plane
11-SH-002	41.5		vnlt	60		1-4 mm grey quartz vnlt; weakly vuggy and brecciated;
11-SH-002	41.9		gouge	60	mod-strong	up to 5 cm gouge, peach0grey clay with lithics up to 4 mm
11-SH-002	42.45		gouge	60	weak	2 mm gouge, light green-grey and yellow-beige clay
11-SH-002	45.27		ctc	40	mod	breccia interval upper contact
11-SH-002	45.72		ctc	30	mod	breccia interval lower contact/welded tuff unit upper contact

11-SH-002 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-002	45.9		def/fab	37	mod	moderate preferred orientation of lithic clasts in welded tuff unit (but this may be a large block within pyroclastic flow, in which case this measurement is trivial)
11-SH-002	46.47		ctc	55		welded tuff unit lower contact
11-SH-002	46.73		vnlt	37		2 grey quartz vnlt, 1-2 mm thick, weakly undulating; weak carbonate; weak colloform banding along contacts
11-SH-002	47.7		def/fab	15	weak	weak preferred orientation of lithic clasts in welded tuff unit (but this may be a large block within pyroclastic flow, in which case this measurement is trivial)
11-SH-002	47.75		vnlt	30		dismembered quartz material within healed fracture up to 2 mm thick oriented along 30 deg TCA
11-SH-002	48.77		gouge			not entirely recovered gouge, difficult to measure orientation; medium grey clay up to 1 cm thick with clasts up to 5 mm
11-SH-002	49.28		vnlt	65		weakly undulating quartz-carbonate vnlt up to 2 mm thick; situated within brecciated clasts; rare quartz-carbonate material weakly infilling breccia matrix in this area
11-SH-002	50.1		vnlt	60		weakly undulating quartz-carbonate vnlt up to 1 mm thick; situated within crystal rhyolite tuff
11-SH-002	50.6		ctc	45		welded tuff unit upper contact
11-SH-002	50.86		vnlt	20		up to 1 mm quartz vnlt
11-SH-002	51.64		gouge	40		light grey-beige gouge up to 7 cm thick; gouge upper contact
11-SH-002	51.73		gouge	25		gouge lower contact
11-SH-002	51.9		vnlt	15		dismembered light grey to light purple (amethyst?) quartz material, up to 5 mm thick
	52.23		vnlt	60		2 vnlt, grey quartz, up to 2 mm thick; moderately undulating
11-SH-002	52.7		fracture	45		1 mm white clay fracture infill
11-SH-002	53.2		fracture	45		1 mm white clay fracture infill
11-SH-002	54.43		gouge	50		6 cm grey-beige clay gouge, upper contact 50 deg, lower contact not completely recovered;
11-SH-002	54.6		ctc	65		breccia+gouge unit lower contact
11-SH-002	54.86		fracture	45		white clay up to 1 mm infilling fracture
11-SH-002	55.4		fracture	25		white clay up to 1 mm infilling fracture
11-SH-002	58.1		str	35		weakly undulating 1 mm white quartz vein stringer
11-SH-002	58.8		vn	25		dismembered undulating vein, up to 3 mm thick; grey quartz and peach-orange adularia
11-SH-002	59		gouge	45	weak	weak 1-2 mm green-white clay/chlorite gouge
11-SH-002	62.15		def/fab	60	weak	weak deformation/preferred mineral orientation marked by chlorite altered clasts at about 60 deg TCA
11-SH-002	63.1		def/fab	30	weak	weak deformation/preferred mineral orientation marked by chlorite altered clasts at about 30 deg TCA
11-SH-002	64.35		str	30		1-2 mm stringer of grey quartz and adularia (peach-orange), potentially along a fracture plane
11-SH-002	64.6		gouge	35	mod	moderate clay gouge up to 1 cm thick of clay (white-grey) and chlorite (bright pastel green)
11-SH-002	64.65		def/fab	50	weak	weak deformation/preferred mineral orientation marked by chlorite altered clasts at about 50 deg TCA
11-SH-002	65.3		str	15		weakly undulating 1 mm grey quartz stringer
11-SH-002	65.7		str	45		dismembered 1 mm grey quartz and adularia (peach-orange) stringer
11-SH-002	66		str	30		dismembered grey quartz and adularia stringer up to 3 mm thick
11-SH-002	68.85		str	40		two dismembered mm-sized stringers of adularia (peach-orange)
11-SH-002	68.6		fracture	35		healed fracture with voids up to 2 mm thick

11-SH-002 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-002	70.28		gouge	45	mod	1cm clay fault gouge; weak brecciation 10-15 cm above fault
11-SH-002	70.28		ctc	45		contact marked by clay gouge fault; rhyolite tuff-pyroclastic breccia
11-SH-002	70.84		gouge	50	weak	minor clay gouge (<1 mm)
11-SH-002	71.34		vn	60		1cm, planar quartz vnlt; weak colloform texture; lower contact faulted with minor gouge
11-SH-002	71.35		gouge		weak	minor clay gouge (<1 mm)
11-SH-002	71.64		str	60		planar vnlt, grey quartz, pinches out (dismembered), 0-1 mm thick
11-SH-002	71.8		vnlt	80		undulating, cherty grey quartz, 1 mm thick
11-SH-002	72.94		gouge	17		grey clay gouge on curved fracture, mm sized, 15-20 deg TCA
11-SH-002	73.5		gouge	17		grey clay gouge on irregular fracture, mm sized, 15-20 deg TCA
11-SH-002	74.2		gouge	25		1-2 mm sized grey clay gouge; still held together by core
11-SH-002	74.6		gouge			no angle measured due to missing core
11-SH-002	74.75		gouge	70		2-3 mm, grey-white clay gouge, weakly brecciated
11-SH-002	75.45		gouge	70		1 mm, grey clay gouge
11-SH-002	75.48	75.58	gouge			10 cm gouge, peach-beige-grey clay; breccia clasts up to 3 mm; angle non-measurable
11-SH-002	75.85		gouge			broken area, no thickness or angle measurable, grey-peach clay; pieces may not belong here; gouge on fractured surface
11-SH-002	76.05		gouge			broken area, no thickness or angle measurable, more grey than peach clay gouge; pieces may not belong here; gouge on fractured surface
11-SH-002	76.35		fracture	55		weak infill through parts of healed fracture, weak white clay gouge, <1 mm
11-SH-002	76.4		gouge	70		up to 3 mm; irregular surface; grey gouge
11-SH-002	76.55		gouge	50		1-2 mm sized grey-light grey-peach clay gouge; weak shearing for about 10 cm around around gouge; potassicly altered (peach color?) patch 10-15 cm
11-SH-002	77.29		vnlt			2 parallel vnlt within 1 cm of each other, 1-2 mm; cherty grey quartz; trace finely disseminated pyrite
11-SH-002	77.35		gouge	65		1 mm light grey clay gouge
11-SH-002	77.48		gouge	40		1-2 mm medium grey clay gouge
11-SH-002	78.25		gouge			1-2 mm white-light grey-peach gouge, angle non-measurable
11-SH-002	78.41	78.44	gouge	40		2-3 cm grey-peach gouge
11-SH-002	79.6		fracture	35		fracture infilled with white-light grey, <1 mm thick
11-SH-002	80	80.05	brkn			broken pieces with weak gouge
11-SH-002	80.18	81.29	vn	60		quartz-carbonate vein; irregular, weakly stockworked or fracture infilled between clasts; 0.1 - 2 cm veins, 45 - 60 deg; another (more rare) set at 80 deg TCA; weakly vuggy;
11-SH-002	81.29	81.84	gouge			large interval of fault gouge; likely recovery loss through this section as this run is only 2.62/3 m recovery; medium grey-beige with ~20% clasts up to 2 cm, but mostly <0.5 cm; clasts are weakly silicified; contacts non-measurable
11-SH-002	82.21		fracture	50		healed fracture with infill up to 1 mm with some voids; light grey-white clay infill
11-SH-002	82.7		vn			irregular, dismembered grey quartz material up to 1 cm, approximately subparallel
11-SH-002	82	84.7	brkn			broken core < 10 cm, most <5 cm; most fractures are 50-60 deg; many infilled white-light grey clay, up to 1 mm thick

11-SH-002 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-002	86.1		fracture	60		healed fracture with infill up to 1 mm; light grey-white clay infill
11-SH-002	87.08		fracture	40		healed fracture with infill up to 1 mm; light grey-white clay infill
11-SH-002	87.21		fracture	30		healed fracture with infill up to 1 mm; light grey-white clay infill
11-SH-002	87.66	88.39	bx			orange to grey, brecciated, moderatly to strongly silicified volcanic
11-SH-002	87.96		fracture	40		fracture infilled with cavities, < 1 mm wide; white clay gouge, minor

11-SH-002 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-002	0.00	6.10	6.10	0.75	12.30	0.00	0.00	0.00
11-SH-002	6.10	9.14	3.04	2.95	97.04	1.54	52.20	12.00
11-SH-002	9.14	12.19	3.05	2.79	91.48	1.50	53.76	9.00
11-SH-002	12.19	15.24	3.05	2.45	80.33	0.89	36.33	5.00
11-SH-002	15.24	18.29	3.05	2.72	89.18	1.19	43.75	6.00
11-SH-002	18.29	21.34	3.05	2.75	90.16	0.98	35.64	5.00
11-SH-002	21.34	24.38	3.04	2.09	68.75	0.81	38.76	5.00
11-SH-002	24.38	27.43	3.05	3.00	98.36	2.29	76.33	10.00
11-SH-002	27.43	30.48	3.05	3.05	100.00	2.43	79.67	10.00
11-SH-002	30.48	33.53	3.05	2.87	94.10	1.80	62.72	8.00
11-SH-002	33.53	36.58	3.05	3.02	99.02	2.08	68.87	14.00
11-SH-002	36.58	39.62	3.04	2.90	95.39	1.79	61.72	9.00
11-SH-002	39.62	42.67	3.05	2.95	96.72	2.04	69.15	8.00
11-SH-002	42.67	45.72	3.05	3.01	98.69	1.80	59.80	9.00
11-SH-002	45.72	48.77	3.05	2.89	94.75	1.89	65.40	10.00
11-SH-002	48.77	51.82	3.05	3.01	98.69	1.90	63.12	10.00
11-SH-002	51.82	54.86	3.04	2.31	75.99	0.34	14.72	3.00
11-SH-002	54.86	57.91	3.05	2.65	86.89	0.94	35.47	6.00
11-SH-002	57.91	60.96	3.05	3.00	98.36	2.43	81.00	10.00
11-SH-002	60.96	64.01	3.05	2.84	93.11	1.53	53.87	9.00
11-SH-002	64.01	67.06	3.05	2.87	94.10	1.35	47.04	9.00
11-SH-002	67.06	70.10	3.04	2.73	89.80	1.51	55.31	11.00
11-SH-002	70.10	73.15	3.05	3.05	100.00	2.27	74.43	13.00
11-SH-002	73.15	76.20	3.05	2.98	97.70	1.76	59.06	11.00
11-SH-002	76.20	79.25	3.05	3.05	100.00	2.30	75.41	11.00
11-SH-002	79.25	82.30	3.05	2.62	85.90	1.73	66.03	12.00
11-SH-002	82.30	85.34	3.04	2.43	79.93	0.12	4.94	1.00
11-SH-002	85.34	88.39	3.05	2.60	85.25	1.49	57.31	8.00

11-SH-002 Mas Sus

Hole ID	Depth (m)	Mag Sus
11-SH-002	6	0.27
11-SH-002	7	0.71
11-SH-002	8	0.62
11-SH-002	9	0.43
11-SH-002	10	0.1
11-SH-002	11	0
11-SH-002	12	0.1
11-SH-002	13	0.18
11-SH-002	14	0.47
11-SH-002	15	0.03
11-SH-002	16	0.51
11-SH-002	17	0.07
11-SH-002	18	0
11-SH-002	19	0
11-SH-002	20	
11-SH-002	21	0.01
11-SH-002	22	0.1
11-SH-002	23	0
11-SH-002	24	0
11-SH-002	25	0.07
11-SH-002	26	0.03
11-SH-002	27	0.14
11-SH-002	28	0
11-SH-002	29	0.23
11-SH-002	30	0.05
11-SH-002	31	0.64
11-SH-002	32	0.51
11-SH-002	33	0.8
11-SH-002	34	0.21
11-SH-002	35	0.21
11-SH-002	36	0.16
11-SH-002	37	0.1
11-SH-002	38	0.34
11-SH-002	39	0.1
11-SH-002	40	0.18
11-SH-002	41	0.56
11-SH-002	42	0.38
11-SH-002	43	0.27
11-SH-002	44	0.29

11-SH-002 Mas Sus

Hole ID	Depth (m)	Mag Sus
11-SH-002	45	0.8
11-SH-002	46	0.34
11-SH-002	47	0.16
11-SH-002	48	0.91
11-SH-002	49	0.01
11-SH-002	50	0.1
11-SH-002	51	0.14
11-SH-002	52	0.43
11-SH-002	53	0.42
11-SH-002	54	0.38
11-SH-002	55	0.51
11-SH-002	56	0.1
11-SH-002	57	0.1
11-SH-002	58	0.43
11-SH-002	59	0.21
11-SH-002	60	0.18
11-SH-002	61	0.51
11-SH-002	62	0.56
11-SH-002	63	0.21
11-SH-002	64	0.6
11-SH-002	65	0.16
11-SH-002	66	0.09
11-SH-002	67	0.03
11-SH-002	68	0.18
11-SH-002	69	0.07
11-SH-002	70	0.05
11-SH-002	71	0.36
11-SH-002	72	0.23
11-SH-002	73	0.6
11-SH-002	74	0.1
11-SH-002	75	0.47
11-SH-002	76	0.45
11-SH-002	77	0.91
11-SH-002	78	0.1
11-SH-002	79	0.01
11-SH-002	80	0.01
11-SH-002	81	0.32
11-SH-002	82	0.18
11-SH-002	83	0.12

11-SH-002 Mas Sus

Hole ID	Depth (m)	Mag Sus
11-SH-002	84	0.34
11-SH-002	85	0.43
11-SH-002	86	0.03
11-SH-002	87	0.95
11-SH-002	88	0.1

11-SH-003 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-003	0.00	0.88	OB	OB	overburden	
11-SH-003	0.88	11.27	rhyolite tuff	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff; beige-tan to rusty orange & dark grey with light grey-cream bleached areas near top of interval; clast supported 20-40%; ~0.5-1% veinlets/stringers of grey quartz +/- weak-moderate carbonate, with common vugs, 0-1cm thick, 25-80 deg, at times trace finely disseminated pyrite; 1-3% hard black mafic subangular-subrounded clasts up to 1 cm, weak-moderately magnetic; 1-5% soft chlorite-altered subangular clasts up to 2 cm, greasy, green; 15-30% sub-angular peach-pink/rarely creamy-beige feldspar crystals up to 3 cm, at times clay-altered & soft but usually hard; 5-10% siliceous fragments up to 5 cm, grey, cherty, hard, subrounded-subangular; matrix is weakly clay altered, pervasive with localized intervals of moderate clay alteration; patchy weak silicious overprint of clay altered matrix, typically associated with quartz veining; matrix & clasts are limonite/iron-oxide altered, weak-strong, patchy to pervasive bands with fluidal margins, often associated with fracture planes; minor manganese associated with limonite weathering; some clasts are heterolithic; few weathered out rounded or elongate (along fracture plane) pits (Fe-Ox); gouge is common along some fractures (faults), typically oriented at 0-20 or 70-80 degrees TCA; non-magnetic	
11-SH-003	11.27	13.37	rhyolite tuff breccia	crystal lithic rhyolite tuff - breccia	weakly to moderately brecciated volcanic rhyolite tuff; beige-tan-green to rusty orange; clast supported 20-40%; clasts are sub-rounded to sub-angular and composed of hard mafics up to .5cm (0-1%), green chlorite altered clasts up to 1cm (1-2%), feldspar crystals (3-5%), silicious fragments up to 2cm (15-20%), and few polyolithic clasts; matrix is clay-chlorite altered with weak patchy silicious overprint; weak-strong limonite/iron-oxide alteration in matrix and clasts often associated with fractures, patchy to pervasive with fluidal margins; minor manganese alteration associated with limonite weathering; minor patchy hematite alteration surrounding clasts; large zones of brecciated clay (+/-chlorite) gouge (up to 10cm) with common mm-scale gouge found in fractures; common rounded or elongate pits (Fe-Ox)	
11-SH-003	13.37	22.7	pyroclastic breccia	volcaniclastic	very coarse grained, very poorly sorted, clast supported (20-60%) volcanic breccia (ignimbrite); beige-tan to rusty orange with areas of dark grey and pink; clasts are sub-rounded to sub-angular with low to moderate sphericity and range in size from mm-scale to 50cm; large clasts are polyolithic rhyolite tuff and welded rhyolite tuff, composed predominately of feldspar, silicious fragments, occasional chalcedonic fragments, minor mafics, and minor lithics; other clasts include feldspar crystals, silicious fragments, mafic lithics, and other lithics; concentration of feldspar (mainly KSP) from 20.2-21.8m; one 40cm interval of volcanic rock with dark grey matrix and fluidal boundaries to rhyolite tuff clast (at 21.85m), showing similar clast composition to rhyolite tuff; matrix is clay altered with patchy overprint of weak to strong silicification; common zones of clay gouge up to 5cm, often brecciated; veining is uncommon and typically at 0-35 degrees TCA; common round or elongate (Fe-Ox) cavities; moderate to strong limonite/iron oxide weathering, typically fracture controlled, patchy to pervasive bands with fluidal margins; minor manganese associated with limonite	
11-SH-003	22.7	25.66	breccia zone	breccia	moderately to strongly brecciated, clast supported, polyolithic, very poorly sorted, very coarse sub-rounded to angular clasts; medium to dark grey with rusty orange; clasts are rhyolite tuff, welded rhyolite tuff, feldspar (some mod-strong clay altered), clay altered chalcedonic fragments, minor silicious fragments, mafic clasts, and other minor lithics; matrix is clay altered with areas of silicious overprint; patchy potassic alteration; weak to moderate limonite/iron oxide weathering, patchy to pervasive, mainly fracture controlled; silicification is weak-strong and patchy to pervasive, in both clasts and matrix; highly fractured with common gouge up to 10cm, often brecciated; few veinlets and stringers, up to 1mm	
11-SH-003	25.66	28.04	pyroclastic breccia	volcaniclastic	coarse grained, poorly sorted, clast supported volcanic breccia, predominantly composed of rhyolite tuff; grey to beige-pink with rusty orange around fractures; clasts are sub-angular to sub-rounded and include welded rhyolite tuff (often clay altered), chalcedonic fragments, grey silicious fragments, feldspar, hard black mafic mineral, and other minor lithics; largest clasts are typically polyolithic (mainly welded tuff) and up to 10cm; matrix is weak patchy to pervasive clay with moderate pervasive silicious overprint; weak patchy to pervasive potassic alteration and weak patchy manganese; weak to moderate fracture controlled limonite/iron oxide weathering; minor gouge along some fractures; many feldspar and tuff clasts moderately to strongly clay altered	
11-SH-003	28.04	28.3	fault gouge	fault gouge	orange-yellow-grey medium to coarse grained fault gouge; clasts up to 1 cm; initial rock is still present but crumbles upon touch	

11-SH-003 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-003	28.3	49.38	rhyolite tuff + bombs + VEIN ZONE	VEIN ZONE: volcaniclastic	pyroclastic breccia is composed predominantly of rhyolite tuff similar to 25.66 - 28.04 m interval, however, rhyolite tuff seems to have a conspicuous darker grey (as opposed to light grey) matrix color, and more silicified; 20-30% clasts; <2% silica fragments, <0.5 cm; black mafic clasts up to 2 cm; dark maroon fractured clasts up to 2 cm; large feldspar rich bombs rarely present up to 50 cm along core axis length [IE: large, hard, quartz-potassic-rich bomb (or possibly dyke) from 36.32-36.68, hosting vein mineralization from 36.4-36.47; crystals (qz+fsp eyes) arranged in preferred orientation (60 degrees TCA) up to 4mm, some fresh with some weathered to clay/chlorite; 1-2% very finely disseminated pyrite; alternating bands between maroon red (hematite?) and potassic altered (peachy colored with varying intensity) with undulating boundaries, snaking around crystals]; clay rich intervals and common gouges up to a few cm thick; core is generally moderately fractured with intervals that are strongly fractured and blocky; veins up to 8 cm thick, mostly subvertical, white to grey quartz with adularia and carbonate alteration, colloform banding and rare comb and toothcomb textures, trace disseminated pyrite, vein content 3-5%;	
11-SH-003	49.38	58.94	rhyolite tuff	crystal lithic rhyolite tuff	siliceous to increasingly clay-altered crystal lithic rhyolite tuff; dark grey to light grey-peach; alteration regime change at about 55.47 m; fine to coarse grained matrix with 15-30% clasts up to 3 cm; rare silica fragments (<1%; mostly potassic-(chalcedonic/feldspar), chlorite-altered clasts and <3% mafic rounded clasts; trace to 2% finely disseminated pyrite, often associated with clay-rich intervals and gouge; rare veining, mostly carbonate, <1 cm thick and <1% d content	
11-SH-003	58.94	63.08	deformed rhyolite and potassic rich breccia	volcaniclastic breccia	deformed and clay-altered (grey-white) rhyolite tuff with large quartz-potassic rich clasts (dark orange-red) up to 50 cm (similar appearance to large potassic and hematite altered clast in VEIN ZONE), weakly hematite altered; trace to 1 % pyrite; moderately fractured (generally healed) and brecciated with clay-carbonate fill-in up to 0.5 cm generally oriented 15-20 and 50-60 deg TCA;	mod-strong
11-SH-003	63.08	66.5	potassic rich breccia	volcaniclastic breccia	light orange-peach potassic-quartz rich breccia; moderate pastel green clay-chlorite matrix infill for first 50 cm; potassic clasts up to 7 cm, hematite-chlorite-pyrite (up to 10% fine to coarse grained disseminated) altered clasts up to 5 cm in a seemingly crystal lithic (crystal edges are at times visible but at times bleed into the potassic rich breccia matrix) potassic and hematite altered matrix; 2-3% silica fragments up to 5 mm; total proportion of clasts not easily measurable due to the pervasive potassic alteration through the clasts and matrix, most clasts are subrounded; trace to 2% pyrite; carbonate infill up to 1 cm; rare quartz veining but patches/clasts that are siliceous rich are more common; weakly patchy deformation with hairline fractures filled in with carbonate-clay, <1 mm (deformation orientation difficult to judge, 10 deg TCA at beginning of interval, fracture infill varies at 45-70 deg TCA, at times no deformation clearly visible; increasing amount of clay-altered rhyolite tuff in matrix in the last m of interval, suggesting that that may be the host for the entire breccia interval (given the presence of lithics at times visible)	weak
11-SH-003	66.5	68.1	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	alternating clay-sericite-potassic (light peach-orange) altered and siliceous overprinted alteration (dark grey) of the crystal lithic rhyolite tuff; trace to 2% subrounded to subangular siliceous fragments up to 3-4 mm; it is likely that the darker more siliceous tuff engulfed older more altered rhyolite tuff clasts due to one instance where a potassic-clay-sericite altered clast is split and infilled with the siliceous tuff, indicating at least two episodes of rhyolite tuff emplacement;	
11-SH-003	68.1	83.25	altered heterolithic clastic breccia	volcaniclastic breccia	clay-sericite-potassic altered rock with silica flooding and carbonate fracture-infilling/veinlets < 1mm; color varies from beige to peach-orange to dark grey to brick orange; mottled texture with strong alteration overprinting; there are crystal lithics present up to 50% that are subangular and no larger than 5 mm and some subrounded silica fragments (quartz eyes) up to 4-5 mm; strongly clay-potassic altered sections up to 20 cm with lithics visible that could likely be heterolithic clasts that have been strongly altered (bombs in a pyroclastic lithic rich breccia flow?); many sub mm stringers of quartz-carbonate (>50 at least); weak preferred deformation due to stringers of quartz-carbonate at about 45-70 deg TCA; local preferred chlorite-altered mineral (chlorite altered, silica and and feldspar lithics) orientation (ie. @ 79 m, 81.5 m) at 60 deg TCA with cherty bands up to 0.5 cm; cherty dark grey veins starting at about 79 m generally oriented 40 - 65 deg TCA, rarely 25 deg TCA, up to 2-3 cm thick; clay alteration becomes pervasive towards the end of the interval, affecting the matrix, fractures, and as contacts around crystal lithics	weak

11-SH-003 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-003	83.25	87.45	pyroclastic breccia	volcaniclastic breccia	grey-green, black, peach-orange, red, colors; poorly sorted pyroclastic breccia with dark mafic/mudstone (<2%, large brecciated rounded block about 10 cm), feldspar 5-10%, silica fragments (<2%) crystal lithic rhyolite tuff matrix; strongly clay-chlorite altered intervals; moderate patchy siliceous and weak-moderate patchy potassic alteration; patchy weak hematite alteration; clay-carbonate fracture filling +/- quartz; minimal veining at 40-70 deg TCA, one rare vein 6-7 cm with quartz-clay-carbonate-adularia at 40 deg TCA; trace finely disseminated pyrite	
11-SH-003	87.45	89.97	altered heterolithic clastic breccia	volcaniclastic breccia	clay-sericite-potassic altered rock as from 68.1 - 83.25 but more pervasively altered with even less textures visible; additional weak chlorite alteration as patchy pastel green coloration;	
11-SH-003	89.97	101.4	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff	brick-maroon red and light to dark grey; weakly brecciated with clay-chlorite altered dark grey infill up to 0.5 cm thick (moderate brecciation between 90 - 91 m with potassic and hematite altered clasts up to 5 cm in a chlorite-clay-sericite altered tuff matrix); matrix supported; pervasive alteration throughout matrix and affecting clasts - hematite, clay-sericite and chlorite; <1% cherty subrounded fragments; 15-30% clasts up to 2 cm often overprinted by alteration but visible that there is commonly chlorite-altered, feldspar and dark mafic clasts, typically subrounded but rarely angular; trace pyrite; minimal veining, mostly weak breccia infill and fracture infill	
11-SH-003	101.4	104.25	pyroclastic breccia	volcaniclastic	clay and potassic altered clastic breccia with heterolithic clasts up to 5 cm; patchy strong clay-chlorite alteration within matrix; clast supported with up to 60% clast proportion; patchy hematite and potassic alteration	
11-SH-003	104.25	104.25	EOH	EOH	EOH	

11-SH-003 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-003	0.88	21.22	clay-sericite + limonite + hematite + silicification + potassic + manganese + bleaching	weak to strong pervasive to patchy clay-sericite alteration, often overprinted by patchy weak to moderate silicification, giving a darker grey appearance to the interval; common clay gouge throughout interval, locally up to 10cm thick; patchy potassic alteration presenting as a peach-pink hue, and feldspar; common alteration of feldspar and lithic clasts to clay; moderate to strong, pervasive to patchy, thick limonite/iron oxide bands with fluidal margins, often associated with fractures; minor manganese associated with limonite; patchy hematite alteration of matrix material; patchy bleaching around 4m
11-SH-003	21.22	28.04	clay-sericite + limonite + silicification + potassic + manganese	same as above but limonite/iron oxide is weak-moderate, patchy, fracture controlled with narrow bands around fractures; gouge is often strongly clay or limonite rich (grey or orange-yellow)
11-SH-003	28.04	28.3	clay-limonite gouge	
11-SH-003	28.3	33.9	clay-sericite + bleaching + silicification	strong silicification (dark grey, hard) overprinting potentially initial clay-sericite alteration to rhyolite tuff matrix host to pyroclastic breccia; rare patchy bleaching resulting in a white-beige color;
11-SH-003	33.9	55.43	clay-sericite + silicification + potassic	patchy moderate to strong clay-sericite alteration affecting rhyolite tuff matrix; moderate patchy silicification (dark grey, hard) overprinting initial clay-sericite alteration to rhyolite tuff matrix host to pyroclastic breccia; weak potassic alteration affecting rhyolite tuff matrix (light peach clasts) and large potassic clasts present in breccia;
11-SH-003	55.43	58.92	clay-sericite + silicification + potassic + chlorite	moderate to strong clay-sericite alteration; patchy moderate to strong silicified intervals up to 50 cm; weak patchy potassic alteration mostly affecting clasts rather than matrix; rare chlorite alteration, mostly at the end of interval with increasing clay-chlorite rich, clast supported rock prior to upcoming breccia
11-SH-003	58.92	63.08	clay-sericite + potassic + silicification + hematite	patchy moderate to strong clay-sericite mostly at gougy intervals, breccia infill and near beginning and end of interval; large potassic-siliceous clasts up to 50 cm with patchy dark red (hematite?) alteration
11-SH-003	63.08	66.05	potassic + silicification + chlorite-hematite-pyrite + clay-sericite-carbonate	strong pervasive potassic alteration; pervasive patches and breccia infill of silicification; moderately chlorite-hematite-clay-pyrite altered clasts up to 5 cm; moderate clay-sericite-carbonate fracture infill up to 0.5 cm;
11-SH-003	66.05	68.1	silicification-chlorite + clay-sericite-potassic	a strongly pervasive silicified rhyolite tuff matrix with chloritic lithics (dark grey with green lithics) with clay-sericite-potassic (beige-orange-peach) altered rhyolite tuff clasts
11-SH-003	68.1	83.25	potassic + clay-sericite + silicification	moderate to strong patchy pervasive silicification (cherty veining), mottled texture and as stringers; strong pervasive potassic-clay-sericite alteration; fracture controlled clay alteration typically 20 - 50 deg TCA
11-SH-003	83.25	87.45	chlorite-clay-sericite + potassic + silicification + hematite	moderate to strong pervasive clay-chlorite-sericite alteration; patchy potassic alteration mostly clasts and 7 cm vein (adularia); moderate patchy matrix silicification; weak patchy hematite alteration
11-SH-003	87.45	89.97	potassic + clay-sericite + chlorite	moderate patchy pervasive potassic alteration; strong pervasive clay-sericite; patchy structurally controlled weak chlorite associated with clay-sericite (pastel-green color)
11-SH-003	89.97	101.4	hematite + clay-sericite + chlorite	moderate to strong pervasive hematite alteration (brick red and red-maroon) overprinting moderate clay-sericite alteration with a weak matrix of dark grey soft material (chlorite? Clay?) up to 0.5 cm thick
11-SH-003	101.4	104.25	clay-sericite + chlorite + hematite + potassic	moderate pervasive clay-sericite and chlorite altered matrix; weak patchy hematite alteration; interval between 101.5 - 102.65 m has pervasive moderate potassic alteration (peach-orange color) and weak patchy potassic alteration elsewhere
11-SH-003	104.25	104.25	EOH	EOH

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	2.6		str	70		irregular, dismembered, vuggy (with drusy quartz), up to 1mm thick
11-SH-003	4.11		vnlt	80		planar, slightly irregular, vuggy (with drusy quartz), up to 2mm thick
11-SH-003	5.8		gouge	40		1mm orange-peach gouge
11-SH-003	5.97		fracture	60		planar, slightly irregular, highly vuggy (iron oxide) healed fracture up to 2mm thick; up to 2.5cm iron oxide alteration banding surrounding
11-SH-003	6.05		fracture	35		healed fracture with up to 1cm alteration (iron oxide) banding surrounding
11-SH-003	6.77		alt band	25		limonite/iron oxide alteration banding; tightly spaced bands (~1mm)
11-SH-003	7.15		gouge	20		2-4mm white-light grey-peach clay gouge with few brecciated fragments
11-SH-003	7.24		gouge	0		0.5-1cm white-light grey-peach clay gouge oriented sub-parallel TCA; few brecciated fragments, typically less than 1mm
11-SH-003	7.96		vnlt	50		planar, vuggy (iron oxide filled), 1mm thick
11-SH-003	8.01		gouge	50		<1mm orange-peach clay gouge
11-SH-003	8.42		vnlt	65		0.1-1cm vnlt; partially dismembered, boudinaged, vuggy (iron oxide filled), milky-grey quartz
11-SH-003	8.48		fracture	35		healed fracture with common elongate vugs (iron oxide filled)
11-SH-003	8.62		str	75		planar to irregular, up to 1mm thick grey quartz with (adularia?) selvage
11-SH-003	8.72		vnlt	45		planar, vuggy (iron oxide filled), cherty quartz vnlt up to 2mm thick
11-SH-003	8.89		gouge			1mm grey-green clay gouge with brecciated fragments up to 1mm; no measurable angle
11-SH-003	9.05		fracture	60		healed fracture with 4cm limonite/iron oxide alteration halo; common elongate vugs along fracture plane
11-SH-003	9.25		fracture	15		healed fracture with common elongate vugs (iron oxide filled)
11-SH-003	9.6		gouge	75		light-med grey clay gouge up to 1cm thick with brecciated fragments up to 1mm
11-SH-003	9.86		gouge	15		med grey-brown clay gouge up to 2mm thick with brecciated fragments <1mm
11-SH-003	9.91		vnlt			dismembered quartz material; milky quartz with abundant vugs (limonite/iron oxide filled); no measurable angle
11-SH-003	10	10.36	brkn		mod	broken zone with common fault gouge; pieces up to 5cm
11-SH-003	10.15		gouge	10		med grey-brown clay gouge up to 2mm thick with brecciated fragments <1mm; within broken zone
11-SH-003	10.54		gouge	70		light grey-peach clay gouge up to 1cm thick with brecciated fragments <2mm
11-SH-003	11.27	11.5	gouge			light grey-orange-peach clay gouge with brecciated fragments up to 5mm; no measurable angle
11-SH-003	11.95		gouge	55		light grey-orange-peach clay gouge with brecciated fragments up to 3mm
11-SH-003	12.98		gouge	35		dark grey-maroon clay gouge up to 0.5cm thick with brecciated fragments up to 1mm
11-SH-003	12.4	12.48	gouge	50		grey-beige clay gouge containing brecciated fragments up to 5mm
11-SH-003	14.03		str	65		planar, grey quartz fracture infill <1mm thick; off-white colored selvage (adularia?)
11-SH-003	14.6		fracture	25		fracture controlled disseminated manganese (healed fracture)
11-SH-003	14.7		fracture	20		fracture controlled disseminated manganese with limonite/Fe-oxide vein halo up to 3 mm (healed fracture)
11-SH-003	15.02		fracture	60		fracture controlled disseminated manganese and limonite/Fe-oxide (healed fracture)
11-SH-003	15.1		fracture	25		fracture controlled disseminated and patchy pervasive manganese alteration up to 1 cm halo around fracture
11-SH-003	15.75		gouge	65		up to 1 cm thick yellow-beige clay gouge
11-SH-003	16.3		gouge	35		up to 2 cm thick yellow-beige clay gouge with clasts up to 4 mm
11-SH-003	16.7		fracture	40		irregular fracture plane with limonite/Fe-oxide
11-SH-003	17.2		fracture	20		planar fracture with 1 mm yellow-orange clay gouge and a limonite/Fe-oxide fracture halo up to 1 cm thick
11-SH-003	17.8		fracture	30		irregular fracture plane with <1 mm clay gouge and limonite/Fe-oxide/manganese alteration halo up to 1 cm thick

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	18.8		fracture	50		seemingly fracture controlled quartz material up to 5 mm thick (almost as if silica fragments are dispersed throughout healed fracture)
11-SH-003	19.2		vnlt	35		undulating, irregular dark grey quartz 1-3 mm vnlt with vuggy voids up to 1 mm wide; manganese alteration is most likely giving it a dark grey color
11-SH-003	19.95		vnlt	35		incomplete (not recovered) 3 mm grey quartz vnlt with vuggy voids up to 1 mm thick and fine drusy quartz
11-SH-003	20.25		str	30		irregular, undulating grey quartz stringer, fracture controlled with moderate to strong limonite/Fe-oxide clay surrounding it
11-SH-003	20.5		fracture	55		fracture filled with limonite/Fe-oxide up to 2 mm thick and disseminated manganese alteration
11-SH-003	20.7		str	10		<1 mm dark grey quartz stringer, irregular and undulating
11-SH-003	21.1		gouge	40		irregular fracture plan with up to 2 mm orange-yellow clay
11-SH-003	21.4		vn	5		0-10 deg TCA vein, caught the edge of it (doesn't go all around core), up to 1-2 cm thick, dark grey quartz
11-SH-003	22.75		gouge	65		3-4 cm of orange-yellow-beige clay with clasts up to 0.5 cm
11-SH-003	23.15		gouge	80		2 cm of orange-yellow-grey clay with clasts up to 2 mm
11-SH-003	23.8		gouge	70		upper limit of gouge and strongly clay altered rock (soft and breaks easily), gouge is orange-grey clay with clasts up to 2 mm
11-SH-003	24.1		gouge	35		lower limit of gouge and strongly clay altered rock; up to 5 cm of grey-orange clay at end of interval
11-SH-003	24.99		gouge			unmeasurable gouge contact, dark grey clay; 1-2 mm
11-SH-003	25.35		vnlt	45		1-2 mm grey quartz vnlt; irregular and undulating, weakly offset
11-SH-003	25.37		gouge	60		5 cm of grey-orange clay gouge with very strongly clay altered clasts up to 2 cm
11-SH-003	25.6		gouge	70		1-2 cm of grey-orange clay gouge with clasts up to 2 mm
11-SH-003	26.7		gouge	45		up to 4 mm of dark grey gouge with clasts up to 2 mm
11-SH-003	28.04	28.68	bx		strong	mod-strongly brecciated interval with abundant clay gouge
11-SH-003	28.04	28.3	gouge	80		tan-orange gouge with brecciated fragments up to 1cm
11-SH-003	28.41		gouge			tan-orange gouge with brecciated fragments up to 2mm; 1cm thickness
11-SH-003	28.53		gouge	70		tan-grey with orange; 2-3cm thick gouge with brecciated fragments
11-SH-003	28.84		str	55		irregular, partly dismembered, 0.5-2mm milky+grey quartz stringer
11-SH-003	28.92		vnlt	60		planar to irregular, 2-5mm grey comb quartz vnlt
11-SH-003	29.01		vn	70		planar to slightly irregular, 2cm milky white to grey comb+crustiform quartz vein with minor carbonate
11-SH-003	29.3		gouge	40-70		med grey to tan, 2-3cm gouge on curvilinear surface; brecciated fragments up to 4mm
11-SH-003	29.5		gouge	70		grey gouge, <1mm
11-SH-003	29.89	30	gouge	70		tan-beige-grey gouge with brecciated fragments up to 5mm
11-SH-003	30.03		gouge	50		tan-beige-grey 0.5-1cm gouge with brecciated fragments up to 5mm
11-SH-003	30.36		fracture	30		healed planar fracture with rusty orange infill and small (<1mm)
11-SH-003	30.46		gouge	40		yellow beige clay gouge up to 4 mm thick with up to 2 mm clasts
11-SH-003	30.86		vnlt	70		partial recovery (60-70%) due to broken core; grey to dark grey quartz with a band of calcite within vnlt up to 3 mm thick and infilling vuggy cavity; 4-5 mm thick;
11-SH-003	30.25	31.2	brkn			broken zone, moderately fractured with pieces mostly < 5 cm, rarely up to 10 cm; vnlt @ 30.86 m broken up and partly missing
11-SH-003	30.9		fracture	30		healed planar fracture with rusty orange infill (and rare patch of soft black and small (<1mm) cavities
11-SH-003	31.57		vnlt	70		vnlt splays into 2 parts: 60 & 80 degrees TCA; 1-5mm dark grey quartz vnlt with cavity up to 2mm filled with limonite/clay; limonite/clay gouge at downhole margin
11-SH-003	32.32		vnlt	70		2 sub-parallel quartz vnlt (0-4mm) with 3 associated sub-parallel stringers; minor clay/limonite infill

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	32.34		fracture	40		irregular, healed fracture with clay/limonite infill
11-SH-003	32.88		fracture	80		<1mm voids with white clay infill
11-SH-003	32.9		vn	70		1-2cm dark grey cherty quartz; only partial recovery of vnlt
11-SH-003	32.98		vnlt	90		1-3mm planar, grey quartz vnlt
11-SH-003	33.01		vnlt	75		1-10mm splayed, weakly colloform textured, grey quartz vnlt with branches at 75 and 80 degrees TCA; clay infill associated with elongated mm-scale cavities; minor carbonate
11-SH-003	33.15		vnlt	70		2-3mm planar, weakly colloform textured, grey quartz vnlt with <1mm (adularia?) selvage
11-SH-003	33.16		vnlt	80		2-3mm planar, weakly colloform textured, grey quartz vnlt with
11-SH-003	33.22		str	90		<1mm planar, grey quartz stringer
11-SH-003	33.26		fracture	25		healed fracture (~1mm) with limonite-clay infill
11-SH-003	33.42	33.85	brkn		mod	mod-strongly fractured with pieces up to 10cm; common gouge and occasional partially recovered grey quartz vnlt up to 2mm
11-SH-003	33.88		str	80		1mm planar, milky white-grey quartz stringer; fracture down middle of stringer with limonite coating
11-SH-003	33.92		vn	25		0.2-1.5cm irregular, weakly brecciated, weakly colloform banded, milky white-dark grey quartz with trace finely disseminated pyrite; large central cavity (up to 1cm) filled with clay-calcite-limonite
11-SH-003	33.95		vnlt	80		3-5mm planar, weakly colloform banded, grey quartz vnlt with cavities <1mm; trace finely disseminated pyrite; crosscut by 25 degree vein (33.92)
11-SH-003	34.05		str	80		3 <1mm stringers grey quartz stringers with small, calcite filled cavities
11-SH-003	34.14		vn	70		up to 2cm colloform banded, milky white to grey quartz vein with adularia selvages (up to 5mm); dark band on margin of adularia (up to 1mm); trace disseminated pyrite associated with dark patches (up to 2mm); up to 2mm light grey clay gouge on up-hole margin of vein; only partial recovery due to breakage and loss
11-SH-003	34.29		vnlt	80		6-7mm quartz vnlt with randomly oriented adularia/feldspar crystals at margins of veins (up to 2mm); dark patch of disseminated purple specks up to 2mm; minor clay infill; ~25% recovery
11-SH-003	34.33		str	80		<1mm weakly undulating, grey quartz stringer with dark grey selvages with clay-carbonate infill
11-SH-003	34.59		vnlt	70		1-3mm weakly undulating, weakly colloform banded, white-grey quartz vnlt with vugs up to 1mm (clay + light purple drusy quartz infill); very trace finely disseminated pyrite
11-SH-003	34.9		vnlt	80		1-3mm planar, weakly colloform banded, grey quartz vnlt with patchy adularia selvage; up to 2mm carbonate infill
11-SH-003	34.99	35.2	vnlt	70		6 vnlt + few stringers; 1-6mm undulating, weakly colloform banded, dark grey quartz vnlt with rare toothcomb texture; carbonate-clay infill up to 4mm
11-SH-003	35.2	35.33	brkn		mod	moderately broken with pieces up to 8cm; common quartz vnlt fragments and minor clay gouge
11-SH-003	35.41		vnlt	85		3-5mm planar, colloform banded, grey quartz vnlt with minor (<1mm) adularia selvage; elongated central cavities up to 1mm wide with clay-carbonate + drusy quartz infill; trace finely disseminated pyrite
11-SH-003	35.44		vnlt	90		2-3mm planar, toothcomb-textured, grey quartz vnlt with clay infilled central fracture (<1mm); trace finely disseminated pyrite
11-SH-003	35.46		vn	70		4-5cm planar to irregular, colloform banded, white-grey quartz vein with adularia bands up to 2-3mm; fine-grained and weakly comb-textured bladed quartz in centre and at margins; elongate cavities run down the centre of the vein with occasional rounded cavities towards margins, infilled with clay-carbonate and drusy quartz; trace finely disseminated pyrite, with sulfide concentrations in dark speckled patches (electrum?)

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	35.57		vn	70		5cm planar, colloform banded + bladed, white-grey quartz vein with adularia bands up to 2-3cm; fine-grained to bladed at margins and centre; elongate cavities run down the centre of the vein with occasional rounded cavities towards margins, infilled with clay-carbonate and drusy quartz; trace finely disseminated pyrite, with sulfide concentrations in dark speckled patches (electrum?) occurring along growth planes; 1-3mm weakly colloform banded, white-grey quartz vnlt follows 3-5cm after vein
11-SH-003	36.03		vnlt	75		2-4mm, weakly undulating, weakly colloform banded, white-grey quartz
11-SH-003	36.32		ctc	60		sharp contact
11-SH-003	36.4		vnlt	85		7-8mm, planar, weakly colloform banded, white-grey quartz; rare vugs up to 3mm with clay infill; rare adularia clasts up to 5mm
11-SH-003	36.42		vn	70		4.5-5cm planar to slightly sheared, mod-strongly colloform banded, white to grey quartz with adularia bands up to 7-8mm; toothcomb textured quartz radiating from margins of vein and adularia bands; occasional vugs up to 4mm wide containing fine drusy quartz; rare encircling colloform bands around individual quartz crystals; trace disseminated pyrite; rare light green patches (chlorite?); calcite-clay infilled cavities common
11-SH-003	36.52		alt band	60		undulating boundary
11-SH-003	36.68		ctc	40		sharp contact
11-SH-003	36.68		str	85		2 stringers 2cm apart 80/90 degrees TCA; <1mm dark grey quartz with clay alteration; crosscuts contact at 36.68
11-SH-003	36.77		vnlt	80		1-2mm weakly undulating, dark grey quartz with clay infill up to 1mm along centre of vein
11-SH-003	37.38	37.46	vnlt	75		3 vnlt, 70-80 degrees TCA with 2 stockworked/interconnecting within 1cm; 1-4mm, weakly colloform banded, grey quartz with clay-carbonate infill up to 2mm along centre of vein
11-SH-003	37.68		vnlt	80		vnlt splays into 3 stringers; 80-85 degrees TCA with up to 7mm with 1-3mm splays; grey quartz with clay infill down centre
11-SH-003	37.7		gouge	75		2-3cm white-grey gouge with clasts up to 6mm; trace disseminated pyrite
11-SH-003	37.73	38	brk		mod	mod-strongly fractured with pieces up to 5cm; minor quartz material
11-SH-003	38.3		str	45		mod undulating grey quartz stringer up to 1mm thick
11-SH-003	38.75		fracture	65		yellow to white clay-limonite infill <1mm
11-SH-003	38.85	39.15	brk			mod-strongly fractured with pieces up to 4cm
11-SH-003	39.2		gouge	30		1-2mm beige-grey clay
11-SH-003	39.26	39.33	fracture	40		series of 3 fractures with grey-beige-green clay gouge 2-3mm thick
11-SH-003	39.69		fracture	30		healed fracture with clay infill <1mm
11-SH-003	40.16	40.23	gouge	40		grey-tan clay gouge rich brecciated zone
11-SH-003	40.23	41.9	brk		mod	mod-strongly broken zone with abundant brecciated pieces and clay gouge up to 2cm; gouge typically contains clasts up to 3mm; occasional white quartz stringers; no orientations
11-SH-003	41.88		vnlt	70		2-3mm planar, white-grey quartz vnlt with weak colloform banding and toothcomb textures; clay infill <1mm in fracture down centre
11-SH-003	42	42.45	brk			moderately broken with pieces up to 10cm; minor gouge and quartz material
11-SH-003	42.3		vnlt			2 grey quartz vnlt within broken zone at 40 and 85 degrees TCA; shallow dipping vnlt is highly clay-carbonate altered and is crosscut by steeply dipping vnlt (showing minor clay-carbonate infill) actual depth unsure
11-SH-003	42.45		str	70		up to 1mm irregular, dismembered and splayed, white-grey quartz stringer with clay-carbonate infill <1mm
11-SH-003	42.5		vn	70		1-1.5cm planar, splayed, weakly colloform banded white-grey quartz vein with clay-carbonate infill in series of fractures sub-parallel to banding; <1mm adularia bands; vein offset by fault at 40 degrees TCA, containing 1-2mm dark grey clay gouge

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	42.54	43.2	vnlt/str + stwk + bx			stockwork of vnlt and stringers related to brecciated zone; white-grey quartz-carbonate with clay-carbonate infill in vugs and fractures; trace finely disseminated pyrite, often along vein margins
11-SH-003	42.61		vn	80		1.5cm planar, weakly colloform banded white-grey quartz-carbonate vein; carbonate-clay infill in cavities up to 1cm; euhedral bladed carbonate crystals present in cavities; minor clay-altered adularia bands and selvage <1mm; vein is connected to stockwork from 42.54-42.84m
11-SH-003	42.76		vn	30		1-2cm irregular, undulating, white-grey quartz carbonate vein composing part of a stockworked zone; quartz is fine grained and
11-SH-003	43		vn	30		20-30 degrees TCA, irregular quartz-carbonate vein; continuation of undulating vein at 42.76
11-SH-003	43.28	44.13	brk	60	weak	weak-moderately fractured zone with minor clay gouge <1mm; fractures are typically oriented at 50-60 degrees TCA
11-SH-003	44.13	50.9	bx/brkn		strong	moderate-strongly brecciated and broken zone; abundant gouge intervals up to 25cm; common quartz veining, clay-carbonate fracture infill, and trace-2% disseminated pyrite; fractures are typically oriented at 50-70 degrees TCA
11-SH-003	44.13		gouge	60		0.5-1cm grey-tan clay gouge with clasts up to 3mm
11-SH-003	44.22		gouge	80		4-5cm grey clay gouge with clasts up to 8mm
11-SH-003	44.34		fracture	60		healed fracture with clay infill ~1mm; common elongate cavities along fracture plane
11-SH-003	44.6	45	gouge			20cm recovered grey to tan clay gouge with clasts up to 1.5cm
11-SH-003	45		vn	70		4-5cm white-grey quartz vein, possibly larger but up-hole vein contact not recovered; irregular, deformed, bladed quartz with very weak colloform banding; wispy, irregular adularia banding; common fractures and cavities up to 3mm with clay infill; trace finely disseminated pyrite, especially along vein margins
11-SH-003	45.07		vnlt	60		1-2mm planar, partly dismembered, weakly colloform grey quartz vnlt with minor clay infill
11-SH-003	45.16		vnlt	60		2-3mm irregular grey quartz vnlt with fractures and elongate cavities containing clay infill
11-SH-003	45.19		vn	60		1-1.5cm, irregular, weakly colloform banded, grey-white quartz vein with dismembered adularia selvages and bands; minor clay fracture and vug infill
11-SH-003	45.22		gouge	50		1-2cm clay gouge with abundant clasts (including common quartz material) up to 5mm; 2-3% finely disseminated pyrite
11-SH-003	45.3		vn	50		1-1.5cm planar, colloform banded, weakly brecciated grey-white quartz vein with bands of adularia; trace finely disseminated pyrite
11-SH-003	45.88	45.91	stwk	60		quartz-carbonate stringer/vnlt stockwork zone bounded by broken zone above and 2-3mm planar, colloform, 60 degree TCA vnlt below; common clay and carbonate infill in fractures and cavities
11-SH-003	46.14		vn	70		1cm planar-irregular, colloform banded, white-grey quartz vein with adularia (~1mm); rare dark speckled patches with very fine metallic yellow mineral (pyrite/electrum?)
11-SH-003	46.58	46.68	fracture zone	70		fractured zone with minor clay gouge infill
11-SH-003	46.68		gouge	70		4-5cm med grey clay gouge with clasts up to 1cm
11-SH-003	46.92		vnlt	70		4-6mm irregular, weakly boudinaged, grey quartz-adularia vnlt
11-SH-003	47.04		vnlt	80		4-8mm planar, splayed, weakly colloform, grey quartz vnlt set; common cavities with drusy quartz and minor clay; trace weakly disseminated pyrite
11-SH-003	47.4	47.6	gouge			grey, highly brecciated zone with abundant gouge and clasts up to 5cm; 1-3% disseminated quartz; 15cm recovery over interval
11-SH-003	47.66		gouge			5cm grey clay gouge with clasts up to 1cm; trace disseminated pyrite
11-SH-003	49		vn	75		9-10cm planar to irregular, brecciated, white-grey-beige quartz-adularia-carbonate vein with 1-3cm adularia selvages; weak
11-SH-003	49.1	49.38	gouge			30cm recovery; grey to tan-beige gouge with clasts up to 5cm, but typically around 0.5cm
11-SH-003	51.52		str	20		1mm irregular, quartz-carbonate stringer

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	52.85		vnlt	70		2-3mm planar to irregular, partially brecciated, grey quartz vnlt
11-SH-003	55.03		fracture	70		planar fracture with chloritic clay coating
11-SH-003	60.2		fracture	20		healed planar fracture with carbonate-clay up to 2 mm
11-SH-003	60.25		vnlt	65		1-4 mm carbonate vnlt
11-SH-003	60.75		fracture	15		hairline fracture with chlorite-clay infill < 1 mm
11-SH-003	61.45		gouge	40		grey-beige clay gouge up to 5 cm thick with large clasts up to 1 cm
11-SH-003	63.08		gouge	10		weak gouge with strong chlorite-clay alteration; rock is still competent but may have been sheared to form this distinct clay-chlorite rich contact with upcoming interval
11-SH-003	63.53		vnlt	70		carbonate vnlt, weakly brecciated and irregular, up to 5 mm thick
11-SH-003	63.99		fracture	70		healed fracture with clay-quartz-carbonate infill, <1 mm
11-SH-003	64.2		fracture	45		healed fracture with clay-carbonate infill, <1 to 3 mm
11-SH-003	66		vnlt	60		carbonate vnlt, irregular and undulating, <1 to 2 mm thick
11-SH-003	68	68.8	str	50		a series of < 1 mm stringers (about 10) oriented 40 to 60 deg TCA; grey quartz with rare carbonate
11-SH-003	69	69.14	vn bx	60		vein is broken at lower contact; strong carbonate-altered quartz-adularia weakly brecciated vein with visible elongate crystals up to 1 cm tall and 1-3 mm thick; 1-2 cm white-beige clay gouge at 60 deg TCA with clasts up to 3-4 mm; 1-2 mm quartz-carbonate vnlt running through the vein
11-SH-003	69.76		gouge	60		2-5 mm white-beige clay gouge with clasts up to 4 mm
11-SH-003	69.88		gouge	30		1-2 cm clay gouge, light green - light peach - white - beige color with clasts up to 3-4 mm
11-SH-003	69.95	70.05	vnlt	60		two 1-2 mm quartz-carbonate vnlt, weakly irregular and undulating
11-SH-003	70.9	78	str	57		vnlt and stringers (>50) of quartz-carbonate, dark grey and white; mostly < 1 mm, rarely more than 1 mm; orientations vary from 45 to 70 deg TCA, rarely 30 and 80 deg TCA;
11-SH-003	78.25	78.4	vnlt	57		6 vnlt, 1-3 mm; quartz-carbonate; grey and white; weakly vuggy/drusy;
11-SH-003	79.01		fracture	25		fracture controlled dark red (hematite) alteration up to 0.5 cm around fracture
11-SH-003	79.31		fol/fab	60		preferred orientation represented by mineral alignment as well as alternating potassic (orange-peach) and siliceous (dark grey) banding
11-SH-003	79.9		vn	60		0.5 - 2 cm vein, dark grey chert; locally irregular contacts
11-SH-003	80.03		vnlt	40		irregular, undulating dark grey cherty vnlt, 2-5 mm thick
11-SH-003	80.25		fracture	62		hairline fractures with white clay infill <1 mm; 60 - 65 deg TCA
11-SH-003	80.35	80.6	vn stwk			0.1 - 3 cm thick dark grey chert vein stockwork; irregular undulating contacts; 25 - 65 deg TCA
11-SH-003	80.9	81.12	vnlt	52		3 vnlt of grey chert; 1 - 4 mm; irregular and undulating, at times dismembered material
11-SH-003	81.3		fracture	45		fracture controlled carbonate infill up to 2 mm thick
11-SH-003	81.65		fol/fab	65		preferred orientation represented by mineral alignment as well as alternating potassic (orange-peach) and siliceous (dark grey)
11-SH-003	81.75	81.8	gouge	55	weak-mod	2 gouge up to 1 cm thick within 5 cm; beige-white with clasts up to 3-4 mm
11-SH-003	82	83	fracture	42		fracture controlled carbonate infill up to 1 cm thick; 35 to 50 deg TCA, irregular
11-SH-003	83	83.4	brkn			broken subangular and grinded core, pieces no bigger than 3-4 cm
11-SH-003	83.5	84.5	gouge			clay gouge material surrounding mafic clasts (clasts are 3-5 cm, subrounded, weakly brecciated with clay in mm fractures)
11-SH-003	85.02		fracture	45		moderately planar fracture with 1-2 mm carbonate on surface

11-SH-003 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-003	85.3		gouge	75		3-4 mm grey-white clay gouge on fracture
11-SH-003	85.8	86	brkn			broken subangular core with pieces no bigger than 3 cm
11-SH-003	86		gouge	40		5 cm grey-green gouge after a 20 cm interval of broken core
11-SH-003	86.15		vnlt	65		2 quartz-carbonate vnlt; 0.2 - 1.5 cm; irregular and undulating
11-SH-003	86.25		vn	60		6 cm quartz-adularia vein with weak carbonate infill; weakly crystalline rather than massive; rare dark patches up to 0.5 cm; clay gouge within vein up to 2-3 mm at 80 deg TCA
11-SH-003	86.65		fracture	70		white clay-filled fracture, <1 mm
11-SH-003	86.75		gouge	60	weak	weak clay gouge affecting crumbling rock, up to 5 cm thick; light grey-green
11-SH-003	86.8		gouge	65	strong	2-3 cm of of beige-grey clay gouge with clasts up to 2-3 mm
11-SH-003	87.1	87.2	fracture	40		1-2 mm fracture filled carbonate, pinches out and irregular, up to 3 mm thick; carbonate infill in matrix up to 3 mm thick nearby
11-SH-003	88		gouge			9 cm peach-pastel green-white clay gouge, no measurable angles due to rounded edges; clasts up to 3-4 mm
11-SH-003	89.97		ctc	20		contact between altered (peach-orange) lithology and upcoming hematite rich breccia
11-SH-003	90.6		fol/fab	55	weak	weak foliation fabric due to hematite-clay altered banding within brecciated interval between 90-91 m
11-SH-003	91.7		gouge		weak	1-3 mm hematite-clay (grey-red) gouge at 20 and 60 deg TCA
11-SH-003	93.2		gouge	60		1-2 cm hematite-clay (grey-red) gouge at 60 deg TCA
11-SH-003	94.7		fracture	70		fracture with hematite-clay cover up to 1 mm thick
11-SH-003	95.95		fracture	70		planar fracture
11-SH-003	102.4	102.5	ctc	40		contact with clay rich rhyolite tuff, affected by weak clay gouge for up to 10 cm
11-SH-003	103.15		gouge	85	moderate	moderate clay altered rhyolite tuff affected by clay gouge up to 5 cm (falls apart and is clast supported)
11-SH-003	102.85	103.25	stwk		weak-mod	weak-mod carbonate infill as stockwork at 20, 40 and 70 deg TCA; up to 4 mm thick

11-SH-003 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-003	0.00	0.91	0.91	0.13	14.29	0.00	0.00	0
11-SH-003	0.91	1.83	0.92	0.12	13.04	0.00	0.00	0
11-SH-003	1.83	3.66	1.83	0.73	39.89	0.30	41.10	2
11-SH-003	3.66	6.71	3.05	2.51	82.30	1.17	46.61	5
11-SH-003	6.71	9.75	3.04	3.04	100.00	1.50	49.34	11
11-SH-003	9.75	12.80	3.05	2.91	95.41	1.57	53.95	11
11-SH-003	12.80	15.85	3.05	2.90	95.08	2.15	74.14	12
11-SH-003	15.85	18.90	3.05	2.42	79.34	1.53	63.22	8
11-SH-003	18.90	21.95	3.05	2.92	95.74	1.69	57.88	11
11-SH-003	21.95	24.99	3.04	2.87	94.41	1.50	52.26	9
11-SH-003	24.99	28.04	3.05	2.65	86.89	1.00	37.74	8
11-SH-003	28.04	31.09	3.05	2.89	94.75	0.91	31.49	8
11-SH-003	31.09	34.14	3.05	2.86	93.77	1.55	54.20	11
11-SH-003	34.14	37.19	3.05	3.01	98.69	1.33	44.19	9
11-SH-003	37.19	40.23	3.04	2.57	84.54	0.67	26.07	5
11-SH-003	40.23	43.28	3.05	2.84	93.11	0.55	19.37	4
11-SH-003	43.28	46.33	3.05	1.98	64.92	0.48	24.24	3
11-SH-003	46.33	49.38	3.05	2.55	83.61	0.32	12.55	2
11-SH-003	49.38	52.43	3.05	1.83	60.00	0.26	14.21	2
11-SH-003	52.43	55.47	3.04	2.40	78.95	1.53	63.75	8
11-SH-003	55.47	58.52	3.05	2.75	90.16	1.09	39.64	8
11-SH-003	58.52	61.57	3.05	2.90	95.08	1.94	66.90	12
11-SH-003	61.57	64.62	3.05	2.30	75.41	1.10	47.83	5
11-SH-003	64.62	67.66	3.04	2.80	92.11	1.88	67.14	10
11-SH-003	67.66	70.71	3.05	2.85	93.44	1.47	51.58	8
11-SH-003	70.71	73.76	3.05	3.00	98.36	3.00	100.00	8
11-SH-003	73.76	76.81	3.05	3.00	98.36	2.85	95.00	5
11-SH-003	76.81	79.86	3.05	2.87	94.10	2.80	97.56	7
11-SH-003	79.86	82.91	3.05	2.90	95.08	2.04	70.34	9
11-SH-003	82.91	85.95	3.04	2.50	82.24	1.70	68.00	11
11-SH-003	85.95	89.00	3.05	2.75	90.16	1.22	44.36	9
11-SH-003	89.00	92.05	3.05	2.95	96.72	1.75	59.32	9
11-SH-003	92.05	95.10	3.05	2.95	96.72	1.60	54.24	10
11-SH-003	95.10	98.15	3.05	2.90	95.08	2.35	81.03	10
11-SH-003	98.15	101.20	3.05	3.00	98.36	2.55	85.00	8
11-SH-003	101.20	104.25	3.05	2.90	95.08	2.85	98.28	9

EOH

11-SH-003 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-003	2	0.96
11-SH-003	3	0.49
11-SH-003	4	0.14
11-SH-003	5	0.12
11-SH-003	6	0.29
11-SH-003	7	0.23
11-SH-003	8	0.09
11-SH-003	9	0.01
11-SH-003	10	0.12
11-SH-003	11	0.2
11-SH-003	12	0.4
11-SH-003	13	0.21
11-SH-003	14	0.29
11-SH-003	15	0.09
11-SH-003	16	0.51
11-SH-003	17	0.03
11-SH-003	18	0.43
11-SH-003	19	0.23
11-SH-003	20	0.09
11-SH-003	21	0.12
11-SH-003	22	0.05
11-SH-003	23	0.16
11-SH-003	24	0.01
11-SH-003	25	0.16
11-SH-003	26	0.43
11-SH-003	27	0.73
11-SH-003	28	0.07
11-SH-003	29	0.93
11-SH-003	30	0.21
11-SH-003	31	0.09
11-SH-003	32	0.14
11-SH-003	33	0.27
11-SH-003	34	0.32
11-SH-003	35	0.56
11-SH-003	36	0.21
11-SH-003	37	0.1
11-SH-003	38	0.69
11-SH-003	39	0.16
11-SH-003	40	0.21

11-SH-003 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-003	41	0.14
11-SH-003	42	0.18
11-SH-003	43	0.43
11-SH-003	44	0.73
11-SH-003	45	0.54
11-SH-003	46	0.29
11-SH-003	47	0.05
11-SH-003	48	0.21
11-SH-003	49	0.05
11-SH-003	50	0.05
11-SH-003	51	0.05
11-SH-003	52	0.38
11-SH-003	53	0.38
11-SH-003	54	0.18
11-SH-003	55	0.73
11-SH-003	56	0.1
11-SH-003	57	1.07
11-SH-003	58	0.42
11-SH-003	59	2.47
11-SH-003	60	0.21
11-SH-003	61	0.47
11-SH-003	62	0.53
11-SH-003	63	0.6
11-SH-003	64	0.07
11-SH-003	65	1.04
11-SH-003	66	0.62
11-SH-003	67	0.18
11-SH-003	68	0.25
11-SH-003	69	0.89
11-SH-003	70	0.03
11-SH-003	71	0.64
11-SH-003	72	0.25
11-SH-003	73	0.34
11-SH-003	74	0.12
11-SH-003	75	0.47
11-SH-003	76	0.05
11-SH-003	77	0.27
11-SH-003	78	0.43
11-SH-003	79	0.4

11-SH-003 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-003	80	0.27
11-SH-003	81	0.95
11-SH-003	82	0.38
11-SH-003	83	0.23
11-SH-003	84	0.42
11-SH-003	85	0.42
11-SH-003	86	0.44
11-SH-003	87	0.69
11-SH-003	88	0.62
11-SH-003	89	0.49
11-SH-003	90	0.84
11-SH-003	91	1.04
11-SH-003	92	0.09
11-SH-003	93	0.45
11-SH-003	94	0.29
11-SH-003	95	0.38
11-SH-003	96	0.03
11-SH-003	97	0.69
11-SH-003	98	0.14
11-SH-003	99	0.62
11-SH-003	100	0.01
11-SH-003	101	0.16
11-SH-003	102	0.2
11-SH-003	103	0.01
11-SH-003	104	0.29

11-SH-004 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-004	0.00	0.20	OB	OB	overburden	
11-SH-004	0.2	80.21	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	light to dark green-grey, rusty yellow-orange alteration for the first 9 m, weakening afterwards; matrix supported; 20-30% crystal lithics; fine to coarse grained with heterolithics up to 5 cm; clasts are chlorite altered, silica fragments, white and peach-orange feldspar; chalcedony, dark mafic - angular to subrounded and various heterolithics with internal clasts; clay-sericite-chlorite altered matrix and clasts with patchy siliceous overprints; rare hematite alteration as fracture controlled often with clay (dark red-maroon) and as selvages around carbonate infill; dark alteration material as veinlets/fracture infills with haloes up to 0.5 cm, at times stockworked and resulting in a weakly brecciated texture, usually associated with carbonate-clay-chlorite infill and finely disseminated pyrite; trace to 2% finely disseminated pyrite with concentrations found in quartz-carbonate infilled fractures and clay gouge; rare veinlets, typically mm-scale, rarely up to 1 cm, generally carbonate with weak hematite selvages; locally weakly brecciated	
11-SH-004	80.21	80.29	fault gouge	fault gouge	8cm, dark grey-green clay gouge with brecciated fragments up to 1cm; lower margin marks contact with red rock; alterations mirror crystal lithic rhyolite tuff	
11-SH-004	80.29	92.35	altered feldspar porphyry	altered feldspar phyrlic igneous rock	red to beige-yellow (in bleached areas); 30-40% phenocrysts, likely mostly altered feldspar crystals; phenocrysts are typically euhedral to subhedral rectangular with fewer rounded crystals; initial clay-sericite alteration of the matrix and phenocrysts has likely been strongly overprinted by pervasive hematite alteration; silicification is patchy and appears to be related to fracture-controlled bleaching; clay-carbonate infilled fractures are abundant, with few weak carbonate stockworks; zones of brecciation scattered throughout interval, typically with clay gouge matrix (sometimes + carbonate); faulting is common, with abundant fault gouge as evidence; trace finely disseminated pyrite in gouge/fractures;	
11-SH-004	92.35	92.35	EOH	EOH	EOH	

11-SH-004 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-004	0.2	9.05	clay-sericite + limonite/Fe-oxide + manganese + silicification	pervasive moderate clay-sericite alteration (light grey-green); fracture controlled limonite/Fe-oxide (rusty yellow-orange) with fracture haloes > 5 cm and lengthy intervals >1 m affected; mangangese alteration is strictly fracture controlled as medium to coarse disseminations as spindles; weak patchy silicification
11-SH-004	9.05	38	clay-sericite-chlorite + limonite/Fe-oxide + silicification	moderate pervasive clay-sericite and weak chlorite alteration (medium grey-green) affecting matrix and clasts; fracture controlled limonite/Fe-oxide alteration with haloes rarely exceeding 1 cm thick, weakening downhole; weak patchy to pervasive silicification
11-SH-004	38	56.76	clay-sericite-chlorite + silicification	moderate pervasive clay-sericite and weak chlorite alteration (medium grey-green) affecting matrix and clasts; moderate patchy silicification
11-SH-004	56.76	80.29	clay-sericite + chlorite + silicification + hematite	moderate pervasive clay-sericite with moderate chlorite alteration (medium to dark grey-green) affecting matrix and clasts and fracture infills; moderate patchy silicification; weak hematite selvages along carbonate infill/veinlets
11-SH-004	80.29	92.35	hematite + clay-sericite + bleaching + silicification	initial moderate to strong pervasive clay-sericite alteration overprinted by strong pervasive hematite alteration, giving the rock a deep red coloration; weak-moderate, fracture controlled beige-yellow bleaching; silicification seems to be associated with bleaching
11-SH-004	92.35	92.35	EOH	EOH

11-SH-004 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-004	1.8		fracture	45		limonite/hematite/iron oxide coated fracture with 3cm alteration bands
11-SH-004	2.06		gouge	70		3-5mm orange-grey-tan clay-limonite gouge
11-SH-004	2.27	3.15	brkn			moderately fractured zone with common clay-limonite/iron oxide gouge in fractures; fractures range from 25 to 80 degrees TCA
11-SH-004	2.7		gouge	25		1-3mm orange-brown clay-limonite/iron oxide gouge in moderately fractured zone
11-SH-004	2.9		gouge	80		3-4cm orange-grey-tan clay-limonite/iron oxide gouge containing breccia fragments up to 0.5cm
11-SH-004	2.97		gouge	30		1-2mm orange-grey-tan clay-limonite/iron oxide gouge
11-SH-004	3.23		fracture	80		~1mm healed fracture infilled with clay-limonite/iron oxide
11-SH-004	4.24	4.42	fracture	0		<1mm healed fracture with clay-limonite/iron oxide infill, running roughly parallel TCA
11-SH-004	4.33		fracture	50		~1mm healed fracture infilled with clay-limonite/iron oxide
11-SH-004	4.47		gouge	70		3-4cm orange-grey-tan clay-limonite/iron oxide gouge containing breccia fragments up to 0.5cm
11-SH-004	6.06		str	70		up to 1mm, planar to irregular, dismembered carbonate stringer
11-SH-004	6.14		fracture	50		limonite/hematite/iron oxide coated fracture with 2cm alteration bands
11-SH-004	6.18		gouge	70		~1mm, grey-tan-orange clay gouge
11-SH-004	6.21		fracture	60		limonite/hematite/iron oxide coated fracture with 1-2cm alteration bands
11-SH-004	6.7		str	60		up to 1mm, irregular quartz-carbonate stringer
11-SH-004	6.78		fracture	30		<1mm healed fracture with white clay infill
11-SH-004	7.09		fracture	40		up to 1mm healed fracture with minor clay infill
11-SH-004	7.67		fracture	40		limonite/iron oxide coated fracture with 2-3cm alteration bands
11-SH-004	7.84	8.89	brkn			moderately-strongly fractured/faulted zone with abundant brecciated and gouge-rich intervals
11-SH-004	8		gouge	20		3-4cm orange-grey-tan clay-limonite/iron oxide gouge containing breccia fragments up to 1cm
11-SH-004	8.17		gouge	50		3-5cm orange-grey clay-limonite/iron oxide gouge containing breccia fragments up to 2cm
11-SH-004	8.25	8.8	bx			strongly brecciated, gouge rich interval with fractureing ranging from 40-80 degrees TCA
11-SH-004	8.8		gouge	70		grey-orange clay (+minor limonite) gouge, containing breccia fragments up to 2cm
11-SH-004	8.89	9.04	bx			moderate-strongly brecciated with carbonate stockwork from 8.89-9.04m
11-SH-004	9.08		gouge			~1mm grey clay gouge
11-SH-004	9.28		fracture	60		<1mm healed fracture with clay-limonite/iron oxide infill
11-SH-004	9.44		vnlt	50		2-3mm splayed, irregular to planar, fracture controlled quartz vnlt with abundant fine grained pyrite
11-SH-004	9.52		fracture	50		limonite/hematite/iron oxide coated fracture with 2-3cm alteration bands
11-SH-004	9.68		vnlt	55		2-3mm planar to irregular, dismembered quartz vnlt
11-SH-004	9.86		vnlt	40		3-4mm splayed, irregular, fracture controlled quartz-carbonate vnlt with abundant fine grained pyrite
11-SH-004	10.64	10.66	vnlt	40		two 1-3mm planar, irregular, fracture controlled quartz-carbonate vnlt
11-SH-004	11.05		fracture	50		<1mm clay-carbonate infilled fracture
11-SH-004	11.09		fracture	70		<1mm clay-carbonate infilled fracture
11-SH-004	11.25		str	40		up to 1mm, white, fracture controlled, irregular carbonate-quartz stringer
11-SH-004	11.32		vnlt	60		1-4mm, irregular, fracture controlled quartz-carbonate vnlt with abundant fine grained pyrite
11-SH-004	11.41		vnlt	45		2-4mm, irregular, fracture controlled quartz-carbonate vnlt with abundant fine grained pyrite
11-SH-004	11.95		fracture	35		healed fracture
11-SH-004	12.4		vnlt	40		1-3mm, planar, slightly irregular carbonate vnlt
11-SH-004	12.97		vnlt	60		5-8mm, partially brecciated, planar, fracture controlled carbonate vnlt with minor quartz
11-SH-004	13.02		vnlt	45		1-1.5cm, strongly splayed, irregular, fracture controlled, brecciated carbonate-quartz vnlt

11-SH-004 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-004	13.45	13.6	stwk	45		weak carbonate-quartz stockwork interval, showing preferred orientation at 45 degrees TCA; vnlt/stringers are strongly splayed, irregular, and appear to be fracture controlled; associated pyrite concentrations in some areas
11-SH-004	13.9		fracture	60		healed fracture with white-beige clay-carbonate infill
11-SH-004	13.95		fracture	35		healed fracture with white-beige clay-carbonate infill
11-SH-004	14.11		gouge	60		grey clay gouge up to 1cm, containing fragments up to 2mm
11-SH-004	14.27		vnlt	45		1-2mm, planar, grey to white quartz carbonate vnlt
11-SH-004	14.4		vnlt	50		1-5mm, strongly splayed, irregular, white carbonate stringer with very minor quartz
11-SH-004	14.7	14.85	bx			fractured/brecciated interval with fractures at 30-70 degrees TCA; abundant grey clay gouge
11-SH-004	15.8		gouge	70		3-4cm grey clay gouge with fragments up to 1cm
11-SH-004	15.9		gouge	50		1-2cm grey-white clay gouge with fragments up to 1cm
11-SH-004	16.2	16.55	bx			brecciated zone with common grey clay gouge and carbonate-(minor)quartz stockwork
11-SH-004	17.51		fracture	35		healed fracture with white clay-carbonate infill
11-SH-004	17.56		fracture	60		healed fracture with white clay-carbonate infill
11-SH-004	18.21		vn	35		dark grey siliceous vein, dismembered and weakly brecciated with weak patchy hematite alteration; 0.5 - 2.5 cm
11-SH-004	18.28		gouge	60		0.5cm dark grey clay gouge with abundant pyrite and fragments up to 2mm
11-SH-004	18.32		gouge	70		1-1.5cm dark grey clay gouge with abundant pyrite and fragments up to 3mm
11-SH-004	18.71		gouge	60		~1mm white-light grey clay gouge
11-SH-004	18.81		gouge	40		~1mm white-light grey clay gouge
11-SH-004	19.82		gouge			1-2cm dark grey clay gouge with no measureable angle; pyrite rich
11-SH-004	20.2		vnlt	60		1cm irregular quartz-carbonate vnlt; quartz appears brecciated with carbonate matrix
11-SH-004	23.02		gouge	50		0.5-1cm white-grey-orange clay gouge with minor limonite; fragments up to 2mm
11-SH-004	24.91		fracture	40		limonite/iron oxide coated fracture with 2-3mm alteration bands
11-SH-004	28.26		gouge	40		limonite/hematite/iron oxide coated fracture followed by 4-8cm brecciated, broken gouge zone; gouge is white-light grey clay with fragments up to 3mm; minor disseminated pyrite
11-SH-004	29.62		fracture	40		<1mm white clay-carbonate filled fracture with 2-5% finely disseminated pyrite
11-SH-004	34.58		gouge	90		5-10mm light grey clay gouge with fragments up to 2mm
11-SH-004	35.8		gouge	60		1-2mm, light grey-beige clay gouge with 2-5% finely disseminated pyrite
11-SH-004	35.92		gouge	50		4-5mm dark grey clay gouge
11-SH-004	37.74		gouge	80		1mm medium grey clay gouge
11-SH-004	37.74	37.91	stwk			brecciated zone with common grey clay gouge and carbonate-(minor)quartz stockwork
11-SH-004	37.74		gouge	80		5-6cm medium grey clay gouge with brecciated fragments up to 1cm
11-SH-004	38.23		gouge	35		1-2mm medium-dark grey clay gouge with brecciated fragments up to 2mm
11-SH-004	38.43		str	50		~1mm, irregular, undulating, white, fracture infill carbonate stringer
11-SH-004	38.54		vnlt	50		2-3mm, splayed, irregular, undulating, white, fracture infill carbonate stringer with orientation ranging from 45-65 degrees TCA
11-SH-004	38.65		gouge	50		2-3mm grey-beige clay-carbonate gouge
11-SH-004	38.7	39.2	stwk			weakly brecciated, weakly carbonate-stockworked interval
11-SH-004	39.34		fracture	20		healed fracture infilled with dark grey alteration products, including very fine disseminated pyrite
11-SH-004	40.8	40.9	stwk			weak stockwork of dark grey alteration material, up to 3 mm thick, very weak carbonate infilling; trace very fine disseminated pyrite
11-SH-004	40.92		fracture	35		healed fracture with dark grey alteration haloes up to 0.5 cm and carbonate infill up to 2 mm and sub mm hematite selvages around
11-SH-004	41.55		vnlt	65		dismembered carbonate vnlt, 0 - 2 mm thick
11-SH-004	42.05		fracture	40		fracture controlled quartz-chlorite-clay infill with weak sub mm hematite (maroon) selvages; infill is up to 2 mm thick

11-SH-004 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-004	42.58		stwk	60		weak stockwork with dominantly 50-70 deg infill of dark alteration material with carbonate, chlorite and quartz; fine to coarse disseminated pyrite up to 3%
11-SH-004	43.02		band	65		light, medium and dark grey cherty banding with crystal lithics up to 4 mm
11-SH-004	43.35		vnlt	50		1-3 mm quartz-carbonate vnlt, irregular and undulating contacts; weak hematite (maroon) sub-mm selvages, 1% fine to medium grained disseminated pyrite
11-SH-004	45.55	45.8	stwk			weakly stockworked and brecciated with dark alteration material
11-SH-004	44.4		vnlt	50		1-2mm, planar to splayed, white, fracture controlled (?) carbonate vnlt
11-SH-004	45.3		vnlt	60		1-2mm, planar, white carbonate (+minor quartz) vnlt with <1mm hematite selvages; trace finely disseminated pyrite
11-SH-004	46.34		vnlt	5		0-10 degrees TCA; grey-white quartz-carbonate vnlt; thickness likely mm-cm scale; 0.5-1% finely disseminated pyrite
11-SH-004	46.41	46.48	brkn			moderately fractured zone with abundant quartz vein material; trace 1% disseminated pyrite
11-SH-004	46.5		vnlt	40		0.5cm grey quartz vnlt with <1mm (clay?) selvages
11-SH-004	46.6	46.72	vnlt	5		0-10 degrees TCA; grey-white quartz-carbonate vnlt; thickness likely mm-cm scale; 0.5-1% finely disseminated pyrite with
11-SH-004	46.8		vnlt	25		0-10mm, planar, irregular, weakly boudinaged, grey quartz vnlt with <1mm clay selvages; pyrite up to 0.5% along vnlt margins
11-SH-004	46.97		str	65		<1mm, undulating, irregular, dismembered carbonate stringer
11-SH-004	47		fracture	30		splayed, silicious, chlorite-clay infilled fracture (up to 3mm); trace finely disseminated pyrite
11-SH-004	48.82		fracture			2-5mm quartz-chlorite-clay infill with <1mm dismembered hematite selvages
11-SH-004	49.81		fracture	20		0-4mm fracture infilled with white carbonate (+clay-chlorite, typically at margins)
11-SH-004	50.15		vnlt	50		0-10mm, irregular, fracture controlled, carbonate vnlt; <1mm clay-chlorite on margins; offsetting fractures oriented 70 degrees to structure by up to 1.5cm
11-SH-004	50.69		gouge	60		1-1.5cm grey-white-green clay gouge; brecciated fragments up to 5mm; up to 0.5% fine to medium grained pyrite
11-SH-004	50.94		fracture	30		up to 1mm fracture infilled with (cherty)silica-clay-chlorite; trace finely disseminated pyrite
11-SH-004	51.48		fracture	60		up to 2mm splayed fracture infilled with (cherty)silica-clay-chlorite; trace finely disseminated pyrite
11-SH-004	52.05		vn			vein fragment that seems to be oriented at 35-50 deg TCA; light pink grey with patchy blebby hematite alteration associated with clay infill
11-SH-004	53.1		gouge	40		0.5-1.5cm grey-white-green clay gouge; brecciated fragments up to 8mm; up to 0.5% fine to medium grained pyrite; upper contact at 40 and lower at 60 degrees TCA
11-SH-004	55.06		fracture	50		0-4mm splayed, irregular fracture infilled with white carbonate, grey quartz; associated clay-carbonate
11-SH-004	55.07		fracture	30		0-1cm splayed, irregular fracture infilled with grey quartz; associated clay-carbonate; weakly brecciated
11-SH-004	55.73		fracture	70		splayed, silicious, chlorite-clay infilled fracture (up to 2mm); trace finely disseminated pyrite; weakly brecciated
11-SH-004	55.92		fracture	50		splayed, silicious, chlorite-clay infilled fracture (up to 3mm); trace finely disseminated pyrite; weakly brecciated
11-SH-004	57.55		gouge	60		1-2mm medium grey clay gouge
11-SH-004	57.72		gouge	50		1.5-2.5cm grey-green clay gouge; brecciated fragments up to 5mm; ~0.5% finely disseminated pyrite
11-SH-004	58.85		fracture	50		0-2mm, strongly splayed fracture infilled with carbonate; forms a weak stockwork over 2-5cm
11-SH-004	58.96		fracture	70		1-2mm, splayed fracture infilled with carbonate
11-SH-004	60		fracture	60		up to 1cm, splayed fracture infilled with quartz-clay-chlorite; weakly brecciated; patchy hematite filling elongated cavities at centre of fracture
11-SH-004	61.1		gouge	40		0.5-1cm grey-green clay gouge; brecciated fragments up to 3mm
11-SH-004	62.03	62.11	bx	50		gouge-rich breccia zone with clasts up to 1cm; 0.5-1cm grey clay gouge at top and bottom contacts, marked by fractures (oriented at 50 degrees); up to 1% fine to medium grained disseminated pyrite

11-SH-004 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-004	62.43		gouge	70		medium grey-greenish clay gouge with brecciated clasts up to 0.5cm; gouge zone is drill broken so thickness hard to determine (likely 1-2cm)
11-SH-004	65.35		gouge	40		<1mm med-dark grey clay gouge
11-SH-004	66.08		fracture	60		<1mm fracture (stringer) infilled with carbonate + clay-chlorite
11-SH-004	66.17		gouge	40		<1mm dark grey clay gouge; 2-3% disseminated fine-med grained pyrite; gouge marks contact with 7-8cm highly silicified dark grey-black brecciated clast with weak carbonate stockwork
11-SH-004	68.95		gouge	70		<1mm white-light grey clay gouge
11-SH-004	69.6		fracture	60		1-2mm carbonate-clay infilled fracture; part of a series of 60 degree TCA oriented fractures from 69.5-69.8m
11-SH-004	70.56		vnlt	30		1-5mm, irregular, slightly splayed, fracture infill carbonate vnlt; clay-chlorite infill around margins
11-SH-004	71		vnlt			irregular, undulating carbonate veinlet with weak sub mm hematite selvages; <1 to 2 mm
11-SH-004	71.05		fracture	30		1mm healed fracture infilled with carbonate-clay
11-SH-004	72.15	72.5	fracture	10		grey clay-infilled fracture sub-parallel TCA (0-15 degrees)
11-SH-004	72.5		gouge	70		0.5-1.5cm med grey clay gouge with brecciated fragments up to 4mm and minor carbonate
11-SH-004	75.01		fracture	60		1-4mm, irregular carbonate-clay-chlorite infilled fracture; hematite along margins (<1mm)
11-SH-004	75.4		gouge	70		5-7mm med-dark grey clay gouge with few brecciated clasts up to 3mm
11-SH-004	76.68		fracture	50		3-8mm irregular, splayed, weakly brecciated healed fracture; infill is silica-chlorite-clay; trace finely disseminated pyrite
11-SH-004	77.15		fracture	60		1-3mm, irregular carbonate-clay-chlorite infilled fracture; weak patchy hematite along margins (<1mm)
11-SH-004	78.79		fracture	60		3-8mm irregular, strongly brecciated healed fracture; infill is silica-chlorite-clay; minor gouge; trace finely disseminated pyrite
11-SH-004	79.1		gouge	50		1mm light grey clay gouge
11-SH-004	79.1	79.59	stwk			weakly brecciated carbonate stockwork; veining decreases in intensity down-interval; zone bounded by gouge (faults?) at top and bottom
11-SH-004	79.59		gouge	50		1mm light grey-white clay gouge
11-SH-004	79.59	79.79	bx			moderate-strongly brecciated with abundant clay gouge; trace-0.5% disseminated pyrite
11-SH-004	80.06		vnlt	50		0.5-1.5cm, irregular, splayed, fracture controlled carbonate veinlet
11-SH-004	80.21		gouge			7-8cm, dark grey-green clay gouge with brecciated fragments up to 1cm; lower margin marks contact
11-SH-004	80.29		ctc	60		crystal lithic rhyolite tuff-altered, phenocrystic red rock (volcanic, dyke, porphyry?); contact marked by gouge
11-SH-004	80.29	80.39	bx			moderately brecciated clay gouge zone; gouge is white-light grey-pink
11-SH-004	80.8		gouge	45		2-10mm white-light grey-pink clay gouge filled fracture with brecciated clasts up to 2mm
11-SH-004	80.85		gouge	50		2-5mm white-light grey-pink clay gouge filled fracture with brecciated clasts up to 2mm
11-SH-004	80.9		gouge	45		2-10mm white-light grey-pink clay gouge filled fracture with brecciated clasts up to 2mm
11-SH-004	81.39		gouge	55		2-8mm dark grey-red clay gouge with brecciated clasts up to 5mm
11-SH-004	81.58		gouge	60		2-4mm white-light grey-pink clay gouge with brecciated clasts up to 2mm
11-SH-004	82.15		fracture	40		1-2mm clay-carbonate infilled fracture
11-SH-004	82.55		gouge	60		1-10mm white-light grey-pink clay gouge filled fracture with brecciated clasts up to 1mm
11-SH-004	82.69		gouge	50		1-2mm white-grey-pink clay-carbonate gouge with few brecciated clasts up to 1mm
11-SH-004	83.08		vn	70		2-3cm fractured, white carbonate vein; fracture down centre of vein and at lower margin contain clay-carbonate gouge
11-SH-004	83.11	83.21	bx			moderate-strongly brecciated with clay gouge cement; clasts up to 1cm
11-SH-004	83.43		gouge	80		1-2mm white-grey-pink clay-carbonate gouge with few brecciated clasts up to 1mm
11-SH-004	83.59		gouge	60		1-2cm white-grey-pink clay gouge with brecciated clasts up to 3mm

11-SH-004 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-004	84.04	84.12	bx			moderate-strongly brecciated with clay gouge cement; clasts up to 1cm
11-SH-004	84.6	84.85	brkn			moderately to strongly fractured zone with common clay-carbonate gouge on fracture planes
11-SH-004	84.9		fracture	25		carbonate-clay infilled fracture (<1mm)
11-SH-004	84.9	85.15	stwk			weakly carbonate stockworked zone bounded by fractures above and below (25 degrees TCA); some planar veinlets at 25-30 degrees TCA
11-SH-004	85.15		fracture	25		carbonate-clay infilled fracture (<1mm)
11-SH-004	85.93		alt band	65		3-5mm bleached alteration bands surrounding fracture
11-SH-004	86		alt band	25		5-6mm bleached alteration bands surrounding healed fracture
11-SH-004	86.16		alt band	75		3-5mm bleached alteration bands surrounding fracture
11-SH-004	86.38		fracture	35		carbonate infilled fracture (1-2mm) with 1-5mm bleached alteration bands
11-SH-004	87.05		fracture	10		1mm clay (+minor carbonate) infilled fracture
11-SH-004	88		gouge	20		1-3mm white-pink clay-carbonate gouge with clasts <1mm
11-SH-004	88.25		gouge	15		1-3cm clay-carbonate gouge with abundant brecciated fragments
11-SH-004	88.8		fracture	15		<1mm carbonate infilled fracture
11-SH-004	89.95		fracture	30		1-3mm carbonate infilled fracture
11-SH-004	90.23	90.39	flt	50		brecciated fault zone with visible deformation fabrics (50 degrees TCA) and clay gouge
11-SH-004	90.39	91.85	bx		weak	weak to very weakly brecciated zone; clay carbonate cement
11-SH-004	90.82		gouge	40		1-2cm grey-pink clay gouge with brecciated fragments up to 5mm
11-SH-004	91.6		fracture	15		1-3mm, splayed clay-carbonate infilled fracture
11-SH-004	92.1		fracture	30		0.5-1cm, planar to irregular, brecciated carbonate infilled fracture/veinlet

11-SH-004 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-004	0.00	0.61	0.61	0.41	67.21	0.00	0.00	0.00
11-SH-004	0.61	3.96	3.35	3.00	89.55	0.85	28.33	7.00
11-SH-004	3.96	7.01	3.05	3.04	99.67	1.42	46.71	7.00
11-SH-004	7.01	10.06	3.05	3.03	99.34	1.47	48.51	9.00
11-SH-004	10.06	13.11	3.05	3.07	100.66	2.89	94.14	10.00
11-SH-004	13.11	16.15	3.04	3.05	100.33	2.63	86.23	13.00
11-SH-004	16.15	19.20	3.05	2.95	96.72	2.40	81.36	10.00
11-SH-004	19.20	22.25	3.05	3.06	100.33	2.53	82.68	12.00
11-SH-004	22.25	25.30	3.05	2.92	95.74	2.01	68.84	11.00
11-SH-004	25.30	28.35	3.05	2.88	94.43	2.35	81.60	9.00
11-SH-004	28.35	31.39	3.04	2.95	97.04	2.76	93.56	14.00
11-SH-004	31.39	34.44	3.05	3.04	99.67	2.21	72.70	8.00
11-SH-004	34.44	37.49	3.05	3.05	100.00	2.60	85.25	11.00
11-SH-004	37.49	40.54	3.05	2.85	93.44	2.18	76.49	13.00
11-SH-004	40.54	43.59	3.05	3.17	103.93	2.64	83.28	12.00
11-SH-004	43.59	46.63	3.04	3.05	100.33	2.72	89.18	12.00
11-SH-004	46.63	49.68	3.05	3.01	98.69	2.87	95.35	7.00
11-SH-004	49.68	52.73	3.05	3.03	99.34	2.75	90.76	12.00
11-SH-004	52.73	55.78	3.05	2.98	97.70	2.70	90.60	8.00
11-SH-004	55.78	58.83	3.05	3.04	99.67	2.43	79.93	11.00
11-SH-004	58.83	61.87	3.04	3.01	99.01	2.45	81.40	7.00
11-SH-004	61.87	64.92	3.05	3.02	99.02	2.44	80.79	11.00
11-SH-004	64.92	67.97	3.05	3.03	99.34	2.88	95.05	5.00
11-SH-004	67.97	71.02	3.05	3.05	100.00	2.58	84.59	13.00
11-SH-004	71.02	74.07	3.05	2.95	96.72	2.65	89.83	10.00
11-SH-004	74.07	77.11	3.04	3.00	98.68	2.05	68.33	7.00
11-SH-004	77.11	80.16	3.05	2.96	97.05	2.44	82.43	7.00
11-SH-004	80.16	83.21	3.05	2.95	96.72	2.37	80.34	14.00
11-SH-004	83.21	86.26	3.05	2.81	92.13	1.94	69.04	10.00
11-SH-004	86.26	89.31	3.05	3.05	100.00	2.66	87.21	12.00
11-SH-004	89.31	92.35	3.04	3.02	99.34	2.64	87.42	12.00

11-SH-004 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-004	1	0.29
11-SH-004	2	0.2
11-SH-004	3	0.76
11-SH-004	4	0.14
11-SH-004	5	0.16
11-SH-004	6	0.1
11-SH-004	7	0.16
11-SH-004	8	0.07
11-SH-004	9	0.07
11-SH-004	10	0.25
11-SH-004	11	0.2
11-SH-004	12	0.23
11-SH-004	13	0.32
11-SH-004	14	0.64
11-SH-004	15	0.25
11-SH-004	16	0.34
11-SH-004	17	0.49
11-SH-004	18	0.73
11-SH-004	19	0.26
11-SH-004	20	0.91
11-SH-004	21	0.45
11-SH-004	22	0.6
11-SH-004	23	0.16
11-SH-004	24	0.05
11-SH-004	25	0.42
11-SH-004	26	0.1
11-SH-004	27	0.86
11-SH-004	28	0.16
11-SH-004	29	0.27
11-SH-004	30	0.69
11-SH-004	31	0.65
11-SH-004	32	0.05
11-SH-004	33	0.36
11-SH-004	34	0.1
11-SH-004	35	0.09
11-SH-004	36	0.32
11-SH-004	37	0.16
11-SH-004	38	0.07
11-SH-004	39	0.54

11-SH-004 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-004	40	0.78
11-SH-004	41	0.4
11-SH-004	42	0.2
11-SH-004	43	0.12
11-SH-004	44	0.38
11-SH-004	45	0.67
11-SH-004	46	0.82
11-SH-004	47	0.47
11-SH-004	48	0.23
11-SH-004	49	0.69
11-SH-004	50	0.43
11-SH-004	51	0.05
11-SH-004	52	0.67
11-SH-004	53	0.14
11-SH-004	54	0.65
11-SH-004	55	0.01
11-SH-004	56	0.25
11-SH-004	57	0.09
11-SH-004	58	0.75
11-SH-004	59	0.56
11-SH-004	60	0.36
11-SH-004	61	0.69
11-SH-004	62	0.51
11-SH-004	63	0.18
11-SH-004	64	0.12
11-SH-004	65	0.51
11-SH-004	66	0.95
11-SH-004	67	0.6
11-SH-004	68	0.09
11-SH-004	69	0.07
11-SH-004	70	0.07
11-SH-004	71	0.8
11-SH-004	72	0.16
11-SH-004	73	0.05
11-SH-004	74	0.05
11-SH-004	75	0.09
11-SH-004	76	0.36
11-SH-004	77	0.2
11-SH-004	78	0.49

11-SH-004 Mag Sus

Hole ID	Depth (m)	Mag Sus
11-SH-004	79	0.38
11-SH-004	80	0.38
11-SH-004	81	0.49
11-SH-004	82	0.32
11-SH-004	83	0.1
11-SH-004	84	0.32
11-SH-004	85	0.71
11-SH-004	86	0.01
11-SH-004	87	0.62
11-SH-004	88	0.03
11-SH-004	89	0.12
11-SH-004	90	0.27
11-SH-004	91	0.38
11-SH-004	92	0.03

11-SH-005 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-005	0.00	6.45	OB	OB	overburden	
11-SH-005	6.45	38.06	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	light to dark green-grey; rusty yellow-orange alteration for first 8 m, weakening afterwards; matrix supported; 20-30% crystal lithics; fine to coarse grained matrix with heterolithics up to 5 cm; clasts are chlorite altered, silica fragments, white and light peach feldspar - chalcedony, dark mafics; clasts are angular to subrounded and various heterolithics found with internal clasts; moderate pervasive clay-sericite alteration; weak to moderate chlorite alteration; weak to moderate patchy silicification; some veining, generally 1 or 2 every m at most, usually veinlets < 1 cm composed of quartz-carbonate, weak hematite (adularia?) and trace finely disseminated pyrite; trace to 1% finely disseminated pyrite in matrix and at times within clasts; trace arsenopyrite? associated with limonite staining - silvery white - conspicuous drill marks?	
11-SH-005	38.06	43.1	volcanic breccia	volcaniclastic	weak to moderately brecciated intervals; lithologies vary slightly in their textures and composition; sharp upper and lower contacts, both 60 deg TCA; competent units with weak to moderately brecciated intervals; light to dark green-grey with beige, black, peach and dark green clasts; rare quartz material up to 1-2 cm, dark smokey grey; 3-4 gouge intervals, 1 to 10 cm thick, light green-grey to dark green-black, generally 60-80 deg TCA; units contain crystal lithic content ranging from fine to 0.5-1 cm; one rhyolite tuff unit weakly brecciated between ~38.8 - 39.6 m; a fine grained dark green (andesitic?) unit that is strongly clay-chlorite altered between ~41.5 -42.05m; clasts are generally beige and peach feldspars, dark mafics and chlorite-altered clasts; trace very finely disseminated pyrite; no veining but some weak carbonate infilling;	
11-SH-005	43.1	70.2	welded tuff	welded tuff	variably welded tuff; intermediate composition?; green-grey with a peach hue; locally present eutaxitic texture (welded clasts) at about 15 - 45 deg TCA; 20-40% clasts within a chloritic-potassic matrix; rare subangular to subrounded clasts up to (even rarer clasts up to 5 cm) 2-3 cm but generally <1 cm; welded clasts are ubiquitously chlorite-altered; subangular to subrounded clasts are typically chlorite-altered or feldspathic, up to 2% coarse mafic mineral (rarely >3 mm); rare veining but at times some carbonate infill up to a few mm thick; a few clay gouges; trace to 1-2% fine grained pyrite associated with matrix and clasts;	
11-SH-005	70.2	70.32	fault gouge	fault gouge	10-12 cm of fault gouge; grey-green clay matrix with up to 40% clasts, up to 3 cm wide; 60 deg sharp upper and lower contacts	
11-SH-005	70.32	73.9	pyroclastic/tuff breccia	volcaniclastic	a felsic-intermediate crystal lithic tuff matrix with heterolithic clasts up to 3-4 cm and patchy weak to moderate brecciation with supported by clay gouge; clast and crystal content up to 40%; clasts are subangular to subrounded, feldspathic, chalcedonic, chlorite-altered, siliceous fragments and up to 2% coarse mafic weakly magnetic mineral (altered magnetite? goethite?); trace to 1% finely disseminated pyrite; rare carbonate-quartz veins up to 2 cm thick associated with clay gouges;	
11-SH-005	73.9	76.55	chalcedony /felsic breccia	breccia	chalcedony/felsic breccia with with 50% subangular/angular clasts up to 4-5 cm; strong gouges associated with upper and lower contacts; beige peach, dark red-maroon, light pastel green, dark grey-black; significant mm-scale colloform banding present in cm-scale angular clasts with light beige-green-peach, soft clay-sericite-carbonate altered horizons interlayered with peach-pink adularia (not always present) and hard, dark grey silica/magnetite rich bands; matrix is generally silica/magnetite rich, hard and dark grey with patchy pervasive hematite alteration, resulting in a dark red-maroon overprint in the matrix; dark hard bands within angular clasts and dark hard matrix is weakly magnetic (magnetite alteration?); with dark, black, elongated mineral sometimes present in patches that is likely tourmaline (scratches white, difficult to scratch with tungsten) and other dark more rounded minerals are magnetic (magnetite crystals); mm-scale angular fragments in matrix, may be feldspars?; trace to 2% pyrite and very fine specks of silvery-gold mineralization (could also be pyrite but too fine to confirm); rare quartz-carbonate stringers and fracture infilling up to a few mm thick;	
11-SH-005	76.55	77.63	altered rhyolite tuff	crystal lithic rhyolite tuff	bleached grey fine ash matrix with up to 30% subangular clasts, mostly feldspathic/chalcedonic and rarer rounded mafics; angular breccia fragment up to 15 cm found just prior to sudden alteration to red-maroon waxy crumbly rock with abundant clay gouge up to 3 cm; trace finely disseminated pyrite	
11-SH-005	77.63	85.4	chalcedony /felsic breccia	breccia	continuation from 73.9 - 76.55 m	
11-SH-005	85.4	85.56	fault gouge	fault gouge	very fine clay gouge	
11-SH-005	85.56	93.95	altered lithic tuff	crystal lithic rhyolite tuff	crystal lithic rich tuff; the first m is marked by a dark purple-green clay gouge supporting large lithic clasts up to 5 cm; dark purple-maroon, deep rich green, pale green-aqua-beige, beige-peach clast colors; >50% clasts, subrounded to subangular, up to 3-4 cm with rare bombs up >10 cm that seem to be feldspar porphyritic in a mafic dark green-purple matrix; weakly patchy magnetic; rare weak carbonate infilling up to 0.5 cm thick and minor carbonate crystals as well; trace very finely disseminated pyrite;	
11-SH-005	93.95	95.4	altered welded tuff	welded tuff	altered welded tuff; light green, dark green and spotty pink-peach-beige; flattened clasts are generally chloritic altered (dark green); the matrix is a light green, beige-peach color, most likely clay-sericite-chlorite and weak carbonate alteration as well; rare subangular clasts up to 2 cm that are dark, hard mafics; about 2-4% coarse disseminations of a dark magnetic mineral (magnetite) up to 2 mm in size; trace very finely disseminated pyrite; rare weak carbonate infill up to 2-3 mm thick;	
11-SH-005	95.4	95.4	EOH	EOH	EOH	

11-SH-005 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-005	6.45	14.5	limonite/Fe-oxide + clay-sericite-chlorite + manganese + silicification	pervasive limonite/Fe-oxide weakening towards the end as fracture controlled haloes up to 20 cm thick; pervasive moderate clay-sericite-chlorite alteration (light grey-green) affecting matrix and clasts; manganese alteration is strictly fracture controlled as medium to coarse disseminations (spindly); weak to moderate patchy silicification
11-SH-005	14.5	38.06	clay-sericite-chlorite + limonite/Fe-oxide + chlorite + silicification	pervasive moderate clay-sericite-chlorite alteration (light grey-green) affecting matrix and clasts; chlorite alteration becomes more intense downhole, resulting in a medium green-grey matrix with medium to dark green chlorite altered clasts; banded and fracture controlled limonite/Fe-oxide with haloes up to 1 cm thick, weakening towards the end and found increasingly rare on fracture surfaces; weak to moderate patchy silicification;
11-SH-005	38.06	43.1	chlorite + clay-sericite	pervasive moderate to strong chlorite and clay-sericite alteration; clay-sericite mostly affecting matrix; chlorite affecting both matrix and clasts;
11-SH-005	43.1	70.2	chlorite + clay-sericite + potassic	about 10-15% chlorite altered clasts in a clay-sericite-chlorite + potassic altered matrix; about 5-10% k-spar clasts
11-SH-005	70.2	73.9	clay-sericite + chlorite + silicification	weak to moderate clay-sericite altered clasts and matrix with moderate chlorite alteration of mafic clasts and matrix; moderate patchy-pervasive silicification; some felsic fragments are bleached out
11-SH-005	73.9	75.05	clay-sericite + chlorite	moderately brecciated with clay-sericite-chlorite grey-green and pastel green gouge
11-SH-005	75.05	85.4	silicification + clay-sericite-carbonate + magnetite + hematite	hard dark siliceous, weakly magnetic matrix that is patchy hematite altered until ~76.55 and more pervasive afterwards; clay-sericite alteration typically associated with weak carbonate alteration affecting angular breccia fragments mostly as soft grey-green-yellow bands within fragments or completely replacing angular fragments at times with a waxy soft green clay or powdery yellow-beige clay; (although at times the fragments are fresh and unaltered, with their original peach-orange color);
11-SH-005	85.4	85.56	clay gouge	
11-SH-005	85.56	93.95	silicification + hematite + chlorite + magnetite	weak to moderate silicified rock with hematite (deep red-purple) and chlorite (deep green) alteration patchily affecting clasts and matrix
11-SH-005	93.95	95.4	chlorite + clay-sericite + carbonate	pervasive moderate chlorite alteration affecting matrix and flattened clasts; weak-moderate clay-sericite and carbonate alteration affecting mm-scale crystal lithics as well as matrix;
11-SH-005	95.4	95.4	EOH	EOH

11-SH-005 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-005	7.66		gouge	40		1cm orange-grey clay-limonite/iron oxide gouge; brecciated fragments up to 2mm
11-SH-005	8.7	9.4	brkn		mod	moderate-strongly broken zone with abundant orange-grey clay-limonite gouge; one 2-3cm interval of grey clay gouge; minor quartz stringer material
11-SH-005	9.7	9.8	vnlt	75		series of 4 sub-parallel, 1-4mm, planar to irregular, weakly splayed quartz-carbonate veinlets oriented at 70-80 degrees TCA; patchy clay alteration
11-SH-005	9.8		gouge	45		2-3cm orange-tan clay-limonite/iron oxide gouge with fragments up to 5mm
11-SH-005	10.51	10.64	brkn		mod	moderately broken zone containing large (up to 5cm) fragments of colloform quartz vein material
11-SH-005	10.64		vn	50		5+cm, weathered, broken and fractured, weakly colloform banded, white-grey quartz-adularia vein; occasional rounded cavities infilled with limonite-hematite (+minor drusy quartz); patchy dark (often long and narrow, fracture controlled?) specks
11-SH-005	11.2		fracture	35		fracture with strong hematite-limonite coating
11-SH-005	13		fracture	25		fracture with strong hematite-limonite coating and minor red-orange-grey clay gouge; dendritic, 1-2cm hematite alteration halos around fracture
11-SH-005	18.02	18.19	gouge	80		medium grey-white gouge/breccia zone; 1-2% finely disseminated pyrite
11-SH-005	19.05		gouge	55		2-3 mm grey-brown gouge
11-SH-005	21.05		vnlt	52		weakly stockworked veinlet, up to 2 mm thick; quartz-carbonate; light grey-white; 45-60 deg TCA
11-SH-005	21.8		vnlt	75		3 veinlets 65 and 85 deg TCA; 1-3 mm thick; quartz-carbonate; light grey to white; trace very finely disseminated pyrite
11-SH-005	22.15		vnlt	50		weakly colloform banded irregular veinlet with undulating contacts; rare voids up to 2 mm; 2-8 mm thickness; light grey quartz with
11-SH-005	22.33		vnlt	40		dismembered quartz veinlet, <1 mm to 2 mm thick; light grey to white
11-SH-005	22.43		vn	60		irregular contacts; light grey to white to beige; weak banding; quartz carbonate; very finely disseminated trace pyrite; weak stockwork nearby
11-SH-005	23.07		str	45		irregular, undulating stringer, <1 mm to 1 mm thick; white-grey
11-SH-005	23.9		vnlt	70		fracture controlled veinlet, incomplete around core axis; fracture voids up to 2 mm with limonite/Fe-oxide staining associated with it; quartz-carbonate; light grey-white; <1 to 2 mm thick
11-SH-005	24.05		vnlt	65		3 veinlets within 5 cm; 60, 65 and 70 deg TCA; 2-6 mm thick; quartz carbonate; white-grey;
11-SH-005	24.8		str	65		quartz stringer with weak carbonate; undulating contacts; <1 mm to 1 mm thick
11-SH-005	25.2	25.45	brkn		weak-mod	weak to moderately broken core with some quartz-carbonate material weakly hematite altered (pink-red)
11-SH-005	25.6		vnlt	60		2 veinlets; 70 and 50 deg TCA; irregular and undulating contacts; mostly carbonate material with minor quartz; 1-5 mm thick
11-SH-005	26.15		vnlt	60		irregular veinlet; quartz with weak carbonate; weak patchy hematite/adularia? (pink-red); clay-chlorite (light grey-green) infill
11-SH-005	27.19		vnlt	42		2 veinlets; 40 and 45 deg TCA; 1-3 mm thick; quartz-carbonate; white-grey
11-SH-005	28.05		vnlt	60		irregular undulating veinlet; 2-10 mm; weakly colloform banded on edges with pink-peach alteration (adularia? Hematite?) and clay-chlorite infill up to 2-3 mm;
11-SH-005	28.3		vnlt	40		<1 mm to 3 mm veinlet/fracture infill; dismembered; quartz-
11-SH-005	28.35		vnlt	70		vein on a fracture, not completely recovered; 2-3 mm thick; weakly colloform banded; white-grey quartz, no/trace carbonate
11-SH-005	28.45		vnlt	60		irregular and undulating; 1-4 mm; weakly colloform banded; quartz with minor carbonate; white-grey; weak hematite/adularia alteration (pink-red) along fractures and on edges of veinlet contact
11-SH-005	30.04		gouge	70		1-2 mm grey-white-green gouge with some quartz material
11-SH-005	30.05	30.45	brkn			moderately broken core with an incomplete recovered veinlet up to 1 cm thick with weak colloform banding, hematite and chlorite alteration at 40 deg TCA;
11-SH-005	32.39		gouge	80		3 cm light grey green gouge with clasts up to 2 mm
11-SH-005	32.54		gouge	60		2-3 cm light grey green gouge with clasts up to 2 mm
11-SH-005	33.45		vnlt	60		2-3 mm grey-white quartz-carbonate veinlet, irregular contacts

11-SH-005 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-005	33.85		vnlt	75		2-3 mm grey-white quartz-carbonate veinlet, irregular contacts
11-SH-005	34.17		gouge	80		1-2 mm grey-yellow clay gouge
11-SH-005	36.25		fracture	30		fracture controlled chlorite infill (dark grey-green healed fracture) up to 1 mm thick
11-SH-005	37.12		vnlt	65		0-2 mm thick grey-white quartz-carbonate veinlet, irregular contacts
11-SH-005	38.06		ctc	60		contact between rhyolite tuff and upcoming volcanic breccia unit
11-SH-005	38.65	39.61	bx			weak to moderately brecciated rhyolite tuff
11-SH-005	39.62		ctc	70		contact between brecciated rhyolite tuff and a short interval of tuff that is potentially of intermediate composition
11-SH-005	40.38	40.45	gouge	80		7 cm of light grey gouge with clasts up to 2 mm
11-SH-005	40.46	40.7	bx			weak to moderately brecciated tuff
11-SH-005	40.71	40.79	gouge	60		8 cm of grey-green gouge with clasts up to 2 mm
11-SH-005	41.26		gouge	80		1-2 cm of light grey-green gouge with clasts up to 3-4 mm
11-SH-005	41.33		gouge	80		6 cm of light grey-green gouge with clasts up to 5 mm
11-SH-005	42.06		gouge			non-measurable contact; 9 cm medium to dark grey-green clay gouge with clasts up to 2-3 cm;
11-SH-005	42.37		gouge	75		2-3 cm of medium grey-green gouge with clasts up to 1 cm (dark smokey grey quartz)
11-SH-005	42.95		gouge	55		5-8 cm of medium to dark grey-green gouge and easily crumbled rock
11-SH-005	43.06		ctc			contact has not been recovered, non-measurable angle
11-SH-005	43.69		fol/fab	45		weak to moderate preferred orientation of minerals in welded tuff
11-SH-005	43.84		gouge	70		up to 1 cm of grey-green gouge
11-SH-005	44		gouge	25		1-2 mm grey-green gouge
11-SH-005	44.45		gouge	70		1-2 mm grey-green gouge
11-SH-005	44.48		fol/fab	45		weak to moderate preferred orientation of minerals in welded tuff
11-SH-005	46.65		gouge	50		2-3 cm of grey clay gouge with very fine <1mm clasts
11-SH-005	47.21		gouge	70		1-2 cm of grey clay gouge with clasts up to 3 mm
11-SH-005	47.85		gouge	45		mm sized grey clay gouge
11-SH-005	48.46		vnlt	60		1-2 mm grey-white quartz-carbonate veinlet
11-SH-005	48.8	49.2	bx + gouge	60		weakly brecciated with mm scale clay-carbonate infill up and clay on fractures; 2-3 cm grey clay gouge at start of interval with clasts up to 0.5 cm
11-SH-005	49.69		gouge	60		1-2 cm of grey clay gouge with clasts up to 0.5 cm
11-SH-005	49.24		gouge	30		0.5 cm of grey clay gouge with clasts up to 3 mm
11-SH-005	49.65		gouge	70		1 cm of grey clay gouge with clasts up to 3 mm
11-SH-005	49.7		gouge	60		2-3 cm of grey clay gouge with clasts up to 1 cm
11-SH-005	50.7		gouge	45		up to 1 cm of grey clay gouge with clasts up to 3 mm
11-SH-005	52		gouge	45		0.5-1.5 cm of grey clay gouge with clasts up to 0.5 cm
11-SH-005	52.1	52.53	gouge			weak to moderate clay gouge affecting rock with crumbly intervals flanked by up to 7 cm of grey clay gouge with clasts up to 0.5 cm
11-SH-005	53.45		fol/fab	20		weak to moderate preferred orientation of minerals in welded tuff
11-SH-005	53.85		fol/fab	25		weak to moderate preferred orientation of minerals in welded tuff
11-SH-005	53.8	54	flt	47		unknown amount of fault movement; very minor series of 3 faulted blocks at 40 and 55 deg TCA
11-SH-005	55.96		flt	75		fault movement visible due to 2 clasts being cut off and not matching; amount of movement unknown
11-SH-005	57.4		fol/fab	50		weak to moderate preferred orientation of minerals in welded tuff
11-SH-005	58.05		gouge	40		1-3 mm grey gouge filling a fracture; weak brecciation for 5 cm prior to gouge with clay and carbonate infill up to 0.5 cm
11-SH-005	59.1	59.2	stwk			weak stockwork/brecciation with carbonate infill up to 4 mm thick; 65, 30 and 80 deg TCA
11-SH-005	60.75		vnlt	37		quartz-carbonate veinlet up to 3 mm thick, a 2nd (25 deg TCA) veinlet nearby that seems to have infilled fracture clay gouge
11-SH-005	61.05		gouge	50		8 cm of grey-green gouge with clasts up to 3-4 mm
11-SH-005	62.5		vnlt + gouge	20		6-8 mm quartz-carbonate light grey-white vein followed by 2-3 cm of grey clay gouge with clasts up to 4 mm
11-SH-005	62.95		gouge	60		up to 1 cm clay gouge in weakly competent but easily crumbled rock

11-SH-005 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-005	64.2	64.4	vnlt + gouge	70		a series of 3-4 veinlets up to 2 mm thick, 60 and 70 deg TCA with weak sub mm grey clay gouge at 70 and 80 deg TCA
11-SH-005	65.08		vnlt	55		quartz-carbonate veinlet up to 5 mm thick; not all recovered due to fracture plane
11-SH-005	65.6	65.65	str	65		2 stringers of carbonate material, undulating and irregular, <1 mm to 1 mm thick; 50 and 80 deg TCA; white-grey
11-SH-005	66.5	66.55	vnlt	40		2 veinlets of quartz-carbonate; irregular and wispy; <1 mm to 5 mm thick; white-grey; 50 and 30 deg TCA
11-SH-005	70.19		ctc	60		
11-SH-005	70.2	70.31	flt gouge	60		10-12 cm of grey-green gouge, up to 40% clasts that are up to 3 cm wide; 60 deg sharp upper and lower contacts
11-SH-005	70.32		ctc	60		
11-SH-005	70.33	70.4	vn + gouge	60		irregular white quartz-carbonate vein, 1-2 cm thick, with weak patchy peach-pink alteration; within a moderately clay altered 8-9 cm zone, not quite clay gouge but distinct with sharp lower contact;
11-SH-005	70.41		ctc	60		
11-SH-005	71.17		vn + gouge	70		up to 1.5 cm quartz-carbonate vein with weak patchy peach-pink alteration; weak minor amounts of grey clay gouge on either side of vein up to 2 mm thick; vein is not completely recovered, about 40% probably unrecovered
11-SH-005	71.58		fracture	60		healed fracture with up to 0.5 cm of carbonate material
11-SH-005	71.62		gouge	60		3 cm grey-green and black clay gouge with clasts up to 1 cm wide
11-SH-005	71.67		gouge	10		2-3 mm of grey-green clay gouge on a fracture surface
11-SH-005	72		gouge	20		up to 2 cm of white-grey-green clay gouge with clasts up to 0.5 cm
11-SH-005	73	73.25	gouge	10		up to 2 cm of grey-green-black clay gouge supporting clasts up to 2 cm wide;
11-SH-005	73.9	75.05	bx + gouge			a clay rich breccia zone with rounded and subangular clasts being held together by a grey-white-green and pastel green clay gouge up to 3 cm thick
11-SH-005	75.62		vn	67		65-70 deg TCA carbonate vein, irregular and weakly dismembered, 1-4 mm thick
11-SH-005	75.65		ctc	67		upper contact of a short altered rhyolite tuff section; 65 - 70 deg TCA, irregular and undulating contact
11-SH-005	75.78		ctc	45		lower contact of a short altered rhyolite tuff section; 40-50 deg TCA, irregular and undulating
11-SH-005	76.55		shr	75		waxy pink-maroon altered crumbly rock likely due to shearing/deformation; about 4 cm thick
11-SH-005	76.59	77.63	bx + gouge			weakly brecciated unit of rhyolite tuff and angular chalcedonic/felsic breccia, with a sudden change in alteration @ 77.12 to the waxy pink-maroon altered crumbly rock with abundant white clay gouge up to 3 cm;
11-SH-005	77.63		stwk			weak stockwork of quartz-carbonate material up to 0.5 cm;
11-SH-005	80.51		str	45		white-grey quartz-carbonate stringer up to 1 mm thick; weakly undulating contacts
11-SH-005	81.95		fracture	40		white-grey quartz-carbonate infill within a fracture up to 1 mm thick;
11-SH-005	82.25		flt	85		minor fault offset up to 3 cm with quartz-carbonate material up to 1 cm on edge; clasts are visibly offset
11-SH-005	83.3	83.5	stwk	35		weak stockwork of quartz-carbonate material up to 3-4 mm thick within breccia infill; most orientations 30 and 40 deg TCA
11-SH-005	84.63	84.8	gouge			weak gouge (waxy crumbly rock) material supporting fragments up to 3-4 cm; gouge material is a light pastel green and grey; upper contact is about 70 deg, lower contact is 30-50 deg TCA, the contacts are not sharp
11-SH-005	85.4	85.6	gouge			contacts not recovered well; clay gouge is grey-brown, very fine with rare clasts up to 2 cm;
11-SH-005	86.05	86.25	gouge			dark purple clay gouge holding together dark green altered clasts up to 3 cm
11-SH-005	86		stwk			rare weak carbonate infill up to 3-4 mm thick
11-SH-005	90.6		fracture	30		planar fracture
11-SH-005	91.95		gouge	65		1-2 cm dark purple-grey clay gouge with clasts up to 2-3 mm
11-SH-005	93.85		alt band	45		fluidal weakly irregular alteration band contact - dark purple meeting dark green

11-SH-005 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-005	93.95		ctc	45		upper contact between altered tuff and altered welded tuff
11-SH-005	94.05		fol/fab	50		moderate foliation/fabric at 50 deg TCA of welded tuff
11-SH-005	94.45		fol/fab	45		moderate foliation/fabric of welded tuff
11-SH-005	94.85		fol/fab	45		moderate foliation/fabric of welded tuff

11-SH-005 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-005	0.00	7.01	7.01	0.56	7.99	0.00	0.00	0.00
11-SH-005	7.01	10.06	3.05	2.69	88.20	0.86	31.97	6.00
11-SH-005	10.06	13.11	3.05	2.91	95.41	1.23	42.27	8.00
11-SH-005	13.11	16.15	3.04	3.04	100.00	1.58	51.97	10.00
11-SH-005	16.15	19.20	3.05	2.25	73.77	0.64	28.44	4.00
11-SH-005	19.20	22.25	3.05	2.83	92.79	2.12	74.91	15.00
11-SH-005	22.25	25.30	3.05	2.62	85.90	1.54	58.78	10.00
11-SH-005	25.30	28.35	3.05	2.84	93.11	2.07	72.89	12.00
11-SH-005	28.35	31.39	3.04	2.30	75.66	1.68	73.04	9.00
11-SH-005	31.39	34.44	3.05	2.94	96.39	2.71	92.18	8.00
11-SH-005	34.44	37.49	3.05	2.90	95.08	2.42	83.45	12.00
11-SH-005	37.49	40.54	3.05	3.05	100.00	2.73	89.51	12.00
11-SH-005	40.54	43.59	3.05	2.93	96.07	1.82	62.12	8.00
11-SH-005	43.59	46.63	3.04	3.05	100.33	2.26	74.10	10.00
11-SH-005	46.63	49.68	3.05	2.78	91.15	1.53	55.04	8.00
11-SH-005	49.68	52.73	3.05	2.62	85.90	1.48	56.49	10.00
11-SH-005	52.73	55.78	3.05	3.05	100.00	2.64	86.56	12.00
11-SH-005	55.78	58.83	3.05	3.01	98.69	2.57	85.38	13.00
11-SH-005	58.83	61.87	3.04	3.01	99.01	2.22	73.75	12.00
11-SH-005	61.87	64.92	3.05	2.92	95.74	1.56	53.42	8.00
11-SH-005	64.92	67.97	3.05	3.02	99.02	2.91	96.36	10.00
11-SH-005	67.97	71.02	3.05	3.07	100.66	2.88	93.81	8.00
11-SH-005	71.02	74.07	3.05	2.85	93.44	2.27	79.65	13.00
11-SH-005	74.07	77.11	3.04	3.02	99.34	2.00	66.23	10.00
11-SH-005	77.11	80.16	3.05	2.97	97.38	1.88	63.30	11.00
11-SH-005	80.16	83.21	3.05	3.05	100.00	2.60	85.25	16.00
11-SH-005	83.21	86.26	3.05	2.81	92.13	1.84	65.48	9.00
11-SH-005	86.26	89.31	3.05	2.88	94.43	2.85	98.96	10.00
11-SH-005	89.31	92.35	3.04	2.99	98.36	2.99	100.00	7.00
11-SH-005	92.35	95.40	3.05	3.05	100.00	2.93	96.07	9.00

11-SH-005 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-005	7	0.12
11-SH-005	8	0.43
11-SH-005	9	0.2
11-SH-005	10	0.62
11-SH-005	11	0.67
11-SH-005	12	0.67
11-SH-005	13	0.49
11-SH-005	14	0.1
11-SH-005	15	0.32
11-SH-005	16	0.09
11-SH-005	17	0.14
11-SH-005	18	0.29
11-SH-005	19	0.49
11-SH-005	20	0.69
11-SH-005	21	0.27
11-SH-005	22	0.53
11-SH-005	23	0.1
11-SH-005	24	0.98
11-SH-005	25	0.14
11-SH-005	26	0.1
11-SH-005	27	0.42
11-SH-005	28	0.95
11-SH-005	29	0.63
11-SH-005	30	0.54
11-SH-005	31	0.14
11-SH-005	32	0.23
11-SH-005	33	0.12
11-SH-005	34	0.4
11-SH-005	35	0.09
11-SH-005	36	0.32
11-SH-005	37	0.27
11-SH-005	38	0.16
11-SH-005	39	0.12
11-SH-005	40	0.36
11-SH-005	41	0.21
11-SH-005	42	0.32
11-SH-005	43	0.1
11-SH-005	44	0.49
11-SH-005	45	0.4

11-SH-005 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-005	46	0.8
11-SH-005	47	0.12
11-SH-005	48	0.07
11-SH-005	49	0.84
11-SH-005	50	0.62
11-SH-005	51	0.49
11-SH-005	52	0.51
11-SH-005	53	0.65
11-SH-005	54	0.53
11-SH-005	55	0.75
11-SH-005	56	0.84
11-SH-005	57	0.96
11-SH-005	58	0.71
11-SH-005	59	0.64
11-SH-005	60	0.31
11-SH-005	61	0.53
11-SH-005	62	0.31
11-SH-005	63	0.87
11-SH-005	64	0.16
11-SH-005	65	0.36
11-SH-005	66	0.98
11-SH-005	67	0.21
11-SH-005	68	0.64
11-SH-005	69	0.12
11-SH-005	70	0.73
11-SH-005	71	0.14
11-SH-005	72	0.09
11-SH-005	73	0.67
11-SH-005	74	0.69
11-SH-005	75	0.58
11-SH-005	76	0.16
11-SH-005	77	0.82
11-SH-005	78	0.87
11-SH-005	79	0.25
11-SH-005	80	0.69
11-SH-005	81	0.25
11-SH-005	82	0.4
11-SH-005	83	0.23
11-SH-005	84	0.32

11-SH-005 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-005	85	0.73
11-SH-005	86	0.07
11-SH-005	87	0.38
11-SH-005	88	0.86
11-SH-005	89	0.69
11-SH-005	90	0.6
11-SH-005	91	0.82
11-SH-005	92	0.12
11-SH-005	93	0.12
11-SH-005	94	0.16
11-SH-005	95	0.54

11-SH-006 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-006	0.00	0.23	OB	OB	overburden	
11-SH-006	0.23	35.03	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	crystal lithic rhyolite tuff; white-beige and green-grey; up to 30% clasts, most <1 cm, rarely up to 5 cm; 10-12% siliceous grey-green fragments, typically subrounded-subangular; 10-12% chalcedonic/feldspathic clasts; up to 10% chlorite altered lithics; 1-2% dark mafic mineral, weakly magnetic (magnetite?) up to 1 cm maximum, typically subrounded; matrix is a weakly pervasive clay-sericite altered ash, patchy chlorite-altered, both clay-sericite and chlorite alteration begin to increase at ~ 19 m; the rock is generally weak to moderately siliceous, decreasing after ~ 19 m; strong limonite/Fe-oxide alteration affects fractures and forms thick haloes up to 10 cm, weakens at about 9 m and weakens still at about 19 with haloes typically <1 cm and limonite/Fe-oxide affecting mostly fracture surfaces; trace finely disseminated pyrite; veining is common with quartz veins up to 10 cm, (about 2-10% veining, 45 deg TCA to subvertical), but becomes less common after ~ 19 m; some carbonate stringers and veinlets; weak to moderately fractured up until about 22 m and then rock becomes somewhat more competent; intermittent gouging starts occurring after 27 m with weak to moderately fractured rock again; siliceous fragments begin to disappear around 27 m, increase in chlorite altered clasts around 19 m;	
11-SH-006	35.03	39.35	welded rhyolite tuff	welded tuff	variable weak to moderately welded crystal lithic rhyolite tuff at about 55 - 65 deg TCA preferred orientation of flattened chlorite-altered lithics; very transitional, contact chosen after a small gouge filled fracture	
11-SH-006	39.35	44.85	volcanic breccia	volcaniclastic	weak to moderately brecciated intervals; variable lithologies; up to 43.9 m: a dark green crystal lithic tuff (intermediate composition?) with abundant clay gouge as weak matrix support; a pyroclastic breccia between 43.9 to 44.85 with lithics up to almost 20 cm along core axis length (block of seemingly andesitic composition, fine grained, chlorite altered); rare carbonate stringers/veinlets up to 1 cm thick; trace very finely disseminated pyrite with local clay gouge rich areas up to 2% very finely disseminated pyrite;	
11-SH-006	44.85	48.8	welded tuff	welded tuff	moderate pervasive chlorite and clay-sericite altered weakly welded tuff (of intermediate composition?); 30-40% clasts: 10-20% chlorite-altered flattened clasts (no clearly visible preferred orientation, although seems to be about 20-30 deg TCA), 5% feldspathic and 5% sericite-clay altered felsic clasts, 2% mafic weakly magnetic, at times weak-moderately hematite altered clasts (magnetite?); typically subangular to subrounded clasts, moderately poorly sorted with clasts up to 5 cm across but typically < 1 cm;	
11-SH-006	48.8	50.6	pyroclastic breccia	volcaniclastic	crystal lithic tuff matrix (of intermediate composition?) hosting larger heterolithic blocks up to 7-8 cm wide; lithic tuff is a deep green with feldspathic, chlorite-altered, weakly magnetic mafic hematite altered, and felsic (chalcedonic?) clasts totalling about 30-40% clast content; lack of veining; trace finely disseminated pyrite, locally up to 2% particularly within altered clasts;	
11-SH-006	50.6	50.8	fault gouge	fault gouge	broken core with about 10-15 cm of grey clay gouge hosting clasts up to 2%	
11-SH-006	50.8	52.55	hematitic and siliceous breccia zone	breccia	moderate-strongly deformed (tightly folded layers visible) hematitic and siliceous altered breccia zone; corresponds to chalcedonic/felsic breccia zone in 11-SH-005 with similar textures present although this unit is shorter and is visibly more deformed; brecciated laminated clasts up to 10 cm with dark red-gray, hard, weak-moderate hematite, weakly magnetic mm-scale laminations interlayered with softer light green-peach, weakly carbonate altered mm-scale laminations; patchy siliceous grey-red-green flooding with weak sub-mm-scale carbonate stockwork; gouge @ 51.5 for about 5 cm followed by a variably chlorite and siliceous fine grained mafic rock becoming progressively altered at 52.35 and ending with a fault gouge unit; trace finely disseminated pyrite	
11-SH-006	52.55	52.73	fault gouge	fault gouge	fine grey gouge with clasts up to 3-4 mm	
11-SH-006	52.73	58.83	altered mafic igneous rock	feldspar, pyroxene/amphibole-phyric intermediate-mafic flow/dyke	variably altered mafic igneous rock; flow vs dyke? dark red-purple to dark green-brown to olive green-brown; very fine to fine grained matrix with fine to medium grained felsic and mafic phenocrysts up to 2 mm, up to 20% phenocryst content; felsic minerals are weakly carbonate altered (probably clay-sericite altered as well due to easy scratching) and sometimes have a light peach-pink-white hue, anhedral but at times rectangular; mafic minerals are anhedral and weakly magnetic, dark grey/black and hard; locally weakly brecciated with carbonate breccia infill up to 0.5 cm; trace finely disseminated pyrite; matrix is weak to moderately siliceous with patchy chlorite and hematite; alteration or lithological (altered dyke?) upper contact @ 56.6 m that is sharp but lower contact at ~ 57 m is gradual;	
11-SH-006	58.83	58.83	EOH	EOH	EOH	

11-SH-006 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-006	0	19	manganese/limonite/Fe-oxide + clay-sericite + silicification + chlorite	manganese/limonite/Fe-oxide weathering pervades the rock to about 9 m with fractures acting as conduits and haloes up to 10 cm forming around the fractures; manganese typically finely branches out away from fractures no more than about 2 cm; the matrix is weakly pervasively clay-sericite altered with increasing amounts of chlorite patches and overprinted by weak-moderately intense silicification
11-SH-006	19	39.35	clay-sericite + chlorite + silicification + limonite/Fe-oxide	moderate pervasive clay-sericite and chlorite alteration; moderately abundant clay gouge; weak patchy silicification; rare fracture controlled limonite/Fe-oxide
11-SH-006	39.35	50.8	clay-sericite + chlorite + carbonate + hematite	moderate pervasive clay-sericite and chlorite alteration affecting matrix and clasts; weak carbonate alteration within matrix; patchy weak hematite mostly affecting mafic weakly magnetic clasts
11-SH-006	50.8	51.5	silicification + hematite + clay-sericite + carbonate	patchy moderate to strong silicification as well as silicified and hematite (and weakly magnetic) altered laminations within large brecciated and deformed clasts; moderate clay-sericite and weakly carbonate altered laminations also present within deformed clasts;
11-SH-006	51.5	52.73	clay-sericite + chlorite + hematite + silicification	clay-sericite and chlorite altered halo up to 20 cm after clay gouge @ 51.5 m; patchy silicification and hematite altered mafic rock becoming brecciated prior to 10-15 cm gouge @ 52.55 m
11-SH-006	52.73	58.83	silicification + chlorite + hematite + carbonate + clay-sericite	weak to moderate pervasive silicification; patchy weak to moderate chlorite, hematite alteration particularly within weakly brecciated intervals; carbonate alteration as breccia infill and also as calcite within matrix; moderate clay-sericite altered felsic clasts
11-SH-006	58.83	58.83	EOH	EOH

11-SH-006 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-006	2.17		vnlt	70		0.5-1 cm grey-white quartz veinlet that has been manganese-limonite altered along contacts and fractures
11-SH-006	2.4	2.8	brkn			broken core with pieces typically < 5 cm, some vein material up to 4.5 mm thick visible
11-SH-006	2.95		vnlt	40		1-2 mm grey quartz veinlet with vugs and voids up to 2 mm thick infilled with clay-limonite; weakly undulating contacts
11-SH-006	4.85		vnlt + gouge			weakly recovered grey quartz veinlet up to 3-4 mm thick with a limonite-manganese clay gouge up to 2-4 mm thick
11-SH-006	4.95		fracture	37		intersecting planar fractures, 35 and 40 deg TCA
11-SH-006	5.95		vnlt	55		0.5-1.5 cm veinlet, grey quartz limonite altered; vugs and voids up to 7 mm wide; weak patchy colloform banding
11-SH-006	7	7.3	brkn			broken core with pieces typically <5 cm; clay gouge @ 7.1 m, 70 deg TCA, up to 2-3 mm with clasts up to 5 mm
11-SH-006	7.95		fracture	65		planar fracture that has been altered by limonite/Fe-oxide and manganese
11-SH-006	9		vnlt	75		irregular grey quartz veinlet up to 1 cm thick with limonite/Fe-oxide (yellow-orange) gouge up to 5 mm thick
11-SH-006	9.13		str	85		2 stringers of grey quartz, <1 mm, both 85 deg TCA; limonite alteration along vein contacts and nearby fractures
11-SH-006	9.5		str	77		a series of stringers, grey quartz; <1 mm to 2 mm; 75 - 80 deg TCA; altered by limonite; rare voids up to 1 mm thick
11-SH-006	10.3		str	50		<1 mm grey quartz stringer with limonite/Fe-oxide clay along contacts
11-SH-006	11.65		vnlt	77		a veinlet of grey quartz up to 8 mm thick; 2 stringers on either side < 1 mm, 75 and 80 deg TCA; irregular thickness and weakly colloform banded
11-SH-006	12.3		gouge	75		limonite and manganese altered clay gouge up to 5 mm thick with clasts up to 3 mm
11-SH-006	12.75		vnlt	45		grey quartz veinlet up to 4 mm thick; near a fracture that is altered by limonite; voids up to 3 mm thick;
11-SH-006	12.85		vnlt	65		grey quartz material in a limonite clay filled fracture, up to 3-4 mm thick
11-SH-006	13	13.4	brkn			broken core with pieces < 5 cm; partial grey quartz veinlet visible up to 3 mm thick;
11-SH-006	13.45		vnlt	70		a grey quartz veinlet up to 7 mm thick with sub mm stringers (2-3) occurring < 5 cm above veinlet; limonite altered and vugs present that are filled with limonite clay
11-SH-006	13.6		str			2 intersecting stringers at 70 and 30 deg TCA; up to 2 mm thick; voids up to 1 mm thick stained by limonite/Fe-oxide
11-SH-006	14.1		vn	55		incomplete recovery (~50%); vein up to 1.5 cm; weakly colloform banded; limonite altered; grey quartz
11-SH-006	14.22		vn	45		2 mm to 1.5 cm thick; grey quartz with limonite and an pink-red alteration along sub mm fractures; rare void up to 2 mm
11-SH-006	14.5		vn	75		7 mm to 1.5 cm thick; grey quartz with limonite and pink-red alteration along fractures; voids up to 3-4 mm are filled with limonite clay; weakly colloform banded
11-SH-006	14.8		vn	70		3 mm to 1.3 cm thick with up to 4-5 mm of limonite clay infill; weak limonite and pink-red alteration along fractures;
11-SH-006	14.9		brkn			a few cm of broken core with some grey quartz material of a partially recovered veinlet (up to 5-6 mm thick)
11-SH-006	15.05		vn	70		1.5-1.8 cm vein; grey quartz; weakly colloform banded; moderate limonite and weak red-pink alteration along fractures; rare voids up to 1-2 mm
11-SH-006	15.45		vn	72		2.5-3 cm grey quartz vein; 70-75 deg TCA; weakly colloform banded; moderate limonite and weak red-pink alteration along fractures; minor voids up to 2 mm
11-SH-006	15.6		vnlt	85		0.5-1 cm grey quartz veinlet; about 60% recovered; moderate limonite and weak red-pink alteration along fractures; limonite clay infill up to 2-3 mm; weakly colloform banded; 2 stringers of grey quartz, one on either side of veinlet, 40 and 50 deg TCA
11-SH-006	15.7	16.25	stwk			moderate stockwork of grey quartz veinlets and stringers with interconnections at various orientations, from 10 to 40 to 85 deg TCA; thicknesses vary from sub mm and rarely up to 3 cm; limonite clay alteration affecting fractures and infilling voids up to 1 cm thick; broken core between 15.8-15.9 with some quartz material up to 0.5 cm

11-SH-006 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-006	16.7	16.82	stwk			weak-moderate stockwork of grey quartz stringers and veinlets; interconnections at various orientations, from 40 - 80 deg TCA; thicknesses vary from sub mm and rarely up to 1.5 cm; moderate vugs and voids up to 1 cm with fine-medium drusy quartz; weak fracture controlled limonite alteration; vein density is about 5-10%
11-SH-006	16.88	16.96	vnlt	70		a series of 3 veinlets, subparallel at about 70 deg TCA; 3-6 mm thicknesses; weakly colloform banded; weak-moderate fracture controlled limonite alteration
11-SH-006	17.03	17.75	stwk			moderate-strong stockwork of grey quartz veinlets and veins; interconnections at various orientations, from 30 - 70 deg TCA; thicknesses vary from sub mm and commonly to 5 cm thick; moderate voids up to 2 cm with fine drusy quartz altered by limonite manganese; weak to moderate fracture controlled limonite alteration; vein density is about 40-50%; some broken quartz material up to 3 cm, indicating potential unrecovered quartz
11-SH-006	17.8	17.92	vnlt	65		a series of 3 veinlets; subparallel at 60, 65 and 70 deg TCA; 5-7 mm thicknesses; moderate vugs and voids up to 5 mm thick with fine drusy quartz; moderate limonite alteration fracture controlled and within voids
11-SH-006	18.03	18.15	brkn			broken core with pieces < 5 cm; some grey quartz vein material visible up to 5 mm thick
11-SH-006	18.65	18.8	vn	70		grey quartz vein 4-5 cm with weak stockwork nearby (attached veinlets up to 8 mm thick nearby); vein is moderately altered with fracture controlled manganese and limonite; vein is about ~ 90% recovered; voids up to 3-4 mm wide with some limonite clay infill;
11-SH-006	19.2	19.3	bx vnlt	67		weakly brecciated interval with clay infill and brecciated vein material/veinlets 1-3 mm thick at 65 and 70 deg TCA; fracture controlled limonite alteration
11-SH-006	20	20.25	brkn + vn			broken core with pieces < 3 cm; some partially (50%) recovered vein material up to 2 cm thick, limonite altered;
11-SH-006	20.45	20.7	brkn + vn			broken core with pieces < 3 cm; some partially (40%) recovered vein material up to 1 cm thick; limonite altered
11-SH-006	21	21.1	vn	70		7-8 cm vein, white-grey quartz; weak fracture controlled limonite alteration; weak vugs up to 2-3 mm wide with very fine drusy quartz
11-SH-006	21.2		vnlt	65		broken core with grey quartz veinlet partially recovered (70%?) up to 1 cm thick; weak fracture controlled limonite alteration
11-SH-006	21.4		vnlt	60		3-4 mm white-grey quartz veinlet with limonite clay infill up to 1-2 mm; weakly vuggy up to 1 mm wide
11-SH-006	22.98		vnlt	65		2-8 mm quartz-carbonate veinlet with undulating contacts; green-white clay infill up to 3 mm; weak limonite alteration; voids up to 2 mm;
11-SH-006	23.5		vnlt	45		white-grey quartz-carbonate veinlet, irregular and undulating contacts; 2-10 mm thick; beige-white hard mineral on edges with toothcomb texture? (albite?);
11-SH-006	24.9		bx vn	45		weakly brecciated light to dark grey quartz material up to 3 cm thick; weak limonite and manganese alteration controlled by brecciation;
11-SH-006	25.45		bx vn	70		weak-moderately brecciated light to dark grey quartz material up to 4 cm thick; weak pink-red and limonite alteration, controlled by brecciation; weakly colloform banded
11-SH-006	26.2	26.3	gouge			contacts non-measurable due to broken core; brown-yellow-gray clay gouge is up to 10 cm thick with clasts up to 1.5 cm
11-SH-006	28		vnlt	45		white-grey quartz-carbonate veinlet up to 1.5 cm thick, irregular and undulating contacts; weak sub-mm stringer stockwork nearby
11-SH-006	28.4		gouge	75		grey clay gouge up to 0.5 cm thick with clasts up to 2 mm
11-SH-006	28.55	28.65	gouge	75		grey clay gouge is up to 10 cm thick with clasts up to 1-2 cm
11-SH-006	29.5		gouge			2-3 cm grey clay gouge, contacts non-measurable due to broken core; clasts up to 1.5 cm
11-SH-006	32.4	32.55	gouge	55		grey clay gouge up to 10-15 cm, unclear due to broken up gouge and core; clasts up to 2-3 cm; lower contact is 55 deg TCA
11-SH-006	32.7	32.8	gouge			broken core and gouge makes contacts non-measurable; grey clay gouge is up to 5-10 cm thick with clasts up to 1 cm
11-SH-006	33.3		gouge	50		1-2 mm grey clay gouge on fracture surface

11-SH-006 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-006	35.05		gouge	40		3-5 mm grey clay gouge on fracture surface with clasts up to 2 mm
11-SH-006	35.9		fol/fab	60		preferred orientation of chlorite-rich flattened clasts
11-SH-006	36.1		fol/fab	55		preferred orientation of chlorite-rich flattened clasts
11-SH-006	36.75		fol/fab	65		preferred orientation of chlorite-rich flattened clasts
11-SH-006	38.7		fol/fab	60		preferred orientation of chlorite-rich flattened clasts
11-SH-006	39.35	39.7	gouge	50		grey clay gouge with some competent rock up to 5 cm intact; gouge contains clasts up to 2-3 cm; lower contact is 50 deg TCA but upper contact has not been recovered
11-SH-006	41.88		gouge			up to 1 cm grey clay gouge with clasts up to 3-4 mm; subvertical contact although not entirely clear
11-SH-006	42	43	gouge			lithic tuff held together by clay-rich matrix and a clay gouge up to 10 cm @ 42.85, 75 deg TCA lower contact
11-SH-006	43.15	43.95	gouge + bx	65		strong clay and gouge present with rare competent rock up to 20 cm; clay gouge is grey, very fine and at times acting as a breccia matrix to clasts up to 5 cm wide; 70 deg upper and 60 deg lower contacts
11-SH-006	43.95	44.87	bx			moderately brecciated and chlorite altered pyroclastic with lithics up to 20 cm;
11-SH-006	44.25		vnit	55		white quartz-carbonate veinlet up to 1 cm thick
11-SH-006	45.1		gouge + fracture	35		fracture controlled grey clay gouge infill up to 2 mm thick
11-SH-006	45.55		vnit	50		dismembered quartz-carbonate material up to 0.5 cm thick
11-SH-006	47.73		gouge	70		grey clay gouge up to 1.5 cm with clasts up to 3-4 mm
11-SH-006	48.1		def	40		deformed (folded) clast along 40 deg orientation
11-SH-006	48.8		gouge	80		5 cm grey clay gouge with clasts up to 5 mm; lower contact 80 deg TCA
11-SH-006	50.6	50.8	gouge	60		grey clay gouge up to 20 cm with clasts up to 1.5 cm
11-SH-006	51.5		gouge	70		white to grey clay gouge 3 cm thick with clasts up to 3-4 mm
11-SH-006	51.62		gouge	50		1 cm grey clay gouge with clasts up to 3 mm
11-SH-006	52.55	52.73	gouge	50		upper contact is 50 deg TCA; clay gouge is up to 18 cm thick, fine grey clay; about 5 cm of competent rock within gouge; clasts up to 4 mm
11-SH-006	53.7		gouge			5 cm of broken core with up to 1 cm of grey-brown clay gouge
11-SH-006	53.7	54.45	bx			healed breccia with altered subrounded clasts up to 5 cm in a dark purple-brown breccia matrix, weakly magnetic
11-SH-006	56.6	57	dyke	65		lithological contact (dyke?) or alteration; sharp contact but lower contact at ~57m is gradual over 2-3 cm
11-SH-006	57.3		gouge			5 cm of broken core with up to 2-3 mm of grey clay gouge on broken surfaces

11-SH-006 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-006	0.00	0.91	0.91	0.68	74.73	0.10	14.71	1.00
11-SH-006	0.91	3.96	3.05	2.45	80.33	0.80	32.65	6.00
11-SH-006	3.96	7.01	3.05	1.85	60.66	0.99	53.51	7.00
11-SH-006	7.01	10.06	3.05	2.43	79.67	0.78	32.10	6.00
11-SH-006	10.06	13.11	3.05	1.82	59.67	0.98	53.85	7.00
11-SH-006	13.11	16.15	3.04	3.02	99.34	1.57	51.99	10.00
11-SH-006	16.15	19.20	3.05	2.32	76.07	0.34	14.66	3.00
11-SH-006	19.20	22.25	3.05	2.69	88.20	0.28	10.41	2.00
11-SH-006	22.25	25.30	3.05	3.01	98.69	2.13	70.76	13.00
11-SH-006	25.30	28.35	3.05	2.09	68.52	0.78	37.32	4.00
11-SH-006	28.35	31.39	3.04	2.56	84.21	0.87	33.98	6.00
11-SH-006	31.39	34.44	3.05	2.68	87.87	1.14	42.54	7.00
11-SH-006	34.44	37.49	3.05	2.97	97.38	2.69	90.57	9.00
11-SH-006	37.49	40.54	3.05	2.81	92.13	1.32	46.98	6.00
11-SH-006	40.54	43.59	3.05	2.79	91.48	1.98	70.97	9.00
11-SH-006	43.59	46.63	3.04	2.97	97.70	2.52	84.85	13.00
11-SH-006	46.63	49.68	3.05	2.86	93.77	2.32	81.12	12.00
11-SH-006	49.68	52.73	3.05	3.04	99.67	2.63	86.51	10.00
11-SH-006	52.73	58.83	6.10	3.03	49.67	2.78	91.75	12.00

11-SH-006 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-006	1	0.38
11-SH-006	2	0.78
11-SH-006	3	0.73
11-SH-006	4	0.84
11-SH-006	5	0.45
11-SH-006	6	0.38
11-SH-006	7	0.42
11-SH-006	8	0.64
11-SH-006	9	0.12
11-SH-006	10	0.54
11-SH-006	11	0.12
11-SH-006	12	0.84
11-SH-006	13	0.32
11-SH-006	14	0.21
11-SH-006	15	0.87
11-SH-006	16	0.14
11-SH-006	17	0.07
11-SH-006	18	0.36
11-SH-006	19	0.78
11-SH-006	20	0.12
11-SH-006	21	0.23
11-SH-006	22	0.12
11-SH-006	23	0.27
11-SH-006	24	0.32
11-SH-006	25	0.58
11-SH-006	26	0.87
11-SH-006	27	0.73
11-SH-006	28	0.51
11-SH-006	29	0.23
11-SH-006	30	0.82
11-SH-006	31	0.03
11-SH-006	32	0.14
11-SH-006	33	0.12
11-SH-006	34	0.42
11-SH-006	35	0.12
11-SH-006	36	0.14
11-SH-006	37	0.06
11-SH-006	38	0.1
11-SH-006	39	0.01

11-SH-006 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-006	40	0.45
11-SH-006	41	0.31
11-SH-006	42	0.58
11-SH-006	43	0.09
11-SH-006	44	0.12
11-SH-006	45	0.32
11-SH-006	46	0.34
11-SH-006	47	0.29
11-SH-006	48	0.2
11-SH-006	49	0.07
11-SH-006	50	0.14
11-SH-006	51	0.34
11-SH-006	52	0.25
11-SH-006	53	0.16
11-SH-006	54	0.1
11-SH-006	55	0.75
11-SH-006	56	0.18
11-SH-006	57	0.34
11-SH-006	58	0.07

11-SH-007 Lithology Log

Hole ID	From (m)	To (m)	Lith Initial	Lith Final	Description	Deformation
11-SH-007	0.00	2.28	OB	OB	overburden	
11-SH-007	2.28	11.78	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	crystal lithic rhyolite tuff; rare beige-peach to commonly medium to dark blue-grey with peach-beige, dark grey-black and rare light to dark green lithics; white/dark grey/black stringers to veins; crystal lithics compose about 30-40%, typically sub-rounded to sub-angular and < 1 cm, rarely up to 3-4 cm; peach-beige lithics are typically feldspathic and rare chalcedony; blue-grey siliceous fragments up to 5-8%; dark mafic lithics are weakly magnetic; light to dark green minerals at times visible within lithics, very rare chlorite alteration; vein density is up to 10-15% per m interval, but typically < 2-3%, weakly stockworked, varied orientations from 0-5 to 85-90 deg TCA, thicknesses up to 4-5 cm, rare weak-moderate colloform banding, often fracture controlled limonite/Fe-oxide alteration due to surface weathering, trace very finely disseminated pyrite with small local areas (<1 cm) with up to 10% finely disseminated pyrite usually within the dark grey silica content; pits up to 3-4 mm that have been at times filled in with clay or moderate-strongly clay-altered felsics that have been weathered out; alteration consists of patchy bleaching at the surface and near the end of the interval, to pervasive fracture controlled and haloed limonite/Fe-oxide and weak manganese due to surface weathering, to a moderate-strong siliceous overprint over what was most likely initially a pervasive weak-moderate clay-sericite altered rhyolite tuff; weakly fractured, but generally relatively competent; trace very finely disseminated pyrite in matrix;	
11-SH-007	11.78	17.43	breccia zone	breccia	distinctly brecciated rhyolite tuff cross-cut/flooded with dark grey silica veins/dykes up to 20 cm with angular breccia fragments up to 2-3 cm, but typically sub-cm; abrupt decrease in limonite/Fe-oxide alteration but still present weakly fracture-controlled; a distinct change @ 13.62 m to a clast-supported breccia with an absence of the rhyolite tuff as a more competent host - clasts are varied heterolithics, subangular to subrounded (generally subrounded) up to several cm and are bound by a dark grey siliceous matrix usually sub-mm and rarely cross-cut by dark grey siliceous veins up to 1 cm thick;	
11-SH-007	17.43	34.2	crystal lithic rhyolite tuff with silica stockwork	stockwork zone	continuation of crystal lithic rhyolite tuff with gradual color change from grey-blue to grey-beige crystal rhyolite tuff with white-beige, and rare peach, light green and dark mafic lithics (more monolithic); similar lithic content, size and shape as previous interval; seemingly more bleached due to abundance of light-colored felsic lithics; patchy strong clay-sericite affecting these light colored lithics breaking them down to a white-beige powder (although some are still hard and unweathered but bleached), and many left-over mm-scale pits due to weathered out lithics; siliceous overprint due to dark grey silica vein stockworking (density about 3 - 20%)	
11-SH-007	34.2	54.73	crystal lithic rhyolite tuff	crystal lithic rhyolite tuff + siliceous fragments	continuation of crystal lithic rhyolite tuff as previous interval; silica stockwork not as prominent but veining and local veinlet stockworking present with vein material up to 3 cm thick (about 2-4% vein density); rare larger clasts present up to 3-4 cm; patchy finely disseminated pyrite within fracture controlled silica infill (typically sub-mm infilling), pyrite visible on fracture faces; trace medium to dark grey siliceous fragments	
11-SH-007	54.73	58.59	breccia zone	breccia	distinctly brecciated rhyolite tuff cross-cut/flooded with dark grey silica veins/dykes up to 25 cm with angular breccia fragments up to 2-3 cm but typically sub-cm; between 55.2 - 56.1, distinct 1-2 mm pyrite rich band along the selvages of the silica flooding/rhyolite tuff fragments (~2% pyrite in pyrite-rich interval); siliceous material composes about 15-30% of the interval;	
11-SH-007	58.59	72.5	(welded) crystal lithic rhyolite tuff	welded tuff	distinctly different than the previous rhyolite tuff with diverse heterolithic content and clay-sericite-chlorite alteration; grey-beige matrix color with light to dark green orange-peach, dark grey/black and beige lithics; absence of siliceous fragments; typically < 1 cm size lithics, but some between 1-2 cm and rare clasts up to 5 cm (concentration of larger >10 cm clasts up until 65.3, and a brecciated welded tuff segment between 64.55 - 65.1 m); lithic content is 20-40%; rhyolite tuff becomes weakly welded after 65.1 m with a locally observable orientation of 70 - 85 deg TCA; welded clasts are primarily the waxy light green chlorite/clay-altered lithics;	
11-SH-007	72.5	87.17	pyroclastic breccia flow	volcaniclastic	poorly sorted pyroclastic lithics, subrounded to subangular up 20-30 cm; chlorite-clay-sericite rich matrix; up to 70% lithics with a chlorite-clay-sericite altered matrix; clasts are heterolithic with feldspathic, chlorite altered, mafic, porphyritic and flow-banded varieties; 2 distinctly laminated/banded lithics (one feldspathic/felsic and the other mafic porphyritic) that are both oriented at 60 deg TCA - are these dykes or deposited flows?, occurring between ~76.8 - 77.8m; weak fracture controlled carbonate up to 2 mm thick, rarely up to 1 cm, present both within lithics (but not matrix) and matrix + lithics;	
11-SH-007	87.17	87.17	EOH	EOH	EOH	

11-SH-007 Alteration Log

Hole ID	From (m)	To (m)	ALTERATION TYPE	Description
11-SH-007	2.28	11.78	silicification + limonite/Fe-oxide-manganese + clay-sericite + bleaching	initial clay-sericite (weak-moderate?) patchily bleached up until ~5 m and between 10.25 - 11 m; pervasive moderate-strong siliceous overprint; pervasive fracture-controlled limonite/Fe-oxide with haloes up to 20 cm; fracture controlled manganese rarely more than a few cm away from fractures of veins;
11-SH-007	11.78	58.59	silicification + limonite/Fe-oxide + clay-sericite	strong silicification overprint due siliceous breccia matrix; with weak fracture-controlled limonite/Fe-oxide (rare strong pervasive @14.6-15.1 m), minor haloes up to 5 cm; likely initially clay-sericite altered due to weathered out clay pits
11-SH-007	58.59	72.5	clay-sericite + chlorite	moderate pervasive clay-sericite and chlorite alteration affecting matrix and weakly selectively affecting lithics;
11-SH-007	72.5	87.17	clay-sericite + chlorite	moderate to strong pervasive clay-sericite and chlorite alteration generally affecting matrix but selectively affecting lithics;

11-SH-007 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-007	3.1		vnlt	70		3-5 mm grey-white quartz veinlet; moderate fracture-controlled limonite/Fe-oxide altered; voids up to 5 mm wide; trace finely disseminated pyrite
11-SH-007	3.2		vnlt	60		4-7 mm white and dark grey quartz veinlet; moderate fracture-controlled limonite/Fe-oxide altered; voids up to 1 cm wide; irregular contacts; trace finely disseminated pyrite
11-SH-007	3.75	4.25	stwk			weak veinlet stockwork; 4-5 veinlets, some connected, others in series; orientations vary from 35-75 deg TCA; thicknesses vary from 3-4 mm to 1-2 cm; white and dark grey silica/quartz; local weak colloform banding; weak-moderate fracture controlled limonite/Fe-oxide alteration; generally rare voids/vugs up to 3 mm, sometimes filled in with clay; rare weakly brecciated; trace finely disseminated pyrite; about 10-15% vein density
11-SH-007	4.58		vnlt	45		irregular, splayed veinlet, 40 - 50 deg TCA, weakly vuggy up to 2 mm voids; dark grey and white quartz; fracture controlled limonite/Fe-oxide alteration; weakly brecciated
11-SH-007	4.9	5.15	str	47		2 sub mm stringers at 45 and 50 deg TCA; irregular, dark grey quartz; weakly limonite/Fe-oxide altered
11-SH-007	5.65		brkn			4-5 cm of broken core with partially recovered vein up to 1 cm; strongly limonite/Fe-oxide altered; white and dark grey quartz
11-SH-007	5.75		gouge + vnlt	65		fracture coated with dirty maroon-brown clay up to 2 mm; nearby veinlet up to 8 mm thick of grey and white quartz, weakly brecciated; rare vugs up to 2 mm
11-SH-007	5.93		vn	85		splayed quartz vein; 0.5 - 1.5 cm thick; dark grey and white quartz distinctly banded; trace finely disseminated, rarely up to 0.5-1%, pyrite
11-SH-007	6.3	6.7	str			series of stringers (4-5), sub mm and a rare veinlet up to 1.5 cm; dark grey and white quartz; irregular and undulating contacts; trace finely disseminated pyrite, locally up to 0.5-1%; orientations vary from 20 to 30 to 60 deg TCA
11-SH-007	6.77	6.96	vnlt			series of veinlets (3), 3-4 mm and one is a vein 2-3 cm thick; weakly brecciated dark and white quartz with some fragments up to 1 cm containing up to 5-10% very finely disseminated pyrite; orientations vary, 45 and 80 deg TCA; weakly vuggy with voids up to 2-3 mm
11-SH-007	7.18	7.23	brkn			broken core with partially recovered (20%?) veinlet up to 1 cm thick with dark grey and white quartz banding
11-SH-007	7.25	7.6	vnlt			a series of 3 veinlets, 2 to 10 mm thick; weakly colloform banded with white and dark grey quartz-silica; minor vugs up to 2-3 mm wide; trace very finely disseminated pyrite with local mm-scale areas up to 5%; orientations vary from 40 to 65 to 70 deg TCA;
11-SH-007	7.62		gouge	50		2-4 mm limonite and manganese altered clay gouge (dark grey-brown) with clasts up to 2 mm
11-SH-007	7.77		gouge	75		1-3 mm limonite altered clay (white to orange) with clasts up to 1
11-SH-007	8.5		vnlt	70		5-10 mm veinlet, dark grey with minor white quartz; common vugs up to 2 mm; trace to mm-scale patches of up to 5-10% finely disseminated pyrite; weakly colloform banded; rare toothcomb textures in voids;
11-SH-007	8.7		vnlt	40		1-2 mm veinlet; dark grey with minor white quartz; common vugs up to 1 mm; trace to 2% very finely disseminated quartz with rare crystals up to 1 mm; weak colloform banding;
11-SH-007	8.9		vn	85		1-1.5 cm vein; weakly colloform banded; dark grey quartz-silica with patchy white that has been strongly overprinted and altered by limonite/Fe-oxide, fracture controlled; trace finely disseminated pyrite; no vugs/voids
11-SH-007	9.25	9.4	vnlt	5		edge of a vein up to 1 cm thick, subparallel TCA; dark grey, weakly brecciated;
11-SH-007	9.85	10.15	str	70		2 stringers, < mm to 4 mm thick; strongly altered by fracture-controlled limonite/Fe-ox; dark grey quartz;
11-SH-007	11.28	11.23	vn			vein, contacts not recovered, dark grey and white-orange due to moderate fracture-controlled limonite/Fe-oxide alteration; weakly colloform with a weakly brecciated 3-4 mm band of 30% very finely disseminated pyrite within brecciated clasts;
11-SH-007	11.45	11.52	bx vn	60		weakly brecciated veinlets up to 1 cm (3-4 veinlets), irregular with undulating contacts; white and dark grey quartz-silica; weak-moderate fracture-controlled limonite/Fe-oxide; trace finely disseminated pyrite;

11-SH-007 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-007	11.78	13.62	bx vn			moderately brecciated rhyolite tuff with dark grey silica-quartz veins/dykes up to 10-20 cm cross-cutting (at various 30-70 deg TCA) containing angular fragments of rhyolite tuff up to 1 cm, but typically mm-scale; weakly vuggy with voids up to 1 cm, but typically <3-4 mm; patches of dark grey quartz-silica up to 1 cm that contain up to 40% very finely disseminated pyrite and weakly sub mm vuggy texture;
11-SH-007	13.62	17.43	bx			clast-supported breccia with rhyolite tuff no longer the main host; various heterolithic clasts up to several cm with mm-sized dark grey siliceous breccia matrix weakly cross-cut by siliceous veining up to 1 cm thick;; clasts are sub-angular to subrounded
11-SH-007	17.43	34.2	vn stwk			up to now, most veins have been entered individually or as groups; this entire interval is composed of such similar weakly brecciated, weakly stockworked or seemingly individual veins but it is possible that this is part of a large network of dark grey quartz-silica stockwork composed of sub-mm stringers up to 5-10 cm thick (rare up to 20 cm) cross-cutting brecciated/stockworked veinlets/veins; although many of the veins prior to this interval contained some amounts of white-grey quartz, dark grey silica (with cherty texture) dominates with relatively rare white-grey quartz present; orientations vary considerably with sub-parallel to sub-vertical cross-cutting occurring (although on average about 50-80 deg TCA); vugs up to 3-4 mm are commonly present; trace very finely disseminated pyrite with mm to max cm-sized patches of up to 5-10% finely disseminated pyrite in the dark grey silica-quartz; contacts are generally irregular and rarely offset; vein stockwork density ~ 3-20%
11-SH-007	34.37		vnlt	50		3-6 mm medium to dark grey quartz; irregular and undulating contacts;
11-SH-007	36.37		vn	80		splayed dark grey quartz vein with white patches; trace to 2% finely disseminated pyrite; 0.5-2 cm thick; weakly vuggy with voids up to 2 mm
11-SH-007	36.52		vn	75		2.5 cm dark grey quartz vein; weak fracture controlled limonite alteration; rare white patches; trace to 1% finely disseminated pyrite
11-SH-007	38.15		vn	50		light grey quartz vein with dark grey/black selvages; 1.5-2 cm thick; irregular and undulating contacts
11-SH-007	39.15		vnlt	75		70-80 deg TCA; 3-5 mm thick; undulating contacts; medium grey quartz with sub-mm dark grey/black selvages associated with finely disseminated pyrite (about 5% within entire veinlet but concentrated within ~2 mm); weak fracture-controlled limonite/Fe-oxide
11-SH-007	39.7	39.85	stwk			weak stockwork/brecciated with veinlets up to 1.5 cm thick; dark grey quartz with minor white-grey quartz and clean white clay-sericite infill; orientations vary from 10 to 60 to 85 deg TCA; patchy fracture-controlled limonite alteration; fracture controlled finely disseminated and blebby pyrite along 2-3 mm wide concentrations, entire associated with the dark grey silica material, about 5-10% of total veining;
11-SH-007	40.38		vnlt			weakly brecciated and weakly colloform banded veinlet 2-5 mm thick; very finely disseminated pyrite entirely within dark grey silica; white-grey quartz also present as attached band to dark grey silica; orange-brown limonite clay also on fracture plane up to 2 mm thick;
11-SH-007	41.55	42.05	vnlt	60		a series of 4 veinlets; 1-10 mm thick; orientations vary from 50, 60, 65 and 70 deg TCA; dark grey/black and white silica/quartz; 1 veinlet is weakly colloform banded, another is weak-moderately brecciated; irregular and undulating contacts; patchy limonite-clay-sericite infill (white-beige-orange) up to 4 mm; trace to 1% finely disseminated pyrite along veinlet selvages
11-SH-007	42.72	43.2	stwk			weakly brecciated white and dark grey quartz material and veinlets up to 1.5 cm thick; clay-sericite-limonite (beige-tan) infill up to 1 cm thick; weakly colloform banded with white to medium to dark grey selvages; trace very fine grained pyrite along fractures and selvages; orientations vary from 35-40 and 50 deg TCA;

11-SH-007 Structure/Veining Log

Hole ID	From (m)	To (m)	Structure Type	Angle TCA	Intensity	Description
11-SH-007	43.7		vn	47		2.5-3 cm vein; moderately colloform banded with white, medium and dark grey quartz; dark grey/black selvages; very finely disseminated pyrite along 2-4 mm bands associated with the vein and banded contacts; undulating, irregular vein contacts; weakly vuggy with voids up to 1-2 mm; weak patchy clay-sericite (beige-tan) along vein selvages and in fractures; 35-60 deg TCA
11-SH-007	46.15	47.35	stwk			weakly stockworked veinlets up to 5 mm thick; weakly brecciated with irregular orientations sub parallel to sub vertical TCA; weakly banded; rare vugs up to 1 mm; patchy clay-sericite-limonite (beige-tan color) infill up to 5 mm;
11-SH-007	48.05		vnlt	45		3-10 mm veinlet; irregular and undulating contacts; white and dark grey silica-quartz; weakly vuggy up to 2-3 mm voids; nearby veinlet (<2 cm downhole), similar style and thickness; 40-50 deg TCA; trace very finely disseminated pyrite
11-SH-007	49.7	50.1	def	62		weak deformation, 60-65 deg TCA; wrinkly deformed texture snaking around lithics with weak sub-mm clay-sericite infilling;
11-SH-007	50.18		vn	30		weakly brecciated and banded vein; 1-2 cm thick; irregular and undulating contacts; white and dark grey silica-quartz; beige-tan colored infill, also siliceous, up to 1 cm; trace finely disseminated pyrite along vein contacts and fractures;
11-SH-007	54.73	58.59	bx			distinctly brecciated rhyolite tuff cross-cut/flooded with dark grey silica veins/dykes up to 25 cm with angular breccia fragments up to 2-3 cm but typically sub-cm; between 55.2 - 56.1, distinct 1-2 mm pyrite rich band along the selvages of the silica flooding/rhyolite tuff fragments; siliceous material composes about 15-30% of the interval;
11-SH-007	50.48	51.85	stwk			very weak veinlet and stringer stockwork, typically sub-mm and mm-scale with a rare 8-10 mm veinlet; dark grey quartz-silica with rare white-grey quartz; rare weak brecciation with sub cm angular clasts in the brecciated veinlet; finely disseminated pyrite up to 5% present in stringers trace to 1% in veinlets > 1 mm thick; various orientations from 20 to 45 to 75 deg TCA; 1-2% vein density
11-SH-007	53.2	53.9	stwk			moderately brecciated vein stockwork with vein thicknesses up to 5 cm thick; white powdery clay-sericite infill up to 0.5 cm thick associated with strange beige-tan globular/spherical silica-seeming (hard) mineral; dark grey and white-grey quartz-silica; 10% vein density; trace very finely disseminated pyrite; orientations vary from 45 to 80 deg TCA
11-SH-007	65.5		fol/fab	70		weakly welded chlorite-altered lithics locally oriented at 70 deg TCA
11-SH-007	69.8		fol/fab	82		weakly welded chlorite-altered lithics locally oriented at 80-85 deg TCA
11-SH-007	72.4		fol/fab	75		weakly welded chlorite-altered lithics locally oriented at 75 deg TCA
11-SH-007	72.5		gouge	73.75		intermittent weak to strongly intense gouge; green-grey with clasts
11-SH-007	77		flow band	60		feldspathic/felsic clast/dyke with distinct flow banding
11-SH-007	77.8		flow band	60		mafic porphyritic clast/dyke with distinct flow banding

11-SH-007 TCR and RQD

Hole ID	From (m)	To (m)	Run Length (m)	Meas. Length (m)	Recovery %	RQD Length (m)	RQD %	Pieces > 10 cm
11-SH-007	2.28	4.88	2.60	2.46	94.62	1.98	80.49	11.00
11-SH-007	4.88	7.92	3.04	2.97	97.70	1.68	56.57	10.00
11-SH-007	7.92	10.97	3.05	2.92	95.74	1.95	66.78	12.00
11-SH-007	10.97	14.02	3.05	3.02	99.02	2.90	96.03	15.00
11-SH-007	14.02	17.07	3.05	3.05	100.00	2.54	83.28	12.00
11-SH-007	17.07	20.12	3.05	2.80	91.80	1.19	42.50	7.00
11-SH-007	20.12	23.16	3.04	2.98	98.03	2.32	77.85	12.00
11-SH-007	23.16	26.21	3.05	3.04	99.67	2.43	79.93	4.00
11-SH-007	26.21	29.26	3.05	3.02	99.02	1.53	50.66	7.00
11-SH-007	29.26	32.31	3.05	3.05	100.00	1.82	59.67	8.00
11-SH-007	32.31	35.36	3.05	2.97	97.38	2.55	85.86	9.00
11-SH-007	35.36	38.40	3.04	3.06	100.66	2.40	78.43	11.00
11-SH-007	38.40	41.45	3.05	3.05	100.00	1.53	50.16	5.00
11-SH-007	41.45	44.50	3.05	3.03	99.34	2.46	81.19	10.00
11-SH-007	44.50	47.55	3.05	2.92	95.74	1.83	62.67	9.00
11-SH-007	47.55	50.60	3.05	3.06	100.33	2.14	69.93	9.00
11-SH-007	50.60	53.64	3.04	3.01	99.01	2.59	86.05	9.00
11-SH-007	53.64	56.69	3.05	3.11	101.97	2.44	78.46	13.00
11-SH-007	56.69	59.74	3.05	3.01	98.69	2.89	96.01	9.00
11-SH-007	59.74	62.79	3.05	2.85	93.44	2.43	85.26	11.00
11-SH-007	62.79	65.84	3.05	3.02	99.02	2.40	79.47	9.00
11-SH-007	65.84	68.88	3.04	3.03	99.67	2.56	84.49	8.00
11-SH-007	68.88	71.93	3.05	3.08	100.98	3.02	98.05	7.00
11-SH-007	71.93	74.98	3.05	3.04	99.67	2.23	73.36	12.00
11-SH-007	74.98	78.03	3.05	3.03	99.34	2.56	84.49	13.00
11-SH-007	78.03	81.08	3.05	3.06	100.33	2.87	93.79	13.00
11-SH-007	81.08	84.12	3.04	2.99	98.36	2.27	75.92	11.00
11-SH-007	84.12	87.17	3.05	3.05	100.00	2.73	89.51	14.00

11-SH-007 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-007	3	0.1
11-SH-007	4	0.07
11-SH-007	5	0.12
11-SH-007	6	0.38
11-SH-007	7	0.03
11-SH-007	8	0.09
11-SH-007	9	0.18
11-SH-007	10	0.09
11-SH-007	11	0.12
11-SH-007	12	0.23
11-SH-007	13	0.12
11-SH-007	14	0.16
11-SH-007	15	0.16
11-SH-007	16	0.8
11-SH-007	17	0.8
11-SH-007	18	0.31
11-SH-007	19	0.05
11-SH-007	20	0.05
11-SH-007	21	0.12
11-SH-007	22	0.2
11-SH-007	23	0.82
11-SH-007	24	0.87
11-SH-007	25	0.16
11-SH-007	26	0.25
11-SH-007	27	0.27
11-SH-007	28	0.27
11-SH-007	29	0.2
11-SH-007	30	0.25
11-SH-007	31	0.31
11-SH-007	32	0.82
11-SH-007	33	0.53
11-SH-007	34	0.82
11-SH-007	35	0.03
11-SH-007	36	0.23
11-SH-007	37	0.4
11-SH-007	38	0.05
11-SH-007	39	0.86
11-SH-007	40	0.12
11-SH-007	41	0.53

11-SH-007 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-007	42	0.4
11-SH-007	43	0.12
11-SH-007	44	0.16
11-SH-007	45	0.18
11-SH-007	46	0.25
11-SH-007	47	0.23
11-SH-007	48	0.05
11-SH-007	49	0.09
11-SH-007	50	0.89
11-SH-007	51	0.4
11-SH-007	52	0.4
11-SH-007	53	0.31
11-SH-007	54	0.25
11-SH-007	55	0.14
11-SH-007	56	0.4
11-SH-007	57	0.45
11-SH-007	58	0.12
11-SH-007	59	0.05
11-SH-007	60	0.07
11-SH-007	61	0.03
11-SH-007	62	0.05
11-SH-007	63	0.05
11-SH-007	64	0.47
11-SH-007	65	0.51
11-SH-007	66	0.64
11-SH-007	67	1.29
11-SH-007	68	0.2
11-SH-007	69	0.2
11-SH-007	70	0.18
11-SH-007	71	0.31
11-SH-007	72	0.31
11-SH-007	73	0.12
11-SH-007	74	0.58
11-SH-007	75	0.45
11-SH-007	76	0.36
11-SH-007	77	0.24
11-SH-007	78	0.14
11-SH-007	79	0.27
11-SH-007	80	0.68

11-SH-007 Mag Sus

Hole ID	Depth (m)	Mag_Sus
11-SH-007	81	0.45
11-SH-007	82	0.36
11-SH-007	83	0.24
11-SH-007	84	0.51
11-SH-007	85	0.74
11-SH-007	86	0.34
11-SH-007	87	0.2

APPENDIX 9

2011 DIAMOND DRILL HOLE SECTIONS

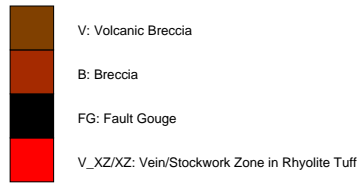
300 mE

350 mE

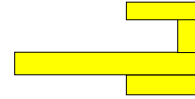
400 mE

450 mE

500 mE

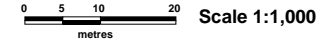


Sample Interval Au Histogram



WESTHAVEN VENTURES INC

Shovelnose Property
 Drill Section Looking N020E
 11-SH-001 (-60) & 11-SH-003 (-55)



APEX Geoscience LTD.

February 2012

1500 mN

1500 mN

1450 mN

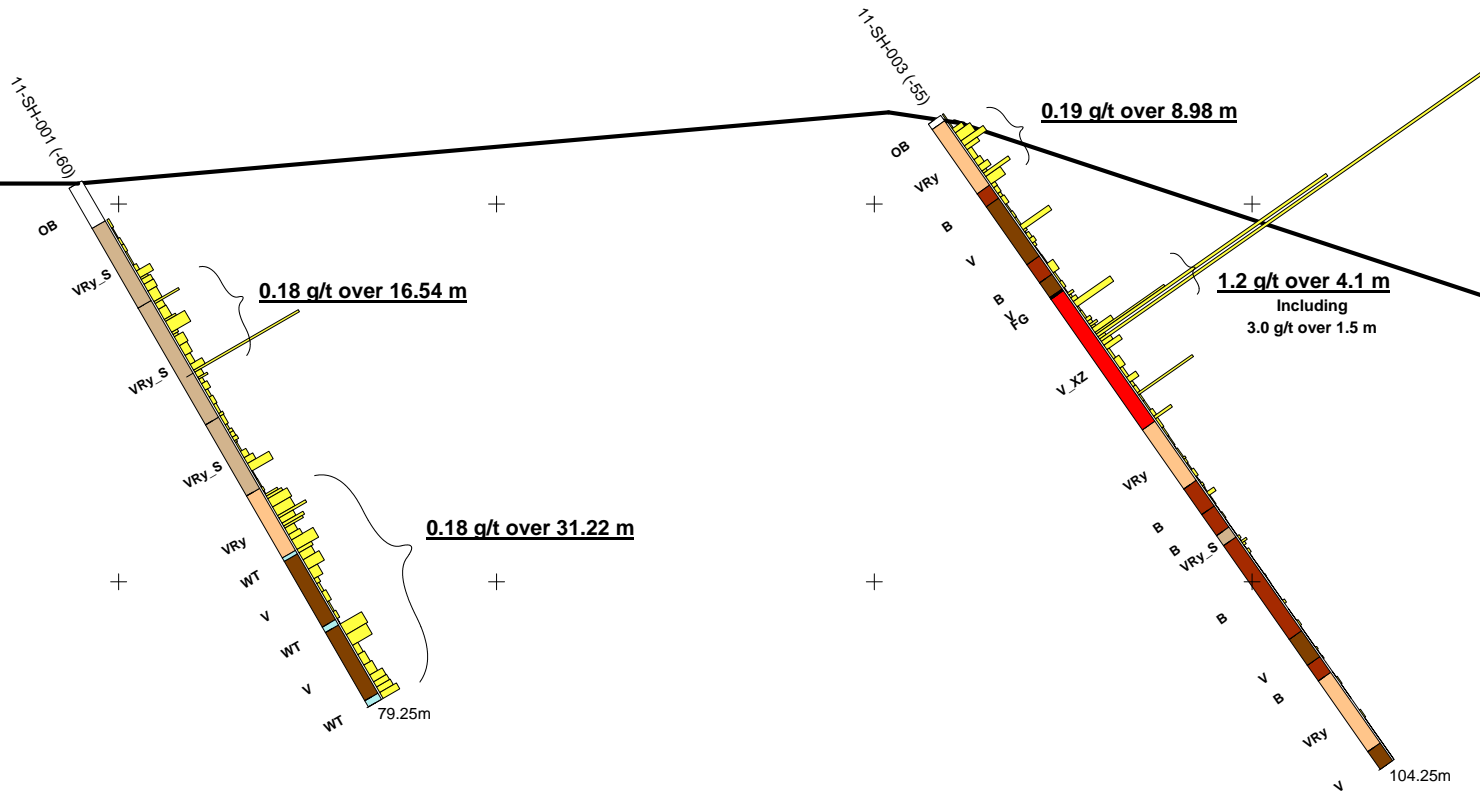
1450 mN

1400 mN

1400 mN

1350 mN

1350 mN



300 mE

350 mE

400 mE

450 mE

500 mE

160 mE 170 mE 180 mE 190 mE 200 mE 210 mE 220 mE 230 mE 240 mE

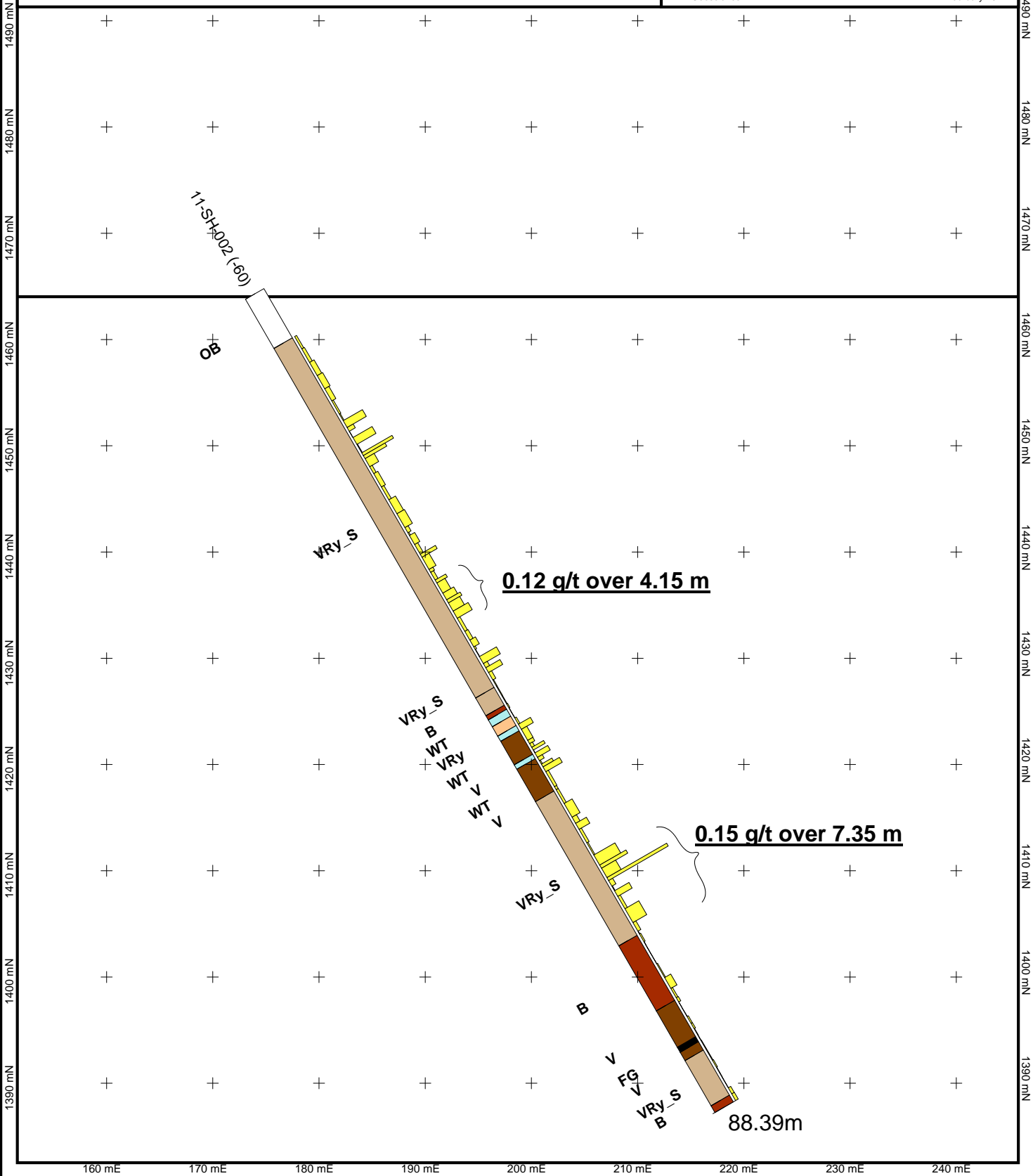
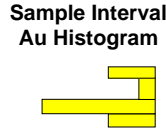
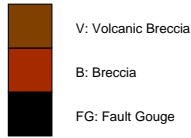
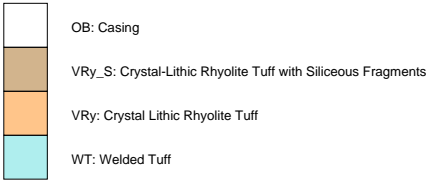
WESTHAVEN VENTURES INC

Shovelnose Property
Drill Section Looking N030E
11-SH-002 (-60)

0 5 10
metres
Scale 1:500

APEX Geoscience LTD.

February 2012



160 mE 170 mE 180 mE 190 mE 200 mE 210 mE 220 mE 230 mE 240 mE

1500 mN
1490 mN
1480 mN
1470 mN
1460 mN
1450 mN
1440 mN
1430 mN
1420 mN
1410 mN
1400 mN
1390 mN

1500 mN
1490 mN
1480 mN
1470 mN
1460 mN
1450 mN
1440 mN
1430 mN
1420 mN
1410 mN
1400 mN
1390 mN

230 mE 240 mE 250 mE 260 mE 270 mE 280 mE 290 mE 300 mE 310 mE

WESTHAVEN VENTURES INC

Shovelnose Property
Drill Section Looking N020E
11-SH-004 (-45)

0 5 10 metres Scale 1:500

APEX Geoscience LTD.

February 2012



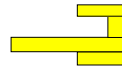
OB: Casing

VRy_S: Crystal-Lithic Rhyolite Tuff with Siliceous Fragments

FG: Fault Gouge

I: Feldspar Phyrlic Intermediate-Mafic Flow/Dyke

Sample Interval Au Histogram



1440 mN
1430 mN
1420 mN
1410 mN
1400 mN
1390 mN
1380 mN
1370 mN
1360 mN
1350 mN
1340 mN
1330 mN

1440 mN
1430 mN
1420 mN
1410 mN
1400 mN
1390 mN
1380 mN
1370 mN
1360 mN
1350 mN
1340 mN
1330 mN

11-SH-004 (-45)

OB

0.32 g/t over 25.63 m

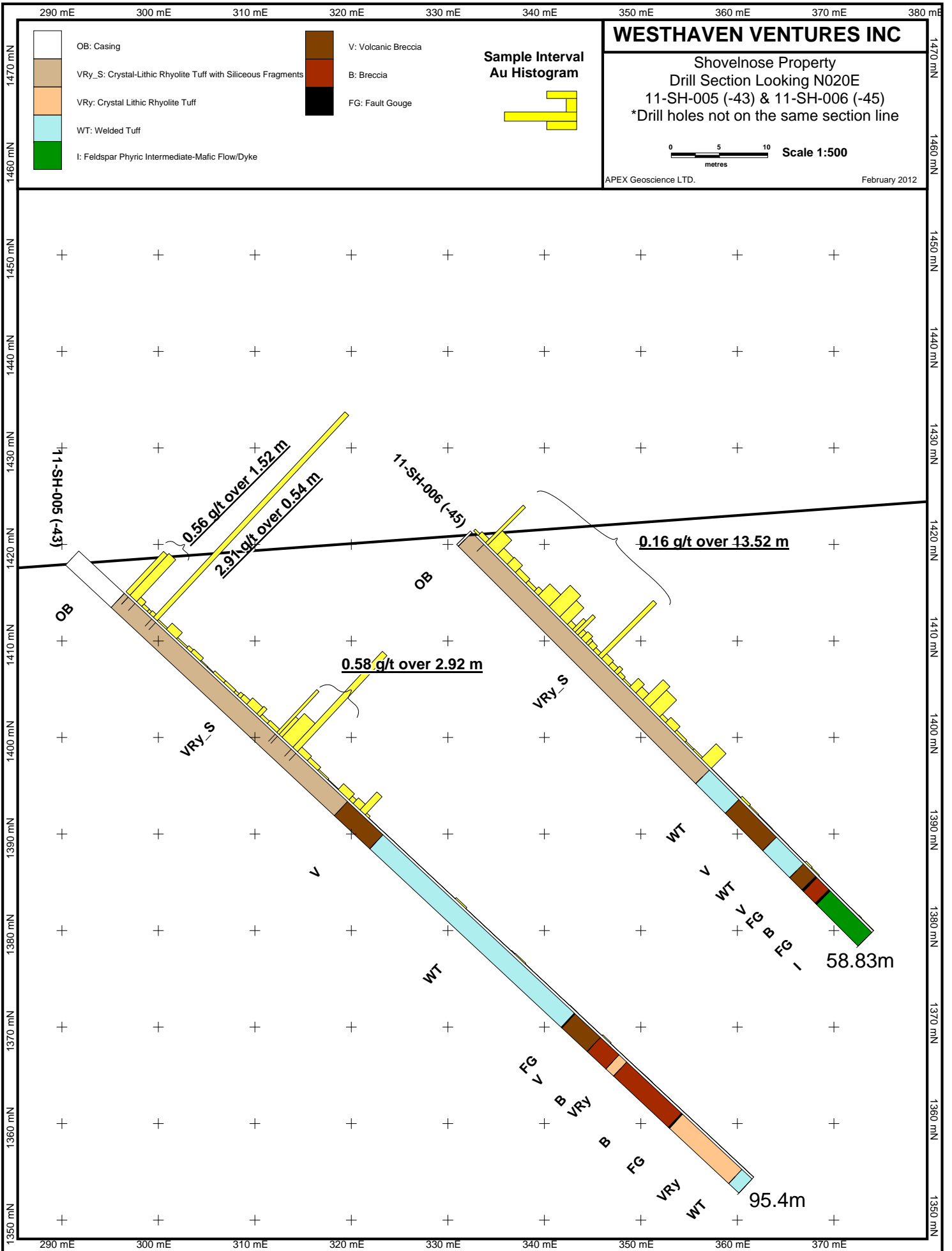
VRy_S

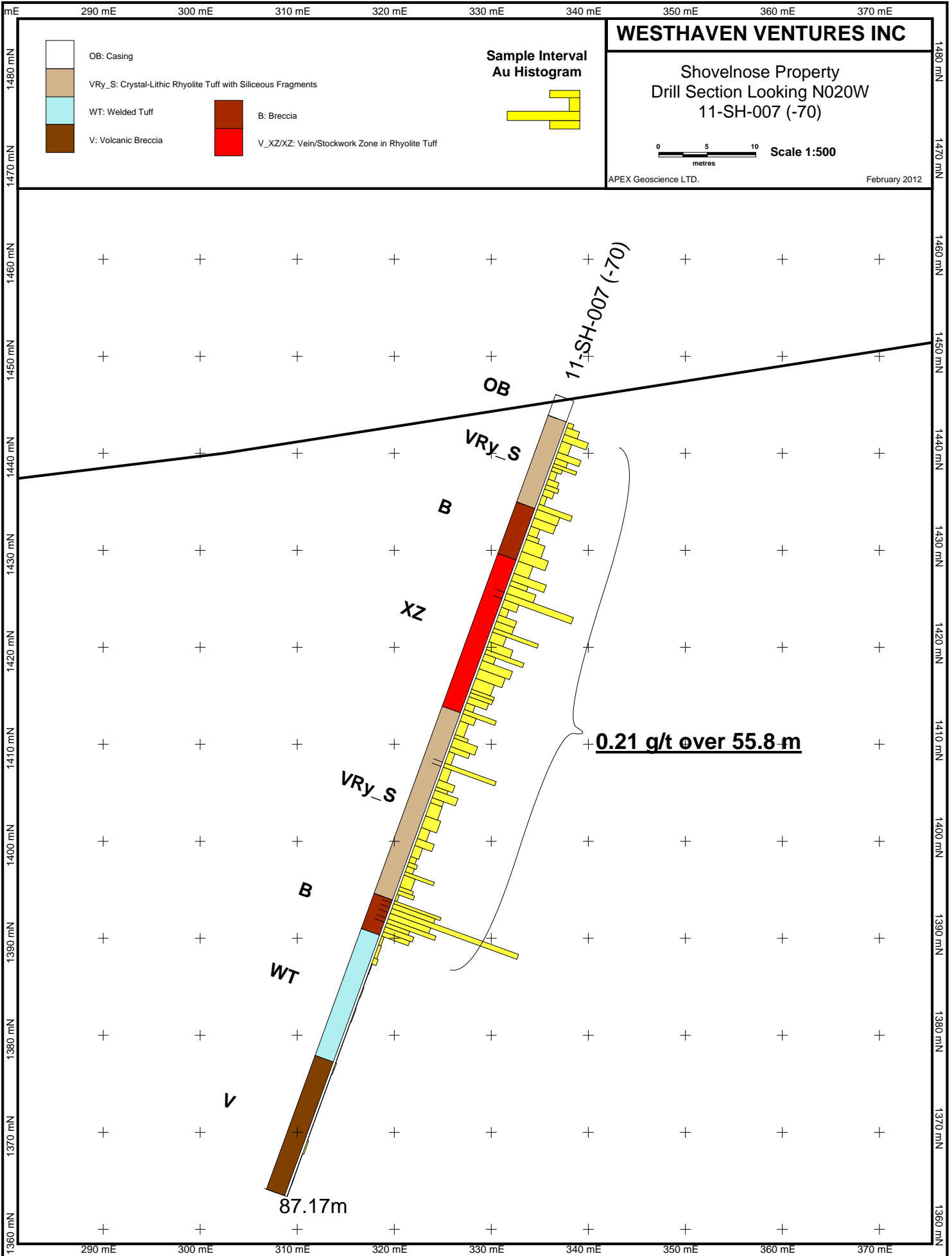
0.70 g/t over 1.85 m

FG

92.35m

230 mE 240 mE 250 mE 260 mE 270 mE 280 mE 290 mE 300 mE 310 mE





APPENDIX 10

2011 DIAMOND DRILL HOLE CORE & QA/QC SAMPLES

APPENDIX 11

2011 DIAMOND DRILL HOLE ANALYTICAL CERTIFICATES

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V539059

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Jan 19, 2012

PAGES (INCLUDING COVER): 23

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

***NOTES**

VERSION 2:Gold (AR-ICPMS) is for exploratory purposes only.
Additional Fire Assay Gold data provided on this certificate.
Corrected Copy - trace element package 201074) for sample 1455907
January 18, 2012

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1455901		2.28	0.29	0.46	7.1	0.02	<5	51	0.28	0.11	0.09	0.09	29.1	2.3	55.5
1455902		2.91	0.17	0.41	2.5	0.01	<5	49	0.26	0.07	0.22	0.08	30.8	2.0	56.4
1455903		0.65	0.31	0.40	5.8	0.06	<5	52	0.22	0.09	0.09	0.07	29.3	1.7	65.7
1455904		0.65	0.44	0.40	5.8	0.03	<5	61	0.19	0.09	0.08	0.06	26.8	1.8	71.8
1455905		1.26	0.32	0.43	3.9	0.01	<5	56	0.25	0.09	0.09	0.06	33.5	2.0	61.6
1455906		3.42	0.43	0.43	6.1	0.02	<5	52	0.26	0.10	0.09	0.08	30.3	2.5	62.9
1455907		0.48	1.58	0.44	10.1	0.03	<5	40	0.21	0.07	0.06	0.06	22.6	1.3	80.8
1455908		0.70	1.37	0.39	5.1	0.37	<5	45	0.26	0.09	0.07	0.12	27.9	2.0	79.8
1455909		0.42	1.11	0.37	4.9	0.19	<5	40	0.22	0.09	0.06	0.14	24.5	1.7	80.4
1455910		0.04	7.81	2.24	9.0	5.17	<5	113	0.33	0.20	2.18	1.33	34.8	17.9	18.5
1455911		0.48	1.84	0.28	4.3	0.15	<5	43	0.14	0.07	0.05	0.14	26.5	2.2	112
1455912		1.07	1.24	0.31	2.5	0.12	<5	41	0.15	0.07	0.07	0.06	32.1	1.8	81.7
1455913		1.91	1.30	0.36	2.1	0.37	<5	40	0.19	0.05	0.44	0.06	23.8	2.2	72.6
1455914		0.41	0.30	0.38	1.3	0.11	<5	44	0.22	0.02	1.62	0.11	20.5	3.9	58.5
1455915		0.47	1.12	0.42	2.7	0.12	<5	35	0.22	0.05	0.87	0.07	21.3	3.6	73.4
1455916		2.77	0.57	0.42	5.6	0.06	<5	44	0.23	0.08	0.86	0.11	23.4	4.6	54.3
1455917		0.52	1.69	0.43	3.3	0.32	<5	34	0.25	0.05	1.23	0.10	27.7	4.5	74.7
1455918		0.45	1.48	0.42	7.3	0.14	<5	36	0.23	0.07	0.48	0.07	31.4	4.2	60.3
1455919		3.40	1.01	0.39	6.9	0.11	<5	33	0.22	0.10	0.28	0.05	20.7	4.4	64.3
1455920		0.50	0.62	0.39	7.8	0.08	<5	33	0.24	0.06	0.40	0.06	19.8	4.4	75.7
1455921		0.43	0.42	0.45	3.9	0.07	<5	33	0.25	0.06	0.35	0.06	24.0	4.3	48.2
1455922		2.65	0.33	0.49	5.8	0.13	<5	43	0.24	0.06	0.21	0.05	26.5	4.2	45.7
1455923		2.41	1.14	0.45	16.4	0.05	<5	43	0.23	0.08	0.27	0.05	22.4	4.7	40.1
1455924		2.72	0.72	0.42	6.7	0.09	<5	40	0.22	0.07	0.31	0.04	20.6	4.3	49.6
1455925		0.95	5.20	0.42	9.5	0.12	<5	57	0.32	0.14	0.46	0.11	28.1	5.3	74.8
1455926		0.05	1.03	2.35	4250	7.20	<5	104	0.18	0.22	3.36	0.18	18.8	26.1	69.9
1455927		0.48	5.84	0.40	40.7	1.56	<5	41	0.28	0.08	0.36	0.06	18.9	4.9	83.7
1455928		0.92	1.26	0.41	4.2	0.12	<5	45	0.29	0.06	0.13	0.08	27.1	4.9	52.5
1455929		0.40	0.58	0.37	4.7	0.06	<5	29	0.26	0.06	1.21	0.08	20.7	4.4	52.0
1455930		1.31	0.28	0.42	3.2	0.10	<5	39	0.27	0.05	1.13	0.07	25.4	4.7	38.9
1455931		1.75	0.23	0.41	2.6	0.08	<5	33	0.23	0.05	0.59	0.06	21.2	4.3	42.4

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1455932		1.74	0.15	0.45	2.0	0.03	<5	32	0.29	0.04	1.18	0.07	26.4	4.5	36.2
1455933		2.07	0.23	0.47	2.1	0.01	<5	57	0.26	0.05	0.29	0.06	25.8	4.4	46.7
1455934		1.71	2.06	0.43	4.1	2.68	<5	49	0.29	0.09	0.39	0.05	25.0	4.2	54.9
1455935		0.70	1.01	0.35	5.9	0.11	<5	34	0.21	0.10	0.42	0.06	24.4	3.8	57.6
1455936		2.30	0.42	0.37	3.3	0.02	<5	35	0.17	0.08	0.33	0.04	22.9	3.3	48.9
1455937		1.25	0.46	0.40	3.2	0.01	<5	36	0.31	0.06	0.73	0.06	23.3	4.1	59.2
1455938		0.58	0.45	0.37	2.8	0.04	<5	37	0.17	0.06	0.35	0.06	25.7	4.2	51.0
1455939		1.14	0.31	0.39	2.1	0.04	<5	33	0.24	0.06	0.45	0.05	29.2	3.6	41.3
1455940		0.70	0.08	1.46	6.5	<0.01	<5	148	0.20	0.04	5.69	0.19	16.9	10.0	88.5
1455941		1.19	0.30	0.41	1.8	0.05	<5	28	0.25	0.06	1.06	0.08	22.5	3.8	42.8
1455942		0.75	0.47	0.42	3.6	0.07	<5	31	0.30	0.06	0.34	0.04	26.7	4.0	54.2
1455943		1.64	0.28	0.38	1.8	0.01	<5	28	0.25	0.06	0.52	0.05	23.6	3.5	38.4
1455944		1.58	0.27	0.36	2.1	0.01	<5	33	0.22	0.08	0.58	0.04	25.2	3.9	33.7
1455945		1.49	0.55	0.38	2.2	0.62	<5	35	0.21	0.06	0.60	0.05	27.8	4.4	33.2
1455946		1.69	4.51	0.31	3.2	0.41	<5	31	0.17	0.06	1.09	0.04	19.4	3.1	53.1
1455947		1.32	0.43	0.34	1.8	0.31	<5	29	0.20	0.05	0.65	0.04	20.7	3.5	42.7
1455948		0.90	0.19	0.33	1.7	0.08	<5	37	0.16	0.04	0.53	0.03	19.7	3.3	47.8
1455949		2.42	0.20	0.41	1.4	0.04	<5	23	0.32	0.05	4.56	0.19	30.0	4.9	25.3
1455950		0.71	0.14	0.35	1.4	<0.01	<5	32	0.20	0.04	1.02	0.06	18.1	3.7	34.2
1455951		0.05	31.0	0.82	416	2.48	<5	116	0.06	20.8	0.34	0.68	9.50	10.0	120
1455952		0.84	0.10	0.37	1.5	0.01	<5	35	0.20	0.04	1.25	0.07	20.2	3.8	43.5
1455953		0.47	0.14	0.38	1.5	0.12	<5	34	0.23	0.04	0.48	0.04	20.2	4.5	36.8
1455954		0.45	0.21	0.37	1.2	0.25	<5	33	0.22	0.03	1.45	0.07	17.5	4.3	37.2
1455955		1.54	0.42	0.38	1.7	0.11	<5	35	0.25	0.05	0.90	0.06	19.2	4.3	46.4
1455956		1.76	0.45	0.33	1.9	0.20	<5	35	0.22	0.06	0.80	0.06	19.6	3.6	55.6
1455957		0.66	1.52	0.34	2.2	0.41	<5	34	0.18	0.10	0.30	0.05	23.6	3.2	52.3
1455958		1.35	0.32	0.33	1.5	0.09	<5	35	0.19	0.05	0.32	0.04	21.8	2.9	43.0
1455959		0.12	0.59	0.32	3.5	0.37	<5	37	0.19	0.06	0.22	0.05	18.3	3.7	50.6
1455960		0.05	0.98	0.32	3.6	1.03	<5	34	0.21	0.06	0.28	0.05	19.0	3.6	48.6
1455961		0.43	0.37	0.33	1.7	0.37	<5	42	0.19	0.06	0.37	0.04	20.8	3.2	52.3
1455962		1.43	0.34	0.33	1.2	0.18	<5	35	0.20	0.04	0.27	0.04	24.4	3.4	36.1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
Sample Description														
1455963	1.19	0.50	0.30	3.1	0.09	<5	32	0.21	0.07	0.35	0.04	19.8	2.9	75.1
1455964	1.99	0.44	0.28	1.7	0.38	<5	41	0.15	0.07	0.30	0.06	22.7	1.6	80.8
1455965	0.21	0.07	1.40	7.0	<0.01	<5	157	0.20	0.04	5.77	0.19	15.9	9.6	75.0
1455966	0.63	0.40	0.35	5.3	0.25	<5	46	0.17	0.03	0.24	0.04	21.8	3.3	75.4
1455967	1.97	0.54	0.38	2.7	0.54	<5	35	0.25	0.08	0.77	0.07	25.3	3.7	48.5
1455968	1.18	1.64	0.42	6.6	0.15	<5	39	0.27	0.08	0.56	0.07	20.7	4.2	61.4
1455969	2.64	0.74	0.43	16.2	0.23	<5	39	0.29	0.11	0.59	0.07	24.2	4.6	58.0
1455970	1.33	0.53	0.45	10.3	0.05	<5	37	0.32	0.09	0.65	0.07	24.5	4.5	53.0
1455971	2.29	0.25	0.44	4.3	0.04	<5	43	0.31	0.07	0.90	0.07	25.4	4.6	35.4
1455972	2.79	0.28	0.44	3.3	0.01	<5	38	0.27	0.07	0.50	0.08	26.3	4.8	50.0
1455973	2.19	0.28	0.37	2.3	<0.01	<5	44	0.22	0.05	0.30	0.06	24.6	3.8	53.0
1455974	1.22	0.46	0.46	4.1	0.05	<5	39	0.33	0.06	0.28	0.07	28.6	4.6	47.5
1455975	1.58	0.15	0.44	2.1	<0.01	<5	48	0.30	<0.01	0.56	0.06	26.4	3.7	56.3
1455976	0.06	17.0	1.81	16.4	10.6	<5	98	0.29	0.20	1.29	3.00	20.0	19.5	23.2
1455977	3.07	4.32	0.45	5.4	0.10	<5	38	0.30	0.07	0.71	0.07	21.8	4.4	42.2
1455978	3.03	0.67	0.43	1.3	0.88	<5	57	0.33	0.05	0.77	0.06	21.8	4.2	32.2
1455979	2.50	0.23	0.45	1.2	0.10	<5	59	0.33	0.05	0.81	0.06	19.3	4.2	28.2
1455980	2.89	0.22	0.39	1.4	0.07	<5	61	0.27	0.06	0.52	0.04	19.7	4.2	32.2

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Unit: RDL:	ppm 0.05	ppm 0.1	% 0.01	ppm 0.05	ppm 0.05	ppm 0.02	ppm 0.01	ppm 0.005	% 0.01	ppm 0.1	ppm 0.1	% 0.01	ppm 1	ppm 0.05
1455901		1.40	4.7	1.30	1.79	0.08	0.14	0.02	0.011	0.23	13.7	1.7	0.03	560	1.06
1455902		1.41	1.7	1.30	1.54	0.08	0.12	<0.01	0.013	0.21	15.0	1.6	0.03	557	0.46
1455903		1.04	2.2	1.19	1.59	0.08	0.13	0.01	0.012	0.20	13.9	1.7	0.02	335	0.58
1455904		1.02	3.0	1.19	1.51	0.07	0.13	0.01	0.013	0.20	12.9	1.6	0.02	408	0.65
1455905		1.07	3.5	1.32	1.81	0.08	0.15	0.01	0.011	0.23	13.1	1.7	0.03	568	0.56
1455906		1.16	2.7	1.30	1.75	0.07	0.14	<0.01	0.012	0.23	13.4	1.6	0.03	514	0.61
1455907		1.10	97.4	1.01	1.60	0.07	0.06	0.02	0.015	0.25	12.2	1.1	0.02	100	0.67
1455908		1.11	91.7	1.30	1.56	0.08	0.12	0.02	0.013	0.22	11.3	1.4	0.02	310	0.70
1455909		1.04	6.9	1.17	1.50	0.08	0.11	0.02	0.012	0.21	10.6	1.6	0.02	335	0.76
1455910		2.17	119	3.70	7.29	0.09	0.41	0.04	0.027	0.23	16.8	15.6	1.15	1100	13.7
1455911		0.59	3.6	1.21	1.25	0.07	0.14	0.02	0.019	0.14	12.9	1.3	0.01	358	1.00
1455912		0.75	1.7	1.30	1.31	0.09	0.15	0.01	0.018	0.15	15.5	1.0	0.01	388	0.64
1455913		1.10	2.5	1.37	1.48	0.07	0.13	<0.01	0.014	0.16	10.9	1.1	0.11	451	0.56
1455914		1.23	1.1	1.66	1.65	0.06	0.12	<0.01	0.012	0.15	9.2	1.6	0.32	854	0.41
1455915		1.47	3.2	1.75	1.96	0.07	0.12	<0.01	0.012	0.18	10.1	1.7	0.03	582	0.54
1455916		1.01	3.8	1.97	1.83	0.07	0.12	<0.01	0.012	0.18	10.8	2.4	0.22	788	0.35
1455917		1.72	5.3	1.85	2.21	0.07	0.13	<0.01	0.014	0.18	13.8	1.8	0.04	729	0.49
1455918		1.35	6.7	1.59	2.04	0.07	0.13	<0.01	0.012	0.20	17.2	2.6	0.19	563	0.39
1455919		1.07	4.3	1.73	1.59	0.07	0.12	0.02	0.009	0.17	10.2	2.5	0.17	488	0.63
1455920		1.31	9.4	1.68	1.57	0.07	0.13	<0.01	0.010	0.18	11.1	2.8	0.13	434	0.55
1455921		1.26	5.7	1.98	1.84	0.08	0.14	<0.01	0.011	0.20	12.0	3.5	0.31	617	0.28
1455922		1.37	3.2	1.87	2.00	0.07	0.13	<0.01	0.011	0.20	13.8	3.4	0.08	517	0.27
1455923		1.45	4.7	1.85	1.88	0.07	0.15	0.01	0.012	0.17	11.7	3.3	0.06	531	1.74
1455924		0.98	3.4	1.94	1.83	0.07	0.14	0.01	0.013	0.20	9.7	3.4	0.29	539	0.72
1455925		2.98	8.2	1.79	2.30	0.07	0.13	0.08	0.014	0.23	14.5	1.9	0.04	558	0.57
1455926		2.46	194	9.46	7.32	0.11	0.35	0.02	0.033	0.10	11.0	8.6	2.08	4900	4.51
1455927		1.03	16.6	2.07	1.90	0.07	0.12	0.03	0.016	0.18	9.8	3.8	0.20	604	0.49
1455928		1.22	4.8	2.08	1.99	0.08	0.13	0.01	0.017	0.18	11.1	3.3	0.03	700	0.37
1455929		0.99	4.7	1.82	1.68	0.06	0.12	<0.01	0.015	0.18	10.1	3.6	0.53	673	0.32
1455930		1.00	3.6	2.01	1.87	0.06	0.13	<0.01	0.016	0.17	12.9	4.2	0.57	733	0.28
1455931		1.09	3.5	1.89	1.79	0.07	0.13	<0.01	0.015	0.18	10.2	3.6	0.24	607	0.28
1455932		1.58	1.7	1.98	2.10	0.07	0.14	<0.01	0.016	0.20	13.7	3.7	0.45	716	0.23

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Unit: RDL:	ppm 0.05	ppm 0.1	% 0.01	ppm 0.05	ppm 0.05	ppm 0.02	ppm 0.01	ppm 0.005	% 0.01	ppm 0.1	ppm 0.1	% 0.01	ppm 1	ppm 0.05
1455933		1.54	2.3	1.92	2.27	0.07	0.14	<0.01	0.016	0.21	12.9	3.1	0.04	725	0.29
1455934		1.46	4.0	1.93	2.13	0.07	0.13	0.01	0.013	0.18	13.9	2.5	0.04	555	0.35
1455935		0.89	7.2	1.61	1.64	0.07	0.15	0.02	0.011	0.16	13.1	2.1	0.19	416	0.75
1455936		0.76	4.9	1.50	1.67	0.07	0.16	0.02	0.012	0.15	11.3	2.9	0.30	511	0.31
1455937		1.89	5.6	1.69	2.15	0.07	0.14	<0.01	0.011	0.20	12.0	2.6	0.27	556	0.36
1455938		0.53	11.0	1.94	1.74	0.07	0.16	<0.01	0.014	0.16	13.9	3.3	0.35	669	0.35
1455939		1.63	2.7	1.71	1.83	0.07	0.15	<0.01	0.012	0.16	15.0	3.0	0.17	433	0.27
1455940		0.99	49.7	2.32	4.76	<0.05	0.24	0.03	0.015	0.25	9.4	8.2	1.00	578	2.24
1455941		1.97	2.4	1.67	1.99	0.06	0.13	<0.01	0.012	0.22	11.0	2.7	0.27	574	0.28
1455942		1.17	7.3	1.85	1.92	0.07	0.11	0.01	0.012	0.19	15.8	2.9	0.22	394	0.27
1455943		1.17	3.4	1.69	1.76	0.06	0.12	<0.01	0.012	0.16	11.0	3.1	0.25	479	0.21
1455944		0.81	6.7	1.74	1.70	0.07	0.12	0.01	0.014	0.17	14.3	3.5	0.28	558	0.60
1455945		0.81	4.3	2.01	1.68	0.07	0.13	0.01	0.014	0.18	15.5	3.4	0.39	646	0.25
1455946		0.95	7.8	1.31	1.35	0.06	0.14	0.02	0.011	0.16	9.8	2.0	0.26	420	0.56
1455947		0.93	2.6	1.55	1.54	0.07	0.13	0.01	0.014	0.17	10.6	3.1	0.35	472	0.24
1455948		0.70	2.5	1.38	1.35	0.07	0.15	<0.01	0.014	0.17	10.3	3.3	0.28	426	0.27
1455949		1.99	1.5	2.24	2.15	0.05	0.13	<0.01	0.011	0.24	13.3	2.3	1.41	1450	0.17
1455950		0.98	1.9	1.62	1.48	0.06	0.13	<0.01	0.013	0.18	9.2	2.9	0.45	592	0.23
1455951		0.17	329	3.89	5.88	0.08	0.23	0.76	0.588	0.04	5.0	2.3	0.49	164	6.30
1455952		0.70	2.8	1.76	1.39	0.06	0.13	<0.01	0.016	0.17	9.5	3.9	0.58	612	0.27
1455953		1.06	1.5	1.93	1.65	0.07	0.13	<0.01	0.017	0.19	10.7	3.6	0.39	561	0.21
1455954		1.07	1.8	2.02	1.53	0.06	0.12	<0.01	0.015	0.20	8.3	3.1	0.65	780	0.29
1455955		1.24	2.5	1.85	1.70	0.07	0.13	<0.01	0.014	0.20	9.9	3.2	0.49	620	0.23
1455956		1.02	1.9	1.61	1.54	0.07	0.12	<0.01	0.012	0.17	9.5	3.1	0.44	615	0.32
1455957		0.86	1.9	1.36	1.60	0.07	0.14	<0.01	0.011	0.18	12.6	3.0	0.26	436	0.27
1455958		0.79	1.7	1.31	1.44	0.07	0.13	<0.01	0.011	0.17	10.3	3.1	0.28	453	0.21
1455959		0.96	8.8	1.53	1.52	0.07	0.12	0.01	0.011	0.20	10.1	2.9	0.25	493	0.28
1455960		1.07	6.1	1.47	1.69	0.06	0.12	0.01	0.010	0.20	10.2	2.5	0.26	506	0.25
1455961		0.82	1.6	1.37	1.61	0.07	0.14	<0.01	0.011	0.17	10.3	3.4	0.25	444	0.24
1455962		0.91	2.7	1.44	1.66	0.07	0.13	0.01	0.012	0.18	11.1	3.0	0.27	490	0.29
1455963		1.10	2.5	1.31	1.61	0.07	0.12	0.01	0.012	0.17	9.2	2.7	0.25	483	0.42
1455964		0.76	2.0	0.95	1.44	0.07	0.15	<0.01	0.016	0.15	10.9	2.1	0.20	400	0.54

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Cs ppm 0.05	Cu ppm 0.1	Fe % 0.01	Ga ppm 0.05	Ge ppm 0.05	Hf ppm 0.02	Hg ppm 0.01	In ppm 0.005	K % 0.01	La ppm 0.1	Li ppm 0.1	Mg % 0.01	Mn ppm 1	Mo ppm 0.05
1455965		0.93	41.7	2.20	4.64	<0.05	0.21	0.03	0.016	0.26	9.0	8.5	0.98	465	2.46
1455966		1.15	4.0	1.33	1.61	0.07	0.14	0.01	0.011	0.22	13.6	2.4	0.19	430	0.52
1455967		1.38	2.9	1.67	1.89	0.07	0.13	0.01	0.012	0.21	13.4	3.2	0.44	627	0.49
1455968		1.28	10.0	1.89	1.98	0.07	0.12	0.02	0.016	0.22	9.9	4.1	0.37	630	0.76
1455969		1.13	4.8	1.98	1.92	0.08	0.14	0.02	0.015	0.23	11.4	4.6	0.43	665	3.08
1455970		1.26	6.2	2.07	2.13	0.07	0.13	0.02	0.016	0.23	11.3	4.9	0.43	690	5.35
1455971		1.12	4.3	2.11	2.05	0.07	0.12	0.02	0.016	0.23	12.0	4.6	0.54	675	0.45
1455972		1.13	5.7	2.06	2.02	0.07	0.13	<0.01	0.016	0.24	12.8	4.7	0.41	623	0.46
1455973		0.98	2.3	1.75	1.65	0.07	0.11	<0.01	0.012	0.24	13.0	3.8	0.37	525	0.49
1455974		1.69	3.6	2.01	2.10	0.07	0.12	<0.01	0.013	0.26	15.5	3.8	0.40	600	0.98
1455975		1.68	2.2	1.69	2.03	0.07	0.14	<0.01	0.014	0.26	13.7	2.5	0.33	480	0.49
1455976		1.96	155	3.59	5.71	0.09	0.32	0.06	0.023	0.27	8.9	16.3	0.97	880	27.6
1455977		1.40	8.8	1.84	2.06	0.07	0.13	0.02	0.017	0.23	10.5	4.7	0.43	637	1.52
1455978		1.74	2.3	1.75	2.04	0.07	0.12	<0.01	0.015	0.21	10.4	4.3	0.36	583	0.23
1455979		1.76	2.8	1.61	2.19	0.07	0.13	<0.01	0.015	0.22	9.4	4.5	0.28	523	0.32
1455980		1.68	4.4	1.67	1.80	0.07	0.11	0.01	0.014	0.21	8.8	3.5	0.30	535	0.26

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm
1455901		0.05	<0.05	1.9	290	6.7	9.8	<0.001	0.013	0.13	1.1	0.3	<0.2	7.2	<0.01
1455902		0.05	<0.05	1.8	280	4.6	9.0	<0.001	0.018	0.09	1.0	0.3	<0.2	7.4	<0.01
1455903		0.06	0.05	1.9	274	7.3	9.1	<0.001	0.006	0.11	0.9	0.4	<0.2	5.4	<0.01
1455904		0.06	0.05	2.0	277	6.7	8.6	<0.001	0.007	0.12	0.9	0.2	0.2	5.9	<0.01
1455905		0.06	<0.05	1.9	288	7.3	10.2	<0.001	0.011	0.10	1.1	0.3	0.2	5.7	<0.01
1455906		0.06	<0.05	2.0	289	6.2	11.0	<0.001	0.037	0.13	1.0	0.3	0.2	5.6	<0.01
1455907		0.06	<0.05	2.0	220	7.8	10.7	<0.001	0.020	0.36	1.0	0.4	0.2	6.2	<0.01
1455908		0.06	<0.05	2.3	253	6.6	9.9	<0.001	0.020	0.29	0.9	0.6	0.2	4.9	<0.01
1455909		0.05	<0.05	2.2	245	6.2	9.0	<0.001	0.006	0.25	0.8	0.4	<0.2	5.5	<0.01
1455910		0.13	0.12	12.5	1020	20.4	9.8	0.002	0.723	0.25	9.2	1.0	0.7	119	<0.01
1455911		0.06	0.08	3.0	258	4.5	6.0	<0.001	0.027	0.46	1.3	0.5	0.3	5.4	<0.01
1455912		0.07	0.09	2.2	271	3.8	6.5	<0.001	<0.005	0.63	1.5	0.2	0.5	5.6	<0.01
1455913		0.07	<0.05	2.1	309	3.9	7.5	<0.001	0.008	0.22	1.3	0.3	0.3	18.3	<0.01
1455914		0.06	<0.05	1.9	401	3.9	7.3	<0.001	0.024	0.10	1.8	0.4	0.2	47.8	<0.01
1455915		0.05	<0.05	2.1	413	3.9	9.1	<0.001	0.012	0.17	1.6	0.3	0.2	8.1	<0.01
1455916		0.05	<0.05	1.9	432	6.6	8.4	<0.001	0.049	0.10	1.9	0.4	<0.2	35.3	<0.01
1455917		0.04	0.05	2.4	586	4.4	9.7	<0.001	0.033	0.16	1.9	0.4	0.3	9.7	<0.01
1455918		0.04	<0.05	2.0	394	5.0	9.7	<0.001	0.152	0.12	1.3	0.4	<0.2	16.8	<0.01
1455919		0.04	<0.05	2.0	431	6.5	8.0	<0.001	0.150	0.14	1.3	0.5	<0.2	13.0	<0.01
1455920		0.04	<0.05	2.3	404	7.4	8.8	<0.001	0.270	0.14	1.2	0.4	<0.2	13.0	<0.01
1455921		0.04	<0.05	1.7	470	6.8	9.9	<0.001	0.155	0.07	1.5	0.5	0.6	15.0	<0.01
1455922		0.04	<0.05	1.7	446	5.4	10.2	<0.001	0.052	0.09	1.5	0.3	<0.2	8.7	<0.01
1455923		0.04	<0.05	1.5	475	5.5	9.1	<0.001	0.024	0.12	1.7	0.3	<0.2	8.0	<0.01
1455924		0.03	<0.05	1.8	430	4.4	9.4	<0.001	0.112	0.10	1.8	0.3	0.2	10.9	<0.01
1455925		0.03	<0.05	2.3	441	7.6	13.1	<0.001	0.052	0.19	2.4	0.5	0.2	7.1	<0.01
1455926		0.11	0.40	78.9	2420	10.2	5.6	0.004	3.67	6.54	8.1	3.7	0.4	84.9	<0.01
1455927		0.04	0.06	3.2	467	4.6	9.0	<0.001	0.056	0.24	2.4	0.8	0.3	9.2	<0.01
1455928		0.03	<0.05	2.0	494	3.9	9.3	<0.001	<0.005	0.14	2.9	0.3	0.3	6.2	<0.01
1455929		0.03	<0.05	1.8	435	4.0	8.6	<0.001	0.119	0.16	2.5	0.5	0.3	34.0	<0.01
1455930		0.04	<0.05	1.6	474	3.7	8.5	<0.001	0.039	0.22	2.6	<0.2	0.3	32.3	<0.01
1455931		0.04	<0.05	1.6	447	3.0	8.6	<0.001	0.026	0.14	2.3	<0.2	0.3	11.7	<0.01
1455932		0.04	<0.05	1.5	482	3.2	10.9	<0.001	0.024	0.18	2.7	0.2	0.3	19.1	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1455933	0.03	<0.05	1.8	466	2.9	10.9	<0.001	0.006	0.10	2.2	0.3	0.3	7.2	<0.01
1455934	0.04	<0.05	1.8	521	4.9	8.8	<0.001	0.050	0.15	1.6	0.3	0.2	6.3	<0.01
1455935	0.06	<0.05	1.7	431	7.3	7.7	<0.001	0.234	0.12	1.3	0.4	0.2	8.2	<0.01
1455936	0.07	<0.05	1.5	424	6.8	7.1	<0.001	0.157	0.08	1.5	0.2	<0.2	8.9	<0.01
1455937	0.04	<0.05	1.7	448	6.1	10.3	<0.001	0.212	0.08	1.4	0.4	<0.2	8.0	<0.01
1455938	0.05	<0.05	1.6	479	6.4	7.1	<0.001	0.104	0.08	1.6	0.3	<0.2	7.5	<0.01
1455939	0.05	<0.05	1.4	458	5.4	8.7	<0.001	0.059	0.06	1.8	0.6	<0.2	6.7	<0.01
1455940	0.08	0.34	28.5	894	2.9	11.0	0.003	0.229	0.48	5.3	0.6	0.4	102	<0.01
1455941	0.04	<0.05	1.7	498	5.6	11.1	<0.001	0.114	0.06	1.7	0.4	<0.2	11.5	<0.01
1455942	0.04	<0.05	1.7	496	5.3	9.6	<0.001	0.119	0.09	1.5	0.3	<0.2	8.5	<0.01
1455943	0.05	<0.05	1.3	503	4.4	8.3	<0.001	0.098	0.06	1.5	0.3	<0.2	9.4	<0.01
1455944	0.04	<0.05	1.3	394	3.8	7.4	<0.001	0.051	0.17	1.4	0.3	<0.2	13.0	<0.01
1455945	0.04	<0.05	1.3	398	3.9	7.3	<0.001	0.058	0.09	1.5	<0.2	<0.2	15.5	<0.01
1455946	0.05	<0.05	1.4	358	3.4	7.0	<0.001	0.084	0.10	1.4	0.7	0.2	14.7	<0.01
1455947	0.05	<0.05	1.3	347	3.5	7.3	<0.001	0.059	0.06	1.8	0.4	<0.2	13.1	<0.01
1455948	0.05	<0.05	1.4	326	3.7	6.8	<0.001	0.047	0.06	1.3	<0.2	<0.2	11.3	<0.01
1455949	0.04	<0.05	1.0	305	8.1	12.4	<0.001	0.137	<0.05	3.7	0.3	<0.2	48.2	<0.01
1455950	0.04	<0.05	1.2	339	3.8	7.8	<0.001	0.069	<0.05	1.6	<0.2	<0.2	15.7	<0.01
1455951	0.10	0.42	33.6	347	158	1.4	<0.001	1.35	79.0	1.3	9.6	5.4	48.8	<0.01
1455952	0.05	<0.05	1.4	342	4.1	6.6	<0.001	0.069	0.09	2.0	<0.2	0.2	24.0	<0.01
1455953	0.04	<0.05	1.5	406	3.1	8.5	<0.001	0.042	0.09	1.7	<0.2	0.2	13.9	<0.01
1455954	0.04	<0.05	1.4	360	3.5	8.4	<0.001	0.050	0.06	2.1	0.2	<0.2	19.8	<0.01
1455955	0.04	<0.05	1.6	375	3.6	9.2	<0.001	0.078	0.08	1.9	<0.2	0.2	17.3	<0.01
1455956	0.05	<0.05	1.6	289	4.9	7.8	<0.001	0.095	0.07	1.7	<0.2	<0.2	17.5	<0.01
1455957	0.05	<0.05	1.4	289	6.5	8.3	<0.001	0.097	0.07	1.2	0.3	<0.2	11.4	<0.01
1455958	0.05	<0.05	1.2	277	3.8	7.4	<0.001	0.044	0.06	1.2	0.2	<0.2	11.6	<0.01
1455959	0.04	<0.05	1.6	289	4.9	8.4	<0.001	0.074	0.09	1.1	<0.2	<0.2	9.8	<0.01
1455960	0.04	<0.05	1.5	292	5.0	9.3	<0.001	0.075	0.10	1.2	<0.2	<0.2	9.7	<0.01
1455961	0.05	<0.05	1.5	314	3.8	7.3	<0.001	0.069	0.06	1.2	0.2	<0.2	10.2	<0.01
1455962	0.05	<0.05	1.3	319	3.1	7.9	<0.001	0.052	<0.05	1.3	0.2	0.2	10.1	<0.01
1455963	0.05	<0.05	1.9	262	5.0	7.8	<0.001	0.127	0.08	1.2	0.2	<0.2	10.4	<0.01
1455964	0.06	<0.05	2.0	177	7.6	6.6	<0.001	0.092	0.07	0.9	<0.2	0.2	11.6	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
Sample Description														
1455965	0.09	0.27	28.3	622	4.1	10.3	0.003	0.219	0.48	5.3	0.5	0.4	121	<0.01
1455966	0.05	<0.05	2.4	207	8.0	9.6	<0.001	0.155	0.12	1.3	0.3	<0.2	10.7	<0.01
1455967	0.04	<0.05	1.7	330	5.4	9.8	<0.001	0.108	0.08	1.7	0.3	<0.2	22.8	<0.01
1455968	0.03	<0.05	2.1	351	8.2	9.4	<0.001	0.174	0.13	1.6	0.3	0.5	14.8	<0.01
1455969	0.03	<0.05	2.1	299	6.9	9.0	0.002	0.265	0.17	1.6	<0.2	0.2	18.6	<0.01
1455970	0.03	<0.05	2.0	352	5.7	9.8	0.002	0.138	0.14	1.8	0.2	0.2	18.0	<0.01
1455971	0.03	<0.05	1.5	387	4.2	9.6	<0.001	0.064	0.07	2.0	0.2	0.2	20.4	<0.01
1455972	0.03	<0.05	1.9	370	5.0	10.2	<0.001	0.072	0.09	1.7	<0.2	0.2	15.7	<0.01
1455973	0.02	<0.05	1.6	322	4.6	9.5	<0.001	0.056	0.06	1.3	<0.2	<0.2	13.4	<0.01
1455974	0.03	<0.05	1.8	375	5.3	11.6	<0.001	0.073	0.09	1.5	<0.2	0.2	14.5	<0.01
1455975	0.05	<0.05	1.8	321	3.7	11.5	<0.001	0.040	0.16	1.5	<0.2	0.2	17.6	<0.01
1455976	0.06	0.09	15.0	498	32.7	11.6	0.003	1.18	0.36	7.3	1.6	0.7	62.4	<0.01
1455977	0.03	<0.05	1.8	310	5.2	9.7	<0.001	0.053	0.16	2.1	0.3	0.2	22.8	<0.01
1455978	0.04	<0.05	1.4	338	4.0	9.7	<0.001	0.020	0.36	2.0	<0.2	0.3	20.1	<0.01
1455979	0.03	<0.05	1.3	343	4.0	11.4	<0.001	0.016	0.45	1.9	<0.2	0.3	17.7	<0.01
1455980	0.03	<0.05	1.4	351	3.8	9.9	<0.001	0.023	0.34	1.6	<0.2	0.3	14.9	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CANADA L4Z 1N9
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1455901		0.02	1.0	<0.005	0.12	0.36	7.4	0.08	7.29	55.5	4.4
1455902		<0.01	1.0	<0.005	0.12	0.22	6.9	0.07	7.06	56.1	3.9
1455903		<0.01	1.0	<0.005	0.13	0.29	6.7	0.09	6.91	46.7	4.2
1455904		<0.01	1.0	<0.005	0.13	0.27	6.7	0.09	6.80	45.2	4.2
1455905		0.01	1.0	<0.005	0.14	0.27	6.9	0.07	8.20	50.5	4.5
1455906		0.01	1.0	<0.005	0.14	0.30	7.0	0.09	8.17	50.4	4.8
1455907		0.14	0.8	<0.005	0.13	0.28	6.5	<0.05	5.63	40.2	2.0
1455908		0.09	0.9	<0.005	0.14	0.25	6.2	0.06	7.22	50.8	3.7
1455909		0.17	0.9	<0.005	0.13	0.25	6.3	<0.05	6.61	48.7	3.3
1455910		4.30	1.8	0.121	0.15	0.57	91.6	0.41	9.07	86.1	14.9
1455911		0.07	1.3	<0.005	0.10	0.25	8.6	0.17	6.61	45.0	4.6
1455912		0.01	1.7	0.007	0.10	0.26	11.1	0.51	8.04	48.0	4.7
1455913		<0.01	1.6	<0.005	0.11	0.21	12.3	0.40	7.20	49.2	4.3
1455914		<0.01	1.5	<0.005	0.10	0.21	19.7	0.17	7.01	52.9	4.2
1455915		<0.01	1.5	<0.005	0.12	0.19	18.1	0.17	6.27	49.2	3.9
1455916		<0.01	1.4	<0.005	0.12	0.23	26.4	<0.05	7.52	53.1	3.9
1455917		<0.01	1.6	0.011	0.12	0.21	21.1	0.23	7.65	53.6	4.1
1455918		<0.01	1.5	<0.005	0.15	0.31	17.2	<0.05	6.26	43.3	4.3
1455919		0.03	1.5	<0.005	0.13	0.24	14.8	<0.05	5.33	44.9	4.1
1455920		0.01	1.4	<0.005	0.12	0.22	12.2	<0.05	5.15	40.4	4.8
1455921		<0.01	1.6	<0.005	0.12	0.21	14.1	<0.05	6.42	50.5	5.0
1455922		<0.01	1.6	<0.005	0.14	0.24	16.2	<0.05	6.21	49.1	4.8
1455923		<0.01	1.7	<0.005	0.13	0.28	19.0	<0.05	6.78	46.5	4.8
1455924		<0.01	1.4	<0.005	0.12	0.27	16.7	<0.05	5.91	49.1	4.7
1455925		0.02	1.7	<0.005	0.16	0.27	18.0	<0.05	7.21	41.1	4.5
1455926		0.22	2.4	0.114	0.07	0.84	95.9	1.95	13.6	89.7	16.7
1455927		0.01	1.5	<0.005	0.11	0.21	19.1	0.08	7.14	54.2	4.3
1455928		0.01	1.7	<0.005	0.12	0.22	23.6	0.06	8.39	59.6	4.3
1455929		<0.01	1.5	<0.005	0.11	0.25	22.0	0.07	7.76	48.9	4.2
1455930		<0.01	1.7	<0.005	0.10	0.22	24.1	0.10	8.36	52.9	4.4
1455931		<0.01	1.4	<0.005	0.11	0.21	19.4	0.08	6.55	51.2	4.4
1455932		<0.01	1.6	<0.005	0.12	0.21	21.5	0.09	7.55	54.3	4.8

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011	DATE RECEIVED: Oct 13, 2011					DATE REPORTED: Jan 19, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1455933	<0.01	1.6	<0.005	0.14	0.25	19.4	0.05	7.38	55.6	4.8	
1455934	0.02	1.5	<0.005	0.11	0.26	20.6	0.10	6.31	51.8	4.4	
1455935	0.03	1.5	<0.005	0.10	0.25	13.1	<0.05	5.27	42.7	5.2	
1455936	0.02	1.5	<0.005	0.10	0.31	10.6	<0.05	5.18	41.2	5.3	
1455937	<0.01	1.4	<0.005	0.12	0.31	13.9	<0.05	5.77	47.3	5.1	
1455938	0.06	1.5	<0.005	0.10	0.42	15.8	<0.05	5.83	52.1	5.7	
1455939	<0.01	1.6	<0.005	0.11	0.36	14.7	<0.05	6.58	48.8	5.1	
1455940	0.02	1.7	0.145	0.08	0.70	73.8	0.31	8.41	44.3	8.6	
1455941	<0.01	1.5	<0.005	0.13	0.33	13.2	<0.05	6.32	44.0	4.5	
1455942	0.01	1.5	<0.005	0.12	0.23	14.6	0.05	6.04	52.4	4.1	
1455943	<0.01	1.5	<0.005	0.10	0.19	14.4	<0.05	6.06	47.2	4.1	
1455944	0.02	1.5	<0.005	0.10	0.18	19.9	0.08	5.62	47.2	4.3	
1455945	<0.01	1.6	<0.005	0.10	0.17	21.6	0.06	5.67	52.8	4.5	
1455946	0.01	1.4	<0.005	0.09	0.30	15.2	<0.05	4.90	36.9	4.8	
1455947	<0.01	1.5	<0.005	0.10	0.18	18.3	<0.05	5.30	41.0	4.5	
1455948	<0.01	1.6	<0.005	0.10	0.20	15.0	<0.05	4.52	37.7	4.9	
1455949	<0.01	1.5	<0.005	0.13	0.25	46.4	<0.05	17.8	69.8	5.3	
1455950	<0.01	1.3	<0.005	0.10	0.18	19.0	<0.05	6.28	43.2	4.3	
1455951	22.3	0.8	0.061	0.71	0.21	25.2	5.33	3.36	76.9	9.0	
1455952	0.01	1.3	<0.005	0.09	0.19	24.3	<0.05	7.26	46.2	4.2	
1455953	<0.01	1.4	<0.005	0.11	0.16	21.8	<0.05	5.57	51.7	4.4	
1455954	<0.01	1.3	<0.005	0.10	0.15	27.2	<0.05	8.02	52.5	4.2	
1455955	<0.01	1.2	<0.005	0.12	0.17	24.6	0.06	6.61	48.1	4.3	
1455956	<0.01	1.3	<0.005	0.10	0.20	20.5	0.06	6.47	43.9	4.2	
1455957	0.01	1.6	<0.005	0.10	0.23	17.6	0.06	4.77	33.6	4.7	
1455958	0.01	1.5	<0.005	0.09	0.19	16.3	<0.05	4.68	34.3	4.7	
1455959	0.05	1.5	<0.005	0.11	0.16	17.4	<0.05	4.47	40.8	4.2	
1455960	0.05	1.3	<0.005	0.11	0.17	17.8	<0.05	4.96	39.6	4.2	
1455961	<0.01	1.5	<0.005	0.09	0.18	17.5	<0.05	4.91	33.5	4.8	
1455962	0.01	1.6	<0.005	0.10	0.18	18.0	<0.05	4.91	37.9	4.4	
1455963	0.01	1.3	<0.005	0.11	0.27	16.9	0.09	4.95	35.6	4.2	
1455964	<0.01	1.4	<0.005	0.08	0.37	11.3	0.31	5.77	27.8	4.8	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5
Sample Description										
1455965	0.02	1.7	0.123	0.08	0.77	71.9	0.30	8.04	36.7	8.1
1455966	<0.01	1.4	<0.005	0.13	0.31	20.4	0.06	4.47	35.6	4.6
1455967	0.01	1.5	<0.005	0.13	0.31	23.9	0.08	7.33	44.4	4.4
1455968	<0.01	1.4	<0.005	0.13	0.34	26.2	1.41	6.44	48.2	4.2
1455969	0.02	1.4	<0.005	0.13	0.64	25.3	<0.05	6.65	42.0	4.8
1455970	0.01	1.5	<0.005	0.13	0.57	27.3	<0.05	7.04	47.7	4.6
1455971	<0.01	1.6	<0.005	0.12	0.27	32.4	<0.05	7.86	48.0	4.6
1455972	<0.01	1.3	<0.005	0.14	0.27	27.2	<0.05	6.68	50.8	4.5
1455973	<0.01	1.3	<0.005	0.13	0.23	23.5	<0.05	5.60	44.0	4.0
1455974	0.01	1.5	<0.005	0.15	0.47	25.6	0.06	6.45	50.1	4.4
1455975	<0.01	1.6	<0.005	0.13	0.30	26.9	0.11	5.69	41.8	4.8
1455976	9.86	0.9	0.086	0.27	0.38	78.9	0.85	7.30	101	10.0
1455977	<0.01	1.6	<0.005	0.12	0.35	27.2	<0.05	6.73	47.4	4.6
1455978	<0.01	1.8	<0.005	0.12	0.20	27.0	0.12	6.41	44.2	4.4
1455979	<0.01	1.8	<0.005	0.13	0.21	24.8	0.16	5.86	44.1	4.5
1455980	0.02	1.5	<0.005	0.12	0.18	25.1	0.12	5.70	44.9	4.1

Comments: RDL - Reported Detection Limit
 Gold (AR-ICPMS) is for exploratory purposes only.
 Additional Fire Assay Gold data provided on this certificate.
 Corrected Copy - trace element package 201074) for sample 1455907
 January 18, 2012

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	RDL:
1455901	0.031
1455902	0.014
1455903	0.032
1455904	0.023
1455905	0.036
1455906	0.019
1455907	0.050
1455908	0.203
1455909	0.112
1455910	4.47
1455911	0.140
1455912	0.144
1455913	0.126
1455914	0.371
1455915	0.109
1455916	0.116
1455917	0.134
1455918	0.167
1455919	0.293
1455920	0.085
1455921	0.066
1455922	0.132
1455923	0.112
1455924	0.076
1455925	0.177
1455926	6.86
1455927	1.60
1455928	0.096
1455929	0.141
1455930	0.053
1455931	0.083
1455932	0.037

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

	Analyte:	Au
	Unit:	ppm
Sample Description	RDL:	0.002

1455933	0.054
1455934	0.039
1455935	0.061
1455936	0.051
1455937	0.027
1455938	0.055
1455939	0.056
1455940	<0.002
1455941	0.065
1455942	0.033
1455943	0.021
1455944	0.082
1455945	0.130
1455946	0.327
1455947	0.012
1455948	0.011
1455949	0.015
1455950	0.024
1455951	2.07
1455952	0.011
1455953	0.183
1455954	0.229
1455955	0.292
1455956	0.267
1455957	0.424
1455958	0.214
1455959	0.320
1455960	0.646
1455961	0.284
1455962	0.140
1455963	0.169
1455964	0.328

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 14, 2011

DATE RECEIVED: Oct 13, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	RDL:
1455965	<0.002
1455966	0.216
1455967	0.186
1455968	0.243
1455969	0.136
1455970	0.059
1455971	0.036
1455972	0.064
1455973	0.021
1455974	0.041
1455975	0.006
1455976	9.06
1455977	0.328
1455978	0.302
1455979	0.083
1455980	0.101

Comments: RDL - Reported Detection Limit
 Gold (AR-ICPMS) is for exploratory purposes only.
 Additional Fire Assay Gold data provided on this certificate.
 Corrected Copy - trace element package 201074) for sample 1455907
 January 18, 2012

Certified By: _____

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date: Jan 19, 2012		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
									Lower	Upper	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Ag	1	2801747	0.287	0.255	11.8%	< 0.01			80%	120%	
Al	1	2801747	0.46	0.46	0.0%	< 0.01			80%	120%	
As	1	2801747	7.1	6.9	2.9%	< 0.1			80%	120%	
Au	1	2801747	0.02	0.03	< 0.01	< 0.01			80%	120%	
B	1	2801747	< 5	< 5	0.0%	< 5			80%	120%	
Ba	1	2801747	51	50	2.0%	< 1			80%	120%	
Be	1	2801747	0.280	0.274	2.2%	< 0.05			80%	120%	
Bi	1	2801747	0.11	0.10	9.5%	< 0.01			80%	120%	
Ca	1	2801747	0.09	0.09	0.0%	< 0.01			80%	120%	
Cd	1	2801747	0.09	0.09	0.0%	< 0.01			80%	120%	
Ce	1	2801747	29.1	29.1	0.0%	0.02			80%	120%	
Co	1	2801747	2.32	2.37	2.1%	< 0.1			80%	120%	
Cr	1	2801747	55.5	57.8	4.1%	< 0.5			80%	120%	
Cs	1	2801747	1.40	1.38	1.4%	< 0.05			80%	120%	
Cu	1	2801797	329	334	1.5%	< 0.1	3808	3800	100%	80%	120%
Fe	1	2801747	1.30	1.28	1.6%	< 0.01			80%	120%	
Ga	1	2801747	1.79	1.80	0.6%	< 0.05			80%	120%	
Ge	1	2801747	0.08	0.08	0.0%	< 0.05			80%	120%	
Hf	1	2801747	0.14	0.14	0.0%	< 0.02			80%	120%	
Hg	1	2801797	0.597	0.716	18.1%	0.01			80%	120%	
In	1	2801747	0.011	0.011	0.0%	< 0.005			80%	120%	
K	1	2801747	0.225	0.220	2.2%	< 0.01			80%	120%	
La	1	2801747	13.7	13.6	0.7%	< 0.1			80%	120%	
Li	1	2801747	1.7	1.7	0.0%	< 0.1			80%	120%	
Mg	1	2801747	0.03	0.03	0.0%	< 0.01			80%	120%	
Mn	1	2801747	560	564	0.7%	< 1			80%	120%	
Mo	1	2801747	1.06	0.82	25.5%	< 0.05			80%	120%	
Na	1	2801747	0.05	0.05	0.0%	< 0.01			80%	120%	
Nb	1	2801747	< 0.05	< 0.05	0.0%	< 0.05			80%	120%	
Ni	1	2801747	1.9	1.9	0.0%	< 0.2			80%	120%	
P	1	2801747	290	290	0.0%	< 10			80%	120%	
Pb	1	2801747	6.7	6.5	3.0%	< 0.1			80%	120%	
Rb	1	2801747	9.76	9.73	0.3%	< 0.1	11	13	83%	80%	120%
Re	1	2801747	< 0.001	< 0.001	0.0%	< 0.001			80%	120%	
S	1	2801747	0.013	0.013	0.0%	< 0.005			80%	120%	
Sb	1	2801747	0.13	0.13	0.0%	< 0.05			80%	120%	
Sc	1	2801747	1.1	1.1	0.0%	< 0.1			80%	120%	
Se	1	2801747	0.3	0.3	0.0%	0.3	0.9	0.8	107%	80%	120%
Sn	1	2801747	< 0.2	< 0.2	0.0%	< 0.2			80%	120%	
Sr	1	2801747	7.2	6.3	13.3%	< 0.2	285	290	98%	80%	120%
Ta	1	2801747	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
Te	1	2801797	7.36	7.78	5.5%	< 0.01			80%	120%	
Th	1	2801747	1.0	1.0	0.0%	< 0.1			80%	120%	
Ti	1	2801747	< 0.005	< 0.005	0.0%	< 0.005			80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2801747	0.12	0.12	0.0%	< 0.02				80%	120%	
U	1	2801747	0.357	0.354	0.8%	< 0.05	0.7	0.8	89%	80%	120%	
V	1	2801747	7.43	7.70	3.6%	< 0.5				80%	120%	
W	1	2801747	0.08	0.08	0.0%	< 0.05				80%	120%	
Y	1	2801747	7.29	7.22	1.0%	< 0.05				80%	120%	
Zn	1	2801747	55.5	54.5	1.8%	< 0.5				80%	120%	
Zr	1	2801747	4.4	4.4	0.0%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2801772	1.03	0.98	5.0%	< 0.01				80%	120%	
Al	1	2801772	2.35	2.42	2.9%	< 0.01				80%	120%	
As	1	2801772	4250	4280	0.7%	0.2				80%	120%	
Au	1	2801772	7.20	7.18	0.3%	< 0.01				80%	120%	
B	1	2801772	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2801772	104	112	7.4%	< 1				80%	120%	
Be	1	2801772	0.179	0.186	3.8%	< 0.05				80%	120%	
Bi	1	2801772	0.22	0.22	0.0%	< 0.01				80%	120%	
Ca	1	2801772	3.36	3.49	3.8%	< 0.01				80%	120%	
Cd	1	2801772	0.18	0.18	0.0%	< 0.01				80%	120%	
Ce	1	2801772	18.8	19.0	1.1%	0.02				80%	120%	
Co	1	2801772	26.1	26.1	0.0%	< 0.1				80%	120%	
Cr	1	2801772	69.9	70.7	1.1%	< 0.5				80%	120%	
Cs	1	2801772	2.46	2.42	1.6%	< 0.05				80%	120%	
Cu	1	2801772	194	194	0.0%	< 0.1	3773	3800	99%	80%	120%	
Fe	1	2801772	9.46	9.78	3.3%	< 0.01				80%	120%	
Ga	1	2801772	7.32	7.30	0.3%	< 0.05				80%	120%	
Ge	1	2801772	0.115	0.120	4.3%	< 0.05				80%	120%	
Hf	1	2801772	0.35	0.35	0.0%	< 0.02				80%	120%	
Hg	1	2801772	0.02	0.02	0.0%	< 0.01				80%	120%	
In	1	2801772	0.033	0.033	0.0%	< 0.005				80%	120%	
K	1	2801772	0.10	0.10	0.0%	< 0.01				80%	120%	
La	1	2801772	11.0	11.0	0.0%	< 0.1				80%	120%	
Li	1	2801772	8.62	8.80	2.1%	< 0.1				80%	120%	
Mg	1	2801772	2.08	2.15	3.3%	< 0.01				80%	120%	
Mn	1	2801772	4900	4860	0.8%	< 1				80%	120%	
Mo	1	2801772	4.51	4.51	0.0%	< 0.05				80%	120%	
Na	1	2801772	0.111	0.117	5.3%	< 0.01				80%	120%	
Nb	1	2801772	0.40	0.42	4.9%	< 0.05				80%	120%	
Ni	1	2801772	78.9	78.2	0.9%	< 0.2				80%	120%	
P	1	2801772	2420	2430	0.4%	< 10				80%	120%	
Pb	1	2801772	10.2	10.5	2.9%	< 0.1				80%	120%	
Rb	1	2801772	5.6	5.6	0.0%	< 0.1	11	13	83%	80%	120%	
Re	1	2801772	0.004	0.004	0.0%	< 0.001				80%	120%	
S	1	2801772	3.67	3.75	2.2%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Sb	1	2801772	6.54	6.67	2.0%	< 0.05				80%	120%	
Sc	1	2801772	8.07	8.04	0.4%	< 0.1				80%	120%	
Se	1	2801772	3.7	3.6	2.7%	0.3	0.9	0.8	112%	80%	120%	
Sn	1	2801822	< 0.2	< 0.2	0.0%	< 0.2				80%	120%	
Sr	1	2801772	84.9	86.1	1.4%	< 0.2	283	290	97%	80%	120%	
Ta	1	2801772	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2801772	0.22	0.22	0.0%	< 0.01				80%	120%	
Th	1	2801772	2.4	2.4	0.0%	< 0.1				80%	120%	
Ti	1	2801772	0.114	0.121	6.0%	< 0.005				80%	120%	
Tl	1	2801772	0.07	0.07	0.0%	< 0.02				80%	120%	
U	1	2801772	0.84	0.85	1.2%	< 0.05	0.9	0.8	107%	80%	120%	
V	1	2801772	95.9	96.1	0.2%	< 0.5				80%	120%	
W	1	2801772	1.95	1.99	2.0%	< 0.05				80%	120%	
Y	1	2801772	13.6	13.5	0.7%	< 0.05				80%	120%	
Zn	1	2801772	89.7	90.7	1.1%	< 0.5				80%	120%	
Zr	1	2801772	16.7	17.0	1.8%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2801797	31.0	29.9	3.6%	< 0.01				80%	120%	
As	1	2801797	416	416	0.0%	< 0.1				80%	120%	
Au	1	2801797	2.48	2.48	0.0%	< 0.01				80%	120%	
B	1	2801797	< 5	< 5	0.0%	< 5				80%	120%	
Be	1	2801797	0.06	0.06	0.0%	< 0.05				80%	120%	
Bi	1	2801797	20.8	20.6	1.0%	< 0.01				80%	120%	
Cd	1	2801797	0.680	0.673	1.0%	< 0.01				80%	120%	
Ce	1	2801797	9.50	9.28	2.3%	< 0.01				80%	120%	
Co	1	2801797	10.0	10.2	2.0%	< 0.1				80%	120%	
Cs	1	2801797	0.173	0.163	6.0%	< 0.05				80%	120%	
Cu	1					< 0.1	4133	3800	108%	80%	120%	
Ga	1	2801797	5.88	5.89	0.2%	< 0.05				80%	120%	
Ge	1	2801797	0.08	0.08	0.0%	< 0.05				80%	120%	
Hf	1	2801797	0.23	0.23	0.0%	< 0.02				80%	120%	
Hg	1	2801797	0.756	0.749	0.9%	< 0.01				80%	120%	
In	1	2801797	0.588	0.593	0.8%	< 0.005				80%	120%	
La	1	2801797	4.96	4.81	3.1%	< 0.1				80%	120%	
Li	1	2801797	2.3	2.3	0.0%	< 0.1				80%	120%	
Mo	1	2801797	6.30	6.34	0.6%	< 0.05				80%	120%	
Nb	1	2801797	0.42	0.43	2.4%	< 0.05				80%	120%	
Ni	1	2801797	33.6	33.9	0.9%	< 0.2				80%	120%	
Pb	1	2801797	158	158	0.0%	< 0.1				80%	120%	
Rb	1	2801797	1.37	1.30	5.2%	< 0.1	12	13	91%	80%	120%	
Re	1	2801797	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
Sb	1	2801797	79.0	80.7	2.1%	< 0.05				80%	120%	
Sc	1	2801797	1.3	1.3	0.0%	< 0.1				80%	120%	
Se	1	2801797	9.64	9.72	0.8%	< 0.2	0.8	0.8	101%	80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Sn	1	2801797	5.45	5.49	0.7%	< 0.2				80%	120%	
Sr	1					< 0.2	295	290	101%	80%	120%	
Ta	1	2801797	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2801797	22.3	22.4	0.4%	< 0.01				80%	120%	
Th	1	2801797	0.76	0.74	2.7%	< 0.1				80%	120%	
Tl	1	2801797	0.71	0.71	0.0%	< 0.02				80%	120%	
U	1	2801797	0.21	0.21	0.0%	< 0.05	0.9	0.8	107%	80%	120%	
W	1	2801797	5.33	5.50	3.1%	< 0.05				80%	120%	
Y	1	2801797	3.36	3.33	0.9%	< 0.05				80%	120%	
Zr	1	2801797	9.0	9.0	0.0%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2801822	17.0	17.1	0.6%	< 0.01				80%	120%	
As	1	2801822	16.4	16.3	0.6%	< 0.1				80%	120%	
Au	1	2801822	10.6	10.8	1.9%	< 0.01				80%	120%	
B	1	2801822	< 5	< 5	0.0%	< 5				80%	120%	
Be	1	2801822	0.29	0.28	3.5%	< 0.05				80%	120%	
Bi	1	2801822	0.20	0.20	0.0%	< 0.01				80%	120%	
Cd	1	2801822	3.00	3.01	0.3%	< 0.01				80%	120%	
Ce	1	2801822	20.0	20.0	0.0%	< 0.01				80%	120%	
Co	1	2801822	19.5	19.2	1.6%	< 0.1				80%	120%	
Cs	1	2801822	1.96	1.93	1.5%	< 0.05				80%	120%	
Ga	1	2801822	5.71	5.72	0.2%	< 0.05				80%	120%	
Ge	1	2801822	0.09	0.08	11.8%	< 0.05				80%	120%	
Hf	1	2801822	0.32	0.32	0.0%	< 0.02				80%	120%	
Hg	1	2801822	0.06	0.06	0.0%	< 0.01				80%	120%	
In	1	2801822	0.0233	0.0238	2.1%	< 0.005				80%	120%	
La	1	2801822	8.87	8.85	0.2%	< 0.1				80%	120%	
Li	1	2801822	16.3	16.3	0.0%	< 0.1				80%	120%	
Mo	1	2801822	27.6	28.0	1.4%	< 0.05				80%	120%	
Nb	1	2801822	0.09	0.09	0.0%	< 0.05				80%	120%	
Ni	1	2801822	15.0	15.4	2.6%	< 0.2				80%	120%	
Pb	1	2801822	32.7	33.0	0.9%	< 0.1				80%	120%	
Rb	1	2801822	11.6	11.4	1.7%	< 0.1				80%	120%	
Re	1	2801822	0.003	0.003	0.0%	< 0.001				80%	120%	
Sb	1	2801822	0.36	0.36	0.0%	< 0.05				80%	120%	
Sc	1	2801822	7.27	7.20	1.0%	< 0.1				80%	120%	
Se	1	2801822	1.60	1.51	5.8%	< 0.2				80%	120%	
Sn	1	2801822	0.7	0.7	0.0%	< 0.2				80%	120%	
Ta	1	2801822	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2801822	9.86	9.94	0.8%	< 0.01				80%	120%	
Th	1	2801822	0.9	0.9	0.0%	< 0.1				80%	120%	
Tl	1	2801822	0.27	0.27	0.0%	< 0.02				80%	120%	
U	1	2801822	0.384	0.385	0.3%	< 0.05				80%	120%	
W	1	2801822	0.851	0.876	2.9%	< 0.05				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V539059
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012		REPLICATE					Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Y	1	2801822	7.30	7.40	1.4%	< 0.05				80%	120%	
Zr	1	2801822	9.99	9.83	1.6%	< 0.5				80%	120%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801772	6.86	6.27	9.0%	< 0.002	0.0751	0.0849	88%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801797	2.07	2.08	0.5%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801822	9.06	10.2	11.8%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801747	0.0306	0.0355	14.8%	< 0.002	0.0753	0.0849	89%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801770	0.076	0.038		< 0.002	0.876	0.922	95%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801786	< 0.002	< 0.002	0.0%	< 0.002		0.0849		90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2801801	0.059	< 0.002		< 0.002		0.0849		90%	110%	

Certified By: _____



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V539059

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V540107

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Jan 18, 2012

PAGES (INCLUDING COVER): 34

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

***NOTES**

VERSION 1: Additional Fire Assay Gold data

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Sample Login Weight kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
1456095		2.29	0.31	0.44	3.0	<0.01	<5	32	0.43	0.06	1.10	0.11	24.8	4.3	58.8
1456096		1.09	0.46	0.41	1.8	0.05	<5	26	0.35	0.06	0.56	0.06	18.5	3.8	68.8
1456097		1.50	2.69	0.42	2.4	0.03	<5	30	0.44	0.11	0.30	0.05	37.1	2.2	73.7
1456098		1.11	0.22	0.41	9.6	<0.01	<5	60	0.40	0.10	0.06	0.09	45.5	1.8	53.3
1456099		0.58	0.37	0.45	6.7	0.14	<5	65	0.39	0.10	0.08	0.20	33.6	2.0	58.2
1456100		1.52	0.41	0.36	6.5	0.16	<5	54	0.25	0.10	0.05	0.11	32.9	1.5	60.6
1456101		1.14	0.33	0.39	11.7	0.06	<5	75	0.27	0.11	0.06	0.19	37.4	2.0	50.7
1456102		1.22	0.43	0.34	15.3	0.15	<5	47	0.25	0.12	0.07	0.11	37.9	1.7	53.2
1456103		3.13	0.69	0.40	13.8	0.07	<5	45	0.35	0.12	0.07	0.12	43.9	2.4	64.3
1456104		1.86	0.54	0.30	27.6	0.22	<5	49	0.21	0.10	0.07	0.07	29.4	1.8	74.4
1456105		1.86	0.68	0.27	31.9	0.17	<5	27	0.15	0.09	0.04	0.05	23.8	1.4	102
1456106		0.99	0.46	0.26	22.7	0.06	<5	23	0.16	0.09	0.05	0.06	27.5	1.4	86.2
1456107		0.82	1.48	0.32	21.5	0.34	<5	71	0.24	0.10	0.06	0.08	30.3	2.0	80.2
1456108		2.42	0.54	0.37	17.6	0.07	<5	48	0.32	0.12	0.07	0.07	37.0	1.8	72.1
1456109		0.11	8.24	2.52	8.5	4.28	<5	122	0.45	0.21	2.35	1.64	34.4	17.3	21.3
1456110		0.54	0.34	0.36	20.2	0.04	<5	42	0.31	0.11	0.04	0.08	39.3	2.0	88.2
1456111		0.57	0.29	0.37	17.1	0.05	<5	37	0.28	0.12	0.04	0.08	40.5	1.7	74.0
1456112		2.03	0.31	0.37	19.9	0.03	<5	32	0.27	0.11	0.06	0.09	35.9	1.8	93.8
1456113		1.15	0.80	0.34	17.6	0.04	<5	64	0.26	0.11	0.05	0.10	38.8	1.7	88.7
1456114		2.36	0.34	0.42	10.1	0.03	<5	43	0.29	0.12	0.07	0.10	34.4	2.0	60.5
1456115		0.36	0.11	1.62	6.1	<0.01	<5	145	0.27	0.04	6.13	0.22	17.0	9.8	101
1456116		2.59	0.37	0.45	17.6	0.03	<5	84	0.35	0.07	0.08	0.08	30.7	3.6	64.1
1456117		1.81	0.65	0.43	19.5	0.03	<5	53	0.42	0.05	0.10	0.11	27.8	3.8	103
1456118		2.03	0.34	0.41	10.7	0.10	<5	47	0.26	0.10	0.07	0.08	34.2	2.0	82.7
1456119		1.32	0.23	0.35	3.4	0.15	<5	38	0.27	0.09	0.06	0.10	28.0	1.7	59.1
1456120		0.75	0.29	0.34	5.1	0.02	<5	29	0.20	0.09	0.05	0.08	24.1	1.5	69.4
1456121		0.60	0.19	0.38	4.6	<0.01	<5	35	0.20	0.11	0.05	0.08	32.7	1.7	69.4
1456122		1.48	0.20	0.34	12.9	0.02	<5	38	0.24	0.10	0.04	0.09	44.4	2.0	81.9
1456123		1.53	0.37	0.34	15.5	0.05	<5	29	0.23	0.10	0.04	0.09	27.8	1.7	78.1
1456124		1.38	0.36	0.38	13.0	0.03	<5	26	0.34	0.12	0.06	0.09	39.3	1.8	55.6
1456125		0.87	0.26	0.28	11.5	0.02	<5	24	0.20	0.09	0.05	0.05	20.7	1.6	88.3

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Sample Login Weight kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
1456126		0.08	32.0	1.09	454	2.23	<5	71	0.08	23.1	0.45	0.79	9.21	10.6	136
1456127		2.21	0.47	0.39	11.7	0.01	<5	31	0.32	0.14	0.18	0.06	36.5	2.9	51.2
1456128		3.00	0.34	0.45	4.1	0.01	<5	38	0.43	0.09	0.10	0.06	37.0	2.3	97.9
1456129		3.28	0.60	0.54	12.0	0.05	<5	30	0.59	0.08	0.64	0.11	31.8	3.7	57.7
1456130		2.38	0.49	0.49	13.7	0.01	<5	38	0.33	0.08	0.19	0.08	29.7	4.0	51.6
1456131		2.20	0.45	0.42	5.4	0.03	<5	50	0.32	0.06	0.13	0.04	21.2	3.8	90.0
1456132		1.88	0.49	0.55	5.0	0.01	<5	26	0.49	0.07	0.32	0.04	23.5	3.6	72.6
1456133		0.85	1.29	0.47	8.0	0.12	<5	26	0.48	0.07	0.68	0.10	19.2	4.8	91.9
1456134		0.92	0.52	0.53	5.6	0.02	<5	26	0.49	0.08	0.34	0.03	22.4	4.6	85.3
1456135		1.16	1.01	0.47	8.8	0.07	<5	53	0.43	0.11	0.41	0.04	21.2	5.4	85.3
1456136		1.82	2.19	0.43	7.2	0.63	<5	82	0.40	0.08	0.40	0.08	19.6	4.7	80.1
1456137		1.52	0.51	0.41	7.0	0.02	<5	98	0.37	0.10	0.41	0.09	20.6	4.3	75.6
1456138		2.13	0.36	0.54	3.4	0.04	<5	33	0.36	0.10	0.86	0.07	20.4	4.3	76.0
1456139		1.19	0.33	0.62	7.2	0.09	<5	34	0.42	0.08	0.45	0.08	19.1	4.3	88.0
1456140		0.38	0.13	1.61	8.9	<0.01	<5	149	0.29	0.05	5.89	0.21	15.0	9.7	83.8
1456141		1.05	0.65	0.40	8.0	0.13	<5	37	0.40	0.08	0.28	0.09	13.4	4.0	56.1
1456142		0.77	0.85	0.37	10.9	0.10	<5	32	0.39	0.08	0.27	0.06	10.2	4.1	81.8
1456143		0.89	0.63	0.39	6.1	0.07	<5	38	0.31	0.06	0.20	0.05	14.2	3.8	119
1456144		1.53	0.76	0.50	13.1	0.20	<5	31	0.31	0.08	0.84	0.09	17.0	4.2	92.9
1456145		0.59	1.66	0.52	26.9	1.14	<5	31	0.26	0.07	0.68	0.12	12.8	3.6	105
1456146		0.77	3.50	0.46	16.4	3.68	<5	27	0.37	0.10	0.31	0.12	14.3	3.9	92.8
1456147		0.78	0.51	0.47	26.9	0.23	<5	30	0.28	0.12	0.26	0.10	23.3	3.2	108
1456148		1.04	6.05	0.28	10.3	5.33	<5	32	0.17	0.05	0.34	0.14	26.1	1.5	89.3
1456149		1.47	0.51	0.70	14.4	0.14	<5	29	0.51	0.09	1.39	0.08	21.8	4.0	80.2
1456150		1.83	1.94	0.27	8.7	0.20	<5	26	0.26	0.11	0.35	0.08	19.5	3.1	109
1456151		0.09	31.3	1.03	438	2.12	<5	62	0.08	23.1	0.41	0.80	8.78	10.3	120
1456152		2.56	0.50	0.44	6.2	0.03	<5	46	0.30	0.13	0.33	0.02	19.5	4.2	71.6
1456153		2.90	0.53	0.34	6.6	0.09	<5	25	0.22	0.09	0.46	0.08	25.7	3.0	99.3
1456154		3.19	0.34	<0.01	7.3	0.04	<5	36	0.36	0.10	<0.01	0.04	28.7	4.0	73.5
1456155		1.69	1.95	0.35	12.6	0.15	<5	40	0.40	0.06	1.21	0.08	12.7	3.8	124
1456156		0.89	0.48	0.40	11.4	0.04	<5	38	0.33	0.07	0.34	0.04	13.2	3.6	118

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456157	1.49	0.78	0.44	16.0	0.04	<5	26	0.38	0.08	0.50	0.08	19.0	4.1	123
1456158	0.74	1.59	0.35	5.2	0.89	<5	23	0.30	0.07	0.53	0.15	27.6	3.0	128
1456159	0.68	0.29	0.31	3.4	0.02	<5	23	0.29	0.09	0.37	0.05	30.1	3.1	58.0
1456160	0.65	0.25	0.36	3.3	0.02	<5	24	0.32	0.08	0.48	0.04	31.9	3.4	61.5
1456161	2.74	0.45	0.46	6.6	0.01	<5	31	0.40	0.10	0.61	0.06	37.5	4.2	89.4
1456162	2.15	0.57	0.57	6.5	0.03	<5	127	0.40	0.08	0.61	0.10	36.6	4.8	87.1
1456163	0.73	2.99	0.32	4.7	0.34	<5	48	0.29	0.05	1.55	0.15	15.2	2.2	127
1456164	2.01	0.41	0.37	3.7	0.05	<5	27	0.27	0.06	0.57	0.19	19.9	3.2	61.7
1456165	0.60	0.20	1.68	9.1	<0.01	<5	158	0.31	0.04	7.04	0.24	15.9	10.1	105
1456166	2.18	0.25	0.37	3.9	0.01	<5	25	0.27	0.06	0.40	0.09	18.4	3.7	50.2
1456167	2.35	0.37	0.44	6.0	<0.01	<5	25	0.50	0.09	0.36	0.12	31.2	4.1	51.2
1456168	0.97	0.24	0.54	3.4	<0.01	<5	25	0.59	0.07	0.53	0.09	31.0	3.7	36.7
1456169	2.38	0.28	0.51	6.1	<0.01	<5	33	0.65	0.09	0.51	0.09	38.0	4.4	36.8
1456170	0.90	0.45	0.31	3.6	0.03	<5	32	0.28	0.11	0.23	0.04	24.9	2.8	99.2
1456171	1.17	0.52	0.40	3.3	0.03	<5	34	0.29	0.08	0.24	0.02	21.7	3.3	85.7
1456172	2.46	0.36	0.50	3.0	0.02	<5	32	0.39	0.07	0.41	0.04	25.4	3.6	96.1
1456173	2.15	0.43	0.48	6.0	0.02	<5	37	0.33	0.08	0.49	0.04	27.9	3.7	118
1456174	1.31	0.42	0.74	9.6	<0.01	<5	22	0.84	0.09	0.53	0.07	22.3	5.5	71.7
1456175	1.10	0.17	0.24	2.7	0.01	<5	11	0.26	0.03	0.93	0.08	13.4	2.1	50.8
1456176	0.11	1.11	2.13	4360	6.29	<5	79	0.27	0.22	3.11	0.23	16.3	25.2	70.3
1456177	1.36	0.46	0.44	16.3	0.05	<5	22	0.44	0.05	0.97	0.13	27.4	3.6	74.9
1456178	0.77	0.27	0.39	5.5	0.01	<5	38	0.24	0.02	0.67	0.09	31.2	1.7	116
1456179	1.68	0.31	0.41	4.8	<0.01	<5	45	0.36	0.04	0.38	0.11	24.0	2.9	102
1456180	1.22	7.13	0.57	9.2	0.11	<5	28	0.61	0.09	0.47	0.17	14.9	3.4	104
1456181	1.46	0.27	0.37	5.5	<0.01	<5	31	0.32	0.05	0.78	0.09	23.4	3.4	82.9
1456182	0.72	0.24	0.33	3.8	<0.01	<5	30	0.26	0.04	0.92	0.07	23.2	2.5	91.8
1456183	1.02	0.17	0.50	6.3	<0.01	<5	21	0.86	0.06	0.74	0.10	46.4	4.0	23.9
1456184	0.82	0.38	0.49	9.8	<0.01	<5	32	0.59	0.16	0.99	0.15	28.3	5.0	53.6
1456185	1.12	0.18	0.37	4.5	<0.01	<5	28	0.30	0.08	0.33	0.08	29.7	2.1	109
1456186	1.83	0.14	0.40	4.8	<0.01	<5	37	0.28	0.07	0.35	0.09	30.9	1.8	86.7
1456187	0.67	0.32	0.46	9.5	<0.01	<5	25	0.48	0.15	0.42	0.16	31.5	3.5	68.4

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456188		0.74	0.36	0.54	11.1	0.01	<5	30	0.62	0.19	0.84	0.23	32.1	4.6	53.1
1456189		1.25	0.24	0.43	6.8	<0.01	<5	31	0.47	0.15	0.63	0.15	29.1	4.0	50.9
1456190		0.66	0.16	1.67	7.5	<0.01	<5	164	0.31	0.04	6.22	0.23	17.0	10.2	107
1456191		3.45	0.17	0.39	2.2	<0.01	<5	33	0.35	0.08	0.42	0.13	28.2	2.2	57.3
1456192		1.04	0.18	0.49	2.2	<0.01	<5	33	0.39	0.08	0.42	0.11	33.2	1.8	58.6
1456193		0.84	0.24	0.43	1.9	<0.01	<5	45	0.31	0.09	1.13	0.14	36.5	1.3	56.8
1456194		0.61	11.5	0.21	1.4	0.09	<5	16	0.39	0.05	12.6	0.23	16.2	0.9	37.7
1456195		1.09	0.21	0.48	2.9	<0.01	<5	46	0.58	0.10	0.78	0.14	33.1	2.2	49.9
1456196		0.64	0.10	0.58	2.0	<0.01	<5	354	0.59	0.09	2.24	0.13	40.4	1.5	38.3
1456197		0.66	0.08	0.33	1.7	<0.01	<5	70	0.34	0.09	0.66	0.07	31.6	1.1	47.2
1456198		1.36	0.12	0.35	2.1	0.02	<5	54	0.41	0.09	1.64	0.16	39.5	1.4	43.5
1456199		1.18	0.10	0.28	1.7	<0.01	<5	220	0.31	0.09	1.30	0.09	29.8	1.0	68.2
1456200		2.98	0.12	0.30	1.8	<0.01	<5	100	0.36	0.09	1.02	0.09	34.6	1.1	61.5
1456201		0.09	18.9	1.35	17.4	9.47	<5	72	0.43	0.21	0.98	3.56	19.6	19.5	18.7
1456202		3.24	0.18	0.32	1.4	0.03	<5	73	0.32	0.09	0.52	0.09	35.0	1.1	59.7
1456203		1.02	0.10	0.29	1.2	<0.01	<5	90	0.27	0.07	0.50	0.07	32.3	1.0	84.2
1456204		2.76	0.11	0.39	1.2	<0.01	<5	78	0.34	0.09	1.15	0.10	39.7	1.2	52.8
1456205		2.17	0.08	0.34	1.1	<0.01	<5	82	0.35	0.07	0.99	0.13	35.6	1.1	85.7
1456206		3.07	0.09	0.29	1.5	<0.01	<5	71	0.31	0.08	0.74	0.09	34.2	1.1	57.7
1456207		0.74	0.11	0.24	1.4	<0.01	<5	47	0.27	0.09	1.09	0.07	35.0	1.0	56.0
1456208		1.19	0.07	0.24	1.4	<0.01	<5	44	0.33	0.06	0.80	0.09	33.6	1.2	59.8
1456209		0.89	0.09	0.28	1.4	<0.01	<5	38	0.34	0.07	1.04	0.11	32.6	1.1	50.9
1456210		0.80	0.08	0.31	1.3	<0.01	<5	52	0.35	0.06	1.22	0.10	32.7	1.1	60.5
1456211		1.68	0.09	0.41	1.3	<0.01	<5	65	0.42	0.09	1.65	0.14	34.2	1.4	53.1
1456212		2.61	0.11	0.38	1.3	<0.01	<5	27	0.49	0.08	2.57	0.18	40.7	1.5	48.1
1456213		1.73	0.09	0.53	1.2	<0.01	<5	19	0.63	0.08	1.68	0.11	32.5	1.3	50.5
1456214		0.80	0.08	0.33	1.0	<0.01	<5	21	0.49	0.06	3.60	0.18	33.2	1.4	44.6
1456215		0.46	0.14	1.20	6.8	<0.01	<5	118	0.32	0.04	5.26	0.24	15.6	9.7	67.9
1456216		0.90	0.13	0.35	1.2	<0.01	<5	27	0.53	0.07	1.51	0.11	28.2	1.9	51.7
1456217		1.56	0.18	0.70	10.2	<0.01	<5	36	0.97	0.11	2.13	0.12	26.5	6.2	41.1
1456218		2.58	0.14	0.65	5.6	<0.01	<5	137	0.76	0.09	2.21	0.10	29.1	5.3	39.1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456219	1.16	0.35	0.69	6.3	<0.01	<5	108	0.75	0.08	1.55	0.08	24.2	4.9	53.6
1456220	1.06	6.41	0.46	3.2	0.02	<5	263	0.61	0.08	1.49	0.13	18.0	3.3	69.0
1456221	2.29	0.17	0.39	2.7	<0.01	<5	85	0.72	0.06	1.38	0.09	24.2	4.6	45.2
1456222	0.94	0.11	0.49	1.8	<0.01	<5	141	0.56	0.10	2.91	0.20	41.2	2.2	24.9
1456223	1.12	0.13	0.28	1.8	<0.01	<5	194	0.42	0.08	1.75	0.20	32.7	3.1	46.2
1456224	1.94	0.11	0.55	1.0	<0.01	<5	78	0.50	0.08	1.88	0.19	32.2	1.5	48.5
1456225	1.09	0.18	0.50	1.3	<0.01	<5	42	0.58	0.06	1.00	0.10	29.3	1.2	62.1
1456226	0.10	8.24	2.54	9.2	4.17	5	123	0.65	0.21	2.30	1.66	32.0	16.5	19.8
1456227	2.21	0.13	0.39	1.1	0.01	<5	30	0.46	0.05	1.26	0.11	25.5	1.2	48.2
1456228	2.59	0.12	0.61	0.9	<0.01	<5	28	0.75	0.05	2.70	0.15	26.6	2.7	17.7
1456229	2.15	0.07	0.54	1.5	<0.01	<5	100	0.72	0.06	2.14	0.11	20.5	4.2	19.3
1456230	2.18	0.16	0.60	1.6	<0.01	<5	324	0.73	0.07	2.25	0.10	23.0	3.3	13.8
1456231	1.31	0.12	0.71	1.6	<0.01	<5	49	0.72	0.08	2.53	0.07	27.2	3.4	14.9
1456232	1.38	0.12	1.14	1.9	<0.01	6	139	1.07	0.12	3.20	0.10	45.3	5.0	20.0
1456233	2.99	0.20	0.58	1.6	<0.01	<5	67	0.63	0.08	2.14	0.08	28.0	3.6	15.9
1456234	3.36	0.08	0.51	1.5	<0.01	<5	86	0.28	0.07	2.37	0.09	30.2	4.0	13.0
1456235	1.28	0.09	0.52	1.4	<0.01	<5	76	0.29	0.07	2.10	0.09	30.7	4.2	16.5
1456236	3.54	0.08	0.39	1.7	<0.01	<5	75	0.26	0.06	2.13	0.07	32.3	4.3	15.0
1456237	3.66	0.06	0.51	1.6	<0.01	<5	104	0.31	0.06	2.85	0.08	32.9	4.7	19.3
1456238	1.44	0.04	0.54	1.7	<0.01	<5	345	0.44	0.07	2.91	0.13	39.3	6.3	13.8
1456239	2.81	0.06	0.47	2.7	<0.01	<5	122	0.24	0.07	1.93	0.07	35.5	5.7	60.7
1456240	0.57	0.10	1.54	6.8	<0.01	<5	161	0.19	0.04	6.41	0.21	17.0	10.5	80.3
1456241	1.61	0.10	0.60	3.3	<0.01	<5	307	0.42	0.09	2.32	0.09	32.3	4.9	33.7
1456242	1.87	0.09	0.53	4.3	<0.01	<5	97	0.35	0.08	1.33	0.08	34.1	4.8	35.5

Certified By: _____



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011	DATE RECEIVED: Oct 18, 2011					DATE REPORTED: Jan 18, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456095	0.89	3.9	2.30	1.76	0.09	0.14	0.01	0.017	0.19	8.3	3.5	0.51	1030	0.51	
1456096	0.92	2.2	2.10	1.58	0.08	0.13	0.01	0.018	0.16	8.5	3.7	0.35	697	0.43	
1456097	1.49	2.4	1.93	1.85	0.08	0.18	0.10	0.023	0.21	23.2	2.6	0.28	725	0.56	
1456098	0.86	3.3	1.20	1.81	0.09	0.14	<0.01	0.013	0.22	23.1	1.6	0.02	584	1.42	
1456099	1.23	4.9	1.62	2.05	0.09	0.13	0.01	0.019	0.23	12.6	1.7	0.02	777	1.07	
1456100	0.42	2.9	1.31	1.56	0.09	0.14	0.01	0.027	0.15	12.0	1.9	0.01	683	1.15	
1456101	0.40	3.8	1.51	1.70	0.09	0.17	0.01	0.030	0.13	14.0	2.1	0.02	1140	2.03	
1456102	0.52	3.1	1.31	1.50	0.09	0.16	0.02	0.028	0.09	18.4	2.2	0.01	778	1.11	
1456103	1.19	3.2	1.81	2.07	0.09	0.16	0.02	0.025	0.15	20.6	2.0	0.02	833	0.97	
1456104	0.47	3.2	1.42	1.35	0.09	0.15	0.02	0.025	0.09	11.6	2.2	0.01	579	1.59	
1456105	0.46	5.6	0.99	1.25	0.08	0.14	0.03	0.021	0.07	8.6	2.1	0.01	346	2.12	
1456106	0.41	3.1	0.94	1.19	0.08	0.15	0.02	0.021	0.06	9.2	2.0	<0.01	321	1.54	
1456107	0.67	3.3	1.36	1.36	0.08	0.15	0.03	0.021	0.11	12.3	2.0	0.02	1160	1.84	
1456108	0.95	2.7	1.61	1.92	0.09	0.18	0.01	0.025	0.14	13.9	2.2	0.02	799	0.86	
1456109	2.04	148	4.16	7.92	0.10	0.34	0.04	0.036	0.29	14.9	20.3	1.26	1330	14.3	
1456110	0.85	2.6	1.33	1.95	0.10	0.17	<0.01	0.021	0.13	14.5	2.5	0.02	746	1.58	
1456111	0.84	2.3	1.27	1.95	0.10	0.17	<0.01	0.021	0.13	18.2	2.6	0.02	529	1.01	
1456112	1.14	2.5	1.23	2.02	0.10	0.15	<0.01	0.019	0.14	13.4	2.4	0.02	558	2.28	
1456113	0.79	4.0	1.37	1.74	0.09	0.16	0.02	0.021	0.13	20.3	2.1	0.02	1010	1.09	
1456114	1.00	2.3	1.43	2.12	0.09	0.16	0.02	0.023	0.17	17.1	2.4	0.03	823	1.22	
1456115	0.91	53.9	2.63	4.85	0.06	0.23	0.02	0.022	0.29	8.8	9.9	1.11	651	2.37	
1456116	1.25	4.2	2.02	2.05	0.09	0.14	0.02	0.021	0.18	13.5	2.7	0.02	1130	0.74	
1456117	1.47	7.5	2.13	2.05	0.09	0.13	0.02	0.017	0.17	12.4	3.6	0.02	951	0.94	
1456118	0.71	3.7	1.50	1.88	0.09	0.14	0.01	0.019	0.16	16.6	2.7	0.02	487	0.55	
1456119	0.71	1.8	1.45	1.60	0.09	0.14	<0.01	0.021	0.12	10.5	2.8	0.01	742	0.42	
1456120	0.73	4.3	1.17	1.47	0.09	0.12	<0.01	0.017	0.12	9.3	2.9	0.01	634	0.47	
1456121	0.52	2.3	1.41	1.66	0.09	0.13	0.01	0.017	0.14	13.8	3.0	0.02	623	0.44	
1456122	0.71	2.4	1.20	1.72	0.09	0.12	<0.01	0.016	0.13	22.3	2.4	0.02	501	0.66	
1456123	0.79	2.5	1.24	1.67	0.09	0.14	0.02	0.021	0.14	11.1	2.0	0.02	382	1.00	
1456124	0.85	2.8	1.79	2.06	0.10	0.17	0.02	0.026	0.13	14.8	2.6	0.02	570	0.98	
1456125	0.69	2.1	0.99	1.22	0.08	0.14	0.01	0.018	0.09	7.3	2.2	0.01	433	1.39	
1456126	0.16	357	4.68	6.55	0.09	0.24	0.79	0.702	0.04	4.8	3.0	0.55	181	6.65	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Unit: RDL:	ppm 0.05	ppm 0.1	% 0.01	ppm 0.05	ppm 0.05	ppm 0.02	ppm 0.01	ppm 0.005	% 0.01	ppm 0.1	ppm 0.1	% 0.01	ppm 1	ppm 0.05
1456127		0.81	3.3	1.88	1.77	0.09	0.13	0.02	0.016	0.17	18.5	2.9	0.13	680	0.80
1456128		1.05	3.9	1.70	2.00	0.09	0.14	0.02	0.019	0.18	19.4	2.5	0.03	744	0.74
1456129		1.83	6.4	2.20	2.17	0.08	0.13	0.02	0.019	0.20	16.1	3.4	0.25	603	0.47
1456130		1.13	4.6	2.06	2.00	0.08	0.13	0.01	0.015	0.21	12.8	3.9	0.08	357	0.32
1456131		1.09	6.5	2.07	1.69	0.08	0.11	0.02	0.015	0.19	9.1	4.1	0.10	597	0.62
1456132		2.14	6.3	1.93	2.30	0.09	0.13	0.01	0.015	0.23	9.9	4.5	0.25	549	0.46
1456133		2.47	22.9	2.16	2.11	0.08	0.12	0.03	0.015	0.23	7.6	4.4	0.47	703	1.25
1456134		2.13	6.5	1.94	2.37	0.09	0.12	0.04	0.015	0.21	9.5	5.1	0.32	652	0.54
1456135		1.70	12.4	2.15	2.07	0.10	0.11	0.12	0.014	0.21	8.3	4.0	0.38	709	0.54
1456136		1.50	10.2	2.15	1.88	0.08	0.11	0.07	0.013	0.23	7.8	4.1	0.39	733	0.55
1456137		1.28	5.9	2.01	1.72	0.08	0.12	0.03	0.014	0.21	8.5	4.3	0.37	679	0.51
1456138		1.05	7.5	2.63	1.71	0.09	0.12	0.02	0.015	0.29	8.7	5.1	0.72	662	0.82
1456139		1.45	9.8	2.97	1.90	0.08	0.12	0.03	0.015	0.35	7.6	5.0	0.62	685	1.16
1456140		0.89	45.0	2.33	4.99	0.05	0.26	0.03	0.021	0.28	8.7	10.3	1.03	541	2.41
1456141		1.36	5.0	2.03	1.66	0.08	0.12	0.04	0.016	0.22	6.0	4.6	0.34	377	1.01
1456142		1.30	8.7	1.91	1.56	0.08	0.10	0.05	0.016	0.21	4.6	4.5	0.33	429	1.77
1456143		1.01	5.4	1.80	1.62	0.09	0.10	0.02	0.013	0.23	5.9	5.1	0.36	421	1.49
1456144		0.90	8.1	2.66	1.57	0.09	0.11	0.02	0.016	0.29	7.0	5.2	0.66	671	1.10
1456145		0.74	13.5	2.65	1.44	0.08	0.11	0.04	0.016	0.30	5.9	3.8	0.48	528	1.68
1456146		1.23	12.9	2.20	1.72	0.08	0.12	0.04	0.015	0.24	6.7	4.4	0.39	687	1.17
1456147		0.79	4.6	2.29	1.54	0.08	0.16	0.02	0.021	0.21	10.0	4.2	0.30	605	0.99
1456148		0.53	6.7	1.25	1.06	0.09	0.14	0.09	0.021	0.16	10.8	1.8	0.16	404	1.33
1456149		1.76	5.7	3.12	1.91	0.09	0.13	0.02	0.017	0.33	9.5	4.4	0.59	794	1.22
1456150		0.91	7.7	1.41	1.35	0.08	0.12	0.04	0.018	0.13	7.9	3.3	0.25	446	1.42
1456151		0.16	333	4.25	6.47	0.09	0.24	0.78	0.709	0.04	4.6	3.3	0.52	169	6.57
1456152		1.10	3.5	2.05	1.79	0.08	0.14	0.02	0.019	0.21	7.7	3.5	0.36	423	0.81
1456153		0.84	6.2	1.62	1.43	0.09	0.14	0.01	0.017	0.15	9.8	2.6	0.29	478	0.95
1456154		1.06	6.3	<0.01	2.21	0.10	0.17	0.02	0.020	<0.01	11.4	4.1	0.02	925	0.52
1456155		1.50	14.1	1.71	1.37	0.08	0.09	0.04	0.014	0.20	5.7	3.4	0.43	696	0.98
1456156		1.08	4.7	1.81	1.75	0.08	0.10	0.02	0.015	0.22	6.1	4.0	0.31	615	0.83
1456157		1.97	8.6	1.89	2.00	0.08	0.10	0.02	0.015	0.22	8.3	3.6	0.34	609	1.02
1456158		1.27	8.2	1.67	1.52	0.09	0.08	0.02	0.010	0.21	12.1	2.6	0.36	552	0.94

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456159	1.09	2.4	1.77	1.39	0.10	0.08	<0.01	0.014	0.17	13.8	2.9	0.35	587	0.53
1456160	1.20	2.4	1.89	1.63	0.10	0.09	0.01	0.016	0.18	17.7	3.7	0.40	643	0.49
1456161	1.81	4.5	2.04	2.23	0.10	0.11	<0.01	0.017	0.28	16.5	3.8	0.41	719	0.69
1456162	1.93	9.7	2.51	2.79	0.09	0.13	0.01	0.020	0.33	15.1	3.9	0.42	948	0.70
1456163	1.89	13.4	1.05	1.34	0.08	0.08	0.02	0.013	0.20	6.9	2.5	0.45	636	1.00
1456164	1.00	4.2	1.49	1.51	0.08	0.08	0.01	0.015	0.17	7.9	3.9	0.34	560	0.39
1456165	0.94	58.8	2.72	5.21	0.07	0.23	0.03	0.022	0.28	9.4	10.7	1.15	687	2.50
1456166	1.07	4.3	1.90	1.46	0.08	0.09	<0.01	0.016	0.17	7.5	4.2	0.37	658	0.31
1456167	2.14	5.8	2.01	2.00	0.09	0.09	<0.01	0.015	0.24	14.2	4.1	0.39	679	0.39
1456168	2.52	3.8	2.09	2.40	0.08	0.08	<0.01	0.014	0.29	13.8	4.1	0.47	748	0.31
1456169	2.98	4.4	2.36	2.40	0.09	0.09	<0.01	0.014	0.30	20.4	4.2	0.43	992	0.44
1456170	1.28	5.6	1.59	1.38	0.09	0.12	<0.01	0.017	0.18	9.6	2.4	0.23	605	0.43
1456171	1.37	8.5	1.75	1.72	0.08	0.12	<0.01	0.020	0.21	8.7	2.8	0.25	606	0.57
1456172	1.80	5.6	1.96	2.35	0.09	0.10	0.01	0.021	0.24	11.0	4.3	0.35	845	0.58
1456173	1.62	4.0	1.97	2.09	0.08	0.12	0.02	0.020	0.21	11.9	3.9	0.35	687	0.57
1456174	4.42	7.9	2.44	3.64	0.08	0.09	0.02	0.022	0.29	8.4	7.3	0.44	775	0.40
1456175	0.97	2.4	1.13	1.02	0.09	0.05	0.01	0.011	0.09	5.7	2.3	0.29	535	0.26
1456176	2.12	198	9.23	7.22	0.11	0.35	0.02	0.046	0.09	9.6	12.1	1.95	4820	4.64
1456177	1.60	5.7	2.13	1.92	0.09	0.13	0.02	0.022	0.17	10.6	4.4	0.46	756	0.44
1456178	0.90	6.2	1.34	1.72	0.08	0.13	0.02	0.020	0.17	14.0	2.8	0.26	472	0.52
1456179	1.57	4.7	1.58	2.24	0.09	0.12	0.01	0.022	0.18	9.4	4.4	0.30	564	0.68
1456180	3.93	15.7	1.40	2.69	0.09	0.09	0.04	0.015	0.26	7.1	6.5	0.30	464	0.65
1456181	1.06	4.1	1.78	1.79	0.14	0.12	0.05	0.015	0.17	11.1	4.8	0.43	705	0.56
1456182	0.77	3.8	1.47	1.55	0.13	0.12	0.03	0.016	0.14	10.8	4.4	0.37	618	0.52
1456183	1.79	2.5	2.37	2.96	0.15	0.12	0.02	0.011	0.30	25.9	4.4	0.44	1060	0.36
1456184	1.50	8.1	2.76	2.80	0.16	0.09	0.03	0.013	0.25	14.4	6.0	0.44	1200	0.31
1456185	0.58	2.5	1.65	2.15	0.14	0.13	0.02	0.014	0.15	15.3	5.9	0.27	743	0.50
1456186	0.50	1.9	1.60	2.14	0.15	0.13	0.02	0.015	0.14	15.0	5.6	0.28	771	0.39
1456187	1.16	4.1	2.19	2.62	0.14	0.12	0.02	0.015	0.20	15.1	5.9	0.29	972	0.42
1456188	1.37	9.1	2.46	3.13	0.15	0.12	0.02	0.013	0.28	16.1	6.3	0.32	1290	0.45
1456189	0.98	8.2	2.11	2.28	0.15	0.12	0.02	0.013	0.24	12.3	5.4	0.32	975	0.42
1456190	0.81	46.7	2.53	5.35	0.11	0.20	0.04	0.019	0.29	8.8	14.9	1.13	545	2.34

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456191	0.79	2.2	1.38	1.88	0.14	0.11	0.01	0.014	0.20	15.6	5.3	0.27	649	0.47
1456192	0.69	2.1	1.58	2.22	0.14	0.19	0.01	0.020	0.18	17.2	7.6	0.28	721	0.32
1456193	0.48	3.1	1.26	2.21	0.13	0.21	0.02	0.018	0.20	17.7	5.3	0.27	642	0.30
1456194	0.84	11.6	0.62	1.08	<0.05	0.06	0.07	0.008	0.13	7.0	2.1	0.18	1360	0.35
1456195	1.30	2.4	1.56	2.39	0.14	0.10	0.01	0.015	0.23	17.1	4.6	0.29	655	0.26
1456196	1.29	0.9	1.40	3.09	0.15	0.10	<0.01	0.014	0.25	19.5	4.4	0.26	861	0.16
1456197	0.57	0.9	1.10	1.84	0.16	0.10	0.01	0.012	0.16	15.6	3.1	0.20	525	0.18
1456198	0.64	1.4	1.65	2.14	0.16	0.12	0.01	0.015	0.16	18.6	3.6	0.40	1000	0.29
1456199	0.50	1.2	1.05	1.73	0.13	0.14	0.02	0.014	0.12	14.8	3.3	0.19	551	0.52
1456200	0.52	1.1	1.17	2.14	0.15	0.15	0.01	0.017	0.13	16.7	3.5	0.20	611	0.44
1456201	1.59	125	2.76	6.65	0.13	0.28	0.07	0.027	0.20	8.0	32.4	0.74	709	29.7
1456202	0.36	1.0	1.33	1.98	0.15	0.18	0.01	0.019	0.12	17.2	3.8	0.23	626	0.36
1456203	0.33	1.1	1.12	1.86	0.13	0.15	<0.01	0.016	0.15	16.2	3.1	0.17	487	0.47
1456204	0.43	0.8	1.65	2.36	0.15	0.17	<0.01	0.019	0.15	18.2	3.2	0.31	796	0.31
1456205	0.47	1.4	1.30	2.26	0.13	0.14	<0.01	0.018	0.13	17.1	3.3	0.34	723	0.51
1456206	0.44	1.3	1.23	2.07	0.14	0.16	<0.01	0.017	0.14	16.5	2.4	0.24	605	0.31
1456207	0.26	1.2	1.06	1.78	0.14	0.20	0.01	0.018	0.12	17.5	2.0	0.18	581	0.40
1456208	0.38	1.0	1.27	1.90	0.15	0.16	<0.01	0.022	0.10	16.5	2.0	0.23	577	0.40
1456209	0.44	0.9	1.27	2.06	0.14	0.19	<0.01	0.022	0.12	15.2	2.1	0.25	599	0.45
1456210	0.43	0.9	1.24	2.19	0.15	0.15	<0.01	0.022	0.13	15.6	2.1	0.24	615	0.38
1456211	0.53	1.0	1.66	2.70	0.14	0.15	<0.01	0.023	0.14	16.0	2.7	0.32	910	0.31
1456212	1.24	0.8	1.61	2.54	0.13	0.12	<0.01	0.022	0.18	19.2	2.4	0.32	1110	0.31
1456213	2.51	0.8	1.10	2.74	0.13	0.07	<0.01	0.014	0.25	15.2	3.7	0.26	635	0.26
1456214	1.43	0.5	1.11	1.81	0.13	0.07	<0.01	0.011	0.20	14.6	2.2	0.30	792	0.22
1456215	0.74	42.0	2.02	4.95	0.11	0.22	0.03	0.018	0.21	8.1	15.9	0.89	462	2.32
1456216	1.94	1.9	1.18	1.79	0.13	0.10	<0.01	0.011	0.22	14.3	2.5	0.28	655	0.46
1456217	3.08	5.2	2.36	2.70	0.13	0.03	0.03	0.018	0.28	12.8	8.0	0.65	993	3.47
1456218	2.43	5.4	2.20	2.82	0.13	0.03	0.02	0.020	0.25	14.1	7.6	0.66	907	0.39
1456219	3.68	8.3	1.98	2.76	0.12	0.04	0.07	0.016	0.27	10.3	8.6	0.43	799	1.44
1456220	2.84	14.9	1.38	1.82	0.12	0.04	0.14	0.011	0.22	7.9	6.0	0.26	555	0.79
1456221	1.76	5.3	2.10	1.88	0.15	0.08	0.01	0.019	0.19	10.5	5.6	0.32	684	0.42
1456222	1.81	0.9	1.73	2.58	0.14	0.11	0.01	0.019	0.27	17.9	4.0	0.86	1020	0.29

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456223	0.52	2.7	2.04	1.33	0.15	0.12	0.01	0.023	0.11	14.8	4.3	0.55	955	0.29
1456224	1.13	1.1	1.42	2.05	0.12	0.10	0.01	0.017	0.21	13.5	5.4	0.58	760	0.26
1456225	1.70	1.3	0.96	2.21	0.13	0.09	0.02	0.015	0.26	15.6	4.0	0.24	469	0.42
1456226	1.85	130	4.08	8.63	0.14	0.41	0.04	0.033	0.30	15.1	37.1	1.23	1170	14.3
1456227	0.99	1.3	0.90	1.62	0.14	0.11	0.01	0.016	0.22	11.2	4.4	0.27	494	0.34
1456228	1.68	1.0	1.47	2.16	0.13	0.06	0.01	0.012	0.30	10.0	5.9	0.45	782	0.18
1456229	1.65	3.3	1.91	1.85	0.14	0.03	0.02	0.012	0.27	8.2	6.9	0.47	760	0.19
1456230	2.09	8.9	1.60	1.94	0.15	0.03	0.01	0.010	0.30	10.1	6.8	0.34	712	0.16
1456231	2.36	2.8	1.73	2.35	0.12	0.07	<0.01	0.011	0.35	13.6	7.8	0.33	716	0.26
1456232	3.32	4.8	2.22	3.84	0.13	0.06	<0.01	0.015	0.52	23.4	12.9	0.47	1030	0.27
1456233	1.75	2.7	1.51	2.27	0.14	0.06	<0.01	0.010	0.29	13.2	7.7	0.34	636	0.16
1456234	1.85	2.3	1.52	1.82	0.10	0.06	<0.01	0.009	0.24	15.3	2.7	0.42	666	0.16
1456235	1.95	3.2	1.52	1.90	0.10	0.06	<0.01	0.009	0.25	15.7	3.1	0.40	703	0.15
1456236	1.64	3.0	1.66	1.51	0.12	0.06	<0.01	0.010	0.21	16.2	2.4	0.34	684	0.27
1456237	2.02	3.9	2.08	1.75	0.10	0.07	<0.01	0.012	0.28	16.3	2.8	0.43	806	0.31
1456238	3.11	3.2	2.78	1.91	0.10	0.07	<0.01	0.015	0.31	19.1	2.8	0.69	1210	0.36
1456239	1.52	5.6	2.62	1.82	0.11	0.06	<0.01	0.016	0.20	16.8	3.1	0.45	947	0.39
1456240	0.95	53.7	2.70	4.70	0.08	0.20	0.02	0.019	0.29	9.1	6.8	1.16	601	2.31
1456241	3.82	7.3	1.97	1.87	0.07	0.09	<0.01	0.013	0.32	13.9	2.9	0.45	818	0.40
1456242	2.69	4.9	1.92	1.73	0.11	0.07	<0.01	0.015	0.26	17.2	3.0	0.60	773	0.52

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456095	0.05	<0.05	1.1	355	5.3	9.2	<0.001	0.056	0.16	2.4	<0.2	0.3	41.1	<0.01
1456096	0.05	<0.05	1.2	355	3.5	7.6	<0.001	0.040	0.12	1.8	<0.2	0.3	22.6	<0.01
1456097	0.06	<0.05	1.1	216	4.3	10.4	<0.001	0.060	0.11	0.9	0.3	0.3	12.9	<0.01
1456098	0.05	0.05	1.0	223	6.8	10.0	<0.001	<0.005	0.32	0.9	<0.2	0.2	6.4	<0.01
1456099	0.06	<0.05	1.0	230	8.1	8.8	<0.001	<0.005	0.28	1.2	0.2	0.3	9.1	<0.01
1456100	0.07	<0.05	1.0	218	6.8	4.8	<0.001	0.006	0.21	1.1	<0.2	0.3	7.1	<0.01
1456101	0.09	<0.05	1.2	239	7.9	4.2	<0.001	<0.005	0.30	1.2	<0.2	0.3	8.3	<0.01
1456102	0.09	<0.05	0.8	243	8.8	3.5	<0.001	<0.005	0.38	1.0	0.2	0.3	7.4	<0.01
1456103	0.07	<0.05	1.1	255	9.1	6.3	<0.001	0.008	0.38	1.4	0.2	0.3	6.7	<0.01
1456104	0.08	<0.05	1.3	299	8.3	3.3	<0.001	<0.005	0.60	1.1	0.2	0.3	7.2	<0.01
1456105	0.09	<0.05	1.8	205	7.6	3.1	<0.001	0.016	0.73	0.9	0.2	0.3	7.2	<0.01
1456106	0.09	<0.05	1.6	203	7.2	2.8	<0.001	0.088	0.56	1.0	0.2	0.3	7.3	<0.01
1456107	0.08	<0.05	1.5	194	8.0	4.5	<0.001	<0.005	0.50	1.1	<0.2	0.3	7.6	<0.01
1456108	0.07	<0.05	1.3	194	9.3	6.4	<0.001	<0.005	0.43	1.2	<0.2	0.3	7.3	<0.01
1456109	0.15	0.09	12.1	757	22.0	11.6	0.002	0.755	0.38	9.1	0.7	0.9	143	<0.01
1456110	0.06	<0.05	1.4	103	8.6	6.2	<0.001	0.006	0.45	1.0	<0.2	0.3	5.4	<0.01
1456111	0.06	<0.05	1.1	93	8.2	6.2	<0.001	0.006	0.46	1.0	<0.2	0.3	5.6	<0.01
1456112	0.06	<0.05	1.5	141	7.9	7.0	<0.001	0.008	0.48	1.0	<0.2	0.3	6.0	<0.01
1456113	0.06	<0.05	1.6	141	8.1	5.9	<0.001	0.007	0.54	1.2	<0.2	0.3	6.0	<0.01
1456114	0.07	<0.05	1.1	200	7.9	7.8	<0.001	0.061	0.37	1.0	0.4	0.3	9.3	<0.01
1456115	0.10	0.17	31.1	737	3.1	11.2	0.002	0.228	0.61	5.3	0.3	0.8	126	<0.01
1456116	0.06	<0.05	1.3	269	7.4	8.2	<0.001	0.113	0.52	1.5	0.3	0.3	12.5	<0.01
1456117	0.04	<0.05	2.6	294	7.3	7.8	<0.001	0.084	0.63	1.6	0.2	0.3	10.9	<0.01
1456118	0.06	<0.05	1.4	242	7.0	6.6	<0.001	0.010	0.32	1.0	<0.2	0.3	8.2	<0.01
1456119	0.07	<0.05	0.9	207	7.3	5.6	<0.001	0.005	0.15	1.2	<0.2	0.3	6.6	<0.01
1456120	0.07	<0.05	1.1	151	6.5	5.5	<0.001	0.039	0.22	0.7	0.3	0.2	8.5	<0.01
1456121	0.07	<0.05	1.1	141	7.0	5.7	<0.001	0.009	0.17	0.8	<0.2	0.2	7.3	<0.01
1456122	0.06	<0.05	1.4	118	6.6	5.9	<0.001	0.008	0.28	0.9	<0.2	0.2	4.6	<0.01
1456123	0.08	<0.05	1.3	89	7.2	6.1	<0.001	0.013	0.47	1.0	<0.2	0.3	8.6	<0.01
1456124	0.08	<0.05	0.9	145	9.1	5.9	<0.001	0.039	0.45	1.5	0.3	0.3	7.1	<0.01
1456125	0.08	<0.05	1.6	148	6.3	4.6	<0.001	0.042	0.31	1.1	<0.2	0.2	8.5	<0.01
1456126	0.14	0.45	38.8	266	177	1.4	<0.001	1.47	102	1.4	9.5	6.9	58.2	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456127	0.04	<0.05	1.0	253	7.7	8.1	<0.001	0.087	0.48	1.2	0.2	0.2	10.9	<0.01
1456128	0.05	<0.05	1.7	255	6.0	8.8	<0.001	0.031	0.19	1.2	0.2	0.3	8.4	<0.01
1456129	0.04	<0.05	1.2	324	7.1	10.6	<0.001	0.348	0.32	1.7	0.3	0.3	29.3	<0.01
1456130	0.04	<0.05	1.1	360	6.7	10.1	<0.001	0.325	0.35	1.5	0.4	0.2	9.7	<0.01
1456131	0.04	<0.05	2.0	312	5.9	8.9	<0.001	0.216	0.24	1.3	0.3	0.2	10.4	<0.01
1456132	0.02	<0.05	1.5	352	5.6	11.9	<0.001	0.138	0.25	1.6	0.3	0.2	12.3	<0.01
1456133	0.03	<0.05	1.6	359	7.7	12.7	<0.001	0.393	0.81	1.7	0.3	0.2	13.4	<0.01
1456134	0.03	<0.05	1.7	358	5.1	11.5	<0.001	0.223	0.30	1.5	0.2	0.2	10.7	<0.01
1456135	0.03	<0.05	1.9	329	9.5	10.9	<0.001	0.266	0.45	1.6	0.3	0.4	12.7	<0.01
1456136	0.03	<0.05	1.5	315	7.8	11.7	<0.001	0.234	0.35	1.5	0.3	0.2	14.0	<0.01
1456137	0.03	<0.05	1.4	339	6.1	10.2	<0.001	0.232	0.30	1.6	0.2	0.2	12.2	<0.01
1456138	0.05	<0.05	1.6	350	5.3	9.3	<0.001	0.164	0.19	1.8	<0.2	0.2	32.1	<0.01
1456139	0.04	<0.05	1.8	397	5.8	10.8	<0.001	0.254	0.52	1.5	<0.2	0.2	20.3	<0.01
1456140	0.10	0.18	24.5	496	3.0	11.3	0.003	0.221	0.75	4.9	0.3	0.5	128	<0.01
1456141	0.03	<0.05	0.3	90	5.8	9.2	<0.001	0.257	0.51	1.5	0.3	0.2	12.9	<0.01
1456142	0.03	<0.05	1.7	121	6.5	8.1	0.001	0.280	0.75	1.4	0.3	0.2	14.5	<0.01
1456143	0.03	<0.05	2.4	288	5.2	8.8	<0.001	0.184	0.38	1.3	<0.2	0.2	12.5	<0.01
1456144	0.03	<0.05	1.9	410	6.1	8.8	<0.001	0.554	0.53	1.7	0.3	0.2	33.5	<0.01
1456145	0.04	<0.05	1.6	254	6.3	8.0	<0.001	0.671	0.77	1.3	0.3	0.2	34.9	<0.01
1456146	0.03	<0.05	1.7	401	7.2	9.0	<0.001	0.387	0.68	1.3	0.3	0.2	19.2	<0.01
1456147	0.07	<0.05	2.2	403	7.0	7.4	<0.001	0.782	0.51	1.2	0.2	0.3	17.4	<0.01
1456148	0.08	0.06	0.9	182	6.6	5.9	<0.001	0.406	0.61	0.9	0.3	0.3	15.1	<0.01
1456149	0.06	<0.05	1.5	367	5.9	10.5	<0.001	0.558	0.42	1.6	0.2	0.2	30.7	<0.01
1456150	0.05	<0.05	2.4	330	5.4	6.6	<0.001	0.304	0.41	1.2	0.3	0.3	15.4	<0.01
1456151	0.13	0.39	33.8	111	176	1.4	0.001	1.42	104	1.4	9.7	6.8	56.0	<0.01
1456152	0.04	<0.05	0.6	186	4.5	9.0	<0.001	0.317	0.40	1.5	0.2	0.3	15.3	<0.01
1456153	0.07	<0.05	1.0	231	12.6	6.6	<0.001	0.427	0.25	1.3	0.4	0.3	19.7	<0.01
1456154	<0.01	<0.05	1.8	308	5.3	12.5	<0.001	0.063	0.22	1.8	0.3	0.3	24.1	<0.01
1456155	0.04	<0.05	2.5	287	5.5	8.7	<0.001	0.286	0.29	1.4	0.4	0.2	27.9	<0.01
1456156	0.05	<0.05	2.0	285	5.0	9.7	<0.001	0.279	0.26	1.2	0.3	0.3	15.0	<0.01
1456157	0.03	<0.05	2.2	331	6.7	11.8	<0.001	0.637	0.34	1.4	0.4	0.3	17.5	<0.01
1456158	0.02	<0.05	2.2	272	9.5	10.4	<0.001	0.442	0.16	1.0	0.3	0.2	22.4	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456159	0.03	<0.05	1.9	281	3.0	8.1	<0.001	0.280	0.11	1.1	<0.2	<0.2	12.9	<0.01
1456160	0.03	<0.05	1.7	297	2.7	8.6	<0.001	0.218	0.12	1.3	<0.2	0.2	20.0	<0.01
1456161	0.03	<0.05	1.8	386	4.5	13.8	<0.001	0.431	0.15	1.5	0.3	0.3	24.2	<0.01
1456162	0.03	<0.05	1.9	351	8.0	15.9	<0.001	0.463	0.16	1.8	0.3	0.3	21.0	<0.01
1456163	0.03	<0.05	2.2	167	7.8	9.8	<0.001	0.124	0.18	1.2	<0.2	0.2	55.1	<0.01
1456164	0.04	<0.05	1.1	350	5.7	7.5	<0.001	0.120	0.14	1.3	<0.2	<0.2	32.7	<0.01
1456165	0.11	0.20	32.4	725	3.3	11.4	0.003	0.263	0.62	5.6	0.4	0.6	137	<0.01
1456166	0.05	<0.05	0.9	341	4.5	7.1	<0.001	0.115	0.12	1.4	<0.2	<0.2	20.0	<0.01
1456167	0.03	<0.05	1.2	368	6.6	11.9	<0.001	0.152	0.13	1.5	0.2	0.2	19.9	<0.01
1456168	0.02	<0.05	0.8	385	5.2	14.9	<0.001	0.093	0.09	1.7	0.2	0.2	29.3	<0.01
1456169	0.02	<0.05	0.8	393	5.7	15.3	<0.001	0.096	0.12	1.6	<0.2	0.2	19.7	<0.01
1456170	0.05	<0.05	2.1	265	5.5	7.9	<0.001	0.202	0.12	1.2	<0.2	0.3	12.1	<0.01
1456171	0.05	<0.05	2.1	270	7.3	8.5	<0.001	0.182	0.14	1.4	0.2	0.3	15.3	<0.01
1456172	0.04	<0.05	2.0	351	6.2	10.8	<0.001	0.116	0.12	1.7	<0.2	0.3	23.3	<0.01
1456173	0.05	<0.05	2.1	314	5.2	10.0	<0.001	0.256	0.18	1.6	0.2	0.3	21.8	<0.01
1456174	0.02	<0.05	1.5	521	6.7	16.0	<0.001	0.211	0.35	2.8	0.2	0.4	28.5	<0.01
1456175	0.03	<0.05	0.8	201	3.9	4.5	<0.001	0.097	0.09	1.4	<0.2	<0.2	33.1	<0.01
1456176	0.11	0.38	76.3	1450	10.5	5.8	0.003	3.35	7.44	7.6	3.4	0.6	89.4	<0.01
1456177	0.05	<0.05	1.4	398	6.9	7.8	<0.001	0.306	0.28	2.3	0.2	0.3	44.6	<0.01
1456178	0.10	0.06	1.7	338	5.2	7.4	<0.001	0.227	0.24	1.4	0.2	0.3	32.4	<0.01
1456179	0.05	<0.05	1.7	337	5.6	9.6	<0.001	0.166	0.19	1.9	<0.2	0.4	24.2	<0.01
1456180	0.03	<0.05	1.9	292	9.1	13.9	<0.001	0.260	0.24	1.5	0.3	0.3	30.8	<0.01
1456181	0.05	<0.05	2.5	360	5.4	8.1	<0.001	0.183	0.14	1.8	0.2	0.3	38.6	<0.01
1456182	0.06	<0.05	2.2	331	5.1	6.3	<0.001	0.197	0.13	1.7	0.2	0.2	34.9	<0.01
1456183	0.02	<0.05	1.6	391	5.1	18.8	<0.001	0.230	0.15	1.3	0.2	<0.2	22.3	<0.01
1456184	0.02	<0.05	3.1	356	9.8	12.4	<0.001	0.605	0.18	1.8	0.9	<0.2	25.0	<0.01
1456185	0.06	<0.05	2.8	258	5.6	6.8	<0.001	0.307	0.11	1.1	0.2	0.3	22.8	<0.01
1456186	0.08	<0.05	1.9	263	5.6	6.6	<0.001	0.324	0.11	1.0	0.2	0.3	24.2	<0.01
1456187	0.05	<0.05	2.3	283	10.6	9.9	<0.001	0.746	0.18	1.3	0.8	0.3	22.0	<0.01
1456188	0.03	<0.05	2.1	390	11.9	14.3	<0.001	0.781	0.21	1.6	0.9	0.2	26.0	<0.01
1456189	0.03	<0.05	2.3	357	8.4	10.9	<0.001	0.531	0.14	1.4	0.8	<0.2	21.7	<0.01
1456190	0.11	0.18	29.0	656	3.5	12.2	0.002	0.245	0.45	5.9	0.3	0.5	132	<0.01

Certified By:



Certificate of Analysis

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ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm
1456191		0.04	<0.05	2.0	257	4.7	8.4	<0.001	0.129	0.07	1.1	<0.2	0.2	24.7	<0.01
1456192		0.07	<0.05	1.7	313	7.4	7.2	<0.001	0.267	0.08	1.1	<0.2	0.2	26.8	<0.01
1456193		0.06	<0.05	1.3	315	9.2	8.2	<0.001	0.251	0.10	1.0	0.2	0.3	32.7	<0.01
1456194		0.01	0.06	0.6	137	10.9	6.1	0.001	0.241	0.10	1.0	0.3	<0.2	143	<0.01
1456195		0.04	<0.05	1.3	327	5.9	10.2	<0.001	0.212	0.08	1.1	<0.2	0.2	23.4	<0.01
1456196		0.05	<0.05	0.9	326	6.7	12.0	<0.001	0.245	0.06	1.1	0.2	0.2	42.8	<0.01
1456197		0.04	<0.05	0.9	288	4.8	7.5	<0.001	0.123	0.06	0.6	<0.2	<0.2	14.5	<0.01
1456198		0.05	<0.05	0.9	314	7.1	7.4	<0.001	0.173	0.07	1.2	0.2	<0.2	32.7	<0.01
1456199		0.06	0.05	1.3	235	4.5	5.5	<0.001	0.140	0.07	0.8	0.2	<0.2	20.6	<0.01
1456200		0.05	<0.05	1.4	283	5.4	6.5	<0.001	0.142	0.07	1.1	<0.2	0.2	21.7	<0.01
1456201		0.04	0.08	14.8	405	37.1	14.4	0.003	0.969	0.38	8.2	1.5	0.9	45.4	<0.01
1456202		0.07	<0.05	1.1	290	4.9	5.3	<0.001	0.115	0.06	1.1	<0.2	0.2	15.6	<0.01
1456203		0.04	<0.05	1.8	256	4.0	5.2	<0.001	0.079	0.06	0.9	<0.2	0.2	15.0	<0.01
1456204		0.06	<0.05	0.9	334	5.2	6.2	<0.001	0.096	0.06	1.4	<0.2	0.3	23.9	<0.01
1456205		0.06	<0.05	1.7	283	5.8	5.6	<0.001	0.074	0.07	1.3	<0.2	0.3	26.6	<0.01
1456206		0.05	<0.05	1.1	299	5.7	5.9	<0.001	0.087	0.08	1.1	<0.2	0.2	19.2	<0.01
1456207		0.05	0.05	1.2	323	3.1	4.9	<0.001	0.078	0.08	1.0	<0.2	0.2	15.2	<0.01
1456208		0.06	<0.05	1.3	283	4.5	4.5	<0.001	0.053	0.09	1.4	<0.2	0.3	19.6	<0.01
1456209		0.05	0.08	1.2	278	4.9	5.1	<0.001	0.076	0.08	1.5	<0.2	0.3	20.4	<0.01
1456210		0.06	0.06	1.1	301	4.5	5.6	<0.001	0.065	0.08	1.4	<0.2	0.3	23.1	<0.01
1456211		0.06	<0.05	1.2	309	5.3	5.8	<0.001	0.052	0.07	1.7	<0.2	0.4	32.1	<0.01
1456212		0.05	<0.05	1.0	338	5.2	8.8	<0.001	0.076	0.06	1.7	<0.2	0.3	40.6	<0.01
1456213		0.03	<0.05	1.0	282	5.0	13.0	<0.001	0.047	<0.05	1.1	<0.2	0.3	48.0	<0.01
1456214		0.03	<0.05	0.9	211	7.2	10.5	<0.001	0.064	<0.05	1.0	0.2	<0.2	76.3	<0.01
1456215		0.07	0.26	27.1	599	3.0	11.2	0.003	0.198	0.51	5.6	0.4	0.5	94.0	<0.01
1456216		0.03	<0.05	1.4	256	4.9	10.9	<0.001	0.039	0.06	0.9	<0.2	0.5	39.7	<0.01
1456217		0.02	<0.05	2.6	458	5.4	15.0	<0.001	0.083	0.12	3.3	<0.2	0.4	60.7	<0.01
1456218		0.03	<0.05	2.3	443	4.6	12.4	<0.001	0.064	0.08	3.4	<0.2	0.4	61.4	<0.01
1456219		0.02	<0.05	2.3	423	4.8	13.8	<0.001	0.074	0.10	2.6	<0.2	0.3	46.8	<0.01
1456220		0.02	<0.05	1.9	266	5.4	11.4	<0.001	0.084	0.13	1.7	<0.2	0.2	44.2	<0.01
1456221		0.03	<0.05	1.8	460	4.9	9.6	<0.001	0.218	0.14	2.7	<0.2	0.3	38.3	<0.01
1456222		0.03	<0.05	0.8	336	8.5	14.5	<0.001	0.190	0.05	2.0	<0.2	0.4	101	<0.01

Certified By:



Certificate of Analysis

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DATE SAMPLED: Oct 18, 2011

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SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456223	0.05	0.05	1.4	292	6.4	4.8	<0.001	0.147	0.08	2.2	<0.2	0.3	50.3	<0.01
1456224	0.06	<0.05	0.9	333	7.3	8.5	<0.001	0.049	0.05	1.4	<0.2	0.3	74.4	<0.01
1456225	0.04	<0.05	1.3	350	4.1	12.0	<0.001	0.031	0.09	1.0	<0.2	0.3	44.3	<0.01
1456226	0.15	0.09	10.8	674	22.4	13.7	0.002	0.728	0.35	10.0	0.7	1.0	140	<0.01
1456227	0.05	<0.05	1.1	286	5.0	9.7	<0.001	0.034	0.08	1.0	<0.2	0.3	48.2	<0.01
1456228	0.02	<0.05	0.8	326	6.7	13.0	<0.001	0.036	0.10	1.6	<0.2	0.2	82.3	<0.01
1456229	0.03	<0.05	1.1	346	6.1	11.0	<0.001	0.035	0.10	1.7	<0.2	<0.2	81.4	<0.01
1456230	0.03	<0.05	0.9	424	5.9	12.4	<0.001	0.038	0.11	1.5	<0.2	<0.2	84.3	<0.01
1456231	0.03	<0.05	0.7	519	5.7	14.6	<0.001	0.033	0.16	1.7	<0.2	0.2	74.6	<0.01
1456232	0.05	<0.05	1.1	611	8.5	25.5	<0.001	0.043	0.18	2.2	<0.2	0.3	109	<0.01
1456233	0.04	<0.05	0.8	380	6.8	13.8	<0.001	0.029	0.13	1.5	<0.2	<0.2	62.8	<0.01
1456234	0.04	<0.05	0.9	330	7.6	11.3	<0.001	0.031	0.09	1.3	<0.2	<0.2	71.0	<0.01
1456235	0.04	<0.05	1.0	336	7.4	11.9	<0.001	0.028	0.08	1.3	<0.2	0.3	65.7	<0.01
1456236	0.04	<0.05	1.0	417	6.9	9.2	<0.001	0.029	0.10	1.6	<0.2	<0.2	59.8	<0.01
1456237	0.04	<0.05	1.3	474	6.6	10.6	<0.001	0.044	0.15	1.9	<0.2	<0.2	80.7	<0.01
1456238	0.04	<0.05	1.8	546	9.1	11.6	<0.001	0.054	0.18	2.0	<0.2	0.2	109	<0.01
1456239	0.06	<0.05	3.0	457	5.4	7.3	<0.001	0.048	0.11	2.6	<0.2	0.3	52.2	<0.01
1456240	0.09	0.20	32.3	773	3.0	10.9	0.002	0.238	0.47	5.0	0.3	0.4	122	<0.01
1456241	0.04	<0.05	1.9	499	6.3	12.5	<0.001	0.198	0.09	1.9	<0.2	0.2	94.1	<0.01
1456242	0.04	<0.05	1.9	457	6.5	10.9	<0.001	0.163	0.13	2.2	<0.2	0.2	99.2	<0.01

Certified By:



Certificate of Analysis

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DATE SAMPLED: Oct 18, 2011

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DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456095		0.01	1.4	<0.005	0.11	0.21	25.7	<0.05	7.98	59.8	4.6
1456096		<0.01	1.3	<0.005	0.10	0.18	19.7	<0.05	5.55	56.3	4.1
1456097		0.02	0.9	<0.005	0.17	0.29	11.8	<0.05	7.00	61.3	6.2
1456098		<0.01	1.4	<0.005	0.14	0.42	6.4	0.06	7.04	46.9	4.7
1456099		<0.01	1.7	<0.005	0.12	0.38	10.2	0.06	10.1	81.1	4.3
1456100		<0.01	1.6	<0.005	0.09	0.39	10.7	<0.05	8.50	69.6	4.6
1456101		<0.01	1.9	<0.005	0.15	0.43	11.1	<0.05	8.42	74.2	5.7
1456102		<0.01	2.1	<0.005	0.09	0.46	9.9	<0.05	9.98	47.4	5.0
1456103		<0.01	2.1	<0.005	0.11	0.47	14.1	<0.05	10.3	73.7	4.8
1456104		<0.01	1.6	<0.005	0.11	0.43	9.5	<0.05	8.71	54.4	4.6
1456105		0.04	1.6	<0.005	0.11	0.32	7.5	<0.05	6.35	37.2	4.3
1456106		<0.01	1.6	<0.005	0.10	0.30	7.3	<0.05	7.00	39.9	4.2
1456107		<0.01	1.6	<0.005	0.16	0.33	8.6	<0.05	10.0	60.2	4.7
1456108		<0.01	2.1	<0.005	0.12	0.37	11.6	<0.05	11.0	74.3	5.5
1456109		3.87	2.1	0.132	0.17	0.67	123	0.28	9.76	102	13.8
1456110		0.03	2.0	<0.005	0.13	0.38	10.5	0.10	8.30	71.4	5.3
1456111		0.01	2.1	<0.005	0.12	0.39	10.1	0.10	8.26	59.7	5.3
1456112		<0.01	1.9	<0.005	0.13	0.35	9.7	<0.05	8.44	55.4	4.8
1456113		0.02	1.7	<0.005	0.11	0.35	9.9	2.40	9.83	63.7	4.9
1456114		0.01	1.8	<0.005	0.11	0.34	11.4	0.10	8.72	57.9	4.9
1456115		0.02	1.9	0.164	0.08	0.78	99.0	0.23	8.82	47.6	9.0
1456116		<0.01	1.8	<0.005	0.13	0.36	16.4	0.05	7.65	64.8	4.8
1456117		0.03	1.4	<0.005	0.14	0.41	18.9	0.10	8.39	62.1	4.5
1456118		<0.01	1.8	<0.005	0.13	0.38	14.0	0.06	7.68	57.3	4.5
1456119		<0.01	1.7	<0.005	0.10	0.31	12.3	0.05	9.50	70.6	4.4
1456120		0.04	1.4	<0.005	0.10	0.24	8.6	<0.05	7.56	50.3	3.7
1456121		<0.01	1.7	<0.005	0.10	0.25	9.4	<0.05	7.15	63.2	4.2
1456122		<0.01	1.9	<0.005	0.11	0.26	9.7	<0.05	7.18	51.0	4.0
1456123		<0.01	1.6	<0.005	0.11	0.32	10.4	<0.05	7.10	52.3	4.5
1456124		<0.01	2.1	<0.005	0.09	0.41	14.2	<0.05	10.9	57.4	5.1
1456125		<0.01	1.4	<0.005	0.09	0.26	8.0	<0.05	6.56	34.6	4.3
1456126		21.6	0.9	0.089	0.73	0.25	31.8	5.03	3.55	85.5	9.9

Certified By:



Certificate of Analysis

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SAMPLE TYPE: Drill Core

Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5
1456127	0.09	1.4	<0.005	0.13	0.34	13.5	0.06	7.75	57.8	4.1
1456128	0.01	1.5	<0.005	0.12	0.31	9.7	0.08	7.90	59.2	4.9
1456129	0.01	1.4	<0.005	0.12	0.42	18.4	0.08	8.41	56.5	4.5
1456130	<0.01	1.4	<0.005	0.12	0.46	16.3	<0.05	6.36	51.2	4.4
1456131	0.01	1.3	<0.005	0.12	0.26	17.5	0.07	5.59	54.4	3.8
1456132	0.07	1.3	<0.005	0.13	0.23	18.3	0.19	6.75	53.0	4.2
1456133	0.26	1.2	<0.005	0.15	0.34	22.0	0.07	7.40	54.6	4.1
1456134	0.09	1.4	<0.005	0.14	0.22	20.8	0.08	6.14	50.6	3.9
1456135	0.04	1.3	<0.005	0.15	0.23	20.3	0.12	6.90	53.6	3.7
1456136	0.04	1.2	<0.005	0.14	0.22	21.2	0.08	6.83	53.6	3.8
1456137	0.05	1.4	<0.005	0.13	0.28	22.3	0.12	6.55	52.9	4.1
1456138	0.02	1.3	<0.005	0.12	0.27	22.2	0.05	6.57	42.0	4.0
1456139	0.02	1.2	<0.005	0.14	0.34	21.1	0.06	6.64	48.3	4.1
1456140	0.03	1.9	0.147	0.08	0.84	77.7	0.29	9.11	37.6	9.7
1456141	0.06	1.1	<0.005	0.12	0.27	9.9	0.21	5.85	29.0	3.8
1456142	0.02	1.0	<0.005	0.13	0.32	11.6	<0.05	5.59	30.7	3.4
1456143	0.02	1.1	<0.005	0.12	0.31	14.5	<0.05	5.08	34.2	3.3
1456144	<0.01	1.3	<0.005	0.12	0.33	20.6	0.05	6.24	48.5	3.8
1456145	0.02	1.1	<0.005	0.12	0.24	14.9	0.05	5.59	42.9	3.9
1456146	0.06	1.1	<0.005	0.12	0.32	17.8	0.10	5.62	55.1	3.9
1456147	0.02	1.4	<0.005	0.11	0.37	14.9	0.13	6.12	43.8	5.5
1456148	0.13	1.4	<0.005	0.09	0.41	7.1	0.07	6.25	28.9	5.0
1456149	0.02	1.3	<0.005	0.12	0.38	18.4	0.09	6.92	56.3	4.4
1456150	0.11	1.2	<0.005	0.09	0.26	13.1	2.12	5.76	33.6	4.1
1456151	20.9	0.8	0.073	0.72	0.24	27.9	5.02	3.56	74.7	9.6
1456152	0.12	1.4	<0.005	0.11	0.23	15.7	0.18	6.28	34.0	4.6
1456153	0.07	1.4	<0.005	0.09	0.28	16.4	0.18	6.95	40.7	4.6
1456154	0.02	1.5	<0.005	0.15	0.39	20.6	0.06	8.28	66.8	5.5
1456155	0.04	1.0	<0.005	0.11	0.27	19.8	0.06	7.50	46.3	3.2
1456156	0.03	1.4	<0.005	0.13	0.27	22.2	0.06	5.14	47.3	3.5
1456157	0.09	1.2	<0.005	0.14	0.41	17.0	0.14	6.58	52.4	3.7
1456158	0.16	1.2	<0.005	0.13	0.27	16.0	0.07	6.27	45.5	2.8

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CANADA L4Z 1N9
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456159		0.03	1.4	<0.005	0.10	0.23	17.2	<0.05	6.65	52.2	2.8
1456160		0.02	1.4	<0.005	0.11	0.26	18.0	<0.05	7.70	45.8	3.6
1456161		0.03	1.6	<0.005	0.17	0.44	21.0	0.07	9.00	55.3	4.0
1456162		<0.01	1.6	<0.005	0.19	0.56	24.3	0.38	9.38	70.3	5.0
1456163		0.68	0.9	<0.005	0.13	0.28	13.9	0.08	7.37	34.3	2.8
1456164		0.03	1.3	<0.005	0.10	0.25	18.2	0.08	6.27	37.8	3.1
1456165		0.03	2.0	0.177	0.08	0.87	99.6	0.26	9.96	49.5	9.1
1456166		0.02	1.4	<0.005	0.09	0.22	22.2	<0.05	5.64	47.2	3.1
1456167		0.01	1.5	<0.005	0.13	0.49	22.1	0.05	7.24	57.5	3.4
1456168		<0.01	1.5	<0.005	0.16	0.54	21.3	<0.05	8.62	55.9	3.1
1456169		0.01	1.6	<0.005	0.17	0.53	23.0	<0.05	8.49	64.0	3.4
1456170		<0.01	1.7	<0.005	0.10	0.30	15.6	0.19	7.28	50.0	3.9
1456171		0.02	1.7	<0.005	0.11	0.23	19.6	0.55	6.67	55.4	4.2
1456172		0.02	1.7	<0.005	0.13	0.24	25.8	0.13	7.49	68.9	3.8
1456173		0.02	1.9	<0.005	0.12	0.32	20.0	0.06	8.40	57.9	4.1
1456174		0.01	1.6	<0.005	0.16	0.38	30.7	<0.05	8.16	74.8	3.1
1456175		<0.01	0.6	<0.005	0.05	0.16	12.6	<0.05	6.08	31.1	1.7
1456176		0.19	2.7	0.105	0.07	0.99	105	1.87	14.3	96.2	17.1
1456177		0.02	1.4	<0.005	0.10	0.33	19.4	0.06	9.60	56.8	4.7
1456178		0.02	1.8	<0.005	0.09	0.28	13.4	<0.05	8.07	37.3	5.1
1456179		0.02	1.2	<0.005	0.11	0.28	16.6	<0.05	7.64	48.2	4.5
1456180		1.73	1.1	<0.005	0.16	0.59	16.5	0.08	5.64	44.9	3.0
1456181		0.02	1.4	<0.005	0.10	0.29	19.0	0.05	8.82	53.8	4.0
1456182		0.02	1.2	<0.005	0.08	0.25	16.1	<0.05	8.51	45.5	4.1
1456183		<0.01	1.0	<0.005	0.15	0.45	17.9	<0.05	9.69	68.2	4.7
1456184		0.02	0.8	<0.005	0.13	0.47	18.5	<0.05	8.75	87.5	3.5
1456185		0.02	0.7	<0.005	0.09	0.30	10.3	<0.05	6.06	47.1	4.8
1456186		<0.01	0.8	<0.005	0.09	0.31	9.9	<0.05	6.33	48.1	5.1
1456187		0.05	0.8	<0.005	0.11	0.71	12.8	<0.05	7.16	77.5	4.8
1456188		0.05	0.9	<0.005	0.15	0.60	16.4	<0.05	8.60	93.1	4.6
1456189		0.02	0.9	<0.005	0.12	0.34	14.4	<0.05	7.75	77.7	4.3
1456190		0.02	1.9	0.156	0.08	0.85	85.2	0.22	9.46	43.5	8.3

Certified By:



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AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5
1456191	<0.01	1.2	<0.005	0.10	0.33	11.1	<0.05	6.91	47.5	3.9
1456192	0.02	1.1	<0.005	0.10	0.54	10.7	<0.05	7.54	48.0	7.4
1456193	0.04	1.1	<0.005	0.11	0.72	8.4	<0.05	8.59	53.1	8.5
1456194	5.33	0.4	<0.005	0.07	0.33	5.9	<0.05	7.89	23.9	2.2
1456195	0.05	0.9	<0.005	0.11	0.35	10.7	<0.05	6.80	57.0	4.1
1456196	<0.01	0.9	<0.005	0.13	0.38	9.2	<0.05	8.98	50.3	4.2
1456197	<0.01	0.8	<0.005	0.09	0.30	6.7	<0.05	5.91	39.6	4.1
1456198	0.01	0.9	<0.005	0.09	0.35	10.8	<0.05	8.77	66.7	4.7
1456199	0.01	0.8	<0.005	0.07	0.35	6.4	<0.05	6.18	38.3	5.2
1456200	<0.01	0.9	<0.005	0.08	0.36	7.6	<0.05	7.88	46.2	5.9
1456201	8.51	1.0	0.066	0.30	0.47	67.0	0.56	8.19	88.6	9.8
1456202	0.05	0.9	<0.005	0.06	0.37	8.3	<0.05	7.14	55.9	6.7
1456203	0.01	0.9	<0.005	0.07	0.33	7.1	<0.05	6.56	43.9	5.7
1456204	<0.01	1.0	<0.005	0.07	0.42	9.9	<0.05	8.30	62.9	6.4
1456205	<0.01	1.0	<0.005	0.07	0.35	10.9	<0.05	8.11	51.2	5.6
1456206	<0.01	1.0	<0.005	0.07	0.30	8.3	<0.05	7.25	47.7	6.0
1456207	<0.01	0.9	<0.005	0.07	0.30	6.9	<0.05	6.88	42.7	7.2
1456208	<0.01	1.1	<0.005	0.06	0.37	7.9	<0.05	7.21	47.9	5.6
1456209	<0.01	1.0	<0.005	0.07	0.37	9.3	<0.05	7.04	49.6	6.9
1456210	<0.01	1.0	<0.005	0.07	0.36	9.2	<0.05	7.15	48.2	5.7
1456211	<0.01	1.0	<0.005	0.07	0.33	11.7	<0.05	7.91	61.4	5.6
1456212	<0.01	1.0	<0.005	0.10	0.31	10.4	<0.05	9.27	60.0	4.7
1456213	<0.01	0.8	<0.005	0.14	0.25	8.6	<0.05	8.03	45.7	2.7
1456214	<0.01	0.6	<0.005	0.11	0.32	7.4	<0.05	9.53	42.3	2.5
1456215	0.02	2.0	0.117	0.07	0.82	71.5	0.23	9.19	39.6	8.5
1456216	<0.01	0.7	<0.005	0.12	0.29	8.4	0.34	7.64	46.4	3.7
1456217	0.02	1.7	<0.005	0.14	0.48	31.0	<0.05	13.3	56.0	1.1
1456218	<0.01	2.3	<0.005	0.13	0.35	31.8	<0.05	12.7	51.1	1.1
1456219	0.22	1.2	<0.005	0.14	0.24	25.3	0.06	10.3	49.4	1.2
1456220	2.15	0.8	<0.005	0.13	0.19	16.8	<0.05	7.68	34.6	1.4
1456221	0.02	1.0	<0.005	0.09	0.32	25.4	<0.05	9.12	50.9	2.8
1456222	<0.01	0.9	<0.005	0.14	0.61	15.7	<0.05	11.5	65.6	4.5

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 18, 2011	DATE RECEIVED: Oct 18, 2011					DATE REPORTED: Jan 18, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456223	<0.01	0.9	<0.005	0.06	0.46	14.0	<0.05	8.49	71.6	4.3	
1456224	<0.01	0.9	<0.005	0.09	0.28	11.9	<0.05	9.28	58.5	3.8	
1456225	<0.01	1.0	<0.005	0.12	0.29	8.7	0.05	8.92	52.5	3.5	
1456226	3.54	2.2	0.135	0.17	0.72	112	0.23	10.2	92.1	15.4	
1456227	0.03	0.8	<0.005	0.09	0.19	9.0	<0.05	7.18	35.6	3.9	
1456228	<0.01	1.0	<0.005	0.10	0.28	19.7	<0.05	10.5	37.0	2.2	
1456229	<0.01	1.0	<0.005	0.08	0.28	23.1	<0.05	9.22	41.3	1.0	
1456230	<0.01	1.3	<0.005	0.09	0.39	23.5	<0.05	9.17	34.8	1.0	
1456231	<0.01	1.5	<0.005	0.10	0.25	25.9	<0.05	9.36	36.1	2.5	
1456232	<0.01	2.5	<0.005	0.16	0.40	29.2	<0.05	12.8	57.8	2.3	
1456233	<0.01	1.4	<0.005	0.09	0.30	21.3	<0.05	8.38	32.5	2.3	
1456234	<0.01	1.2	<0.005	0.08	0.27	20.0	<0.05	7.23	32.5	2.3	
1456235	<0.01	1.2	<0.005	0.08	0.28	20.5	<0.05	6.90	36.4	2.5	
1456236	<0.01	1.2	<0.005	0.06	0.25	24.6	<0.05	8.51	36.9	2.3	
1456237	<0.01	1.1	<0.005	0.08	0.26	29.0	<0.05	10.1	42.2	2.7	
1456238	<0.01	1.3	<0.005	0.09	0.23	34.8	<0.05	12.6	70.2	2.7	
1456239	<0.01	1.9	0.005	0.07	0.23	32.8	<0.05	9.89	58.1	2.0	
1456240	0.02	1.8	0.147	0.08	0.64	89.4	<0.05	8.28	50.1	8.5	
1456241	0.01	1.2	<0.005	0.10	0.64	23.2	<0.05	10.4	44.4	3.4	
1456242	<0.01	1.2	<0.005	0.10	0.82	25.7	<0.05	10.1	51.0	2.9	

Comments: RDL - Reported Detection Limit

Certified By:



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AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	RDL:
1456095	0.002
1456096	0.027
1456097	0.029
1456098	0.018
1456099	0.152
1456100	0.237
1456101	0.359
1456102	0.206
1456103	0.071
1456104	0.098
1456105	0.149
1456106	0.065
1456107	0.398
1456108	0.233
1456109	4.48
1456110	0.061
1456111	0.058
1456112	0.057
1456113	0.043
1456114	0.060
1456115	0.002
1456116	0.018
1456117	0.030
1456118	0.023
1456119	0.463
1456120	0.048
1456121	0.014
1456122	0.048
1456123	0.066
1456124	0.038
1456125	0.007
1456126	2.184

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Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Unit:	RDL:
	Au	ppm	0.002
1456127			0.010
1456128			0.015
1456129			0.099
1456130			0.024
1456131			0.037
1456132			0.009
1456133			0.085
1456134			0.030
1456135			0.077
1456136			0.592
1456137			0.021
1456138			0.027
1456139			0.076
1456140			<0.002
1456141			0.059
1456142			0.116
1456143			0.063
1456144			0.302
1456145			1.11
1456146			3.71
1456147			0.105
1456148			6.21
1456149			0.147
1456150			0.247
1456151			2.31
1456152			0.036
1456153			0.086
1456154			0.040
1456155			0.148
1456156			0.038
1456157			0.044
1456158			0.885

Certified By:



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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	RDL
1456159	0.022
1456160	0.030
1456161	0.020
1456162	0.047
1456163	0.275
1456164	0.034
1456165	<0.002
1456166	0.021
1456167	0.017
1456168	<0.002
1456169	0.018
1456170	0.038
1456171	0.026
1456172	0.015
1456173	0.039
1456174	0.011
1456175	0.015
1456176	6.82
1456177	0.029
1456178	0.019
1456179	0.012
1456180	0.113
1456181	0.013
1456182	0.012
1456183	<0.002
1456184	0.005
1456185	<0.002
1456186	0.016
1456187	0.004
1456188	0.003
1456189	<0.002
1456190	0.006

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DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	RDL:
1456191	0.002
1456192	0.029
1456193	0.007
1456194	0.081
1456195	0.038
1456196	0.002
1456197	0.003
1456198	0.031
1456199	0.003
1456200	0.002
1456201	9.90
1456202	0.004
1456203	0.012
1456204	0.005
1456205	<0.002
1456206	<0.002
1456207	<0.002
1456208	0.030
1456209	<0.002
1456210	<0.002
1456211	<0.002
1456212	<0.002
1456213	0.023
1456214	<0.002
1456215	<0.002
1456216	<0.002
1456217	<0.002
1456218	<0.002
1456219	<0.002
1456220	0.020
1456221	0.005
1456222	0.014

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

5623 McADAM ROAD
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1N9
 TEL (905)501-9998
 FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 18, 2011

DATE RECEIVED: Oct 18, 2011

DATE REPORTED: Jan 18, 2012

SAMPLE TYPE: Drill Core

Analyte:	Au
Unit:	ppm
RDL:	0.002

Sample Description	Result
1456223	<0.002
1456224	<0.002
1456225	<0.002
1456226	4.61
1456227	<0.002
1456228	0.016
1456229	<0.002
1456230	<0.002
1456231	<0.002
1456232	<0.002
1456233	<0.002
1456234	0.017
1456235	<0.002
1456236	<0.002
1456237	<0.002
1456238	<0.002
1456239	<0.002
1456240	<0.002
1456241	<0.002
1456242	0.002

Comments: RDL - Reported Detection Limit

Certified By: _____

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date: Jan 18, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits	
							Lower			Upper	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Ag	1	2812805	0.554	0.475	15.4%	1.02				80% 120%	
Al	1	2812747	0.44	0.42	4.7%	< 0.01				80% 120%	
As	1	2812805	6.9	6.3	9.1%	2.7				80% 120%	
Au	1	2812805	< 0.01	0.02	0.0%	< 0.01	0.071	0.0849	84%	80% 120%	
B	1	2812805	< 5	< 5	0.0%	56				80% 120%	
Ba	1	2812747	32	32	0.0%	< 1				80% 120%	
Be	1	2812805	0.19	0.18	5.4%	< 0.05				80% 120%	
Bi	1	2812805	0.10	0.10	0.0%	0.18				80% 120%	
Ca	1	2812747	1.10	1.05	4.7%	< 0.01				80% 120%	
Cd	1	2812805	0.08	0.08	0.0%	0.48				80% 120%	
Ce	1	2812805	20.1	19.4	3.5%	0.57				80% 120%	
Co	1	2812805	3.28	3.03	7.9%	0.5				80% 120%	
Cr	1	2812747	58.8	59.7	1.5%	< 0.5				80% 120%	
Cs	1	2812805	0.90	0.82	9.3%	0.08				80% 120%	
Cu	1	2812747	3.9	3.9	0.0%	< 0.1	3983	3800	104%	80% 120%	
Fe	1	2812747	2.30	2.18	5.4%	< 0.01				80% 120%	
Ga	1	2812805	1.37	1.15	17.5%	< 0.05				80% 120%	
Ge	1	2812805	0.059	0.050	16.5%	0.06				80% 120%	
Hf	1	2812805	0.14	0.14	0.0%	0.10				80% 120%	
Hg	1	2812805	< 0.01	< 0.01	0.0%	0.04				80% 120%	
In	1	2812805	0.016	0.016	0.0%	0.018				80% 120%	
K	1	2812747	0.191	0.181	5.4%	< 0.01				80% 120%	
La	1	2812805	8.60	8.15	5.4%	0.3				80% 120%	
Li	1	2812805	1.93	1.63	16.9%	0.4				80% 120%	
Mg	1	2812747	0.51	0.49	4.0%	< 0.01				80% 120%	
Mn	1	2812747	1030	896	13.9%	< 1				80% 120%	
Mo	1	2812805	1.07	1.01	5.8%	5.27				80% 120%	
Na	1	2812747	0.05	0.05	0.0%	< 0.01				80% 120%	
Nb	1	2812805	< 0.05	< 0.05	0.0%	0.09				80% 120%	
Ni	1	2812847	1.3	1.3	0.0%	0.3				80% 120%	
P	1	2812747	355	369	3.9%	< 10				80% 120%	
Pb	1	2812805	12.7	12.2	4.0%	12.6				80% 120%	
Rb	1	2812805	6.41	5.73	11.2%	0.4	12	13	94%	80% 120%	
Re	1	2812805	< 0.001	< 0.001	0.0%	0.001				80% 120%	
S	1	2812747	0.0557	0.0533	4.4%	< 0.005				80% 120%	
Sb	1	2812805	0.21	0.20	4.9%	0.45				80% 120%	
Sc	1	2812805	1.28	1.14	11.6%	< 0.1				80% 120%	
Se	1	2812805	0.28	0.23	19.6%	< 0.2	0.8	0.8	96%	80% 120%	
Sn	1	2812805	< 0.2	< 0.2	0.0%	< 0.2				80% 120%	
Sr	1	2812805	19.7	18.4	6.8%	4.0	310	290	106%	80% 120%	
Ta	1	2812805	< 0.01	< 0.01	0.0%	0.11				80% 120%	
Te	1	2812805	0.06	0.06	0.0%	0.19				80% 120%	
Th	1	2812805	1.3	1.3	0.0%	< 0.1	1.1	1.4	78%	80% 120%	
Ti	1	2812747	< 0.005	< 0.005	0.0%	< 0.005				80% 120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 18, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2812805	0.087	0.079	9.6%	< 0.02				80%	120%	
U	1	2812805	0.256	0.243	5.2%	< 0.05	0.8	0.8	106%	80%	120%	
V	1	2812747	25.7	25.6	0.4%	< 0.5				80%	120%	
W	1	2812805	0.223	0.231	3.5%	2.15				80%	120%	
Y	1	2812805	7.32	6.78	7.7%	0.17	5	7	70%	80%	120%	
Zn	1	2812747	59.8	60.0	0.3%	< 0.5				80%	120%	
Zr	1	2812805	4.9	4.6	6.3%	2.6				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2812872	6.85	9.84		< 0.01				80%	120%	
Al	1	2812772	0.34	0.36	5.7%	< 0.01				80%	120%	
As	1	2812872	6.51	7.97	20.2%	< 0.1				80%	120%	
Au	1	2812872	0.02	0.03		< 0.01				80%	120%	
B	1	2812872	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2812772	29	29	0.0%	< 1				80%	120%	
Be	1	2812872	0.43	0.56	26.3%	< 0.05				80%	120%	
Bi	1	2812872	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Ca	1	2812772	0.05	0.05	0.0%	< 0.01				80%	120%	
Cd	1	2812872	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Ce	1	2812872	16.5	21.9	28.1%	< 0.01				80%	120%	
Co	1	2812872	2.91	3.80	26.5%	< 0.1				80%	120%	
Cr	1	2812772	69.4	79.6	13.7%	< 0.5				80%	120%	
Cs	1	2812872	2.84	4.38		< 0.05				80%	120%	
Cu	1	2812772	4.3	4.7	8.9%	0.6	4217	3800	110%	80%	120%	
Fe	1	2812772	1.17	1.22	4.2%	< 0.01				80%	120%	
Ga	1	2812872	1.68	2.44		< 0.05				80%	120%	
Ge	1	2812872	0.118	0.126	6.6%	0.11				80%	120%	
Hf	1	2812872	0.04	0.06		< 0.02				80%	120%	
Hg	1	2812872	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
In	1	2812872	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
K	1	2812772	0.122	0.128	4.8%	< 0.01				80%	120%	
La	1	2812872	6.74	8.86	27.2%	< 0.1				80%	120%	
Li	1	2812872	3.2	4.5		< 0.1				80%	120%	
Mg	1	2812772	0.015	0.016	6.5%	< 0.01				80%	120%	
Mn	1	2812772	634	731	14.2%	< 1				80%	120%	
Mo	1	2812872	1.09	1.47	29.7%	< 0.05				80%	120%	
Na	1	2812772	0.07	0.07	0.0%	< 0.01				80%	120%	
Nb	1	2812872	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2812872	1.3	1.7	26.7%	< 0.2				80%	120%	
P	1	2812772	151	167	10.1%	< 10				80%	120%	
Pb	1	2812872	4.3	6.0		< 0.1				80%	120%	
Rb	1	2812872	20.7	27.5	28.2%	< 0.1	13	13	97%	80%	120%	
Re	1	2812872	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2812772	0.039	0.040	2.5%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 18, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Sb	1	2812872	2.63	2.63	0.0%	< 0.05				80%	120%	
Sc	1	2812872	1.9	2.5	27.3%	< 0.1				80%	120%	
Se	1	2812872	< 0.2	< 0.2	0.0%	< 0.2	0.8	0.8	100%	80%	120%	
Sn	1	2812872	< 0.2	< 0.2	0.0%	< 0.2				80%	120%	
Sr	1	2812772	8.5	7.2	16.6%	< 0.2	309	290	106%	80%	120%	
Ta	1	2812872	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2812872	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2812872	< 0.1	< 0.1	0.0%	< 0.1	1.4	1.4	100%	80%	120%	
Ti	1	2812772	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2812872	3.53	3.29	7.0%	< 0.02				80%	120%	
U	1	2812872	< 0.05	< 0.05	0.0%	< 0.05	0.9	0.8	112%	80%	120%	
V	1	2812772	8.63	10.3	17.6%	< 0.5				80%	120%	
W	1	2812872	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2812872	7.16	9.54	28.5%	< 0.05	5	7	70%	80%	120%	
Zn	1	2812772	50.3	56.4	11.4%	< 0.5				80%	120%	
Zr	1	2812872	1.22	1.65	30.0%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2812797	1.66	1.54	7.5%	< 0.01				80%	120%	
Al	1	2812822	0.313	0.372	17.2%	< 0.01				80%	120%	
As	1	2812797	26.9	26.3	2.3%	< 0.1				80%	120%	
Au	1	2812797	1.14	0.982	14.9%	< 0.01				80%	120%	
B	1	2812797	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2812797	31	31	0.0%	< 1				80%	120%	
Be	1	2812797	0.261	0.269	3.0%	< 0.05				80%	120%	
Bi	1	2812797	0.065	0.063	3.1%	< 0.01				80%	120%	
Ca	1	2812822	0.23	0.23	0.0%	< 0.01				80%	120%	
Cd	1	2812797	0.117	0.111	5.3%	< 0.01				80%	120%	
Ce	1	2812797	12.8	12.7	0.8%	< 0.01				80%	120%	
Co	1	2812797	3.6	3.6	0.0%	< 0.1	5.3	5.0	106%	80%	120%	
Cr	1	2812822	99.2	106	6.6%	< 0.5				80%	120%	
Cs	1	2812797	0.74	0.74	0.0%	< 0.05				80%	120%	
Cu	1	2812822	5.62	5.45	3.1%	< 0.1	4172	3800	109%	80%	120%	
Fe	1	2812822	1.59	1.60	0.6%	< 0.01				80%	120%	
Ga	1	2812797	1.44	1.44	0.0%	< 0.05				80%	120%	
Ge	1	2812797	0.08	0.08	0.0%	< 0.05				80%	120%	
Hf	1	2812797	0.115	0.117	1.7%	< 0.02				80%	120%	
Hg	1	2812797	0.04	0.04	0.0%	< 0.01	1.3	1.3	100%	80%	120%	
In	1	2812797	0.0164	0.0169	3.0%	< 0.005				80%	120%	
K	1	2812822	0.183	0.201	9.4%	< 0.01				80%	120%	
La	1	2812797	5.90	5.85	0.9%	< 0.1				80%	120%	
Li	1	2812797	3.8	3.8	0.0%	< 0.1				80%	120%	
Mg	1	2812822	0.234	0.235	0.4%	< 0.01				80%	120%	
Mn	1	2812822	605	586	3.2%	< 1				80%	120%	
Mo	1	2812797	1.68	1.73	2.9%	< 0.05				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 18, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Na	1	2812822	0.05	0.05	0.0%	< 0.01				80%	120%	
Nb	1	2812797	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2812822	2.1	2.0	4.9%	< 0.2	8	7	114%	80%	120%	
P	1	2812822	265	261	1.5%	< 10				80%	120%	
Pb	1	2812797	6.3	6.2	1.6%	< 0.1				80%	120%	
Rb	1	2812797	8.0	8.0	0.0%	< 0.1	12	13	91%	80%	120%	
Re	1	2812797	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2812822	0.202	0.201	0.5%	< 0.005				80%	120%	
Sb	1	2812797	0.77	0.76	1.3%	< 0.05				80%	120%	
Sc	1	2812797	1.3	1.3	0.0%	< 0.1				80%	120%	
Se	1	2812797	0.3	0.3	0.0%	< 0.2	0.8	0.8	96%	80%	120%	
Sn	1	2812797	0.2	0.2	0.0%	< 0.2				80%	120%	
Sr	1	2812822	12.1	11.9	1.7%	< 0.2	319	290	110%	80%	120%	
Ta	1	2812797	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2812797	0.022	0.026	16.7%	< 0.01				80%	120%	
Th	1	2812797	1.1	1.1	0.0%	< 0.1	1.3	1.4	92%	80%	120%	
Ti	1	2812822	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2812797	0.12	0.12	0.0%	< 0.02				80%	120%	
U	1	2812797	0.24	0.24	0.0%	< 0.05	0.9	0.8	109%	80%	120%	
V	1	2812822	15.6	16.0	2.5%	< 0.5				80%	120%	
W	1	2812797	0.05	0.05	0.0%	< 0.05				80%	120%	
Y	1	2812797	5.59	5.53	1.1%	< 0.05				80%	120%	
Zn	1	2812822	50.0	47.3	5.5%	< 0.5				80%	120%	
Zr	1	2812797	3.9	3.9	0.0%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2812822	0.45	0.47	4.3%	< 0.01				80%	120%	
As	1	2812822	3.6	3.5	2.8%	< 0.1				80%	120%	
Au	1	2812822	0.028	0.035	22.2%	< 0.01				80%	120%	
B	1	2812822	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2812822	32	32	0.0%	< 1				80%	120%	
Be	1	2812822	0.279	0.285	2.1%	< 0.05				80%	120%	
Bi	1	2812822	0.11	0.11	0.0%	< 0.01				80%	120%	
Cd	1	2812822	0.035	0.028	22.2%	< 0.01				80%	120%	
Ce	1	2812822	24.9	24.6	1.2%	< 0.01				80%	120%	
Co	1	2812822	2.78	2.75	1.1%	< 0.1				80%	120%	
Cs	1	2812822	1.28	1.39	8.2%	< 0.05				80%	120%	
Cu	1					< 0.1	4144	3800	109%	80%	120%	
Ga	1	2812822	1.38	1.63	16.6%	< 0.05				80%	120%	
Ge	1	2812822	0.09	0.09	0.0%	< 0.05				80%	120%	
Hf	1	2812822	0.12	0.12	0.0%	< 0.02				80%	120%	
Hg	1	2812822	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
In	1	2812822	0.0175	0.0183	4.5%	< 0.005				80%	120%	
La	1	2812822	9.6	9.6	0.0%	< 0.1				80%	120%	
Li	1	2812822	2.4	2.8	15.4%	< 0.1				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V540107
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 18, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Mo	1	2812822	0.43	0.44	2.3%	< 0.05				80%	120%	
Nb	1	2812822	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Pb	1	2812822	5.5	5.6	1.8%	< 0.1				80%	120%	
Rb	1	2812822	7.91	8.87	11.4%	< 0.1	13	13	99%	80%	120%	
Re	1	2812822	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
Sb	1	2812822	0.12	0.12	0.0%	< 0.05				80%	120%	
Sc	1	2812822	1.19	1.28	7.3%	< 0.1				80%	120%	
Se	1	2812822	< 0.2	0.3		< 0.2	0.7	0.8	91%	80%	120%	
Sn	1	2812822	0.3	0.3	0.0%	< 0.2				80%	120%	
Sr	1					< 0.2	305	290	105%	80%	120%	
Ta	1	2812822	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2812822	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2812822	1.7	1.7	0.0%	< 0.1				80%	120%	
Tl	1	2812822	0.105	0.113	7.3%	< 0.02				80%	120%	
U	1	2812822	0.304	0.316	3.9%	< 0.05	0.9	0.8	118%	80%	120%	
W	1	2812822	0.19	0.19	0.0%	< 0.05				80%	120%	
Y	1	2812822	7.28	7.33	0.7%	< 0.05				80%	120%	
Zr	1	2812822	3.95	4.13	4.5%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Cu	1					< 0.1	3683	3800	96%	80%	120%	
Rb	1					< 0.1	12	13	89%	80%	120%	
Sr	1					< 0.2	290	290	100%	80%	120%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812802	0.247	0.227	8.4%	< 0.002	0.0747	0.0849	88%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812872	0.0198	0.0217	9.2%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812797	1.11	1.05	5.6%	< 0.002	0.0816	0.0849	96%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812832	0.107	0.107	0.0%	< 0.002	0.0673	0.0849	79%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812874	0.014	< 0.002		< 0.002	0.831	0.922	90%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812887	< 0.002	< 0.002	0.0%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812747	0.002	0.002	0.0%	< 0.002	0.0652	0.0849	77%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2812772	0.0480	0.0576	18.2%	< 0.002	0.413	0.417	99%	90%	110%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)

RPT Date: Jan 18, 2012		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
									Lower	Upper	
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2812835	< 0.002	< 0.002	0.0%	< 0.002	0.0849	90%	110%		
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2812847	0.041	< 0.002		< 0.002	0.0849	90%	110%		

Certified By: _____



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V540107

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V541963

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Jan 20, 2012

PAGES (INCLUDING COVER): 51

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

***NOTES**

VERSION 1:Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.
New client material was supplied for check samples 1456276, 1456301, 1456326 and 1456351. Jan 20, 2012

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
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TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1455981		3.34	0.49	0.57	2.0	0.02	<5	33	0.40	0.05	0.97	0.06	28.2	5.6	66.5
1455982		2.31	0.36	0.48	2.0	0.11	<5	64	0.39	0.04	2.11	0.13	34.9	4.0	56.7
1455983		1.82	2.52	0.56	1.5	0.09	<5	55	0.29	0.04	0.36	0.06	21.6	4.7	77.8
1455984		2.13	0.26	0.49	1.2	0.17	<5	85	0.31	0.04	0.62	0.07	28.3	5.4	49.9
1455985		2.13	0.23	0.37	3.4	0.20	<5	46	0.22	0.03	0.70	0.05	19.0	3.7	63.3
1455986		2.87	0.28	0.37	2.1	0.03	<5	46	0.22	0.05	0.23	0.04	33.0	2.8	84.2
1455987		3.09	0.44	0.29	3.5	0.03	<5	32	0.23	0.08	0.09	0.04	34.2	3.0	74.3
1455988		3.14	0.37	0.37	4.1	0.02	<5	41	0.24	0.09	0.09	0.04	33.3	3.0	92.9
1455989		2.93	0.44	0.35	8.1	0.02	<5	36	0.22	0.10	0.12	0.03	33.2	3.4	88.7
1455990		0.47	0.11	1.51	6.6	<0.01	<5	143	0.23	0.04	6.14	0.20	19.6	10.7	116
1455991		3.09	0.31	0.34	7.4	0.03	<5	32	0.24	0.08	0.64	0.03	33.0	3.1	85.0
1455992		2.38	0.40	0.34	8.1	0.02	<5	118	0.21	0.08	0.18	0.05	31.2	2.9	88.3
1455993		1.82	0.42	0.30	5.3	0.02	<5	47	0.20	0.08	0.08	0.08	29.4	2.4	82.2
1455994		1.17	2.03	0.25	8.0	0.19	<5	48	0.21	0.08	0.07	0.13	27.0	2.4	91.7
1455995		1.08	2.14	0.25	6.8	0.08	<5	35	0.19	0.07	0.06	0.10	23.0	2.0	99.5
1455996		1.42	0.38	0.29	5.1	<0.01	<5	36	0.22	0.08	0.07	0.07	37.5	2.3	88.4
1455997		1.23	1.84	0.26	4.5	0.26	<5	55	0.22	0.09	0.07	0.08	29.5	2.1	89.5
1455998		2.20	0.33	0.30	3.9	0.01	<5	44	0.24	0.09	0.10	0.10	40.3	2.6	78.2
1455999		0.73	1.42	0.35	3.7	0.22	<5	57	0.27	0.09	0.08	0.08	38.5	2.4	86.7
1456000		1.84	0.37	0.27	2.1	0.20	<5	41	0.33	0.05	0.08	0.08	33.4	2.2	92.5
1456001		0.11	8.18	2.26	9.1	4.74	<5	115	0.38	0.19	2.17	1.48	39.2	18.8	22.8
1456002		1.37	0.36	0.29	2.1	0.08	<5	38	0.18	0.05	0.07	0.06	25.2	2.1	75.8
1456003		2.50	0.19	0.34	1.7	0.03	<5	32	0.26	0.04	0.10	0.08	49.3	2.6	53.7
1456004		2.28	0.21	0.36	1.9	0.02	<5	43	0.22	0.05	0.11	0.05	37.8	2.5	71.3
1456005		2.29	0.39	0.35	2.6	0.04	<5	33	0.22	0.07	0.09	0.10	32.9	2.6	60.2
1456006		2.96	0.83	0.45	1.7	0.75	<5	55	0.28	0.06	0.27	0.10	33.0	2.7	77.0
1456007		1.26	0.32	0.45	2.2	0.03	<5	50	0.30	0.07	0.10	0.09	31.1	2.5	64.7
1456008		0.65	0.31	0.42	1.8	0.06	<5	67	0.27	0.06	0.15	0.09	35.3	2.7	66.0
1456009		0.98	0.45	0.41	2.6	0.07	<5	64	0.29	0.07	0.51	0.09	36.3	2.6	73.9
1456010		1.11	0.47	0.49	2.6	0.06	<5	59	0.32	0.08	0.26	0.08	37.2	2.7	77.2
1456011		2.32	0.48	0.53	2.8	0.06	<5	52	0.34	0.08	0.22	0.09	41.8	3.1	70.2

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CANADA L4Z 1N9
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456012		0.88	0.77	0.44	2.4	0.24	<5	48	0.31	0.07	0.12	0.08	32.4	2.7	79.7
1456013		2.72	0.30	0.52	2.4	0.02	<5	37	0.32	0.07	0.56	0.10	41.9	2.6	69.2
1456014		0.72	0.46	0.39	11.3	0.03	<5	50	0.22	0.11	0.19	0.14	40.8	2.7	77.3
1456015		0.56	0.10	1.46	6.6	<0.01	<5	147	0.22	0.04	5.85	0.20	14.3	10.2	112
1456016		1.76	0.34	0.36	6.4	0.09	<5	63	0.21	0.09	0.13	0.13	41.0	2.4	70.4
1456017		0.70	0.36	0.40	5.0	0.08	<5	77	0.21	0.07	0.11	0.17	41.1	2.5	77.8
1456018		1.93	1.20	0.45	5.6	1.31	<5	59	0.20	0.10	0.42	0.08	39.3	2.3	88.6
1456019		1.61	0.48	0.39	5.5	0.05	<5	55	0.17	0.10	0.09	0.05	34.8	2.6	81.3
1456020		0.80	0.53	0.41	5.3	0.10	<5	35	0.17	0.09	0.15	0.06	37.0	2.0	104
1456021		2.08	0.68	0.32	4.3	0.07	<5	35	0.22	0.08	0.09	0.09	34.8	2.3	73.7
1456022		1.62	0.83	0.42	3.7	0.18	<5	31	0.25	0.11	0.54	0.10	39.9	2.5	70.4
1456023		3.08	0.84	0.41	2.9	0.04	<5	48	0.22	0.07	0.37	0.09	26.1	2.4	68.9
1456024		1.65	0.27	0.35	2.0	0.01	<5	37	0.21	0.07	0.12	0.08	27.8	1.9	79.9
1456025		1.58	0.29	0.38	2.1	0.09	<5	41	0.18	0.09	0.09	0.06	42.7	2.1	65.7
1456026		0.11	33.6	0.97	541	2.53	<5	99	0.08	26.4	0.40	0.77	10.3	12.0	174
1456027		1.92	0.51	0.37	7.0	0.02	<5	33	0.18	0.18	0.10	0.08	38.0	2.1	73.8
1456028		1.84	0.56	0.38	5.2	0.03	<5	24	0.29	0.11	0.20	0.10	43.0	2.3	69.5
1456029		1.11	0.92	0.48	5.4	0.40	<5	80	0.31	0.13	0.11	0.12	54.6	3.1	84.4
1456030		1.84	0.39	0.47	3.2	0.06	<5	52	0.26	0.10	0.17	0.08	46.6	2.8	72.7
1456031		1.48	0.34	0.65	3.6	<0.01	<5	65	0.25	0.08	0.26	0.07	28.8	4.6	233
1456032		0.79	0.45	0.39	5.8	0.24	<5	58	0.27	0.08	0.10	0.10	27.7	2.5	102
1456033		2.31	0.32	0.27	3.5	<0.01	<5	66	0.19	0.09	0.25	0.09	39.1	2.4	66.0
1456034		1.88	0.38	0.37	5.1	<0.01	<5	92	0.23	0.09	0.16	0.08	53.2	2.5	69.5
1456035		1.06	0.98	0.64	14.1	<0.01	<5	47	0.36	0.16	0.32	0.12	67.2	7.1	78.7
1456036		1.91	0.18	0.51	2.6	<0.01	<5	53	0.26	0.03	0.35	0.06	26.3	4.2	78.7
1456037		0.71	0.26	0.41	2.5	<0.01	<5	38	0.19	0.06	1.15	0.13	55.3	2.3	100
1456038		1.56	0.60	0.47	4.4	0.01	<5	80	0.26	0.08	1.11	0.12	57.7	3.1	86.9
1456039		1.13	1.45	0.34	6.6	0.11	<5	37	0.31	0.09	0.40	0.08	32.2	5.5	62.9
1456040		0.47	0.12	1.62	7.3	<0.01	<5	152	0.25	0.04	6.36	0.21	21.1	11.0	115
1456041		2.87	0.93	0.31	4.6	0.03	<5	51	0.36	0.07	0.64	0.08	32.4	3.9	80.3
1456042		0.80	5.73	0.33	3.5	0.07	<5	41	0.36	0.03	0.95	0.06	23.5	4.1	65.7

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Sample Login Weight kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
1456043		0.98	1.39	0.61	3.4	0.01	<5	54	0.42	0.07	0.70	0.09	39.0	3.4	83.2
1456044		0.71	13.5	0.43	7.4	0.14	<5	51	0.28	0.06	0.56	0.08	34.4	3.5	103
1456045		0.53	0.68	0.41	4.0	<0.01	<5	63	0.20	0.08	0.71	0.07	36.7	2.1	122
1456046		1.28	2.50	0.61	14.2	0.02	<5	75	0.39	0.04	2.42	0.14	36.5	4.0	101
1456047		0.77	1.20	0.38	6.6	0.02	<5	43	0.30	0.07	0.92	0.05	36.6	3.0	62.9
1456048		0.86	0.82	0.44	10.1	0.01	<5	46	0.40	0.09	1.15	0.12	37.8	3.4	63.5
1456049		0.56	5.69	0.31	5.7	0.43	<5	46	0.24	0.03	1.13	0.09	26.5	3.8	68.3
1456050		1.01	8.13	0.43	19.5	0.12	<5	42	0.36	0.07	0.93	0.17	42.1	6.4	28.7
1456051		0.08	1.08	2.66	4900	6.67	5	150	0.26	0.22	3.82	0.21	19.1	27.3	103
1456052		2.22	0.86	0.48	44.5	0.06	<5	46	0.34	0.05	1.87	0.11	35.9	5.0	90.3
1456053		0.62	0.77	0.79	13.8	0.03	<5	46	0.77	0.09	0.37	0.08	41.1	5.4	64.3
1456054		2.95	0.33	0.73	3.6	0.01	<5	71	0.33	0.08	0.50	0.06	30.9	4.4	125
1456055		0.45	0.26	0.42	2.7	<0.01	<5	45	0.21	0.08	0.08	0.08	29.6	2.0	69.1
1456056		0.54	1.05	0.27	4.7	0.02	<5	26	0.18	0.10	0.21	0.12	39.7	2.7	84.0
1456057		3.07	0.35	0.58	2.6	0.02	<5	84	0.26	0.08	0.34	0.06	25.7	4.4	71.5
1456058		1.56	0.31	0.50	3.2	0.03	<5	50	0.21	0.06	0.23	0.06	27.6	4.0	75.1
1456059		0.75	0.21	0.52	2.1	<0.01	<5	45	0.22	0.05	0.26	0.05	24.3	3.5	76.2
1456060		0.85	0.39	0.46	3.3	<0.01	<5	41	0.21	0.07	0.30	0.06	24.1	4.0	75.9
1456061		3.02	0.43	0.42	3.3	0.01	<5	43	0.22	0.07	0.33	0.06	28.5	4.0	59.8
1456062		2.28	0.26	0.49	2.4	0.01	<5	42	0.27	0.04	0.38	0.04	29.8	4.1	61.4
1456063		2.53	0.30	0.59	2.0	0.02	<5	41	0.35	0.04	0.58	0.05	30.4	4.2	67.6
1456064		0.76	0.22	0.49	1.7	0.16	<5	40	0.29	0.04	0.29	0.04	32.4	4.1	58.4
1456065		0.48	0.13	1.36	6.3	<0.01	<5	130	0.22	0.04	5.87	0.21	14.5	9.9	98.5
1456066		1.78	0.34	0.33	1.9	0.21	<5	31	0.29	0.05	0.56	0.06	31.1	4.4	35.0
1456067		0.64	0.36	0.36	1.5	0.35	<5	25	0.29	0.03	0.54	0.05	28.1	3.3	47.6
1456068		1.43	0.50	0.35	2.6	0.07	<5	31	0.31	0.06	0.35	0.06	29.2	4.4	35.2
1456069		0.89	0.29	0.31	2.2	<0.01	<5	40	0.21	0.04	0.27	0.05	25.1	3.3	68.4
1456070		1.18	1.26	0.38	4.6	0.26	<5	33	0.24	0.04	0.35	0.13	27.1	3.8	73.2
1456071		2.40	0.53	0.36	8.3	0.02	<5	36	0.25	0.06	0.26	0.09	28.7	3.9	54.6
1456072		3.11	0.49	0.38	2.1	0.08	<5	28	0.26	0.07	0.31	0.06	32.2	4.2	35.1
1456073		1.83	0.43	0.32	3.1	0.02	<5	29	0.23	0.08	0.49	0.07	35.7	4.1	32.1

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CANADA L4Z 1N9
TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011	DATE REPORTED: Jan 20, 2012	SAMPLE TYPE: Drill Core												
Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5	
1456074	0.68	0.40	0.36	3.8	0.06	<5	20	0.40	0.09	1.39	0.05	34.1	5.6	21.2	
1456075	1.82	0.25	0.39	2.0	<0.01	<5	36	0.38	0.04	1.52	0.07	28.3	4.9	23.4	
1456076	0.11	17.5	1.73	15.7	9.52	<5	95	0.27	0.20	1.23	3.07	22.9	20.1	27.4	
1456077	0.64	0.38	0.55	2.1	0.05	<5	25	0.46	0.03	2.52	0.11	27.8	5.6	23.1	
1456078	1.34	0.26	0.50	1.9	<0.01	<5	26	0.44	0.04	2.02	0.08	32.2	4.6	29.6	
1456079	3.22	0.26	0.48	2.0	<0.01	<5	22	0.47	0.05	1.75	0.09	31.7	4.1	29.5	
1456080	3.13	0.56	0.56	4.7	0.01	<5	115	0.54	0.07	2.16	0.10	32.5	5.3	25.3	
1456081	2.34	0.46	0.49	1.3	0.46	<5	67	0.47	0.04	2.28	0.09	33.3	4.7	26.8	
1456082	2.45	0.73	0.42	5.4	0.46	<5	56	0.49	0.10	1.68	0.10	31.8	5.6	23.1	
1456083	1.14	0.40	0.50	4.3	<0.01	<5	27	0.50	0.06	2.28	0.11	38.3	5.0	26.3	
1456084	2.52	0.27	0.48	2.1	<0.01	<5	30	0.39	0.05	1.48	0.07	28.0	4.4	49.9	
1456085	0.92	0.34	0.45	1.9	<0.01	<5	36	0.30	0.07	1.18	0.07	25.6	4.5	58.7	
1456086	1.76	0.26	0.34	1.9	<0.01	<5	31	0.28	0.06	0.53	0.04	20.3	4.2	59.1	
1456087	1.16	1.19	0.34	1.6	0.02	<5	25	0.38	0.05	2.18	0.09	31.7	4.5	34.7	
1456088	1.05	0.77	0.33	1.6	<0.01	<5	20	0.31	0.04	4.75	0.41	31.4	4.2	61.5	
1456089	0.78	0.54	0.57	2.8	<0.01	<5	22	0.54	0.12	4.14	0.41	45.5	4.7	19.6	
1456090	0.53	0.11	1.64	7.2	<0.01	<5	157	0.26	0.04	6.62	0.25	21.7	10.0	118	
1456091	1.75	0.52	0.36	3.0	0.41	<5	34	0.30	0.05	1.39	0.12	25.3	3.6	71.9	
1456092	2.22	0.55	0.45	4.1	0.01	<5	27	0.47	0.11	0.79	0.10	33.1	6.6	47.5	
1456093	1.05	0.77	0.44	6.0	0.01	<5	29	0.42	0.28	1.03	0.07	47.9	4.8	40.0	
1456094	2.14	0.26	0.34	2.0	<0.01	<5	27	0.31	0.07	0.65	0.07	25.5	4.3	29.7	
1456243	1.58	0.18	0.33	15.1	<0.01	<5	79	0.21	0.09	0.05	0.03	22.9	2.7	84.9	
1456244	3.04	0.33	0.31	17.5	0.02	<5	97	0.19	0.09	0.05	0.02	29.1	2.1	77.1	
1456245	2.55	0.37	0.43	19.4	0.04	<5	77	0.34	0.09	0.05	0.02	33.6	2.9	81.1	
1456246	2.89	0.27	0.46	18.4	0.02	<5	56	0.37	0.09	0.05	0.06	38.1	3.4	88.6	
1456247	3.35	0.32	0.52	18.9	0.02	<5	47	0.55	0.10	0.27	0.08	46.4	3.5	75.8	
1456248	1.41	0.46	0.45	16.2	0.01	<5	29	0.37	0.09	0.44	0.08	39.9	3.6	98.2	
1456249	2.63	0.62	0.51	22.0	0.30	<5	34	0.43	0.09	0.22	0.07	37.1	3.6	89.3	
1456250	2.93	1.44	0.34	22.2	1.13	<5	52	0.54	0.09	0.36	0.08	39.3	3.5	67.7	
1456251	0.11	31.8	0.95	513	2.30	<5	180	0.07	25.1	0.40	0.74	9.30	10.5	147	
1456252	2.88	0.68	0.40	15.1	0.08	<5	62	0.40	0.11	0.41	0.22	24.5	3.0	84.8	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456253		3.52	0.42	0.34	14.0	0.02	<5	66	0.30	0.09	0.46	0.05	34.8	2.8	76.6
1456254		3.18	0.49	0.37	11.5	0.07	<5	105	0.30	0.09	0.46	0.04	31.7	2.9	81.1
1456255		2.59	0.79	<0.01	14.2	0.59	<5	<1	0.36	0.09	<0.01	0.07	20.1	2.8	83.8
1456256		3.35	0.59	<0.01	16.3	0.08	<5	<1	0.43	0.09	<0.01	0.06	34.0	2.7	82.3
1456257		1.03	0.59	<0.01	14.1	0.07	<5	<1	0.40	0.08	<0.01	0.08	13.5	2.7	80.4
1456258		0.90	0.65	0.52	13.1	0.12	<5	442	0.49	0.09	2.77	0.09	15.5	3.1	73.8
1456259		1.90	0.34	0.45	9.0	0.05	<5	163	0.32	0.09	0.70	0.06	35.9	3.0	77.0
1456260		1.44	0.43	0.44	7.5	0.27	<5	35	0.34	0.09	0.57	0.06	20.7	2.8	74.2
1456261		0.70	1.33	0.37	6.4	1.38	<5	78	0.27	0.07	0.61	0.06	13.5	2.1	118
1456262		0.89	1.39	0.40	12.8	0.61	<5	80	0.35	0.11	0.34	0.07	16.1	3.4	79.5
1456263		3.29	1.75	0.46	13.1	1.07	<5	210	0.41	0.10	0.48	0.11	20.8	3.2	80.9
1456264		3.39	0.87	0.39	12.9	0.55	<5	85	0.47	0.10	0.44	0.13	25.3	3.4	65.9
1456265		0.52	0.09	1.58	6.9	<0.01	<5	150	0.25	0.04	6.51	0.23	16.1	10.2	117
1456266		2.82	0.43	0.43	8.7	0.10	<5	51	0.36	0.10	0.29	0.09	40.1	2.9	73.0
1456267		3.68	0.48	0.48	9.1	0.19	<5	42	0.43	0.09	0.31	0.07	25.7	3.1	80.9
1456268		2.49	0.33	0.40	8.6	0.08	<5	70	0.32	0.09	0.70	0.07	40.9	2.9	69.3
1456269		3.48	0.29	0.45	9.5	0.06	<5	166	0.38	0.09	0.90	0.09	41.6	3.0	64.9
1456270		2.97	0.34	0.49	7.3	0.04	<5	55	0.46	0.09	1.21	0.11	42.8	3.3	77.3
1456271		2.93	0.46	0.57	7.9	0.11	<5	93	0.58	0.09	0.65	0.07	25.5	2.9	73.9
1456272		3.05	0.37	0.40	8.6	0.09	<5	106	0.45	0.09	0.71	0.06	38.1	2.9	64.8
1456273		2.99	0.40	0.49	6.7	0.23	<5	57	0.64	0.09	0.66	0.07	26.9	2.9	67.7
1456274		3.52	0.35	0.49	9.2	0.04	<5	48	0.52	0.10	0.79	0.10	43.1	3.6	46.4
1456275		3.00	0.26	0.50	9.0	<0.01	<5	67	0.56	0.09	1.03	0.10	43.9	3.4	57.4
1456276		0.11	1.00	2.64	4480	6.27	<5	110	0.27	0.23	3.80	0.21	18.3	28.1	96.7
1456277		1.74	0.42	0.51	10.8	0.05	<5	158	0.33	0.09	0.70	0.11	38.1	3.1	74.7
1456278		3.45	0.45	0.42	9.9	0.08	<5	111	0.38	0.09	0.78	0.10	38.2	3.0	68.2
1456279		2.19	1.07	0.46	39.8	0.18	<5	81	0.52	0.09	1.54	0.15	20.7	3.5	78.8
1456280		1.47	1.12	0.42	7.9	0.05	<5	50	0.37	0.09	1.37	0.13	34.0	3.0	73.9
1456281		3.13	0.41	0.50	11.1	0.16	<5	84	0.48	0.09	0.56	0.11	24.9	3.1	64.3
1456282		1.84	0.68	0.34	6.5	0.03	<5	241	0.31	0.09	0.75	0.11	32.0	2.8	79.6
1456283		3.47	0.31	0.42	6.3	<0.01	<5	133	0.30	0.09	0.62	0.08	35.1	2.9	78.8

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456284		1.20	0.35	0.39	6.5	0.01	<5	133	0.39	0.09	0.69	0.08	35.0	3.1	63.2
1456285		0.90	0.25	0.35	5.8	<0.01	<5	290	0.27	0.08	0.89	0.09	36.6	2.8	69.6
1456286		1.24	0.45	0.37	6.5	0.02	<5	139	0.36	0.09	0.57	0.10	36.1	3.0	71.2
1456287		3.33	0.34	0.46	6.3	0.06	<5	213	0.40	0.09	0.68	0.11	40.6	3.1	44.3
1456288		1.73	0.26	0.40	6.4	0.01	<5	113	0.39	0.09	0.55	0.10	21.6	2.9	67.7
1456289		1.48	0.46	0.32	7.8	0.10	<5	168	0.27	0.08	0.62	0.09	26.2	3.1	86.0
1456290		0.57	0.08	1.59	6.9	<0.01	<5	153	0.23	0.04	6.54	0.21	14.5	9.9	108
1456291		3.89	0.25	0.45	5.3	0.02	<5	221	0.36	0.09	0.90	0.12	19.2	3.1	65.1
1456292		1.54	0.44	0.46	6.2	<0.01	<5	147	0.35	0.09	0.64	0.11	37.3	3.0	72.5
1456293		2.47	0.33	0.39	6.3	0.03	<5	117	0.30	0.09	0.65	0.10	36.7	2.9	65.7
1456294		0.70	0.55	0.45	19.0	0.03	<5	56	0.34	0.08	0.66	0.13	34.6	5.3	64.8
1456295		1.96	0.33	0.46	7.3	0.02	<5	68	0.34	0.09	0.53	0.09	39.5	3.1	81.7
1456296		1.93	0.24	0.46	5.9	0.07	<5	52	0.40	0.09	0.40	0.08	44.1	2.9	44.6
1456297		0.89	0.17	0.43	5.6	<0.01	<5	133	0.40	0.08	1.17	0.11	39.0	3.2	50.2
1456298		1.16	0.18	0.35	6.0	<0.01	<5	167	0.38	0.10	0.66	0.10	23.9	3.0	37.0
1456299		1.32	0.28	0.45	7.5	0.01	<5	609	0.46	0.09	0.94	0.13	45.7	3.3	43.7
1456300		3.04	0.26	0.44	6.6	0.02	<5	386	0.45	0.09	1.05	0.10	38.8	3.2	44.0
1456301		0.11	17.1	1.87	17.8	9.67	<5	108	0.38	0.22	1.32	3.05	15.9	20.9	27.7
1456302		3.35	0.49	0.61	6.6	0.08	<5	349	0.30	0.09	0.74	0.11	35.3	3.5	113
1456303		1.25	0.28	0.55	6.5	0.03	<5	196	0.36	0.08	0.77	0.11	20.4	3.3	66.8
1456304		0.96	0.17	0.71	5.2	<0.01	<5	85	0.65	0.09	1.36	0.11	37.8	3.2	66.8
1456305		3.52	0.19	0.88	5.9	<0.01	<5	53	0.66	0.10	0.86	0.09	37.7	3.5	70.8
1456306		1.46	7.10	0.52	15.1	0.21	<5	44	0.60	0.09	0.94	0.54	25.8	4.6	52.1
1456307		2.77	0.30	0.91	5.6	<0.01	<5	62	0.60	0.09	0.79	0.12	37.5	3.1	74.5
1456308		3.73	0.22	0.72	7.5	0.02	<5	41	0.69	0.10	0.74	0.11	39.3	3.3	66.3
1456309		1.63	0.23	0.79	6.7	0.06	<5	53	0.64	0.09	0.47	0.09	37.9	2.9	65.9
1456310		1.31	0.20	0.69	7.7	<0.01	<5	91	0.59	0.09	0.69	0.11	37.1	2.9	65.0
1456311		0.99	0.85	0.88	8.6	0.12	<5	69	0.62	0.10	0.32	0.10	38.6	3.9	81.1
1456312		3.57	0.21	0.63	6.3	<0.01	<5	67	0.53	0.10	0.73	0.10	36.5	3.1	65.5
1456313		2.12	0.23	0.80	6.3	<0.01	<5	50	0.61	0.10	0.57	0.11	39.1	3.1	58.5
1456314		0.89	33.4	0.48	29.5	2.68	<5	98	0.49	0.10	0.52	1.04	34.0	4.4	50.5

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Sample Login Weight kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
1456315		0.36	0.29	1.44	7.1	0.02	<5	139	0.28	0.05	5.92	0.22	15.2	10.5	97.6
1456316		3.48	0.68	0.76	6.6	0.16	<5	497	0.44	0.09	0.73	0.12	26.5	2.9	58.3
1456317		3.59	0.21	0.69	7.4	0.01	<5	41	0.53	0.10	0.67	0.09	24.2	3.1	43.1
1456318		2.67	0.42	0.75	11.3	0.07	<5	124	0.52	0.10	1.18	0.12	32.1	3.4	39.3
1456319		1.82	0.73	0.51	13.0	<0.01	<5	521	0.47	0.09	0.90	0.12	22.9	3.2	61.9
1456320		2.43	0.31	0.71	12.8	<0.01	<5	256	0.53	0.10	1.33	0.11	23.1	2.9	49.8
1456321		3.19	0.23	0.50	13.6	<0.01	<5	55	0.50	0.10	1.18	0.11	24.9	3.6	40.8
1456322		3.08	0.27	0.81	18.5	<0.01	<5	69	0.56	0.09	1.33	0.11	24.0	3.2	75.9
1456323		0.73	0.54	0.55	13.5	0.01	<5	36	0.55	0.09	0.92	0.10	23.0	3.0	42.9
1456324		1.87	0.71	0.72	14.6	<0.01	<5	128	0.56	0.09	1.45	0.14	25.8	3.1	46.2
1456325		1.66	0.30	0.57	8.4	<0.01	<5	112	0.53	0.09	1.56	0.11	29.7	2.6	32.2
1456326		0.11	8.31	2.34	9.2	4.53	<5	124	0.46	0.22	2.31	1.57	31.1	18.2	22.0
1456327		3.15	0.50	0.72	17.6	0.03	<5	31	0.49	0.09	1.15	0.11	28.2	2.9	60.2
1456328		2.54	1.05	0.87	52.2	0.12	<5	34	0.47	0.08	1.50	0.12	26.5	3.4	97.6
1456329		0.82	0.97	0.89	26.4	<0.01	<5	34	0.52	0.09	0.92	0.10	28.6	4.2	101
1456330		0.90	0.46	0.69	9.3	0.30	<5	415	0.56	0.08	2.65	0.08	26.9	4.2	59.8
1456331		2.94	<0.01	1.33	1.2	<0.01	<5	65	0.52	<0.01	2.29	0.05	38.4	2.0	67.7
1456332		3.47	0.01	0.94	3.3	<0.01	<5	366	0.52	0.02	2.49	0.04	36.1	2.3	57.6
1456333		0.77	<0.01	1.04	1.5	<0.01	<5	738	0.64	0.03	5.87	0.08	32.7	3.4	47.5
1456334		1.17	<0.01	0.66	1.1	<0.01	<5	65	0.41	<0.01	1.83	0.03	35.2	1.9	49.5
1456335		0.92	<0.01	0.85	1.6	<0.01	<5	85	0.45	<0.01	3.21	0.05	35.3	2.0	54.6
1456336		1.58	<0.01	0.95	4.7	<0.01	<5	59	0.52	<0.01	2.02	0.03	37.4	2.1	68.5
1456337		1.12	<0.01	1.01	4.9	<0.01	<5	68	0.46	<0.01	3.18	0.05	34.9	2.0	50.2
1456338		3.98	0.03	0.93	3.0	<0.01	<5	97	0.53	<0.01	2.27	0.04	38.7	2.0	59.3
1456339		3.35	0.04	0.59	8.6	<0.01	<5	112	0.51	0.02	2.21	0.05	37.9	2.1	36.0
1456340		0.41	0.04	1.39	7.6	<0.01	<5	155	0.27	0.04	6.08	0.25	14.5	10.0	96.1
1456341		3.86	<0.01	0.45	6.1	<0.01	<5	84	0.42	0.03	1.71	0.05	34.8	2.0	30.3
1456342		2.13	0.02	0.58	3.0	<0.01	<5	152	0.52	0.03	2.22	0.05	34.5	3.0	37.6
1456343		3.71	<0.01	0.62	2.6	<0.01	<5	145	0.51	<0.01	2.11	0.04	36.6	1.7	32.7
1456344		0.93	13.0	1.07	18.6	0.55	<5	241	0.50	0.07	0.27	0.07	29.8	3.4	48.8
1456345		1.76	0.98	0.70	21.9	0.67	<5	81	0.43	0.08	0.18	0.08	28.6	3.0	40.7

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456346	1.53	0.41	1.01	12.3	0.05	<5	250	0.47	0.08	0.18	0.04	21.5	2.8	59.1
1456347	1.10	0.68	0.81	12.3	0.01	<5	237	0.44	0.08	0.29	0.04	26.9	2.6	48.6
1456348	0.77	0.23	0.60	9.6	0.04	<5	484	0.31	0.07	0.95	0.03	8.39	2.6	49.9
1456349	1.26	0.50	0.73	11.1	0.07	<5	144	0.42	0.08	0.26	0.05	16.5	3.6	47.9
1456350	1.05	7.01	0.69	10.2	3.64	<5	174	0.33	0.07	0.15	0.09	17.3	2.9	75.5
1456351	0.09	31.7	1.09	408	2.30	<5	145	0.08	22.7	0.45	0.76	9.46	10.6	135
1456352	3.09	0.20	1.18	11.1	<0.01	<5	114	0.45	0.09	0.35	0.09	24.9	3.2	105
1456353	2.87	0.22	0.76	13.0	0.05	<5	91	0.41	0.10	0.38	0.06	19.4	3.2	64.7
1456354	3.38	0.27	0.69	13.3	<0.01	<5	68	0.37	0.08	0.23	0.04	18.8	2.9	63.4
1456355	1.44	0.31	1.01	15.2	0.03	<5	69	0.40	0.08	0.38	0.08	31.1	3.8	128
1456356	2.76	0.39	0.97	15.9	0.04	<5	87	0.45	0.08	0.19	0.08	30.9	3.4	72.2
1456357	1.35	0.49	1.59	20.7	<0.01	<5	59	0.63	0.10	0.53	0.08	40.1	4.3	112
1456358	1.29	0.38	1.23	19.3	<0.01	<5	98	0.72	0.10	0.27	0.14	40.6	3.8	63.1
1456359	1.63	0.30	1.30	13.2	<0.01	<5	76	0.61	0.09	0.63	0.08	34.2	3.6	96.8
1456360	1.67	0.27	1.14	12.4	<0.01	<5	69	0.61	0.09	0.60	0.08	34.4	3.5	84.0
1456361	2.50	0.34	0.94	18.3	0.01	<5	102	0.46	0.09	1.03	0.09	34.1	3.7	91.7
1456362	1.11	0.51	0.69	18.0	0.02	<5	79	0.39	0.07	1.32	0.10	24.9	2.8	49.7
1456363	0.83	0.54	0.85	20.5	0.04	<5	64	0.41	0.06	1.23	0.08	24.5	2.7	104
1456364	1.86	0.45	0.94	23.3	0.03	<5	51	0.47	0.08	0.32	0.11	32.2	3.1	52.7
1456365	0.43	0.07	1.49	6.7	<0.01	<5	139	0.27	0.04	5.76	0.20	14.7	9.9	90.3
1456366	2.58	0.45	0.84	19.0	0.06	<5	43	0.45	0.07	0.75	0.14	28.7	3.1	54.3
1456367	0.90	0.39	0.88	15.8	0.10	<5	139	0.45	0.08	0.93	0.11	26.9	3.1	67.3
1456368	2.29	0.26	0.95	13.0	0.01	<5	38	0.54	0.08	0.81	0.08	30.7	3.1	43.2
1456369	2.81	0.23	0.82	12.8	<0.01	<5	53	0.48	0.09	0.62	0.10	32.7	3.0	66.0
1456370	0.74	1.06	0.87	13.2	0.54	<5	49	0.51	0.08	0.83	0.12	32.5	2.9	38.6
1456371	1.09	0.63	1.11	15.9	0.13	<5	57	0.56	0.07	0.84	0.06	28.9	2.9	56.4
1456372	2.76	0.53	0.80	15.8	0.19	<5	31	0.49	0.08	0.63	0.08	30.2	3.3	53.2
1456373	0.69	10.5	0.82	18.2	3.75	<5	40	0.49	0.10	1.44	0.08	36.9	3.4	46.2
1456374	3.31	0.32	0.88	8.2	0.04	<5	45	0.47	0.09	0.53	0.08	34.7	3.2	60.6

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Cs ppm 0.05	Cu ppm 0.1	Fe % 0.01	Ga ppm 0.05	Ge ppm 0.05	Hf ppm 0.02	Hg ppm 0.01	In ppm 0.005	K % 0.01	La ppm 0.1	Li ppm 0.1	Mg % 0.01	Mn ppm 1	Mo ppm 0.05
1455981		2.40	4.7	2.18	2.95	0.12	0.09	0.03	0.024	0.29	12.3	3.1	0.42	730	0.48
1455982		1.75	2.9	1.75	1.97	0.10	0.12	0.02	0.021	0.22	18.0	3.0	0.81	925	0.31
1455983		1.41	9.8	1.90	2.29	0.10	0.09	0.03	0.017	0.28	9.9	4.2	0.33	622	0.33
1455984		1.40	2.1	2.13	2.15	0.12	0.08	0.02	0.016	0.23	10.5	3.7	0.45	699	0.23
1455985		1.02	3.5	1.73	1.46	0.11	0.17	0.02	0.013	0.29	8.1	1.6	0.20	416	0.86
1455986		0.80	3.1	1.48	1.60	0.12	0.12	0.02	0.017	0.18	12.7	1.3	0.02	589	0.52
1455987		1.12	3.5	1.35	1.57	0.11	0.09	0.02	0.016	0.14	16.4	1.0	0.02	578	0.48
1455988		1.02	3.1	1.48	1.73	0.12	0.08	0.02	0.018	0.17	12.4	1.1	0.02	571	0.48
1455989		0.97	5.5	1.59	1.64	0.11	0.08	0.02	0.019	0.17	15.1	1.1	0.08	533	0.51
1455990		0.92	44.6	2.35	4.52	0.08	0.17	0.03	0.017	0.27	9.6	6.9	1.07	504	2.33
1455991		1.15	3.0	1.58	1.44	0.11	0.09	0.01	0.020	0.16	11.7	1.2	0.24	637	0.59
1455992		0.90	7.7	1.38	1.42	0.11	0.08	0.01	0.017	0.16	11.6	1.1	0.03	458	0.61
1455993		1.00	5.1	1.48	1.24	0.13	0.06	0.01	0.016	0.16	11.1	1.1	0.02	540	0.69
1455994		0.91	13.5	1.30	1.09	0.12	0.06	0.03	0.014	0.16	9.9	1.0	0.02	629	0.77
1455995		1.00	19.7	1.06	1.12	0.10	0.06	0.04	0.012	0.17	8.6	1.2	0.01	393	0.75
1455996		1.09	5.0	1.26	1.45	0.12	0.07	0.01	0.014	0.17	17.7	1.3	0.01	408	0.66
1455997		0.98	8.1	1.03	1.23	0.11	0.07	0.05	0.011	0.17	10.6	1.0	0.02	417	0.58
1455998		1.11	4.5	1.48	1.54	0.13	0.07	0.02	0.015	0.17	18.7	1.4	0.06	549	0.46
1455999		1.25	5.9	1.34	1.84	0.11	0.06	0.05	0.015	0.19	18.1	1.8	0.02	620	0.75
1456000		0.92	2.6	1.18	1.32	0.11	0.08	0.02	0.017	0.14	12.1	1.2	0.01	643	0.58
1456001		1.81	122	3.73	7.09	0.13	0.29	0.05	0.029	0.25	15.5	14.1	1.20	1130	13.9
1456002		0.80	2.8	1.16	1.15	0.11	0.08	0.02	0.013	0.16	9.8	1.1	0.01	391	0.49
1456003		1.15	1.9	1.29	1.85	0.12	0.07	0.01	0.016	0.17	27.7	1.2	0.02	747	0.26
1456004		0.94	2.8	1.41	1.58	0.12	0.07	0.01	0.016	0.18	19.8	1.3	0.02	623	0.34
1456005		1.12	2.9	1.38	1.58	0.11	0.08	0.02	0.015	0.18	19.5	1.1	0.02	621	0.30
1456006		1.40	2.3	1.46	2.08	0.12	0.09	0.01	0.016	0.22	17.9	0.9	0.07	814	0.25
1456007		1.62	2.3	1.30	1.95	0.11	0.10	0.01	0.015	0.21	13.7	1.0	0.03	749	0.25
1456008		1.19	2.9	1.56	1.76	0.11	0.10	<0.01	0.016	0.22	19.2	0.7	0.02	681	0.26
1456009		1.51	3.5	1.28	1.86	0.11	0.10	<0.01	0.015	0.22	20.8	0.8	0.06	812	0.28
1456010		1.68	3.1	1.34	2.28	0.11	0.08	<0.01	0.015	0.25	21.5	0.9	0.06	744	0.26
1456011		1.82	2.8	1.48	2.46	0.11	0.08	<0.01	0.016	0.28	22.4	0.9	0.09	857	0.32
1456012		1.66	3.3	1.45	1.94	0.11	0.09	0.01	0.014	0.24	17.7	0.9	0.03	598	0.30

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456013	2.06	2.7	1.45	2.45	0.11	0.11	<0.01	0.017	0.30	23.3	1.2	0.26	809	0.32	
1456014	1.65	4.3	1.33	1.68	0.12	0.10	0.01	0.016	0.22	23.9	1.0	0.10	655	0.33	
1456015	0.88	49.1	2.30	4.38	0.08	0.15	0.03	0.017	0.28	8.6	6.9	1.04	556	2.18	
1456016	1.30	2.8	1.29	1.61	0.13	0.08	0.04	0.016	0.20	21.2	0.9	0.03	637	0.33	
1456017	1.07	2.7	1.27	1.91	0.11	0.10	0.03	0.018	0.19	22.9	1.1	0.03	871	0.40	
1456018	1.33	2.9	1.27	2.20	0.11	0.12	0.04	0.019	0.19	21.3	1.4	0.03	673	0.41	
1456019	1.29	3.0	1.25	1.87	0.11	0.12	0.02	0.016	0.15	18.1	1.5	0.02	704	0.37	
1456020	1.41	3.2	1.16	1.97	0.11	0.12	0.04	0.016	0.17	20.1	1.4	0.06	342	0.40	
1456021	1.38	3.5	1.24	1.56	0.10	0.13	0.02	0.015	0.15	18.7	1.1	0.03	560	0.44	
1456022	1.49	4.3	1.27	2.15	0.10	0.13	0.02	0.018	0.19	21.4	1.4	0.13	821	0.47	
1456023	1.42	2.5	1.28	1.93	0.10	0.12	0.01	0.016	0.17	12.1	1.4	0.04	722	0.27	
1456024	1.39	2.0	1.09	1.86	0.10	0.13	0.02	0.016	0.15	12.2	1.3	0.05	550	0.32	
1456025	1.02	1.9	1.31	1.72	0.12	0.11	0.02	0.016	0.16	22.9	1.2	0.02	545	0.27	
1456026	0.19	331	4.12	6.64	0.10	0.22	0.87	0.675	0.04	5.4	2.3	0.55	178	7.11	
1456027	0.75	2.3	1.20	1.77	0.12	0.11	0.03	0.021	0.15	19.6	1.4	0.07	400	0.33	
1456028	1.37	3.4	1.30	1.98	0.10	0.14	0.03	0.018	0.19	22.3	1.4	0.18	401	0.29	
1456029	2.04	4.7	1.43	2.63	0.10	0.12	0.02	0.017	0.24	30.0	1.4	0.04	686	0.29	
1456030	1.58	3.5	1.46	2.48	0.12	0.11	0.01	0.019	0.22	24.9	1.8	0.12	729	0.27	
1456031	1.02	6.2	1.95	2.38	0.11	0.15	0.02	0.015	0.36	11.0	2.9	0.17	602	1.30	
1456032	1.22	10.3	1.27	1.73	0.11	0.09	0.01	0.017	0.24	10.0	2.2	0.09	471	1.07	
1456033	1.03	1.8	1.31	1.25	0.11	0.10	0.01	0.016	0.19	20.2	1.0	0.16	765	0.58	
1456034	1.19	1.6	1.37	1.74	0.14	0.14	0.01	0.015	0.28	27.2	0.9	0.16	742	1.19	
1456035	2.06	11.4	1.86	2.81	0.14	0.14	0.03	0.013	0.42	34.7	1.4	0.38	641	0.70	
1456036	1.34	3.9	1.86	1.91	0.10	0.09	<0.01	0.013	0.28	10.2	1.9	0.33	658	0.60	
1456037	0.73	1.7	1.34	1.74	0.13	0.15	<0.01	0.019	0.25	28.0	1.8	0.45	809	0.86	
1456038	1.40	2.6	1.55	2.14	0.12	0.12	0.02	0.019	0.26	30.3	1.9	0.58	850	0.68	
1456039	2.06	6.4	1.87	1.56	0.11	0.08	0.03	0.013	0.21	14.0	1.6	0.34	718	0.52	
1456040	0.98	46.6	2.42	4.95	0.10	0.18	0.05	0.020	0.27	10.2	8.0	1.10	565	2.76	
1456041	2.34	3.0	1.62	1.34	0.13	0.07	0.02	0.015	0.20	13.5	1.7	0.32	692	0.85	
1456042	1.83	5.5	1.86	1.38	0.09	0.07	0.05	0.013	0.20	9.5	2.6	0.37	772	0.87	
1456043	2.34	3.4	1.74	2.53	0.11	0.09	0.03	0.018	0.36	19.0	3.6	0.34	862	0.78	
1456044	1.48	7.2	1.48	2.00	0.10	0.09	0.08	0.017	0.26	13.8	3.1	0.27	628	0.86	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456045	0.91	1.3	1.35	1.59	0.11	0.13	0.02	0.019	0.30	14.0	2.4	0.40	627	0.97	
1456046	1.83	4.2	1.82	2.23	0.09	0.14	0.02	0.018	0.31	15.2	3.1	0.87	958	1.73	
1456047	1.88	2.7	1.41	1.58	0.10	0.11	0.02	0.014	0.24	20.1	2.1	0.25	553	1.36	
1456048	2.11	4.7	1.53	1.65	0.12	0.10	0.02	0.018	0.24	15.6	2.3	0.54	711	3.52	
1456049	1.27	6.5	1.71	1.02	0.11	0.09	0.04	0.013	0.19	10.2	2.1	0.56	701	7.08	
1456050	1.87	30.3	2.75	1.47	0.12	0.11	0.05	0.012	0.26	21.1	2.7	0.73	982	0.54	
1456051	2.37	187	10.3	7.18	0.14	0.36	0.06	0.041	0.12	11.7	9.6	2.31	4520	4.66	
1456052	0.92	19.5	2.22	1.66	0.09	0.13	0.02	0.016	0.21	15.0	5.0	0.97	1150	0.98	
1456053	7.00	10.5	1.80	3.00	0.12	0.07	0.01	0.012	0.45	22.0	3.1	0.40	629	0.48	
1456054	2.27	4.8	1.82	2.54	0.11	0.09	0.01	0.013	0.44	13.0	3.7	0.41	630	0.73	
1456055	0.92	2.0	1.18	1.73	0.11	0.11	0.02	0.016	0.19	11.8	1.6	0.02	542	0.58	
1456056	1.12	3.9	1.40	1.41	0.11	0.10	0.03	0.016	0.16	20.1	1.3	0.24	559	0.43	
1456057	1.55	2.4	1.96	2.17	0.10	0.11	<0.01	0.013	0.29	11.1	4.4	0.45	662	0.28	
1456058	1.38	4.0	1.79	1.98	0.11	0.10	0.01	0.012	0.29	12.2	3.6	0.36	541	0.47	
1456059	1.63	1.6	1.52	2.09	0.10	0.10	<0.01	0.011	0.30	10.4	3.5	0.32	463	0.33	
1456060	1.71	2.1	1.56	1.84	0.10	0.09	0.01	0.010	0.28	10.3	2.8	0.34	477	0.33	
1456061	1.56	3.2	1.68	1.60	0.10	0.11	0.01	0.011	0.24	12.3	2.8	0.36	551	0.30	
1456062	1.46	3.6	1.84	1.93	0.10	0.11	<0.01	0.011	0.26	13.4	3.8	0.38	616	0.35	
1456063	2.44	3.2	1.77	2.78	0.10	0.12	<0.01	0.012	0.34	12.6	3.7	0.41	631	0.35	
1456064	1.87	1.7	1.75	2.10	0.10	0.10	<0.01	0.012	0.29	14.4	3.5	0.34	589	0.26	
1456065	0.86	48.8	2.22	4.26	0.09	0.19	0.04	0.017	0.24	8.5	7.8	1.04	510	2.26	
1456066	1.86	2.5	1.92	1.51	0.10	0.11	<0.01	0.013	0.22	12.8	2.5	0.42	688	0.30	
1456067	2.44	1.4	1.51	1.65	0.09	0.08	0.01	0.011	0.25	10.3	2.0	0.36	489	0.34	
1456068	3.69	3.2	1.79	1.79	0.09	0.09	0.01	0.012	0.26	10.7	2.1	0.35	536	0.27	
1456069	1.36	9.3	1.52	1.25	0.10	0.09	0.01	0.010	0.19	10.8	2.4	0.29	450	0.38	
1456070	1.83	14.7	1.64	1.49	0.09	0.08	0.01	0.012	0.22	11.8	3.2	0.33	487	0.47	
1456071	1.47	4.5	1.84	1.42	0.10	0.09	0.01	0.013	0.21	12.1	2.7	0.41	623	0.38	
1456072	1.76	2.2	1.83	1.58	0.10	0.09	<0.01	0.013	0.19	14.1	3.0	0.39	651	0.91	
1456073	1.20	3.8	1.76	1.22	0.11	0.09	<0.01	0.013	0.17	19.8	2.6	0.40	592	0.28	
1456074	2.04	3.3	2.31	1.59	0.10	0.10	0.01	0.011	0.22	14.7	2.0	0.55	767	0.17	
1456075	2.17	4.5	2.02	1.60	0.08	0.09	0.01	0.013	0.22	12.0	2.0	0.44	706	0.20	
1456076	2.02	166	3.41	5.63	0.12	0.30	0.08	0.025	0.25	8.5	15.4	0.95	988	28.5	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456077	3.19	3.8	2.47	1.95	0.08	0.04	0.01	0.013	0.29	12.4	2.3	0.63	1000	0.32
1456078	2.99	2.3	2.05	1.81	0.09	0.07	<0.01	0.015	0.26	13.7	2.2	0.60	838	0.29
1456079	3.23	2.3	1.75	1.83	0.08	0.05	0.03	0.015	0.28	17.3	1.7	0.54	735	0.24
1456080	3.60	5.6	2.04	2.03	0.08	0.06	0.01	0.018	0.29	19.2	2.6	0.57	872	0.30
1456081	2.45	1.4	2.11	1.80	0.09	0.06	<0.01	0.019	0.24	12.2	2.6	0.83	911	0.23
1456082	3.16	6.0	2.13	1.70	0.08	0.09	<0.01	0.017	0.23	13.8	2.4	0.55	921	0.25
1456083	2.75	6.0	2.09	1.89	0.09	0.08	<0.01	0.017	0.26	13.1	2.5	0.70	981	0.22
1456084	2.53	2.6	1.91	1.88	0.08	0.06	<0.01	0.015	0.24	12.3	2.4	0.49	812	0.40
1456085	1.58	4.1	2.04	1.72	0.08	0.08	0.01	0.016	0.21	11.0	2.4	0.49	789	0.49
1456086	1.58	2.1	1.76	1.36	0.10	0.08	0.01	0.015	0.18	8.5	2.1	0.32	580	0.48
1456087	2.07	4.0	1.86	1.43	0.09	0.09	0.02	0.014	0.22	10.4	1.8	0.56	855	0.28
1456088	1.44	1.7	2.08	1.21	0.07	0.09	<0.01	0.014	0.17	9.2	2.0	1.08	1420	0.45
1456089	3.29	3.8	1.93	2.30	0.09	0.07	0.01	0.018	0.29	20.5	2.2	0.75	1340	0.19
1456090	1.17	48.5	2.44	4.90	0.08	0.20	0.03	0.019	0.29	10.1	8.1	1.11	616	2.53
1456091	1.40	3.7	1.64	1.37	0.08	0.11	<0.01	0.016	0.18	11.3	2.6	0.40	754	0.52
1456092	2.33	8.5	2.40	1.99	0.09	0.09	0.01	0.016	0.22	18.7	2.8	0.38	921	0.31
1456093	2.95	7.2	1.66	2.00	0.09	0.11	0.02	0.019	0.25	38.7	2.2	0.29	603	0.38
1456094	1.10	2.8	2.21	1.35	0.11	0.10	<0.01	0.014	0.17	8.8	2.3	0.42	876	0.25
1456243	0.34	4.0	1.35	0.85	0.09	0.04	0.02	0.011	0.20	9.1	1.1	0.02	396	0.77
1456244	0.60	4.4	1.56	0.94	0.10	0.05	0.02	0.010	0.20	11.7	1.2	0.02	238	0.78
1456245	0.93	4.4	1.78	1.40	0.10	0.04	0.02	0.012	0.23	13.7	1.7	0.03	497	2.70
1456246	1.12	4.9	1.66	1.56	0.10	0.04	0.02	0.012	0.26	18.4	1.9	0.03	702	0.96
1456247	1.34	5.6	1.85	1.77	0.11	0.04	0.01	0.012	0.28	22.5	2.0	0.10	869	0.91
1456248	1.17	4.5	1.91	1.47	0.10	0.05	0.02	0.012	0.24	19.4	2.1	0.17	643	1.86
1456249	1.51	8.5	1.63	1.71	0.10	0.05	0.02	0.012	0.28	14.3	1.9	0.11	487	1.44
1456250	1.65	6.5	1.54	1.14	0.09	0.08	0.03	0.009	0.24	18.9	1.2	0.08	452	2.49
1456251	0.16	319	4.27	6.22	0.10	0.22	0.85	0.668	0.04	4.8	2.4	0.54	162	6.81
1456252	1.02	3.8	1.48	1.66	0.08	0.05	0.02	0.014	0.27	11.6	2.2	0.22	630	4.59
1456253	0.88	3.1	1.38	1.27	0.09	0.06	0.02	0.009	0.23	13.5	1.8	0.24	574	2.03
1456254	1.10	4.7	1.49	1.29	0.09	0.05	0.02	0.013	0.24	12.3	2.4	0.26	560	1.87
1456255	1.22	1.0	<0.01	1.51	0.08	0.04	0.04	0.014	<0.01	12.0	2.6	<0.01	<1	1.68
1456256	1.64	4.8	<0.01	1.47	0.09	0.03	0.02	0.010	<0.01	13.2	1.6	<0.01	<1	6.24

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011	DATE REPORTED: Jan 20, 2012	SAMPLE TYPE: Drill Core												
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456257	1.40	1.8	<0.01	1.32	0.08	0.04	0.02	0.019	<0.01	6.2	3.6	<0.01	<1	11.2	
1456258	1.54	3.9	1.27	1.71	0.05	0.04	0.02	0.014	0.26	9.1	1.9	0.23	824	15.1	
1456259	1.01	4.5	1.58	1.51	0.12	0.06	0.03	0.012	0.23	13.9	2.0	0.31	604	2.76	
1456260	0.94	4.1	1.59	1.57	0.08	0.04	0.01	0.011	0.23	9.9	2.3	0.28	578	2.95	
1456261	0.69	3.8	1.22	0.91	0.07	0.05	0.02	0.012	0.19	7.9	2.0	0.27	473	4.54	
1456262	1.11	3.7	1.48	1.35	0.08	0.07	0.02	0.012	0.24	9.5	2.1	0.19	314	13.5	
1456263	1.28	5.4	1.45	1.90	0.07	0.06	0.02	0.014	0.26	12.3	2.4	0.25	491	22.3	
1456264	1.05	4.8	1.52	1.60	0.09	0.06	0.02	0.013	0.23	12.0	1.8	0.20	472	13.3	
1456265	0.94	47.1	2.40	4.93	0.08	0.23	0.04	0.020	0.27	9.3	8.6	1.16	562	2.72	
1456266	1.06	4.4	1.45	1.57	0.11	0.07	0.01	0.014	0.23	15.4	2.2	0.16	378	5.56	
1456267	1.27	5.7	1.43	2.08	0.08	0.05	0.02	0.012	0.27	12.2	3.2	0.21	442	2.76	
1456268	1.03	4.3	1.42	1.42	0.13	0.05	0.02	0.011	0.23	19.4	2.0	0.24	682	0.99	
1456269	1.11	4.6	1.47	1.50	0.12	0.07	0.01	0.010	0.27	20.1	1.6	0.29	756	0.97	
1456270	1.43	4.6	1.63	1.70	0.11	0.06	0.01	0.011	0.29	20.7	1.7	0.35	1040	0.99	
1456271	1.72	5.1	1.49	2.27	0.09	0.06	0.01	0.013	0.32	12.1	2.8	0.29	679	1.36	
1456272	1.40	4.9	1.46	1.46	0.14	0.06	0.02	0.010	0.26	14.7	1.7	0.31	670	0.79	
1456273	1.84	5.3	1.54	2.17	0.09	0.06	0.01	0.012	0.29	12.9	2.3	0.31	686	0.89	
1456274	1.63	5.0	1.54	1.77	0.13	0.07	0.01	0.011	0.29	20.7	1.7	0.29	742	2.54	
1456275	1.58	4.8	1.47	1.81	0.12	0.07	0.01	0.011	0.31	20.9	1.7	0.27	753	2.35	
1456276	2.42	184	10.1	7.92	0.12	0.35	0.02	0.036	0.12	10.9	9.7	2.36	4470	4.42	
1456277	1.20	5.3	1.67	1.86	0.10	0.05	0.03	0.014	0.26	14.5	3.1	0.33	734	11.3	
1456278	1.12	4.1	1.47	1.56	0.12	0.08	0.02	0.011	0.26	14.6	2.2	0.30	715	5.76	
1456279	1.56	4.6	1.31	1.62	0.08	0.07	0.02	0.013	0.27	12.2	2.5	0.23	802	42.8	
1456280	0.98	4.6	1.52	1.48	0.13	0.06	0.02	0.013	0.24	13.0	2.5	0.28	832	59.6	
1456281	1.03	3.7	1.53	1.80	0.09	0.05	0.01	0.014	0.28	11.6	2.7	0.30	623	9.69	
1456282	0.98	4.5	1.44	1.32	0.12	0.06	0.01	0.015	0.19	12.2	2.5	0.32	613	30.6	
1456283	0.95	4.8	1.50	1.68	0.11	0.06	0.01	0.016	0.20	13.6	3.3	0.33	668	6.82	
1456284	1.10	3.3	1.46	1.47	0.12	0.05	0.01	0.014	0.21	13.3	2.7	0.36	685	12.9	
1456285	0.85	3.6	1.47	1.38	0.12	0.06	0.01	0.017	0.18	14.0	2.8	0.38	710	7.41	
1456286	0.99	3.8	1.49	1.46	0.13	0.06	0.01	0.014	0.20	13.8	2.9	0.32	640	17.6	
1456287	0.98	4.4	1.45	1.85	0.12	0.06	0.01	0.013	0.25	15.4	2.5	0.37	758	9.33	
1456288	1.04	4.7	1.48	1.78	0.08	0.05	0.01	0.015	0.21	12.7	3.6	0.31	716	8.67	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Cs ppm 0.05	Cu ppm 0.1	Fe % 0.01	Ga ppm 0.05	Ge ppm 0.05	Hf ppm 0.02	Hg ppm 0.01	In ppm 0.005	K % 0.01	La ppm 0.1	Li ppm 0.1	Mg % 0.01	Mn ppm 1	Mo ppm 0.05
1456289		0.75	5.1	1.46	1.14	0.11	0.07	0.01	0.017	0.17	9.8	2.3	0.23	563	18.1
1456290		0.89	51.2	2.39	4.79	0.09	0.19	0.02	0.019	0.28	8.4	8.1	1.16	565	2.43
1456291		1.08	4.3	1.71	1.73	0.10	0.06	<0.01	0.017	0.22	7.3	2.9	0.45	868	6.17
1456292		1.17	5.0	1.51	1.85	0.12	0.06	0.01	0.016	0.24	14.3	3.0	0.30	691	21.7
1456293		1.09	4.3	1.48	1.47	0.11	0.07	0.01	0.016	0.20	14.0	2.8	0.28	674	9.28
1456294		1.12	9.4	2.20	1.95	0.10	0.05	0.01	0.023	0.20	13.1	4.5	0.35	1040	24.9
1456295		1.24	4.6	1.49	1.81	0.10	0.05	0.01	0.016	0.22	18.9	4.0	0.28	659	13.5
1456296		1.69	4.1	1.54	1.78	0.12	0.05	0.02	0.015	0.25	21.2	3.0	0.29	632	3.89
1456297		1.57	3.7	1.61	1.60	0.12	0.06	0.01	0.023	0.24	14.9	2.5	0.42	788	1.53
1456298		1.54	4.6	1.55	1.23	0.12	0.06	0.01	0.015	0.22	8.9	2.0	0.36	689	1.60
1456299		1.05	4.3	1.45	1.60	0.13	0.06	0.01	0.015	0.27	21.8	2.1	0.29	677	7.97
1456300		1.42	4.8	1.51	1.61	0.10	0.06	0.01	0.016	0.26	14.6	2.6	0.36	750	6.82
1456301		2.15	164	3.67	6.87	0.08	0.30	0.07	0.029	0.29	9.4	18.3	1.05	961	27.7
1456302		0.96	4.3	1.68	2.05	0.10	0.12	0.01	0.019	0.29	13.6	5.0	0.35	741	11.9
1456303		1.38	4.4	1.64	2.03	0.05	0.09	0.01	0.013	0.27	9.6	4.6	0.38	699	10.5
1456304		1.59	3.9	1.56	2.62	0.07	0.08	0.01	0.011	0.38	18.2	3.3	0.29	926	3.90
1456305		1.33	4.8	1.62	3.32	0.09	0.14	0.02	0.013	0.44	18.1	4.7	0.28	750	3.80
1456306		1.40	5.9	1.43	2.90	0.08	0.08	0.05	0.017	0.30	12.0	3.2	0.26	649	439
1456307		1.57	4.4	1.59	3.31	0.08	0.12	0.01	0.011	0.45	18.1	4.8	0.35	749	7.48
1456308		1.56	4.3	1.47	2.85	0.08	0.10	0.01	0.010	0.37	18.8	4.7	0.27	717	5.47
1456309		1.69	4.2	1.24	3.28	0.08	0.08	0.02	0.011	0.38	17.9	5.6	0.26	670	8.89
1456310		1.54	4.7	1.41	2.62	0.07	0.08	0.01	0.009	0.35	17.6	4.1	0.27	719	8.61
1456311		1.62	5.3	1.46	3.39	0.08	0.10	0.01	0.011	0.43	18.6	4.9	0.24	629	51.5
1456312		1.28	4.0	1.56	2.43	0.07	0.10	0.02	0.008	0.34	17.5	3.1	0.30	770	5.29
1456313		1.25	4.3	1.42	2.86	0.09	0.11	0.01	0.009	0.39	18.8	4.4	0.24	716	8.28
1456314		1.03	30.4	1.28	1.87	0.08	0.10	0.28	0.006	0.29	16.2	2.7	0.18	577	1180
1456315		0.89	50.3	2.27	5.02	<0.05	0.22	0.04	0.014	0.26	8.7	10.8	1.02	567	10.3
1456316		1.23	4.5	1.42	2.75	0.07	0.09	0.02	0.009	0.38	12.4	3.4	0.28	677	25.4
1456317		1.55	4.0	1.51	2.42	0.07	0.08	0.01	0.009	0.36	11.0	3.1	0.28	704	2.34
1456318		1.44	4.4	1.41	2.71	0.07	0.08	0.02	0.011	0.37	15.2	3.6	0.28	732	11.5
1456319		1.29	4.4	1.49	1.87	0.07	0.09	0.02	0.007	0.28	10.4	2.9	0.29	628	45.5
1456320		1.52	4.1	1.58	2.35	0.06	0.09	0.03	0.010	0.37	10.4	3.1	0.34	735	10.2

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011	DATE REPORTED: Jan 20, 2012	SAMPLE TYPE: Drill Core												
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456321	1.07	4.4	1.63	1.67	0.07	0.10	0.03	0.010	0.28	11.6	2.8	0.31	747	7.79	
1456322	1.53	3.2	1.36	3.06	0.07	0.11	0.02	0.012	0.41	10.9	3.3	0.30	684	16.7	
1456323	1.44	3.7	1.28	2.21	0.06	0.07	0.01	0.009	0.30	10.4	3.0	0.32	636	44.0	
1456324	1.47	3.2	1.46	2.68	0.07	0.09	0.02	0.009	0.36	11.8	4.0	0.40	782	56.7	
1456325	1.34	3.5	1.43	2.03	0.07	0.08	0.02	0.009	0.30	13.8	3.3	0.42	787	11.2	
1456326	2.02	128	3.93	8.18	0.10	0.49	0.05	0.027	0.25	14.7	23.1	1.24	1170	14.3	
1456327	1.44	4.1	1.42	2.44	0.06	0.09	0.04	0.010	0.35	13.1	3.8	0.34	651	19.8	
1456328	1.74	2.6	1.45	3.27	0.06	0.10	0.05	0.010	0.41	12.4	4.2	0.27	604	57.5	
1456329	2.10	2.6	1.18	3.55	0.06	0.11	0.02	0.008	0.43	13.4	3.9	0.22	410	58.0	
1456330	2.68	7.7	1.38	2.41	0.06	0.08	0.02	0.009	0.30	12.6	6.7	0.28	774	14.5	
1456331	3.70	0.5	1.21	3.63	0.07	0.05	<0.01	0.006	0.51	19.1	4.8	0.20	622	1.15	
1456332	3.51	0.4	1.32	2.73	0.06	0.09	<0.01	0.006	0.37	17.9	5.1	0.25	719	1.01	
1456333	5.11	<0.1	1.82	2.93	<0.05	0.09	<0.01	0.009	0.39	16.4	7.5	0.50	1410	1.06	
1456334	3.16	0.2	1.22	1.94	0.06	0.05	<0.01	<0.005	0.28	17.5	4.4	0.21	507	0.76	
1456335	2.79	0.3	1.17	2.40	0.06	0.08	<0.01	0.006	0.32	17.5	6.2	0.23	755	0.76	
1456336	3.26	1.2	1.15	2.89	0.07	0.05	<0.01	0.005	0.37	18.5	5.7	0.19	538	1.08	
1456337	3.18	0.5	1.24	3.15	0.06	0.05	<0.01	0.005	0.39	17.6	5.9	0.21	958	0.78	
1456338	3.46	0.3	1.23	3.03	0.06	0.04	0.01	0.006	0.36	19.2	5.3	0.21	761	1.05	
1456339	3.16	0.2	1.15	2.05	0.06	0.05	<0.01	0.005	0.26	18.6	4.3	0.26	714	0.96	
1456340	0.86	45.2	2.23	4.77	0.06	0.22	0.03	0.012	0.26	8.5	10.3	1.00	538	2.67	
1456341	2.37	0.3	1.05	1.64	0.07	0.07	<0.01	0.006	0.21	17.0	3.9	0.21	575	1.42	
1456342	2.37	3.3	1.49	2.00	0.07	0.07	<0.01	0.011	0.25	16.8	5.3	0.34	754	1.41	
1456343	2.82	0.2	1.16	2.24	0.08	0.04	<0.01	0.005	0.25	17.9	4.6	0.28	697	1.08	
1456344	1.85	20.7	1.21	3.97	0.08	0.17	0.75	0.006	0.40	14.1	5.2	0.14	626	2.47	
1456345	1.18	3.5	1.09	2.54	0.08	0.05	0.04	0.005	0.29	12.8	5.8	0.10	186	2.22	
1456346	1.39	3.8	1.56	3.61	0.08	0.06	0.03	0.008	0.39	9.1	7.7	0.12	480	2.36	
1456347	1.81	4.3	1.39	2.58	0.07	0.06	0.05	0.006	0.37	12.4	4.0	0.07	247	1.31	
1456348	0.92	3.1	1.20	1.84	0.07	0.06	0.03	0.005	0.28	3.5	3.5	0.07	450	0.85	
1456349	2.11	4.1	1.51	2.45	0.07	0.04	0.04	0.006	0.35	6.8	3.2	0.05	692	1.24	
1456350	1.38	4.5	1.22	2.33	0.07	0.04	0.18	0.005	0.34	7.4	3.2	0.04	902	1.70	
1456351	0.17	322	4.16	7.15	0.08	0.24	0.90	0.667	0.04	4.9	3.5	0.52	168	6.76	
1456352	1.43	4.7	1.57	3.80	0.08	0.09	0.02	0.011	0.56	10.6	4.6	0.10	666	1.28	

Certified By: _____



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456353	1.28	4.7	1.58	2.40	0.07	0.07	0.02	0.008	0.34	8.2	4.4	0.09	836	1.18	
1456354	0.84	5.2	1.29	2.83	0.08	0.07	0.02	0.008	0.28	7.4	6.6	0.12	382	3.09	
1456355	1.26	5.0	1.45	3.10	0.09	0.08	0.03	0.009	0.48	13.3	5.4	0.11	278	4.27	
1456356	1.35	4.0	1.32	3.36	0.08	0.06	0.03	0.009	0.40	14.1	6.9	0.14	440	3.53	
1456357	1.56	3.5	1.36	4.99	0.08	0.09	0.03	0.014	0.69	19.0	7.9	0.19	444	4.91	
1456358	1.58	3.7	1.62	4.51	0.09	0.09	0.02	0.011	0.50	19.0	8.1	0.20	339	2.34	
1456359	1.28	4.9	1.37	4.42	0.09	0.09	0.03	0.010	0.56	16.3	9.2	0.20	556	2.78	
1456360	1.48	4.8	1.23	3.97	0.08	0.08	0.02	0.011	0.47	16.3	8.8	0.18	560	2.31	
1456361	1.26	3.9	1.06	3.01	0.07	0.10	0.04	0.009	0.48	16.2	4.9	0.12	590	2.56	
1456362	0.86	2.8	1.03	2.50	0.07	0.09	0.03	0.009	0.32	11.8	4.7	0.15	630	5.67	
1456363	1.08	3.1	1.58	2.98	0.08	0.08	0.03	0.008	0.39	11.7	4.9	0.16	817	5.19	
1456364	1.22	3.9	1.23	3.46	0.08	0.09	0.05	0.010	0.39	15.1	7.3	0.18	256	5.84	
1456365	0.85	47.0	2.25	5.23	0.06	0.20	0.03	0.014	0.25	8.5	10.7	0.99	520	2.41	
1456366	1.33	4.2	1.16	3.34	0.07	0.09	0.08	0.008	0.34	13.6	7.8	0.16	569	7.87	
1456367	1.30	4.9	1.16	3.31	0.07	0.10	0.04	0.008	0.38	12.7	7.6	0.15	680	2.13	
1456368	1.38	4.0	1.51	3.79	0.07	0.09	0.02	0.007	0.33	14.2	12.5	0.18	512	2.31	
1456369	1.32	4.9	1.00	3.04	0.08	0.09	0.03	0.007	0.39	15.3	7.5	0.11	416	1.56	
1456370	1.27	4.1	1.35	3.52	0.09	0.07	0.04	0.007	0.34	15.4	9.6	0.16	558	1.23	
1456371	1.41	3.7	1.65	4.54	0.07	0.11	0.06	0.007	0.42	13.8	11.6	0.22	568	1.95	
1456372	1.36	3.5	1.54	3.47	0.08	0.08	0.04	<0.005	0.28	14.1	9.9	0.18	465	1.95	
1456373	2.31	8.3	1.43	3.30	0.07	0.06	0.25	0.006	0.32	17.6	7.7	0.16	987	2.01	
1456374	1.95	4.0	1.59	4.23	0.09	0.07	0.02	0.006	0.29	16.8	13.3	0.24	448	1.48	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	
Sample Description	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
1455981	0.03	<0.05	1.2	480	3.8	13.8	0.004	0.032	0.17	2.5	<0.2	0.3	22.7	<0.01	
1455982	0.05	<0.05	0.8	280	4.7	9.4	<0.001	0.049	0.27	2.7	<0.2	0.3	66.1	<0.01	
1455983	0.03	<0.05	1.9	357	3.0	11.1	<0.001	0.028	0.07	1.9	0.2	0.2	15.7	<0.01	
1455984	0.03	<0.05	0.8	369	3.4	10.0	<0.001	0.015	0.10	1.9	<0.2	0.2	20.7	<0.01	
1455985	0.04	0.06	0.9	278	4.7	10.8	<0.001	0.025	0.48	1.7	<0.2	0.4	16.5	<0.01	
1455986	0.07	<0.05	1.3	260	3.4	6.6	<0.001	0.010	0.15	1.2	<0.2	0.3	7.2	<0.01	
1455987	0.05	<0.05	1.2	254	5.3	6.7	<0.001	0.018	0.12	1.2	<0.2	0.2	6.0	<0.01	
1455988	0.06	<0.05	1.4	253	5.4	7.1	<0.001	0.031	0.10	1.3	<0.2	0.3	7.1	<0.01	
1455989	0.06	<0.05	1.4	262	7.8	6.8	<0.001	0.137	0.15	1.3	0.3	0.2	7.8	<0.01	
1455990	0.09	0.17	24.8	643	2.9	10.0	0.003	0.223	0.50	5.2	0.3	0.4	116	<0.01	
1455991	0.06	<0.05	1.3	267	2.9	6.8	<0.001	0.105	0.14	1.7	0.3	0.3	25.4	<0.01	
1455992	0.05	<0.05	1.8	250	5.7	6.2	<0.001	0.059	0.13	1.1	<0.2	0.2	9.1	<0.01	
1455993	0.05	<0.05	1.3	214	5.6	5.9	<0.001	0.020	0.09	1.0	0.2	<0.2	6.2	<0.01	
1455994	0.04	<0.05	1.5	193	6.5	5.9	<0.001	0.014	0.21	0.8	<0.2	<0.2	5.1	<0.01	
1455995	0.04	<0.05	1.5	174	5.4	6.2	<0.001	0.028	0.25	0.7	<0.2	<0.2	5.5	<0.01	
1455996	0.05	<0.05	1.2	221	4.9	6.5	<0.001	0.033	0.11	0.8	<0.2	<0.2	6.4	<0.01	
1455997	0.05	<0.05	1.3	200	6.2	6.5	<0.001	0.040	0.11	0.7	0.3	<0.2	5.6	<0.01	
1455998	0.05	<0.05	1.3	240	5.3	6.7	<0.001	0.045	0.08	1.0	0.3	<0.2	5.7	<0.01	
1455999	0.05	<0.05	1.2	211	5.4	7.8	<0.001	0.011	0.10	0.9	<0.2	0.2	6.3	<0.01	
1456000	0.05	<0.05	1.1	226	4.0	6.1	<0.001	<0.005	0.16	1.3	0.2	0.3	7.3	<0.01	
1456001	0.14	0.07	7.3	634	22.2	9.0	0.002	0.681	0.27	8.9	0.7	0.8	127	<0.01	
1456002	0.05	<0.05	1.1	237	3.6	5.8	<0.001	<0.005	0.08	0.8	<0.2	<0.2	6.6	<0.01	
1456003	0.05	<0.05	0.7	253	3.4	8.0	<0.001	<0.005	0.05	1.5	0.2	0.3	7.3	<0.01	
1456004	0.06	<0.05	0.9	241	3.0	7.1	<0.001	0.007	0.07	1.1	<0.2	0.2	6.4	<0.01	
1456005	0.05	<0.05	0.8	244	6.0	7.5	<0.001	0.006	0.07	1.3	<0.2	0.2	6.9	<0.01	
1456006	0.06	<0.05	1.0	236	4.2	9.7	<0.001	0.017	0.07	1.7	0.2	0.3	9.7	<0.01	
1456007	0.05	<0.05	1.0	207	4.6	9.4	<0.001	<0.005	0.07	1.4	<0.2	0.3	7.3	<0.01	
1456008	0.06	<0.05	1.0	234	4.2	9.1	<0.001	0.039	0.07	1.7	0.3	0.3	7.2	<0.01	
1456009	0.05	<0.05	1.4	250	4.7	9.8	<0.001	0.018	0.08	1.4	0.3	0.3	13.5	<0.01	
1456010	0.06	<0.05	1.0	219	4.5	11.6	<0.001	0.015	0.09	1.5	0.2	0.3	10.6	<0.01	
1456011	0.05	<0.05	1.3	247	5.6	12.5	<0.001	0.022	0.07	1.5	0.2	0.3	10.1	<0.01	
1456012	0.05	<0.05	1.2	244	4.7	10.5	<0.001	0.009	0.09	1.4	0.3	0.3	8.1	<0.01	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	
Sample Description	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
1456013	0.05	<0.05	1.1	268	4.7	13.0	<0.001	0.035	0.08	1.7	<0.2	0.3	14.4	<0.01	
1456014	0.05	<0.05	1.2	240	6.5	8.8	<0.001	0.078	0.15	1.1	0.3	0.2	8.1	<0.01	
1456015	0.09	0.17	27.3	678	2.7	10.2	0.003	0.208	0.48	4.9	0.3	0.4	113	<0.01	
1456016	0.05	<0.05	1.1	201	6.0	7.5	<0.001	0.009	0.13	1.1	0.2	0.2	8.1	<0.01	
1456017	0.06	<0.05	1.2	216	5.5	7.6	<0.001	0.023	0.14	1.2	<0.2	0.3	7.8	<0.01	
1456018	0.08	<0.05	1.3	211	6.7	8.1	<0.001	0.028	0.18	1.5	<0.2	0.3	8.4	<0.01	
1456019	0.08	<0.05	1.3	196	6.4	6.9	<0.001	0.018	0.13	1.4	<0.2	0.3	7.6	<0.01	
1456020	0.09	<0.05	1.5	210	6.7	7.7	<0.001	0.066	0.17	1.2	0.3	0.3	6.9	<0.01	
1456021	0.06	<0.05	1.4	220	5.2	6.9	<0.001	0.042	0.12	1.3	<0.2	0.2	6.3	<0.01	
1456022	0.07	<0.05	1.5	312	6.1	10.0	<0.001	0.097	0.13	1.5	0.2	0.3	14.0	<0.01	
1456023	0.07	<0.05	1.0	198	4.6	8.1	<0.001	0.026	0.08	1.5	0.2	0.2	13.0	<0.01	
1456024	0.06	<0.05	1.0	206	4.0	7.8	<0.001	0.014	0.09	1.2	<0.2	0.3	9.6	<0.01	
1456025	0.06	<0.05	1.0	210	4.3	6.9	<0.001	0.012	0.08	1.2	<0.2	0.2	7.0	<0.01	
1456026	0.12	0.43	37.8	278	199	1.5	<0.001	1.41	99.7	1.6	10.1	6.4	54.7	<0.01	
1456027	0.07	<0.05	1.2	221	5.8	6.7	<0.001	0.042	0.58	1.2	0.3	0.3	7.7	<0.01	
1456028	0.05	<0.05	1.2	270	6.4	9.2	<0.001	0.098	0.18	1.4	0.3	0.2	9.4	<0.01	
1456029	0.04	<0.05	1.2	259	6.4	12.3	<0.001	0.057	0.16	1.3	0.2	0.3	8.5	<0.01	
1456030	0.05	<0.05	1.1	264	5.0	10.6	<0.001	0.051	0.10	1.5	0.2	0.3	10.5	<0.01	
1456031	0.12	0.05	2.8	358	4.9	15.5	<0.001	0.075	0.15	2.7	<0.2	0.3	15.5	<0.01	
1456032	0.08	<0.05	1.7	213	5.1	9.5	<0.001	0.064	0.14	1.0	<0.2	<0.2	10.2	<0.01	
1456033	0.03	<0.05	1.4	237	5.5	9.6	<0.001	0.045	0.09	1.1	<0.2	<0.2	13.1	<0.01	
1456034	0.03	<0.05	1.2	247	5.7	13.3	<0.001	0.053	0.09	1.1	0.2	0.2	10.2	<0.01	
1456035	0.05	<0.05	1.4	296	11.8	19.9	<0.001	0.238	0.26	1.5	0.3	0.2	16.0	<0.01	
1456036	0.08	<0.05	1.0	355	4.8	12.5	<0.001	0.045	0.08	1.5	<0.2	<0.2	15.7	<0.01	
1456037	0.05	0.06	0.8	215	5.4	11.9	<0.001	0.053	0.07	1.3	<0.2	0.2	38.3	<0.01	
1456038	0.05	<0.05	0.7	245	7.8	13.7	<0.001	0.088	0.14	1.3	0.2	0.3	41.9	<0.01	
1456039	0.05	<0.05	0.9	376	8.3	10.2	<0.001	0.149	0.17	1.4	0.2	<0.2	13.8	<0.01	
1456040	0.10	0.28	28.9	703	3.1	11.0	0.002	0.249	0.55	5.7	0.3	0.4	130	<0.01	
1456041	0.04	<0.05	1.2	339	4.8	10.2	<0.001	0.096	0.13	1.4	<0.2	<0.2	23.7	<0.01	
1456042	0.05	<0.05	0.9	311	3.7	9.3	<0.001	0.062	0.11	1.4	0.5	<0.2	27.9	<0.01	
1456043	0.04	<0.05	1.0	344	4.3	18.1	<0.001	0.064	0.09	1.8	0.3	0.3	23.9	<0.01	
1456044	0.07	<0.05	1.1	278	4.9	13.8	<0.001	0.075	0.11	1.5	1.1	0.3	21.1	<0.01	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	
Sample Description	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
1456045	0.06	0.06	1.1	212	3.7	14.4	<0.001	0.041	0.07	1.3	<0.2	0.3	36.4	<0.01	
1456046	0.14	<0.05	0.9	331	8.7	13.6	<0.001	0.183	0.14	2.0	0.5	0.2	123	<0.01	
1456047	0.05	<0.05	0.9	299	4.0	11.7	<0.001	0.064	0.09	1.1	0.2	<0.2	16.0	<0.01	
1456048	0.06	<0.05	1.0	381	6.0	12.0	<0.001	0.127	0.12	1.7	0.4	<0.2	29.9	<0.01	
1456049	0.05	<0.05	0.8	362	4.4	8.5	<0.001	0.088	0.11	1.5	0.7	<0.2	19.2	<0.01	
1456050	0.06	<0.05	0.6	437	9.4	12.6	<0.001	0.386	0.24	2.0	1.2	<0.2	23.5	<0.01	
1456051	0.14	0.45	73.1	1470	10.1	5.9	0.003	3.62	7.56	8.4	3.4	0.5	97.2	0.01	
1456052	0.09	<0.05	0.8	359	7.1	9.2	<0.001	0.250	0.30	2.3	0.3	<0.2	91.7	<0.01	
1456053	0.04	<0.05	0.9	344	8.0	26.1	<0.001	0.225	0.14	1.7	0.2	0.2	16.3	<0.01	
1456054	0.08	<0.05	1.3	389	4.9	20.5	<0.001	0.131	0.10	1.9	<0.2	0.2	20.2	<0.01	
1456055	0.09	<0.05	0.8	208	4.8	7.9	<0.001	0.006	0.10	1.3	<0.2	0.2	10.0	<0.01	
1456056	0.05	<0.05	1.4	300	7.1	7.2	<0.001	0.178	0.17	1.0	0.2	0.2	8.6	<0.01	
1456057	0.04	<0.05	0.7	347	5.5	12.4	<0.001	0.103	0.07	1.7	<0.2	0.2	20.2	<0.01	
1456058	0.04	<0.05	0.9	365	6.1	12.2	<0.001	0.145	0.10	1.3	<0.2	0.2	15.7	<0.01	
1456059	0.04	<0.05	0.8	432	4.7	13.3	<0.001	0.088	0.07	1.5	<0.2	0.2	17.2	<0.01	
1456060	0.03	<0.05	0.9	472	5.4	12.5	<0.001	0.115	0.09	1.5	<0.2	<0.2	18.2	<0.01	
1456061	0.04	<0.05	0.7	408	5.7	10.1	<0.001	0.126	0.09	1.3	<0.2	<0.2	14.8	<0.01	
1456062	0.04	<0.05	0.6	389	4.1	10.7	<0.001	0.074	0.08	1.5	<0.2	0.2	15.4	<0.01	
1456063	0.04	<0.05	0.7	401	3.6	15.9	<0.001	0.060	0.10	1.8	<0.2	0.3	22.6	<0.01	
1456064	0.04	<0.05	0.6	396	3.3	12.7	<0.001	0.038	0.09	1.4	<0.2	0.2	12.8	<0.01	
1456065	0.07	0.34	28.8	695	2.9	9.5	0.003	0.213	0.47	5.0	0.3	0.4	114	0.01	
1456066	0.03	<0.05	0.5	431	4.2	10.5	<0.001	0.075	0.07	1.7	<0.2	0.2	20.8	<0.01	
1456067	0.03	<0.05	0.5	451	2.5	11.8	<0.001	0.033	0.08	1.4	<0.2	0.2	19.7	<0.01	
1456068	0.03	<0.05	0.5	447	4.0	13.7	<0.001	0.102	0.07	1.5	<0.2	<0.2	13.5	<0.01	
1456069	0.03	<0.05	0.8	427	4.4	7.9	<0.001	0.094	0.09	1.0	<0.2	<0.2	11.9	<0.01	
1456070	0.03	<0.05	0.8	622	7.1	9.6	<0.001	0.198	0.09	1.5	0.3	<0.2	14.1	<0.01	
1456071	0.03	<0.05	0.8	334	7.1	8.9	<0.001	0.122	0.10	1.1	<0.2	<0.2	14.9	<0.01	
1456072	0.04	<0.05	0.4	379	5.6	9.0	<0.001	0.059	0.06	1.3	<0.2	<0.2	14.8	<0.01	
1456073	0.04	<0.05	0.5	392	4.1	7.4	<0.001	0.053	0.07	1.3	<0.2	<0.2	21.5	<0.01	
1456074	0.02	<0.05	0.4	467	5.1	11.2	<0.001	0.078	0.10	1.3	0.2	<0.2	30.3	<0.01	
1456075	0.03	<0.05	0.4	396	4.3	11.2	<0.001	0.040	0.11	1.4	<0.2	<0.2	27.2	<0.01	
1456076	0.05	0.07	14.5	541	35.0	12.4	0.004	1.13	0.35	7.2	1.3	0.8	58.4	<0.01	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	
Sample Description	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
1456077	0.04	<0.05	0.5	390	5.0	13.8	<0.001	0.045	0.08	1.7	<0.2	<0.2	31.2	<0.01	
1456078	0.05	<0.05	0.5	440	3.4	13.3	<0.001	0.041	0.11	1.8	<0.2	<0.2	46.7	<0.01	
1456079	0.03	<0.05	0.5	466	3.6	14.5	<0.001	0.046	0.15	2.0	<0.2	0.2	50.3	<0.01	
1456080	0.03	<0.05	0.5	446	7.7	14.8	<0.001	0.077	0.13	2.5	0.2	0.2	50.1	<0.01	
1456081	0.04	<0.05	0.5	398	4.1	11.5	<0.001	0.042	0.07	2.4	<0.2	<0.2	84.9	<0.01	
1456082	0.03	<0.05	0.5	460	7.1	12.4	<0.001	0.077	0.09	2.1	0.2	<0.2	36.3	<0.01	
1456083	0.05	<0.05	0.5	390	7.0	13.5	<0.001	0.126	0.12	1.9	0.3	0.2	65.9	<0.01	
1456084	0.06	<0.05	0.8	367	3.2	12.4	<0.001	0.041	0.14	1.8	<0.2	0.2	37.0	<0.01	
1456085	0.07	<0.05	0.9	316	3.8	10.0	<0.001	0.041	0.11	1.9	<0.2	0.2	31.0	<0.01	
1456086	0.06	<0.05	0.9	320	3.0	9.0	<0.001	0.039	0.10	1.2	<0.2	0.2	14.8	<0.01	
1456087	0.04	<0.05	0.7	406	4.0	11.2	<0.001	0.068	0.05	1.7	0.2	<0.2	40.5	<0.01	
1456088	0.03	<0.05	0.8	292	8.7	8.0	<0.001	0.072	<0.05	3.1	0.4	<0.2	44.7	<0.01	
1456089	0.02	<0.05	0.7	420	8.2	15.9	<0.001	0.102	0.08	4.0	0.4	0.2	42.5	<0.01	
1456090	0.09	0.25	28.2	706	3.2	12.0	0.003	0.236	0.56	5.3	0.4	0.5	129	<0.01	
1456091	0.06	<0.05	1.1	322	4.0	8.7	<0.001	0.115	0.09	2.0	0.3	0.2	36.4	<0.01	
1456092	0.03	<0.05	1.2	414	6.6	12.0	<0.001	0.165	0.14	2.4	0.3	<0.2	23.4	<0.01	
1456093	0.04	<0.05	1.0	401	7.8	13.9	<0.001	0.308	0.17	1.5	0.5	0.3	33.8	<0.01	
1456094	0.04	<0.05	0.7	364	4.3	8.1	<0.001	0.049	0.07	2.0	<0.2	<0.2	21.7	<0.01	
1456243	0.02	<0.05	1.3	256	5.5	8.0	<0.001	0.013	0.43	0.8	<0.2	<0.2	12.6	<0.01	
1456244	0.02	<0.05	1.0	270	5.6	8.6	<0.001	0.023	0.49	0.8	<0.2	<0.2	8.4	<0.01	
1456245	0.02	<0.05	1.1	289	6.4	11.2	<0.001	0.022	0.49	0.9	<0.2	<0.2	10.1	<0.01	
1456246	0.02	<0.05	1.3	321	6.5	13.3	<0.001	0.023	0.61	1.1	<0.2	<0.2	8.9	<0.01	
1456247	0.02	<0.05	1.8	394	6.2	15.2	<0.001	0.421	0.56	1.0	0.2	0.2	9.1	<0.01	
1456248	0.03	<0.05	1.7	346	7.5	11.7	0.001	0.773	0.69	1.0	<0.2	<0.2	14.5	<0.01	
1456249	0.02	<0.05	1.6	379	7.0	14.4	<0.001	0.622	0.91	1.1	0.2	0.2	12.7	<0.01	
1456250	0.01	<0.05	1.3	308	7.0	11.9	0.002	0.546	0.67	0.8	0.4	<0.2	14.0	<0.01	
1456251	0.12	0.40	34.9	263	190	1.4	<0.001	1.39	98.5	1.4	9.8	6.2	51.6	<0.01	
1456252	0.01	<0.05	1.4	288	9.6	13.6	0.002	0.421	0.75	0.9	<0.2	<0.2	16.0	<0.01	
1456253	0.01	<0.05	1.2	266	5.7	11.9	0.001	0.473	0.52	0.8	<0.2	<0.2	24.7	<0.01	
1456254	0.02	<0.05	1.3	244	4.7	11.3	0.001	0.430	0.42	0.9	0.3	<0.2	29.6	<0.01	
1456255	<0.01	<0.05	4.5	20	5.3	12.2	0.001	<0.005	0.46	0.9	0.3	<0.2	55.0	<0.01	
1456256	<0.01	<0.05	26.1	105	5.3	14.8	0.003	<0.005	0.70	0.8	0.2	<0.2	37.6	<0.01	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456257	<0.01	<0.05	12.8	62	5.6	10.8	0.004	<0.005	0.40	1.3	0.3	<0.2	69.1	<0.01
1456258	0.01	<0.05	1.1	199	6.3	12.5	0.005	0.704	0.34	1.1	0.2	<0.2	63.5	<0.01
1456259	0.03	<0.05	1.1	270	4.9	10.5	0.001	0.387	0.32	1.1	0.2	<0.2	22.0	<0.01
1456260	0.02	<0.05	1.1	271	5.0	9.9	<0.001	0.439	0.22	0.9	<0.2	<0.2	17.7	<0.01
1456261	0.03	<0.05	1.5	181	3.5	6.4	0.002	0.187	0.24	0.8	<0.2	<0.2	19.4	<0.01
1456262	0.02	<0.05	1.4	214	7.5	11.1	0.005	0.742	0.38	0.8	<0.2	<0.2	27.3	<0.01
1456263	0.03	<0.05	1.3	266	7.2	13.7	0.006	0.556	0.48	1.0	<0.2	<0.2	25.7	<0.01
1456264	0.02	<0.05	1.1	309	7.8	11.8	0.004	0.860	0.51	0.9	0.2	<0.2	18.6	<0.01
1456265	0.09	0.20	29.7	763	3.0	11.1	0.003	0.233	0.65	5.6	0.4	0.5	129	<0.01
1456266	0.03	<0.05	1.1	320	6.2	11.6	0.002	0.566	0.46	1.1	0.2	<0.2	13.8	<0.01
1456267	0.03	<0.05	1.3	321	5.7	13.3	0.001	0.233	0.22	1.2	0.3	<0.2	12.8	<0.01
1456268	0.03	<0.05	1.0	320	5.9	11.2	<0.001	0.185	0.21	1.0	0.2	<0.2	16.3	<0.01
1456269	0.03	<0.05	0.9	330	6.4	13.7	<0.001	0.206	0.29	1.1	0.3	<0.2	24.1	<0.01
1456270	0.03	<0.05	1.1	325	5.9	14.9	<0.001	0.212	0.24	1.2	0.3	<0.2	33.0	<0.01
1456271	0.03	<0.05	1.0	320	5.8	16.4	<0.001	0.259	0.23	1.3	0.2	<0.2	25.4	<0.01
1456272	0.03	<0.05	1.0	303	6.0	13.2	<0.001	0.292	0.25	1.0	0.3	<0.2	31.4	<0.01
1456273	0.03	<0.05	1.0	314	5.1	15.9	<0.001	0.257	0.22	1.2	0.3	<0.2	27.7	<0.01
1456274	0.03	<0.05	1.0	363	6.5	15.5	<0.001	0.264	0.41	1.2	<0.2	<0.2	29.5	<0.01
1456275	0.03	<0.05	0.9	315	6.2	16.7	<0.001	0.263	0.48	1.2	0.2	<0.2	31.4	<0.01
1456276	0.15	0.86	73.3	1510	9.9	6.0	0.004	3.46	6.61	8.0	3.9	<0.2	99.4	0.02
1456277	0.04	<0.05	1.0	310	6.8	12.8	0.003	0.334	0.50	1.3	0.2	<0.2	37.6	<0.01
1456278	0.04	<0.05	1.0	321	6.0	12.7	0.001	0.256	0.42	1.1	0.3	<0.2	31.7	<0.01
1456279	0.03	<0.05	1.3	322	7.3	12.1	0.009	0.383	0.67	1.2	<0.2	<0.2	31.7	<0.01
1456280	0.04	<0.05	1.1	314	7.3	11.1	0.014	0.354	0.87	1.1	0.2	<0.2	24.5	<0.01
1456281	0.03	<0.05	0.9	326	6.7	12.4	0.003	0.413	0.47	1.0	0.2	<0.2	22.2	<0.01
1456282	0.04	<0.05	1.2	294	5.2	8.6	0.009	0.281	0.74	1.1	<0.2	<0.2	25.3	<0.01
1456283	0.05	<0.05	1.1	278	4.6	8.5	0.003	0.186	0.64	1.3	<0.2	<0.2	24.7	<0.01
1456284	0.04	<0.05	1.1	278	5.7	8.7	0.005	0.246	0.54	1.1	<0.2	<0.2	34.8	<0.01
1456285	0.04	<0.05	0.9	259	5.1	7.5	0.002	0.253	0.55	1.1	<0.2	<0.2	28.6	<0.01
1456286	0.04	<0.05	1.1	253	5.5	8.9	0.005	0.318	0.54	1.0	<0.2	<0.2	25.2	<0.01
1456287	0.04	<0.05	0.9	309	6.5	12.0	0.001	0.202	0.69	1.2	<0.2	<0.2	29.8	<0.01
1456288	0.04	<0.05	0.9	231	4.9	9.9	0.002	0.142	0.52	1.2	<0.2	<0.2	29.8	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
1456289	0.05	<0.05	1.4	216	6.0	6.7	0.003	0.639	0.64	1.0	0.3	<0.2	26.2	<0.01	
1456290	0.09	0.18	30.4	765	2.8	10.6	0.003	0.234	0.57	5.1	0.3	0.5	125	<0.01	
1456291	0.05	<0.05	1.0	103	5.1	9.6	<0.001	0.238	0.57	1.3	<0.2	<0.2	64.5	<0.01	
1456292	0.04	<0.05	1.1	250	6.6	11.2	0.002	0.195	0.91	1.4	<0.2	<0.2	27.0	<0.01	
1456293	0.05	<0.05	1.1	292	5.8	8.9	<0.001	0.244	0.66	1.1	<0.2	<0.2	28.4	<0.01	
1456294	0.05	<0.05	1.2	527	5.3	8.6	0.001	0.542	0.81	2.3	<0.2	<0.2	23.3	<0.01	
1456295	0.05	<0.05	1.2	296	5.8	10.1	0.001	0.257	0.60	1.3	<0.2	<0.2	22.4	<0.01	
1456296	0.04	<0.05	0.7	281	5.2	12.2	0.002	0.206	0.40	1.3	<0.2	<0.2	23.7	<0.01	
1456297	0.04	<0.05	0.9	223	4.6	12.2	<0.001	0.134	0.28	1.7	<0.2	<0.2	58.1	<0.01	
1456298	0.04	<0.05	0.7	102	4.4	11.1	<0.001	0.174	0.35	1.2	<0.2	<0.2	49.3	<0.01	
1456299	0.03	<0.05	0.9	345	6.9	12.5	<0.001	0.295	0.53	1.2	<0.2	<0.2	41.1	<0.01	
1456300	0.04	<0.05	0.9	305	5.7	12.6	<0.001	0.186	0.41	1.5	<0.2	<0.2	51.7	<0.01	
1456301	0.06	0.08	15.3	580	26.5	14.8	0.004	1.18	0.37	8.3	1.4	0.4	67.8	<0.01	
1456302	0.13	<0.05	1.6	262	6.6	11.1	<0.001	0.246	0.50	1.3	<0.2	<0.2	48.2	<0.01	
1456303	0.09	<0.05	1.1	142	6.7	12.5	<0.001	0.197	0.49	1.4	<0.2	<0.2	86.4	<0.01	
1456304	0.06	<0.05	1.3	341	7.5	19.6	<0.001	0.194	0.33	1.6	0.2	0.2	44.0	<0.01	
1456305	0.09	0.07	1.4	381	7.4	22.8	<0.001	0.255	0.39	2.1	0.2	0.3	40.7	<0.01	
1456306	0.06	<0.05	2.2	328	15.0	16.3	0.012	0.470	1.23	1.5	0.3	<0.2	38.2	<0.01	
1456307	0.09	<0.05	1.1	364	7.6	22.2	<0.001	0.264	0.41	1.8	0.2	0.3	44.3	<0.01	
1456308	0.06	<0.05	1.1	361	8.6	20.0	<0.001	0.166	0.36	1.7	0.2	0.3	40.2	<0.01	
1456309	0.08	<0.05	1.2	344	7.4	21.3	<0.001	0.116	0.43	1.7	<0.2	0.3	40.5	<0.01	
1456310	0.06	<0.05	1.1	335	7.9	17.7	<0.001	0.125	0.45	1.5	0.2	0.3	39.3	<0.01	
1456311	0.09	<0.05	1.6	335	10.6	21.7	<0.001	0.135	0.79	1.7	<0.2	0.3	38.4	<0.01	
1456312	0.07	<0.05	1.1	330	7.8	16.3	<0.001	0.144	0.40	1.4	0.2	0.2	44.0	<0.01	
1456313	0.09	<0.05	1.2	357	7.2	17.6	<0.001	0.148	0.44	1.5	<0.2	0.2	38.3	<0.01	
1456314	0.06	<0.05	2.7	309	31.7	13.1	0.119	0.428	4.42	1.1	1.5	<0.2	36.4	<0.01	
1456315	0.10	0.17	30.6	725	3.3	11.1	<0.001	0.215	0.59	5.7	0.4	0.4	129	<0.01	
1456316	0.09	<0.05	1.0	258	7.4	18.3	<0.001	0.148	0.57	1.5	<0.2	0.2	66.1	<0.01	
1456317	0.07	<0.05	0.8	301	6.2	18.2	<0.001	0.163	0.24	1.4	<0.2	0.2	52.4	<0.01	
1456318	0.07	<0.05	0.8	319	8.9	19.0	<0.001	0.208	0.46	1.6	<0.2	0.3	58.2	<0.01	
1456319	0.06	<0.05	1.1	242	9.4	14.0	<0.001	0.235	0.77	1.2	0.2	<0.2	51.1	<0.01	
1456320	0.07	<0.05	0.8	240	8.8	17.6	<0.001	0.316	0.56	1.4	<0.2	0.2	72.4	<0.01	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

5623 McADAM ROAD
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456321	0.05	<0.05	0.9	253	9.1	12.7	<0.001	0.341	0.60	1.4	<0.2	<0.2	59.9	<0.01
1456322	0.07	<0.05	1.3	249	9.9	20.7	<0.001	0.303	0.79	1.7	<0.2	0.3	71.1	<0.01
1456323	0.05	<0.05	0.9	254	9.5	15.7	<0.001	0.173	0.89	1.3	<0.2	0.2	60.3	<0.01
1456324	0.06	<0.05	0.9	279	8.2	18.6	<0.001	0.194	0.72	1.6	<0.2	0.2	69.2	<0.01
1456325	0.05	<0.05	0.6	297	7.6	15.0	<0.001	0.136	0.65	1.4	<0.2	0.2	67.1	<0.01
1456326	0.14	0.12	11.0	729	22.1	11.2	<0.001	0.732	0.31	10.0	0.9	0.9	143	<0.01
1456327	0.06	<0.05	1.0	299	7.9	17.0	<0.001	0.356	0.71	1.4	0.2	0.2	59.0	<0.01
1456328	0.07	<0.05	2.0	267	8.9	21.6	0.001	0.641	0.85	1.4	0.3	0.3	61.2	<0.01
1456329	0.07	<0.05	2.1	282	8.1	23.2	<0.001	0.440	0.65	1.4	0.2	0.3	54.4	<0.01
1456330	0.06	<0.05	1.8	264	5.5	16.2	<0.001	0.213	0.35	2.1	0.2	0.2	83.8	<0.01
1456331	0.15	<0.05	0.8	327	5.1	18.7	<0.001	0.031	0.21	1.2	<0.2	0.4	202	<0.01
1456332	0.12	0.08	0.7	335	5.3	15.0	<0.001	0.054	0.17	1.4	<0.2	0.4	186	<0.01
1456333	0.14	0.07	0.7	294	11.2	16.7	<0.001	0.099	0.13	1.4	<0.2	0.4	256	<0.01
1456334	0.12	<0.05	0.6	344	4.7	11.1	<0.001	0.031	0.15	0.9	<0.2	0.3	138	<0.01
1456335	0.14	<0.05	0.9	329	7.2	12.4	<0.001	0.053	0.15	1.1	<0.2	0.3	200	<0.01
1456336	0.13	<0.05	0.8	367	5.2	14.4	<0.001	0.049	0.13	1.0	<0.2	0.3	178	<0.01
1456337	0.15	<0.05	0.5	325	7.2	14.7	<0.001	0.066	0.16	1.1	<0.2	0.3	199	<0.01
1456338	0.14	<0.05	0.5	385	6.0	14.2	<0.001	0.044	0.16	1.1	<0.2	0.3	173	<0.01
1456339	0.11	<0.05	0.3	364	7.5	10.9	<0.001	0.059	0.14	0.9	<0.2	0.3	165	<0.01
1456340	0.10	0.15	30.6	703	3.1	11.2	<0.001	0.224	0.61	5.3	0.3	0.4	132	<0.01
1456341	0.10	<0.05	0.5	349	6.4	8.4	<0.001	0.042	0.14	0.9	<0.2	0.3	128	<0.01
1456342	0.13	<0.05	1.0	388	6.6	9.5	<0.001	0.046	0.22	1.6	<0.2	0.4	130	<0.01
1456343	0.11	<0.05	<0.2	341	7.6	10.3	<0.001	0.046	0.17	1.1	<0.2	0.3	126	<0.01
1456344	0.02	<0.05	2.4	288	8.0	22.8	<0.001	0.023	1.23	1.2	0.2	0.3	16.1	<0.01
1456345	<0.01	<0.05	0.8	301	8.6	15.9	<0.001	0.063	0.99	0.9	0.4	<0.2	7.7	<0.01
1456346	0.01	<0.05	1.0	274	7.8	21.1	<0.001	0.067	0.68	1.2	0.3	0.3	8.3	<0.01
1456347	<0.01	<0.05	0.9	286	7.3	20.4	<0.001	0.107	0.64	1.0	0.4	0.2	9.1	<0.01
1456348	<0.01	<0.05	0.9	246	6.5	14.0	<0.001	0.147	0.47	0.9	0.3	<0.2	19.7	<0.01
1456349	<0.01	<0.05	0.9	273	8.0	21.6	<0.001	0.027	0.58	1.1	<0.2	<0.2	9.4	<0.01
1456350	<0.01	<0.05	1.3	271	6.8	19.8	<0.001	0.021	0.42	1.0	0.4	<0.2	8.5	<0.01
1456351	0.14	0.50	35.3	256	170	1.6	<0.001	1.33	87.7	1.6	9.4	6.7	64.7	<0.01
1456352	0.05	<0.05	1.5	338	8.6	29.6	<0.001	0.157	0.41	1.7	0.3	0.3	12.6	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm
		0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456353		0.03	<0.05	1.0	325	8.2	17.9	<0.001	0.230	0.39	1.3	0.3	<0.2	11.6	<0.01
1456354		0.02	<0.05	1.1	347	7.6	14.8	<0.001	0.328	0.59	1.1	0.3	<0.2	7.8	<0.01
1456355		0.04	<0.05	2.4	605	8.6	24.0	<0.001	0.652	0.74	1.4	0.4	0.2	10.7	<0.01
1456356		0.03	<0.05	1.3	376	7.6	22.1	<0.001	0.338	0.91	1.3	0.4	0.2	6.8	<0.01
1456357		0.05	<0.05	1.8	404	9.7	38.2	<0.001	0.509	1.30	2.0	0.3	0.4	14.3	<0.01
1456358		0.02	<0.05	1.3	407	9.9	27.3	<0.001	0.622	1.04	1.5	0.4	0.4	8.4	<0.01
1456359		0.04	<0.05	1.7	339	9.2	29.3	<0.001	0.313	1.00	1.6	0.3	0.3	17.3	<0.01
1456360		0.03	<0.05	1.3	346	8.2	26.7	<0.001	0.275	0.91	1.6	0.3	0.3	16.5	<0.01
1456361		0.03	<0.05	1.8	348	9.7	24.7	<0.001	0.513	1.32	1.3	0.2	0.3	25.9	<0.01
1456362		0.01	<0.05	1.1	285	7.8	16.9	<0.001	0.587	1.45	0.9	<0.2	0.2	36.5	<0.01
1456363		0.02	<0.05	1.5	298	8.9	21.6	<0.001	1.22	1.53	1.2	0.2	0.3	31.9	<0.01
1456364		0.03	<0.05	1.1	327	7.8	20.8	<0.001	0.391	1.55	1.2	0.3	0.3	8.6	<0.01
1456365		0.12	0.12	26.9	686	3.1	11.4	<0.001	0.207	0.55	5.7	0.4	0.4	134	<0.01
1456366		0.02	<0.05	1.0	335	7.5	19.8	<0.001	0.342	1.42	1.3	0.3	0.3	19.4	<0.01
1456367		0.02	<0.05	1.2	358	7.5	21.1	<0.001	0.346	0.88	1.3	0.3	0.6	22.1	<0.01
1456368		0.02	<0.05	0.8	332	7.8	17.5	<0.001	0.287	0.71	1.2	0.3	0.3	21.3	<0.01
1456369		0.03	<0.05	1.0	341	7.7	21.4	<0.001	0.343	0.67	1.3	0.3	0.2	13.7	<0.01
1456370		0.02	<0.05	0.5	342	8.0	18.2	<0.001	0.364	0.69	1.2	0.3	0.2	18.4	<0.01
1456371		0.03	<0.05	0.7	304	8.0	22.2	<0.001	0.465	1.16	1.3	0.3	0.3	21.6	<0.01
1456372		0.02	<0.05	1.1	331	8.4	15.1	<0.001	0.511	0.77	1.0	0.3	0.2	14.1	<0.01
1456373		0.02	<0.05	1.0	375	9.9	17.7	<0.001	0.590	1.16	1.1	1.1	0.2	28.8	<0.01
1456374		0.03	<0.05	1.1	362	9.0	15.2	<0.001	0.345	0.30	1.2	0.4	0.2	13.9	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
Sample Description											
1455981	0.02	1.1	<0.005	0.17	0.22	46.6	0.07	7.63	56.5	3.3	
1455982	<0.01	1.3	<0.005	0.11	0.22	43.9	0.06	10.6	44.3	4.8	
1455983	0.01	1.1	<0.005	0.14	0.18	27.9	<0.05	6.10	51.7	3.8	
1455984	<0.01	1.3	<0.005	0.12	0.17	28.3	<0.05	7.12	58.7	3.3	
1455985	<0.01	1.2	0.015	0.14	0.28	45.0	0.33	6.05	42.9	5.7	
1455986	<0.01	1.1	<0.005	0.08	0.18	18.3	0.33	7.26	54.6	4.1	
1455987	0.01	1.0	<0.005	0.08	0.21	16.2	0.27	7.65	55.1	3.2	
1455988	0.01	1.0	<0.005	0.08	0.23	15.8	0.11	8.19	52.9	2.9	
1455989	0.02	1.1	<0.005	0.09	0.25	15.9	0.06	7.03	49.3	3.1	
1455990	0.02	1.5	0.127	0.08	0.68	117	0.23	8.39	37.3	7.6	
1455991	0.01	1.0	<0.005	0.08	0.25	19.3	0.08	10.1	42.8	3.6	
1455992	0.02	1.0	<0.005	0.08	0.25	14.8	0.05	7.21	48.5	3.1	
1455993	0.06	0.9	<0.005	0.09	0.24	12.7	<0.05	6.60	52.2	2.1	
1455994	0.63	0.7	<0.005	0.09	0.20	11.3	<0.05	5.58	53.5	2.3	
1455995	0.42	0.7	<0.005	0.10	0.17	11.2	<0.05	5.01	44.5	2.0	
1455996	0.04	0.9	<0.005	0.09	0.26	12.0	<0.05	6.13	49.3	2.4	
1455997	0.29	0.9	<0.005	0.10	0.23	11.7	<0.05	6.36	42.6	2.3	
1455998	0.03	1.0	<0.005	0.09	0.20	14.5	<0.05	7.83	55.6	2.4	
1455999	0.35	1.0	<0.005	0.10	0.21	14.9	<0.05	8.06	49.8	2.4	
1456000	0.02	1.1	<0.005	0.08	0.15	17.6	0.29	9.55	49.0	2.9	
1456001	3.93	1.6	0.098	0.15	0.51	135	0.32	9.30	80.2	12.4	
1456002	0.06	1.0	<0.005	0.08	0.14	12.8	0.08	6.99	44.3	2.6	
1456003	0.01	1.2	<0.005	0.10	0.16	14.2	<0.05	9.24	60.0	2.5	
1456004	<0.01	1.0	<0.005	0.09	0.14	13.7	<0.05	7.73	55.4	2.4	
1456005	0.02	1.0	<0.005	0.09	0.18	14.1	<0.05	7.99	53.9	2.7	
1456006	0.01	1.0	<0.005	0.12	0.20	15.8	<0.05	9.15	54.9	3.2	
1456007	<0.01	1.0	<0.005	0.11	0.18	13.5	<0.05	9.08	48.5	3.5	
1456008	<0.01	1.1	<0.005	0.11	0.20	14.4	<0.05	9.67	53.9	3.3	
1456009	<0.01	1.1	<0.005	0.11	0.20	13.2	<0.05	8.86	54.7	3.3	
1456010	<0.01	1.1	<0.005	0.13	0.21	14.3	<0.05	8.60	54.2	2.9	
1456011	<0.01	1.2	<0.005	0.13	0.28	14.8	<0.05	9.41	58.1	2.7	
1456012	<0.01	1.1	<0.005	0.12	0.21	14.6	<0.05	9.00	55.4	3.3	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456013		<0.01	1.3	<0.005	0.14	0.35	15.3	<0.05	9.68	56.2	3.6
1456014		<0.01	1.2	<0.005	0.11	0.22	12.7	<0.05	8.05	49.8	3.4
1456015		0.02	1.4	0.113	0.08	0.55	115	0.23	7.82	40.2	6.9
1456016		<0.01	1.2	<0.005	0.10	0.21	12.8	<0.05	8.34	53.0	2.7
1456017		<0.01	1.2	<0.005	0.10	0.22	13.0	<0.05	8.17	50.7	3.8
1456018		0.01	1.3	<0.005	0.11	0.24	14.4	<0.05	8.05	53.4	4.6
1456019		<0.01	1.3	<0.005	0.09	0.24	13.6	<0.05	7.38	48.8	4.4
1456020		<0.01	1.4	<0.005	0.09	0.23	14.5	<0.05	7.23	43.9	4.5
1456021		<0.01	1.3	<0.005	0.10	0.22	13.1	<0.05	7.79	50.9	4.6
1456022		0.01	1.4	<0.005	0.13	0.31	14.0	<0.05	8.92	65.4	4.6
1456023		<0.01	1.3	<0.005	0.09	0.21	13.5	<0.05	7.78	52.0	4.2
1456024		<0.01	1.2	<0.005	0.09	0.20	13.0	<0.05	7.46	50.4	4.4
1456025		<0.01	1.4	<0.005	0.09	0.21	12.7	<0.05	7.80	52.1	3.7
1456026		22.5	0.7	0.068	0.76	0.21	34.8	5.11	3.73	83.0	10.0
1456027		0.21	1.3	<0.005	0.10	0.25	13.4	0.06	7.49	50.7	3.8
1456028		0.03	1.5	<0.005	0.11	0.29	14.3	<0.05	9.04	50.3	5.1
1456029		0.02	1.7	<0.005	0.14	0.35	15.9	<0.05	9.09	60.7	4.3
1456030		0.01	1.5	<0.005	0.12	0.27	16.5	<0.05	8.81	59.1	4.1
1456031		0.01	1.3	0.007	0.21	0.23	31.0	0.11	7.26	50.5	5.8
1456032		0.01	1.1	<0.005	0.13	0.30	14.7	0.09	7.12	44.3	3.5
1456033		<0.01	1.1	<0.005	0.12	0.24	12.6	0.06	8.47	54.2	3.6
1456034		<0.01	1.3	<0.005	0.18	0.41	13.6	0.07	9.03	53.4	4.8
1456035		<0.01	1.5	<0.005	0.34	0.90	24.0	0.08	8.02	52.0	5.3
1456036		<0.01	1.1	<0.005	0.16	0.19	20.6	0.08	6.82	56.4	3.6
1456037		<0.01	1.3	<0.005	0.15	0.34	16.2	0.09	10.7	47.6	5.2
1456038		0.02	1.5	<0.005	0.16	0.48	20.7	0.08	11.1	54.2	4.7
1456039		0.02	1.1	<0.005	0.12	0.27	23.7	0.06	6.48	60.0	2.9
1456040		0.02	1.6	0.146	0.12	0.62	124	0.26	9.18	44.5	8.2
1456041		0.01	1.0	<0.005	0.11	0.28	17.3	0.06	8.95	54.2	2.6
1456042		<0.01	0.9	<0.005	0.11	0.19	20.8	0.07	6.29	56.0	2.8
1456043		<0.01	1.2	<0.005	0.20	0.34	20.1	0.05	11.2	58.5	3.4
1456044		<0.01	1.2	<0.005	0.17	0.29	21.8	<0.05	7.49	54.7	3.5

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5
1456045	<0.01	1.2	<0.005	0.19	0.32	16.5	0.06	9.07	47.2	4.7
1456046	<0.01	1.4	<0.005	0.17	0.38	28.0	0.07	9.91	52.4	5.7
1456047	<0.01	1.1	<0.005	0.13	0.25	12.9	0.06	7.33	46.5	3.9
1456048	0.01	1.2	<0.005	0.16	0.51	18.7	0.09	10.4	53.5	4.0
1456049	<0.01	1.0	<0.005	0.12	0.22	19.2	0.07	8.06	51.4	3.3
1456050	0.06	1.6	<0.005	0.20	0.30	21.3	0.06	9.50	57.6	4.1
1456051	0.19	2.2	0.128	0.08	0.82	146	1.96	13.8	92.6	18.3
1456052	0.01	1.5	<0.005	0.14	0.28	26.4	0.16	11.0	54.0	5.3
1456053	0.01	1.3	<0.005	0.25	0.58	19.0	0.06	7.39	47.8	2.8
1456054	<0.01	1.2	<0.005	0.25	0.24	24.6	0.07	7.54	45.6	4.0
1456055	<0.01	1.2	<0.005	0.10	0.22	12.9	0.06	7.42	50.5	3.8
1456056	<0.01	1.5	<0.005	0.09	0.25	13.5	<0.05	7.26	56.8	3.6
1456057	<0.01	1.2	<0.005	0.16	0.21	21.3	<0.05	6.09	49.0	4.3
1456058	<0.01	1.1	<0.005	0.16	0.24	20.7	<0.05	5.26	46.4	4.0
1456059	<0.01	1.1	<0.005	0.17	0.37	19.7	<0.05	5.72	42.1	4.0
1456060	<0.01	1.0	<0.005	0.16	0.47	19.3	<0.05	5.83	41.5	3.7
1456061	<0.01	1.4	<0.005	0.13	0.35	19.3	<0.05	5.81	43.3	4.1
1456062	<0.01	1.3	<0.005	0.13	0.23	21.5	<0.05	5.85	48.1	4.0
1456063	<0.01	1.4	<0.005	0.18	0.22	27.2	<0.05	6.46	47.1	4.5
1456064	<0.01	1.3	<0.005	0.15	0.21	22.3	<0.05	5.59	50.5	3.7
1456065	0.02	1.5	0.122	0.07	0.65	105	0.33	8.01	40.8	7.9
1456066	<0.01	1.4	<0.005	0.12	0.17	20.0	<0.05	6.82	51.2	3.9
1456067	<0.01	1.2	<0.005	0.14	0.36	20.3	<0.05	6.21	40.0	3.1
1456068	<0.01	1.2	<0.005	0.16	0.28	20.1	<0.05	6.15	46.1	3.4
1456069	<0.01	1.0	<0.005	0.10	0.42	18.1	<0.05	5.61	42.1	3.3
1456070	<0.01	1.1	<0.005	0.12	0.51	18.9	<0.05	6.30	41.8	3.7
1456071	<0.01	1.0	<0.005	0.12	0.24	17.8	<0.05	5.76	51.1	3.5
1456072	<0.01	1.3	<0.005	0.11	0.18	17.5	<0.05	5.59	48.6	3.7
1456073	<0.01	1.2	<0.005	0.10	0.20	20.3	<0.05	5.94	48.0	3.3
1456074	<0.01	1.3	<0.005	0.14	0.15	22.3	0.06	7.88	49.0	3.5
1456075	<0.01	1.1	<0.005	0.12	0.24	20.8	0.05	7.41	45.0	3.3
1456076	8.66	0.8	0.072	0.28	0.34	103	0.68	7.54	104	10.0

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
	Unit: RDL:	ppm 0.01	ppm 0.1	% 0.005	ppm 0.02	ppm 0.05	ppm 0.5	ppm 0.05	ppm 0.05	ppm 0.5	ppm 0.5
1456077		0.07	0.9	<0.005	0.13	0.24	27.3	<0.05	10.9	61.7	1.8
1456078		<0.01	1.1	<0.005	0.13	0.20	24.0	<0.05	8.64	45.7	2.8
1456079		<0.01	1.2	<0.005	0.15	0.22	23.4	<0.05	8.80	41.4	2.1
1456080		<0.01	1.2	<0.005	0.15	0.28	23.7	<0.05	9.40	43.8	2.4
1456081		<0.01	1.1	<0.005	0.11	0.21	27.2	<0.05	8.94	38.9	2.4
1456082		<0.01	1.2	<0.005	0.13	0.35	20.0	<0.05	8.63	45.7	3.3
1456083		<0.01	1.2	<0.005	0.15	0.66	22.1	<0.05	9.14	43.6	3.2
1456084		<0.01	1.1	<0.005	0.12	0.21	24.2	<0.05	6.89	51.0	2.5
1456085		<0.01	1.1	<0.005	0.11	0.16	25.5	0.05	6.49	55.0	3.1
1456086		<0.01	1.0	<0.005	0.10	0.12	19.2	<0.05	4.68	48.9	3.0
1456087		<0.01	1.1	<0.005	0.12	0.16	17.1	<0.05	8.89	39.6	3.4
1456088		<0.01	0.8	<0.005	0.08	0.20	34.2	0.05	36.7	56.4	3.2
1456089		<0.01	1.3	<0.005	0.17	0.26	23.7	<0.05	34.3	44.8	2.5
1456090		0.02	1.4	0.142	0.09	0.63	116	0.24	10.2	45.1	8.4
1456091		<0.01	1.0	<0.005	0.11	0.20	22.3	<0.05	8.12	45.7	4.1
1456092		<0.01	1.1	<0.005	0.16	0.22	19.9	<0.05	7.29	64.9	3.2
1456093		0.03	1.2	<0.005	0.19	0.46	10.5	<0.05	6.88	48.8	4.2
1456094		<0.01	1.1	<0.005	0.11	0.15	14.5	<0.05	6.43	53.6	3.6
1456243		<0.01	0.9	<0.005	0.12	0.15	11.4	0.21	3.38	41.2	2.0
1456244		<0.01	1.1	<0.005	0.12	0.16	11.5	0.11	2.90	42.7	2.3
1456245		0.01	1.1	<0.005	0.17	0.20	13.7	<0.05	5.39	53.0	1.9
1456246		<0.01	1.2	<0.005	0.18	0.19	14.1	<0.05	5.99	52.7	1.5
1456247		<0.01	1.2	<0.005	0.17	0.21	13.6	<0.05	9.81	58.2	1.8
1456248		<0.01	1.1	<0.005	0.17	0.21	14.7	<0.05	8.25	58.8	2.2
1456249		<0.01	1.1	<0.005	0.18	0.22	14.7	<0.05	8.10	52.3	2.2
1456250		0.01	1.1	<0.005	0.18	0.19	10.6	0.08	7.33	55.7	2.7
1456251		21.5	0.7	0.066	0.71	0.19	30.2	5.10	3.55	77.9	9.4
1456252		0.02	1.2	<0.005	0.23	0.20	11.9	0.67	6.61	44.5	2.1
1456253		0.01	1.0	<0.005	0.17	0.16	11.5	<0.05	6.75	37.3	2.1
1456254		0.01	1.0	<0.005	0.15	0.14	12.4	<0.05	6.34	46.7	2.1
1456255		0.01	1.1	<0.005	0.18	0.17	12.1	0.11	7.04	<0.5	1.9
1456256		0.01	0.9	<0.005	0.22	0.16	10.9	<0.05	6.71	<0.5	1.5

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456257		0.01	0.6	<0.005	0.19	0.18	13.0	0.20	6.48	<0.5	1.8
1456258		<0.01	0.9	<0.005	0.22	0.17	10.8	0.10	8.00	33.6	1.9
1456259		0.01	1.1	<0.005	0.12	0.18	15.0	0.08	6.09	51.8	2.7
1456260		<0.01	1.1	<0.005	0.12	0.18	15.3	0.06	5.32	51.4	1.9
1456261		<0.01	0.8	<0.005	0.11	0.15	16.7	0.07	4.35	40.2	2.0
1456262		0.02	1.0	<0.005	0.23	0.22	11.6	0.12	5.10	41.0	2.8
1456263		0.01	1.3	<0.005	0.27	0.24	14.2	0.06	6.06	49.2	2.5
1456264		<0.01	1.3	<0.005	0.20	0.25	11.3	<0.05	6.46	51.9	2.9
1456265		0.02	1.5	0.154	0.08	0.66	117	0.25	9.28	44.5	9.1
1456266		<0.01	1.2	<0.005	0.13	0.20	14.8	0.06	6.58	52.8	3.3
1456267		<0.01	1.3	<0.005	0.14	0.21	16.3	<0.05	6.36	48.2	2.2
1456268		<0.01	1.1	<0.005	0.10	0.17	13.6	<0.05	7.00	51.0	2.5
1456269		<0.01	1.2	<0.005	0.12	0.17	12.1	<0.05	7.36	50.8	2.8
1456270		<0.01	1.2	<0.005	0.12	0.20	13.5	<0.05	8.06	54.7	2.7
1456271		<0.01	1.3	<0.005	0.15	0.23	14.5	<0.05	7.02	54.5	2.7
1456272		0.01	1.1	<0.005	0.13	0.17	6.6	<0.05	6.88	52.9	2.7
1456273		<0.01	1.3	<0.005	0.14	0.22	13.9	<0.05	6.98	53.5	2.7
1456274		0.01	1.2	<0.005	0.14	0.20	9.5	<0.05	8.12	55.0	3.1
1456275		0.01	1.3	<0.005	0.14	0.22	13.0	0.06	8.29	50.8	3.4
1456276		0.26	2.2	0.132	0.08	0.80	134	1.75	14.2	95.6	15.8
1456277		0.02	1.2	<0.005	0.19	0.20	15.9	<0.05	7.78	56.0	2.6
1456278		0.01	1.1	<0.005	0.17	0.18	13.7	<0.05	7.49	51.8	3.2
1456279		0.01	1.2	<0.005	0.40	0.23	14.4	0.07	8.14	57.0	2.6
1456280		0.01	1.0	<0.005	0.46	0.17	17.1	<0.05	6.98	51.4	2.7
1456281		<0.01	1.3	<0.005	0.17	0.20	15.2	<0.05	6.44	56.5	2.3
1456282		<0.01	1.0	<0.005	0.28	0.17	19.0	<0.05	5.92	53.4	2.7
1456283		<0.01	1.1	<0.005	0.13	0.17	21.1	<0.05	5.78	56.2	2.4
1456284		<0.01	1.0	<0.005	0.16	0.17	17.9	<0.05	6.39	50.7	2.4
1456285		<0.01	1.1	<0.005	0.13	0.16	18.7	<0.05	6.13	53.6	2.7
1456286		<0.01	1.0	<0.005	0.18	0.17	18.5	<0.05	5.82	52.9	2.8
1456287		<0.01	1.1	<0.005	0.15	0.18	14.0	<0.05	6.77	57.3	2.8
1456288		<0.01	1.1	<0.005	0.14	0.20	17.2	<0.05	5.28	56.4	2.3

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011	DATE RECEIVED: Oct 24, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
Sample Description											
1456289	<0.01	0.8	<0.005	0.15	0.15	15.3	<0.05	4.52	47.3	3.0	
1456290	0.02	1.3	0.146	0.07	0.60	113	0.23	8.68	45.0	7.8	
1456291	0.01	0.6	<0.005	0.11	0.15	18.8	<0.05	5.00	64.3	2.6	
1456292	<0.01	0.9	<0.005	0.21	0.18	18.3	<0.05	5.47	54.7	2.5	
1456293	<0.01	1.0	<0.005	0.14	0.16	16.0	<0.05	7.30	53.7	2.7	
1456294	0.01	0.9	<0.005	0.24	0.16	28.2	<0.05	7.75	65.9	2.5	
1456295	0.01	1.0	<0.005	0.16	0.19	18.8	<0.05	5.63	56.8	2.4	
1456296	0.01	1.0	<0.005	0.12	0.18	13.7	<0.05	5.81	57.2	2.3	
1456297	<0.01	1.2	<0.005	0.10	0.18	13.0	<0.05	7.82	54.2	2.4	
1456298	<0.01	0.6	<0.005	0.10	0.13	11.1	<0.05	4.70	58.3	2.3	
1456299	0.01	1.1	<0.005	0.13	0.19	9.6	<0.05	7.15	57.8	2.7	
1456300	<0.01	1.0	<0.005	0.13	0.18	11.9	<0.05	7.14	53.6	2.3	
1456301	9.94	1.0	0.086	0.30	0.42	103	0.54	8.42	110	10.6	
1456302	0.11	1.0	<0.005	0.16	0.20	19.8	0.08	5.82	55.8	4.6	
1456303	<0.01	0.8	<0.005	0.15	0.21	13.5	0.08	5.21	57.1	3.3	
1456304	<0.01	1.4	<0.005	0.15	0.28	10.3	0.08	8.55	60.1	3.2	
1456305	<0.01	1.5	<0.005	0.19	0.34	11.7	0.06	8.34	59.5	5.5	
1456306	0.09	1.1	<0.005	2.88	0.25	9.8	0.10	7.34	58.9	3.3	
1456307	<0.01	1.4	<0.005	0.20	0.32	11.0	<0.05	8.20	60.1	4.4	
1456308	<0.01	1.4	<0.005	0.17	0.33	9.4	0.08	8.29	57.6	3.6	
1456309	<0.01	1.3	<0.005	0.20	0.28	9.4	<0.05	7.61	55.4	3.2	
1456310	<0.01	1.3	<0.005	0.16	0.27	8.5	0.07	7.58	63.6	3.1	
1456311	<0.01	1.5	<0.005	0.42	0.32	10.0	0.05	7.33	58.9	3.8	
1456312	<0.01	1.3	<0.005	0.15	0.27	8.8	0.08	7.15	56.4	3.6	
1456313	<0.01	1.4	<0.005	0.17	0.30	10.4	<0.05	7.71	53.6	4.3	
1456314	0.02	1.2	<0.005	7.28	0.25	11.4	0.06	6.66	59.0	3.6	
1456315	0.02	1.9	0.131	0.12	0.78	89.4	0.27	9.06	45.3	8.9	
1456316	<0.01	1.2	<0.005	0.27	0.30	11.0	<0.05	7.19	52.0	3.5	
1456317	<0.01	1.1	<0.005	0.15	0.34	8.7	<0.05	7.27	58.7	3.1	
1456318	<0.01	1.3	<0.005	0.19	0.29	10.2	<0.05	8.21	56.9	3.0	
1456319	<0.01	1.0	<0.005	0.28	0.20	9.2	<0.05	6.74	51.3	3.6	
1456320	<0.01	1.1	<0.005	0.17	0.26	8.9	<0.05	8.28	60.9	3.4	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
	Unit: RDL:	ppm 0.01	ppm 0.1	% 0.005	ppm 0.02	ppm 0.05	ppm 0.5	ppm 0.05	ppm 0.05	ppm 0.5	ppm 0.5
1456321		0.01	1.1	<0.005	0.12	0.25	8.8	<0.05	7.66	61.5	3.7
1456322		<0.01	1.1	<0.005	0.22	0.28	10.2	0.06	8.05	53.9	4.1
1456323		<0.01	1.0	<0.005	0.33	0.23	10.0	<0.05	6.47	50.2	2.7
1456324		<0.01	1.1	<0.005	0.44	0.27	11.2	<0.05	7.58	58.3	3.6
1456325		<0.01	1.2	<0.005	0.16	0.26	9.5	<0.05	7.92	63.6	2.8
1456326		3.91	2.1	0.117	0.17	0.70	108	0.38	10.3	91.6	16.6
1456327		0.03	1.1	<0.005	0.24	0.26	9.9	0.09	6.97	53.7	3.4
1456328		<0.01	1.1	<0.005	0.44	0.29	10.7	0.08	7.77	38.8	3.8
1456329		<0.01	1.1	<0.005	0.45	0.37	10.3	0.08	6.88	30.7	4.1
1456330		<0.01	1.1	<0.005	0.18	0.36	14.1	0.08	8.39	45.4	2.9
1456331		<0.01	4.3	<0.005	0.13	0.40	7.5	0.08	11.7	31.7	2.0
1456332		<0.01	3.7	<0.005	0.09	0.48	6.7	0.09	10.6	44.7	4.2
1456333		<0.01	2.7	<0.005	0.11	0.45	7.9	<0.05	11.3	64.9	3.8
1456334		<0.01	4.0	<0.005	0.07	0.42	6.4	0.07	10.4	40.1	2.2
1456335		<0.01	3.7	<0.005	0.08	0.37	6.3	0.06	11.2	36.7	3.0
1456336		<0.01	4.0	<0.005	0.09	0.44	5.5	0.08	11.2	33.1	2.2
1456337		<0.01	3.7	<0.005	0.10	0.44	7.4	<0.05	11.5	33.2	2.2
1456338		<0.01	4.1	<0.005	0.09	0.40	7.8	0.07	12.4	35.7	1.6
1456339		<0.01	4.0	<0.005	0.06	0.39	7.2	<0.05	11.8	38.4	1.9
1456340		0.01	2.1	0.119	0.07	0.79	81.6	0.29	8.72	46.3	8.4
1456341		<0.01	3.6	<0.005	0.05	0.42	9.0	<0.05	10.1	38.3	3.0
1456342		<0.01	3.5	<0.005	0.06	0.49	12.7	0.05	11.9	50.0	2.6
1456343		<0.01	4.0	<0.005	0.06	0.49	8.0	<0.05	12.5	34.5	2.2
1456344		<0.01	1.6	<0.005	0.25	0.33	9.6	39.7	7.37	55.6	3.1
1456345		<0.01	1.2	<0.005	0.18	0.23	7.5	0.47	6.51	48.9	2.1
1456346		<0.01	1.1	<0.005	0.23	0.25	9.6	0.43	7.01	48.6	2.4
1456347		<0.01	1.2	<0.005	0.21	0.21	7.5	1.23	7.21	45.4	2.4
1456348		<0.01	0.8	<0.005	0.15	0.17	6.5	0.10	6.65	36.9	2.3
1456349		<0.01	0.9	<0.005	0.23	0.19	7.7	0.18	6.33	52.6	1.9
1456350		<0.01	0.9	<0.005	0.24	0.20	7.3	0.18	6.01	52.2	1.7
1456351		21.0	0.9	0.086	0.76	0.25	23.0	5.03	3.70	76.8	10.0
1456352		<0.01	1.1	<0.005	0.28	0.35	11.4	0.12	8.03	65.1	3.6

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456353		<0.01	1.0	<0.005	0.18	0.27	9.1	0.10	7.85	47.4	3.0
1456354		<0.01	0.9	<0.005	0.18	0.22	7.7	0.10	7.21	49.9	2.7
1456355		<0.01	1.3	<0.005	0.30	0.30	7.0	0.11	10.1	50.8	3.7
1456356		<0.01	1.4	<0.005	0.27	0.30	8.4	0.09	8.80	44.8	2.7
1456357		<0.01	1.8	<0.005	0.43	0.40	11.2	0.07	10.2	52.7	3.9
1456358		<0.01	1.5	<0.005	0.28	0.39	9.6	0.10	9.65	72.8	3.7
1456359		<0.01	1.5	<0.005	0.33	0.33	10.3	0.07	9.62	55.9	3.7
1456360		<0.01	1.5	<0.005	0.28	0.30	9.2	0.10	9.57	56.9	3.5
1456361		<0.01	1.5	<0.005	0.31	0.29	6.2	0.07	9.99	50.1	4.0
1456362		<0.01	1.2	<0.005	0.28	0.25	5.2	0.09	9.02	48.8	3.2
1456363		<0.01	1.2	<0.005	0.29	0.26	5.5	0.06	9.27	38.6	3.5
1456364		<0.01	1.5	<0.005	0.34	0.29	8.3	0.05	7.72	53.6	3.1
1456365		<0.01	2.0	0.131	0.07	0.90	85.0	0.24	9.33	44.1	8.0
1456366		<0.01	1.2	<0.005	0.34	0.26	8.4	0.06	9.18	57.8	3.3
1456367		<0.01	1.3	<0.005	0.24	0.29	7.9	0.09	9.67	55.2	3.7
1456368		<0.01	1.3	<0.005	0.20	0.25	9.5	0.06	8.88	54.6	3.2
1456369		<0.01	1.4	<0.005	0.23	0.27	8.7	0.06	8.70	55.9	3.7
1456370		<0.01	1.4	<0.005	0.22	0.26	9.7	<0.05	9.48	68.0	2.8
1456371		<0.01	1.3	<0.005	0.25	0.28	10.3	0.06	9.61	49.3	4.1
1456372		<0.01	1.3	<0.005	0.18	0.25	8.4	0.06	8.08	51.1	3.1
1456373		<0.01	1.5	<0.005	0.22	0.26	7.9	0.07	9.98	52.3	2.4
1456374		<0.01	1.4	<0.005	0.15	0.29	11.5	0.09	7.73	60.5	3.0

Comments:

RDL - Reported Detection Limit

Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.

New client material was supplied for check samples 1456276, 1456301, 1456326 and 1456351. Jan 20, 2012

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1455981		0.124	
1455982		0.192	
1455983		0.199	
1455984		0.209	
1455985		0.255	
1455986		0.021	
1455987		0.029	
1455988		0.049	
1455989		0.059	
1455990		<0.002	
1455991		0.045	
1455992		0.017	
1455993		0.010	
1455994		0.209	
1455995		0.066	
1455996		<0.002	
1455997		0.208	
1455998		0.007	
1455999		0.329	
1456000		0.098	
1456001		4.37	
1456002		0.026	
1456003		0.044	
1456004		0.027	
1456005		0.072	
1456006		0.082	
1456007		0.035	
1456008		0.011	
1456009		0.057	
1456010		0.089	
1456011		0.034	
1456012		0.165	

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SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456013		0.076	
1456014		0.042	
1456015		<0.002	
1456016		0.031	
1456017		0.114	
1456018		0.088	
1456019		0.119	
1456020		0.147	
1456021		0.123	
1456022		0.163	
1456023		0.029	
1456024		0.035	
1456025		0.061	
1456026		2.25	
1456027		0.004	
1456028		0.185	
1456029		0.154	
1456030		0.033	
1456031		0.008	
1456032		0.236	
1456033		0.007	
1456034		0.006	
1456035		0.010	
1456036		<0.002	
1456037		0.002	
1456038		0.017	
1456039		0.130	
1456040		<0.002	
1456041		0.059	
1456042		0.056	
1456043		0.031	
1456044		0.129	

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Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 24, 2011

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DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456045		0.002	
1456046		0.139	
1456047		0.052	
1456048		0.011	
1456049		0.114	
1456050		0.179	
1456051		6.38	
1456052		0.028	
1456053		0.023	
1456054		0.023	
1456055		0.016	
1456056		0.042	
1456057		0.087	
1456058		0.048	
1456059		0.117	
1456060		0.006	
1456061		0.025	
1456062		0.012	
1456063		0.229	
1456064		0.285	
1456065		<0.002	
1456066		0.154	
1456067		0.649	
1456068		0.044	
1456069		0.007	
1456070		0.157	
1456071		0.027	
1456072		0.151	
1456073		0.033	
1456074		0.004	
1456075		0.014	
1456076		9.64	

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DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456077		0.003	
1456078		<0.002	
1456079		<0.002	
1456080		0.010	
1456081		0.067	
1456082		0.018	
1456083		0.023	
1456084		<0.002	
1456085		0.002	
1456086		0.014	
1456087		0.015	
1456088		0.005	
1456089		0.003	
1456090		<0.002	
1456091		0.006	
1456092		0.007	
1456093		0.012	
1456094		0.004	
1456243		<0.002	
1456244		0.034	
1456245		0.044	
1456246		0.018	
1456247		0.012	
1456248		0.034	
1456249		0.274	
1456250		0.513	
1456251		2.14	
1456252		0.140	
1456253		0.031	
1456254		0.240	
1456255		0.479	
1456256		0.110	

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DATE SAMPLED: Oct 24, 2011

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DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456257		0.273	
1456258		0.170	
1456259		0.096	
1456260		0.134	
1456261		1.00	
1456262		0.937	
1456263		1.71	
1456264		0.268	
1456265		0.004	
1456266		0.176	
1456267		0.204	
1456268		0.310	
1456269		0.216	
1456270		0.048	
1456271		0.245	
1456272		0.143	
1456273		0.199	0.222
1456274		0.069	
1456275		0.007	
1456276		6.01	9.53
1456277		0.141	
1456278		0.089	
1456279		0.127	0.120
1456280		0.078	
1456281		0.047	0.078
1456282		0.013	
1456283		0.034	
1456284		0.022	
1456285		<0.002	
1456286		0.042	
1456287		0.028	
1456288		0.061	0.077

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Certificate of Analysis

AGAT WORK ORDER: 11V541963

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456289		0.090	
1456290		<0.002	
1456291		0.028	
1456292		0.022	
1456293		0.029	
1456294		0.030	
1456295		0.032	
1456296		0.077	
1456297		0.018	
1456298		0.033	
1456299		0.030	
1456300		0.008	
1456301		7.99	3.65
1456302		0.025	
1456303		0.052	
1456304		<0.002	
1456305		0.038	
1456306		0.137	0.155
1456307		0.031	
1456308		0.021	
1456309		0.042	
1456310		0.005	
1456311		0.051	0.047
1456312		0.012	
1456313		0.004	
1456314		2.19	2.30
1456315		<0.002	
1456316		0.189	0.256
1456317		0.004	
1456318		0.028	
1456319		0.032	
1456320		0.006	

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SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456321		<0.002	
1456322		0.010	
1456323		0.023	
1456324		0.036	
1456325		<0.002	
1456326		4.40	4.29
1456327		0.030	
1456328		0.204	0.135
1456329		0.028	
1456330		0.101	0.117
1456331		<0.002	
1456332		<0.002	
1456333		0.012	
1456334		<0.002	
1456335		<0.002	
1456336		<0.002	
1456337		<0.002	
1456338		<0.002	
1456339		<0.002	
1456340		<0.002	
1456341		<0.002	
1456342		<0.002	
1456343		<0.002	
1456344		0.480	0.571
1456345		0.612	0.593
1456346		0.064	
1456347		0.034	
1456348		0.031	
1456349		0.043	
1456350		2.67	2.91
1456351		2.13	8.94
1456352		0.019	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

5623 McADAM ROAD
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1N9
 TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 24, 2011

DATE RECEIVED: Oct 24, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	
	Unit: RDL:	ppm 0.002	ppm 0.002
1456353		0.088	
1456354		0.019	
1456355		0.036	
1456356		0.045	
1456357		0.011	
1456358		0.008	
1456359		0.029	
1456360		0.004	
1456361		0.031	
1456362		0.027	
1456363		0.051	
1456364		0.055	
1456365		<0.002	
1456366		0.091	
1456367		0.106	
1456368		0.033	
1456369		0.044	
1456370		0.513	0.607
1456371		0.202	0.252
1456372		0.280	0.338
1456373		1.25	1.36
1456374		0.066	

Comments: RDL - Reported Detection Limit
 Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.
 New client material was supplied for check samples 1456276, 1456301, 1456326 and 1456351. Jan 20, 2012

Certified By: _____

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis											
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits	
							Lower			Upper	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)											
Ag	1	2832945	0.83	0.44		0.03			80%	120%	
Al	1	2832920	0.573	0.683	17.5%	< 0.01			80%	120%	
As	1	2832945	1.67	1.59	4.9%	0.2			80%	120%	
Au	1	2832945	< 1	< 1	0.0%	< 1			80%	120%	
B	1	2832945	< 5	< 5	0.0%	< 5			80%	120%	
Ba	1	2832920	33	35	5.9%	< 1			80%	120%	
Be	1	2832945	0.284	0.274	3.6%	< 0.05			80%	120%	
Bi	1	2832945	0.06	0.06	0.0%	< 0.01			80%	120%	
Ca	1	2832920	0.97	0.97	0.0%	< 0.01			80%	120%	
Cd	1	2832945	0.10	0.10	0.0%	< 0.01			80%	120%	
Ce	1	2832945	33.0	33.1	0.3%	< 0.01			80%	120%	
Co	1	2832945	2.73	2.78	1.8%	< 0.1	6	5.0	120%	80%	
Cr	1	2832945	77.0	73.8	4.2%	< 0.5			80%	120%	
Cs	1	2832945	1.40	1.34	4.4%	< 0.05			80%	120%	
Cu	1	2832920	4.68	4.25	9.6%	< 0.1	3954	3800	104%	80%	
Fe	1	2832920	2.18	2.17	0.5%	< 0.01			80%	120%	
Ga	1	2832945	2.08	1.92	8.0%	< 0.05			80%	120%	
Ge	1	2832945	0.118	0.110	7.0%	0.07			80%	120%	
Hf	1	2832945	0.093	0.102	9.2%	< 0.02			80%	120%	
Hg	1	2832945	0.01	0.01	0.0%	< 0.01	1.6	1.3	126%	80%	
In	1	2832945	0.016	0.015	6.5%	< 0.005			80%	120%	
K	1	2832920	0.293	0.323	9.7%	< 0.01			80%	120%	
La	1	2832945	17.9	18.0	0.6%	< 0.1			80%	120%	
Li	1	2832945	0.89	0.84	5.8%	< 0.1			80%	120%	
Mg	1	2832920	0.42	0.44	4.7%	< 0.01			80%	120%	
Mn	1	2832920	730	743	1.8%	< 1			80%	120%	
Mo	1	2832945	0.253	0.243	4.0%	< 0.05	318	280	113%	80%	
Na	1	2832920	0.034	0.035	2.9%	< 0.01			80%	120%	
Nb	1	2832945	< 0.05	< 0.05	0.0%	< 0.05			80%	120%	
Ni	1	2832920	1.17	1.12	4.4%	< 0.2			80%	120%	
P	1	2832920	480	488	1.7%	< 10			80%	120%	
Pb	1	2832945	4.22	4.32	2.3%	< 0.1			80%	120%	
Rb	1	2832945	9.74	9.24	5.3%	< 0.1	11	13	87%	80%	
Re	1	2832945	< 0.001	< 0.001	0.0%	0.003			80%	120%	
S	1	2832920	0.032	0.032	0.0%	< 0.005	0.96	0.80	120%	80%	
Sb	1	2832945	0.066	0.064	3.1%	< 0.05			80%	120%	
Sc	1	2832945	1.7	1.7	0.0%	< 0.1			80%	120%	
Se	1	2832945	0.2	0.2	0.0%	< 0.2	0.7	0.8	83%	80%	
Sn	1	2832945	0.29	0.36	21.5%	< 0.2	8.6	7.1	121%	80%	
Sr	1	2832945	9.7	9.4	3.1%	< 0.2	349	390	90%	80%	
Ta	1	2832945	< 0.01	< 0.01	0.0%	< 0.01			80%	120%	
Te	1	2832945	0.01	< 0.01		0.01			80%	120%	
Th	1	2832945	1.0	1.0	0.0%	< 0.1	1.1	1.4	77%	80%	
Ti	1	2832920	0.004	0.005	22.2%	< 0.005			80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2832945	0.115	0.109	5.4%	< 0.02				80%	120%	
U	1	2832945	0.203	0.206	1.5%	< 0.05	1	0.8	119%	80%	120%	
V	1	2832945	15.8	15.6	1.3%	< 0.5				80%	120%	
W	1	2832945	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2832945	9.15	9.35	2.2%	< 0.05		7		80%	120%	
Zn	1	2832920	56.5	58.0	2.6%	< 0.5				80%	120%	
Zr	1	2832945	3.19	3.57	11.2%	< 0.5				80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Ag	1	2833058	0.484	0.434	10.9%	1.02				80%	120%	
Al	1	2832945	0.452	0.422	6.9%	< 0.01				80%	120%	
As	1	2833058	9.12	9.15	0.3%	2.7				80%	120%	
Au	1	2833058	< 1	< 1	0.0%	< 1				80%	120%	
B	1	2833058	< 5	< 5	0.0%	56	8.81	7.00	126%	80%	120%	
Ba	1	2832945	55	55	0.0%	< 1				80%	120%	
Be	1	2833058	0.43	0.44	2.3%	< 0.05				80%	120%	
Bi	1	2833058	0.09	0.09	0.0%	0.18				80%	120%	
Ca	1	2832945	0.273	0.281	2.9%	< 0.01				80%	120%	
Cd	1	2833058	0.07	0.08	13.3%	0.48				80%	120%	
Ce	1	2833058	25.7	25.1	2.4%	0.57				80%	120%	
Co	1	2833058	3.08	3.03	1.6%	0.5	6.3	5.0	126%	80%	120%	
Cr	1	2833118	60.2	58.9	2.2%	< 0.5				80%	120%	
Cs	1	2833058	1.27	1.31	3.1%	0.08				80%	120%	
Cu	1	2832945	2.3	2.3	0.0%	< 0.1	4106	3800	108%	80%	120%	
Fe	1	2832945	1.46	1.49	2.0%	< 0.01				80%	120%	
Ga	1	2833058	2.08	2.02	2.9%	< 0.05				80%	120%	
Ge	1	2833058	0.08	0.08	0.0%	0.06				80%	120%	
Hf	1	2833058	0.05	0.05	0.0%	0.10				80%	120%	
Hg	1	2833058	0.02	0.02	0.0%	0.04	1.6	1.3	125%	80%	120%	
In	1	2833058	0.012	0.012	0.0%	0.018				80%	120%	
K	1	2832945	0.222	0.213	4.1%	< 0.01				80%	120%	
La	1	2833058	12.2	12.0	1.7%	0.3				80%	120%	
Li	1	2833058	3.2	3.2	0.0%	0.4				80%	120%	
Mg	1	2832945	0.07	0.07	0.0%	< 0.01				80%	120%	
Mn	1	2832945	814	831	2.1%	< 1				80%	120%	
Mo	1	2833058	2.76	2.65	4.1%	5.27				80%	120%	
Na	1	2832945	0.06	0.06	0.0%	< 0.01				80%	120%	
Nb	1	2833058	< 0.05	< 0.05	0.0%	0.09				80%	120%	
Ni	1	2832945	1.03	1.09	5.7%	< 0.2				80%	120%	
P	1	2832945	236	244	3.3%	< 10				80%	120%	
Pb	1	2833058	5.66	5.57	1.6%	12.6				80%	120%	
Rb	1	2833058	13.3	13.6	2.2%	0.4	14	13	105%	80%	120%	
Re	1	2833058	0.001	0.001	0.0%	0.001				80%	120%	
S	1	2832945	0.017	0.017	0.0%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Sb	1	2833058	0.217	0.210	3.3%	0.45				80%	120%	
Sc	1	2833058	1.2	1.2	0.0%	< 0.1				80%	120%	
Se	1	2833058	0.3	0.3	0.0%	< 0.2	0.7	0.8	85%	80%	120%	
Sn	1	2833058	< 0.2	< 0.2	0.0%	< 0.2				80%	120%	
Sr	1	2833058	12.8	12.5	2.4%	4.0	372	390	95%	80%	120%	
Ta	1	2833058	< 0.01	< 0.01	0.0%	0.11				80%	120%	
Te	1	2833058	< 0.01	< 0.01	0.0%	0.19				80%	120%	
Th	1	2833058	1.3	1.3	0.0%	< 0.1	1.4	1.4	103%	80%	120%	
Ti	1	2832945	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2833058	0.14	0.14	0.0%	< 0.02				80%	120%	
U	1	2833058	0.21	0.21	0.0%	< 0.05	0.7	0.8	83%	80%	120%	
V	1	2833118	9.87	9.18	7.2%	< 0.5				80%	120%	
W	1	2833058	< 0.05	< 0.05	0.0%	2.15				80%	120%	
Y	1	2833058	6.36	6.17	3.0%	0.17	5	7	70%	80%	120%	
Zn	1	2832945	54.9	56.1	2.2%	< 0.5				80%	120%	
Zr	1	2833058	2.25	2.30	2.2%	2.6				80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Ag	1	2833143	0.20	0.20	0.0%	< 0.01				80%	120%	
Al	1	2833118	0.721	0.604	17.7%	< 0.01				80%	120%	
As	1	2833143	11.1	11.2	0.9%	< 0.1				80%	120%	
Au	1	2833143	5	4	22.2%	< 1				80%	120%	
B	1	2833143	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2833019	115	106	8.1%	< 1				80%	120%	
Be	1	2833143	0.45	0.46	2.2%	< 0.05				80%	120%	
Bi	1	2833143	0.09	0.09	0.0%	< 0.01				80%	120%	
Ca	1	2833019	2.16	2.00	7.7%	< 0.01				80%	120%	
Cd	1	2833143	0.09	0.09	0.0%	< 0.01	0.13	0.10	128%	80%	120%	
Ce	1	2833143	24.9	25.6	2.8%	< 0.01				80%	120%	
Co	1	2833143	3.19	3.27	2.5%	< 0.1	5.9	5.0	118%	80%	120%	
Cr	1	2833143	105	116	10.0%	< 0.5				80%	120%	
Cs	1	2833143	1.43	1.53	6.8%	< 0.05				80%	120%	
Cu	1	2833019	5.61	5.34	4.9%	< 0.1	3853	3800	101%	80%	120%	
Fe	1	2833019	2.04	1.93	5.5%	< 0.01				80%	120%	
Ga	1	2833143	3.80	4.05	6.4%	< 0.05				80%	120%	
Ge	1	2833143	0.08	0.08	0.0%	< 0.05				80%	120%	
Hf	1	2833143	0.087	0.074	16.1%	< 0.02				80%	120%	
Hg	1	2833143	0.02	0.02	0.0%	< 0.01				80%	120%	
In	1	2833143	0.011	0.012	8.7%	< 0.005				80%	120%	
K	1	2833019	0.287	0.233	20.8%	< 0.01				80%	120%	
La	1	2833143	10.6	10.9	2.8%	< 0.1				80%	120%	
Li	1	2833143	4.59	4.75	3.4%	< 0.1				80%	120%	
Mg	1	2833019	0.569	0.540	5.2%	< 0.01				80%	120%	
Mn	1	2833019	872	841	3.6%	< 1				80%	120%	
Mo	1	2833143	1.28	1.33	3.8%	< 0.05				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Na	1	2833019	0.03	0.03	0.0%	< 0.01				80%	120%	
Nb	1	2833143	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2833019	0.54	0.66	20.0%	< 0.2				80%	120%	
P	1	2833019	446	440	1.4%	< 10				80%	120%	
Pb	1	2833143	8.62	9.18	6.3%	< 0.1				80%	120%	
Rb	1	2833143	29.6	31.1	4.9%	< 0.1	12	13	93%	80%	120%	
Re	1	2833143	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2833019	0.077	0.072	6.7%	< 0.005				80%	120%	
Sb	1	2833143	0.407	0.394	3.2%	< 0.05				80%	120%	
Sc	1	2833143	1.66	1.75	5.3%	< 0.1				80%	120%	
Se	1	2833143	0.3	0.3	0.0%	< 0.2	0.7	0.8	91%	80%	120%	
Sn	1	2833143	0.3	0.3	0.0%	< 0.2				80%	120%	
Sr	1	2833143	12.6	13.1	3.9%	< 0.2	406	390	104%	80%	120%	
Ta	1	2833143	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2833143	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2833143	1.15	1.19	3.4%	< 0.1	1.6	1.4	116%	80%	120%	
Ti	1	2833019	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2833143	0.28	0.29	3.5%	< 0.02				80%	120%	
U	1	2833143	0.35	0.36	2.8%	< 0.05	0.8	0.8	103%	80%	120%	
V	1	2833143	11.4	12.2	6.8%	< 0.5				80%	120%	
W	1	2833143	0.118	0.102	14.5%	< 0.05				80%	120%	
Y	1	2833143	8.03	8.20	2.1%	< 0.05	5	7	70%	80%	120%	
Zn	1	2833019	43.8	43.0	1.8%	< 0.5				80%	120%	
Zr	1	2833143	3.56	3.23	9.7%	< 0.5				80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Ag	1	2832995	1.05	1.17	10.8%	< 0.01				80%	120%	
Al	1	2833043	0.396	0.379	4.4%	< 0.01				80%	120%	
As	1	2832995	4.7	4.8	2.1%	< 0.1				80%	120%	
Au	1	2832995	24	119		< 1				80%	120%	
B	1	2832995	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2833043	62	61	1.6%	< 1				80%	120%	
Be	1	2832995	0.18	0.19	5.4%	< 0.05				80%	120%	
Bi	1	2832995	0.102	0.108	5.7%	< 0.01				80%	120%	
Ca	1	2833043	0.41	0.40	2.5%	< 0.01				80%	120%	
Cd	1	2832995	0.12	0.12	0.0%	< 0.01				80%	120%	
Ce	1	2832995	39.7	41.5	4.4%	< 0.01				80%	120%	
Co	1	2832995	2.7	2.7	0.0%	< 0.1				80%	120%	
Cr	1	2832995	84.0	73.3	13.6%	< 0.5				80%	120%	
Cs	1	2832995	1.12	1.26	11.8%	< 0.05				80%	120%	
Cu	1	2833043	3.82	4.02	5.1%	< 0.1	4037	3800	106%	80%	120%	
Fe	1	2833043	1.48	1.43	3.4%	< 0.01				80%	120%	
Ga	1	2832995	1.41	1.67	16.9%	< 0.05				80%	120%	
Ge	1	2832995	0.11	0.11	0.0%	< 0.05				80%	120%	
Hf	1	2832995	0.101	0.109	7.6%	< 0.02				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Hg	1	2832995	0.03	0.03	0.0%	< 0.01			80%	120%		
In	1	2832995	0.016	0.017	6.1%	< 0.005			80%	120%		
K	1	2833043	0.267	0.259	3.0%	< 0.01			80%	120%		
La	1	2832995	20.1	21.2	5.3%	< 0.1			80%	120%		
Li	1	2832995	1.3	1.5	14.3%	< 0.1			80%	120%		
Mg	1	2833043	0.22	0.22	0.0%	< 0.01			80%	120%		
Mn	1	2833043	630	623	1.1%	< 1			80%	120%		
Mo	1	2832995	0.43	0.43	0.0%	< 0.05			80%	120%		
Na	1	2833043	0.01	0.01	0.0%	< 0.01			80%	120%		
Nb	1	2832995	< 0.05	< 0.05	0.0%	< 0.05			80%	120%		
Ni	1	2833043	1.38	1.33	3.7%	< 0.2			80%	120%		
P	1	2833043	288	276	4.3%	< 10			80%	120%		
Pb	1	2832995	7.1	7.6	6.8%	< 0.1			80%	120%		
Rb	1	2832995	7.2	8.4	15.4%	< 0.1	11	13	87%	80%	120%	
Re	1	2832995	< 0.001	< 0.001	0.0%	< 0.001			80%	120%		
S	1	2833043	0.421	0.414	1.7%	< 0.005			80%	120%		
Sb	1	2832995	0.17	0.18	5.7%	< 0.05			80%	120%		
Sc	1	2832995	1.0	1.1	9.5%	< 0.1			80%	120%		
Se	1	2832995	0.23	0.29	23.1%	< 0.2	0.7	0.8	86%	80%	120%	
Sn	1	2832995	0.2	0.2	0.0%	< 0.2			80%	120%		
Sr	1	2832995	8.63	9.50	9.6%	< 0.2	309	390	79%	80%	120%	
Ta	1	2832995	< 0.01	< 0.01	0.0%	< 0.01			80%	120%		
Te	1	2832995	< 0.01	< 0.01	0.0%	< 0.01			80%	120%		
Th	1	2832995	1.54	1.61	4.4%	< 0.1	1.4	1.4	99%	80%	120%	
Ti	1	2833043	< 0.005	< 0.005	0.0%	< 0.005			80%	120%		
Tl	1	2832995	0.094	0.107	12.9%	< 0.02			80%	120%		
U	1	2832995	0.252	0.276	9.1%	< 0.05	0.9	0.8	116%	80%	120%	
V	1	2832995	13.5	14.2	5.1%	< 0.5			80%	120%		
W	1	2832995	< 0.05	< 0.05	0.0%	< 0.05			80%	120%		
Y	1	2832995	7.26	7.59	4.4%	< 0.05		7		80%	120%	
Zn	1	2833043	44.5	45.7	2.7%	< 0.5			80%	120%		
Zr	1	2832995	3.6	4.0	10.5%	< 0.5			80%	120%		
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Ag	1	2833019	0.564	0.570	1.1%	< 0.01			80%	120%		
As	1	2833019	4.7	4.7	0.0%	< 0.1			80%	120%		
Au	1	2833019	10	13	26.1%	< 1			80%	120%		
B	1	2833019	< 5	< 5	0.0%	< 5	5.85	7.00	84%	80%	120%	
Be	1	2833019	0.539	0.504	6.7%	< 0.05			80%	120%		
Bi	1	2833019	0.07	0.07	0.0%	< 0.01			80%	120%		
Cd	1	2833019	0.10	0.10	0.0%	< 0.01			80%	120%		
Ce	1	2833019	32.5	31.7	2.5%	< 0.01			80%	120%		
Co	1	2833019	5.3	5.3	0.0%	< 0.1			80%	120%		
Cr	1	2833019	25.3	21.9	14.4%	< 0.5			80%	120%		

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Cs	1	2833019	3.60	2.95	19.8%	< 0.05				80%	120%	
Cu	1					< 0.1	3995	3800	105%	80%	120%	
Ga	1	2833019	2.03	1.40		< 0.05				80%	120%	
Ge	1	2833019	0.079	0.088	10.8%	< 0.05				80%	120%	
Hf	1	2833019	0.06	0.09		< 0.02				80%	120%	
Hg	1	2833019	0.01	0.01	0.0%	< 0.01				80%	120%	
In	1	2833019	0.0179	0.0171	4.6%	< 0.005				80%	120%	
La	1	2833019	19.2	15.1	23.9%	< 0.1				80%	120%	
Li	1	2833019	2.56	2.01	24.1%	< 0.1				80%	120%	
Mo	1	2833019	0.30	0.26	14.3%	< 0.05				80%	120%	
Nb	1	2833019	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Pb	1	2833019	7.7	7.5	2.6%	< 0.1				80%	120%	
Rb	1	2833019	14.8	11.8	22.6%	< 0.1	12	13	93%	80%	120%	
Re	1	2833019	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
Sb	1	2833019	0.13	0.13	0.0%	< 0.05				80%	120%	
Sc	1	2833019	2.5	2.4	4.1%	< 0.1				80%	120%	
Se	1	2833019	0.2	0.2	0.0%	< 0.2	0.7	0.8	92%	80%	120%	
Sn	1	2833019	0.2	0.2	0.0%	< 0.2				80%	120%	
Sr	1	2833019	50.1	49.0	2.2%	< 0.2	328	390	84%	80%	120%	
Ta	1	2833019	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2833019	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2833019	1.17	1.13	3.5%	< 0.1	1	1.4	72%	80%	120%	
Tl	1	2833019	0.148	0.121	20.1%	< 0.02				80%	120%	
U	1	2833019	0.28	0.26	7.4%	< 0.05	0.8	0.8	106%	80%	120%	
V	1	2833019	23.7	22.5	5.2%	< 0.5				80%	120%	
W	1	2833019	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2833019	9.40	9.36	0.4%	< 0.05		7		80%	120%	
Zr	1	2833019	2.4	3.5		< 0.5				80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Ag	1	2833043	0.698	0.550	23.7%	< 0.01				80%	120%	
As	1	2833043	17.9	15.9	11.8%	< 0.1				80%	120%	
Au	1	2833043	159	165	3.7%	< 1				80%	120%	
B	1	2833043	< 5	< 5	0.0%	< 5				80%	120%	
Be	1	2833043	0.32	0.30	6.5%	< 0.05				80%	120%	
Bi	1	2833043	0.18	0.10		< 0.01				80%	120%	
Cd	1	2833043	0.05	0.05	0.0%	< 0.01				80%	120%	
Ce	1	2833043	39.0	39.6	1.5%	< 0.01				80%	120%	
Co	1	2833043	2.86	2.81	1.8%	< 0.1				80%	120%	
Cr	1	2833043	84.8	90.4	6.4%	< 0.5				80%	120%	
Cs	1	2833043	0.93	0.93	0.0%	< 0.05				80%	120%	
Cu	1					< 0.1	4057	3800	106%	80%	120%	
Ga	1	2833043	1.39	1.37	1.4%	< 0.05				80%	120%	
Ge	1	2833043	0.09	0.10	10.5%	< 0.05				80%	120%	
Hf	1	2833043	0.05	0.05	0.0%	< 0.02				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V541963
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Hg	1	2833043	0.03	0.03	0.0%	< 0.01			80%	120%		
In	1	2833043	0.014	0.010		< 0.005			80%	120%		
La	1	2833043	19.1	19.0	0.5%	< 0.1			80%	120%		
Li	1	2833043	1.7	1.6	6.1%	< 0.1			80%	120%		
Mo	1	2833043	4.70	4.66	0.9%	< 0.05			80%	120%		
Nb	1	2833043	< 0.05	< 0.05	0.0%	< 0.05			80%	120%		
Pb	1	2833043	6.12	5.42	12.1%	< 0.1			80%	120%		
Rb	1	2833043	12.9	12.7	1.6%	< 0.1	11	13	87%	80%	120%	
Re	1	2833043	0.002	0.002	0.0%	< 0.001			80%	120%		
Sb	1	2833043	0.96	0.60		< 0.05			80%	120%		
Sc	1	2833043	0.8	0.8	0.0%	< 0.1			80%	120%		
Se	1	2833043	0.2	0.2	0.0%	< 0.2	0.6	0.8	79%	80%	120%	
Sn	1	2833043	0.2	0.2	0.0%	< 0.2			80%	120%		
Sr	1	2833043	16.1	15.6	3.2%	< 0.2	378	390	97%	80%	120%	
Ta	1	2833043	< 0.01	< 0.01	0.0%	< 0.01			80%	120%		
Te	1	2833043	0.16	0.02		< 0.01			80%	120%		
Th	1	2833043	1.05	1.05	0.0%	< 0.1	1.4	1.4	98%	80%	120%	
Tl	1	2833043	0.230	0.225	2.2%	< 0.02			80%	120%		
U	1	2833043	0.178	0.171	4.0%	< 0.05			80%	120%		
V	1	2833043	11.9	12.2	2.5%	< 0.5			80%	120%		
W	1	2833043	0.07	< 0.05		< 0.05			80%	120%		
Y	1	2833043	6.62	6.60	0.3%	< 0.05		7	80%	120%		
Zr	1	2833043	2.1	2.0	4.9%	< 0.5			80%	120%		
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Cu	1					< 0.1	3855	3800	101%	80%	120%	
Rb	1					< 0.1	10	13	79%	80%	120%	
Se	1					< 0.2	0.6	0.8	78%	80%	120%	
Sr	1					< 0.2	387	390	99%	80%	120%	
Th	1					< 0.1	1.6	1.4	114%	80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Cu	1					< 0.1	4100	3800	107%	80%	120%	
Rb	1					< 0.1	13	13	100%	80%	120%	
Se	1					< 0.2	0.7	0.8	83%	80%	120%	
Sr	1					< 0.2	390	390	100%	80%	120%	
Th	1					< 0.1	1	1.4	74%	80%	120%	
U	1					< 0.05	0.7	0.8	93%	80%	120%	
Aqua Regia Digest - Metals - ICP/ICP-MS finish (201074)												
Se	1					< 0.2	0.7	0.8	91%	80%	120%	
Sr	1					< 0.2	381	390	98%	80%	120%	
U	1					< 0.05	0.9	0.8	107%	80%	120%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2832938	0.329	0.275	17.9%	< 0.002	0.0751	0.0849	88%	90%	110%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V541963
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)											
RPT Date: Jan 20, 2012		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833081	0.002	0.002	0.0%	< 0.002	0.0761	0.0849	90%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833043	0.140	0.136	2.9%	< 0.002	0.954	0.922	103%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2832920	0.124	0.130	4.7%	< 0.002	0.0762	0.0849	90%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833068	0.141	0.192		< 0.002	0.0753	0.0849	89%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833103	0.012	0.008		< 0.002		0.0849		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833118	0.030	0.019		< 0.002		0.0849		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833129	< 0.002	0.021		< 0.002		0.0849		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833143	0.019	0.012		< 0.002		0.0849		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2833155	0.055	0.064	15.1%	< 0.002		0.0849		90%	110%

Certified By: _____



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V541963

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS
Au (Reanalysis)			AAS

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V542405

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Jan 20, 2012

PAGES (INCLUDING COVER): 46

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

***NOTES**

VERSION 3:Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.

Corrected copy for silver only on samples 1456375 through 1456425.

New client material was supplied for check samples 1456376, 1456401, 1456426 and 1456451. Jan 20, 2012

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Sample Login Weight kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm
1456375		3.20	0.41	1.34	11.2	0.02	<5	383	0.49	0.10	0.98	0.29	40.7	3.2	128
1456376		0.11	1.00	2.71	3620	6.01	<5	151	0.25	0.21	3.76	0.20	19.5	25.1	67.9
1456377		3.29	0.29	1.41	34.7	0.05	<5	146	0.54	0.09	1.35	0.25	41.7	3.3	102
1456378		3.29	0.22	1.36	12.0	<0.01	<5	37	0.53	0.10	1.15	0.18	40.8	3.1	81.9
1456379		3.72	0.25	1.03	11.2	0.09	<5	164	0.42	0.09	1.24	0.14	39.8	3.1	70.0
1456380		1.39	0.41	1.35	8.9	0.03	<5	81	0.60	0.10	0.53	0.07	44.5	2.9	86.9
1456381		2.18	0.78	0.91	5.8	0.06	<5	75	0.24	0.09	1.02	0.11	33.0	3.3	88.3
1456382		1.73	0.47	1.34	6.3	0.15	<5	60	0.56	0.09	1.38	0.10	42.2	3.7	79.2
1456383		1.12	0.29	2.03	11.6	0.02	<5	49	0.90	0.08	1.93	0.11	41.9	5.7	87.2
1456384		1.25	0.09	1.50	3.4	<0.01	<5	55	0.45	0.03	2.22	0.05	33.0	4.1	60.6
1456385		1.49	0.12	1.42	9.1	<0.01	<5	86	0.70	0.09	2.54	0.07	50.2	3.3	82.1
1456386		2.02	0.10	1.42	2.7	<0.01	<5	1850	0.57	0.11	1.66	0.12	44.6	3.8	74.6
1456387		3.43	0.08	1.86	2.4	<0.01	<5	894	0.44	0.11	2.29	0.16	41.5	5.7	131
1456388		3.23	0.06	1.69	2.1	<0.01	<5	721	0.38	0.10	2.66	0.14	39.4	5.3	43.0
1456389		3.26	0.06	1.91	2.0	<0.01	<5	152	0.47	0.11	2.42	0.14	42.0	5.4	48.7
1456390		0.77	0.09	1.77	7.5	<0.01	<5	178	0.26	0.04	6.21	0.25	18.0	10.4	133
1456391		2.74	0.04	1.89	2.3	<0.01	<5	352	0.42	0.11	2.56	0.13	40.5	5.3	48.7
1456392		3.26	0.09	2.05	2.1	<0.01	<5	301	0.52	0.11	2.26	0.10	40.3	5.3	54.0
1456393		2.04	0.07	1.96	1.9	<0.01	<5	833	0.43	0.12	2.60	0.12	42.1	5.1	51.1
1456394		2.94	0.06	1.71	1.3	<0.01	<5	955	0.45	0.11	2.58	0.10	40.6	5.3	85.5
1456395		3.08	0.07	1.73	1.3	<0.01	<5	310	0.35	0.09	2.41	0.12	38.7	5.4	46.1
1456396		3.27	0.07	2.09	1.2	<0.01	<5	334	0.49	0.10	2.45	0.11	42.0	6.8	43.8
1456397		3.86	0.07	2.34	1.3	<0.01	<5	210	0.52	0.11	2.80	0.14	44.0	7.1	48.3
1456398		3.46	0.06	2.13	1.4	<0.01	<5	471	0.45	0.10	2.77	0.11	44.0	6.5	51.8
1456399		3.72	0.09	1.66	1.6	<0.01	<5	264	0.44	0.10	2.55	0.16	43.0	6.7	35.2
1456400		1.53	0.10	1.43	1.8	<0.01	<5	798	0.34	0.07	3.01	0.15	38.4	6.5	33.1
1456401		0.11	17.3	1.90	15.8	9.58	<5	97	0.29	0.20	1.33	3.33	19.7	19.4	25.5
1456402		1.13	0.31	1.45	1.7	0.09	<5	356	0.46	0.10	3.10	0.15	42.3	6.5	19.2
1456403		3.34	0.12	1.51	2.2	0.01	<5	1570	0.43	0.10	4.19	0.15	41.9	6.2	32.5
1456404		2.44	0.14	1.73	2.9	<0.01	<5	191	0.41	0.10	3.23	0.11	42.8	6.7	38.6
1456405		3.42	0.11	1.69	2.7	<0.01	<5	266	0.41	0.10	2.70	0.13	41.0	6.6	34.0

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456406		3.70	0.12	1.57	1.9	<0.01	<5	378	0.39	0.09	2.97	0.11	40.6	6.2	21.0
1456407		3.63	0.14	1.44	2.3	<0.01	<5	55	0.41	0.09	3.02	0.11	39.6	6.3	24.8
1456408		1.80	0.12	1.46	2.5	<0.01	<5	60	0.46	0.10	2.97	0.13	41.1	5.9	20.2
1456409		1.13	0.21	1.37	5.0	<0.01	<5	58	0.56	0.11	2.22	0.10	41.1	6.2	23.1
1456410		1.01	0.17	1.50	4.8	<0.01	<5	65	0.55	0.10	2.29	0.10	44.7	6.3	26.4
1456411		0.63	0.34	1.16	5.4	<0.01	<5	607	0.72	0.10	4.74	0.10	42.1	4.9	35.7
1456412		1.89	0.07	1.43	2.2	<0.01	<5	853	0.44	0.07	3.42	0.07	38.7	5.8	35.8
1456413		2.36	0.11	1.64	1.6	<0.01	<5	87	0.49	0.07	2.67	0.07	37.1	7.1	33.0
1456414		3.21	0.12	1.00	1.7	<0.01	<5	66	0.63	0.09	2.33	0.08	38.2	4.2	21.6
1456415		0.83	0.09	1.67	6.1	<0.01	<5	144	0.26	0.04	6.20	0.23	17.8	10.0	91.3
1456416		2.87	0.08	0.92	1.2	<0.01	<5	124	0.69	0.10	6.18	0.16	40.9	2.3	40.0
1456417		3.35	0.03	0.64	1.3	<0.01	<5	202	0.51	0.04	4.74	0.06	38.7	1.3	57.0
1456418		3.19	0.06	0.81	1.1	<0.01	<5	77	0.72	0.07	4.80	0.08	35.9	2.2	28.5
1456419		3.23	0.05	0.44	2.2	<0.01	<5	171	0.38	0.03	5.06	0.06	38.5	1.2	47.2
1456420		3.31	0.07	0.51	3.2	<0.01	<5	247	0.46	0.03	5.26	0.06	40.6	1.2	41.5
1456421		3.31	0.04	0.52	3.4	<0.01	<5	46	0.37	0.02	3.53	0.05	37.3	1.4	62.7
1456422		3.16	0.07	0.66	4.5	<0.01	<5	99	0.37	0.01	3.00	0.05	39.8	1.6	55.8
1456423		2.94	0.09	0.60	2.7	<0.01	<5	162	0.38	0.05	4.33	0.06	39.5	1.7	49.9
1456424		1.75	0.25	2.02	2.5	<0.01	<5	226	0.69	0.12	3.14	0.10	44.3	13.0	30.5
1456425		3.31	0.09	1.69	5.0	<0.01	<5	98	0.39	0.06	2.82	0.08	39.7	10.7	39.3
1456426		0.11	8.31	2.38	8.9	4.40	<5	116	0.40	0.21	2.28	1.60	34.4	17.4	18.7
1456427		3.04	0.12	1.81	4.3	0.03	<5	157	0.39	0.06	3.38	0.09	41.2	7.8	45.2
1456428		3.39	0.06	1.53	3.2	<0.01	<5	99	0.40	0.05	2.69	0.08	38.4	7.4	82.1
1456429		3.06	0.02	1.24	2.9	<0.01	<5	72	0.37	0.05	2.65	0.09	36.2	5.8	28.6
1456430		1.78	0.04	1.79	3.3	<0.01	<5	108	0.46	0.07	2.16	0.08	30.4	8.0	53.0
1456431		2.15	0.06	1.31	2.7	<0.01	<5	74	0.37	0.06	2.86	0.10	27.7	7.1	78.9
1456432		3.29	0.02	1.57	0.7	<0.01	<5	208	0.28	0.03	3.42	0.04	12.6	3.8	16.3
1456433		2.23	0.23	0.39	18.2	0.01	<5	75	0.30	0.08	0.06	0.06	7.57	2.5	60.6
1456434		1.95	0.36	0.72	12.9	0.04	<5	95	0.38	0.08	0.05	0.06	7.22	4.0	60.1
1456435		0.74	5.88	0.66	9.9	0.56	<5	66	0.44	0.07	0.05	0.12	8.10	2.9	131
1456436		2.20	3.80	0.51	13.8	0.23	<5	61	0.51	0.08	0.09	0.20	8.43	4.4	59.4

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456437		2.25	0.87	0.61	14.9	0.06	<5	79	0.52	0.09	0.09	0.17	6.61	3.7	47.9
1456438		1.50	0.31	0.66	16.7	0.08	<5	72	0.58	0.09	0.08	0.10	7.56	2.6	50.6
1456439		2.73	0.53	0.74	15.2	0.06	<5	114	0.87	0.08	0.07	0.13	7.92	3.9	84.5
1456440		0.79	0.04	1.66	8.2	<0.01	<5	160	0.25	0.04	6.23	0.26	16.9	10.1	94.3
1456441		2.07	0.80	0.55	16.9	0.07	<5	183	0.67	0.09	0.07	0.57	7.85	3.7	34.5
1456442		1.07	0.63	0.67	12.9	0.17	<5	95	0.35	0.08	0.06	0.08	11.4	2.4	47.0
1456443		2.47	1.43	0.82	15.8	0.16	<5	82	0.41	0.08	0.16	0.08	13.0	3.4	105
1456444		1.98	3.44	0.47	16.9	0.56	<5	69	0.44	0.08	0.09	0.10	7.57	3.4	47.2
1456445		1.92	4.41	0.64	11.1	0.28	<5	63	0.43	0.08	0.09	0.08	13.3	3.3	50.1
1456446		1.88	0.49	0.63	13.4	0.11	<5	80	0.54	0.08	0.09	0.12	21.5	3.0	51.2
1456447		1.01	4.36	0.73	12.1	0.15	<5	86	0.42	0.07	0.07	0.08	9.47	3.3	134
1456448		0.69	2.85	0.61	13.7	0.26	<5	102	0.55	0.08	0.05	0.07	6.92	3.0	56.9
1456449		1.20	1.33	0.46	12.5	0.05	<5	45	0.54	0.07	0.18	0.10	14.5	3.1	44.3
1456450		1.46	0.37	0.49	12.5	0.08	<5	55	0.52	0.07	0.11	0.14	8.14	2.1	97.9
1456451		0.11	0.99	2.57	3700	6.28	<5	130	0.24	0.22	3.73	0.22	18.3	25.0	74.4
1456452		0.68	0.24	0.56	38.2	0.13	<5	61	0.46	0.08	0.13	0.14	7.77	2.3	72.3
1456453		1.17	0.22	0.34	9.1	0.12	<5	39	0.36	0.05	0.11	0.08	10.8	2.3	167
1456454		0.98	0.19	0.54	13.9	0.03	<5	44	0.65	0.08	0.11	0.13	17.3	2.5	64.6
1456455		0.95	0.07	0.47	10.8	0.16	<5	51	0.32	0.07	0.09	0.08	14.7	2.1	93.6
1456456		2.00	0.78	0.49	12.6	0.26	<5	50	0.36	0.08	0.13	0.11	24.6	2.7	50.1
1456457		1.42	0.56	0.60	12.2	0.07	<5	52	0.41	0.08	0.13	0.09	23.6	2.2	75.9
1456458		1.07	0.33	0.54	11.5	0.06	<5	43	0.31	0.07	0.12	0.07	20.6	2.0	121
1456459		0.92	0.02	0.76	12.7	0.02	<5	44	0.37	0.08	0.14	0.07	28.0	2.3	58.5
1456460		0.79	<0.01	0.74	12.2	0.02	<5	45	0.36	0.07	0.12	0.08	27.9	2.3	53.2
1456461		2.27	0.03	0.85	16.0	0.06	<5	41	0.41	0.08	0.16	0.09	32.5	2.4	49.1
1456462		1.92	0.49	0.88	18.1	0.14	<5	38	0.40	0.07	0.71	0.06	28.2	2.7	76.8
1456463		2.27	0.31	0.72	10.4	0.34	<5	35	0.34	0.07	0.54	0.04	28.1	1.8	49.6
1456464		2.00	0.35	0.59	10.0	0.23	<5	33	0.26	0.09	0.51	0.08	31.7	1.7	72.0
1456465		0.74	<0.01	1.61	10.8	<0.01	<5	154	0.26	0.04	5.87	0.25	18.5	11.1	126
1456466		2.63	0.10	0.94	12.2	0.14	<5	90	0.38	0.08	0.71	0.04	34.6	3.2	59.4
1456467		1.12	<0.01	1.04	14.2	0.03	<5	35	0.39	0.08	0.96	0.05	35.6	3.2	63.3

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456468		2.54	<0.01	1.15	8.5	0.05	<5	265	0.47	0.08	1.09	0.05	39.4	2.7	61.4
1456469		2.59	0.20	1.13	8.0	0.04	<5	81	0.50	0.08	1.22	0.11	40.9	2.9	59.3
1456470		2.11	0.21	1.10	8.3	0.01	<5	57	0.45	0.08	1.14	0.07	37.6	3.0	76.2
1456471		2.48	0.13	1.03	11.5	<0.01	<5	34	0.50	0.09	1.25	0.12	43.4	3.2	51.7
1456472		3.13	<0.01	1.12	8.0	<0.01	<5	28	0.50	0.10	1.00	0.06	45.8	2.8	35.3
1456473		2.97	0.09	1.24	6.2	<0.01	<5	31	0.53	0.10	1.59	0.09	47.8	3.2	38.4
1456474		3.33	0.07	1.10	4.4	<0.01	<5	25	0.46	0.10	2.44	0.08	46.9	2.9	38.4
1456475		2.76	0.12	1.01	5.8	0.01	<5	34	0.42	0.09	2.07	0.07	44.5	3.1	44.0
1456476		0.11	18.3	2.15	17.3	10.3	<5	107	0.35	0.20	1.46	3.40	22.9	24.9	35.5
1456477		2.39	0.02	0.98	0.5	<0.01	<5	48	<0.05	0.01	1.91	0.02	4.37	0.3	3.2
1456478		2.57	0.23	1.17	7.0	0.06	<5	49	0.62	0.11	1.17	0.12	44.8	2.7	46.6
1456479		2.63	0.10	1.02	12.1	0.01	<5	301	0.60	0.10	2.75	0.13	48.0	2.6	66.6
1456480		1.62	0.04	1.05	7.7	0.01	<5	301	0.76	0.13	3.61	0.09	49.6	4.1	12.2
1456481		2.23	0.04	1.97	7.0	<0.01	<5	486	0.66	0.05	4.58	0.11	39.2	12.8	23.9
1456482		3.53	0.04	1.44	3.4	0.11	<5	98	0.50	0.08	3.09	0.10	42.2	7.4	21.1
1456483		2.74	0.03	1.60	2.6	<0.01	<5	66	0.55	0.08	2.74	0.08	42.8	7.3	17.7
1456484		2.26	<0.01	1.56	2.6	<0.01	<5	69	0.53	0.08	2.63	0.07	43.0	7.0	18.5
1456485		2.20	0.04	1.84	2.8	<0.01	<5	84	0.50	0.06	3.98	0.09	40.0	9.2	32.7
1456486		1.95	0.16	1.66	13.2	0.01	<5	74	0.60	0.07	2.90	0.11	43.4	8.6	35.9
1456487		1.40	<0.01	0.78	3.0	<0.01	<5	186	0.34	0.08	1.93	0.08	33.4	1.1	85.7
1456488		2.29	<0.01	1.83	1.1	<0.01	<5	75	0.53	0.10	3.18	0.12	38.5	11.0	46.2
1456489		2.68	<0.01	1.65	0.7	<0.01	<5	114	0.59	0.05	2.46	0.10	46.4	6.0	29.6
1456490		0.51	<0.01	1.50	6.3	<0.01	<5	159	0.26	0.04	6.13	0.22	17.1	10.7	111
1456491		1.57	<0.01	1.28	1.2	<0.01	<5	267	0.39	0.07	2.54	0.10	40.1	5.0	50.8
1456492		2.62	<0.01	1.25	1.3	<0.01	<5	152	0.45	0.05	2.11	0.08	42.1	5.3	42.7
1456493		2.52	0.06	1.13	3.3	<0.01	<5	116	0.38	0.05	2.11	0.09	39.0	5.0	44.8
1456494		0.97	<0.01	1.60	3.7	<0.01	<5	102	0.39	0.03	1.74	0.08	45.7	6.7	28.5
1456495		2.20	<0.01	1.24	3.6	<0.01	<5	234	0.43	0.06	1.87	0.10	42.4	5.1	42.3
1456496		1.98	0.02	1.10	3.3	<0.01	<5	87	0.39	0.05	1.90	0.07	40.1	5.0	55.2
1456497		1.39	0.06	0.36	204	0.06	<5	32	0.28	0.08	0.04	0.03	31.1	0.7	58.2
1456498		1.38	0.18	0.36	234	0.09	<5	40	0.16	0.08	0.03	0.03	32.0	0.4	70.2

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456499		1.43	0.10	0.24	201	0.23	<5	42	0.21	0.06	0.03	0.02	23.2	0.8	74.2
1456500		2.13	<0.01	0.40	170	0.11	<5	70	0.26	0.07	0.03	0.07	28.1	2.9	58.9
1456501		0.11	8.04	2.65	9.3	4.42	<5	123	0.45	0.20	2.35	1.53	35.5	21.4	25.9
1456502		1.50	0.32	0.41	197	0.27	<5	58	0.29	0.06	0.05	0.12	27.7	3.1	212
1456503		1.00	0.28	0.34	213	0.14	<5	39	0.27	0.07	0.07	0.12	29.5	3.1	89.7
1456504		0.75	0.44	0.34	230	0.23	<5	41	0.28	0.06	0.08	0.15	26.7	3.8	79.9
1456505		0.82	0.15	0.44	163	0.11	<5	74	0.40	0.06	0.03	0.11	30.1	7.4	200
1456506		2.03	0.36	0.35	174	0.06	<5	51	0.36	0.08	0.04	0.14	35.4	3.0	42.2
1456507		1.28	0.20	0.30	209	0.12	<5	34	0.25	0.07	0.07	0.08	27.5	2.3	79.5
1456508		1.07	0.23	0.46	233	0.14	<5	49	0.25	0.07	0.09	0.14	27.7	2.6	108
1456509		0.79	0.10	0.48	217	0.12	<5	57	0.32	0.07	0.04	0.07	28.0	2.2	150
1456510		0.69	0.13	0.36	212	0.14	<5	48	0.34	0.07	0.04	0.10	30.1	2.8	64.0
1456511		1.82	0.14	0.47	196	0.06	<5	63	0.43	0.07	0.04	0.13	29.9	3.2	58.1
1456512		1.29	1.28	0.35	278	0.38	<5	37	0.28	0.05	0.11	0.06	21.3	1.7	156
1456513		2.13	1.57	0.29	434	0.31	<5	34	0.23	0.04	0.17	0.09	17.9	3.3	267
1456514		2.33	0.96	0.46	318	0.27	<5	48	0.34	0.05	0.18	0.07	21.4	3.1	248
1456515		0.47	<0.01	1.68	6.9	<0.01	<5	161	0.28	0.04	6.08	0.20	17.2	10.5	100
1456516		2.16	0.58	0.71	325	0.10	<5	64	0.55	0.04	0.24	0.06	40.7	7.1	100
1456517		1.18	0.75	0.77	265	0.14	<5	116	0.61	0.05	0.12	0.13	24.8	5.9	280
1456518		3.09	1.18	0.49	497	0.21	<5	50	0.38	0.05	0.20	0.10	24.4	5.5	102
1456519		2.62	1.00	0.60	454	0.30	<5	70	0.44	0.05	0.19	0.12	30.2	5.5	183
1456520		2.62	0.87	0.24	210	1.49	<5	31	0.25	0.07	0.08	0.08	26.4	2.7	95.0
1456521		1.53	2.02	0.29	414	0.34	<5	31	0.31	0.05	0.09	0.13	21.4	3.0	139
1456522		1.05	0.56	0.38	428	0.18	<5	46	0.25	0.06	0.05	0.13	23.7	2.7	259
1456523		2.10	1.02	0.26	390	0.36	<5	33	0.29	0.07	0.04	0.08	24.1	2.6	105
1456524		1.70	1.05	0.29	470	0.67	<5	44	0.28	0.05	0.07	0.10	19.6	2.4	185
1456525		1.74	0.86	0.34	235	0.18	<5	38	0.28	0.06	0.07	0.23	25.8	3.1	139
1456526		0.11	18.6	1.95	17.0	9.56	<5	101	0.37	0.20	1.36	3.48	20.5	23.6	32.7
1456527		1.93	0.32	0.36	169	0.11	<5	46	0.34	0.06	0.05	0.07	28.4	3.0	106
1456528		1.56	0.48	0.36	236	0.19	<5	44	0.28	0.07	0.10	0.08	27.8	3.1	109
1456529		1.72	0.62	0.32	372	0.28	<5	41	0.20	0.07	0.11	0.11	26.2	3.0	128

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456530	0.98	0.92	0.32	362	0.50	<5	45	0.24	0.06	0.11	0.08	21.1	2.5	177
1456531	2.19	0.33	0.37	144	0.15	<5	51	0.27	0.07	0.13	0.07	26.6	2.8	137
1456532	2.09	0.90	0.35	279	0.31	<5	47	0.26	0.05	0.14	0.09	22.4	2.8	169
1456533	1.01	1.15	0.32	307	0.39	<5	32	0.30	0.05	0.21	0.09	21.4	2.7	157
1456534	1.54	0.41	0.37	129	0.13	<5	45	0.38	0.06	0.14	0.09	27.2	2.9	108
1456535	1.93	0.71	0.38	234	0.31	<5	42	0.50	0.06	0.10	0.12	22.5	2.2	122
1456536	2.37	0.71	0.47	207	0.26	<5	50	0.27	0.06	0.12	0.11	23.6	2.9	217
1456537	2.25	0.90	0.48	203	0.19	<5	64	0.39	0.06	0.22	0.09	25.0	3.2	189
1456538	0.77	1.78	0.51	231	0.23	<5	53	0.28	0.06	0.10	0.16	25.1	2.7	216
1456539	0.96	0.85	0.46	231	0.23	<5	48	0.24	0.06	0.11	0.11	24.6	3.2	277
1456540	0.55	<0.01	1.81	6.8	<0.01	<5	194	0.31	0.04	6.35	0.21	15.9	9.7	141
1456541	1.62	1.42	0.56	291	0.20	<5	59	0.32	0.07	0.22	0.08	27.1	3.6	167
1456542	1.44	0.32	0.54	112	0.10	<5	68	0.29	0.06	0.15	0.10	25.7	2.9	168
1456543	1.13	1.67	0.42	291	0.30	<5	44	0.26	0.05	0.22	0.13	20.3	2.9	266
1456544	1.61	0.66	0.49	180	0.14	<5	54	0.27	0.07	0.16	0.10	25.0	3.3	188
1456545	3.15	0.45	0.62	173	0.08	<5	69	0.24	0.07	0.19	0.08	27.7	3.1	196
1456546	0.94	0.75	0.53	247	0.16	<5	57	0.28	0.07	0.17	0.09	26.6	3.4	226
1456547	1.98	1.78	0.56	378	0.27	<5	57	0.36	0.07	0.19	0.13	26.4	3.7	229
1456548	1.28	1.10	0.53	263	0.20	<5	57	0.29	0.07	0.21	0.08	26.8	3.1	228
1456549	2.75	0.27	0.24	142	0.06	<5	26	0.21	0.07	0.16	0.08	25.4	2.4	46.4
1456550	0.96	3.27	0.30	594	0.56	<5	27	0.32	0.07	0.15	0.16	24.5	2.7	84.4
1456551	0.10	44.4	1.12	473	3.66	<5	100	0.08	28.7	0.37	0.61	6.81	9.4	136
1456552	2.61	0.41	0.33	134	0.10	<5	37	0.31	0.13	0.18	0.09	29.1	2.7	63.3
1456553	1.63	1.01	0.27	239	0.16	<5	34	0.32	0.07	0.16	0.11	24.5	2.5	61.0
1456554	0.84	0.36	0.29	199	0.12	<5	43	0.26	0.08	0.17	0.09	27.6	2.5	52.1
1456555	1.75	1.00	0.22	257	0.22	<5	34	0.44	0.06	0.14	0.15	21.1	2.3	82.5
1456556	1.12	0.86	0.35	191	0.14	<5	48	0.27	0.07	0.15	0.10	24.7	2.7	91.0
1456557	3.17	0.66	0.48	194	0.13	<5	54	0.35	0.07	0.19	0.10	28.1	3.0	81.4
1456558	2.81	0.72	0.41	159	0.16	<5	44	0.32	0.07	0.15	0.09	25.3	2.7	89.0
1456559	1.38	0.50	0.23	144	0.10	<5	25	0.22	0.07	0.16	0.09	25.4	2.4	34.8
1456560	1.25	0.53	0.29	183	0.13	<5	33	0.29	0.07	0.17	0.11	26.8	2.7	59.4

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
1456561	1.62	0.78	0.30	188	0.17	<5	27	0.29	0.07	0.16	0.11	25.8	2.8	71.6
1456562	2.60	0.18	0.34	130	0.08	<5	33	0.33	0.07	0.22	0.09	27.2	2.5	41.4
1456563	1.29	0.23	0.40	112	0.06	<5	33	0.49	0.07	0.25	0.07	27.8	2.5	42.0

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456375	3.08	5.0	1.45	5.26	0.09	0.13	0.01	0.015	0.52	19.8	8.0	0.23	678	3.48	
1456376	2.41	182	9.87	7.56	0.15	0.43	0.02	0.039	0.13	12.2	10.8	2.19	4340	4.54	
1456377	2.33	4.0	1.47	5.63	0.09	0.13	0.01	0.014	0.53	20.2	9.1	0.27	975	3.16	
1456378	2.26	3.1	1.31	5.40	0.09	0.11	0.02	0.016	0.53	20.0	7.7	0.24	727	2.15	
1456379	1.75	4.3	1.33	4.69	0.11	0.11	0.02	0.011	0.40	19.2	7.7	0.23	793	1.91	
1456380	4.58	3.8	1.42	5.73	0.10	0.13	0.01	0.014	0.54	21.8	9.6	0.27	520	4.66	
1456381	1.05	2.9	1.59	4.30	0.10	0.11	0.03	0.016	0.24	16.3	10.1	0.28	690	42.1	
1456382	4.39	2.2	1.47	5.59	0.09	0.11	<0.01	0.015	0.51	20.5	8.6	0.25	881	15.8	
1456383	6.11	7.5	1.81	7.07	0.09	0.08	<0.01	0.016	0.57	21.1	18.1	0.45	976	5.56	
1456384	2.84	3.7	1.58	5.03	0.08	0.09	<0.01	0.010	0.41	17.7	11.6	0.39	884	0.56	
1456385	5.44	4.2	1.27	4.33	0.08	0.11	0.01	0.013	0.45	25.5	9.6	0.27	966	1.01	
1456386	2.56	5.2	1.54	4.65	0.12	0.09	<0.01	0.013	0.44	22.8	8.1	0.37	744	1.12	
1456387	1.24	8.5	2.31	6.25	0.10	0.13	<0.01	0.019	0.52	20.1	10.7	0.54	1030	1.04	
1456388	1.07	6.6	2.06	6.04	0.10	0.13	<0.01	0.017	0.47	19.0	10.0	0.51	1020	0.36	
1456389	1.48	6.2	2.09	6.90	0.09	0.14	<0.01	0.020	0.56	20.5	10.8	0.51	995	0.39	
1456390	1.08	49.1	2.46	5.54	0.08	0.20	0.02	0.021	0.33	10.4	9.6	1.08	579	2.69	
1456391	1.43	7.3	2.05	6.64	0.09	0.14	<0.01	0.019	0.55	19.9	10.1	0.49	1020	0.45	
1456392	1.84	6.6	2.11	6.87	0.09	0.11	<0.01	0.019	0.63	19.6	10.6	0.50	947	0.41	
1456393	1.34	6.7	2.15	6.78	0.09	0.11	0.01	0.019	0.56	20.9	10.2	0.50	1030	0.41	
1456394	1.15	7.0	2.16	6.29	0.11	0.12	0.01	0.017	0.46	20.0	10.6	0.51	977	0.74	
1456395	0.89	5.8	2.06	6.58	0.11	0.11	0.01	0.019	0.44	19.1	10.5	0.50	957	0.39	
1456396	1.55	8.4	2.34	7.85	0.09	0.13	<0.01	0.023	0.55	20.2	13.0	0.60	1030	0.35	
1456397	1.72	8.7	2.58	8.29	0.09	0.12	0.01	0.024	0.62	21.6	14.0	0.66	1070	0.36	
1456398	1.36	9.0	2.40	7.58	0.10	0.11	0.01	0.022	0.55	21.4	12.8	0.59	1080	0.37	
1456399	1.32	10.1	2.40	6.43	0.10	0.07	0.01	0.019	0.36	21.1	13.7	0.61	1080	0.28	
1456400	0.73	8.9	2.37	5.61	0.11	0.06	0.01	0.017	0.25	18.7	12.8	0.59	1110	0.30	
1456401	1.85	169	3.59	6.18	0.10	0.19	0.07	0.028	0.26	9.2	17.8	0.98	981	28.1	
1456402	1.22	9.1	2.24	5.57	0.10	0.07	<0.01	0.016	0.30	20.8	12.8	0.56	1110	0.54	
1456403	1.37	8.0	2.35	5.68	0.09	0.07	<0.01	0.017	0.31	20.7	13.3	0.57	1420	0.32	
1456404	1.29	10.0	2.49	6.49	0.09	0.10	<0.01	0.021	0.37	21.0	14.1	0.60	1130	0.37	
1456405	1.25	8.1	2.37	6.40	0.09	0.08	<0.01	0.020	0.37	19.9	13.4	0.55	1010	0.32	
1456406	1.31	9.6	2.33	5.75	0.09	0.07	<0.01	0.018	0.34	19.6	13.4	0.51	1020	0.21	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456407	1.34	7.7	2.15	5.28	0.09	0.08	<0.01	0.017	0.30	19.3	13.7	0.46	993	0.24	
1456408	1.19	7.6	2.03	5.11	0.10	0.10	<0.01	0.017	0.37	20.0	12.3	0.40	915	0.24	
1456409	1.56	8.2	1.91	6.03	0.09	0.09	<0.01	0.015	0.38	20.3	11.7	0.34	805	0.42	
1456410	1.35	11.4	2.00	6.40	0.10	0.10	0.01	0.016	0.42	22.2	12.2	0.35	836	0.32	
1456411	4.00	11.1	1.23	4.11	0.09	0.09	0.01	0.013	0.38	21.1	8.9	0.23	780	12.9	
1456412	1.84	9.5	1.76	4.98	0.08	0.11	<0.01	0.014	0.39	19.9	10.3	0.32	849	0.83	
1456413	1.82	13.0	2.13	5.18	0.09	0.12	<0.01	0.016	0.42	18.7	11.4	0.42	807	0.30	
1456414	2.57	10.2	1.20	3.66	0.07	0.11	<0.01	0.013	0.32	19.6	8.1	0.20	660	0.20	
1456415	1.06	47.7	2.36	5.24	0.08	0.22	0.03	0.020	0.30	10.5	9.7	1.06	554	2.59	
1456416	3.24	4.8	0.88	2.59	0.06	0.11	0.01	0.009	0.37	20.8	5.9	0.13	1000	0.68	
1456417	1.76	2.1	0.57	1.86	0.07	0.13	<0.01	0.006	0.36	19.8	2.1	0.13	575	0.75	
1456418	2.09	4.1	0.86	2.30	0.06	0.09	<0.01	0.009	0.37	18.8	3.7	0.13	726	0.38	
1456419	1.14	1.5	0.51	1.20	0.07	0.20	0.01	<0.005	0.32	19.5	1.3	0.12	543	0.73	
1456420	1.25	1.6	0.53	1.40	0.07	0.22	<0.01	<0.005	0.38	21.1	1.4	0.09	632	0.73	
1456421	1.13	2.1	0.55	1.52	0.07	0.24	<0.01	<0.005	0.35	19.7	1.6	0.08	449	0.97	
1456422	1.46	1.5	0.65	2.07	0.09	0.25	<0.01	0.005	0.39	20.3	1.9	0.07	488	0.80	
1456423	1.35	2.8	0.66	1.90	0.07	0.21	<0.01	0.006	0.32	19.9	2.3	0.07	503	0.81	
1456424	2.90	57.7	3.30	6.41	0.11	0.18	<0.01	0.028	0.38	23.5	19.7	1.09	919	0.36	
1456425	1.40	16.6	2.85	6.20	0.10	0.14	<0.01	0.021	0.33	20.0	13.9	0.87	894	0.45	
1456426	2.17	127	3.72	7.84	0.12	0.40	0.03	0.033	0.26	16.4	19.3	1.20	1110	14.1	
1456427	1.39	13.1	2.45	6.38	0.11	0.19	<0.01	0.018	0.57	21.0	8.9	0.61	771	0.70	
1456428	1.17	11.9	2.29	6.09	0.10	0.18	<0.01	0.018	0.46	19.6	8.9	0.59	687	0.84	
1456429	1.16	8.0	1.90	5.16	0.09	0.13	<0.01	0.014	0.36	18.8	7.4	0.47	647	0.36	
1456430	1.30	12.1	2.26	6.47	0.09	0.18	<0.01	0.017	0.54	15.2	8.9	0.61	691	0.64	
1456431	1.03	10.3	2.01	5.39	0.08	0.15	<0.01	0.016	0.35	13.9	8.0	0.52	794	0.73	
1456432	0.25	6.8	2.35	4.22	0.07	0.04	<0.01	0.008	0.46	6.7	5.5	0.58	972	1.21	
1456433	0.58	6.6	1.09	1.51	0.06	0.07	0.03	0.011	0.24	3.5	2.0	0.03	211	1.11	
1456434	1.05	4.5	0.95	1.98	0.07	0.07	0.04	0.012	0.40	3.4	3.1	0.03	182	1.47	
1456435	1.11	4.1	0.75	1.87	0.07	0.05	0.12	0.012	0.44	3.9	2.7	0.03	321	1.26	
1456436	1.07	5.0	1.16	1.52	0.08	0.05	0.07	0.011	0.30	3.5	2.4	0.03	994	1.03	
1456437	1.34	4.4	1.35	2.13	0.07	0.05	0.03	0.014	0.34	3.4	3.3	0.03	713	0.77	
1456438	1.41	3.8	1.11	1.97	0.07	0.06	0.02	0.013	0.36	3.4	3.4	0.03	110	0.87	

Certified By: _____



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456439	1.42	5.5	1.28	2.20	0.07	0.07	0.03	0.014	0.41	3.6	3.5	0.03	195	0.95
1456440	1.02	47.0	2.39	5.25	0.08	0.22	0.02	0.020	0.30	9.7	9.3	1.05	564	2.44
1456441	1.24	6.2	1.13	1.52	0.09	0.08	0.03	0.010	0.32	3.3	2.2	0.03	217	0.62
1456442	1.73	4.2	1.10	2.31	0.09	0.07	0.03	0.010	0.45	4.7	2.3	0.04	432	0.63
1456443	1.70	4.2	1.23	2.91	0.09	0.11	0.04	0.013	0.54	5.3	3.7	0.09	441	0.95
1456444	1.65	4.2	1.07	1.71	0.08	0.07	0.05	0.009	0.30	3.0	2.2	0.06	329	0.77
1456445	1.59	3.0	1.08	2.25	0.09	0.08	0.05	0.010	0.38	5.3	3.0	0.07	343	1.83
1456446	1.30	3.1	1.22	2.14	0.09	0.09	0.03	0.010	0.39	9.0	3.3	0.04	359	1.05
1456447	1.59	3.5	1.32	2.49	0.09	0.10	0.05	0.010	0.47	3.9	3.1	0.04	163	1.23
1456448	1.52	3.4	1.43	1.81	0.08	0.09	0.06	0.009	0.37	2.8	2.5	0.03	136	0.72
1456449	0.93	4.4	1.15	1.41	0.09	0.08	0.03	0.008	0.21	5.9	1.8	0.08	145	0.65
1456450	1.29	3.4	0.85	1.52	0.09	0.06	0.03	0.008	0.25	3.3	1.7	0.03	131	1.27
1456451	2.40	187	9.93	7.20	0.14	0.39	0.02	0.040	0.12	11.1	10.7	2.19	4360	4.50
1456452	1.43	3.0	0.64	2.03	0.08	0.07	0.02	0.009	0.29	3.4	3.2	0.04	177	0.67
1456453	0.88	3.7	0.57	1.42	0.09	0.05	0.03	0.005	0.18	4.6	1.6	0.02	185	1.83
1456454	1.20	3.0	1.19	1.88	0.09	0.08	0.03	0.010	0.28	7.1	2.6	0.04	138	0.47
1456455	1.07	2.8	0.88	1.48	0.12	0.06	0.04	0.006	0.29	4.9	1.2	0.03	228	0.79
1456456	1.07	2.7	0.89	1.46	0.15	0.06	0.06	0.006	0.32	10.6	1.0	0.04	181	0.35
1456457	1.37	2.9	0.64	1.85	0.13	0.08	0.04	0.006	0.35	10.3	1.8	0.06	216	0.61
1456458	1.16	2.9	0.55	1.82	0.13	0.07	0.05	0.006	0.30	9.0	1.9	0.06	123	0.70
1456459	1.30	2.5	0.91	2.36	0.14	0.08	0.05	0.007	0.34	13.1	4.2	0.12	171	0.51
1456460	1.07	2.3	0.91	2.35	0.14	0.05	0.05	0.007	0.33	13.0	3.7	0.12	187	0.38
1456461	1.25	2.7	1.04	2.45	0.14	0.07	0.05	0.008	0.35	15.6	4.9	0.14	196	0.41
1456462	1.64	3.6	1.01	2.90	0.12	0.07	0.05	0.009	0.38	13.3	5.8	0.13	338	0.48
1456463	2.54	6.1	1.07	2.14	0.13	0.08	0.06	0.006	0.35	13.3	3.6	0.11	286	0.72
1456464	1.91	2.1	0.79	1.80	0.14	0.07	0.05	0.006	0.36	14.9	1.7	0.07	199	0.75
1456465	0.99	44.6	2.26	5.61	0.08	0.20	0.03	0.020	0.30	10.8	9.8	1.06	558	2.46
1456466	2.04	3.6	1.26	3.66	0.13	0.08	0.02	0.008	0.37	16.6	6.2	0.24	510	1.16
1456467	1.63	3.6	1.26	3.67	0.14	0.05	0.02	0.009	0.40	17.2	5.1	0.24	498	0.86
1456468	3.58	1.9	1.40	3.66	0.15	0.04	0.02	0.009	0.34	19.0	8.0	0.26	420	1.14
1456469	3.23	5.7	1.29	4.24	0.14	0.05	0.03	0.012	0.35	19.5	9.5	0.26	572	1.02
1456470	2.06	3.3	1.33	4.45	0.12	0.04	0.04	0.014	0.31	18.0	9.4	0.25	567	1.52

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456471	2.08	2.9	1.32	4.52	0.17	0.05	<0.01	0.010	0.35	20.8	7.2	0.27	769	2.14
1456472	2.82	7.2	1.32	4.35	0.16	0.06	0.01	0.009	0.40	21.8	6.9	0.30	651	1.00
1456473	2.65	2.7	1.36	5.59	0.15	0.04	<0.01	0.014	0.39	23.2	7.6	0.33	823	1.36
1456474	2.54	2.7	1.32	5.09	0.13	0.04	0.02	0.013	0.33	22.5	7.7	0.33	1020	1.32
1456475	2.02	2.3	1.36	5.21	0.16	0.04	0.01	0.013	0.28	21.4	8.2	0.33	929	1.17
1456476	1.95	162	3.61	7.04	0.16	0.18	0.07	0.029	0.30	10.5	20.3	1.07	979	29.9
1456477	0.26	3.8	1.18	0.54	<0.05	<0.02	<0.01	<0.005	0.37	2.1	0.8	0.26	91	0.16
1456478	2.85	2.3	1.30	5.34	0.13	0.05	0.02	0.014	0.33	21.5	10.3	0.33	692	2.18
1456479	2.90	1.8	0.96	3.65	0.12	0.03	<0.01	0.014	0.31	23.5	9.3	0.15	887	18.6
1456480	2.94	4.5	1.35	2.62	0.14	0.04	0.01	0.012	0.32	24.3	10.6	0.14	963	1.23
1456481	1.93	18.2	3.36	4.92	0.15	0.05	0.01	0.026	0.32	18.2	26.1	0.47	1320	0.30
1456482	1.72	9.4	2.07	4.24	0.14	0.05	0.01	0.014	0.33	20.0	14.1	0.48	864	0.28
1456483	1.77	10.7	2.12	4.94	0.14	0.05	0.01	0.015	0.37	20.6	14.8	0.57	825	0.28
1456484	1.64	8.7	2.09	4.97	0.16	0.04	0.01	0.015	0.36	20.8	13.5	0.60	790	0.20
1456485	1.83	14.6	2.50	5.71	0.12	0.04	0.01	0.019	0.38	19.4	17.2	0.76	1160	0.27
1456486	2.24	14.6	2.28	6.27	0.13	0.05	0.02	0.017	0.36	20.8	15.2	0.66	1020	3.46
1456487	1.51	1.2	0.62	2.36	0.12	0.08	<0.01	0.006	0.30	17.4	3.6	0.11	338	0.54
1456488	1.26	16.9	2.97	6.38	0.14	0.05	<0.01	0.021	0.22	19.0	21.1	0.99	1200	0.31
1456489	1.40	6.0	2.42	5.63	0.14	0.06	0.02	0.015	0.28	23.2	17.2	0.78	976	0.31
1456490	0.86	45.4	2.14	5.33	0.11	0.14	0.03	0.018	0.27	10.0	10.7	1.03	548	2.29
1456491	1.50	6.0	1.92	5.20	0.11	0.11	<0.01	0.014	0.32	20.1	11.2	0.43	682	0.43
1456492	2.59	4.1	2.05	5.82	0.15	0.08	<0.01	0.016	0.29	20.8	13.5	0.48	757	0.38
1456493	1.87	4.3	2.00	5.37	0.14	0.13	<0.01	0.015	0.31	18.7	11.2	0.37	675	0.49
1456494	1.66	5.7	2.65	8.61	0.16	0.08	<0.01	0.017	0.29	20.7	19.4	0.74	878	0.16
1456495	1.88	4.2	2.07	5.56	0.14	0.12	0.02	0.015	0.35	20.4	12.3	0.43	642	0.53
1456496	1.79	6.7	2.05	5.42	0.15	0.10	0.02	0.015	0.30	19.7	11.6	0.40	589	0.52
1456497	1.44	4.3	1.06	2.27	0.14	0.07	0.04	0.023	0.21	15.0	1.4	0.01	76	1.61
1456498	1.33	3.5	0.76	2.38	0.13	0.10	0.03	0.020	0.23	15.7	1.5	0.01	26	1.23
1456499	1.19	2.7	1.27	1.33	0.14	0.07	0.05	0.017	0.18	11.4	0.9	<0.01	60	2.48
1456500	1.60	2.5	1.40	2.14	0.13	0.08	0.03	0.019	0.31	13.4	1.6	0.01	558	2.28
1456501	2.11	121	3.48	8.99	0.14	0.29	0.04	0.034	0.29	16.8	22.4	1.22	1110	14.2
1456502	1.48	3.2	1.11	2.43	0.14	0.10	0.05	0.020	0.35	13.3	2.4	0.03	190	3.70

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456503	1.89	2.6	1.07	2.26	0.14	0.10	0.03	0.023	0.28	14.2	2.2	0.06	194	3.79
1456504	1.63	3.1	1.31	2.18	0.15	0.10	0.05	0.021	0.28	12.6	2.2	0.09	484	3.81
1456505	1.50	4.2	1.82	2.78	0.15	0.09	0.03	0.024	0.37	14.3	2.1	0.01	1240	3.99
1456506	1.88	3.4	1.45	2.42	0.14	0.12	0.04	0.028	0.27	16.5	1.8	0.01	749	3.84
1456507	1.71	2.6	1.20	2.09	0.14	0.10	0.05	0.023	0.23	13.1	2.3	0.06	268	3.24
1456508	1.98	2.8	0.73	2.73	0.14	0.11	0.02	0.022	0.35	13.3	3.1	0.07	169	3.51
1456509	1.90	2.7	1.34	2.69	0.13	0.11	0.02	0.023	0.39	13.6	2.5	0.02	320	3.17
1456510	1.93	2.6	1.21	2.43	0.14	0.08	0.02	0.025	0.25	14.4	2.2	0.02	604	3.23
1456511	2.41	3.5	1.81	3.03	0.15	0.08	0.02	0.023	0.29	14.2	2.5	0.02	971	3.48
1456512	1.59	2.9	1.20	2.08	0.12	0.10	0.05	0.018	0.28	10.4	2.1	0.01	74	12.8
1456513	1.40	3.9	2.55	1.68	0.15	0.09	0.12	0.016	0.20	7.5	2.6	0.03	85	19.1
1456514	2.04	3.1	1.74	2.72	0.13	0.11	0.09	0.022	0.31	10.3	5.1	0.17	493	13.2
1456515	0.83	46.5	2.28	5.55	0.10	0.18	0.03	0.020	0.28	8.5	12.0	1.11	603	2.46
1456516	3.36	9.9	2.13	4.65	0.15	0.13	0.06	0.031	0.32	20.8	8.5	0.20	694	7.75
1456517	3.17	5.9	2.09	4.34	0.14	0.11	0.04	0.025	0.45	11.2	7.6	0.05	2650	9.77
1456518	2.98	7.8	1.71	2.77	0.15	0.11	0.08	0.030	0.30	11.4	4.3	0.15	352	12.5
1456519	2.78	5.9	2.01	3.49	0.15	0.13	0.07	0.035	0.42	14.1	5.0	0.14	415	19.0
1456520	1.10	3.2	1.38	1.79	0.13	0.10	0.06	0.027	0.20	12.6	2.5	0.07	188	6.86
1456521	0.93	4.9	1.91	1.83	0.14	0.10	0.16	0.021	0.23	10.1	2.6	0.04	152	12.0
1456522	1.10	2.9	1.32	2.62	0.12	0.10	0.02	0.025	0.30	11.2	3.3	0.03	90	20.1
1456523	1.15	2.9	1.64	1.59	0.13	0.09	0.08	0.023	0.21	11.7	2.1	<0.01	69	6.50
1456524	0.91	3.2	1.67	1.55	0.13	0.10	0.20	0.018	0.26	9.4	2.4	<0.01	55	11.9
1456525	1.66	3.0	0.68	1.96	0.14	0.10	0.03	0.023	0.26	12.1	2.4	0.03	58	13.1
1456526	1.81	160	3.45	6.59	0.14	0.31	0.07	0.029	0.27	8.3	23.3	1.01	954	30.5
1456527	1.08	2.9	1.33	1.96	0.15	0.09	0.03	0.027	0.31	13.4	2.3	0.01	163	6.63
1456528	1.07	3.4	1.44	2.41	0.14	0.12	0.08	0.027	0.30	13.2	3.9	0.14	370	10.8
1456529	0.91	3.5	1.59	1.73	0.14	0.12	0.11	0.026	0.31	12.4	3.0	0.13	269	12.7
1456530	1.04	3.1	1.49	1.80	0.12	0.11	0.09	0.021	0.28	10.2	3.7	0.15	382	13.4
1456531	1.42	2.7	1.32	2.32	0.14	0.13	0.07	0.027	0.33	12.6	3.9	0.20	456	10.4
1456532	1.54	3.2	1.30	1.99	0.15	0.10	0.08	0.022	0.30	10.6	3.4	0.14	363	18.5
1456533	0.91	3.3	1.51	1.88	0.14	0.10	0.19	0.021	0.25	10.2	4.3	0.16	444	20.8
1456534	1.33	2.5	1.71	2.43	0.14	0.12	0.11	0.028	0.32	12.9	4.0	0.20	798	10.6

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core				
Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	
1456535	1.44	9.9	2.25	1.78	0.15	0.13	0.13	0.021	0.29	10.8	3.9	0.02	423	19.8	
1456536	1.46	3.5	1.48	2.29	0.14	0.14	0.09	0.024	0.34	11.2	4.6	0.08	260	24.2	
1456537	1.45	3.5	2.01	2.55	0.14	0.14	0.08	0.023	0.38	12.0	3.7	0.15	901	21.7	
1456538	1.39	3.8	1.39	2.77	0.13	0.15	0.14	0.024	0.40	12.1	3.2	0.06	359	23.9	
1456539	1.67	3.4	1.39	2.59	0.14	0.15	0.11	0.024	0.38	11.7	3.8	0.09	341	19.2	
1456540	0.90	46.9	2.29	5.37	0.11	0.21	0.03	0.021	0.35	8.0	12.0	1.09	611	2.79	
1456541	2.07	6.4	1.83	3.14	0.15	0.18	0.20	0.027	0.42	12.6	3.2	0.13	281	17.5	
1456542	1.65	3.2	1.72	2.90	0.16	0.13	0.05	0.024	0.42	12.3	3.7	0.19	535	10.8	
1456543	1.51	3.9	1.86	2.45	0.14	0.12	0.22	0.021	0.32	9.8	3.6	0.17	363	44.3	
1456544	1.46	3.2	1.66	2.83	0.13	0.15	0.13	0.025	0.39	11.8	4.8	0.24	522	19.9	
1456545	1.15	3.5	1.69	3.11	0.14	0.17	0.06	0.028	0.53	13.1	5.3	0.30	599	12.5	
1456546	1.57	4.2	1.76	2.89	0.12	0.16	0.10	0.025	0.45	12.5	4.4	0.19	420	16.6	
1456547	2.21	5.6	2.07	2.80	0.13	0.17	0.16	0.027	0.43	12.7	4.7	0.19	486	21.3	
1456548	1.63	4.0	1.74	2.77	0.15	0.16	0.12	0.027	0.42	12.8	5.2	0.25	515	11.5	
1456549	1.20	2.3	1.43	1.65	0.15	0.11	0.04	0.024	0.18	12.1	3.6	0.27	369	12.0	
1456550	2.19	4.9	2.03	1.78	0.11	0.10	0.23	0.024	0.19	11.7	2.7	0.06	162	29.5	
1456551	0.14	393	3.89	6.00	0.12	0.21	1.38	1.12	0.04	3.5	4.2	0.41	144	7.02	
1456552	1.40	2.6	1.53	2.24	0.13	0.13	0.05	0.028	0.21	13.8	5.7	0.29	519	16.8	
1456553	1.77	3.6	1.42	1.55	0.13	0.12	0.07	0.021	0.19	11.8	4.1	0.21	396	36.6	
1456554	1.77	3.2	1.32	1.67	0.14	0.12	0.04	0.022	0.22	12.9	4.0	0.23	418	15.9	
1456555	1.90	3.3	1.33	1.04	0.14	0.09	0.08	0.021	0.19	10.1	2.8	0.13	276	29.2	
1456556	1.74	3.4	1.22	2.02	0.13	0.13	0.06	0.024	0.25	11.7	4.6	0.16	320	25.1	
1456557	2.19	4.8	1.59	2.74	0.14	0.14	0.06	0.025	0.31	13.3	5.3	0.23	418	20.6	
1456558	2.03	2.8	1.57	2.34	0.14	0.13	0.07	0.023	0.27	12.0	4.5	0.16	300	18.4	
1456559	1.53	2.9	1.34	1.66	0.13	0.09	0.04	0.024	0.15	12.0	3.7	0.22	378	20.7	
1456560	1.66	3.4	1.49	1.91	0.14	0.11	0.06	0.025	0.20	12.6	4.3	0.22	410	20.2	
1456561	1.64	3.4	1.40	1.97	0.13	0.12	0.07	0.023	0.20	12.3	4.1	0.20	387	18.2	
1456562	1.28	2.7	1.48	1.91	0.14	0.11	0.04	0.022	0.24	13.0	4.3	0.30	532	9.72	
1456563	2.07	2.7	1.74	2.33	0.15	0.10	0.03	0.020	0.26	13.3	4.3	0.35	594	14.0	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456375	0.06	0.05	1.6	368	16.7	25.6	0.001	0.194	0.54	1.5	0.3	0.4	24.3	<0.01
1456376	0.17	0.49	71.1	1490	9.9	6.2	0.004	3.54	7.76	8.4	3.1	0.5	106	<0.01
1456377	0.06	0.05	1.3	368	10.7	26.5	0.001	0.180	0.40	1.5	0.2	0.4	25.7	<0.01
1456378	0.05	<0.05	1.0	354	8.9	26.2	0.001	0.181	0.26	1.5	0.2	0.4	25.8	<0.01
1456379	0.06	<0.05	1.0	329	9.5	18.8	<0.001	0.216	0.34	1.1	0.2	0.3	31.3	<0.01
1456380	0.07	<0.05	1.2	435	8.1	27.4	0.001	0.266	0.36	1.4	0.2	0.4	22.0	<0.01
1456381	0.09	<0.05	1.2	371	8.6	9.6	0.008	0.375	0.57	1.4	0.2	0.3	27.7	<0.01
1456382	0.07	<0.05	1.2	344	9.1	25.7	0.002	0.387	0.50	1.6	<0.2	0.4	39.0	<0.01
1456383	0.03	<0.05	1.4	497	9.7	28.6	<0.001	0.351	0.32	2.5	0.2	0.4	62.6	<0.01
1456384	0.04	<0.05	1.0	336	7.3	18.2	<0.001	0.079	0.10	1.5	<0.2	0.2	61.5	<0.01
1456385	0.08	<0.05	0.9	279	10.7	21.3	<0.001	0.075	0.27	1.4	<0.2	0.4	90.0	<0.01
1456386	0.08	<0.05	1.1	325	10.0	17.8	<0.001	0.146	0.09	1.5	<0.2	0.3	91.5	<0.01
1456387	0.11	<0.05	1.7	455	9.2	17.8	<0.001	0.288	0.11	2.4	<0.2	0.3	71.9	<0.01
1456388	0.12	<0.05	1.0	431	10.2	16.4	<0.001	0.195	0.12	2.4	<0.2	0.3	65.9	<0.01
1456389	0.13	<0.05	1.1	430	9.3	20.9	<0.001	0.174	0.11	2.7	<0.2	0.4	56.4	<0.01
1456390	0.16	0.21	29.4	753	4.1	12.9	0.003	0.220	0.58	5.7	0.2	0.5	137	<0.01
1456391	0.14	<0.05	1.1	441	9.3	20.2	<0.001	0.174	0.14	2.7	<0.2	0.4	62.8	<0.01
1456392	0.12	<0.05	1.1	437	9.6	23.1	<0.001	0.214	0.13	2.6	<0.2	0.4	62.0	<0.01
1456393	0.14	<0.05	1.0	446	9.1	19.0	<0.001	0.216	0.15	2.5	<0.2	0.4	70.5	<0.01
1456394	0.11	<0.05	1.3	435	9.2	15.6	<0.001	0.176	0.08	2.3	<0.2	0.3	64.2	<0.01
1456395	0.15	<0.05	1.0	447	7.9	15.0	<0.001	0.153	0.08	2.7	<0.2	0.3	59.5	<0.01
1456396	0.15	<0.05	1.2	469	7.7	20.6	<0.001	0.142	0.08	3.6	<0.2	0.4	64.1	<0.01
1456397	0.16	<0.05	1.8	477	9.6	22.3	<0.001	0.154	0.09	3.9	<0.2	0.5	67.1	<0.01
1456398	0.16	<0.05	1.3	472	8.7	19.9	<0.001	0.163	0.08	3.4	<0.2	0.4	66.8	<0.01
1456399	0.07	<0.05	1.1	525	9.9	13.8	<0.001	0.158	0.09	2.8	<0.2	0.3	59.8	<0.01
1456400	0.07	<0.05	1.3	516	7.6	8.6	<0.001	0.198	0.09	2.6	0.2	0.2	68.7	<0.01
1456401	0.06	0.07	15.1	522	31.7	12.4	0.004	1.17	0.41	7.4	1.3	0.8	61.3	<0.01
1456402	0.05	<0.05	1.2	502	9.4	11.4	<0.001	0.129	0.08	2.2	<0.2	0.2	68.4	<0.01
1456403	0.06	<0.05	1.2	508	9.2	11.8	<0.001	0.264	0.13	2.4	<0.2	0.3	89.2	<0.01
1456404	0.10	<0.05	1.0	500	8.9	13.5	<0.001	0.321	0.17	3.2	<0.2	0.3	70.6	<0.01
1456405	0.09	<0.05	1.2	488	9.7	14.0	<0.001	0.249	0.23	3.0	<0.2	0.3	60.4	<0.01
1456406	0.06	<0.05	1.2	493	8.0	13.6	<0.001	0.176	0.08	2.7	<0.2	0.3	60.2	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456407	0.05	<0.05	1.3	526	7.9	13.1	<0.001	0.159	0.18	2.8	<0.2	0.3	58.6	<0.01
1456408	0.06	<0.05	1.0	478	8.3	14.8	<0.001	0.149	0.13	2.6	<0.2	0.2	63.1	<0.01
1456409	0.05	<0.05	1.4	506	11.2	17.8	<0.001	0.185	0.12	2.5	<0.2	0.2	54.1	<0.01
1456410	0.06	<0.05	1.3	505	9.1	18.7	<0.001	0.180	0.11	2.6	<0.2	0.3	54.8	<0.01
1456411	0.06	<0.05	1.6	413	7.8	17.5	0.002	0.233	0.18	2.0	<0.2	0.3	116	<0.01
1456412	0.08	<0.05	2.5	375	7.2	19.5	<0.001	0.154	0.08	2.5	<0.2	0.3	65.4	<0.01
1456413	0.09	<0.05	3.1	399	8.3	19.2	<0.001	0.077	0.11	3.0	<0.2	0.3	48.9	<0.01
1456414	0.05	<0.05	2.0	399	9.8	16.4	<0.001	0.072	0.11	2.2	<0.2	0.3	48.8	<0.01
1456415	0.13	0.29	27.5	732	3.3	11.7	0.003	0.220	0.58	5.5	0.3	0.7	130	<0.01
1456416	0.06	<0.05	1.2	250	9.9	14.5	<0.001	0.082	0.09	1.3	<0.2	0.3	93.2	<0.01
1456417	0.07	0.05	0.8	212	9.2	14.3	<0.001	0.091	0.07	0.7	<0.2	<0.2	113	<0.01
1456418	0.06	<0.05	0.8	232	7.9	15.8	<0.001	0.063	0.07	1.1	<0.2	0.2	87.0	<0.01
1456419	0.06	<0.05	0.6	193	9.3	11.6	<0.001	0.078	0.08	0.5	<0.2	<0.2	126	<0.01
1456420	0.07	0.05	0.5	205	10.2	13.2	<0.001	0.087	0.08	0.6	<0.2	<0.2	121	<0.01
1456421	0.09	0.07	0.8	222	9.0	13.5	<0.001	0.059	0.10	0.6	<0.2	<0.2	71.9	<0.01
1456422	0.09	0.06	0.6	221	8.0	15.5	<0.001	0.074	0.09	0.6	<0.2	<0.2	51.0	<0.01
1456423	0.09	0.07	0.7	207	9.3	12.5	<0.001	0.104	0.08	0.8	<0.2	<0.2	79.3	<0.01
1456424	0.09	<0.05	12.0	673	8.7	13.9	<0.001	0.056	0.15	6.1	<0.2	0.7	81.1	<0.01
1456425	0.09	0.05	5.4	478	5.3	11.7	<0.001	0.034	0.12	4.5	<0.2	0.5	51.6	<0.01
1456426	0.14	0.11	10.6	723	20.8	10.6	0.002	0.699	0.34	8.9	0.6	0.9	130	<0.01
1456427	0.15	<0.05	3.2	437	6.2	20.7	<0.001	0.043	0.13	4.0	<0.2	0.6	54.8	<0.01
1456428	0.13	0.05	3.9	420	5.1	18.3	<0.001	0.035	0.12	3.6	<0.2	0.5	46.6	<0.01
1456429	0.10	0.05	2.7	356	5.1	14.7	<0.001	0.034	0.10	2.6	<0.2	0.4	43.3	<0.01
1456430	0.18	<0.05	3.3	369	5.6	17.3	<0.001	0.027	0.12	3.6	<0.2	<0.2	46.2	<0.01
1456431	0.13	<0.05	3.2	398	4.3	11.9	<0.001	0.036	0.10	3.2	<0.2	<0.2	48.3	<0.01
1456432	0.08	0.06	<0.2	830	2.1	6.7	0.002	0.046	0.08	1.4	<0.2	<0.2	116	<0.01
1456433	<0.01	<0.05	2.1	180	6.3	12.7	<0.001	0.023	0.52	0.9	<0.2	<0.2	10.1	<0.01
1456434	<0.01	<0.05	1.3	183	6.4	17.8	<0.001	0.022	0.44	1.0	<0.2	<0.2	11.7	<0.01
1456435	<0.01	<0.05	2.5	143	6.5	20.3	<0.001	<0.005	0.50	0.9	0.8	<0.2	10.2	<0.01
1456436	<0.01	<0.05	2.1	271	6.6	15.2	<0.001	0.007	0.46	0.9	0.5	<0.2	8.3	<0.01
1456437	<0.01	<0.05	1.6	227	7.1	17.9	<0.001	0.025	0.44	1.1	0.2	<0.2	8.6	<0.01
1456438	<0.01	<0.05	1.6	314	6.8	17.9	<0.001	0.016	0.42	1.0	0.3	<0.2	6.6	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm
1456439		<0.01	<0.05	2.0	300	7.1	21.7	<0.001	0.009	0.48	1.1	<0.2	<0.2	7.2	<0.01
1456440		0.13	0.22	27.5	724	3.0	11.5	0.002	0.215	0.57	5.6	0.3	0.4	131	<0.01
1456441		<0.01	<0.05	1.5	267	6.7	19.0	<0.001	0.052	0.48	0.9	0.2	<0.2	7.7	<0.01
1456442		<0.01	<0.05	1.2	188	6.0	27.4	<0.001	0.008	0.50	1.0	0.2	0.2	5.2	<0.01
1456443		<0.01	<0.05	2.2	256	6.4	31.9	<0.001	0.103	0.57	1.2	0.2	0.3	7.5	<0.01
1456444		<0.01	<0.05	1.5	227	6.6	19.7	<0.001	0.086	0.68	0.9	0.3	<0.2	4.7	<0.01
1456445		<0.01	<0.05	1.3	225	6.5	23.3	<0.001	0.071	0.73	0.9	0.4	0.3	5.2	<0.01
1456446		<0.01	<0.05	1.6	224	6.9	22.4	<0.001	0.102	0.59	0.9	0.2	0.2	5.0	<0.01
1456447		<0.01	<0.05	2.9	191	6.5	26.5	<0.001	0.082	0.69	0.9	0.5	0.3	5.5	<0.01
1456448		<0.01	<0.05	1.7	235	6.6	20.4	<0.001	0.073	0.62	0.8	0.4	0.2	6.1	<0.01
1456449		0.01	<0.05	2.5	202	5.4	11.8	<0.001	0.018	0.52	1.0	0.3	<0.2	6.7	<0.01
1456450		<0.01	<0.05	2.6	276	5.5	13.9	<0.001	0.022	0.65	0.7	0.3	0.2	4.8	<0.01
1456451		0.14	0.47	73.6	1490	10.1	5.7	0.004	3.61	8.14	8.0	3.1	0.6	95.8	<0.01
1456452		<0.01	<0.05	1.8	269	5.3	16.7	<0.001	0.059	0.60	0.9	0.3	0.2	5.5	<0.01
1456453		<0.01	<0.05	3.8	284	3.4	10.3	<0.001	0.014	0.86	0.5	0.2	0.2	4.5	<0.01
1456454		<0.01	<0.05	2.2	243	5.9	16.6	<0.001	0.089	0.51	0.9	0.3	0.2	4.3	<0.01
1456455		<0.01	<0.05	2.7	217	5.9	16.3	<0.001	0.082	0.48	0.6	0.3	<0.2	3.5	<0.01
1456456		<0.01	<0.05	2.5	335	7.2	16.8	<0.001	0.167	0.39	0.6	0.4	<0.2	3.3	<0.01
1456457		<0.01	<0.05	2.5	321	8.4	19.1	<0.001	0.124	0.40	0.7	0.4	<0.2	3.5	<0.01
1456458		<0.01	<0.05	3.2	273	6.0	16.3	<0.001	0.140	0.39	0.6	0.3	<0.2	3.2	<0.01
1456459		<0.01	<0.05	2.3	272	6.9	18.6	<0.001	0.158	0.34	0.7	0.4	0.2	3.6	<0.01
1456460		<0.01	<0.05	2.4	246	6.8	17.2	<0.001	0.149	0.32	0.6	0.4	<0.2	3.5	<0.01
1456461		<0.01	<0.05	2.0	281	7.7	19.1	<0.001	0.180	0.39	0.8	0.3	<0.2	4.1	<0.01
1456462		<0.01	<0.05	1.8	350	6.8	23.0	<0.001	0.232	0.57	0.9	0.4	0.2	16.1	<0.01
1456463		<0.01	<0.05	1.6	486	7.1	19.2	<0.001	0.445	0.51	0.6	0.5	<0.2	8.4	<0.01
1456464		<0.01	<0.05	1.9	438	7.9	19.8	<0.001	0.558	0.49	0.6	0.4	<0.2	9.0	<0.01
1456465		0.10	0.21	26.4	694	3.0	12.6	0.003	0.200	0.56	6.0	0.4	0.5	148	<0.01
1456466		<0.01	<0.05	2.1	303	7.7	20.8	<0.001	0.215	0.42	0.9	0.4	0.2	12.9	<0.01
1456467		<0.01	<0.05	2.0	295	7.7	21.3	<0.001	0.249	0.51	1.0	0.4	0.2	18.3	<0.01
1456468		<0.01	<0.05	1.5	308	8.0	17.7	<0.001	0.212	0.21	0.9	0.2	<0.2	19.6	<0.01
1456469		0.01	<0.05	1.4	343	8.4	21.2	<0.001	0.231	0.46	1.2	0.4	0.2	32.1	<0.01
1456470		0.02	<0.05	1.6	308	7.6	16.6	<0.001	0.238	0.33	1.2	0.3	0.3	31.6	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456471	0.02	<0.05	1.3	333	8.9	21.1	<0.001	0.265	0.38	1.0	0.3	0.2	32.9	<0.01
1456472	0.02	<0.05	1.3	367	12.5	21.2	<0.001	0.254	0.27	0.9	0.2	<0.2	27.4	<0.01
1456473	0.02	<0.05	1.1	353	8.5	23.3	<0.001	0.217	0.15	1.2	0.3	0.2	43.4	<0.01
1456474	0.02	<0.05	1.0	326	8.2	19.4	<0.001	0.226	0.11	1.0	0.3	0.2	51.6	<0.01
1456475	0.02	<0.05	1.4	345	8.7	16.4	<0.001	0.232	0.14	1.0	0.3	<0.2	49.0	<0.01
1456476	0.07	0.07	15.7	692	39.5	17.4	0.004	1.19	0.39	8.9	1.6	0.8	69.8	<0.01
1456477	0.02	<0.05	1.4	433	1.0	1.9	<0.001	0.191	<0.05	0.1	<0.2	<0.2	5.7	<0.01
1456478	0.02	<0.05	1.4	551	9.5	18.6	<0.001	0.351	0.30	1.3	0.3	0.3	48.9	<0.01
1456479	0.02	<0.05	1.4	266	8.7	17.9	0.001	0.169	0.42	1.1	0.3	0.3	85.2	<0.01
1456480	0.01	<0.05	1.2	416	8.7	18.4	<0.001	0.291	0.19	1.7	0.2	0.2	102	<0.01
1456481	0.01	<0.05	3.4	942	6.9	14.0	<0.001	0.471	0.17	6.7	0.3	0.2	109	<0.01
1456482	0.02	<0.05	2.0	564	8.7	16.1	<0.001	0.231	0.08	2.4	0.2	<0.2	74.2	<0.01
1456483	0.02	<0.05	2.0	543	8.8	18.2	<0.001	0.154	0.07	2.5	<0.2	0.2	70.5	<0.01
1456484	0.02	<0.05	2.0	557	7.0	16.6	<0.001	0.097	0.07	2.5	0.2	0.2	67.9	<0.01
1456485	0.03	<0.05	2.8	599	6.5	18.4	<0.001	0.195	0.08	4.1	0.2	0.3	98.2	<0.01
1456486	0.03	<0.05	4.1	732	8.4	19.2	<0.001	0.366	0.26	3.5	0.3	0.3	71.3	<0.01
1456487	0.05	0.05	1.2	160	8.3	15.4	<0.001	0.062	0.09	0.7	<0.2	0.2	46.0	<0.01
1456488	0.04	<0.05	3.9	572	9.9	10.1	<0.001	0.041	0.08	3.9	<0.2	0.3	66.9	<0.01
1456489	0.05	<0.05	0.7	626	5.3	12.9	<0.001	0.027	0.06	2.0	<0.2	0.3	70.3	<0.01
1456490	0.09	0.28	26.3	643	3.1	11.1	0.003	0.215	0.46	5.5	0.3	0.4	153	<0.01
1456491	0.06	0.07	1.0	605	9.0	15.5	<0.001	0.049	0.08	2.6	<0.2	0.4	52.3	<0.01
1456492	0.06	<0.05	0.8	643	6.0	12.0	<0.001	0.054	0.09	3.0	<0.2	0.5	52.1	<0.01
1456493	0.06	0.05	0.8	645	7.1	13.1	<0.001	0.163	0.10	2.8	<0.2	0.5	42.9	<0.01
1456494	0.05	<0.05	0.5	736	4.0	12.4	<0.001	0.108	0.08	3.5	<0.2	0.4	38.2	<0.01
1456495	0.06	0.06	0.7	689	7.0	18.2	<0.001	0.171	0.10	2.8	<0.2	0.7	40.2	<0.01
1456496	0.05	<0.05	0.9	636	6.6	15.3	<0.001	0.187	0.11	2.8	<0.2	0.5	40.4	<0.01
1456497	<0.01	<0.05	1.1	313	7.9	9.9	<0.001	0.007	2.86	1.0	1.7	0.3	10.4	<0.01
1456498	<0.01	<0.05	1.6	247	6.8	10.2	<0.001	0.022	3.75	1.3	0.8	0.3	12.8	<0.01
1456499	<0.01	<0.05	1.4	279	5.6	7.2	<0.001	0.042	4.44	1.1	0.6	0.2	19.8	<0.01
1456500	<0.01	<0.05	1.2	242	6.4	14.9	<0.001	0.008	3.55	1.1	0.5	0.2	17.9	<0.01
1456501	0.15	0.08	11.1	884	22.6	13.0	0.002	0.664	0.32	10.5	0.8	0.9	166	<0.01
1456502	<0.01	<0.05	3.3	277	5.8	18.8	<0.001	0.103	4.89	1.3	0.8	0.3	27.5	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456503	<0.01	<0.05	1.9	241	6.6	15.4	<0.001	0.187	4.12	1.4	0.8	0.3	26.2	<0.01
1456504	<0.01	<0.05	2.5	245	6.3	15.0	<0.001	0.297	5.54	1.4	1.2	0.2	21.9	<0.01
1456505	<0.01	<0.05	4.3	237	6.7	18.7	<0.001	0.024	2.99	1.5	0.5	0.3	32.6	<0.01
1456506	<0.01	<0.05	1.8	266	7.6	15.2	<0.001	0.061	3.61	1.6	0.7	0.3	16.7	<0.01
1456507	<0.01	<0.05	2.3	271	6.2	11.3	<0.001	0.265	4.68	1.4	0.9	0.3	21.2	<0.01
1456508	<0.01	0.06	2.3	239	6.7	18.5	0.001	0.376	3.76	1.3	1.3	0.3	16.3	<0.01
1456509	<0.01	<0.05	2.8	279	6.6	20.1	<0.001	0.051	3.35	1.3	1.2	0.3	14.3	<0.01
1456510	<0.01	<0.05	1.8	310	7.2	14.6	<0.001	0.040	3.16	1.4	1.0	0.3	17.9	<0.01
1456511	<0.01	<0.05	1.9	325	7.0	16.7	<0.001	0.006	3.13	1.5	0.8	0.4	11.5	<0.01
1456512	<0.01	0.06	2.6	547	5.1	14.6	<0.001	0.387	6.75	1.1	1.5	0.3	20.3	<0.01
1456513	<0.01	0.07	4.6	771	5.0	9.8	0.001	2.14	12.6	1.0	5.5	0.3	28.1	<0.01
1456514	<0.01	0.05	3.9	441	5.3	17.5	<0.001	0.903	8.11	1.6	2.9	0.4	38.1	<0.01
1456515	0.11	0.27	27.4	730	3.0	11.1	0.003	0.201	0.61	5.8	0.3	0.4	159	<0.01
1456516	<0.01	0.05	4.0	752	7.2	20.3	0.001	0.652	6.62	4.0	1.3	0.7	41.4	<0.01
1456517	<0.01	0.06	5.5	450	5.7	26.7	<0.001	0.320	5.43	2.6	1.2	0.5	34.5	<0.01
1456518	<0.01	<0.05	3.6	598	6.4	18.4	0.002	0.997	8.87	2.6	1.5	0.4	45.0	<0.01
1456519	<0.01	<0.05	4.2	666	7.7	24.0	0.001	0.851	6.94	2.7	1.6	0.4	46.9	<0.01
1456520	<0.01	<0.05	2.4	377	6.3	9.5	<0.001	0.348	4.79	1.4	1.2	0.3	18.4	<0.01
1456521	<0.01	<0.05	3.3	432	7.0	10.4	<0.001	0.930	17.3	1.5	3.0	0.3	20.9	<0.01
1456522	<0.01	0.06	4.3	250	6.0	15.4	<0.001	0.190	7.18	1.2	1.0	0.4	35.4	<0.01
1456523	<0.01	0.06	2.1	328	6.4	10.0	<0.001	0.672	8.93	1.2	1.9	0.3	16.1	<0.01
1456524	<0.01	0.07	3.1	396	4.7	12.3	<0.001	0.915	16.5	1.1	1.7	0.3	16.4	<0.01
1456525	<0.01	<0.05	3.1	327	6.8	12.6	0.001	0.387	4.00	1.3	1.6	0.3	32.6	<0.01
1456526	0.06	0.10	15.6	679	38.6	13.3	0.004	1.12	0.44	8.2	1.5	0.8	65.4	<0.01
1456527	<0.01	<0.05	2.8	273	6.9	16.2	<0.001	0.269	3.08	1.6	1.0	0.3	23.3	<0.01
1456528	<0.01	<0.05	2.5	372	7.2	16.6	0.001	0.456	6.02	1.7	1.1	0.4	26.3	<0.01
1456529	<0.01	0.06	2.8	373	7.6	16.1	<0.001	0.729	9.24	1.4	1.5	0.3	18.9	<0.01
1456530	<0.01	0.07	3.2	296	5.8	14.7	<0.001	0.789	9.44	1.3	2.3	0.3	34.0	<0.01
1456531	<0.01	<0.05	2.2	296	6.8	16.8	<0.001	0.326	4.47	1.6	0.8	0.4	31.4	<0.01
1456532	<0.01	<0.05	3.2	400	6.1	15.6	<0.001	0.599	7.63	1.2	1.4	0.3	36.8	<0.01
1456533	<0.01	<0.05	3.2	665	5.9	12.0	0.001	0.615	14.6	1.5	1.4	0.3	19.5	<0.01
1456534	<0.01	<0.05	2.2	320	6.7	16.8	<0.001	0.254	4.81	1.6	0.8	0.3	43.3	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456535	<0.01	0.05	3.7	475	7.1	11.9	0.001	0.462	10.2	1.6	1.4	2.3	19.6	<0.01
1456536	<0.01	0.07	4.3	412	5.8	16.7	<0.001	0.490	8.25	1.2	1.2	0.4	17.3	<0.01
1456537	<0.01	0.07	3.9	774	6.2	18.6	0.001	0.414	11.5	1.5	1.2	0.4	27.9	<0.01
1456538	<0.01	0.06	4.0	414	6.5	19.4	<0.001	0.462	20.4	1.2	1.1	0.4	22.0	<0.01
1456539	<0.01	0.09	4.6	386	6.2	20.1	0.001	0.550	12.5	1.3	1.3	0.4	19.4	<0.01
1456540	0.19	0.13	28.9	719	3.1	12.9	0.003	0.215	0.64	5.7	0.3	0.5	160	<0.01
1456541	0.01	0.06	3.6	730	8.0	21.5	0.001	0.864	25.1	2.0	1.2	0.4	122	<0.01
1456542	<0.01	<0.05	3.1	406	6.0	19.5	<0.001	0.305	5.33	1.6	0.9	0.4	75.8	<0.01
1456543	<0.01	0.06	4.5	704	5.4	16.0	0.002	0.987	23.2	1.2	1.7	0.3	25.4	<0.01
1456544	<0.01	0.08	3.5	379	6.4	19.4	0.001	0.510	10.4	1.4	0.9	0.4	37.1	<0.01
1456545	0.01	0.09	3.6	459	6.5	23.6	0.001	0.410	7.33	1.6	0.8	0.4	38.2	<0.01
1456546	<0.01	0.09	4.0	487	6.8	22.5	0.001	0.593	12.4	1.6	1.1	0.4	30.6	<0.01
1456547	<0.01	0.09	4.3	510	7.9	21.4	0.002	0.898	27.6	1.7	1.7	0.4	34.3	<0.01
1456548	0.01	0.06	3.7	472	6.8	21.4	0.001	0.675	16.7	1.7	1.0	0.4	43.7	<0.01
1456549	<0.01	<0.05	1.0	289	6.8	8.5	<0.001	0.367	5.29	1.2	0.8	0.3	24.9	<0.01
1456550	<0.01	0.07	2.1	556	7.1	10.1	0.003	1.37	43.8	1.1	3.8	0.3	27.2	<0.01
1456551	0.12	0.55	29.4	261	191	1.3	0.001	1.57	174	1.5	10.3	15.3	46.1	<0.01
1456552	0.01	0.07	1.5	419	7.9	10.1	<0.001	0.364	7.23	1.4	0.7	0.4	111	<0.01
1456553	<0.01	<0.05	1.7	275	7.4	9.6	0.001	0.642	13.3	1.2	1.0	0.3	24.4	<0.01
1456554	<0.01	<0.05	1.5	345	7.4	10.9	<0.001	0.453	4.05	1.2	0.8	0.3	16.0	<0.01
1456555	<0.01	<0.05	2.2	240	6.3	9.2	0.002	0.752	11.4	1.3	1.1	0.2	12.7	<0.01
1456556	<0.01	0.06	2.1	303	6.4	12.2	0.002	0.531	10.4	1.2	0.9	0.3	28.7	<0.01
1456557	0.01	0.07	2.0	421	7.3	15.0	0.001	0.544	9.75	1.5	0.9	0.4	68.2	<0.01
1456558	<0.01	0.06	2.1	418	6.5	13.0	0.002	0.481	13.3	1.2	0.9	0.4	42.5	<0.01
1456559	<0.01	<0.05	1.3	360	7.4	7.2	0.001	0.471	5.96	1.1	0.7	0.3	47.9	<0.01
1456560	<0.01	<0.05	1.8	379	7.8	9.8	0.002	0.534	9.32	1.2	0.8	0.3	70.9	<0.01
1456561	<0.01	<0.05	2.1	388	6.9	9.4	0.002	0.486	15.2	1.3	0.8	0.3	76.7	<0.01
1456562	0.01	<0.05	1.3	393	7.0	10.8	0.001	0.403	7.55	1.2	0.5	0.3	40.5	<0.01
1456563	0.01	<0.05	1.4	367	7.1	12.6	<0.001	0.360	4.56	1.1	0.4	0.3	57.2	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456375	0.01	1.2	<0.005	0.23	0.32	16.3	0.13	9.27	68.2	4.7	
1456376	0.21	2.4	0.132	0.08	0.90	107	1.96	14.2	89.5	19.9	
1456377	<0.01	1.1	<0.005	0.22	0.36	15.8	0.18	11.1	61.2	4.9	
1456378	<0.01	1.1	<0.005	0.22	0.34	14.0	0.17	9.85	45.5	4.2	
1456379	<0.01	0.9	<0.005	0.16	0.28	14.3	0.10	9.31	52.6	4.0	
1456380	<0.01	1.1	<0.005	0.22	0.34	15.5	0.14	8.27	49.9	4.8	
1456381	<0.01	1.0	<0.005	0.25	0.25	18.5	0.15	8.37	48.6	3.8	
1456382	<0.01	1.2	<0.005	0.26	0.34	17.4	0.15	9.39	41.8	4.0	
1456383	<0.01	1.7	<0.005	0.25	0.46	24.9	0.16	9.20	63.0	3.4	
1456384	<0.01	1.2	<0.005	0.14	0.45	17.6	0.07	7.50	43.0	3.9	
1456385	<0.01	1.5	<0.005	0.15	0.45	12.1	0.13	10.2	36.8	4.8	
1456386	<0.01	1.3	<0.005	0.12	0.36	14.9	0.08	9.26	41.8	3.7	
1456387	<0.01	0.9	<0.005	0.13	0.27	22.1	0.12	9.99	63.8	5.4	
1456388	<0.01	0.8	<0.005	0.12	0.24	22.1	<0.05	10.5	55.5	5.3	
1456389	<0.01	0.9	<0.005	0.14	0.28	23.6	0.07	10.1	55.8	5.9	
1456390	0.02	1.8	0.132	0.08	0.75	92.4	0.25	9.57	48.0	8.2	
1456391	0.01	0.9	<0.005	0.14	0.29	24.1	0.06	10.4	56.6	5.6	
1456392	0.01	0.9	<0.005	0.15	0.28	23.0	0.09	9.99	55.2	4.7	
1456393	0.01	0.9	<0.005	0.13	0.29	24.1	<0.05	10.3	57.4	4.7	
1456394	<0.01	0.9	<0.005	0.11	0.26	21.9	0.09	10.2	58.1	5.1	
1456395	<0.01	0.9	<0.005	0.11	0.27	25.0	<0.05	9.93	58.9	4.7	
1456396	0.01	1.0	<0.005	0.14	0.29	29.6	<0.05	11.1	60.2	5.3	
1456397	0.01	1.0	<0.005	0.15	0.29	30.6	<0.05	11.6	63.7	5.2	
1456398	<0.01	1.0	<0.005	0.13	0.29	28.6	<0.05	10.9	60.8	5.0	
1456399	0.01	0.8	<0.005	0.10	0.23	25.7	<0.05	10.8	66.4	3.1	
1456400	<0.01	0.8	<0.005	0.06	0.19	25.2	<0.05	10.2	64.5	2.3	
1456401	9.55	0.9	0.073	0.27	0.40	86.1	0.59	7.88	106	7.8	
1456402	0.13	0.8	<0.005	0.08	0.21	21.0	0.51	10.1	60.3	2.7	
1456403	0.02	0.7	<0.005	0.08	0.21	23.2	0.06	11.1	60.2	3.0	
1456404	0.02	0.8	<0.005	0.09	0.23	26.6	0.05	11.7	61.3	4.0	
1456405	<0.01	0.8	<0.005	0.09	0.23	24.3	<0.05	10.7	60.4	3.6	
1456406	0.01	0.8	<0.005	0.08	0.21	22.9	<0.05	10.4	60.0	3.0	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456407	0.01	0.7	<0.005	0.08	0.20	23.1	<0.05	10.7	48.3	3.1	
1456408	0.01	0.8	<0.005	0.09	0.22	20.2	<0.05	10.1	55.2	3.7	
1456409	0.02	0.8	<0.005	0.10	0.21	19.5	<0.05	9.92	59.1	3.5	
1456410	0.01	0.9	<0.005	0.11	0.23	19.9	<0.05	10.2	58.7	3.9	
1456411	0.08	1.0	<0.005	0.18	0.30	14.9	0.14	8.21	32.4	3.8	
1456412	<0.01	1.0	<0.005	0.12	0.40	19.9	<0.05	8.22	46.3	4.9	
1456413	<0.01	1.0	<0.005	0.12	0.49	22.9	<0.05	8.70	53.7	5.3	
1456414	<0.01	1.0	<0.005	0.10	0.50	13.7	<0.05	8.26	29.5	4.6	
1456415	0.02	1.8	0.143	0.08	0.83	89.1	0.30	9.51	44.1	8.6	
1456416	<0.01	1.2	<0.005	0.09	0.53	8.5	0.07	7.52	29.0	4.7	
1456417	<0.01	1.9	<0.005	0.09	0.60	6.1	0.07	6.50	15.7	6.1	
1456418	<0.01	1.1	<0.005	0.10	0.59	7.8	<0.05	6.92	19.8	3.7	
1456419	<0.01	1.5	<0.005	0.09	0.57	5.2	0.07	5.46	14.6	8.2	
1456420	<0.01	1.6	<0.005	0.11	0.72	4.5	0.08	6.04	17.3	9.4	
1456421	<0.01	1.8	<0.005	0.11	0.55	4.9	0.08	6.07	19.6	10.1	
1456422	<0.01	2.0	<0.005	0.12	0.58	4.6	0.07	7.43	23.2	11.1	
1456423	<0.01	1.6	<0.005	0.09	0.58	5.7	0.07	6.12	18.0	8.9	
1456424	0.02	1.2	0.016	0.09	0.59	56.1	0.39	14.5	59.5	6.4	
1456425	<0.01	1.2	0.011	0.08	0.50	39.1	0.05	10.4	55.3	4.8	
1456426	4.39	2.0	0.104	0.16	0.63	105	0.35	9.91	90.5	14.7	
1456427	0.04	1.3	0.014	0.14	0.62	36.8	<0.05	10.2	47.3	7.2	
1456428	<0.01	1.3	0.016	0.12	0.56	36.2	0.07	8.79	45.2	6.7	
1456429	<0.01	1.1	0.012	0.09	0.51	27.8	<0.05	7.09	33.9	5.0	
1456430	<0.01	1.2	0.019	0.12	0.62	34.3	0.11	8.38	49.3	6.8	
1456431	<0.01	1.1	0.013	0.08	0.61	29.6	0.08	8.20	47.1	5.9	
1456432	<0.01	1.3	0.007	0.03	0.59	40.3	0.15	3.68	58.2	0.8	
1456433	<0.01	0.8	<0.005	0.14	0.22	9.3	5.91	3.42	54.5	2.4	
1456434	<0.01	0.7	<0.005	0.23	0.34	9.0	0.35	4.34	42.3	2.4	
1456435	<0.01	0.7	<0.005	0.22	0.22	7.5	0.08	7.12	55.3	1.8	
1456436	<0.01	0.7	<0.005	0.21	0.19	8.8	0.63	10.1	78.1	1.8	
1456437	<0.01	0.7	<0.005	0.21	0.20	10.2	0.08	8.12	65.5	2.1	
1456438	<0.01	0.7	<0.005	0.18	0.21	9.3	0.09	9.55	70.9	2.3	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456439	<0.01	0.8	<0.005	0.23	0.27	9.2	0.09	9.09	82.2	2.8	
1456440	0.02	1.8	0.137	0.08	0.75	88.0	0.30	9.39	44.0	8.3	
1456441	<0.01	0.7	<0.005	0.19	0.28	7.1	0.07	8.19	85.4	2.7	
1456442	<0.01	0.8	<0.005	0.29	0.22	7.8	0.07	6.46	57.8	2.6	
1456443	<0.01	0.9	<0.005	0.30	0.28	8.7	0.11	7.55	58.6	3.9	
1456444	<0.01	0.7	<0.005	0.20	0.22	6.9	0.08	6.64	53.4	2.6	
1456445	<0.01	0.8	<0.005	0.21	0.24	6.8	0.07	7.39	57.4	2.6	
1456446	<0.01	0.9	<0.005	0.21	0.26	6.8	0.10	7.79	58.0	3.5	
1456447	<0.01	0.7	<0.005	0.24	0.23	5.7	0.14	7.73	56.0	3.4	
1456448	<0.01	0.7	<0.005	0.19	0.23	6.2	0.09	5.26	57.3	3.1	
1456449	<0.01	0.7	<0.005	0.11	0.18	6.8	0.07	5.90	57.1	2.7	
1456450	<0.01	0.7	<0.005	0.12	0.21	3.3	0.09	7.59	53.1	2.0	
1456451	0.22	2.4	0.114	0.07	0.90	101	2.00	13.9	93.0	18.2	
1456452	<0.01	0.8	<0.005	0.15	0.23	4.6	0.08	7.88	40.9	2.6	
1456453	<0.01	0.6	<0.005	0.10	0.13	1.2	0.07	7.81	37.6	1.8	
1456454	<0.01	0.9	<0.005	0.16	0.21	5.1	<0.05	7.42	50.8	2.7	
1456455	0.01	0.7	<0.005	0.14	0.19	5.4	<0.05	5.16	44.3	1.9	
1456456	<0.01	0.9	<0.005	0.16	0.24	4.4	<0.05	7.88	59.5	2.0	
1456457	<0.01	0.9	<0.005	0.18	0.23	5.5	0.06	6.08	45.0	2.5	
1456458	<0.01	0.8	<0.005	0.16	0.22	6.2	<0.05	4.88	38.8	2.0	
1456459	<0.01	0.9	<0.005	0.17	0.26	5.5	<0.05	5.54	49.7	2.5	
1456460	<0.01	0.9	<0.005	0.16	0.25	5.2	<0.05	5.49	46.8	1.7	
1456461	<0.01	0.9	<0.005	0.18	0.25	5.6	<0.05	5.74	52.1	2.3	
1456462	<0.01	0.8	<0.005	0.18	0.21	7.0	0.06	8.60	38.1	2.6	
1456463	<0.01	0.9	<0.005	0.17	0.24	5.4	0.07	6.53	35.9	2.6	
1456464	<0.01	1.1	<0.005	0.17	0.30	5.1	0.09	5.99	23.1	2.5	
1456465	0.02	2.0	0.135	0.08	0.77	85.7	0.23	10.7	43.3	8.6	
1456466	<0.01	1.0	<0.005	0.17	0.26	10.2	0.05	8.27	42.8	2.5	
1456467	<0.01	1.0	<0.005	0.19	0.27	8.4	<0.05	8.58	40.5	1.7	
1456468	<0.01	1.1	<0.005	0.16	0.25	8.0	<0.05	8.29	45.1	1.4	
1456469	<0.01	1.2	<0.005	0.16	0.24	9.3	<0.05	10.4	47.6	1.9	
1456470	<0.01	1.1	<0.005	0.13	0.22	12.1	<0.05	9.60	45.1	1.8	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456471	<0.01	1.0	<0.005	0.15	0.23	9.0	<0.05	10.2	45.9	1.8	
1456472	<0.01	1.0	<0.005	0.16	0.25	7.3	<0.05	8.56	49.6	1.9	
1456473	<0.01	1.0	<0.005	0.14	0.23	8.5	<0.05	10.5	50.7	1.6	
1456474	0.01	0.9	<0.005	0.11	0.21	7.6	<0.05	11.3	51.2	1.6	
1456475	<0.01	0.9	<0.005	0.11	0.20	8.4	<0.05	10.6	50.8	1.6	
1456476	9.07	1.0	0.086	0.27	0.46	76.4	0.49	8.05	108	7.8	
1456477	<0.01	0.1	<0.005	<0.02	<0.05	0.8	<0.05	1.07	47.1	<0.5	
1456478	0.09	1.0	<0.005	0.12	0.29	8.5	<0.05	9.86	44.6	2.2	
1456479	0.01	1.6	<0.005	0.24	0.27	5.6	0.07	11.4	37.5	1.3	
1456480	0.02	1.3	<0.005	0.12	0.28	5.3	<0.05	11.7	38.0	1.3	
1456481	0.02	0.8	<0.005	0.10	0.22	24.9	<0.05	14.9	87.6	2.0	
1456482	0.02	1.0	<0.005	0.08	0.25	12.1	<0.05	11.3	55.4	2.3	
1456483	0.01	1.0	<0.005	0.10	0.27	14.1	<0.05	11.2	52.6	2.3	
1456484	0.01	1.0	<0.005	0.09	0.27	15.6	<0.05	11.0	53.6	1.8	
1456485	<0.01	1.0	<0.005	0.10	0.27	24.5	<0.05	12.3	53.2	1.9	
1456486	0.01	1.1	<0.005	0.12	0.34	17.1	<0.05	10.6	56.6	2.7	
1456487	<0.01	1.2	<0.005	0.08	0.69	3.6	<0.05	2.51	19.1	3.9	
1456488	<0.01	1.1	<0.005	0.06	0.40	39.0	<0.05	10.4	64.0	2.2	
1456489	<0.01	0.9	<0.005	0.07	0.44	19.8	<0.05	11.0	59.0	2.5	
1456490	0.02	2.0	0.112	0.07	0.82	76.4	0.18	8.64	40.5	5.9	
1456491	<0.01	0.8	0.007	0.07	0.40	26.2	<0.05	10.2	47.9	4.6	
1456492	<0.01	1.2	0.006	0.07	0.61	27.0	<0.05	11.0	53.6	4.1	
1456493	<0.01	1.2	0.013	0.08	0.54	27.6	<0.05	11.7	57.3	6.0	
1456494	<0.01	0.8	<0.005	0.08	0.38	22.9	<0.05	11.8	68.8	4.3	
1456495	<0.01	1.1	0.009	0.09	0.50	23.6	<0.05	11.6	58.0	5.6	
1456496	<0.01	1.1	0.007	0.08	0.54	25.4	<0.05	11.6	51.5	5.0	
1456497	0.01	1.8	<0.005	0.26	0.53	9.9	<0.05	5.35	22.7	2.5	
1456498	<0.01	1.8	<0.005	0.26	0.41	12.7	<0.05	7.42	13.9	3.4	
1456499	<0.01	1.4	<0.005	0.47	0.29	11.5	0.09	4.34	34.0	2.2	
1456500	<0.01	1.6	<0.005	1.04	0.37	11.5	0.06	5.65	51.8	2.7	
1456501	3.60	2.1	0.103	0.16	0.66	90.0	0.16	11.1	85.0	12.6	
1456502	0.04	1.5	<0.005	0.81	0.44	10.4	0.11	11.4	34.2	3.8	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011	DATE RECEIVED: Oct 25, 2011					DATE REPORTED: Jan 20, 2012					SAMPLE TYPE: Drill Core
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
Sample Description											
1456503	0.01	1.7	<0.005	0.65	0.32	14.2	0.08	9.82	40.2	3.6	
1456504	<0.01	1.5	<0.005	1.18	0.37	13.7	0.09	9.13	56.1	3.5	
1456505	<0.01	1.7	<0.005	1.36	0.39	11.9	0.07	10.2	75.6	3.0	
1456506	<0.01	1.8	<0.005	0.91	0.36	15.0	0.06	12.6	73.3	4.0	
1456507	<0.01	1.6	<0.005	0.54	0.33	14.4	0.07	7.11	51.5	3.4	
1456508	<0.01	1.7	<0.005	0.59	0.38	10.6	0.11	10.0	33.1	4.1	
1456509	<0.01	1.8	<0.005	0.37	0.39	15.3	0.08	9.03	42.1	3.8	
1456510	<0.01	1.7	<0.005	0.43	0.36	13.0	<0.05	10.2	51.5	2.9	
1456511	<0.01	1.9	<0.005	0.72	0.46	15.3	<0.05	10.7	62.6	2.9	
1456512	<0.01	1.3	<0.005	0.77	0.32	10.7	0.21	6.38	26.5	3.6	
1456513	<0.01	1.0	<0.005	3.00	0.28	6.4	0.18	6.93	34.1	3.0	
1456514	<0.01	1.2	<0.005	1.78	0.32	11.6	0.15	7.07	43.1	4.3	
1456515	0.02	1.9	0.136	0.08	0.75	77.8	0.22	8.90	42.7	7.3	
1456516	<0.01	1.5	<0.005	0.86	0.38	37.2	0.10	13.2	55.1	5.2	
1456517	<0.01	1.2	<0.005	1.43	0.43	21.7	0.13	12.5	73.5	4.6	
1456518	<0.01	1.3	<0.005	0.89	0.38	26.4	0.14	11.6	57.4	4.2	
1456519	<0.01	1.5	<0.005	0.94	0.40	23.5	0.10	13.6	67.2	5.0	
1456520	<0.01	1.5	<0.005	0.64	0.29	13.9	0.09	8.87	47.6	3.3	
1456521	<0.01	1.2	<0.005	1.73	0.31	12.1	0.17	9.08	52.3	3.4	
1456522	<0.01	1.5	<0.005	0.75	0.39	9.6	0.14	6.46	45.2	3.9	
1456523	<0.01	1.5	<0.005	1.02	0.34	10.8	0.11	6.69	46.2	3.3	
1456524	<0.01	1.2	<0.005	1.60	0.31	5.5	0.22	6.79	35.5	3.5	
1456525	<0.01	1.5	<0.005	0.77	0.40	10.5	0.16	11.8	31.0	3.4	
1456526	8.95	1.0	0.081	0.26	0.45	68.7	0.71	7.89	106	10.5	
1456527	0.05	1.6	<0.005	0.37	0.31	15.7	0.06	10.4	54.6	3.4	
1456528	0.01	1.6	<0.005	0.64	0.32	16.6	0.12	9.92	59.1	4.4	
1456529	<0.01	1.6	<0.005	0.89	0.40	12.5	0.20	7.78	48.3	4.2	
1456530	<0.01	1.3	<0.005	0.93	0.37	9.8	0.21	6.50	41.6	3.9	
1456531	<0.01	1.7	<0.005	0.54	0.32	15.3	0.16	7.91	50.9	4.5	
1456532	<0.01	1.4	<0.005	0.93	0.34	12.3	0.14	7.10	42.0	3.5	
1456533	<0.01	1.1	<0.005	1.73	0.24	12.9	0.18	7.29	48.9	3.9	
1456534	<0.01	1.6	<0.005	0.67	0.30	15.6	0.15	12.2	66.0	4.3	

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456535		<0.01	1.3	<0.005	1.10	0.28	11.8	0.20	12.4	81.1	4.0
1456536		<0.01	1.5	<0.005	0.96	0.35	8.6	0.18	7.49	49.7	4.6
1456537		<0.01	1.4	<0.005	1.61	0.38	17.4	0.18	10.9	74.0	5.2
1456538		<0.01	1.5	<0.005	1.73	0.41	11.6	0.18	10.5	38.7	5.0
1456539		<0.01	1.6	<0.005	1.31	0.52	8.0	0.22	7.85	44.1	5.0
1456540		0.02	1.7	0.130	0.08	0.78	70.6	0.26	8.61	44.0	7.8
1456541		<0.01	1.6	<0.005	2.62	0.49	18.0	0.19	11.3	50.5	6.0
1456542		<0.01	1.6	<0.005	0.76	0.34	16.0	0.11	8.90	56.0	4.5
1456543		<0.01	1.3	<0.005	2.63	0.34	8.3	0.21	6.90	40.1	4.4
1456544		<0.01	1.6	<0.005	1.22	0.41	12.0	0.19	8.12	47.1	5.2
1456545		<0.01	1.6	0.006	0.93	0.37	13.8	0.16	8.46	57.3	6.0
1456546		<0.01	1.6	<0.005	1.43	0.50	14.2	0.19	10.2	49.1	5.9
1456547		<0.01	1.7	<0.005	2.79	0.57	12.4	0.23	10.8	48.9	5.8
1456548		<0.01	1.7	<0.005	1.65	0.41	14.5	0.18	8.94	48.4	5.7
1456549		<0.01	1.4	<0.005	0.58	0.43	12.1	0.06	7.45	48.0	3.5
1456550		<0.01	1.6	<0.005	3.49	0.69	10.4	0.16	7.57	40.8	3.2
1456551		29.7	0.8	0.067	0.61	0.29	18.0	3.39	2.81	62.9	8.3
1456552		0.13	1.8	<0.005	0.78	0.40	15.5	0.11	8.22	53.4	3.9
1456553		0.01	1.7	<0.005	1.53	0.37	10.0	0.11	7.08	45.6	3.6
1456554		0.01	1.9	<0.005	0.55	0.40	10.4	0.08	7.10	53.6	4.0
1456555		<0.01	1.5	<0.005	1.27	0.43	7.9	0.10	6.47	47.3	3.8
1456556		<0.01	1.7	<0.005	1.36	0.41	11.4	0.11	6.42	41.9	4.2
1456557		<0.01	1.8	<0.005	1.24	0.59	13.3	0.11	8.45	51.5	4.8
1456558		<0.01	1.6	<0.005	1.53	0.65	12.5	0.12	8.30	51.5	4.5
1456559		<0.01	1.5	<0.005	0.73	0.57	10.6	0.06	7.46	49.3	2.9
1456560		<0.01	1.6	<0.005	1.12	0.64	11.6	0.09	8.06	54.0	3.6
1456561		<0.01	1.7	<0.005	2.07	0.50	11.6	0.10	7.70	52.8	3.6
1456562		<0.01	1.7	<0.005	0.91	0.37	10.6	<0.05	8.08	53.4	3.8
1456563		<0.01	1.8	<0.005	0.62	0.41	10.1	<0.05	7.35	51.0	3.6

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Comments: RDL - Reported Detection Limit
Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.
Corrected copy for silver only on samples 1456375 through 1456425.
New client material was supplied for check samples 1456376, 1456401, 1456426 and 1456451. Jan 20, 2012

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au	Au	Au-Grav
	Unit:	(Reanalysis)		
RDL:	ppm	ppm	g/t	
1456375		0.046		
1456376		6.27	3.52	
1456377		0.017		
1456378		0.007		
1456379		0.083		
1456380		0.052		
1456381		0.081		
1456382		0.239	0.256	
1456383		0.024		
1456384		0.002		
1456385		<0.002		
1456386		<0.002		
1456387		0.002		
1456388		<0.002		
1456389		<0.002		
1456390		0.002		
1456391		<0.002		
1456392		<0.002		
1456393		<0.002		
1456394		<0.002		
1456395		0.016		
1456396		<0.002		
1456397		<0.002		
1456398		<0.002		
1456399		<0.002		
1456400		<0.002		
1456401		8.97	3.54	
1456402		0.007		
1456403		0.011		
1456404		0.003		
1456405		<0.002		
1456406		<0.002		

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PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au	Au	Au-Grav
	Unit:	(Reanalysis)	ppm	g/t
RDL:	ppm	ppm	0.002	0.05
1456407		<0.002		
1456408		0.002		
1456409		0.005		
1456410		0.005		
1456411		0.004		
1456412		<0.002		
1456413		<0.002		
1456414		<0.002		
1456415		<0.002		
1456416		0.012		
1456417		<0.002		
1456418		<0.002		
1456419		<0.002		
1456420		0.004		
1456421		<0.002		
1456422		<0.002		
1456423		<0.002		
1456424		<0.002		
1456425		<0.002		
1456426		4.48	4.27	
1456427		<0.002		
1456428		<0.002		
1456429		<0.002		
1456430		<0.002		
1456431		<0.002		
1456432		<0.002		
1456433		0.025		
1456434		0.055		
1456435		0.598	0.551	
1456436		0.248	0.210	
1456437		0.131	0.095	
1456438		0.105		

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au (Reanalysis)	Au-Grav
	Unit: RDL:	ppm 0.002	ppm 0.002 g/t 0.05
1456439		0.070	0.060
1456440		<0.002	
1456441		0.038	
1456442		0.081	0.067
1456443		0.143	0.171
1456444		0.383	0.309
1456445		0.307	0.243
1456446		0.107	0.056
1456447		0.146	0.163
1456448		0.371	0.258
1456449		0.080	
1456450		0.098	
1456451		6.45	3.53
1456452		0.102	0.070
1456453		0.069	0.063
1456454		0.042	
1456455		0.140	0.806
1456456		0.084	0.074
1456457		0.056	
1456458		0.079	
1456459		0.041	
1456460		0.026	
1456461		0.021	
1456462		0.126	
1456463		0.090	
1456464		0.298	
1456465		0.004	
1456466		0.247	
1456467		0.040	
1456468		0.079	
1456469		0.029	
1456470		0.016	

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au	Au	Au-Grav
	Unit:	(Reanalysis)		
RDL:	ppm	ppm	g/t	
1456471		0.020		
1456472		0.217		
1456473		0.003		
1456474		0.003		
1456475		0.004		
1456476		9.88		
1456477		0.024		
1456478		0.011		
1456479		0.007		
1456480		0.007		
1456481		0.004		
1456482		0.004		
1456483		<0.002		
1456484		<0.002		
1456485		0.017		
1456486		0.010		
1456487		<0.002		
1456488		<0.002		
1456489		<0.002		
1456490		<0.002		
1456491		<0.002		
1456492		<0.002		
1456493		0.003		
1456494		0.008		
1456495		0.003		
1456496		0.004		
1456497		0.058		
1456498		0.140		
1456499		0.263		
1456500		0.107		
1456501		4.56		
1456502		0.253		

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ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au	Au	Au-Grav
	Unit:	(Reanalysis)		
RDL:	ppm	ppm	g/t	
1456503		0.133		
1456504		0.252		
1456505		0.108		
1456506		0.068		
1456507		0.119		
1456508		0.142		
1456509		0.108		
1456510		0.135		
1456511		0.054		
1456512		0.365		
1456513		0.249		
1456514		0.241		
1456515		0.016		
1456516		0.098		
1456517		0.129		
1456518		0.208		
1456519		0.293		
1456520		0.161		
1456521		0.357		
1456522		0.185		
1456523		0.291		
1456524		0.733		
1456525		0.161		
1456526		>10		9.57
1456527		0.083		
1456528		0.198		
1456529		0.195		
1456530		0.488		
1456531		0.153		
1456532		0.263		
1456533		0.416		
1456534		0.124		

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ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Sample Description	Analyte:	Au	Au	Au-Grav
	Unit:	(Reanalysis)	ppm	g/t
	RDL:	0.002	0.002	0.05
1456535		0.333		
1456536		0.287		
1456537		0.206		
1456538		0.251		
1456539		0.247		
1456540		<0.002		
1456541		0.216		
1456542		0.092		
1456543		0.351		
1456544		0.148		
1456545		0.093		
1456546		0.146		
1456547		0.262		
1456548		0.211		
1456549		0.066		
1456550		0.564		
1456551		3.77		
1456552		0.089		
1456553		0.179		
1456554		0.131		
1456555		0.254		
1456556		0.126		
1456557		0.130		
1456558		0.167		
1456559		0.097		
1456560		0.116		
1456561		0.186		
1456562		0.087		
1456563		0.068		

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AGAT WORK ORDER: 11V542405

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 25, 2011

DATE RECEIVED: Oct 25, 2011

DATE REPORTED: Jan 20, 2012

SAMPLE TYPE: Drill Core

Comments: RDL - Reported Detection Limit
Gold (AR-ICPMS) is for exploratory purposes only. Additional Fire Assay Gold data provided on this certificate including requested client check data. Some samples exhibit gold nugget effect.
Corrected copy for silver only on samples 1456375 through 1456425.
New client material was supplied for check samples 1456376, 1456401, 1456426 and 1456451. Jan 20, 2012

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838785	0.07	0.07	0.0%	< 0.01				80%	120%	
Al	1	2838705	1.34	1.27	5.4%	< 0.01				80%	120%	
As	1	2838785	10.8	10.8	0.0%	0.7				80%	120%	
Au	1	2838785	0.164	0.173	5.3%	< 0.01	0.924	0.922	100%	80%	120%	
B	1	2838785	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2838705	383	373	2.6%	< 1				80%	120%	
Be	1	2838785	0.316	0.311	1.6%	< 0.05				80%	120%	
Bi	1	2838785	0.07	0.07	0.0%	< 0.01				80%	120%	
Ca	1	2838705	0.982	0.963	2.0%	< 0.01				80%	120%	
Cd	1	2838785	0.08	0.08	0.0%	< 0.01	0.11	0.10	112%	80%	120%	
Ce	1	2838785	14.7	14.7	0.0%	< 0.01				80%	120%	
Co	1	2838785	2.1	2.1	0.0%	< 0.1	5	5.0	100%	80%	120%	
Cr	1	2838785	93.6	94.8	1.3%	< 0.5				80%	120%	
Cs	1	2838785	1.07	1.16	8.1%	< 0.05				80%	120%	
Cu	1	2838705	5.0	4.9	2.0%	< 0.1	3874	3800	101%	80%	120%	
Fe	1	2838705	1.45	1.42	2.1%	< 0.01				80%	120%	
Ga	1	2838785	1.48	1.59	7.2%	< 0.05				80%	120%	
Ge	1	2838785	0.12	0.12	0.0%	0.11				80%	120%	
Hf	1	2838785	0.063	0.065	3.1%	< 0.02				80%	120%	
Hg	1	2838785	0.04	0.04	0.0%	< 0.01	1.5	1.3	114%	80%	120%	
In	1	2838785	0.006	0.006	0.0%	< 0.005				80%	120%	
K	1	2838705	0.516	0.490	5.2%	< 0.01				80%	120%	
La	1	2838785	4.9	4.9	0.0%	< 0.1				80%	120%	
Li	1	2838785	1.21	1.28	5.6%	< 0.1				80%	120%	
Mg	1	2838705	0.23	0.23	0.0%	< 0.01				80%	120%	
Mn	1	2838705	678	650	4.2%	< 1				80%	120%	
Mo	1	2838785	0.788	0.692	13.0%	< 0.05	356	280	127%	80%	120%	
Na	1	2838705	0.06	0.06	0.0%	< 0.01				80%	120%	
Nb	1	2838785	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2838705	1.6	1.6	0.0%	< 0.2	9	7	122%	80%	120%	
P	1	2838705	368	358	2.8%	< 10				80%	120%	
Pb	1	2838785	5.9	5.8	1.7%	< 0.1				80%	120%	
Rb	1	2838785	16.3	17.5	7.1%	< 0.1	12	13	92%	80%	120%	
Re	1	2838785	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2838705	0.194	0.195	0.5%	< 0.005	0.95	0.80	119%	80%	120%	
Sb	1	2838785	0.480	0.488	1.7%	< 0.05				80%	120%	
Sc	1	2838785	0.6	0.6	0.0%	< 0.1				80%	120%	
Se	1	2838785	0.27	0.22	20.4%	< 0.2	0.7	0.8	85%	80%	120%	
Sn	1	2838785	< 0.2	< 0.2	0.0%	< 0.2				80%	120%	
Sr	1	2838785	3.52	3.57	1.4%	< 0.2	357	390	92%	80%	120%	
Ta	1	2838785	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2838785	0.01	< 0.01		< 0.01				80%	120%	
Th	1	2838785	0.7	0.7	0.0%	< 0.1	1	1.4	72%	80%	120%	
Ti	1	2838705	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2838785	0.14	0.14	0.0%	< 0.02				80%	120%	
U	1	2838785	0.19	0.19	0.0%	< 0.05	1	0.8	123%	80%	120%	
V	1	2838785	5.4	5.5	1.8%	< 0.5	10	8	126%	80%	120%	
W	1	2838785	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2838785	5.16	5.17	0.2%	< 0.05		7		80%	120%	
Zn	1		98.2	99.0	0.8%	< 0.5				80%	120%	
Zr	1	2838785	1.9	2.0	5.1%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838789	0.26	0.28	7.4%	1.02				80%	120%	
Al	1	2838729	1.66	1.76	5.8%	< 0.01				80%	120%	
As	1	2838789	13.7	13.7	0.0%	2.7				80%	120%	
Au	1	2838789	0.02	0.02	0.0%	0.09	0.196	0.203	97%	80%	120%	
B	1	2838789	8	11		56	8.81	7.00	126%	80%	120%	
Ba	1	2838729	264	263	0.4%	< 1				80%	120%	
Be	1	2838789	0.435	0.450	3.4%	< 0.05				80%	120%	
Bi	1	2838789	0.08	0.08	0.0%	0.18				80%	120%	
Ca	1	2838729	2.55	2.60	1.9%	< 0.01				80%	120%	
Cd	1	2838789	0.09	0.10	10.5%	0.48				80%	120%	
Ce	1	2838789	18.2	19.7	7.9%	0.57				80%	120%	
Co	1	2838789	2.59	2.68	3.4%	0.5				80%	120%	
Cr	1	2838804	38.4	36.3	5.6%	< 0.5				80%	120%	
Cs	1	2838789	0.93	1.18	23.7%	0.08				80%	120%	
Cu	1	2838729	10.1	8.5	17.2%	< 0.1	3931	3800	103%	80%	120%	
Fe	1	2838729	2.40	2.37	1.3%	< 0.01				80%	120%	
Ga	1	2838789	1.79	2.03	12.6%	< 0.05				80%	120%	
Ge	1	2838789	< 0.05	< 0.05	0.0%	0.06				80%	120%	
Hf	1	2838789	0.14	0.15	6.9%	0.10				80%	120%	
Hg	1	2838789	0.035	0.040	13.3%	0.04				80%	120%	
In	1	2838789	0.007	0.008	13.3%	0.018				80%	120%	
K	1	2838729	0.36	0.38	5.4%	< 0.01				80%	120%	
La	1	2838789	8.43	9.06	7.2%	0.3				80%	120%	
Li	1	2838789	4.98	5.17	3.7%	0.4				80%	120%	
Mg	1	2838729	0.61	0.60	1.7%	< 0.01				80%	120%	
Mn	1	2838729	1080	1040	3.8%	< 1				80%	120%	
Mo	1	2838789	0.678	0.644	5.1%	5.27				80%	120%	
Na	1	2838729	0.075	0.077	2.6%	< 0.01				80%	120%	
Nb	1	2838789	< 0.05	< 0.05	0.0%	0.09				80%	120%	
Ni	1	2838729	1.1	1.1	0.0%	< 0.2				80%	120%	
P	1	2838729	525	479	9.2%	< 10				80%	120%	
Pb	1	2838789	6.4	7.1	10.4%	12.6				80%	120%	
Rb	1	2838789	10.5	12.9	20.5%	0.4	10	13	79%	80%	120%	
Re	1	2838789	< 0.001	< 0.001	0.0%	0.001				80%	120%	
S	1	2838729	0.158	0.154	2.6%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Sb	1	2838789	0.37	0.39	5.3%	0.45				80%	120%	
Sc	1	2838789	0.49	0.56	13.3%	< 0.1				80%	120%	
Se	1	2838789	0.3	< 0.2		< 0.2	0.7	0.8	91%	80%	120%	
Sn	1	2838789	< 0.2	< 0.2	0.0%	< 0.2				80%	120%	
Sr	1	2838789	4.0	4.1	2.5%	4.0	370	390	95%	80%	120%	
Ta	1	2838789	< 0.01	< 0.01	0.0%	0.11				80%	120%	
Te	1	2838789	< 0.01	< 0.01	0.0%	0.19				80%	120%	
Th	1	2838789	0.73	0.80	9.2%	< 0.1	1	1.4	70%	80%	120%	
Ti	1	2838729	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2838789	0.13	0.15	14.3%	< 0.02				80%	120%	
U	1	2838789	0.19	0.21	10.0%	< 0.05	0.9	0.8	110%	80%	120%	
V	1	2838804	7.6	7.2	5.4%	< 0.5				80%	120%	
W	1	2838789	0.07	0.13		2.15				80%	120%	
Y	1	2838789	6.01	6.09	1.3%	0.17		7		80%	120%	
Zn	1	2838729	66.4	62.9	5.4%	< 0.5				80%	120%	
Zr	1	2838789	4.1	4.6	11.5%	2.6				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838819	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Al	1	2838754	2.02	2.17	7.2%	< 0.01				80%	120%	
As	1	2838819	0.74	0.79	6.5%	0.6				80%	120%	
Au	1	2838819	< 0.01	< 0.01	0.0%	< 0.01	0.419	0.417	100%	80%	120%	
B	1	2838819	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2838754	226	246	8.5%	< 1				80%	120%	
Be	1	2838819	0.594	0.600	1.0%	< 0.05				80%	120%	
Bi	1	2838819	0.05	0.05	0.0%	< 0.01				80%	120%	
Ca	1	2838754	3.14	2.86	9.3%	< 0.01				80%	120%	
Cd	1	2838819	0.10	0.10	0.0%	< 0.01				80%	120%	
Ce	1	2838819	46.4	44.6	4.0%	< 0.01				80%	120%	
Co	1	2838819	5.98	5.93	0.8%	< 0.1				80%	120%	
Cr	1	2838819	29.6	31.3	5.6%	< 0.5				80%	120%	
Cs	1	2838819	1.40	1.39	0.7%	< 0.05				80%	120%	
Cu	1	2838754	57.7	55.9	3.2%	< 0.1	3905	3800	102%	80%	120%	
Fe	1	2838754	3.30	3.01	9.2%	< 0.01				80%	120%	
Ga	1	2838819	5.63	5.61	0.4%	< 0.05				80%	120%	
Ge	1	2838819	0.141	0.160	12.6%	0.10				80%	120%	
Hf	1	2838819	0.06	0.03		< 0.02				80%	120%	
Hg	1	2838819	0.02	0.02	0.0%	< 0.01				80%	120%	
In	1	2838819	0.015	0.015	0.0%	< 0.005				80%	120%	
K	1	2838754	0.380	0.478	22.8%	< 0.01				80%	120%	
La	1	2838819	23.2	22.5	3.1%	< 0.1				80%	120%	
Li	1	2838819	17.2	16.0	7.2%	< 0.1				80%	120%	
Mg	1	2838754	1.09	1.06	2.8%	< 0.01				80%	120%	
Mn	1	2838754	919	926	0.8%	< 1				80%	120%	
Mo	1	2838819	0.312	0.262	17.4%	< 0.05				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Na	1	2838754	0.09	0.09	0.0%	< 0.01				80%	120%	
Nb	1	2838819	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2838754	12.0	11.8	1.7%	< 0.2				80%	120%	
P	1	2838754	673	652	3.2%	< 10				80%	120%	
Pb	1	2838819	5.33	5.61	5.1%	< 0.1				80%	120%	
Rb	1	2838819	12.9	15.4	17.7%	< 0.1	10	13	80%	80%	120%	
Re	1	2838819	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2838754	0.0563	0.0524	7.2%	< 0.005				80%	120%	
Sb	1	2838819	0.057	0.054	5.4%	< 0.05				80%	120%	
Sc	1	2838819	2.0	1.9	5.1%	< 0.1				80%	120%	
Se	1	2838819	< 0.2	< 0.2	0.0%	< 0.2	0.8	0.8	96%	80%	120%	
Sn	1	2838819	0.3	0.3	0.0%	< 0.2				80%	120%	
Sr	1	2838819	70.3	68.8	2.2%	< 0.2	378	390	97%	80%	120%	
Ta	1	2838819	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2838819	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2838819	0.9	0.9	0.0%	< 0.1	1.1	1.4	82%	80%	120%	
Ti	1	2838754	0.0157	0.0176	11.4%	< 0.005				80%	120%	
Tl	1	2838819	0.074	0.078	5.3%	< 0.02				80%	120%	
U	1	2838819	0.44	0.42	4.7%	< 0.05	0.8	0.8	106%	80%	120%	
V	1	2838819	19.8	19.7	0.5%	< 0.5				80%	120%	
W	1	2838819	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2838819	11.0	10.8	1.8%	< 0.05		7		80%	120%	
Zn	1	2838754	59.5	58.5	1.7%	< 0.5				80%	120%	
Zr	1	2838819	2.5	1.4		< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838829	0.10	0.43		< 0.01				80%	120%	
Al	1	2838779	0.46	0.62	29.6%	< 0.01				80%	120%	
As	1	2838829	201	227	12.1%	< 0.1				80%	120%	
Au	1	2838829	0.23	0.24	4.3%	< 0.01				80%	120%	
B	1	2838829	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2838779	45	48	6.5%	< 1				80%	120%	
Be	1	2838829	0.213	0.243	13.2%	< 0.05				80%	120%	
Bi	1	2838829	0.06	0.06	0.0%	< 0.01				80%	120%	
Ca	1	2838779	0.184	0.186	1.1%	< 0.01				80%	120%	
Cd	1	2838829	0.024	0.026	8.0%	< 0.01				80%	120%	
Ce	1	2838829	23.2	23.3	0.4%	< 0.01				80%	120%	
Co	1	2838829	0.8	0.9	11.8%	< 0.1	5.9	5.0	119%	80%	120%	
Cr	1	2838829	74.2	84.9	13.5%	< 0.5				80%	120%	
Cs	1	2838829	1.19	1.21	1.7%	< 0.05				80%	120%	
Cu	1	2838779	4.4	4.2	4.7%	< 0.1	3864	3800	101%	80%	120%	
Fe	1	2838779	1.15	1.16	0.9%	< 0.01				80%	120%	
Ga	1	2838829	1.33	1.58	17.2%	< 0.05				80%	120%	
Ge	1	2838829	0.14	0.12	15.4%	< 0.05				80%	120%	
Hf	1	2838829	0.07	0.08	13.3%	< 0.02				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V542405
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Hg	1	2838829	0.05	0.05	0.0%	< 0.01			80%	120%		
In	1	2838829	0.0169	0.0197	15.3%	< 0.005			80%	120%		
K	1	2838779	0.21	0.26	21.3%	< 0.01			80%	120%		
La	1	2838829	11.4	11.5	0.9%	< 0.1			80%	120%		
Li	1	2838829	0.93	1.19	24.5%	< 0.1			80%	120%		
Mg	1	2838779	0.079	0.085	7.3%	< 0.01			80%	120%		
Mn	1	2838779	145	149	2.7%	< 1			80%	120%		
Mo	1	2838829	2.48	2.86	14.2%	< 0.05			80%	120%		
Na	1	2838779	0.014	0.017	19.4%	< 0.01			80%	120%		
Nb	1	2838829	< 0.05	< 0.05	0.0%	< 0.05			80%	120%		
Ni	1	2838779	2.50	2.43	2.8%	< 0.2			80%	120%		
P	1	2838779	202	193	4.6%	< 10			80%	120%		
Pb	1	2838829	5.6	5.7	1.8%	< 0.1			80%	120%		
Rb	1	2838829	7.24	8.66	17.9%	< 0.1	10	13	78%	80%		
Re	1	2838829	< 0.001	< 0.001	0.0%	< 0.001			80%	120%		
S	1	2838779	0.018	0.018	0.0%	< 0.005			80%	120%		
Sb	1	2838829	4.44	5.32	18.0%	< 0.05			80%	120%		
Sc	1	2838829	1.1	1.3	16.7%	< 0.1			80%	120%		
Se	1	2838829	0.62	0.72	14.9%	< 0.2	0.6	0.8	76%	80%		
Sn	1	2838829	0.2	0.2	0.0%	< 0.2			80%	120%		
Sr	1	2838829	19.8	24.0	19.2%	< 0.2	364	390	93%	80%		
Ta	1	2838829	< 0.01	< 0.01	0.0%	< 0.01			80%	120%		
Te	1	2838829	< 0.01	< 0.01	0.0%	< 0.01			80%	120%		
Th	1	2838829	1.4	1.4	0.0%	< 0.1	1	1.4	74%	80%		
Ti	1	2838779	< 0.005	< 0.005	0.0%	< 0.005			80%	120%		
Tl	1	2838829	0.473	0.487	2.9%	< 0.02			80%	120%		
U	1	2838829	0.293	0.298	1.7%	< 0.05	0.9	0.8	111%	80%		
V	1	2838829	11.5	13.3	14.5%	< 0.5			80%	120%		
W	1	2838829	0.087	0.095	8.8%	< 0.05			80%	120%		
Y	1	2838829	4.34	5.09	15.9%	< 0.05		7		80%		
Zn	1	2838779	57.1	57.2	0.2%	< 0.5			80%	120%		
Zr	1	2838829	2.2	3.0		< 0.5			80%	120%		
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838854	1.05	1.07	1.9%	< 0.01			80%	120%		
Al	1	2838854	0.291	0.243	18.0%	< 0.01			80%	120%		
As	1	2838854	470	479	1.9%	< 0.1			80%	120%		
Au	1	2838854	0.673	0.727	7.7%	< 0.01			80%	120%		
B	1	2838854	< 5	< 5	0.0%	< 5			80%	120%		
Ba	1	2838854	44	33	28.6%	< 1			80%	120%		
Be	1	2838854	0.276	0.272	1.5%	< 0.05			80%	120%		
Bi	1	2838854	0.05	0.05	0.0%	< 0.01			80%	120%		
Ca	1	2838854	0.065	0.056	14.9%	< 0.01			80%	120%		
Cd	1	2838854	0.10	0.10	0.0%	< 0.01			80%	120%		

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Ce	1	2838854	19.6	20.0	2.0%	< 0.01				80%	120%	
Co	1	2838854	2.4	2.4	0.0%	< 0.1				80%	120%	
Cr	1	2838854	185	176	5.0%	< 0.5				80%	120%	
Cs	1	2838854	0.907	0.935	3.0%	< 0.05				80%	120%	
Cu	1	2838854	3.2	3.3	3.1%	< 0.1	4028	3800	106%	80%	120%	
Fe	1	2838854	1.67	1.44	14.8%	< 0.01				80%	120%	
Ga	1	2838854	1.55	1.52	2.0%	< 0.05				80%	120%	
Ge	1	2838854	0.13	0.13	0.0%	< 0.05				80%	120%	
Hf	1	2838854	0.10	0.10	0.0%	< 0.02				80%	120%	
Hg	1	2838854	0.20	0.20	0.0%	< 0.01				80%	120%	
In	1	2838854	0.018	0.017	5.7%	< 0.005				80%	120%	
K	1	2838854	0.26	0.22	16.7%	< 0.01				80%	120%	
La	1	2838854	9.4	9.6	2.1%	< 0.1				80%	120%	
Li	1	2838854	2.41	2.34	2.9%	< 0.1				80%	120%	
Mg	1	2838854	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Mn	1	2838854	55	62	12.0%	< 1				80%	120%	
Mo	1	2838854	11.9	11.9	0.0%	< 0.05				80%	120%	
Na	1	2838854	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Nb	1	2838854	0.07	0.07	0.0%	< 0.05				80%	120%	
Ni	1	2838854	3.1	3.1	0.0%	< 0.2				80%	120%	
P	1	2838854	396	429	8.0%	< 10				80%	120%	
Pb	1	2838854	4.73	4.80	1.5%	< 0.1				80%	120%	
Rb	1	2838854	12.3	11.8	4.1%	< 0.1	13	13	100%	80%	120%	
Re	1	2838854	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2838854	0.915	0.723	23.4%	< 0.005				80%	120%	
Sb	1	2838854	16.5	16.5	0.0%	< 0.05				80%	120%	
Sc	1	2838854	1.1	1.1	0.0%	< 0.1				80%	120%	
Se	1	2838854	1.7	1.7	0.0%	< 0.2	0.8	0.8	96%	80%	120%	
Sn	1	2838854	0.25	0.24	4.1%	< 0.2				80%	120%	
Sr	1	2838854	16.4	16.3	0.6%	< 0.2	367	390	94%	80%	120%	
Ta	1	2838854	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2838854	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2838854	1.2	1.2	0.0%	< 0.1	1.4	1.4	104%	80%	120%	
Ti	1	2838854	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2838854	1.60	1.59	0.6%	< 0.02				80%	120%	
U	1	2838854	0.31	0.31	0.0%	< 0.05	0.8	0.8	106%	80%	120%	
V	1	2838854	5.5	10.6		< 0.5				80%	120%	
W	1	2838854	0.224	0.229	2.2%	< 0.05				80%	120%	
Y	1	2838854	6.79	6.79	0.0%	< 0.05		7		80%	120%	
Zn	1	2838854	35.5	40.7	13.6%	< 0.5				80%	120%	
Zr	1	2838854	3.55	3.60	1.4%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838879	0.275	0.347	23.2%	< 0.01				80%	120%	
Al	1	2838879	0.24	0.29	18.9%	< 0.01				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
As	1	2838879	142	177	21.9%	< 0.1				80%	120%	
Au	1	2838879	0.065	0.074	12.9%	< 0.01				80%	120%	
B	1	2838879	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2838879	26	29	10.9%	< 1				80%	120%	
Be	1	2838879	0.207	0.245	16.8%	< 0.05				80%	120%	
Bi	1	2838879	0.072	0.081	11.8%	< 0.01				80%	120%	
Ca	1	2838879	0.16	0.18	11.8%	< 0.01				80%	120%	
Cd	1	2838879	0.083	0.092	10.3%	< 0.01				80%	120%	
Ce	1	2838879	25.4	29.2	13.9%	< 0.01				80%	120%	
Co	1	2838879	2.4	2.7	11.8%	< 0.1				80%	120%	
Cr	1	2838879	46.4	52.2	11.8%	< 0.5				80%	120%	
Cs	1	2838879	1.20	1.45	18.9%	< 0.05				80%	120%	
Cu	1	2838879	2.3	2.8	19.6%	< 0.1	3884	3800	102%	80%	120%	
Fe	1	2838879	1.43	1.63	13.1%	< 0.01				80%	120%	
Ga	1	2838879	1.65	2.03	20.7%	< 0.05				80%	120%	
Ge	1	2838879	0.15	0.13	14.3%	< 0.05				80%	120%	
Hf	1	2838879	0.11	0.12	8.7%	< 0.02				80%	120%	
Hg	1	2838879	0.041	0.045	9.3%	< 0.01				80%	120%	
In	1	2838879	0.024	0.027	11.8%	< 0.005				80%	120%	
K	1	2838879	0.184	0.209	12.7%	< 0.01				80%	120%	
La	1	2838879	12.1	13.8	13.1%	< 0.1				80%	120%	
Li	1	2838879	3.6	4.4	20.0%	< 0.1				80%	120%	
Mg	1	2838879	0.270	0.307	12.8%	< 0.01				80%	120%	
Mn	1	2838879	369	466	23.2%	< 1				80%	120%	
Mo	1	2838879	12.0	14.0	15.4%	< 0.05				80%	120%	
Na	1	2838879	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Nb	1	2838879	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2838879	1.0	1.3	26.1%	< 0.2				80%	120%	
P	1	2838879	289	383	28.0%	< 10				80%	120%	
Pb	1	2838879	6.8	7.5	9.8%	< 0.1				80%	120%	
Rb	1	2838879	8.50	9.89	15.1%	< 0.1	11	13	82%	80%	120%	
Re	1	2838879	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2838879	0.367	0.403	9.4%	< 0.005				80%	120%	
Sb	1	2838879	5.29	6.00	12.6%	< 0.05				80%	120%	
Sc	1	2838879	1.2	1.4	15.4%	< 0.1				80%	120%	
Se	1	2838879	0.8	0.9	11.8%	< 0.2	0.7	0.8	90%	80%	120%	
Sn	1	2838879	0.3	0.3	0.0%	< 0.2				80%	120%	
Sr	1	2838879	24.9	29.4	16.6%	< 0.2	370	390	95%	80%	120%	
Ta	1	2838879	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2838879	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2838879	1.41	1.61	13.2%	< 0.1	1	1.4	73%	80%	120%	
Ti	1	2838879	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2838879	0.577	0.645	11.1%	< 0.02				80%	120%	
U	1	2838879	0.434	0.497	13.5%	< 0.05	1	0.8	122%	80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
V	1	2838879	12.1	15.8	26.5%	< 0.5				80%	120%	
W	1	2838879	0.064	0.086	29.3%	< 0.05				80%	120%	
Y	1	2838879	7.45	9.76	26.8%	< 0.05		7		80%	120%	
Zn	1	2838879	48.0	57.8	18.5%	< 0.5				80%	120%	
Zr	1	2838879	3.5	4.1	15.8%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2838893	0.232	0.241	3.8%	< 0.01				80%	120%	
Al	1	2838893	0.403	0.447	10.4%	< 0.01				80%	120%	
As	1	2838893	112	119	6.1%	< 0.1				80%	120%	
Au	1	2838893	0.064	0.067	4.6%	< 0.01				80%	120%	
B	1	2838893	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2838893	33	34	3.0%	< 1				80%	120%	
Be	1	2838893	0.49	0.53	7.8%	< 0.05				80%	120%	
Bi	1	2838893	0.070	0.076	8.2%	< 0.01				80%	120%	
Ca	1	2838893	0.25	0.25	0.0%	< 0.01				80%	120%	
Cd	1	2838893	0.07	0.07	0.0%	< 0.01				80%	120%	
Ce	1	2838893	27.8	29.4	5.6%	< 0.01				80%	120%	
Co	1	2838893	2.5	2.7	7.7%	< 0.1				80%	120%	
Cr	1	2838893	42.0	49.1	15.6%	< 0.5				80%	120%	
Cs	1	2838893	2.07	2.30	10.5%	< 0.05				80%	120%	
Cu	1	2838893	2.73	2.99	9.1%	< 0.1	3667	3800	96%	80%	120%	
Fe	1	2838893	1.74	1.80	3.4%	< 0.01				80%	120%	
Ga	1	2838893	2.33	2.62	11.7%	< 0.05				80%	120%	
Ge	1	2838893	0.152	0.142	6.8%	< 0.05				80%	120%	
Hf	1	2838893	0.10	0.10	0.0%	< 0.02				80%	120%	
Hg	1	2838893	0.03	0.03	0.0%	< 0.01				80%	120%	
In	1	2838893	0.020	0.021	4.9%	< 0.005				80%	120%	
K	1	2838893	0.26	0.27	3.8%	< 0.01				80%	120%	
La	1	2838893	13.3	13.9	4.4%	< 0.1				80%	120%	
Li	1	2838893	4.32	4.78	10.1%	< 0.1				80%	120%	
Mg	1	2838893	0.35	0.36	2.8%	< 0.01				80%	120%	
Mn	1	2838893	594	638	7.1%	< 1				80%	120%	
Mo	1	2838893	14.0	15.0	6.9%	< 0.05				80%	120%	
Na	1	2838893	0.01	0.01	0.0%	< 0.01				80%	120%	
Nb	1	2838893	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Ni	1	2838893	1.41	1.50	6.2%	< 0.2				80%	120%	
P	1	2838893	367	390	6.1%	< 10				80%	120%	
Pb	1	2838893	7.11	7.86	10.0%	< 0.1				80%	120%	
Rb	1	2838893	12.6	16.2	25.0%	< 0.1				80%	120%	
Re	1	2838893	< 0.001	0.001	< 0.001	< 0.001	11	13	82%	80%	120%	
S	1	2838893	0.360	0.361	0.3%	< 0.005				80%	120%	
Sb	1	2838893	4.56	4.90	7.2%	< 0.05				80%	120%	
Sc	1	2838893	1.15	1.23	6.7%	< 0.1				80%	120%	
Se	1	2838893	0.41	0.46	11.5%	< 0.2	0.6	0.8	76%	80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 20, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Sn	1	2838893	0.3	0.3	0.0%	< 0.2				80%	120%	
Sr	1	2838893	57.2	61.4	7.1%	< 0.2	355	390	91%	80%	120%	
Ta	1	2838893	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2838893	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2838893	1.8	1.9	5.4%	< 0.1				80%	120%	
Ti	1	2838893	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2838893	0.620	0.655	5.5%	< 0.02				80%	120%	
U	1	2838893	0.41	0.44	7.1%	< 0.05	0.8	0.8	105%	80%	120%	
V	1	2838893	10.1	11.2	10.3%	< 0.5				80%	120%	
W	1	2838893	0.043	0.057	28.0%	< 0.05				80%	120%	
Y	1	2838893	7.35	7.96	8.0%	< 0.05		7		80%	120%	
Zn	1	2838893	51.0	52.7	3.3%	< 0.5				80%	120%	
Zr	1	2838893	3.6	3.8	5.4%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Cu	1					< 0.1	3687	3800	97%	80%	120%	
Rb	1					< 0.1	12	13	89%	80%	120%	
Se	1					< 0.2	0.6	0.8	77%	80%	120%	
Sr	1					< 0.2	358	390	92%	80%	120%	
Th	1					< 0.1	1.1	1.4	75%	80%	120%	
U	1					< 0.05	0.9	0.8	108%	80%	120%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838848	0.208	0.201	3.4%	< 0.002	0.954	0.922	103%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838712	0.239	0.229	4.3%	< 0.002	0.924	0.922	100%	90%	110%	
Au (Reanalysis)	1	2838717	< 0.01	< 0.01	0.0%	< 0.01	0.071	0.0849	84%	100%	100%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838785	0.140	0.158	12.1%	< 0.002	0.196	0.203	97%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838794	0.298	0.300	0.7%	< 0.002	0.419	0.417	100%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838854	0.733	0.712	2.9%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838876	0.146	0.151	3.4%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838890	0.116	0.136	15.9%	< 0.002				90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2838705	0.046	0.028		< 0.002	0.876	0.922	95%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V542405
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)											
RPT Date: Jan 20, 2012		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
						Lower				Upper	
Au	1	2838729	< 0.002	< 0.002	0.0%	< 0.002	0.406	0.417	97%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838741	0.004	0.004	0.0%	< 0.002	0.377	0.417	90%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838754	< 0.002	< 0.002	0.0%	< 0.002	0.923	0.922	100%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838764	0.055	0.056	1.8%	< 0.002	0.0762	0.0849	90%	90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838779	0.0799	0.0793	0.8%	< 0.002		0.922		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838804	0.003	0.002		< 0.002		0.922		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838816	0.010	0.009	10.5%	< 0.002		0.922		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838828	0.140	0.083		< 0.002		0.922		90%	110%
Fire Assay - Trace Au, AAS finish (202051)											
Au	1	2838879	0.0659	0.0698	5.7%	< 0.002		0.922		90%	110%

Certified By: _____



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V542405

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS
Au (Reanalysis)			AAS
Au-Grav			GRAVIMETRIC

CLIENT NAME: WESTHAVEN VENTURES
1920-1095 WEST PENDER STREET
VANCOUVER, BC V6E2M6

ATTENTION TO: GARETH THOMAS

PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V543365

SOLID ANALYSIS REVIEWED BY: David Tye, General Manager, Mining Operations

DATE REPORTED: Jan 19, 2012

PAGES (INCLUDING COVER): 16

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

***NOTES**

VERSION 1: Additional Fire Assay Gold data

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
Sample Description														
1456564	0.94	0.27	0.54	151	0.11	<5	41	0.33	0.08	0.20	0.07	28.2	2.8	114
1456565	0.83	<0.01	1.65	7.3	0.01	<5	158	0.24	0.04	6.12	0.19	13.5	10.1	125
1456566	1.44	0.37	0.50	151	0.08	<5	36	0.39	0.07	0.22	0.10	24.5	3.1	104
1456567	0.74	0.89	0.45	363	0.27	<5	40	0.30	0.06	0.28	0.09	21.5	3.4	130
1456568	2.55	0.30	0.43	187	0.12	<5	43	0.26	0.07	0.23	0.06	27.3	3.0	92.4
1456569	0.87	0.78	0.42	196	0.14	<5	23	0.45	0.05	1.64	0.12	17.4	2.5	141
1456570	0.944	0.93	0.45	289	0.19	<5	32	0.60	0.05	1.23	0.09	19.1	2.6	116
1456571	1.51	0.18	0.52	154	0.03	<5	44	0.20	0.08	0.25	0.05	30.4	2.6	71.0
1456572	0.95	2.46	0.34	406	0.51	<5	18	0.26	0.05	1.14	0.18	18.5	3.0	114
1456573	0.12	1.31	0.41	642	0.47	<5	36	0.16	0.06	0.17	0.15	22.0	3.5	135
1456574	1.19	5.88	0.27	3030	1.40	<5	23	0.18	0.04	0.16	0.28	14.4	10.4	149
1456575	1.54	1.50	0.30	478	0.50	<5	43	0.20	0.05	0.14	0.11	20.2	3.8	193
1456576	0.11	8.06	2.47	11.2	4.34	<5	126	0.45	0.19	2.35	1.54	27.5	20.3	24.9
1456577	0.99	1.23	0.31	317	0.55	<5	44	0.26	0.05	0.19	0.09	19.7	2.8	227
1456578	0.98	0.68	0.44	235	0.25	<5	46	0.34	0.06	0.19	0.08	23.3	3.1	166
1456579	1.73	0.88	0.39	272	0.34	<5	53	0.23	0.05	0.31	0.07	19.0	3.0	224
1456580	1.16	0.80	0.44	245	0.29	<5	50	0.25	0.05	0.30	0.06	20.2	3.4	208
1456581	2.00	0.12	0.90	211	0.03	<5	41	0.50	0.07	0.50	0.08	33.7	8.3	41.5
1456582	2.16	0.10	0.66	164	0.04	<5	42	0.42	0.07	0.37	0.08	29.9	5.3	56.6
1456583	1.76	0.36	0.46	154	0.06	<5	38	0.38	0.06	0.33	0.10	27.5	4.8	68.6
1456584	2.33	0.04	0.77	54.4	0.01	<5	37	0.64	0.09	1.08	0.11	35.7	5.4	29.5
1456585	2.90	0.08	0.88	37.6	<0.01	<5	32	0.61	0.07	1.94	0.09	33.6	4.7	26.3
1456586	2.34	0.02	0.97	143	0.01	<5	38	0.53	0.12	1.30	0.09	28.5	5.0	41.1
1456587	2.82	0.03	1.03	63.8	<0.01	<5	25	0.62	0.10	1.74	0.10	38.1	3.1	21.1
1456588	2.91	0.02	0.95	61.2	0.01	<5	52	0.52	0.09	2.22	0.11	35.8	2.9	31.1
1456589	3.63	<0.01	0.94	8.2	<0.01	<5	33	0.58	0.10	2.32	0.09	37.8	2.5	37.4
1456590	0.91	<0.01	1.47	6.9	<0.01	<5	151	0.25	0.04	5.56	0.20	12.6	10.0	118
1456591	3.36	0.02	0.79	5.3	<0.01	<5	32	0.53	0.10	2.29	0.12	36.5	2.6	31.7
1456592	3.51	0.02	0.85	8.7	<0.01	<5	35	0.51	0.09	2.28	0.08	35.7	3.1	33.0
1456593	1.57	0.08	0.82	70.7	<0.01	<5	347	0.42	0.06	2.17	0.10	33.5	4.2	61.3
1456594	1.32	0.05	1.44	23.4	0.01	<5	40	0.49	0.09	0.90	0.12	34.3	7.0	48.4

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Analyte:	Sample Login Weight	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5
Sample Description														
1456595	3.29	0.04	1.36	11.7	<0.01	<5	34	0.48	0.09	1.78	0.08	32.0	6.1	53.3
1456596	3.76	0.01	1.26	14.2	<0.01	<5	47	0.42	0.07	1.90	0.10	35.1	5.0	74.0
1456597	1.24	0.04	0.71	12.1	<0.01	<5	34	0.19	0.04	1.34	0.04	36.0	2.6	61.1
1456598	1.57	0.06	1.24	9.6	<0.01	<5	43	0.51	0.06	1.39	0.09	37.7	4.3	111
1456599	3.30	0.05	1.05	6.4	<0.01	<5	40	0.54	0.10	1.35	0.11	36.0	3.4	56.9
1456600	3.51	0.01	1.31	10.1	<0.01	<5	40	0.55	0.10	1.45	0.09	39.7	4.5	46.0
1456601	0.11	20.1	2.04	17.0	10.9	<5	99	0.35	0.19	1.34	3.28	17.1	22.7	32.5
1456602	3.70	0.16	1.38	15.4	0.06	<5	52	0.47	0.08	1.23	0.08	35.3	6.1	65.2
1456603	3.25	0.06	1.27	22.0	<0.01	<5	71	0.50	0.09	1.01	0.07	33.1	5.6	59.2
1456604	2.56	0.06	1.33	36.2	<0.01	<5	36	0.43	0.07	1.24	0.13	30.7	7.1	56.1
1456605	2.52	0.05	1.49	23.5	<0.01	<5	38	0.58	0.09	1.53	0.07	35.8	6.8	46.1
1456606	2.44	0.11	1.46	23.6	<0.01	<5	48	0.55	0.09	1.68	0.11	35.0	5.5	49.2

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

5623 McADAM ROAD
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<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Sample Description	Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Unit: RDL:	ppm 0.05	ppm 0.1	% 0.01	ppm 0.05	ppm 0.05	ppm 0.02	ppm 0.01	ppm 0.005	% 0.01	ppm 0.1	ppm 0.1	% 0.01	ppm 1	ppm 0.05
1456564		1.97	6.5	1.67	3.69	0.13	0.16	0.06	0.020	0.30	13.5	5.9	0.25	494	17.8
1456565		0.74	46.6	2.50	5.30	0.09	0.20	0.03	0.015	0.31	7.9	11.1	1.09	537	2.74
1456566		1.95	5.0	1.51	3.22	0.13	0.13	0.03	0.020	0.28	11.8	4.7	0.23	558	18.6
1456567		1.38	6.7	2.02	3.00	0.13	0.13	0.11	0.022	0.29	10.4	4.4	0.22	484	45.2
1456568		1.62	4.8	1.52	3.00	0.13	0.16	0.04	0.021	0.27	13.1	4.6	0.27	558	11.7
1456569		1.78	4.9	2.21	2.13	0.13	0.13	0.08	0.014	0.17	8.6	5.5	0.84	1180	16.6
1456570		1.59	5.2	2.33	2.24	0.12	0.16	0.11	0.017	0.21	9.0	5.7	0.66	1060	12.7
1456571		1.06	3.8	1.29	3.58	0.13	0.16	0.03	0.024	0.30	14.2	5.9	0.26	496	2.91
1456572		1.02	6.6	2.68	2.22	0.12	0.12	0.24	0.014	0.20	9.3	6.6	0.74	874	41.5
1456573		1.60	5.7	2.12	2.46	0.13	0.15	0.41	0.020	0.28	10.6	3.4	0.11	220	29.0
1456574		1.27	15.6	6.96	1.51	0.14	0.12	5.67	0.018	0.21	7.3	3.3	0.16	387	52.3
1456575		1.31	7.5	1.52	1.93	0.12	0.14	0.42	0.018	0.24	9.7	4.5	0.10	260	27.3
1456576		1.46	124	3.96	8.40	0.16	0.24	0.09	0.028	0.30	13.0	26.5	1.25	1100	15.0
1456577		1.59	6.3	1.51	1.91	0.12	0.13	0.08	0.018	0.24	9.4	4.5	0.17	403	21.8
1456578		2.26	11.5	1.47	2.82	0.12	0.14	0.07	0.022	0.26	11.0	7.4	0.19	475	20.4
1456579		1.59	6.0	1.28	2.56	0.12	0.13	0.06	0.020	0.25	9.2	5.2	0.16	333	23.7
1456580		1.60	6.4	1.39	2.71	0.12	0.15	0.06	0.018	0.27	10.0	5.0	0.20	435	15.6
1456581		6.77	14.1	2.18	5.81	0.14	0.20	0.11	0.030	0.39	15.9	7.6	0.47	805	1.99
1456582		2.24	8.5	1.95	4.21	0.14	0.17	0.07	0.024	0.32	14.2	6.6	0.40	706	8.40
1456583		1.81	6.2	1.94	2.92	0.14	0.17	0.08	0.020	0.27	13.2	5.7	0.35	801	9.94
1456584		3.55	6.1	1.86	3.54	0.15	0.11	0.05	0.020	0.35	17.0	7.5	0.44	1040	0.86
1456585		4.43	5.8	1.82	3.67	0.12	0.08	0.08	0.019	0.38	16.2	7.2	0.46	1220	0.54
1456586		3.85	5.8	1.84	3.93	0.13	0.08	0.05	0.016	0.39	13.7	9.0	0.45	820	1.08
1456587		5.41	3.4	1.62	4.05	0.14	0.07	0.03	0.020	0.41	18.5	8.4	0.43	951	1.79
1456588		5.24	3.5	1.23	3.68	0.12	0.07	0.03	0.018	0.40	17.2	6.8	0.32	836	4.26
1456589		6.75	3.0	1.22	3.52	0.12	0.08	0.03	0.017	0.44	18.0	6.5	0.27	846	0.35
1456590		0.72	47.1	2.25	5.15	0.09	0.17	0.03	0.015	0.27	7.4	11.0	1.00	517	2.39
1456591		5.25	3.2	1.06	3.38	0.14	0.08	0.02	0.016	0.38	17.6	6.1	0.22	759	0.24
1456592		5.06	4.2	1.18	3.73	0.13	0.09	0.02	0.018	0.36	17.2	8.2	0.25	787	0.26
1456593		3.72	4.5	1.66	4.04	0.13	0.12	0.03	0.019	0.25	15.8	11.8	0.29	909	2.57
1456594		6.94	10.3	2.33	6.25	0.14	0.10	0.02	0.019	0.38	16.4	20.8	0.54	927	2.44
1456595		4.12	8.1	2.22	6.09	0.13	0.09	0.03	0.021	0.37	15.6	18.4	0.52	1020	1.02

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05
1456596	3.27	6.0	2.12	6.34	0.13	0.12	0.03	0.022	0.27	17.7	20.5	0.47	954	1.02
1456597	1.30	2.5	1.34	4.49	0.13	0.22	0.01	0.020	0.14	17.2	12.8	0.24	609	0.80
1456598	4.82	5.3	2.10	6.35	0.13	0.17	0.03	0.027	0.31	17.8	18.6	0.42	795	1.29
1456599	3.92	2.7	1.54	5.57	0.13	0.12	0.03	0.019	0.31	17.7	13.6	0.34	692	0.55
1456600	3.82	4.0	1.91	6.21	0.14	0.14	0.03	0.021	0.32	19.2	21.3	0.46	737	0.68
1456601	1.59	170	3.71	7.00	0.14	0.27	0.08	0.025	0.32	7.9	23.1	1.00	983	29.3
1456602	2.83	7.4	2.33	6.64	0.14	0.16	0.04	0.020	0.26	16.9	25.9	0.58	874	1.04
1456603	3.38	5.8	2.12	6.00	0.12	0.16	0.03	0.023	0.26	16.2	24.8	0.47	733	1.08
1456604	2.81	8.6	2.34	6.37	0.14	0.15	0.04	0.020	0.25	15.6	25.5	0.54	861	2.39
1456605	3.66	8.7	2.27	6.62	0.13	0.18	0.03	0.018	0.33	17.4	26.3	0.59	936	8.99
1456606	3.45	5.9	2.04	6.48	0.13	0.14	0.03	0.018	0.32	17.0	24.8	0.48	926	1.40

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
1456564	0.01	0.09	2.1	346	7.5	18.3	0.001	0.394	7.63	1.6	0.6	0.8	138	<0.01
1456565	0.11	0.30	27.1	685	3.0	13.8	0.002	0.208	0.65	6.2	0.4	0.4	151	<0.01
1456566	<0.01	0.06	2.0	342	6.8	18.2	<0.001	0.316	6.30	1.7	0.6	0.4	55.4	<0.01
1456567	0.01	0.09	3.2	445	8.4	16.8	0.004	1.01	20.2	1.7	1.5	0.4	40.8	<0.01
1456568	<0.01	0.06	1.8	337	7.6	15.3	0.001	0.370	5.61	1.6	0.7	0.4	28.9	<0.01
1456569	0.01	<0.05	2.4	222	5.1	8.3	0.002	0.505	12.4	1.5	0.9	0.3	119	<0.01
1456570	0.01	0.06	2.1	264	6.4	10.3	0.002	0.647	18.2	1.9	1.1	0.3	95.3	<0.01
1456571	0.01	0.08	1.0	328	7.0	17.4	<0.001	0.250	4.15	1.7	0.4	0.4	28.3	<0.01
1456572	0.01	0.08	2.0	291	5.4	10.8	0.005	1.13	51.3	2.0	2.3	0.2	47.2	<0.01
1456573	<0.01	0.08	3.8	374	6.1	16.5	0.002	1.70	81.6	1.2	3.0	0.3	18.0	<0.01
1456574	<0.01	0.12	8.0	216	6.8	10.9	0.007	6.56	551	1.3	13.8	0.3	15.2	<0.01
1456575	<0.01	0.11	4.9	296	6.3	14.2	0.003	1.02	46.7	1.4	3.0	0.4	17.7	<0.01
1456576	0.15	0.16	10.3	651	24.3	14.5	0.002	0.688	0.59	10.8	0.8	0.8	164	<0.01
1456577	<0.01	0.09	4.9	314	6.0	13.0	0.002	0.641	11.1	1.7	2.0	0.4	21.2	<0.01
1456578	<0.01	0.09	4.0	319	6.9	14.9	0.002	0.542	10.6	2.1	1.5	0.4	54.6	<0.01
1456579	<0.01	0.11	3.5	311	5.8	14.6	0.002	0.547	10.5	1.8	1.8	0.4	36.1	<0.01
1456580	<0.01	0.09	5.0	503	6.6	15.7	0.001	0.517	8.07	2.0	1.1	0.4	25.5	<0.01
1456581	0.01	0.08	2.0	560	9.5	31.2	<0.001	0.601	7.91	4.1	0.7	0.5	37.8	<0.01
1456582	0.01	0.06	1.6	356	8.8	21.6	<0.001	0.407	10.7	2.8	0.6	0.4	36.9	<0.01
1456583	0.01	0.07	1.9	325	8.8	18.0	0.001	0.428	10.3	2.8	0.6	0.3	33.0	<0.01
1456584	0.02	0.08	1.4	400	10.6	27.4	<0.001	0.245	2.04	2.9	0.4	0.4	48.3	<0.01
1456585	0.03	0.10	0.8	416	9.9	30.6	<0.001	0.180	0.92	3.1	0.4	0.4	76.7	<0.01
1456586	0.03	0.07	1.1	382	8.8	27.1	<0.001	0.255	1.68	2.6	0.5	0.4	55.4	<0.01
1456587	0.03	0.10	0.5	306	11.2	32.2	<0.001	0.188	1.29	2.2	0.4	0.4	89.0	<0.01
1456588	0.03	0.08	0.7	295	10.7	27.9	<0.001	0.182	1.71	1.9	0.4	0.4	84.8	<0.01
1456589	0.04	0.11	0.6	285	9.2	30.8	<0.001	0.082	0.40	2.0	0.3	0.4	93.6	<0.01
1456590	0.09	0.22	27.4	645	3.1	11.6	0.002	0.196	0.56	5.7	0.4	0.4	140	<0.01
1456591	0.04	0.09	0.7	286	8.8	26.9	<0.001	0.059	0.29	1.8	0.3	0.3	101	<0.01
1456592	0.05	0.08	1.0	325	8.9	23.5	<0.001	0.078	0.40	2.2	0.3	0.4	87.1	<0.01
1456593	0.08	0.06	1.3	401	9.9	15.1	0.001	0.237	0.92	2.9	0.3	0.6	65.6	<0.01
1456594	0.06	0.07	1.7	538	12.2	25.0	<0.001	0.160	0.90	4.0	0.3	0.5	50.1	<0.01
1456595	0.06	0.07	1.5	497	8.4	22.7	<0.001	0.110	0.47	3.6	0.3	0.5	62.1	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01
Sample Description														
1456596	0.09	0.08	1.5	462	8.1	16.0	<0.001	0.119	0.70	3.5	0.3	0.6	61.6	<0.01
1456597	0.12	0.08	0.9	387	7.5	6.0	<0.001	0.100	0.56	2.3	0.3	0.7	37.5	<0.01
1456598	0.10	0.11	1.6	432	9.5	18.2	<0.001	0.093	0.63	3.5	0.3	0.8	58.1	<0.01
1456599	0.07	0.08	0.9	377	9.5	18.1	<0.001	0.066	0.36	2.5	0.3	0.6	67.5	<0.01
1456600	0.08	0.08	0.9	432	9.8	16.2	<0.001	0.102	0.54	2.9	0.3	0.7	71.6	<0.01
1456601	0.07	0.12	15.2	511	38.6	18.7	0.003	1.09	0.43	9.2	1.6	0.8	69.4	<0.01
1456602	0.08	0.06	1.8	499	8.9	11.6	<0.001	0.155	0.67	3.7	0.3	0.6	54.4	<0.01
1456603	0.09	0.08	1.4	457	9.2	13.2	<0.001	0.146	0.74	3.5	0.3	0.6	57.8	<0.01
1456604	0.09	<0.05	1.7	557	10.0	11.8	<0.001	0.214	0.97	3.8	0.3	0.5	52.2	<0.01
1456605	0.08	0.06	1.6	523	9.7	18.3	0.001	0.231	0.84	3.6	0.3	0.5	60.9	<0.01
1456606	0.09	0.06	1.1	482	9.6	17.3	<0.001	0.258	0.83	3.2	0.3	0.5	60.3	<0.01

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Sample Description	Analyte: Unit: RDL:	Te ppm 0.01	Th ppm 0.1	Ti % 0.005	Tl ppm 0.02	U ppm 0.05	V ppm 0.5	W ppm 0.05	Y ppm 0.05	Zn ppm 0.5	Zr ppm 0.5
1456564		0.01	1.9	<0.005	1.13	0.37	13.6	0.09	8.64	51.9	5.3
1456565		0.02	1.6	0.144	0.08	0.68	72.2	0.26	9.17	41.8	8.3
1456566		<0.01	1.6	<0.005	0.90	0.47	15.6	0.08	9.96	48.2	6.6
1456567		<0.01	1.4	<0.005	2.66	0.35	15.7	0.10	9.43	38.3	6.5
1456568		<0.01	1.6	<0.005	0.85	0.36	13.8	0.08	9.21	48.1	6.7
1456569		<0.01	0.8	<0.005	2.18	0.34	10.4	0.07	7.45	61.3	6.0
1456570		<0.01	1.0	<0.005	3.09	0.31	16.0	0.08	9.61	57.4	6.9
1456571		<0.01	1.7	<0.005	0.65	0.34	18.3	0.09	9.04	53.1	5.6
1456572		0.01	0.6	<0.005	8.52	0.37	30.9	0.08	4.68	107	5.6
1456573		0.01	1.3	<0.005	12.2	0.39	14.8	0.10	7.42	63.2	5.0
1456574		0.03	0.9	<0.005	81.3	0.25	11.1	0.16	4.36	90.6	4.2
1456575		<0.01	1.4	<0.005	5.73	0.38	13.1	0.13	5.30	46.6	5.6
1456576		3.54	1.9	0.109	0.20	0.61	86.8	0.49	10.4	85.3	13.5
1456577		0.04	1.4	<0.005	1.66	0.31	12.9	0.11	7.19	43.4	4.5
1456578		<0.01	1.7	<0.005	1.26	0.32	16.8	0.08	8.19	47.6	4.8
1456579		<0.01	1.3	<0.005	1.55	0.32	12.4	0.12	5.77	36.9	4.5
1456580		<0.01	1.4	<0.005	1.17	0.38	13.0	0.10	6.04	36.8	5.6
1456581		<0.01	2.0	<0.005	0.63	0.53	28.8	0.06	13.0	57.4	7.1
1456582		<0.01	1.8	<0.005	0.95	0.64	22.7	0.06	10.8	60.9	6.6
1456583		<0.01	1.7	<0.005	1.21	0.62	20.3	0.11	9.02	59.0	6.0
1456584		<0.01	2.2	<0.005	0.33	0.59	14.0	0.07	13.0	61.5	4.5
1456585		<0.01	2.2	<0.005	0.23	0.43	15.5	0.25	13.2	40.3	3.4
1456586		<0.01	1.8	<0.005	0.26	0.35	18.4	0.22	10.4	48.5	3.0
1456587		<0.01	2.8	<0.005	0.23	1.30	7.9	<0.05	13.1	41.3	2.6
1456588		<0.01	2.5	<0.005	0.27	0.97	7.4	<0.05	12.1	33.7	2.6
1456589		<0.01	2.7	<0.005	0.17	0.39	6.5	<0.05	13.5	35.1	2.8
1456590		0.02	1.6	0.123	0.07	0.67	72.7	0.24	8.85	40.9	7.8
1456591		<0.01	2.5	<0.005	0.14	0.43	6.9	<0.05	13.5	33.8	2.9
1456592		<0.01	2.3	<0.005	0.12	0.40	8.1	<0.05	13.5	34.0	3.6
1456593		<0.01	2.0	<0.005	0.11	1.31	13.5	0.07	12.8	45.0	5.9
1456594		0.01	1.6	<0.005	0.14	0.88	24.6	0.06	12.0	58.5	4.0
1456595		<0.01	1.5	<0.005	0.13	0.55	23.0	<0.05	11.8	53.8	3.7

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

5623 McADAM ROAD
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1N9
 TEL (905)501-9998
 FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Oct 27, 2011	DATE RECEIVED: Oct 27, 2011					DATE REPORTED: Jan 19, 2012					SAMPLE TYPE: Rock
Analyte:	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr	
Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
RDL:	0.01	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	
1456596	<0.01	1.8	0.006	0.11	0.77	22.3	<0.05	13.1	58.5	5.6	
1456597	<0.01	2.3	0.014	0.06	0.53	12.3	<0.05	12.7	45.6	8.4	
1456598	0.01	2.0	0.018	0.11	0.63	16.7	<0.05	15.1	68.1	7.5	
1456599	0.01	1.9	0.008	0.10	0.63	14.9	<0.05	13.0	56.3	3.9	
1456600	<0.01	2.1	0.007	0.09	0.66	17.9	<0.05	13.7	55.4	4.4	
1456601	8.66	0.9	0.092	0.29	0.42	73.5	0.66	8.45	106	10.4	
1456602	0.09	1.7	<0.005	0.09	0.62	24.1	<0.05	12.7	58.9	5.6	
1456603	0.01	1.8	0.007	0.09	0.56	21.7	<0.05	11.9	57.7	5.6	
1456604	0.01	1.3	0.006	0.10	0.74	26.0	<0.05	12.7	55.4	6.4	
1456605	0.01	1.5	0.007	0.11	0.59	24.5	<0.05	12.6	55.0	5.7	
1456606	<0.01	1.9	0.005	0.11	0.68	19.6	<0.05	12.8	49.3	5.7	

Comments: RDL - Reported Detection Limit
 Additional Fire Assay Gold data

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
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CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Sample Description	Analyte:	Unit:	RDL:
	Au	ppm	0.002
1456564			0.097
1456565			0.003
1456566			0.079
1456567			0.32
1456568			0.124
1456569			0.151
1456570			0.177
1456571			0.025
1456572			0.510
1456573			0.457
1456574			1.39
1456575			0.446
1456576			4.56
1456577			0.527
1456578			0.254
1456579			0.316
1456580			0.290
1456581			0.026
1456582			0.032
1456583			0.048
1456584			0.007
1456585			0.003
1456586			0.009
1456587			0.002
1456588			0.008
1456589			<0.002
1456590			0.002
1456591			<0.002
1456592			<0.002
1456593			0.010
1456594			0.009
1456595			<0.002

Certified By:



Certificate of Analysis

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

5623 McADAM ROAD
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 CANADA L4Z 1N9
 TEL (905)501-9998
 FAX (905)501-0589
<http://www.agatlabs.com>

CLIENT NAME: WESTHAVEN VENTURES

ATTENTION TO: GARETH THOMAS

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Oct 27, 2011

DATE RECEIVED: Oct 27, 2011

DATE REPORTED: Jan 19, 2012

SAMPLE TYPE: Rock

Sample Description	Analyte:	Unit:	RDL:
	Au	ppm	0.002
1456596			<0.002
1456597			<0.002
1456598			<0.002
1456599			<0.002
1456600			<0.002
1456601			9.49
1456602			0.014
1456603			<0.002
1456604			0.003
1456605			0.005
1456606			0.003

Comments: RDL - Reported Detection Limit
 Additional Fire Assay Gold data

Certified By:

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2848268	0.27	0.29	7.1%	< 0.01				80%	120%	
Al	1	2848268	0.537	0.494	8.3%	< 0.01				80%	120%	
As	1	2848268	151	152	0.7%	0.5				80%	120%	
Au	1	2848268	0.11	0.11	0.0%	< 0.01				80%	120%	
B	1	2848268	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2848268	41	39	5.0%	< 1				80%	120%	
Be	1	2848268	0.33	0.33	0.0%	< 0.05				80%	120%	
Bi	1	2848268	0.08	0.08	0.0%	< 0.01				80%	120%	
Ca	1	2848268	0.20	0.20	0.0%	< 0.01				80%	120%	
Cd	1	2848268	0.07	0.07	0.0%	< 0.01				80%	120%	
Ce	1	2848268	28.2	27.6	2.2%	< 0.01				80%	120%	
Co	1	2848268	2.8	2.8	0.0%	< 0.1	5.5	5.0	109%	80%	120%	
Cr	1	2848268	114	103	10.1%	< 0.5				80%	120%	
Cs	1	2848268	1.97	1.91	3.1%	< 0.05				80%	120%	
Cu	1	2848268	6.5	5.8	11.4%	0.2	3891	3800	102%	80%	120%	
Fe	1	2848268	1.67	1.64	1.8%	< 0.01				80%	120%	
Ga	1	2848268	3.69	3.51	5.0%	< 0.05				80%	120%	
Ge	1	2848268	0.13	0.13	0.0%	0.09				80%	120%	
Hf	1	2848268	0.158	0.149	5.9%	< 0.02				80%	120%	
Hg	1	2848268	0.057	0.054	5.4%	< 0.01	1.7	1.3	128%	80%	120%	
In	1	2848268	0.020	0.020	0.0%	< 0.005				80%	120%	
K	1	2848268	0.30	0.29	3.4%	< 0.01				80%	120%	
La	1	2848268	13.5	13.3	1.5%	< 0.1				80%	120%	
Li	1	2848268	5.86	5.62	4.2%	< 0.1				80%	120%	
Mg	1	2848268	0.246	0.242	1.6%	< 0.01				80%	120%	
Mn	1	2848268	494	475	3.9%	< 1				80%	120%	
Mo	1	2848268	17.8	17.8	0.0%	< 0.05				80%	120%	
Na	1	2848268	0.01	0.01	0.0%	< 0.01				80%	120%	
Nb	1	2848268	0.09	0.06	< 0.05	< 0.05				80%	120%	
Ni	1	2848268	2.09	1.82	13.8%	< 0.2				80%	120%	
P	1	2848268	346	339	2.0%	< 10				80%	120%	
Pb	1	2848268	7.5	7.5	0.0%	< 0.1				80%	120%	
Rb	1	2848268	18.3	17.7	3.3%	< 0.1	11	13	85%	80%	120%	
Re	1	2848268	0.001	0.001	0.0%	< 0.001				80%	120%	
S	1	2848268	0.394	0.389	1.3%	< 0.005				80%	120%	
Sb	1	2848268	7.63	7.51	1.6%	< 0.05				80%	120%	
Sc	1	2848268	1.6	1.6	0.0%	< 0.1				80%	120%	
Se	1	2848268	0.6	0.6	0.0%	< 0.2	0.7	0.8	87%	80%	120%	
Sn	1	2848268	0.8	0.8	0.0%	< 0.2				80%	120%	
Sr	1	2848268	138	137	0.7%	< 0.2	373	390	96%	80%	120%	
Ta	1	2848268	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2848268	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2848268	1.9	1.9	0.0%	< 0.1				80%	120%	
Ti	1	2848268	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
										Lower	Upper	
Tl	1	2848268	1.13	1.13	0.0%	< 0.02				80%	120%	
U	1	2848268	0.366	0.352	3.9%	< 0.05	0.8	0.8	100%	80%	120%	
V	1	2848268	13.6	17.0	22.2%	< 0.5				80%	120%	
W	1	2848268	0.091	0.081	11.6%	< 0.05				80%	120%	
Y	1	2848268	8.64	8.57	0.8%	< 0.05		7		80%	120%	
Zn	1	2848268	51.9	49.9	3.9%	< 0.5				80%	120%	
Zr	1	2848268	5.35	5.40	0.9%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Ag	1	2848293	< 0.01	0.02		< 0.01				80%	120%	
Al	1	2848293	0.936	0.871	7.2%	< 0.01				80%	120%	
As	1	2848293	8.16	8.03	1.6%	< 0.1				80%	120%	
Au	1	2848293	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
B	1	2848293	< 5	< 5	0.0%	< 5				80%	120%	
Ba	1	2848293	33	32	3.1%	< 1				80%	120%	
Be	1	2848293	0.58	0.59	1.7%	< 0.05				80%	120%	
Bi	1	2848293	0.10	0.10	0.0%	< 0.01				80%	120%	
Ca	1	2848293	2.32	2.33	0.4%	< 0.01				80%	120%	
Cd	1	2848293	0.09	0.09	0.0%	< 0.01				80%	120%	
Ce	1	2848293	37.8	37.5	0.8%	< 0.01				80%	120%	
Co	1	2848293	2.5	2.5	0.0%	< 0.1				80%	120%	
Cr	1	2848293	37.4	36.5	2.4%	< 0.5				80%	120%	
Cs	1	2848293	6.75	6.59	2.4%	< 0.05				80%	120%	
Cu	1	2848293	3.02	3.10	2.6%	< 0.1	3935	3800	103%	80%	120%	
Fe	1	2848293	1.22	1.21	0.8%	< 0.01				80%	120%	
Ga	1	2848293	3.52	3.37	4.4%	< 0.05				80%	120%	
Ge	1	2848293	0.122	0.132	7.9%	< 0.05				80%	120%	
Hf	1	2848293	0.082	0.091	10.4%	< 0.02				80%	120%	
Hg	1	2848293	0.03	0.03	0.0%	< 0.01				80%	120%	
In	1	2848293	0.0169	0.0164	3.0%	< 0.005				80%	120%	
K	1	2848293	0.44	0.42	4.7%	< 0.01				80%	120%	
La	1	2848293	18.0	17.9	0.6%	< 0.1				80%	120%	
Li	1	2848293	6.5	6.3	3.1%	< 0.1				80%	120%	
Mg	1	2848293	0.27	0.27	0.0%	< 0.01				80%	120%	
Mn	1	2848293	846	841	0.6%	< 1				80%	120%	
Mo	1	2848293	0.346	0.317	8.7%	< 0.05				80%	120%	
Na	1	2848293	0.04	0.04	0.0%	< 0.01				80%	120%	
Nb	1	2848293	0.11	0.11	0.0%	< 0.05				80%	120%	
Ni	1	2848293	0.6	0.6	0.0%	< 0.2				80%	120%	
P	1	2848293	285	283	0.7%	< 10				80%	120%	
Pb	1	2848293	9.22	9.14	0.9%	< 0.1				80%	120%	
Rb	1	2848293	30.8	28.8	6.7%	< 0.1	13	13	101%	80%	120%	
Re	1	2848293	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
S	1	2848293	0.082	0.084	2.4%	< 0.005				80%	120%	

Quality Assurance

CLIENT NAME: WESTHAVEN VENTURES
 PROJECT NO: Shovelnose

AGAT WORK ORDER: 11V543365
 ATTENTION TO: GARETH THOMAS

Solid Analysis (Continued)												
RPT Date: Jan 19, 2012			REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Result Value		Expect Value	Recovery	Acceptable Limits		
							Lower			Upper		
Sb	1	2848293	0.40	0.38	5.1%	< 0.05				80%	120%	
Sc	1	2848293	1.96	1.90	3.1%	< 0.1				80%	120%	
Se	1	2848293	0.3	0.3	0.0%	< 0.2	0.7	0.8	84%	80%	120%	
Sn	1	2848293	0.4	0.4	0.0%	< 0.2				80%	120%	
Sr	1	2848293	93.6	92.6	1.1%	< 0.2	381	390	98%	80%	120%	
Ta	1	2848293	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Te	1	2848293	< 0.01	< 0.01	0.0%	< 0.01				80%	120%	
Th	1	2848293	2.7	2.7	0.0%	< 0.1	1.6	1.4	116%	80%	120%	
Ti	1	2848293	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Tl	1	2848293	0.169	0.162	4.2%	< 0.02				80%	120%	
U	1	2848293	0.39	0.39	0.0%	< 0.05	0.9	0.8	113%	80%	120%	
V	1	2848293	6.5	6.5	0.0%	< 0.5				80%	120%	
W	1	2848293	< 0.05	< 0.05	0.0%	< 0.05				80%	120%	
Y	1	2848293	13.5	13.3	1.5%	< 0.05		7		80%	120%	
Zn	1	2848293	35.1	35.0	0.3%	< 0.5				80%	120%	
Zr	1	2848293	2.8	2.8	0.0%	< 0.5				80%	120%	
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)												
Cu	1					< 0.1	3851	3800	101%	80%	120%	
Rb	1					< 0.1	12	13	95%	80%	120%	
Se	1					< 0.2	0.7	0.8	87%	80%	120%	
Sr	1					< 0.2	382	390	98%	80%	120%	
Th	1					< 0.1	1.1	1.4	79%	80%	120%	
U	1					< 0.05	0.8	0.8	95%	80%	120%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2848279	0.446	0.442	0.9%	< 0.002	0.0816	0.0849	96%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2848268	0.097	0.098	1.0%	< 0.002	1.38	1.34	102%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2848293	< 0.002	0.003		< 0.002	0.923	0.922	100%	90%	110%	
Fire Assay - Trace Au, AAS finish (202051)												
Au	1	2848302	< 0.002	< 0.002	0.0%	< 0.002	0.886	0.922	96%	90%	110%	

Certified By: _____



Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS

Method Summary

CLIENT NAME: WESTHAVEN VENTURES

AGAT WORK ORDER: 11V543365

PROJECT NO: Shovelnose

ATTENTION TO: GARETH THOMAS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Y	MIN-200-12017		ICP-MS
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Au	MIN-200-12019	BUGBEE, E: A Textbook of Fire Assaying	AAS

APPENDIX 12

2011 SHOVELNOSE EXPLORATION EXPENDITURES

2011 Shovelnose Exploration Expenditures

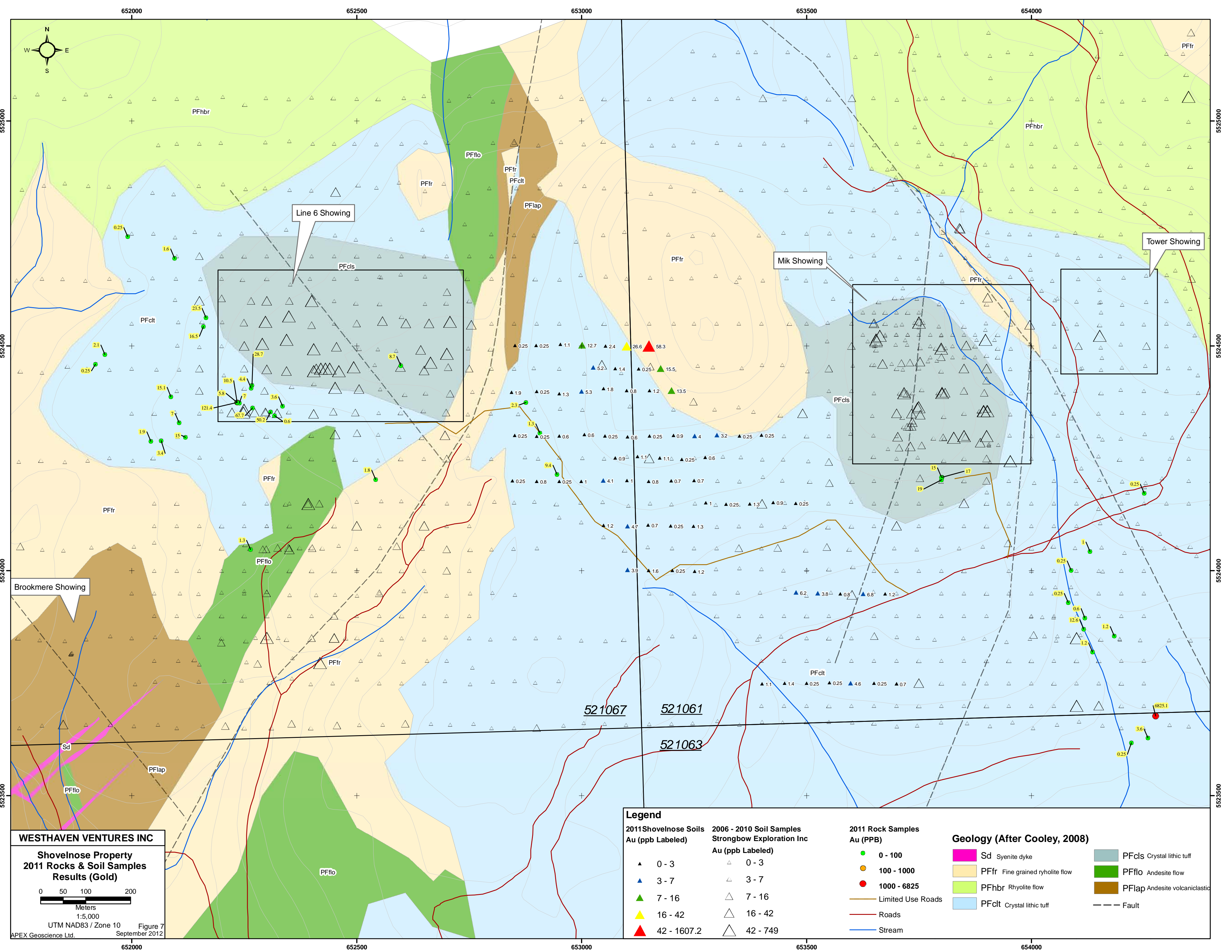
	Date	Invoice	Description	Amount
Geological field work				
	09/30/2011		Prospecting, Operational Planning, Research and Strategic Oversight-Gareth Thomas	5000.00
	09/30/2011		Prospecting, Operational Planning, Research and Strategic Oversight-Shaun Pollard	1000.00
	09/30/2011		Prospecting, Operational Planning, Research and Strategic Oversight-Vicotr Tanaka	700.00
	09/30/2011		Project Geologist, planning, research; prospecting-David Gale	1400.00
	09/30/2011		Project Geologist, planning, research; prospecting-Felisha Chang	1200.00
	09/30/2011		Prospecting, Exploration, Research-Edward Balon	3600.00
	09/30/2011		Prospecting, Exploration, Research-Richard Harwood	3150.00
	08/31/2011	2011-454	Geological Services Performed Field - Andrea De Stefano (July 22-Aug 21/11)	7,600.00
	08/31/2011	2011-454	Geological Services Performed Field - Alexia Greschner (July 22-Aug 21/11)	6,300.00
	08/31/2011	2011-454	Geological Services Performed Field - Eric Harris (July 22-Aug 21/11)	6,175.00
	08/31/2011	2011-454	Geological Services Performed Field - Chad Hayes (July 22-Aug 21/11)	6,175.00
	08/31/2011	2011-454	Geological Services Performed Field - Steven Hill (July 22-Aug 21/11)	975.00
	08/31/2011	2011-454	Geological Services Performed Field - Landon Mutch (July 22-Aug 21/11)	975.00
	08/31/2011	2011-454	Geological Services Performed Field - Sean Milliken (July 22-Aug 21/11)	525.00
	08/31/2011	2011-454	Geological Services Performed Field - David Real (July 22-Aug 21/11)	375.00
	09/30/2011	2011-498	Geological Services Performed Field - Eric Harris (Aug 22-Sept 21/11)	3,250.00
	09/30/2011	2011-498	Geological Services Performed Field - Steven Hill (Aug 22-Sept 21/11)	4,550.00
	09/30/2011	2011-498	Geological Services Performed Field - Landon Mutch (Aug 22-Sept 21/11)	3,250.00
	09/30/2011	2011-498	Geological Services Performed Field - David Real (Aug 22-Sept 21/11)	3,750.00
	09/30/2011	2011-498	Geological Services Performed Field - Chad Hayes (Aug 22-Sept 21/11)	325.00
	09/30/2011	2011-498	Geological Services Performed Field - Andrea De Stefano (Aug 22-Sept 21/11)	3,200.00
	09/30/2011	2011-498	Geological Services Performed Field - Alexia Greschner (Aug 22-Sept 21/11)	449.00
	09/30/2011	2011-498	Geological Services Performed Field - Sean Milliken (Aug 22-Sept 21/11)	7,350.00
	09/30/2011		Core Splitting, Drill Camp build and maintenance-Ryan Fetterley	7350.00
	10/31/2011	2011-561	Party Leader Geological Services Field - Yuliana Proenza (Sept 22-Oct 21/11)	11,025.00
	10/31/2011	2011-561	Geological Services Performed Field - Chris Livingstone (Sept 22-Oct 21/11)	9,450.00
	11/30/2011	2011-626	Geological Services Performed Field - Chris Livingstone (Oct 22-Nov 21/11)	1,800.00
	11/30/2011	2011-626	Party Leader Geological Services Field - Yuliana Proenza (Oct 22-Nov 21/11)	2,625.00
Total Geological field work				103,524.00
Geological office work				
	03/31/2011	2011-153	Geological Services Performed Office - Kris Raffle (Feb 22-March 21/11)	397.50
	04/29/2011	2011-210	Geological Services Performed Office - Kris Raffle (March 22-April 21/11)	3,450.00
	05/31/2011	2011-262	Geological Services Performed Office - Kris Raffle (April 22-May 21/11)	300.00
	06/30/2011	2011-331	Geological Services Performed Office - Kris Raffle (May 22-June 21/11)	5,002.50
	09/30/2011		Westhaven Report Writing	4000.00
	06/30/2011	2011-331	Geological Services Performed Office - Bahram Bahrami (May 22-June 21/11)	255.50
	07/29/2011	2011-383	Geological Services Performed Office - Yuliana Proenza (June 22-July 21/11)	1,284.50
	07/29/2011	2011-383	Geological Services Performed Office - Kris Raffle (June 22-July 21/11)	1,050.00
	07/29/2011	2011-383	Geological Services Performed Office - Bahram Bahrami (June 22-July 21/11)	45.50
	07/29/2011	2011-383	Geological Services Performed Office - Mark Hanki (June 22-July 21/11)	135.00
	08/31/2011	2011-454	Geological Services Performed Office - Kris Raffle (July 22-Aug 21/11)	1,350.00
	08/31/2011	2011-454	Geological Services Performed Office - Bahram Bahrami (July 22-Aug 21/11)	24.50
	08/31/2011	2011-454	Geological Services Performed Office - Alexia Greschner (July 22-Aug 21/11)	325.00
	09/30/2011	2011-498	Geological Services Performed Office - Kris Raffle (Aug 22-Sept 21/11)	1,297.50
	09/30/2011	2011-498	Geological Services Performed Office - Brett Hannigan (Aug 22-Sept 21/11)	654.52
	09/30/2011	2011-498	Geological Services Performed Office - Sean Milliken (Aug 22-Sept 21/11)	198.75
	09/30/2011	2011-498	Geological Services Performed Office - Ermeli Rantala (Aug 22-Sept 21/11)	815.50
	09/30/2011	2011-498	Geological Services Performed Office - Yuliana Proenza (Aug 22-Sept 21/11)	630.00
	10/31/2011	2011-561	Geological Services Performed Office - Yuliana Proenza (Sept 22-Oct 21/11)	698.27
	10/31/2011	2011-561	Geological Services Performed Office - Kris Raffle (Sept 22-Oct 21/11)	750.98
	10/31/2011	2011-561	Geological Services Performed Office - Mark Hanki (Sept 22-Oct 21/11)	100.76
	11/30/2011	2011-626	Geological Services Performed Office - Yuliana Proenza (Oct 22-Nov 21/11)	3,034.50
Total Geological office work				25,800.78
Clerical				
	08/31/2011	2011-454	Clerical Services - Amber Aloisio (July 22-Aug 21/11)	39.00
	09/30/2011	2011-498	Clerical Services - Amber Aloisio (Aug 22-Sept 21/11)	60.00
Total Clerical				99.00
HR & Safety				
	08/31/2011	2011-454	Human Resource and Safety Services - Sean Hawkes (July 22-Aug 21/11)	560.00
	09/30/2011	2011-498	Human Resource and Safety Services - Sean Hawkes (Aug 22-Sept 21/11)	651.00
	10/31/2011	2011-561	Human Resource and Safety Services - Sean Hawkes (Sept 22-Oct 21/11)	931.14
Total HR & Safety				2,142.14
Rentals & other project income				
	08/31/2011	2011-454	APEX rental - truck 1 (Aug 3-21/11)	1,900.00
	08/31/2011	2011-454	APEX rental - truck 2 (Aug 3-21/11)	1,900.00
	08/31/2011	2011-454	APEX rental - quad 1 (Aug 3-21/11)	1,710.00
	08/31/2011	2011-454	APEX rental - quad 2 (Aug 3-21/11) - stand by rate	1,140.00
	08/31/2011	2011-454	APEX rental - laptop & ArcGIS software - 1 month	500.00
	08/31/2011	2011-454	APEX rental - miscellaneous field equipment & supplies - 1 month	250.00
	09/30/2011	2011-498	APEX rental - truck 1 (Aug 22-31/11)	1,000.00
	09/30/2011	2011-498	APEX rental - truck 2 (Aug 22-Sept 4/11)	1,400.00
	09/30/2011	2011-498	APEX rental - quad 1 (Aug 22-31/11)	900.00
	09/30/2011	2011-498	APEX rental - quad 2 (Aug 22-Sept 4/11) - stand by rate	840.00
	09/30/2011	2011-498	Accommodations - Chris Livingstone - September 2011	100.00
	10/31/2011	2011-561	APEX rental - truck	2,100.00
	10/31/2011	2011-561	APEX rental - laptop, printer & software	500.00
	10/31/2011	2011-561	APEX rental - magnetic susceptibility meter, GPS, dymo gun, misc field equipment	500.00

2011 Shovelnose Exploration Expenditures

Date	Invoice	Description	Amount
11/30/2011	2011-626	APEX rental - truck	400.00
Total Rentals & other project income			15,140.00
Expenses			
Drilling Program			
09/30/2011		Foraco Drilling Ltd drilled 609m's across 7 holes	100069.54
09/30/2011		Drill mobilizatoin and demobilization	18000.00
Total Drilling and Related Spend			118,069.54
Geochemical Analysis			
09/30/2011		Acme Labs-Assaying etc	21679.02
09/30/2011		Agat Labs-Assaying etc	19037.27
Total Geochemical Analysis work			40,716.29
Field supplies			
07/07/2011	031-802	Deakin Equipment: supplies, July 7/11, inv 031-802	927.23
08/23/2011		Chad Hayes: supplies, Aug 10-15/11	188.78
09/01/2011		Alexia Greschner: supplies, Aug 5-19/11	77.08
09/02/2011		Andrea De Stefano: supplies, Aug 11/11	27.97
09/07/2011		Sean Milliken: supplies, Aug 24-29/11	66.96
09/08/2011		Steven Hill: supplies, Aug 25 & Sept 3/11	27.51
09/08/2011		Kris Raffle: supplies, Aug 4-17/11	275.17
09/12/2011		Landon Mutch: supplies, Aug 25/11	9.78
10/15/2011	03A-18227	Deakin Equipment: supplies, Oct 15/11, inv 03A-18227	195.75
10/26/2011		Chris Livingstone: supplies, Oct 14/11	18.48
11/08/2011		Yuliana Proenza: supplies, Oct 2-31/11	447.39
Total Field supplies			2,262.10
Freight - other			
09/01/2011	2144088	Greyhound: freight, waybill 53738268360, Aug 29/11, inv 2144088	28.94
09/06/2011	5-958-78034	FedEx: courier, waybill 872184140996, Aug 8/11, inv 5-958-78034	23.12
10/15/2011	2222654	Greyhound: freight, waybill 53739089806, Oct 04/11, inv 2222654	45.99
Total Freight - other			98.05
Freight - samples			
08/15/2011	2114632	Greyhound: freight, waybill 13439255012, Aug 8/11, inv 2114632	28.50
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738205142, Aug 25/11, inv 2144088	69.76
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738205260, Aug 25/11, inv 2144088	82.41
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738205433, Aug 25/11, inv 2144088	90.13
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738205584, Aug 25/11, inv 2144088	85.92
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738205665, Aug 25/11, inv 2144088	43.23
09/01/2011	2144088	Greyhound: freight, samples, waybill 51738278642, Aug 29/11, inv 2144088	36.95
09/15/2011	2165231	Greyhound: freight, samples, waybill 51738408923, Sept 2/11, inv 2165231	92.24
09/15/2011	2165231	Greyhound: freight, samples, waybill 51738409030, Sept 2/11, inv 2165231	68.71
09/15/2011	2165231	Greyhound: freight, samples, waybill 51738409262, Sept 2/11, inv 2165231	56.42
09/15/2011	2165231	Greyhound: freight, samples, waybill 51738445102, Sept 4/11, inv 2165231	46.12
09/15/2011	2165231	Greyhound: freight, samples, waybill 51738445161, Sept 4/11, inv 2165231	40.00
Total Freight - samples			740.39
Rental - automotive			
09/08/2011		Kris Raffle: vehicle rental, Aug 3-6/11	301.38
Total Rental - automotive			301.38
Rental - equipment			
09/01/2011		Alexia Greschner: water pump rental, Aug 15/11	109.60
10/05/2011		Paul Ransom: core splitter rental, one month, July-Sept/11	250.00
Total 6260 - Rental - equipment			359.60
Subcontract - other			
08/22/2011	695	Neale Bros Transfer: excavator services, Aug 8-16/11, inv 695	4,378.50
10/24/2011	1182	Gallant Trucking: subcontract services, water truck, Oct 6-18/11, inv 1182	11,397.00
10/25/2011	703	Neale Bros Transfer: excavator services, Oct 8-9/11, inv 703	2,095.00
10/26/2011	324	L.J.P Construction: subcontract services, excavating & water truck, Oct 14-21/11, inv 324	4,320.90
Total Subcontract - other			22,191.40
Travel - accommodations			
08/03/2011		Carmana Plaza: hotel, Alexia Greschner, Vancouver, Aug 2-3/11	229.50
08/05/2011		Knights Inn: hotel, Kris Raffle, Merritt, Aug 3-5/11	193.80
08/10/2011		Knights Inn: hotel, Alexia Greschner, Merritt, Aug 3-10/11	571.20
08/22/2011		Knights Inn: hotel, David Real, Merritt, Aug 21-22/11	66.30
08/22/2011		Knights Inn: hotel, Alexia Greschner, Merritt, Aug 15-22/11	571.20
09/01/2011		Knights Inn: hotel, Landon Mutch, Merritt, Aug 19-Sept 1/11	1,193.40
09/01/2011		Knights Inn: hotel, Chad Hayes, Merritt, Aug 7-Sept 1/11	2,752.20
09/04/2011		Knights Inn: hotel, Andrea De Stefano, Merritt, Aug 3-Sept 4/11	2,937.60
10/31/2011		Knights Inn: hotel, Chris Livingstone, Merritt, Oct 3-27/11	2,085.69
10/31/2011		Knights Inn: hotel, Yuliana Proenza, Merritt, Oct 3-27/11	1,717.63
Total Travel - accommodations			12,318.52
Travel - airfare/bus fare			
07/27/2011	67227	Globetrotter Travel: airfare, Alexia Greschner, Edmonton/Vancouver, Aug 2/11, inv 67227	259.12
08/02/2011	67285	Globetrotter Travel: airfare, Alexia Greschner, Kelowna/Edmonton, Aug 10/11, inv 67285	261.12
08/18/2011	67504	Globetrotter Travel: airfare, Steven Hill, Calgary/Kelowna, Aug 19/11, inv 67504	248.12
08/18/2011	67502	Globetrotter Travel: airfare, Landon Mutch, Victoria/Kelowna, Aug 19/11, inv 67502	213.12
08/18/2011	67503	Globetrotter Travel: airfare, David Real, Winnipeg/Kelowna, Aug 19/11, inv 67503	449.12
08/19/2011	67532	Globetrotter Travel: airfare, Chad Hayes, Kelowna/Edmonton, Aug 22/11, inv 67532	301.12
08/23/2011		Chad Hayes: excess baggage fee, Aug 22/11	20.00
08/29/2011	67665	Globetrotter Travel: airfare, David Real, Kelowna/Winnipeg, Aug 31/11, inv 67665	311.12

2011 Shovelnose Exploration Expenditures

Date	Invoice	Description	Amount
08/29/2011	67667	Globetrotter Travel: airfare, Landon Mutch, Kelowna/Victoria, Aug 31/11, inv 67667	215.12
08/29/2011	67668	Globetrotter Travel: airfare, Eric Harris, Kelowna/Calgary, Aug 31/11, inv 67668	215.12
09/02/2011	67732	Globetrotter Travel: airfare, Steven Hill, Kelowna/Calgary, Sept 4/11, inv 67732	235.12
09/06/2011		David Real: excess baggage fee, Aug 21 & 31/11	40.00
09/08/2011		Steven Hill: excess baggage fee, Aug 19 & Sept 4/11	40.00
09/22/2011		Sean Hawkes: airfare, Andrea De Stefano, Kelowna/Vancouver, Aug 29/11	250.12
09/30/2011	68040	Globetrotter Travel: airfare, Chris Livingstone, Vancouver/Edmonton, Oct 2/11, inv 68040	364.12
10/24/2011	31037	Globetrotter Travel: airfare, Chris Livingstone, Edmonton/Vancouver, Oct 25/11, inv 31037	289.12
10/26/2011		Chris Livingstone: excess baggage fee, Oct 2/11	20.00
Total Travel - airfare/bus fare			3,731.56
Travel - food			
08/23/2011		Chad Hayes: food, Aug 3-22/11	730.05
09/01/2011		Alexia Greschner: food, Aug 5-22/11	686.45
09/02/2011		Andrea De Stefano: food, Aug 11-28/11	335.05
09/02/2011		Eric Harris: food, Aug 3-29/11	548.33
09/06/2011		David Real: food, Aug 22-30/11	306.15
09/07/2011		Sean Milliken: food, Aug 22-Sept 3/11	857.37
09/08/2011		Steven Hill: food, Aug 19-Sept 4/11	667.92
09/08/2011		Kris Raffle: food, Aug 3-17/11	657.74
09/12/2011		Landon Mutch: food, Aug 19-27/11	310.87
10/26/2011		Chris Livingstone: food, Oct 2-25/11	464.12
11/08/2011		Yuliana Proenza: food, Oct 3-25/11	638.25
Total Travel - food			6,202.30
Travel - fuel			
08/23/2011		Chad Hayes: fuel, Aug 3-13/11	159.36
09/01/2011		Alexia Greschner: fuel, Aug 5-22/11	479.98
09/02/2011		Andrea De Stefano: fuel, Aug 13-21/11	139.55
09/02/2011		Eric Harris: fuel, Aug 3-29/11	647.20
09/06/2011		David Real: fuel, Aug 29-31/11	116.47
09/07/2011		Sean Milliken: fuel, Aug 23-Sept 3/11	480.96
09/08/2011		Steven Hill: taxi, Aug 20/11	85.73
09/08/2011		Kris Raffle: fuel, Aug 3-15/11	356.92
10/26/2011		Chris Livingstone: fuel, Oct 3-25/11	813.05
11/08/2011		Yuliana Proenza: fuel, Oct 6-23/11	259.17
Total Travel - fuel			3,538.39
Travel - taxi, parking & other			
08/23/2011		Chad Hayes: taxi, Aug 22/11	54.67
09/01/2011		Alexia Greschner: taxi, Aug 2/11	49.82
09/06/2011		David Real: taxi, Aug 21/11	29.52
09/12/2011		Landon Mutch: taxi, Aug 19 & 31/11	136.09
10/26/2011		Chris Livingstone: taxi, Oct 2-25/11	164.04
11/08/2011		Yuliana Proenza: taxi & parking, Oct 2-23/11	25.81
Total Travel - taxi, parking & other			459.95
Automotive expenses			
09/02/2011		Andrea De Stefano: tire repair, 2011 Toyota Tundra (brown), Aug 27/11	75.00
10/01/2011	5874	Shadow Creek Properties: repairs, 2010 Toyota Tundra (red), Sept 12/11, inv 5874	309.35
Total Automotive expenses			384.35
Telephone - Edmonton			
08/04/2011	11552674	Allstream: long distance charges, July/11, inv 11552674	0.48
09/04/2011	11664552	Allstream: long distance charges, Aug/11, inv 11664552	0.29
11/08/2011		Yuliana Proenza: cell phone charges, Oct 3-27/11	352.06
Total Telephone - Edmonton			352.83
Total Expenses			211,726.65
Total 2011 Shovelnose Exploration Expenditures			358,432.57



WESTHAVEN VENTURES INC

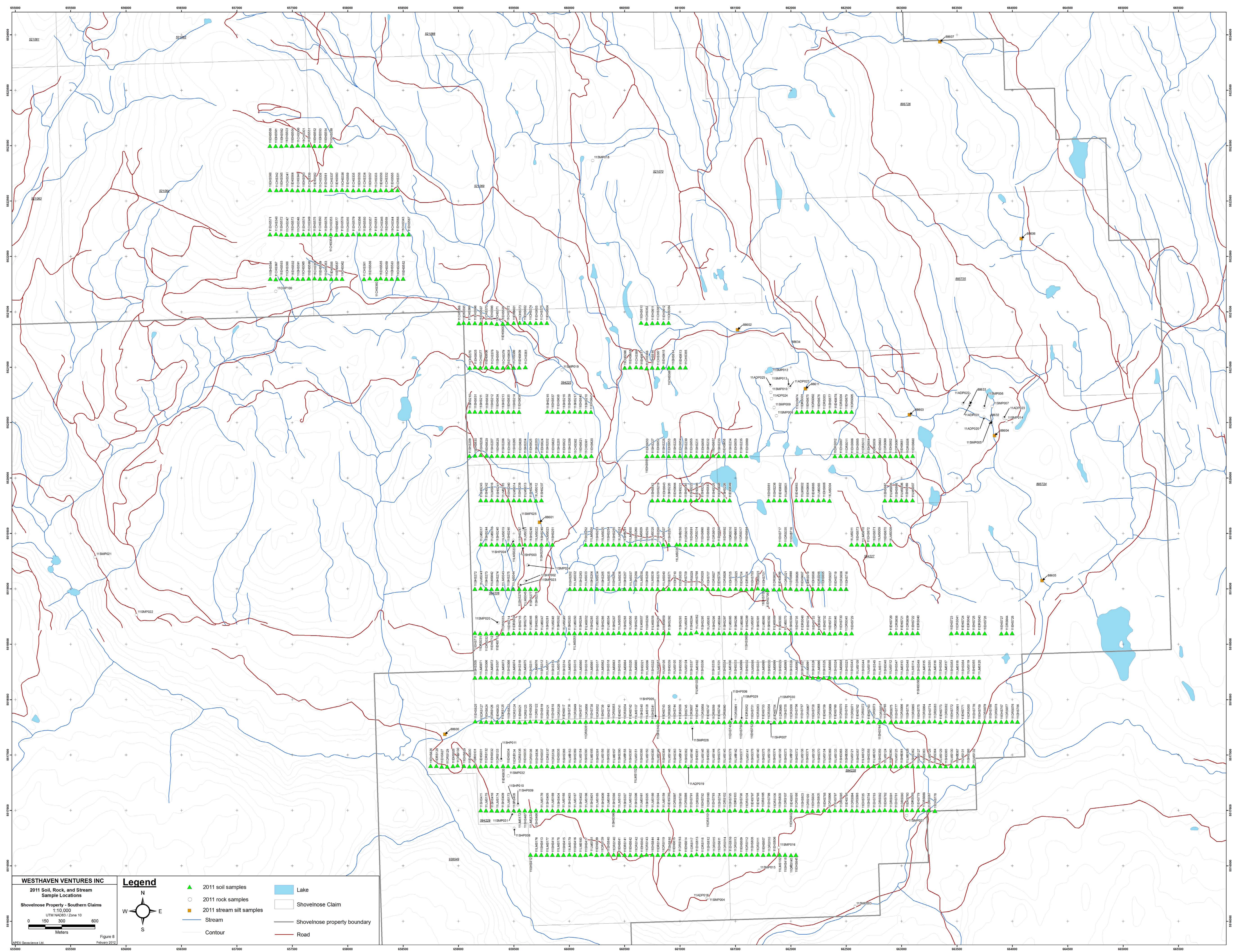
**Shovelnose Property
2011 Rocks & Soil Samples
Results (Gold)**

0 50 100 200
Meters
1:5,000

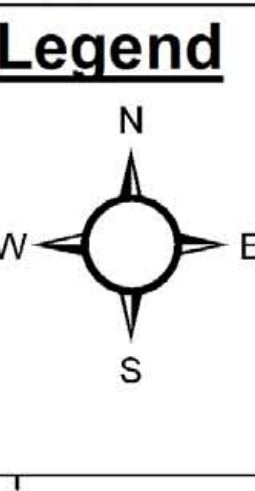
UTM NAD83 / Zone 10 Figure 7
September 2012
APEX Geoscience Ltd.

Legend

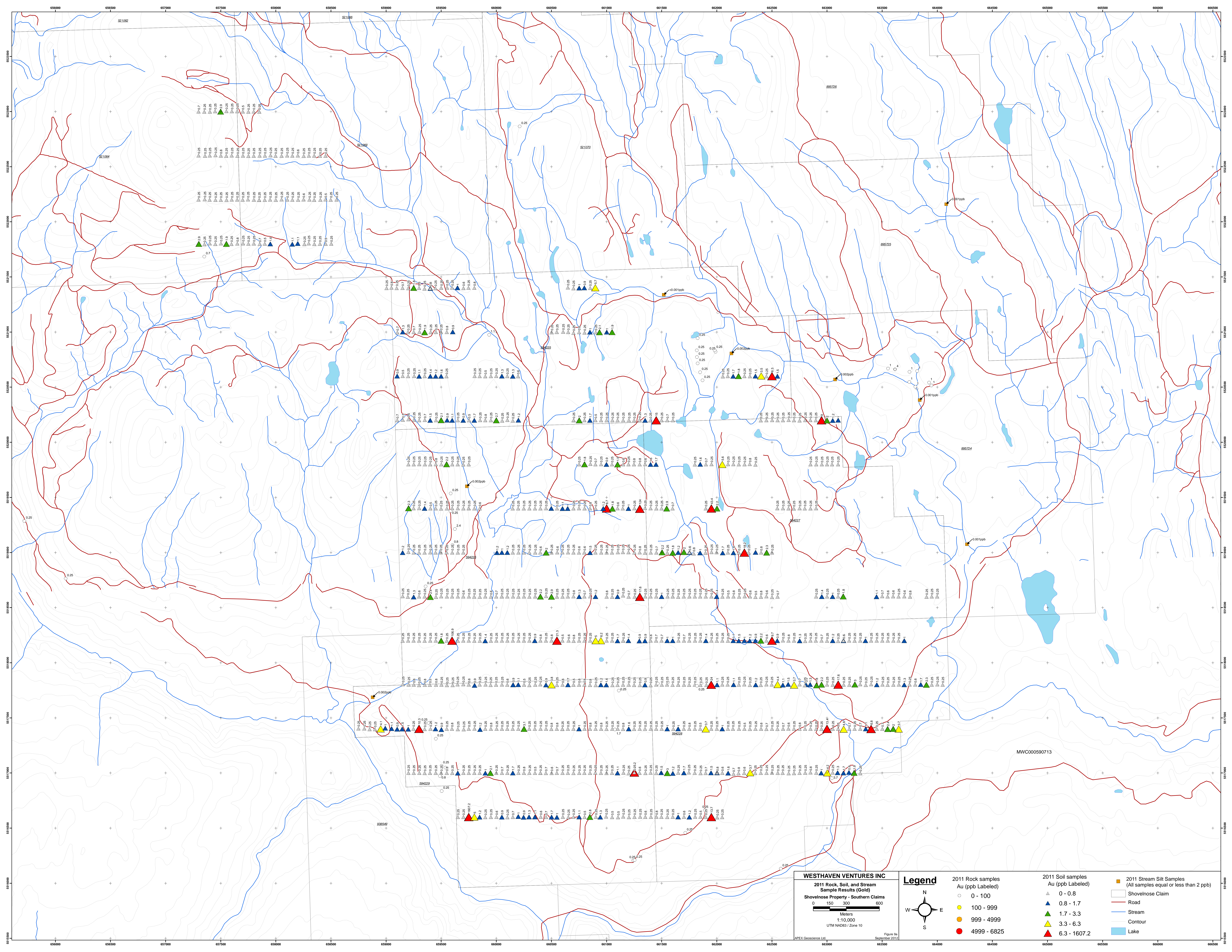
2011 Shovelnose Soils Au (ppb Labeled)	2006 - 2010 Soil Samples Strongbow Exploration Inc Au (ppb Labeled)	2011 Rock Samples Au (PPB)	Geology (After Cooley, 2008)
▲ 0 - 3	△ 0 - 3	● 0 - 100	Sd Syenite dyke
▲ 3 - 7	△ 3 - 7	● 100 - 1000	PFfr Fine grained rhyolite flow
▲ 7 - 16	△ 7 - 16	● 1000 - 6825	PFhbr Rhyolite flow
▲ 16 - 42	△ 16 - 42	— Limited Use Roads	PFclt Crystal lithic tuff
▲ 42 - 1607.2	△ 42 - 749	— Roads	PFflo Andesite flow
		— Stream	PFap Andesite volcanoclastic
			— Fault



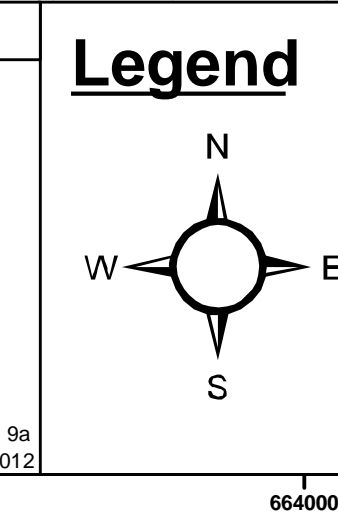
WESTHAVEN VENTURES INC
 2011 Soil, Rock, and Stream
 Sample Locations
 Shovelnose Property - Southern Claims
 1:10,000
 UTM NAD83 / Zone 10
 0 150 300 600
 Meters
 Figure 8
 February 2012
 © 2012 Geosience Ltd.



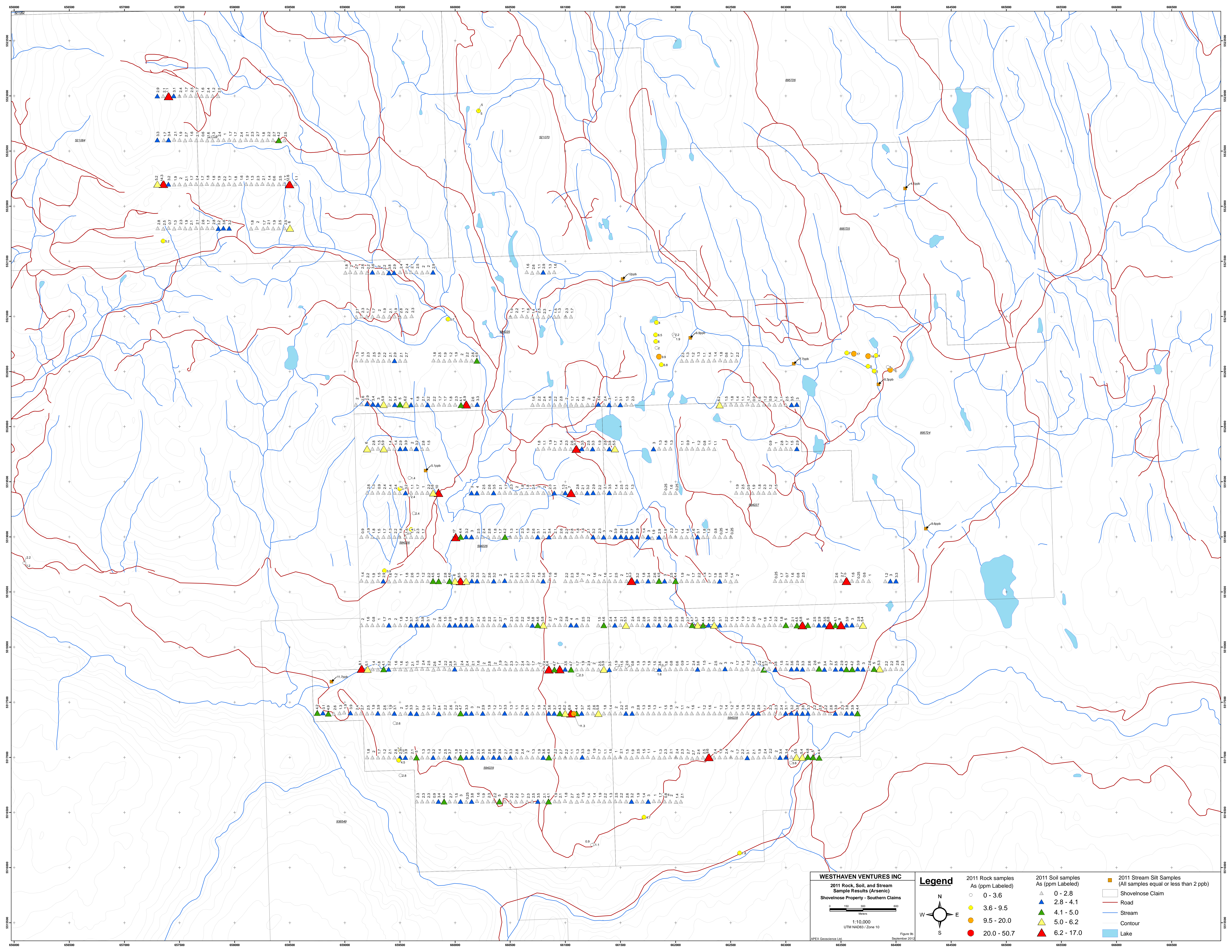
- Legend**
- ▲ 2011 soil samples
 - 2011 rock samples
 - 2011 stream silt samples
 - Stream
 - Contour
 - Lake
 - Shovelnose Claim
 - Shovelnose property boundary
 - Road



WESTHAVEN VENTURES INC
2011 Rock, Soil, and Stream
Sample Results (Gold)
 Shovelnose Property - Southern Claims
 1:10,000
 UTM NAD83 / Zone 10
 GPEX Geoscientific Ltd.
 Figure 9a
 September 2012



- Legend**
- 2011 Rock samples Au (ppb Labeled)
 - 0 - 100
 - 100 - 999
 - 999 - 4999
 - 4999 - 6825
 - 2011 Soil samples Au (ppb Labeled) (All samples equal or less than 2 ppb)
 - ▲ 0 - 0.8
 - ▲ 0.8 - 1.7
 - ▲ 1.7 - 3.3
 - ▲ 3.3 - 6.3
 - ▲ 6.3 - 1607.2
 - 2011 Stream Silt Samples (All samples equal or less than 2 ppb)
 - Shovelnose Claim
 - Road
 - Stream
 - Contour
 - Lake



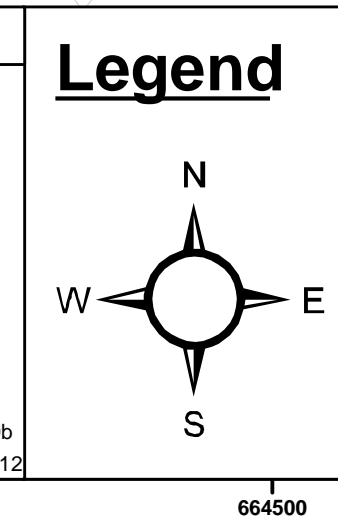
WESTHAVEN VENTURES INC
 2011 Rock, Soil, and Stream
 Sample Results (Arsenic)
 Shovelnose Property - Southern Claims

0 100 200 300
 Meters

1:10,000
 UTM NAD83 / Zone 10

Figure 9b
 September 2011

APEX Geoscience Ltd



Legend

2011 Rock samples
 As (ppm Labeled)

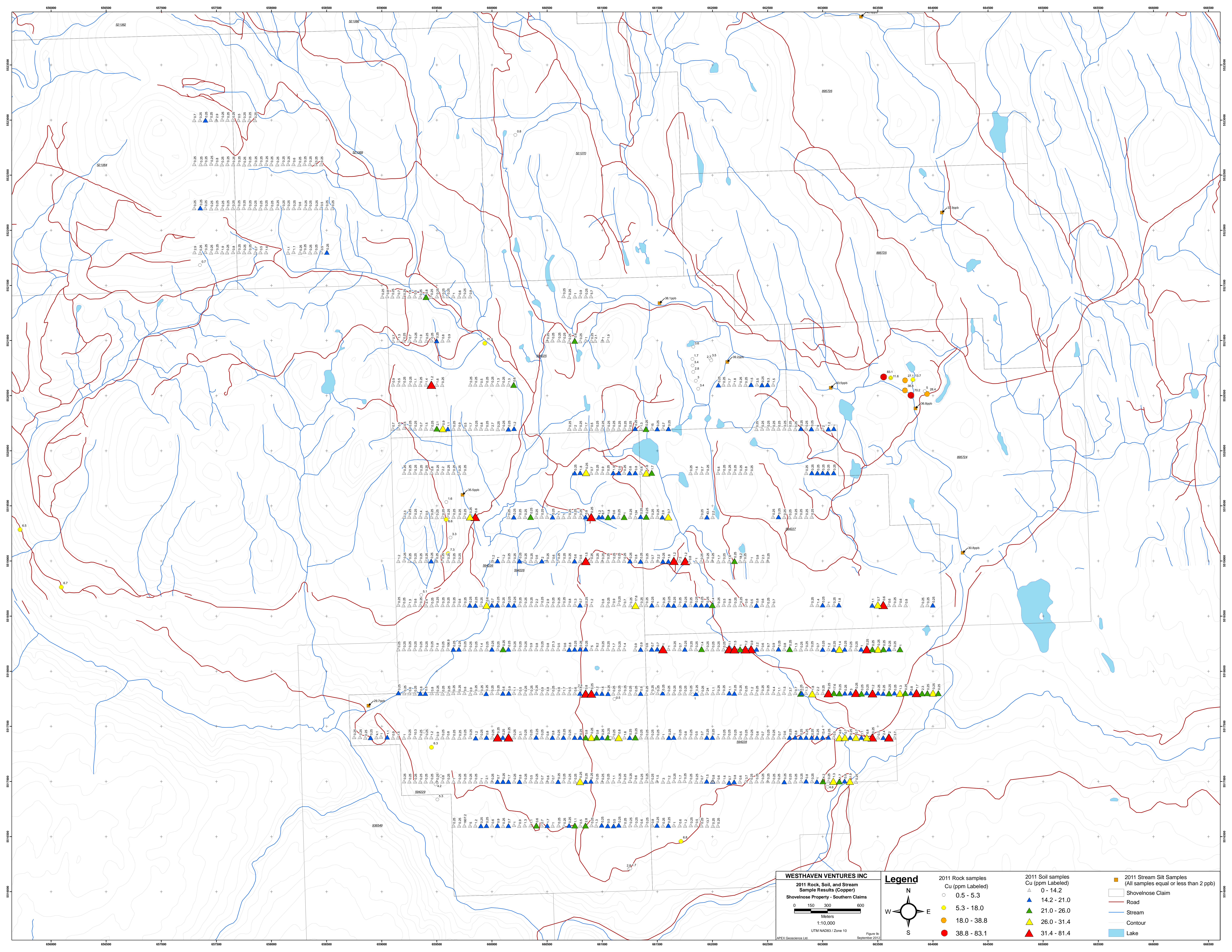
- 0 - 3.6
- 3.6 - 9.5
- 9.5 - 20.0
- 20.0 - 50.7

2011 Soil samples
 As (ppm Labeled)

- △ 0 - 2.8
- ▲ 2.8 - 4.1
- ▲ 4.1 - 5.0
- ▲ 5.0 - 6.2
- ▲ 6.2 - 17.0

2011 Stream Silt Samples
 (All samples equal or less than 2 ppb)

- Shovelnose Claim
- Road
- Stream
- Contour
- Lake



WESTHAVEN VENTURES INC
2011 Rock, Soil, and Stream
Sample Results (Copper)
Shovelnose Property - Southern Claims

Legend

2011 Rock samples
 Cu (ppm Labeled)

- 0.5 - 5.3
- 5.3 - 18.0
- 18.0 - 38.8
- 38.8 - 83.1

2011 Soil samples
 Cu (ppm Labeled)

- △ 0 - 14.2
- ▲ 14.2 - 21.0
- ▲ 21.0 - 26.0
- ▲ 26.0 - 31.4
- ▲ 31.4 - 81.4

- 2011 Stream Silt Samples
 Cu (All samples equal or less than 2 ppb)
- Shovelnose Claim
- Road
- Stream
- Contour
- Lake

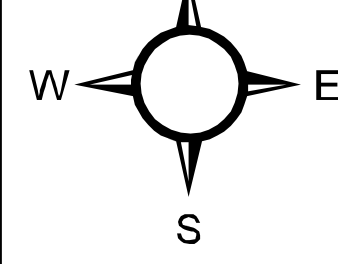
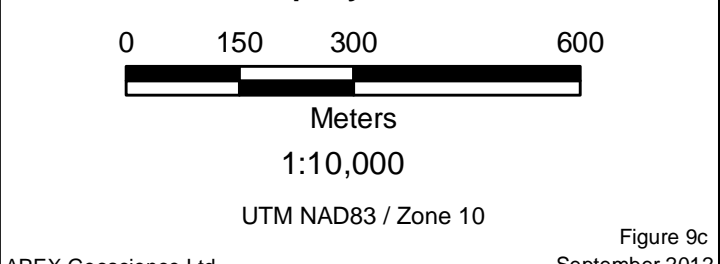
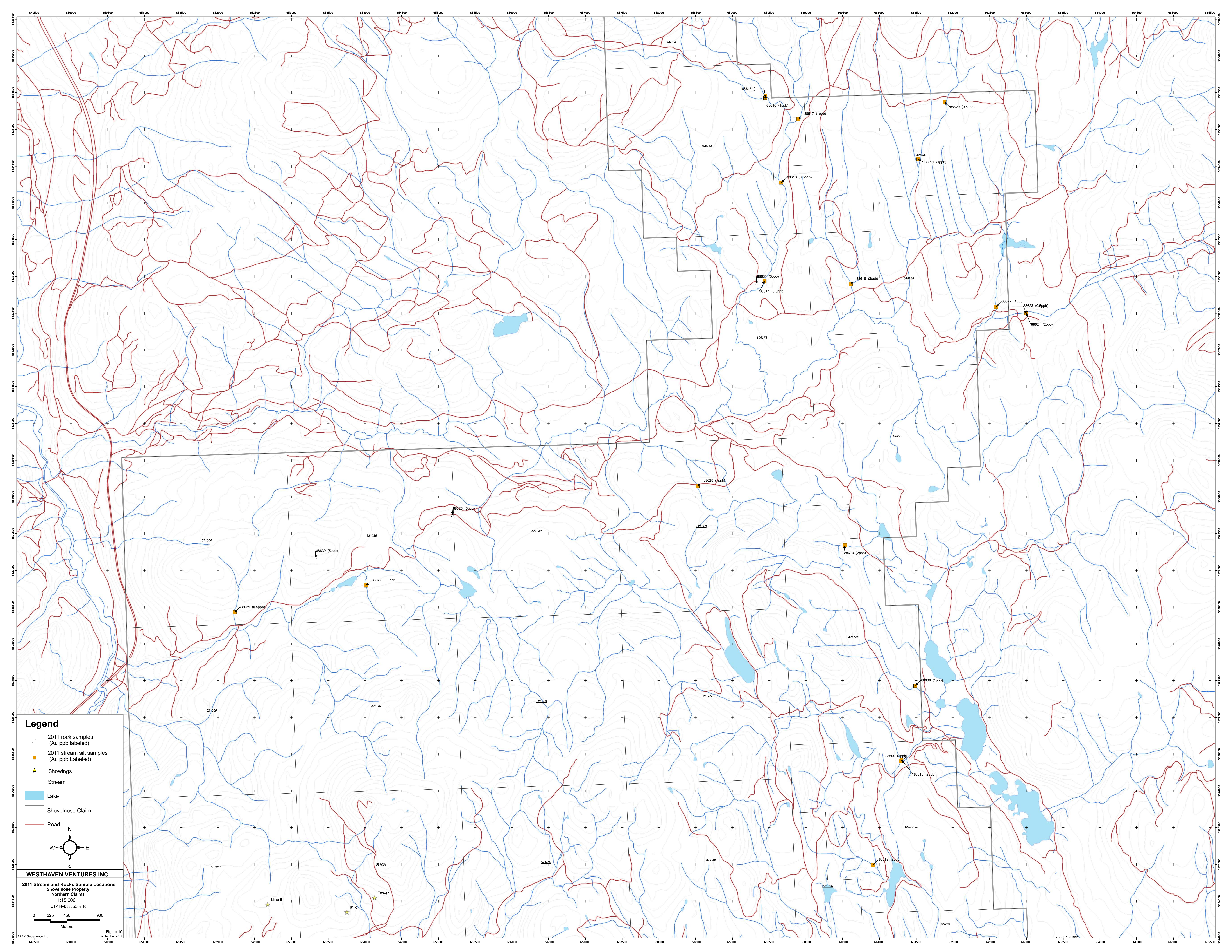


Figure 9c
 September 2012

APEX Geoscience Ltd.



Legend

- 2011 rock samples (Au ppb labeled)
- 2011 stream silt samples (Au ppb Labeled)
- ★ Showings
- Stream
- Lake
- Shovelnose Claim
- Road

WESTHAVEN VENTURES INC

2011 Stream and Rocks Sample Locations
 Shovelnose Property
 Northern Claims

1:15,000
 UTM NAD83 / Zone 10

0 225 450 900
 Meters

Figure 10
 APEX Geoscience Ltd.
 September 2012

Figure 10
 APEX Geoscience Ltd.
 September 2012