NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): 5478637/Nov 27, 2	013 and 5484124/Jan 7, 2014 YEAR OF WORK: 2013
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S)	c
PROPERTY NAME: Titan	
CLAIM NAME(S) (on which the work was done): 504073, 1019510, 50	04077, 408644
соммодітіеs sought: Au, Ag, Mo, Cu, Pb, Zn	
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 104M008, 10	4M009, 104M010, 104M012, 104M035, 104M036, 104M037, 10🅁
MINING DIVISION: Atlin	NTS/BCGS: 104M049
LATITUDE: <u>59</u> ° <u>28</u> ' <u>12</u> " LONGITUDE: <u>134</u>	• <u>18</u> '42 " (at centre of work)
OWNER(S): 1) Eagle Plains Resources Ltd.	2)
MAILING ADDRESS: Suite 200, 44-12th Ave S.	
Cranbrook, BC, V1C 2R7	
OPERATOR(S) [who paid for the work]: 1) Eagle Plains Resources Ltd.	_ 2)
MAILING ADDRESS:	
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structur	e, alteration, mineralization, size and attitude):
hornblende gneiss - Proterozoic to Paleozoic - molybdenite cha	alconvrite pyrrhotite galena malachite azurite sphalerite and
arsenonyrite in quartz veins	

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 27316, 27855, 28627, 30365, 33152

TYPE OF REPORT [type of survey(s)]: Geochemical and Geological

amphibolite gneiss and schist - Permian and Older - polymetallic quartz veins

Ministry of Forests, Mines and Lands

BC Geological Survey

AUTHOR(S): Aaron Higgs

BRITISH COLUMBIA
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**Assessment Report Title Page and Summary** 



TOTAL COST: 15,766.95

SIGNATURE(S): Aaron Higgs Digitally signed by Aaron Higgs DN: cn-Aaron Higgs, DN: cn-A

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/t	rail		
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	15,766.68

# 2013 Geochemical and Geological Report

for the

# TITAN PROPERTY

Atlin Mining Division, Northwestern British Columbia Latitude 59°28'12" N, Longitude 134°18'42"W Trim map sheet:104M049

> Prepared for Eagle Plains Resources Ltd Suite 200, 44-12<sup>th</sup> Ave South Cranbrook, BC V1C 2R7

BC Geological Survey Assessment Report 34573

by

Aaron Higgs, B.Sc. TerraLogic Exploration Inc Suite 200, 44-12<sup>th</sup> Ave South Cranbrook, BC V1C 2R7

# SUMMARY

The Titan Property is located within the Coast Mountains on the southwest side of Taku Arm, on Tagish Lake, 40 kilometres west-southwest of Atlin, BC. At the time of writing this report, the Titan property consists of 17 contiguous claims totalling 1397.9 hectares within mapsheet 104M049.

The Atlin mining district, in which the Titan project lies, has seen exploration and mining work since the beginning of the 20<sup>th</sup> century and includes past producing mines such as the Engineer and Ben-My-Chree. There are many historic poly-metallic showings located on the Titan property, including the Rupert, White Moose, Silver King and Buchan Creek as well as more recent showings such as the Titan. Historic work on the Titan property includes an extensive soil sampling program in close proximity and to the north of the Silver King and Rupert-L showings, prospecting and mapping of the property, and a small Induced Polarization survey and concurrent drill program of limited scope at the Titan showing.

Exploration work in 2007 and 2008 consisted of an airborne magnetic and radiometric geophysical survey, geochemical soil sampling along with geological mapping and prospecting traverses with associated rock sampling. These programs resulted in the delineation of multi element geochemical anomalies of Au, Ag, Pb, Zn and Cu in a zone 1.40 km long and 0.75 km wide in proximity to the Rupert/Silver King and Rupert-L showings, along with open anomalies at the edge of the soil survey. The geophysical program resulted in a number of locations of interest, including intersecting magnetic lineaments and strong radiometric anomalies. The mapping traverses successfully improved definition of the Titan-Mo showing and also located new discoveries of vein hosted mineralization, including one rock grab sample returning 62 g/t Au.

Mapping, rock, soil and silt sampling at several of the Rupert Showings and integration with the latest 2007-2008 airborne geophysics has demonstrated a probable structural control on the mineralization there. The analysis suggests a strong association of mineral occurrences with NNW-trending magnetic lineations that clearly transect granodiorite/gneiss contacts at multiple locations.

The 2011 field program included 23 field man-days, collection of 38 rock samples for assay, 22 rocks for petrophysical analysis, 4 stream-silt samples and 366 soil samples.

Prior to the field program, an airborne electromagnetic (EM) & magnetic geophysical survey was completed by SkyTEM Airborne Surveys, totalling 424.9 line-kilometres.

Rock and soil geochemical analytical results from the 2011 Fee grid area were not encouraging. The low channel EM anomaly central to the grid is likely related to the high percentage of glacial rock powder comprising the matrix of the thick till in the central area of the grid. However, projections of lithological contacts and north-trending airborne magnetic lineaments, along with the presence of unit-EJgd granodiorite and aplite bodies, suggests encouraging structural and lithological convergence in the vicinity of the difficult to access Fee Showing.

At the new Hook prospect area, quartz veining was discovered 400-500 m on strike to the northwest of the 2008 62 g/t Au quartz vein showing; however, none of the five samples collected there returned significant values of Au or base metals. Three isolated greater than 99th-percentile (>34 ppb Au) soil samples were collected.

Three samples collected by independent geologist Carl Schulze, P.Geo. from the Buchan Creek showing returned between 0.03 and 8.41 g/t Au, 2.3 g/t to over detection silver (>300 g/t Ag), 110 to 3000 ppm Cu and 0.080 to 24.18% Pb.

Airborne magnetic lineaments and EM conductivity anomalies are spatially coincident with the showing and on-strike projections of the Buchan Creek vein system.

Mineralization at the White Moose showings (B, Shaft, North) occurs in crosscutting and conformable quartz veins with substantial sulphides (pyrite>galena>chalcopyrite>sphalerite). The 2011 analytical results, from 12 samples at three of the four showings, are encouraging, ranging from 0.05 to 86.4 g/t Ag, 0.001 to 4.9% Pb, 37.4 to 9267 ppm Cu and 0.01 to 2.1% Zn. Gold is anomalous (0.01 to 0.30 g/t Au) but low relative to silver.

The 2013 exploration program consisted of one day of field work, completed on August 9<sup>th</sup>, 2013, resulting in the collection of 92 soil and 4 rock samples. This work focused on extending the Buchan Creek soil anomaly to the north as well as gain soil geochemical coverage in the area of the White Moose showings. Minor follow up work and assessment was completed on historic soil anomalies east of Buchan Creek and the White Moose-south showing.

Total expenditures on the Titan property from the 2013 exploration program were \$15,766.95.

Both the Buchan Creek and White Moose showing areas have very encouraging mineralization potential. The Buchan Creek showing is a high grade Au-Ag-Pb quartz vein system, whereas the White Moose showings are a quartz vein system enriched in Ag-Pb-Cu-Zn.

The magnetic and EM geophysical anomaly identified in 2011 associated with the Buchan Creek showing is further strengthened by a soil anomaly consisting of lead, gold, antimony and silver, now extending 630 m along strike to the north of the showing.

Soil sampling in 2013 highlighted a potential parallel vein system to the east of the White Moose trend. This anomaly, including historic sampling, is over 300 m along a north-northwestern trend consisting of anomalous bismuth, silver, copper, zinc, lead and to a lesser degree gold.

Future work on the property should include compilation and digitization of historical geological and geochemical data, analysis of this data in conjunction with the airborne geophysical data, followed by detailed prospecting, structural mapping and continued infill soil geochemical surveys.

At both the Buchans and White Moose showing areas, emphasis should be placed on determining the interaction between mineralized cross-structures and lithological contacts, particularly where there are granodiorite/diorite and aplite laden structures proximal to other structures of interest. A wealth of airborne geophysical data has been collected for the entire Titan property. It is strongly recommended that the 2011 petrophysical data and all geophysical data be assessed and modelled by a professional geophysicist in order to refine the location, depth and quality of additional potential mineralized targets for future ground exploration and diamond drilling prioritization.

Recommended work on the Titan property includes a phase I program consisting of geological and geophysical compilation, follow up ground field work to better define and delineate known mineralization and soil geochemical anomalies on the property. Phase II would consist of a diamond drill program focusing on the highest priority targets, namely the Buchan Creek and White Moose showings in that order, along with other targets identified in Phase I.

A budget of \$150,000 is recommended to complete Phase I of the exploration work outline above.

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# INTRODUCTION

# Location, Access, Infrastructure and Physiography

The Titan Property is located within the Coast Mountains on the southwest side of Taku Arm, on Tagish Lake, 40 kilometres west-southwest of Atlin, BC, approximately 200 kilometres south of Whitehorse (Figure 1).

The Titan claims are located on White Moose Mountain of the Coast Mountain Range and are situated above tree line in an area of a recently retreated glacier. Elevations range from 1,200 metres to 1,862 metres A.S.L. At lower elevations balsam and lodge pole pine dominate with willow and alder occurring in drainages and avalanche chutes. The alpine areas have scrub balsam, heather and alpine flora. Outcrop exposure is fair except where glacial till and debris cover occur in the alpine valley.

The White Pass Railroad, with direct access to the port of Skagway, is located approximately 60 kilometres northwest of the property, following the eastern shore of Bennett Lake.

The area is affected by weather from the Pacific coast and receives abundant rain and snow. Snow generally begins accumulating in the alpine areas in mid September and begins receding in late April to early May.

The land in which the Titan mineral claims are situated is Crown Land and falls under the jurisdiction of the Government of British Columbia. Surface rights would have to be obtained from the government if the property were to go into development. The Titan claims are located within traditional lands of the Taku River and Tagish Tlingit First Nations.

Power is not available in the project area. The nearest source of power is in Atlin, 35 kilometres northeast of the project area, where hydro-electric power is provided by XEITL Limiterd Partnership Commerical Operation as of April 1<sup>st</sup>, 2009. Any mine development would have to supply its own power system or negotiate with the British Columbia Government or the operation in Atlin to have power supplied to the mine complex. Water resources are abundant in the project area in flowing steams and numerous large lakes.

The nearest major city centre is Whitehorse, 210 kilometres by road north of Atlin. Whitehorse is a supply centre for this northern region and has an ample labour force. Due to historic mining activity in the area, an experienced work force, including mining personnel are available in Yukon and in Atlin.

# Tenure

The Titan Property is located within the Coast Mountains on the southwest side of Taku Arm, on Tagish Lake, 40 kilometres west-southwest of Atlin, BC at 59°27' N Latitude, 134°23' W Longitude (Figure 1). All mineral claims comprising the Titan property are in the Atlin Mining Division and are listed in Table 1 which summarizes the claim names, numbers and due dates. All of the Titan mineral claims are contiguous.

The title to the Titan mineral claims is owned 100% by Eagle Plains Resources Ltd subject to a 1.5% NSR held in favour of Mr. Ouellette on the previously labeled tenure 395607, parts of which now lie within 564097, 564237, 564098, 593863, 564238, 564116 and 564239. The surface rights are held by the Crown. At the time of writing this report, the Titan property consists of 17 claims totaling 1397.9 hectares (Figure 2).

Tenure Number	Claim Name	Owner	Issue Date	Good To Date*	На
504077	TITAN A	EPL (100%)	2005/jan/17	2016/mar/15	49.337
564095	TITAN 1	EPL (100%)	2007/aug/04	2016/mar/15	65.8275
564097	TITAN 3	EPL (100%)	2007/aug/04	2016/mar/15	32.9077
564098	TITAN 4	EPL (100%)	2007/aug/04	2016/mar/15	32.9118
564116	TITAN 5	EPL (100%)	2007/aug/04	2016/mar/15	16.4518
564237	TITAN 6	EPL (100%)	2007/aug/07	2016/mar/15	32.9057
564238	TITAN 7	EPL (100%)	2007/aug/07	2016/mar/15	16.4518
564239	TITAN 8	EPL (100%)	2007/aug/07	2016/mar/15	32.9097
593863	TITAN	EPL (100%)	2008/nov/05	2016/mar/15	16.4519
1019510	TITAN	EPL (100%)	2013/may/14	2016/mar/15	164.3472
1024001	Titan 10B	EPL (100%)	2013/nov/26	2016/mar/15	147.98
1024004	Titan 8A	EPL (100%)	2013/nov/26	2016/mar/15	16.4498
1024010	TITAN	EPL (100%)	2013/nov/26	2014/nov/26	32.9158
1024012	Titan AA	EPL (100%)	2013/nov/26	2016/mar/15	16.4579
1024013	Titan	EPL (100%)	2005/jan/17	2016/mar/15	378.1569
1024015	Titan	EPL (100%)	2013/nov/26	2016/mar/15	263.1895
1024359	Titan	EPL (100%)	2013/dec/11	2014/dec/11	82.225
				Total	1397.9

Table 1 - Claim Data: Titan Property

\*As of SOW 547867 submitted November 27<sup>th</sup>, 2013



N"0'0°09

50°0'0"N



130°0'0"W

0.0°0"N

50°0'0"N

120°0'0"W



# History

The mineral exploration history of the area dates back to 1890's, when prospectors traveling over the Chilkoot trail and across Bennett Lake to the Klondike goldfields first started exploring the area. The first recorded mineral production in the area came from the Engineer Gold Mine at Taku Arm on Tagish Lake. A minor amount of production also came from the Ben-My-Chree gold mine.

The early prospectors discovered a number of precious and base metal bearing veins on the north and east slope of White Moose Mountain known as the Rupert showings. In 1979, United Keno Hill Mines Ltd (UKHM) staked the Fee claims to cover the Rupert showings. UKHM carried out extensive geological and geochemical surveys in the showing area.

In 1986, UKHM optioned the property to Rise Resources. Rise confirmed the historic soil geochemical anomalies but performed no further work.

In 1989, the property was optioned to Placer Dome. Placer conducted mapping, geochemical sampling, geophysical surveys and trenching on the showings. Their program had limited success and the tenure was later allowed to lapse.

During the period of this exploration activity, however, field crews noted that the ongoing retreat of glacial ice at the headwaters of Buchan Creek had begun to expose porphyry copper – molybdenum type mineralization.

In August 2002, Dennis Ouellette staked the TITAN claim and conducted a one-day field program confirming the high-grade nature of the molybdenum occurrence. Rock samples collected from a glacially derived boulder field returned values up to 0.8 % Mo. Later that year the property was acquired by Eagle Plains Resources Ltd (EPL).

2003 fieldwork by EPL included prospecting, rock and soil sampling, an Induced Polarization (IP) ground geophysical survey contracted to Aurora Geosciences Ltd, and staking of additional claims to cover prospective stratigraphy. Prospecting in the area exposed by retreating glacial ice located massive to disseminated molybdenite mineralization in Cretaceous granodiorite boulders and in quartz veins within the granodiorite. By tracing the mineralized boulders up-slope, molybdenum mineralization was located in place near the contact between metasediments and Cretaceous granodiorite. This was the first known in situ molybdenum occurrence discovered on the property. Eight of the ten rock samples collected returned greater than 0.1% Mo. Some samples are also associated with elevated Cu (up to 2873 ppm), W (up to 93.1 ppm) and Bi (up to 60.7 ppm) values.

Field observations indicate that higher grade molybdenum mineralization appears to occur along the intrusive - metasedimentary contact zone, with associated chalcopyrite, malachite and a broad zone of disseminated pyrite. Argillic, sericite and abundant epidote alteration were noted up to one kilometre from the contact zone. The presence of high grade molybdenum mineralization within the limited outcrop exposure combined with an abundance of locally derived high grade float boulders indicate the potential for a large mineralized system.

Results from the IP geophysical survey indicated the presence of a large, high-intensity chargeability anomaly in the vicinity of high-grade mineralization discovered in outcrop during the initial program. Resistivity imaging showed a 25 to 75 metre wide area of lower resistivity suggesting incipient fracturing that may have provided a conduit for mineralizing fluids. The resistivity also clearly showed the contact between the intrusive and metasedimentary rocks, consistent with field observations by EPL

geologists. Chargeability imaging indicated the presence of chargeable bodies on both survey lines, consistent with the observed contact between sedimentary and intrusive rocks.

A 2004 report, authored by Scott Casselman, P.Geo, recommended further geophysical surveying, mapping, sampling and diamond drilling to delineate the extent of the molybdenum mineralization and test the Titan Showing. In 2004, three BTW-sized diamond drill holes from two different sites were completed totaling 413.6 metres (1357 ft). The details and results of the drilling program were filed in a previous technical report (Downie, 2005) and filed on SEDAR. The diamond drill program was carried out under an option agreement with Kobex Resources Ltd with targets selected based on the Casselman report. However, the collection of the geophysical survey data referred to in the Casselman report was constrained in part by poor electrode contacts, particularly in the areas of high grade boulders. Consequently, the geophysical targets tested by drilling in 2004 were located peripheral to the best observed mineralization. It is believed that the chargeability anomalies tested in T04001 and T04002 are likely related to disseminated pyrite. The resistivity feature tested by T04003 is likely the contact between the mafic gneiss and the underlying granite. The low grade molybdenum mineralization that was intersected in the drilling does not appear to be the same as that seen at the Titan showing and in the high grade boulder field.

In 2006, a limited program was completed to take reference points on the ground so that the 1989 soil geochemical grid by Placer Dome could be accurately digitized. Many of the historic showings were also visited and assessed, including the Buchan Creek and White Moose showings.

Exploration work on the Titan property completed in 2007 included a 132 line-km airborne geophysical survey for both aeromagnetics and radiometrics and a two week soil sampling program that expanded the historic Placer Dome soil grid. Geophysical interpretation from the 2007 survey identified six locations of interests on the Titan property. The one region of interest in the south end of the property is promising as there is a direct correlation between aeromagnetic derived intersecting magnetic lineaments and strong radiometric anomalies high in Uranium/Thorium, Uranium/Potassium and Thorium/Potassium ratios. The five regions of interest in the northern end of the property are less distinct and only one has a correlation between magnetic lineaments and radiometric anomalies. The rest of the locations are based on radiometric anomalies alone. The soil sample grid that was completed by Placer Dome in 1989 and digitized by Bootleg Exploration, along with the infill and expansion of such grid during the 2007 Exploration program, located many multi-element anomalies. There is a strong signature of Au, Ag, Pb, Zn, Cu and As found in the proximity of the Rupert/Silver King and Rupert-L showings. The anomalous area encompasses an area of 1.40 km long and 0.75 km wide. In addition to this zone, there are further zones anomalous in Cu, Pb and Ag at the edge of the soil grid and open to the southeast, southwest and northeast. Furthermore, there is an anomalous trend of Au, Pb, Ag, and Cu values extending 300 m to the north of the Buchan Creek Showing.

Exploration work on the Titan property in 2008 included a 195 line-km airborne geophysical survey including both magnetic and radiometric analysis and a 46 man-day field program of prospecting/mapping resulting in the collection of 27 rock samples, 53 stream-silt samples and 301 soil samples.

The 2008 traverses verified that mineralization at the Titan-Mo showing appears to be constrained to within 325 metres either side of the granite/gneiss contact. There are two structural features that appear to have the most influence on mineralization. The first is a pronounced fracture set (120/58) is host to some of the mineralization oriented subparallel to the main granite/gneiss contact. The second structure

is oriented almost perpendicular to the first at (220/65) and parallel to the cliff face that exposes the main showing. A new quartz vein discovery, six km north of the Titan-Mo showing on the same cross-structure (208/70) returned 62 g/t Au. A similar Cu-rich quartz vein on (220/64) was also discovered 1 km southest of the main showing.

Mapping, rock, soil and silt sampling at several of the Rupert Showings and integration with the latest 2007-2008 airborne geophysics demonstrated a probable structural control on the mineralization. The analysis suggests a strong association of mineral occurrences with NNW-trending magnetic lineations that clearly transect granodiorite/gneiss contacts at multiple locations.

The 2011 field program included 23 field man-days resulting in the collection of 38 rock samples for assay, 22 rocks for petrophysical analysis, 4 stream-silt samples and 366 soil samples.

Prior to the field program, an airborne electromagnetic (EM) & magnetic geophysical survey was completed by SkyTEM Airborne Surveys, totalling 424.9 line-kilometres. Preliminary airborne EM and magnetic datasets were available prior to the 2011 ground program, and partially directed subsequent 2011 field traverses.

Rock and soil geochemical analytical results from the 2011 Fee grid area were not encouraging. The low channel EM anomaly central to the grid is likely related to the high percentage of glacial rock powder comprising the matrix of the thick till in the central area of the grid. However, projections of lithological contacts and N-trending airborne magnetic lineaments, along with the presence of unit-EJgd granodiorite and aplite bodies, suggests encouraging structural and lithological convergence in the vicinity of the difficult to access Fee Showing.

At the new Hook prospect area, quartz veining was discovered 400-500 m on strike to the northwest of the 2008 62 g/t Au quartz vein showing; however, none of the five samples collected there returned significant values of Au or base metals. Three isolated greater than 99th-percentile (>34 ppb Au) soil samples were collected.

Three samples collected by independent geologist Carl Schulze, P.Geo. from the Buchan Creek showing returned between 0.03 and 8.41 g/t Au, 2.3 g/t to over detection silver (>300 g/t Ag), 110 to 3000 ppm Cu and 0.080 to 24.18% Pb.

Airborne magnetic lineaments and EM conductivity anomalies are spatially coincident with the showing and on-strike projections of the Buchan Creek vein system.

Mineralization at the White Moose showings (B, Shaft, North) occurs in crosscutting and conformable quartz veins with substantial sulphides (pyrite>galena>chalcopyrite>sphalerite). The 2011 analytical results, from 12 samples at three of the four showings, are encouraging, ranging from 0.05 to 86.4 g/t Ag, 0.001 to 4.9% Pb, 37.4 to 9267 ppm Cu and 0.01 to 2.1% Zn. Gold is anomalous (0.01 to 0.30 g/t Au) but low relative to silver.

Total expenditures on the Titan property from the 2011 exploration program were \$205,402.27.

# **Regional Geology**

The regional geological setting of the project area (Figure 3) is taken from Mihalynuk (1999). The project area occurs at the contact between the Coast Intrusive Belt and the western margin of the Intermontane Belt. The Coast Intrusive Belt is comprised of predominantly Late Cretaceous and Tertiary magmatic rocks, while the Intermontane Belt in this area is comprised of Devonian to Triassic Boundary Ranges Metamorphic Suite, Late Proterozoic orthogneiss (Wann River Gneiss) and meta-sediments (Florence Range Metamorphic Suite). These rocks are intruded by the Early Jurassic Aishihik Plutonic Suite.

The Coast Intrusive Belt rocks in the Taku Arm area are part of the Sloko Plutonic Suite. They are typically comprised of granodiorite, tonalite or granite composition. At White Moose Mountain, the pluton is dominated by non-foliated granite to granodiorite. It is pink to grey, medium to coarse grained, contains 40-50% perthitic and zoned K-feldspar, 40% interstitial quartz, 10-15% plagioclase, and 2-5% euhedral biotite booklets. K-feldspar locally forms scattered (1-5%) megacrysts up to 5 centimetres.

The Aishihik Plutonic Suite is a suite of foliated, hornblende-biotite granodiorite to diorite bodies. They are white to grey on weathered or fresh surfaces, fine to medium-grained and always contain hornblende. At the southern end of Taku Arm, they form resistant, steeply jointed exposures.

The Boundary Ranges Metamorphic Suite is a belt of polydeformed rocks bounded on the east by the Llewellyn Fault and on the west by mainly intrusive rocks of the Coast Belt. The Boundary Ranges Metamorphic Suite is comprised of a wide range of protoliths from quartzose to pelitic or carbonaceous and calcareous sediments through volcanic tuffs or flows to small lenses to large bodies up to several kilometres across of gabbroic, dioritic, granodioritic and granitic intrusives and ultramafite.

The Wann River Gneiss is probably derived from mafic to intermediate strata and comagmatic intrusive rocks. It is consistently intensely foliated and does not contain any plagioclase porphyroblasts. However, it is commonly criss-crossed by plagioclase-rich pegmatites. The Wann River Gneiss is distinctive for its millimetre to decimetre-scale compositional layering, which varies gradationally from hornblende diorite to gabbro; both display subordinate biotite and late epidote.

The Florence Range Metamorphic Suite consists of an upper amphibolite grade metapelite, with lesser, but conspicuous carbonate, amphibole gneiss and quartzite layers. The protolith for the sedimentary component is most likely clastic strata and carbonate deposited in a continental marginal setting while the protolith for the amphibole gneiss is basalt flows, tuffs, sills or dykes.

The major structural break in the area is the Llewellyn Fault, which trends roughly north south and runs through Taku Arm east of the property.

# **Property Geology**

Mihalynuk (1999) described the main units in the property area as follows:

**ETgr:** Sloko-Hyder Plutonic Suite: 53-56 Ma: Granite, biotite leucogranite, quartz monzonite, granodiorite, subvolcanic stocks, dikes and sills. Fresh, unfoliated to weakly foliated.

EJgd: Aishihik Plutonic suite: mid-crustal, foliated hornblende granodiorite to quartz diorite

**PPMBa:** Actinolite-chlorite schist and gneiss (metabasite), locally chlorite more abundant, lesser epidote.

**PPMBb:** Biotite-plagioclase-quartz schist (tuffaceous noncalcareous sediment?) and lesser biotite schist.

**PPMF:** Semipelite-quartzite interlayered with lesser amounts of biotite-hornblende amphibolite gneiss, fissile mica schist, black phyllite and clacsilicate; well foliated, locally pyritic.

**PPMW:** Wann River gneiss; hornblende-biotite-feldspar gneiss, Permian.

Limited mapping was completed on the property in 2003, 2004, 2008 and 2011. The 2011 mapping effort focused on updating the intrusive contacts of the Eocene Sloko-Hydor Plutonic suite (ETgr) – spatially associated with the Titan-Mo showing, and the Early Jurassic granodiorite of the Aishihik Plutonic Suite (EJgd) - the contact area of which is spatially associated with Pb, Zn, Ag, Au and,Cu mineralization of the various Rupert and Buchan Creek showings. The 2008 mapping incorporates scanned and digitized linework from Maheux (1990), as well as airborne and radiometric survey results from the 2007 and 2008 surveys.

The Eocene Sloko-Hydor Plutonic suite (ETgr) rocks are pink to grey, and vary from medium to coarse grained and from equigranular to porphyritic granodiorite to granite. K-feldspar megacrysts are up to 5 centimetres in length. The intrusive rocks show a slight increase in quartz vein and fracture density in proximty to the molybdenite showing. Approximately 0.5 kilometres southwest of the Titan Showing the granitic rocks are stained with red iron oxide from water run off. However, there were very little sulphide minerals observed in the granite and the source of the iron is not known. Sloko-Hydor Plutonic suite (ETgr) rocks are well exposed on the west side of the property and on the steep south facing slopes. Outcrop exposure near the centre of the Titan-Moly showing area is poor where the glacier and glacial debris remain.

In contrast to the Eocene intrusive rocks, the Early Jurassic suite (EJgd), is typically a light to medium grey salt and pepper, equigranular to weakly porphyritic granodiorite. Various shades of green (epidote+-chlorite) alteration and Fe-staining are typically prevalent proximal to the known mineral showings.

The metamorphic rocks occur on the eastern and northern part of the property. Mihalynuk (1999) notes that the Wann River Gneiss (PPMW) is interleaved with the Florence Range Metamorphic Suite. The Wann River gneiss is a well-layered hornblende gneiss of dioritic to gabbroic composition containing 20 - 40 % hornblende with lesser biotite. This gneissic unit forms the contact with the Sloko-Hydor Plutonic suite in the area of the Titan molybdenum mineralization.

Florence Range metamorphic lithologies (PPMF) are mainly metapelitic and semipelitic rocks with carbonate, amphibolite, quartzite and minor calc-silicate and graphite bearing semipelitic rocks. Metapelites occur in 0.1 to 30.0 metre thick units, which may contain sillimanite and altered kyanite. Amphibolite is spatially associated with carbonate in 0.1 to 20.0 metre thick layers.





# Mineralization

There are many mineral occurrences on the Titan property. Previously, EPL focused their 2003–2004 exploration programs on the molybdenum-rich Titan showing at the toe of a glacier on the west side of White Moose Mountain. Additional claims were staked at that time to cover precious and base metal showings on the north and east flank of White Moose Mountain. The following is a cursory description of the major mineral occurences in the Titan property area.

# <u>Titan</u>

The Titan showing (Minfile # 104M089) occurs along the contact between the Wann River Gneiss and the Eocene Sloko-Hydor Plutonic suite (ETgr). The mineralization consists of massive, semi massive and disseminated molybdenite with associated chalcopyrite and pyrrhotite. It occurs as disseminations in the granite, in quartz veins in granite and metasedimentary rocks and along the granite/metasedimentary contact. The Titan showing, discovered in 2002, is a 1m x 2m zone of 5% disseminated molybdenite with local high-grade zones of 20-30% molybdenite over an 50 x 50 cm area. The high-grade mineralization is associated with quartz flooding and vuggy quartz. Away from the high-grade core, coarse molybdenum disseminations decrease into low-grade molybdenite-chalcopyrite to barren pyrrhotite within about 1.0-1.5 metres.

Granodiorite boulders found down-slope from the Titan Showing show similar styles of mineralization. Field observations of the float boulders indicate that higher-grade molybdenite is found closer to the meta-sediment-intrusive contact, grading into lower grade chalcopyrite dominated porphyry style mineralization to the east.

Alteration includes argillic, sericitic and localized strong epidote, occurring up to 1 kilometre away from the contact zone. A well-developed pyrite halo is associated with parts of the metasedimentary contact. Copper skarn mineralization has also been noted 400 metres southest of the main showing in the metasedimentary country rock.

Mineralization and alteration on the Titan appears to be similar to that of the molybdenum showing located on the south-western end of Willison Bay. There, molybdenum mineralization is described as a Low F-type molybdenum porphyry system.

# Buchan Creek

The Buchan Creek showing (Minfile # 104M 035 – Rupert-G) was discovered in the early 1900s and consists of a 1.1 metre wide quartz vein hosted in hornblende gneiss. The vein consists of quartz with massive galena, chalcopyrite and minor malachite and azurite. Two chip samples across the 1.1 metre vein in 1989 averaged 15.43 g/t Au, 244.8 g/t Ag, 9.85% Pb and 0.20% Cu. A grab sample taken during the Eagle Plains Resources Ltd 2004 recce program returned > 1.0% Cu, > 100 g/T Ag and 21.8 g/t Au. The strike and dip of the vein varies from 125/80 southwest to 160/80 east.

# Rupert-North

The Rupert-North showing (Minfile # 104M 036 – Rupert-H) consists of quartz veins in a 0.5 metre wide shear zone that is vuggy, rusty and malachite stained. A 0.5 metre chip sample across the shear zone by Placer Dome in 1990 returned 5.4 g/t Au and 30 g/t Ag. A blast pit north of the shear exposed a weakly developed quartz stockwork with up to 2% pyrite in a rhyolite dyke.

# Silver King

The Silver King showing (Minfile # 104M 008 – Rupert-I) consists of narrow, discontinuous quartz veins in pelitic schists, gneisses and granodiorites. The veins are up to 1 metre wide in shear zones and 3 metres wide in granodiorite and often pinch out into barren shear zones; several are en-echelon. The veins consist of massive white, locally vuggy quartz with massive to disseminated galena, pyrite, sphalerite and minor arsenopyrite and chalcopyrite. Sulphide content is variable, but generally less than 1%. Intermediate to felsic dykes are spatially related to the mineralized quartz veins. The veins strike from 020 to 166 degrees and dip 50 to 80 degrees west.

# Rupert -L

The Rupert-L showing (Minfile # 104M 073) consists of a shear-hosted quartz vein that is 20 to 50 centimetres wide and has been traced on surface for 15 metres. The quartz vein contains disseminated sulphides (pyrite, galena, pyrrhotite, chalcopyrite and sphalerite) in a gangue of limonitic quartz and minor carbonate. Assay results on vein material ranged up to 0.22 g/t Au and 29 g/t Ag.

# Fee Glacier

The Fee Glacier showing (Minfile # 104M 037) consists of quartz veins, quartz sweats and shear zones located on a nunatak in the Fee Glacier. The veins are up to 0.25 metres wide and contain highly oxidized pyrite, pyrrhotite and minor chalcopyrite and galena. Assays of three grab samples collected by Placer Dome in 1990 returned an average of 6.86 g/t Ag and 0.02 % Cu.

# White Moose Showings

The White Moose showings are located along the western shore of the Taku Arm and are described as epigenetic, hydrothermal, polymetallic veins within the Boundary Range Metamorphic Suite.

# White Moose South

The White Moose South (Minfile # 104M 010) vein is 1.8 – 3.0 metres wide with disseminated galena and chalcopyrite. A small collapsed adit and dump occur at the showing location. Samples of vein material from the dump returned values of trace Au, 53.14 g/t Ag, 0.13% Pb and 0.01% Cu (BCEMPR Assessment Report 8384).

# White Moose B

The White Moose B showing (Minfile # 104M 072) consists of a massive, vuggy, variably hematite stained quartz vein with galena and pyrite. Grab samples of vein material averaged trace Au, 71.6 g/t Ag, 1.34% Pb and 0.01% Cu (BCEMPR Assessment Report 19827).

# White Moose C

The White Moose-Shaft (C) occurrence (Minfile # 104M 012) consists of two shafts, located 35 metres apart. A 40 centimetre wide quartz vein on the side of one of the shafts appears to follow a contact between rhyolite and schist. The quartz vein sulphide mineralization consists of galena, pyrite, chalcopyrite and malachite. A 27 centimetre chip sample of vein material returned 2.06 g/t Au, 27.43 g/t Ag, 2.45 % Pb and 0.01% Cu (BCEMPR Assessment Report 8384).

# White Moose A

The White Moose North (A) Showing (Minfile # 104M 009) consists of an adit driven on a 0.45 - 1.20 metre wide quartz vein containing chalcopyrite, bornite, galena, sphalerite and malachite. A 17 centimetre wide vein south of the adit returned values of trace Au, 0.34 g/t Ag, 0.13 % Pb, 0.09 % Zn and 0.09 % Cu (BCEMPR Assessment Report 8384).

# **EXPLORATION**

# 2013 Exploration Program

The 2013 exploration program consisted of one day of field work, completed on August 9<sup>th</sup>, 2013. A crew of three chartered a helicopter from Discovery Helicopters out of Atlin, BC to access the property. Goals of the program were two fold. One goal was to extend the in-soil geochemical anomaly that extends to the north of the Buchan Creek showing. The second goal was the expand the geochemical soil coverage over the White Moose showings. Along with this, follow up work was completed on historic geochemical anomalies to the east of of the Buchan Creek showing as well as assessing the White Moose south showing.

The one day of field work resulted in the collection of 92 soil and 4 rock samples.

As part of the 2013 program, a tenure evaluation was conducted in the fall to consolidate and convert historic legacy claims as well as provide a recommendation of claims to be retained going forward.

Total expenditures on the Titan property from the 2013 exploration program were \$15,766.95.

# **2013 Exploration Program Results**

The soil samples collected to the north of the Buchan Creek showing extended the soil anomaly to the north for lead, gold, antimony and silver: all of which are elements closely associated with the mineralization observed at the Buchan Creek showing. With the inclusion of the new samples, the anomaly now extends north of the showing for 630 m. This represents a highly contiguous anomaly that ranges from 50 m wide to 220 m wide from the showing and is up to 100 m wide 630 m away from the showing.

The sample TIL005 04+50W taken in 2007 returned 407 ppb Au was one of the historic soil samples followed up in 2013. The sample, located 430 m northeast of the Buchan Creek showing could not be replicated by the two samples taken in 2013. Minor meta-sedimentary hosted quartz stockwork veining was discovered in the vicinity of an historic cluster of moderate soil anomalies for lead, gold, arsenic, antimony and silver located 500 m to the east of the Buchan Creek showing. A grab sample of the vein material containing galena mineralization returned 3.16 g/t Au (AHTIR005).

Soil sampling in the vicinity of the White Moose-Shaft occurrence returned interesting results and expanded on the results from sampling in 2007. The mineralization at the showing itself seems to be limited as sampling over the occurrence only produced a single point anomaly for lead, copper, silver, zinc and bismuth. If the veining extends to the north-northwest as estimated, it does not show up in the samples collected 200 m to the north. Samples here did not return anomalous values for lead, copper, silver or bismuth. These soil lines do contain prospective results in the eastern part of the line. There, a contiguous anomaly extending in a north-northwest direction consists of bismuth, silver, copper, zinc, lead and to a lesser degree gold. Including historic sampling, this anomaly can be confidently traced over 300 m and to a lesser degree over 500 m. This anomaly may represent an undiscovered parallel vein system to the White Moose showing. More work is warranted in this area to assess the source of the soil anomaly.

The White Moose-South occurrence consists of a 3 m adit driven into the cliff wall. Quartz veining is minor and is hosted within sericite and silica altered meta-sedimentary units with malachite and

limonite staining. The surrounding area contains interbeds of quartzite with abundant pyrite mineralization. The meta-sedimentary unit is highly folded with two sets of fractures observed: one running 264/64 and the other 136/14. The samples taken here did not return any interesting values for elements of interest, either from mineralized host rock on the floor of the adit (AHTIR008) or from the quartzite beds mineralized with pyrite (AHTIR009). There is very limited quartz veining here containing limited mineralization which is variably distributed in the quartz veining and absent in the host rock. Further work is not recommended here.

As a part of the tenure valuation all of the legacy claims were converted over so that there is no longer overlapping tenure. As shown on Figure 2, a reduced tenure block has been approved to retain going forward based on the current understanding of prospective ground on the Titan property.





# CONCLUSIONS AND RECOMMENDATIONS

Both the Buchan Creek and White Moose showing areas have very encouraging mineralization potential. The Buchan Creek showing is a high grade Au-Ag-Pb quartz vein system, whereas the White Moose showings are a quartz vein system enriched in Ag-Pb-Cu-Zn.

Airborne magnetic lineaments and EM conductivity anomalies are spatially coincident with the Buchan Creek showing and on-strike projections of the Buchan Creek vein system. This association is further strengthened by a soil anomaly consisting of lead, gold, antimony and silver 630 m along strike to the north of the Buchan Creek showing. Drilling beneath the Buchan Creek trench area and along strike of the best geophysical and geochemical anomalies is therefore recommended.

Mineralization at the White Moose showings (B, Shaft, North) occurs in crosscutting and conformable quartz veins with substantial sulphides (pyrite>galena>chalcopyrite>sphalerite). The 2011 analytical results, from 12 samples at 3 of the 4 showings, is encouraging, ranging from 0.05 to 86.4 g/t Ag, 0.001 to 4.9% Pb, 37.4 to 9267 ppm Cu, and 0.01 to 2.1% Zn. Gold is anomalous (0.01 to 0.30 g/t Au) but low relative to silver. Soil sampling in 2013 highlighted a potential parallel vein system to the east of the White Moose trend. This anomaly, including historic sampling, is over 300 m along a north-northwestern trend consisting of anomalous bismuth, silver, copper, zinc, lead and to a lesser degree gold.

Future work at the property should include compilation and digitization of historical geological and geochemical data, analysis of this data in conjunction with the airborne geophysical data, followed by detailed prospecting, structural mapping and continued infill soil geochemical surveys.

At both the Buchans and White Moose showing areas, emphasis should be placed on determining the interaction between mineralized cross-structures and lithological contacts, particularly where there are granodiorite/diorite and aplite laden structures proximal to other structures of interest. A wealth of airborne geophysical data has been collected for the entire Titan property. It is strongly recommended that the 2011 petrophysical data and all geophysical data be assessed and modelled by a professional geophysicist in order to refine the location, depth and quality of additional potential mineralized targets for future ground exploration and diamond drilling prioritization.

Recommended work on the Titan property includes a phase I program consisting of geological and geophysical compilation, follow up ground field work to better define and delineate known mineralization and soil geochemical anomalies on the property. Phase II would consist of a diamond drill program focusing on the highest priority targets, namely the Buchan Creek and White Moose showings in that order, along with other targets identified in Phase I.

A budget of \$150,000 is recommended to complete Phase I of the exploration work outline above.

# References

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Appendix I – Statement of Qualifications

### Aaron A. Higgs, B. Sc.

I, Aaron Ashwell Higgs, B.Sc. do hereby certify that:

I am currently employed as a Geologist by TerraLogic Exploration Inc., with business location of Suite 200, 44-12<sup>th</sup> Ave S., Cranbrook, BC, V1C 2R7 (Telephone: 778-520-2000, email: aah@terralogicexploration.com

I graduated with a Bachelor of Science in Geology from the University of British Columbia in the year 2005.

I have worked as a Geologist in Western Canada for nine years.

I am responsible for the preparation of this Technical Report entitled "Geochemical and Geological Report for the Titan Property", prepared for Eagle Plains Resources Ltd.

Dated at Cranbrook, British Columbia, Canada this 2nd day of January, 2013.

Respectfully submitted

Aaron A. Higgs, B.Sc. (Geol)

Appendix II – Statement of Expenditures

2013 Titan Expenditures					
Exploration Work type	Comment	Days			Totals
Personnel (Name) / Position	Field Days (list actual days)	Days	Rate	Subtotal	
Aaron Higgs, Project Manager	Aug 7, 2013 to Aug 10, 2013	1.65	\$625	1031.25	
Clay Roehner, Geologist	Aug 7, 2013 to Aug 10, 2013	1.65	\$450-475	746.25	
Chris Shook, Geotechnician	Aug 7, 2013 to Aug 10, 2013	1.65	\$375-400	656.25	
		-		\$2,433.75	\$2,433.75
Office Studies	List Personnel	Days	1 = 2 = 2 2	1000 50	
Project Preparation	Jarrod Brown, Senior Geologist	0.50	\$/25.00	\$362.50	
Project Preparation and Report editing	Mike McCuaig, Senior Geologist	1.04	\$625.00	\$650.00	
Project Preparation, Management and		2.00	+ 6 3 5 . 0 0	+2 275 00	
Report Production	Aaron Higgs, Project Manager	3.80	\$625.00	\$2,375.00	
Database compilation and Report					
production	Jason Kolcun, GIS	1.17	\$425.00	\$497.25	
Database compilation and Report					
production	Nathan Taylor, GIS	5.7	\$425.00	\$2,422.50	
		1	1	\$6,307.25	\$6,307.25
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Soil Samples	86 soils			\$1,921.24	
Rock Samples	5 rocks			\$128.31	
		1	L	\$2,049.55	\$2,049.55
Transportation		No.	Rate	Subtotal	
Airfare				\$63.48	
fuel				\$77.03	
Helicopter (hours)				\$2,517.50	
Fuel (litres/hour)				\$356.25	
	1	1	I.	\$3,014.26	\$3,014.26
Accommodation & Food	Rates per day				
Hotel and Meals				\$521.75	
Meals	day rate or actual costs-specify			\$25.91	
				\$547.66	\$547.66
Geological and Geochemical					
Sampling Consumables	sample bags, tags, flagging, etc			\$113.01	
				\$113.01	\$113.01
Equipment Rentals			per day		
Field kits - per day				\$60.00	
Truck wi insurance - per day Unit #ASC truck				\$200.00	
Mileage per km-Unit#ASC truck				\$52.80	
Satelite phone wi charger - per day				\$30.00	
Radio wi charger - per day				\$60.00	
Computer wi printer - per day				\$20.00	
Digital Camera - per day				\$20.00	
				\$442.80	\$442.80
TerraLogic Exploration Handling an	d Adminstration Fees				
				\$858.67	\$858.67
TOTAL Expenditures					\$15,766.95

# Appendix III – Geochemical Protocol

3.1 Handling and Sampling Protocol3.2 Analytical Techniques3.3 Software

# **3.1 Handling and Sampling Protocol**

All 2013 samples were collected by TerraLogic Exploration Inc employees and sub-contractors. The sampling process is standardized and continually monitored for quality assurance and quality control. Three types of samples were collected during the program, these include: rock, silt and soil samples. All samples are described in a digital form on a Ipod/tablet in the field at the time of collection and also have a GPS location recorded at the site. Sample data was also recorded in field books and locations plotted on field maps as a backup to the digital forms. All of the 2013 samples from the Titan program were dropped off at the ACME prep lab in Whitehorse, located at 77 Collins Lane, Lot #53, Whitehorse, YT. Here they were prepped and sent along for analysis at the lab in Vancouver, BC.

# Rock Samples

Rock samples were collected where mineralization was noted. Transported rock materials were sampled as Float, Talus or Subcrop rock sample types, depending on the perceived distance the rock had travelled from its source. Rocks were collected from outcrops as fist sized Grab samples, or as Chip or Channel samples. A Chip sample is a series of continuous and representative samples taken over a set direction and length using a hammer and chisel. Channel samples is a continuous and representative sample using the channel saw. In each case rock samples were recorded on the digital forms with a spatial location and a variety of attributes which include: map unit, major rock type, minor rock type, colour fresh, colour weathered, texture, grain size, mineralization major and mineralization minor. All samples were transported in plastic rice bags with locking plastic straps with unique identification numbers to prevent tampering during the chain of custody.

## Soil Samples

Where possible the soil sample was collected from the B-Horizon of the soil profile. Attribute data collected for each soil sample included: sample size, quality, depth, slope of sample site, soil horizon, colour and other notes. Sample size is rated from 1-5 with one being much too small sample size and 5 being the perfect sample size, filling roughly <sup>3</sup>/<sub>4</sub> of the sample bag. Quality of the sample rated from 1-5 with 1 being very poor quality and 5 being excellent quality. Factors that include: sample size, soil development and quality (the lack of organics), and depth of sample all contribute to the overall quality attribute.

# Silt Samples

Samplers and geologists collected silt samples at any stream they crossed while on a soil line or traverse. Attribute data collected for each silt sample included: sample size, quality, depth, water velocity and tributary order. Samples size is rated on a scale of 1-5 with 1 being a very small sample and 5 being the perfect sample amount, filling roughly <sup>3</sup>/<sub>4</sub> of the sample bag. Factors that include: sample size and silt quality (lack or pebbles or mud) contribute to the overall quality attribute.

# Sample Handling and Shipping Procedure

All samples were brought back to the Discovery base in Atlin, BC; here soil and silt samples were arranged in order and laid to dry. Rock samples were also lined up in order of sampler and number. Samples with damaged bags or unclear labels were re-bagged and placed back into order. At the end of the program, a shipment was prepared. This would require one person going through each sample ensuring that all samples were in order and that any missing samples were accounted for with an empty bag marked with the sample number and "LS" for lost sample. The other person would record each sample number to be shipped. Once recorded, the samples were placed in rice bags labeled with the shipment number and addresses. Each shipping bag was kept under 25 kg. The list of samples was compared to the database and any discrepancies investigated. Once the list of samples to be shipped matched the database's records, the bags were sealed with a zip tie security seal.

## Sample Preparation, Analysis and Security

The samples from the 2013 program were analyzed using ICP-MS (Mass Spectrometer), ICP-OES (Emission Spectrometer) and Fire Assay methods. The following methods were used during the program and are further described in section 3.2:

Rocks:

R200-250: Crush 1kg to 80% passing -10 mesh, split 250g and pulverize to 85% passing -200 mesh

1D01 (ICP-OES): 34 element Aqua Regia ICP-OES

3B01 (Au FA): 30 g FA with AAS Finish (Automatic Grav Overlimits)

Soils and Silts SS80: sieve 100 g to -80 mesh

1DX (ICP-MS): 36 element Aqua Regia ICP-MS

3B (Au FA): 30 g FA with AAS Finish (Automatic Grav Overlimits)

QAQC

Internal QAQC samples were inserted by the lab into the sample sequence. All of the QAQC results fell within the acceptable levels.

# **3.2 Analytical Procedures**



# METHOD SPECIFICATIONS GENERAL SAMPLE PREPARATION METHODS

**Receiving:** Samples arrive via courier, post or by client drop-off; shipment inspected for completeness.

*Sorting and Inspection:* Samples sorted and inspected for quality of use (quantity and condition). Pulp samples inspected for homogeneity and fineness.

## <u>SOILS</u>

**SS80, S230, SSXX Drying and Sieving:** Wet or damp soil samples are dried at 60°C (Air dried or 40°C if specified by the client). Soil and sediment sieved to -80 mesh (SS80) or -230 mesh (S230), unless client specifies otherwise (SSXX). Sieves cleaned by brush and compressed air between samples.

*SP100, SCP100 Pulverizing:* Soils are pulverized to -100 mesh ASTM with an option of using a mild-steel pulverizer (SP100) or a ceramic pulverizer (SCP100), per 100g.

### **ROCKS AND DRILL CORE**

**R200-250, R200-500, R200-1000:** Rock and Drill Core crushed to 80% passing 10 mesh (2 mm), homogenized, riffle split (250g, 500g, or 1000g subsample) and pulverized to 85% passing 200 mesh (75 microns). Crusher and pulverizer are cleaned by brush and compressed air between routine samples. Granite/Quartz wash scours equipment after high-grade samples, between changes in rock colour and at end of each file. Granite/Quartz is crushed and pulverized as first sample in sequence and carried through to analysis.

**P200, PSCB:** Samples requiring pulverizing only are dried at 60°C and pulverized to 85% passing 200 mesh (75 microns), using a mild-steel pulverizer (P200), per 250g or a ceramic pulverizer (PSCB), per 100g.

**M150, M200s:** Rock and Drill Core are crushed, pulverized and sieved, save +150 and -150 mesh fractions (M150) or +200 and -200 mesh fractions (M200) for metallic Au or Cu analysis. Typically 500g samples are sieved.

**HPUL:** Rock and Drill Core are pulverized by using a mortar and pestle.

### **VEGETATION**

PM1: Plant material is dried then milled to 1mm

VA475: Up to 0.1 kg of wet vegetation is ashed by heating to 475°C.

WWSH: Plant samples are washed with Type-1 water then dried at 60°C prior to analysis, per 100g.



# METHOD SPECIFICATIONS GROUP 1D AND 1F – GEOCHEMICAL AQUA REGIA DIGESTION

Package Codes: Sample Digestion: Instrumentation Method: Applicability: 1D01 to 1D03, 1DX1 to 1DX3, 1F01 to 1F07 HNO3-HCI acid digestion ICP-ES (1D), ICP-MS (1DX, 1F) Sediment, Soil, Non-mineralized Rock and Drill Core

## Method Description:

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO3 and DI H2O for one hour in a heating block of hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g, 15g or 30g can be analyzed.

For 1F07, Lead isotopes ( $Pb_{204}$ ,  $Pb_{206}$ ,  $Pb_{207}$ ,  $Pb_{208}$ ) are suitable for geochemical exploration of U and other commodities where gross differences in natural to radiogenic Pb ratios, is a benefit. Isotope values can be reported in both concentrations and intensities. Sample splits of 0.25g, 0.5g, 15g or 30g can be analyzed.

Element	Group 1D Detection	Group 1DX Detection	Group 1F Detection	Upper Limit
Ag	0.3 ppm	0.1 ppm	2 ppb	100 ppm
Al*	0.01%	0.01%	0.01%	10%
As	2 ppm	0.5 ppm	0.1 ppm	10000 ppm
Au	2 ppm	0.5 ppb	0.2 ppb	100 ppm
B*^	20 ppm	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Ca*	0.01%	0.01%	0.01%	40%
Cd	0.5 ppm	0.1 ppm	0.01 ppm	2000 ppm
Со	1 ppm	0.1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	0.01 ppm	10000 ppm
Fe*	0.01%	0.01%	0.01%	40%
Ga*	-	1 ppm	0.1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	5 ppb	50 ppm
К*	0.01%	0.01%	0.01%	10%
La*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Mg*	0.01%	0.01%	0.01%	30%
Mn*	2 ppm	1 ppm	1 ppm	10000 ppm
Мо	1 ppm	0.1 ppm	0.01 ppm	2000 ppm



Element	Group 1D	Group 1DX	Group 1F	Upper
	Detection	Detection	Detection	Limit
Na*	0.01%	0.001%	0.001%	5%
Ni	1 ppm	0.1 ppm	0.1 ppm	10000 ppm
P*	0.001%	0.001%	0.001%	5%
Pb	3 ppm	0.1 ppm	0.01 ppm	10000 ppm
S	0.05%	0.05%	0.02%	10%
Sb	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Sc	-	0.1 ppm	0.1 ppm	100 ppm
Se	-	0.5 ppm	0.1 ppm	100 ppm
Sr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Те	-	0.2 ppm	0.02 ppm	1000 ppm
Th*	2 ppm	0.1 ppm	0.1 ppm	2000 ppm
Ti*	0.01%	0.001%	0.001%	5%
TI	5 ppm	0.1 ppm	0.02 ppm	1000 ppm
U*	8 ppm	0.1 ppm	0.05 ppm	2000 ppm
V*	1 ppm	2 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	0.05 ppm	100 ppm
Zn	1 ppm	1 ppm	0.1 ppm	10000 ppm
Be*	-	-	0.1 ppm	1000 ppm
Ce*	-	-	0.1 ppm	2000 ppm
Cs*	-	-	0.02 ppm	2000 ppm
Ge*	-	-	0.1 ppm	100 ppm
Hf*	-	-	0.02 ppm	1000 ppm
In	-	-	0.02 ppm	1000 ppm
Li*	-	-	0.1 ppm	2000 ppm
Nb*	-	-	0.02 ppm	2000 ppm
Rb*	-	-	0.1 ppm	2000 ppm
Re	-	-	1 ppb	1000 ppb
Sn*	-	-	0.1 ppm	100 ppm
Та*	-	-	0.05 ppm	2000 ppm
Y*	-	-	0.01 ppm	2000 ppm
Zr*	-	-	0.1 ppm	2000 ppm
Pt*	-	-	2 ppb	100 ppm
Pd*	-	-	10 ppb	100 ppm
Pb <sub>204</sub>	-	-	0.01 ppm	10000 ppm
Pb <sub>206</sub>	-	-	0.01 ppm	10000 ppm
Pb <sub>207</sub>	-	-	0.01 ppm	10000 ppm
Pb <sub>208</sub>	-	-	0.01 ppm	10000 ppm

\* Solubility of some elements will be limited by mineral species present. ^Detection limit = 1 ppm for 15g / 30g analysis.

## Limitations:

Au solubility can be limited by refractory and graphitic samples.



# METHOD SPECIFICATIONS GROUP 3B AND G6 – PRECIOUS METALS BY FIRE ASSAY FUSION

Package Codes:
Sample Digestion:
Instrumentation Method:

3B01 to 3B04, G601 to G614 Lead-collection fire assay fusion ICP-ES (3B, G6), ICP-MS (3B-MS), AA (3B, G6), Gravimetric (G6) Rock, Drill Core

**Applicability:** 

# **Method Description:**

Prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a Ag inquart. Firing the charge at 1050 °C liberates Ag  $\pm$  Au  $\pm$  PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950 °C to render a Ag  $\pm$  Au  $\pm$  PGEs dore bead. The bead is digested for ICP analysis or weighed and parted in ACS grade HNO<sub>3</sub> to dissolve Ag leaving a Au sponge. Au is weighed for Gravimetric determination; ACS grade HCl is added dissolving the Au  $\pm$  PGE sponge for Instrument determination.

Element	3B Detection	3B Upper Limit	3B-MS Detection	3B-MS Upper Limit
Au	2 ppb	10000 ppb	1 ppb	10000 ppb
Pt	3 ppb	10000 ppb	0.1 ppb	10000 ppb
Pd	2 ppb	10000 ppb	0.5 ppb	10000 ppb

Element	G6 (Inst) Detection	G6 (Inst) Upper Limit	G6 (Grav) Detection	G6 (Grav) Upper Limit
Ag			50 g/t	1 ton
Au	0.005 g/t	10 g/t	0.9 g/t	1 ton
Pt	0.01 g/t	100 g/t		
Pd	0.01 g/t	100 g/t		

### Note:

\*Sulphide-rich samples require a 15g or smaller sample for proper fusion.


### QUALITY CONTROL: DEFINITIONS AND GUIDELINES FOR INTERPRETATION

Acme Analytical Laboratories core product is analytical data. Therefore Acme has invested heavily into proprietary software and professional staff to ensure we produce the highest quality data. Acme uses a detailed and comprehensive quality system to minimize errors and maximize the reliability of our analytical results. This system applies a tiered approach to the application of quality systems in our laboratories. These tiers are layered in the following manner;

- 1. ISO 9001 and 17025 documentation, training and standard operating procedures. This forms the framework of the application of each specific method in the laboratory.
- 2. The use of instrument calibration standards. These solutions are analyzed before any other solutions to establish the factors required to convert raw instrument data into concentration values.
- 3. QC validation solutions. These solutions are analyzed with client samples to validate each run and to confirm that each analytical run has been performed correctly. These are typically inserted immediately before and immediately after client sample solutions.
- 4. Reference materials, replicates and blanks. These samples are inserted into randomly assigned positions within each rack as generated by our proprietary LIMS system so that they are analyzed with the client solutions. Their purpose is to provide a final verification of the entire sample handling process. These samples are made up of the following categories:
  - Sample preparation blank;
  - Sample preparation replicate;
  - Analytical blank;
  - Analytical replicate;
  - Certified Reference Material (CRM);
  - Internal Reference Material (IRM).
- 5. Data review and validation. This is the final layer that is made up of sophisticated proprietary software and professional personnel reviewing the data. The following steps are applied;
  - a. Software validation. Proprietary software is used to review the data for specific problems and to perform a series of rational checks upon the data. Data values are flagged and given specific colors, red for fail and amber for warning. Operators must take action on failures and log their actions.
  - b. Rack level validation is performed by the instrument operator that analyzed the samples. At Acme, this person is a Chemist or other person with substantial and equivalent experience. This can only occur when the data has passed the software validation. The operator reviews the rack QC and validates the rack of samples if all QC samples pass.
  - c. Method level validation. This validation is performed by the senior department Chemist. This review examines all racks analyzed by a specific method. Its purpose is to identify any trends or unusual results that are not apparent when only looking at a single rack of data.
  - d. Final Job validation. This is performed by a Certified Assayer or equivalent senior person. This person has access to all the data from multiple analytical methods to check and compare. This is the person that ultimately signs the final certificate.

This document provides a detailed description of Acme's application of Reference materials, Replicates and Blanks.

### The Use of Analytical Blanks and Preparation Blanks

Acme uses two types of blanks in the sample analysis stream for drill and rock samples. The first is a preparation blank that is collected from the cleaning sand or rock used between each and every job to clean the crushing and pulverizing equipment prior to starting another client's samples. It also separates different jobs from the same client that may have been separated due to large differences in composition or grade. This blank appears as the first sample in each job, with results reported in the QC section of the certificate under the heading Prep Wash. The analytical results from this blank are used to monitor contamination during the preparation process. The second blank is an analytical blank which is inserted during analysis to monitor reagent contamination and is reported in the QC section of the certificate as BLK.

If the Client chooses to insert blank material, they must be previously certified by a minimum of 4 ISO 9001 accredited laboratories. The nominal maximum value for acceptance will be up to 1% of the preceding sample up to a maximum of 15ppb (preceding sample of 1,500ppb). For preceding samples above this range, additional cleaning rock must be run through equipment prior to these samples and repeat analysis will be at the cost of the client. In some cases, higher rates of contamination can occur. This is typically due to mineral types that contain higher levels of water of hydration (clay minerals). Our operators are trained to recognize this and use cleaning sand between such samples. Since this additional cleaning step carries an added cost, we do our best to contact the client to confirm these actions.

#### The Use of Replicates

Acme uses analytical and preparation replicates on drill samples to track reproducibility of the analytical and preparation processes. Data for both types of replicates is provided with each certificate at no charge. Replicate precision varies with concentration from 100% or greater error at or near the detection limit for the method, down to the method precision at concentrations greater than 10 times the detection limit.

If clients choose to submit blind replicates please note that replicates on drill samples may not meet the same reproducibility criteria as CRM's/IRM's because the drill samples may not be as homogeneous as an aggressively prepared and mixed standard.

The presence of native gold can also cause serious reproducibility problems. Where the presence of coarse gold is suspected, the parties should discuss more appropriate analytical and preparation techniques that can mitigate these problems.

### The Use of Certified Standard Reference Materials (CRM's)

Acme uses CRM's whenever possible to track analytical accuracy and precision for each method. If a CRM is not available or of such high cost that they are not practical, Acme uses internal reference materials (IRM's) that are either synthetically made or certified by performing round robin analyses by several laboratories. If an IRM is used, Acme routinely validates their concentrations using CRM's when they are available.

For concentrations above 10 times the detection limit expected geochemical exploration sample precision is 15% for methods such as 1D and 1E. Ore grade expected precision is 7% at levels greater than 10 times the detection limit for methods such as 7AR and 7TD. Exact precision is method, element and standard quality dependent, so acceptance criteria for individual standard and method combinations are determined on a minimum of 30 replicates measured during the course of routine analyses at a single laboratory. It should be noted that the

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expected precision for gold in methods such as Group 3 and Group 6 are difficult to predict due to the heterogeneous distribution of gold in many materials.

#### **Client Field Replicates**

Field replicate precision is a measure of the sampling process and natural variability within the sample media; they are not suited for determining analytical precision.

#### **Client's Use of Blind or Hidden Internal Standards**

Acme encourages and strongly recommends the use of blind client standards and we recognize that their use is an important component of project data evaluation and acceptance. It is Acme's policy to reanalyze any sample batch that contains a failed customer standard, free of charge, under the following conditions;

- The client supplies Acme with the certification documentation for the standard or proof of certification parameters such as, but not limited to; method of analysis, number of participating laboratories, range of data in the round robin.
- Standards must come from an accredited manufacturer such as CANMET, CDN Labs, Ore Research, Rocklabs or WCM. Certification criteria/method of analysis should be considered before determining if a standard is applicable to a method.
- The analytical result falls outside 3 standard deviations of a population of no less than 30 values determined using a single analytical method (good laboratory practice indicates that 1 value between 2 and 3 SD's is acceptable, while 2 consecutive values will call for reanalysis. In the above description, Acme refers to the standard deviation of values determined over the course of these minimum 30 routine analytical measurements at a single lab, and not the value quoted in the certification sheet for the standard. This definition includes error associated with both the analytical technique, as well as error in the certified value, and is therefore a robust measure of a CRMs performance under a particular set of analytical conditions. In addition, individual standard values that fall outside 3 standard deviations but still lie within the certified error of the material will not be considered to have failed QC validation and costs for requested repeat analyses will be borne by client.
- The failed standard is brought to our attention within 90 days of the initial reporting of the analytical results.

If the reanalysis of a batch or rack is requested by the client due to a Standard failure and the only analytical result that changes significantly is the result for the Standard, the client will be charged for the reanalysis of the rack or batch as this indicates heterogeneity of the Standard itself. In addition, if both samples AND standards are unchanged upon reanalysis, the client will bear the cost of said reanalysis.

Some additional considerations should be noted;

- Variability of a standard material is additive to the analytical method error. Therefore, a poorly prepared standard will increase the total standard deviation realized.
- Selection of an appropriate standard that is both mineralogically and compositionally similar to the samples it is to be analyzed with is of critical importance.
  - If the standard has a different matrix then it would not be unusual if the only sample failing the performance criteria is the standard itself.
  - If the standard has a concentration that is not in a useful concentration range, then unexpected results can occur. For instance, if the concentration of the standard is too high, the laboratory may consistently reanalyze this standard under the assumption that the result is highly anomalous and therefore requires another check. This will waste money and time.

#### Determination of Method Confidence Limits to be Used for Pass/Fail Criteria

When referring to the Standard Certificate, neither the 95% confidence interval nor the standard deviation quoted in the certificate should be used to calculate control limits or to fail a batch of samples. The 95% confidence interval (normally appearing on the front page of a certificate) is a measure of the certainty of the accuracy of the recommended value. It does not relate to the expected precision during routine use. In addition, it does not account for variations controlled by the limitations imposed by a particular digestion method.

The control limits used to determine the passing or failing of batch data should be calculated from the data that is generated by the laboratory itself (see section "Client use of Blind or Hidden Internal Standards" above for details). Each laboratory provides Standards analyzed with each batch, for this purpose.

Whenever possible, the client should discuss their quality program with the laboratory prior to the start of the project. In this way, any difference in interpretation may be discussed and agreed to in advance.

### 3.3 Software

The following is a list of software used in the field and writing of this report:

- Arc GIS 9.3
- Microsoft Access
- Pendragon Forms
- Apache Open Office
- Adobe Acrobat X

### Appendix IV – Sample Descriptions and Locations

4.1 Rock Samples4.2 Soil Samples

# 4.1 Appendix - Rock Samples and Location

Sample Number	Project	Sampler	Date	Туре	Easting	Northing	GPS Accuracy (m)	Major Rock Type	Description
AHTIR005	TI	АН	8/9/2013	grab	538129	6594348	4	metasiltstone	vein material
AHTIR006	TI	AH	8/9/2013	grab	538129	6594348	4	metasiltstone	
AHTIR007	TI	AH	8/9/2013	grab	537924	6594639	4	quartzite	
AHTIR009	TI	AH	8/9/2013	grab	540496	6592490	9	quartzite	

# 4.2 Appendix - Soil Sample Descriptions and Locations

Sample Number	Username	Date	Туре	Purpose	Location Method	Elevation (m)	Easting	Northing	Primary Colour	Subordinate Colour	Slope	Depth (cm)	Soil
TIL030 00+00	CR	8/9/2013	soil	assay	GPS	1267	537178	6594807	brown		20	15	В
TIL030 00+25E	CR	8/9/2013	soil	assay	GPS		537203	6594818.5	black/brown		20	15	В
TIL030 00+50E	CR	8/9/2013	soil	assay	GPS		537228	6594830	light brown		15	15	В
TIL030 00+75E	CR	8/9/2013	soil	assay	GPS		537252	6594841.5	light brown		15	25	В
TIL030 01+00E	CR	8/9/2013	soil	assay	GPS	1268	537277	6594853	light brown		20	10	В
TIL030 01+25E	CR	8/9/2013	soil	assay	GPS		537299	6594864	light brown		20	20	В
TIL030 01+50E	CR	8/9/2013	soil	assay	GPS		537321	6594875	light grey/brown		20	35	В
TIL030 01+75E	CR	8/9/2013	soil	assay	GPS		537343	6594886	light brown		15	15	В
TIL030 02+00E	CR	8/9/2013	soil	assay	GPS	1266	537365	6594897	orange/rust		15	15	В
TIL030 02+25E	CR	8/9/2013	soil	assay	GPS		537390	6594906.5	light orange		5	25	В
TIL030 02+50E	CR	8/9/2013	soil	assay	GPS		537414	6594916	light orange		15	20	В
TIL030 02+75E	CR	8/9/2013	soil	assay	GPS		537439	6594925.5	brown		15	10	В
TIL030 03+00E	CR	8/9/2013	soil	assay	GPS	1262	537463	6594935	brown		10	10	В
TIL030 03+25E	CR	8/9/2013	soil	assay	GPS		537487	6594937.8	brown		10	10	В
TIL030 03+50E	CR	8/9/2013	soil	assay	GPS		537512	6594940.5	orange		10	10	В
TIL030 03+75E	CR	8/9/2013	soil	assay	GPS		537536	6594943.3	light brown		20	10	В
TIL030 04+00E	CR	8/9/2013	soil	assay	GPS	1257	537560	6594946	light orange		15	25	В
TIL030 04+25E	CR	8/9/2013	soil	assay	GPS		537585	6594949.8	light orange		15	25	В

### Wednesday, December 11, 2013

Horizon	Notes
	near creek bed
	sandy/ glacial
	rocky
	glacial sand
	below clay
	glacial
	organic
	organic
	below glacial clay
	organics
	glacial

Sample Number	Username	Date	Туре	Purpose	Location Method	Elevation (m)	Easting	Northing	Primary Colour	Subordinate Colour	Slope	Depth (cm)	Soil Horizon	Notes
TIL030 04+50E	CR	8/9/2013	soil	assay	GPS		537610	6594953.5	brown		15	10	В	organics
TIL030 04+75E	CR	8/9/2013	soil	assay	GPS		537635	6594957.3	brown	orange	15	20	В	in dry creek drainage
TIL030 05+00E	CR	8/9/2013	soil	assay	GPS	1260	537660	6594961	orange		20	10	В	
TIL030 05+25E	CR	8/9/2013	soil	assay	GPS		537686	6594960	brown		15	15	В	
TIL030 05+50E	CR	8/9/2013	soil	assay	GPS		537713	6594959	orange		15	20	В	sandy
TIL030 05+75E	CR	8/9/2013	soil	assay	GPS		537739	6594958	brown		15	10	В	
TIL030 06+00E	CR	8/9/2013	soil	assay	GPS	1261	537765	6594957	orange		20	15	В	sandy
TIL030 06+25E	CR	8/9/2013	soil	assay	GPS		537790	6594951.6	brown		10	10	В	
TIL030 06+50E	CR	8/9/2013	soil	assay	GPS		537814	6594946.3	brown		10	10	В	
TIL030 06+75E	CR	8/9/2013	soil	assay	GPS		537839	6594940.9	brown		10	10	В	
TIL030 07+00E	CR	8/9/2013	soil	assay	GPS	1261	537863	6594935.5	brown	orange	10	10	В	organics
TIL030 07+25E	CR	8/9/2013	soil	assay	GPS		537888	6594930.1	brown		10	10	В	rocky
TIL030 07+50E	CR	8/9/2013	soil	assay	GPS		537912	6594924.8	brown	orange	10	10	В	
TIL030 07+75E	CR	8/9/2013	soil	assay	GPS		537937	6594919.4	brown		15	10	В	sandy
TIL030 08+00E	CR	8/9/2013	soil	assay	GPS	1260	537961	6594914	dark brown		10	10	В	rocky
TIL030 08+25E	CR	8/9/2013	soil	assay	GPS		537989	6594910.3	brown		15	10	В	
TIL030 08+75E	CR	8/9/2013	soil	assay	GPS		538044	6594902.8	dark brown		10	10	В	organic
TIL030 09+00E	CR	8/9/2013	soil	assay	GPS	1255	538072	6594899	brown		10	10	В	
TIL030 09+25E	CR	8/9/2013	soil	assay	GPS		538097	6594887.3	light grey		10	15	В	grey silt/sand

Sample Number	Username	Date	Туре	Purpose	Location Method	Elevation (m)	Easting	Northing	Primary Colour	Subordinate Colour	Slope	Depth (cm)	Soil Horizon	Notes
TIL030 09+50E	CR	8/9/2013	soil	assay	GPS		538122	6594875.5	orange		10	10	В	
TIL030 09+75E	CR	8/9/2013	soil	assay	GPS		538146	6594863.8	brown	orange	10	20	В	sandy below glacier
TIL030 10+00E	CR	8/9/2013	soil	assay	GPS	1264	538171	6594852	dark brown		10	10	В	
TIL031 00+00	CS	8/9/2013	soil	assay	GPS		540620	6593481	rusty	brown	10	30	В	start of line
TIL031 00+25W	CS	8/9/2013	soil	assay	GPS		540595	6593480.9	beige		10	50	В	rocky
TIL031 00+50W	CS	8/9/2013	soil	assay	GPS		540570	6593480.8	rusty	brown	10	45	В	organics
TIL031 00+75W	CS	8/9/2013	soil	assay	GPS		540544	6593480.6	rusty	brown	10	35	В	organics
TIL031 01+00W	CS	8/9/2013	soil	assay	GPS		540519	6593480.5	rusty	brown	10	25	В	organics
TIL031 01+25W	CS	8/9/2013	soil	assay	GPS		540494	6593480.4	rusty	brown	10	25	В	organics
TIL031 01+50W	CS	8/9/2013	soil	assay	GPS		540469	6593480.3	rusty	brown	10	30	В	organics
TIL031 01+75W	CS	8/9/2013	soil	assay	GPS		540443	6593480.1	brown	beige	10	35	В	organics
TIL031 02+00W	CS	8/9/2013	soil	assay	GPS		540418	6593480	brown	beige	10	30	В	organics
TIL031 02+25W	CS	8/9/2013	soil	assay	GPS		540394	6593480	brown	rusty	10	35	В	organics
TIL031 02+50W	CS	8/9/2013	soil	assay	GPS		540369	6593480	brown	chocolate	10	25	В	organics
TIL031 02+75W	CS	8/9/2013	soil	assay	GPS		540345	6593480	brown	rusty	10	25	В	organics
TIL031 03+00W	CS	8/9/2013	soil	assay	GPS		540321	6593480	brown	rusty	10	15	В	organics
TIL031 03+25W	CS	8/9/2013	soil	assay	GPS		540296	6593480	brown	rusty	10	20	В	next to white moose showing
TIL031 03+50W	CS	8/9/2013	soil	assay	GPS		540272	6593480	brown	rusty	10	25	В	organics
TIL031 03+75W	CS	8/9/2013	soil	assay	GPS		540247	6593480	brown	rusty	10	20	В	rocky

Sample Number	Username	Date	Туре	Purpose	Location Method	Elevation (m)	Easting	Northing	Primary Colour	Subordinate Colour	Slope	Depth (cm)	Soil Horizon	Notes
TIL031 04+00W	CS	8/9/2013	soil	assay	GPS		540223	6593480	brown	rusty	10	30	В	rocky
TIL031 04+25W	CS	8/9/2013	soil	assay	GPS		540193	6593481.3	rusty	brown	10	25	В	rocky
TIL031 04+50W	CS	8/9/2013	soil	assay	GPS		540162	6593482.5	rusty	brown	10	30	В	rocky
TIL031 04+75W	CS	8/9/2013	soil	assay	GPS		540132	6593483.8	dark black		10	45	В	rocky
TIL031 05+00W	CS	8/9/2013	soil	assay	GPS		540101	6593485	dark brown		10	35	В	end of line
TIL032 00+00W	CS	8/9/2013	soil	assay	GPS		540520	6593661	rusty	brown	10	20	В	start of line
TIL032 00+25W	CS	8/9/2013	soil	assay	GPS		540493	6593660.4	rusty	brown	10	20	В	rocky
TIL032 00+50W	CS	8/9/2013	soil	assay	GPS		540467	6593659.8	dark brown		10	35	В	organics
TIL032 00+75W	CS	8/9/2013	soil	assay	GPS		540440	6593659.1	dark brown		10	30	В	organics
TIL032 01+00W	CS	8/9/2013	soil	assay	GPS		540414	6593658.5	rusty	brown	10	30	В	rocky
TIL032 01+25W	CS	8/9/2013	soil	assay	GPS		540387	6593657.9	grey	brown	10	35	В	rocky
TIL032 01+50W	CS	8/9/2013	soil	assay	GPS		540360	6593657.3	rusty	brown	10	25	В	rocky
TIL032 01+75W	CS	8/9/2013	soil	assay	GPS		540334	6593656.6	brown	beige	10	30	В	organics
TIL032 02+00W	CS	8/9/2013	soil	assay	GPS		540307	6593656	black	dark brown	10	35	В	organics
TIL032 02+25W	CS	8/9/2013	soil	assay	GPS		540282	6593656.4	rusty	brown	10	25	В	organics
TIL032 02+50W	CS	8/9/2013	soil	assay	GPS		540257	6593656.8	rusty	brown	10	25	В	organics
TIL032 02+75W	CS	8/9/2013	soil	assay	GPS		540232	6593657.1	dark brown	black	10	40	В	organics
TIL032 03+00W	CS	8/9/2013	soil	assay	GPS		540207	6593657.5	brown	beige	10	20	В	organics
TIL032 03+25W	CS	8/9/2013	soil	assay	GPS		540182	6593657.9	light brown		10	20	В	organics

Sample Number	Username	Date	Туре	Purpose	Location Method	Elevation (m)	Easting	Northing	Primary Colour	Subordinate Colour	Slope	Depth (cm)	Soil Horizon	Notes
TIL032 03+50W	CS	8/9/2013	soil	assay	GPS		540157	6593658.3	rusty	brown	10	35	В	organics
TIL032 03+75W	CS	8/9/2013	soil	assay	GPS		540132	6593658.6	rusty	brown	10	45	В	rocky
TIL032 04+00W	CS	8/9/2013	soil	assay	GPS		540107	6593659	rusty	brown	10	35	В	rocky
TIL032 04+25W	CS	8/9/2013	soil	assay	GPS		540083	6593658.8	rusty	brown	10	35	В	rocky
TIL032 04+50W	CS	8/9/2013	soil	assay	GPS		540058	6593658.5	brown	beige	10	30	В	rocky
TIL032 04+75W	CS	8/9/2013	soil	assay	GPS		540034	6593658.3	brown	beige	10	35	В	rocky
TIL032 05+00W	CS	8/9/2013	soil	assay	GPS		540009	6593658	dark brown	black	10	40	В	organics

### Appendix V – Analytical Certificates

5.1 Soil Samples5.2 Rock Samples

5.1 Soil Samples



Acme Analytical Laboratories (Vancouver) Ltd. 9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

### CERTIFICATE OF ANALYSIS

#### **CLIENT JOB INFORMATION**

Project:	Titan
Shipment ID:	TI13-001
P.O. Number	
Number of Samples:	86

#### 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.

www.acmelab.com

Client: TerraLogic Exploration Inc.

Suite 200, 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA

Submitted By:	Chris Gallagher
Receiving Lab:	Canada-Whitehorse
Received:	August 20, 2013
Report Date:	September 04, 2013
Page:	1 of 4

### WHI13000316.2

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	85	Dry at 60C			WHI
SS80	85	Dry at 60C sieve 100g to -80 mesh			WHI
3B	85	Fire assay fusion Au by ICP-ES	30	Completed	VAN
1DX	85	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

#### **ADDITIONAL COMMENTS**

Version 2 : Shipment ID TI13-001 included.

TerraLogic Exploration Inc. Invoice To: Suite 200, 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA

CC:

Jesse Campbell



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. Acre 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.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

# CERTIFICATE OF ANALYSIS

Client:

**TerraLogic Exploration Inc.** Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: Septe

September 04, 2013

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	Metho	d 3	B 1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analy	te A	u Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Ur	it pp	b ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MC	L	2 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
til030 00+00E	Soil	<	2 0.9	9.8	12.1	21	0.2	3.2	3.3	128	1.31	1.0	3.6	0.1	13	<0.1	<0.1	0.4	41	0.09	0.031
til030 00+25E	Soil	<	2 0.4	4.0	9.4	6	0.3	1.6	0.6	24	0.26	0.8	1.8	<0.1	13	<0.1	<0.1	0.4	11	0.05	0.035
til030 00+50E	Soil	2	6 1.8	18.7	19.7	54	0.1	13.2	8.3	333	2.51	7.6	4.0	0.9	20	0.2	0.3	0.6	55	0.30	0.056
til030 00+75E	Soil		2 1.6	12.3	16.9	38	0.1	7.2	7.9	296	3.29	5.0	2.5	1.5	8	0.1	0.2	0.7	64	0.16	0.133
til030 01+00E	Soil	<	2 1.4	10.4	12.6	32	0.2	6.6	5.0	241	1.81	2.3	1.6	0.3	10	<0.1	0.1	0.6	45	0.10	0.044
til030 01+25E	Soil		2 1.2	7.2	9.6	32	<0.1	5.8	5.1	228	1.70	1.9	<0.5	1.6	10	0.1	0.1	1.2	48	0.12	0.022
til030 01+50E	Soil		2 2.6	7.1	19.3	29	<0.1	5.9	5.4	582	1.69	2.0	1.6	0.3	16	<0.1	0.1	0.7	67	0.11	0.025
til030 01+75E	Soil		7 2.1	12.5	15.2	39	0.2	7.1	6.4	254	2.05	4.4	11.8	0.4	13	0.1	0.2	0.9	57	0.12	0.045
til030 02+00E	Soil		4 2.0	17.6	36.0	66	0.5	8.7	9.1	419	4.38	9.3	4.8	1.4	10	0.2	0.3	1.2	73	0.11	0.063
til030 02+25E	Soil		8 1.6	12.6	20.3	53	0.4	7.2	6.5	270	2.52	5.2	8.6	4.3	11	0.2	0.2	1.0	60	0.16	0.041
til030 02+50E	Soil	1	9 2.7	20.3	29.9	67	0.2	9.8	8.9	401	3.61	10.5	7.8	2.8	19	0.2	0.4	1.2	85	0.29	0.051
til030 02+75E	Soil	2	1 1.5	14.4	56.1	41	0.4	7.0	4.7	306	1.53	5.3	13.0	0.2	20	0.2	0.4	1.3	43	0.19	0.052
til030 03+00E	Soil	2	6 1.5	29.1	100.1	76	0.4	13.0	10.0	487	2.30	11.3	20.8	2.1	15	0.5	0.8	0.5	49	0.28	0.063
til030 03+25E	Soil	1	2 1.7	17.6	54.7	56	0.6	9.5	4.6	202	2.01	7.7	8.6	0.2	16	0.2	0.6	0.7	54	0.15	0.055
til030 03+50E	Soil		4 2.6	16.4	22.5	46	0.3	7.1	8.2	276	3.65	5.8	4.7	0.8	14	0.2	0.4	1.0	84	0.18	0.059
til030 03+75E	Soil	3	0 2.0	23.2	56.9	72	0.2	11.8	7.6	485	2.52	17.8	24.9	0.5	19	0.3	0.7	0.7	58	0.26	0.065
til030 04+00E	Soil		3 2.3	15.6	25.5	54	<0.1	7.8	6.3	263	3.03	7.7	3.2	1.3	11	0.2	0.4	0.8	82	0.12	0.038
til030 04+25E	Soil	3	4 2.4	21.8	20.2	44	0.2	7.9	6.8	291	2.86	7.9	3.0	0.7	10	0.1	0.6	0.8	80	0.11	0.047
til030 04+50E	Soil		6 1.3	10.6	16.2	28	0.4	4.6	3.6	143	1.56	3.1	2.5	0.3	17	<0.1	0.2	0.7	52	0.16	0.033
til030 04+75E	Soil		7 2.0	20.9	25.0	52	0.2	8.8	7.8	350	3.06	8.2	4.7	1.5	10	0.2	0.5	0.7	62	0.20	0.065
til030 05+00E	Soil		7 2.3	25.0	38.3	75	0.2	9.3	12.2	1041	3.14	10.0	6.2	0.8	11	0.4	0.5	1.0	64	0.14	0.090
til030 05+25E	Soil		2 0.9	7.2	13.5	17	0.3	2.6	2.5	141	1.03	1.1	17.7	0.2	17	0.1	0.1	0.6	29	0.10	0.035
til030 05+50E	Soil		4 1.5	11.0	16.8	29	<0.1	4.6	5.4	209	2.97	2.7	6.2	1.9	9	<0.1	0.2	0.7	61	0.11	0.054
til030 05+75E	Soil	<	2 0.9	6.3	9.6	17	0.2	2.5	2.6	146	1.11	1.5	1.6	0.2	10	<0.1	0.1	0.5	33	0.07	0.033
til030 06+00E	Soil		3 1.5	9.3	16.1	29	0.1	4.0	5.1	227	2.94	4.5	2.0	3.2	9	<0.1	0.2	0.7	62	0.10	0.087
til030 06+25E	Soil		8 1.4	12.9	18.3	31	0.1	4.5	4.9	219	1.92	3.0	6.1	0.7	11	0.1	0.2	0.7	44	0.15	0.061
til030 06+50E	Soil	1	0 1.9	20.9	20.5	45	<0.1	6.6	8.2	454	2.49	3.9	5.4	1.5	10	0.2	0.3	0.6	51	0.19	0.083
til030 06+75E	Soil		6 1.5	15.5	17.4	33	0.2	4.8	5.7	245	2.55	3.3	4.1	1.0	9	0.1	0.2	0.6	50	0.12	0.053
til030 07+00E	Soil		3 1.6	10.3	12.9	31	0.2	4.1	4.5	234	2.30	2.9	1.5	0.9	10	0.1	0.2	0.6	44	0.08	0.030
til030 07+25E	Soil	1	2 2.1	30.5	31.7	66	0.3	11.6	11.0	533	2.76	8.7	16.6	2.7	18	0.2	0.4	1.0	61	0.35	0.088



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Project: Titan Report Date: September 04, 2013

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	Meth	od 1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Anal	rte La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	Hg	Sc	ті	S	Ga	Se	Те
	U	nit ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	М	DL 1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
til030 00+00E	Soil	5	11	0.34	49	0.046	<20	1.14	0.009	0.02	1.3	0.02	0.6	<0.1	<0.05	5	<0.5	<0.2
til030 00+25E	Soil	4	6	0.05	42	0.006	<20	0.55	0.007	0.02	0.2	0.02	0.1	<0.1	<0.05	3	<0.5	<0.2
til030 00+50E	Soil	8	27	0.63	140	0.050	<20	1.32	0.010	0.05	2.1	<0.01	2.1	<0.1	<0.05	5	<0.5	0.2
til030 00+75E	Soil	6	19	0.45	31	0.060	<20	1.13	0.008	0.03	3.3	<0.01	1.9	<0.1	<0.05	6	<0.5	<0.2
til030 01+00E	Soil	6	16	0.43	39	0.043	<20	1.26	0.008	0.03	1.5	<0.01	0.9	<0.1	<0.05	5	<0.5	<0.2
til030 01+25E	Soil	6	14	0.46	39	0.078	<20	0.94	0.008	0.04	1.0	<0.01	1.5	<0.1	<0.05	6	<0.5	<0.2
til030 01+50E	Soil	6	16	0.31	76	0.097	<20	0.82	0.009	0.03	0.9	0.01	1.0	0.1	<0.05	6	<0.5	<0.2
til030 01+75E	Soil	7	21	0.46	69	0.064	<20	1.24	0.010	0.11	1.7	0.01	1.4	<0.1	<0.05	7	<0.5	0.3
til030 02+00E	Soil	7	26	0.66	82	0.040	<20	2.00	0.008	0.09	2.1	0.05	2.6	<0.1	<0.05	8	<0.5	0.4
til030 02+25E	Soil	7	18	0.60	68	0.057	<20	1.62	0.011	0.06	1.6	0.04	2.9	<0.1	<0.05	8	<0.5	0.2
til030 02+50E	Soil	7	24	0.65	143	0.085	<20	1.39	0.011	0.08	2.7	0.01	3.2	<0.1	<0.05	8	<0.5	0.8
til030 02+75E	Soil	8	17	0.37	151	0.051	<20	1.01	0.011	0.06	0.9	0.02	1.0	0.1	<0.05	5	<0.5	0.5
til030 03+00E	Soil	10	26	0.68	131	0.059	<20	1.33	0.011	0.08	1.1	0.02	3.3	<0.1	<0.05	5	<0.5	0.6
til030 03+25E	Soil	7	23	0.51	160	0.035	<20	1.60	0.011	0.04	1.0	0.03	1.2	0.1	<0.05	7	<0.5	0.3
til030 03+50E	Soil	7	19	0.49	60	0.055	<20	1.31	0.011	0.06	1.9	0.02	2.1	<0.1	<0.05	6	<0.5	0.3
til030 03+75E	Soil	11	25	0.62	244	0.040	<20	1.64	0.012	0.05	1.1	0.02	1.9	<0.1	<0.05	6	<0.5	0.4
til030 04+00E	Soil	7	19	0.45	56	0.075	<20	1.31	0.009	0.06	1.7	<0.01	2.3	<0.1	<0.05	8	<0.5	0.3
til030 04+25E	Soil	7	19	0.41	47	0.076	<20	1.17	0.011	0.06	2.0	<0.01	1.9	<0.1	<0.05	8	<0.5	0.5
til030 04+50E	Soil	7	18	0.32	66	0.049	<20	1.27	0.009	0.05	1.0	0.02	1.4	<0.1	<0.05	6	<0.5	<0.2
til030 04+75E	Soil	8	22	0.58	53	0.059	<20	1.64	0.015	0.06	1.7	0.02	2.6	<0.1	<0.05	6	<0.5	0.3
til030 05+00E	Soil	10	27	0.49	101	0.036	<20	2.13	0.010	0.07	1.3	0.01	1.9	<0.1	<0.05	6	<0.5	0.5
til030 05+25E	Soil	8	10	0.15	71	0.030	<20	0.92	0.007	0.03	0.6	0.03	0.5	<0.1	<0.05	5	<0.5	<0.2
til030 05+50E	Soil	8	15	0.35	35	0.064	<20	1.36	0.009	0.04	2.4	0.03	1.7	<0.1	<0.05	7	<0.5	0.2
til030 05+75E	Soil	6	11	0.21	33	0.027	<20	1.24	0.008	0.03	0.9	0.01	0.6	<0.1	<0.05	4	<0.5	<0.2
til030 06+00E	Soil	9	13	0.29	37	0.067	<20	1.05	0.010	0.04	1.6	0.03	1.7	<0.1	<0.05	6	<0.5	<0.2
til030 06+25E	Soil	8	13	0.35	38	0.043	<20	1.24	0.011	0.05	1.2	0.01	1.3	<0.1	<0.05	5	<0.5	<0.2
til030 06+50E	Soil	11	17	0.43	49	0.050	<20	1.51	0.011	0.08	1.6	0.01	2.0	<0.1	<0.05	5	<0.5	<0.2
til030 06+75E	Soil	8	15	0.35	42	0.042	<20	1.50	0.009	0.04	1.3	0.03	1.3	<0.1	<0.05	5	<0.5	<0.2
til030 07+00E	Soil	8	13	0.29	41	0.044	<20	1.26	0.010	0.04	1.2	0.02	1.2	<0.1	<0.05	6	<0.5	<0.2
til030 07+25E	Soil	15	24	0.65	142	0.064	<20	1.62	0.017	0.10	2.5	0.02	3.5	0.1	<0.05	6	<0.5	0.4



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		Method	3B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	P
		Unit	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	2	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
til030 07+50E	Soil		6	1.3	11.6	16.3	37	<0.1	4.9	4.5	210	1.60	3.7	4.0	1.3	18	0.1	0.2	0.6	39	0.28	0.062
til030 07+75E	Soil		7	1.6	19.1	23.0	57	0.1	8.9	8.1	460	2.40	17.2	3.4	1.9	13	0.2	0.2	1.2	54	0.18	0.058
til030 08+00E	Soil		4	0.9	7.6	13.3	32	0.2	3.8	3.5	205	1.23	9.4	8.5	0.4	20	0.2	<0.1	0.5	28	0.21	0.060
til030 08+25E	Soil		2	1.1	9.1	11.0	23	0.1	2.8	3.5	163	1.47	1.8	3.9	1.0	9	0.1	0.2	0.5	31	0.10	0.041
til030 08+50E	Soil		3	1.7	11.6	11.4	42	<0.1	4.6	5.2	241	2.58	3.1	1.6	3.4	10	0.3	0.2	0.8	58	0.10	0.023
til030 08+75E	Soil		5	0.9	8.7	12.8	28	0.4	4.2	2.7	142	1.04	1.3	1.5	0.2	15	0.2	<0.1	0.6	23	0.12	0.052
til030 09+00E	Soil		6	3.3	37.3	30.9	115	0.3	14.5	11.1	765	4.02	5.5	4.8	2.4	19	0.3	0.3	1.4	76	0.14	0.041
til030 09+25E	Soil		<2	0.8	3.7	16.6	15	0.3	1.9	1.6	97	0.75	0.6	2.5	1.4	11	<0.1	<0.1	0.7	25	0.08	0.015
til030 09+50E	Soil		5	1.1	12.0	15.1	29	0.5	4.2	3.3	182	1.33	1.4	9.7	0.7	12	0.2	0.2	0.7	30	0.17	0.076
til030 09+75E	Soil		8	2.3	13.6	28.0	36	0.6	4.4	9.4	846	1.95	2.8	8.0	1.6	13	0.1	0.2	0.7	40	0.20	0.077
til030 10+00E	Soil		7	1.5	17.2	15.5	34	0.7	5.0	3.5	186	1.54	1.5	6.4	0.4	24	0.3	0.2	0.7	34	0.18	0.087
til031 00+00W	Soil		<2	3.2	27.0	91.6	300	0.3	4.8	13.8	1257	3.31	2.2	3.0	3.0	15	1.0	0.2	1.4	38	0.35	0.045
til031 00+25W	Soil		2	2.0	46.6	68.0	204	0.3	8.2	13.0	888	2.60	1.6	1.6	3.3	12	2.0	0.1	1.3	51	0.34	0.028
til031 00+50W	Soil		<2	16.7	27.5	31.6	101	0.3	8.8	8.4	417	3.72	10.0	0.9	3.8	10	0.3	0.4	1.5	63	0.10	0.085
til031 00+75W	Soil		<2	9.7	10.4	24.5	73	0.4	5.1	5.0	232	2.31	3.6	0.9	2.4	9	0.2	0.2	1.1	58	0.12	0.032
til031 01+00W	Soil		23	5.1	275.3	441.4	647	5.0	88.0	21.0	1363	6.01	6.9	14.7	1.4	11	1.9	0.2	29.5	219	0.28	0.067
til031 01+25W	Soil		4	4.6	32.0	88.2	196	0.6	27.2	17.2	603	4.29	21.5	4.4	2.8	9	0.7	0.2	3.2	100	0.15	0.032
til031 01+50W	Soil		<2	8.9	47.2	54.6	398	0.2	13.5	16.1	783	3.38	4.5	1.4	2.1	24	0.8	0.2	0.8	69	0.50	0.051
til031 01+75W	Soil		<2	20.8	14.8	13.9	105	0.1	4.4	4.1	210	2.21	3.2	2.3	2.8	8	0.6	0.2	0.8	53	0.10	0.034
til031 02+00W	Soil		<2	5.0	8.7	109.7	134	<0.1	4.9	6.1	1042	1.60	6.5	0.7	3.5	11	1.0	0.1	0.9	32	0.12	0.038
til031 02+25W	Soil		<2	38.7	45.5	46.7	150	0.2	6.5	11.9	405	4.32	8.1	<0.5	3.5	15	0.5	0.4	1.2	75	0.23	0.073
til031 02+50W	Soil		<2	8.2	20.2	67.2	178	0.2	11.1	10.7	1859	2.16	5.5	0.7	2.4	15	1.7	0.2	0.7	50	0.24	0.032
til031 02+75W	Soil		<2	14.7	23.3	49.2	236	0.4	23.3	10.0	409	3.38	8.0	1.1	4.4	11	0.3	0.2	1.6	76	0.10	0.038
til031 03+00W	Soil		<2	11.5	24.7	26.5	142	0.2	22.0	11.1	463	3.76	10.0	0.6	3.9	19	0.3	0.3	0.9	87	0.20	0.037
til031 03+25W	Soil		5	31.6	56.6	33.4	75	0.2	10.4	7.6	373	2.87	5.6	1.7	4.7	11	0.2	0.3	0.9	44	0.15	0.040
til031 03+50W	Soil		5	7.3	54.0	359.7	378	0.9	29.9	16.3	950	4.07	6.5	4.5	3.8	18	1.5	0.3	2.1	91	0.21	0.045
til031 03+75W	Soil		<2	10.1	9.4	18.6	84	<0.1	5.2	4.5	182	1.55	3.1	<0.5	2.3	13	0.2	0.1	0.5	42	0.21	0.017
til031 04+00W	Soil		<2	28.3	37.2	79.1	205	0.3	16.1	21.9	1294	4.36	7.7	0.7	3.3	57	0.9	0.3	1.5	83	0.84	0.066
til031 04+25W	Soil		<2	29.7	15.7	16.1	83	<0.1	4.7	4.3	245	2.62	7.5	0.7	2.3	13	0.3	0.2	0.8	60	0.14	0.029
til031 04+50W	Soil		<2	31.2	17.4	25.8	114	0.2	6.3	6.0	287	3.48	8.3	<0.5	2.7	11	0.4	0.3	1.3	90	0.13	0.035



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# CERTIFICATE OF ANALYSIS

Client:

**TerraLogic Exploration Inc.** Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: September 04, 2013

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# WHI13000316.2

	I	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	La	Cr	Mg	Ва	Ti	в	AI	Na	κ	w	Hg	Sc	ті	S	Ga	Se	Те
		Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
til030 07+50E	Soil		10	14	0.35	50	0.039	<20	1.01	0.010	0.05	1.3	0.01	1.6	<0.1	<0.05	4	<0.5	<0.2
til030 07+75E	Soil		11	23	0.52	91	0.059	<20	1.52	0.012	0.08	2.3	0.01	2.2	<0.1	<0.05	5	<0.5	<0.2
til030 08+00E	Soil		9	12	0.28	109	0.028	<20	1.14	0.008	0.05	1.5	0.02	0.7	<0.1	<0.05	4	<0.5	<0.2
til030 08+25E	Soil		8	9	0.27	41	0.038	<20	1.42	0.008	0.03	1.1	0.03	1.2	<0.1	<0.05	4	<0.5	<0.2
til030 08+50E	Soil		7	13	0.38	47	0.087	<20	0.90	0.010	0.05	2.7	<0.01	1.9	<0.1	<0.05	6	<0.5	0.3
til030 08+75E	Soil		8	10	0.28	107	0.028	<20	0.97	0.010	0.05	1.5	0.03	0.5	<0.1	<0.05	5	<0.5	<0.2
til030 09+00E	Soil		8	31	1.10	238	0.076	<20	3.28	0.011	0.25	1.4	0.04	4.2	0.2	<0.05	11	<0.5	<0.2
til030 09+25E	Soil		7	7	0.18	53	0.053	<20	0.73	0.006	0.03	0.5	0.02	1.1	<0.1	<0.05	5	<0.5	<0.2
til030 09+50E	Soil		11	11	0.34	72	0.029	<20	1.00	0.009	0.05	1.0	0.03	1.1	<0.1	<0.05	4	<0.5	<0.2
til030 09+75E	Soil		10	12	0.39	75	0.032	<20	1.21	0.010	0.04	1.7	0.04	1.5	<0.1	<0.05	4	<0.5	<0.2
til030 10+00E	Soil		8	13	0.36	177	0.031	<20	1.24	0.009	0.05	1.1	0.07	1.0	<0.1	0.08	6	<0.5	<0.2
til031 00+00W	Soil		12	12	0.34	394	0.003	<20	1.82	0.004	0.11	0.7	0.02	4.7	0.2	<0.05	7	<0.5	0.2
til031 00+25W	Soil		13	15	0.38	304	0.007	<20	1.71	0.007	0.08	0.8	0.02	3.5	0.2	<0.05	6	<0.5	<0.2
til031 00+50W	Soil		5	23	0.54	103	0.038	<20	1.84	0.007	0.06	1.3	0.02	2.8	0.1	<0.05	8	<0.5	0.3
til031 00+75W	Soil		5	23	0.51	116	0.048	<20	1.24	0.007	0.06	0.8	0.01	2.1	0.1	<0.05	7	<0.5	<0.2
til031 01+00W	Soil		3	365	3.39	71	0.133	<20	3.30	0.012	0.09	16.0	0.02	14.3	0.2	<0.05	13	0.7	3.7
til031 01+25W	Soil		4	110	1.10	67	0.054	<20	1.61	0.008	0.05	13.8	<0.01	4.7	<0.1	<0.05	8	<0.5	1.2
til031 01+50W	Soil		9	24	0.86	303	0.102	<20	1.86	0.007	0.10	0.9	0.02	3.4	0.1	<0.05	8	<0.5	<0.2
til031 01+75W	Soil		5	12	0.36	89	0.031	<20	1.20	0.008	0.05	0.9	0.02	2.3	0.1	<0.05	6	<0.5	<0.2
til031 02+00W	Soil		7	9	0.12	263	0.005	<20	1.23	0.006	0.09	3.7	0.03	1.0	0.1	<0.05	5	<0.5	<0.2
til031 02+25W	Soil		5	15	0.53	146	0.079	<20	1.44	0.008	0.08	2.5	0.02	3.1	0.1	<0.05	8	0.5	0.3
til031 02+50W	Soil		6	26	0.30	146	0.035	<20	0.82	0.008	0.07	3.0	0.02	1.6	0.1	<0.05	5	<0.5	1.0
til031 02+75W	Soil		8	66	0.76	96	0.025	<20	2.10	0.004	0.05	1.1	0.03	2.9	0.2	<0.05	8	<0.5	0.5
til031 03+00W	Soil		7	61	0.87	105	0.070	<20	2.30	0.008	0.06	1.8	0.04	3.6	0.1	<0.05	9	<0.5	0.3
til031 03+25W	Soil		10	20	0.51	116	0.050	<20	1.76	0.010	0.10	1.8	0.03	3.4	0.1	<0.05	5	<0.5	<0.2
til031 03+50W	Soil		7	48	0.64	152	0.093	<20	1.74	0.011	0.06	1.1	0.02	4.3	0.1	<0.05	8	<0.5	0.9
til031 03+75W	Soil		5	13	0.34	102	0.034	<20	0.98	0.008	0.07	0.9	0.01	1.8	<0.1	<0.05	5	<0.5	<0.2
til031 04+00W	Soil		13	31	0.68	448	0.076	<20	2.31	0.013	0.17	1.3	0.02	4.1	0.2	<0.05	10	0.5	0.3
til031 04+25W	Soil		5	15	0.38	96	0.061	<20	1.00	0.010	0.06	1.8	<0.01	2.2	<0.1	<0.05	6	<0.5	0.3
til031 04+50W	Soil		6	20	0.39	109	0.068	<20	1.13	0.009	0.07	1.4	0.02	2.5	0.1	<0.05	9	<0.5	0.3



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Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: Septe

September 04, 2013

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	N	Method	3B	1DX																		
	Α	Analyte	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
		Unit	ppb	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%							
		MDL	2	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
til031 04+75W	Soil		9	2.6	328.6	29.9	406	0.5	19.6	7.9	430	1.23	<0.5	5.3	0.5	160	7.5	0.5	0.4	15	3.83	0.094
til031 05+00W	Soil		<2	5.9	42.6	18.9	131	0.1	7.1	2.4	60	0.81	0.5	<0.5	1.3	26	5.2	<0.1	0.3	20	0.55	0.021
til032 00+00W	Soil		<2	5.1	15.1	22.0	122	<0.1	2.8	3.7	109	2.35	0.8	<0.5	3.1	47	1.3	0.5	0.2	57	0.50	0.014
til032 00+25W	Soil		<2	4.9	21.9	27.9	176	0.1	10.6	13.7	445	3.32	3.0	<0.5	3.7	59	0.8	0.2	0.7	62	0.36	0.025
til032 00+50W	Soil		125	3.3	54.5	23.8	87	0.3	9.4	17.1	758	3.06	2.1	1.4	4.9	133	1.0	0.2	0.9	59	0.98	0.039
til032 00+75W	Soil		<2	6.0	18.1	219.7	173	0.4	60.3	10.3	291	3.78	3.7	<0.5	3.5	22	1.5	0.2	3.0	129	0.38	0.032
til032 01+00W	Soil		<2	16.7	43.9	25.8	114	0.1	6.0	11.5	364	3.32	3.9	1.8	2.9	18	0.5	0.2	1.1	72	0.23	0.036
til032 01+25W	Soil		19	3.3	13.8	20.4	68	0.3	2.6	3.3	363	1.27	2.2	3.3	2.6	10	0.4	<0.1	0.6	40	0.14	0.038
til032 01+50W	Soil		<2	8.1	32.4	192.3	306	0.6	11.6	18.7	597	4.48	4.0	1.0	3.7	14	1.0	0.2	4.0	85	0.22	0.044
til032 01+75W	Soil		<2	22.1	11.6	13.5	44	0.2	5.2	2.7	146	2.22	14.8	14.4	1.9	12	0.1	0.4	0.9	67	0.13	0.020
til032 02+00W	Soil		16	25.8	22.1	10.3	24	<0.1	4.3	1.1	69	0.15	<0.5	1.4	0.1	253	4.8	0.2	0.1	4	4.38	0.070
til032 02+25W	Soil		8	8.8	132.5	32.5	291	0.2	9.1	7.0	324	2.76	6.9	7.0	4.1	26	0.4	2.0	0.9	38	0.45	0.031
til032 02+50W	Soil		4	9.1	28.8	17.1	76	0.2	5.6	8.4	260	3.69	7.3	2.0	1.8	27	0.9	0.6	0.6	44	0.21	0.027
til032 02+75W	Soil		16	9.9	41.7	10.8	12	0.2	5.1	8.7	1713	0.28	0.6	0.5	0.2	289	3.9	1.2	0.2	2	5.30	0.090
til032 03+00W	Soil		3	8.6	48.8	33.2	135	0.3	11.6	19.8	1608	2.59	2.6	1.4	4.0	35	2.5	0.2	1.1	41	0.39	0.029
til032 03+25W	Soil		<2	6.2	33.5	22.0	194	0.1	12.5	16.5	525	2.26	1.7	<0.5	3.9	70	0.6	0.2	0.9	45	0.76	0.031
til032 03+50W	Soil		5	12.5	53.4	26.7	32	0.5	6.4	8.3	164	3.02	2.6	1.9	5.3	104	0.3	0.3	0.6	20	1.14	0.065
til032 03+75W	Soil		<2	15.2	9.7	23.2	62	<0.1	2.9	4.7	168	1.62	1.5	<0.5	2.6	13	0.2	0.2	0.8	46	0.16	0.012
til032 04+00W	Soil		4	3.3	45.0	21.6	223	0.1	6.0	22.4	1406	3.79	4.6	<0.5	3.0	21	2.0	0.2	0.5	68	0.26	0.042
til032 04+25W	Soil		3	20.0	16.8	16.0	63	<0.1	5.3	6.2	270	3.01	4.7	<0.5	4.4	16	0.1	0.3	0.7	74	0.15	0.026
til032 04+50W	Soil		4	9.3	22.7	21.4	83	<0.1	13.9	7.3	214	4.19	34.4	1.2	5.8	15	0.3	2.0	0.3	25	0.14	0.035
til032 04+75W	Soil		11	7.6	6.0	9.6	20	<0.1	2.5	2.1	75	1.15	1.8	<0.5	2.0	9	0.2	0.2	0.5	39	0.09	0.008
til032 05+00W	Soil		L.N.R.																			
CRTIS 001	Soil		14	0.9	23.1	18.7	54	0.2	9.5	9.0	469	2.24	5.4	7.9	6.3	18	0.4	0.3	0.5	46	0.30	0.096
AHTID 001	Soil		10	1.6	15.8	24.6	48	0.2	9.4	7.6	343	2.49	8.1	7.3	0.4	13	<0.1	0.4	0.8	56	0.13	0.045
AHTID 002	Soil		11	1.5	17.6	26.8	40	0.2	6.7	5.1	209	1.79	5.4	7.7	0.3	14	0.2	0.3	1.0	38	0.15	0.084



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Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: September 04, 2013

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# WHI13000316.2

	Method	1DX																
	Analyte	La	Cr	Mg	Ва	Ti	В	AI	Na	к	w	Hg	Sc	ті	S	Ga	Se	Те
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
til031 04+75W	Soil	18	12	0.22	188	0.019	<20	0.74	0.008	0.03	0.4	0.10	1.8	0.1	0.23	2	4.8	<0.2
til031 05+00W	Soil	4	5	0.04	101	0.012	<20	0.25	0.008	0.05	2.3	0.04	0.8	<0.1	0.05	2	<0.5	<0.2
til032 00+00W	Soil	14	7	0.20	231	0.005	<20	1.18	0.005	0.19	0.3	<0.01	2.1	0.2	<0.05	5	<0.5	<0.2
til032 00+25W	Soil	8	18	0.49	148	0.072	<20	1.44	0.011	0.07	1.7	<0.01	2.8	<0.1	<0.05	7	<0.5	<0.2
til032 00+50W	Soil	11	19	0.43	236	0.072	<20	1.30	0.010	0.04	1.4	0.02	3.6	<0.1	<0.05	7	<0.5	0.2
til032 00+75W	Soil	6	161	1.00	222	0.023	<20	1.57	0.007	0.07	1.5	0.01	3.3	<0.1	<0.05	11	<0.5	1.1
til032 01+00W	Soil	7	15	0.45	168	0.034	<20	1.46	0.008	0.06	1.4	<0.01	2.6	0.1	<0.05	8	<0.5	<0.2
til032 01+25W	Soil	7	7	0.20	123	0.026	<20	0.98	0.005	0.06	0.8	0.01	1.5	<0.1	<0.05	6	<0.5	0.3
til032 01+50W	Soil	5	36	0.44	186	0.003	<20	1.80	0.005	0.14	3.7	0.02	4.3	0.1	<0.05	6	<0.5	1.0
til032 01+75W	Soil	5	21	0.29	87	0.030	<20	1.21	0.008	0.06	1.0	0.03	2.5	0.1	<0.05	7	<0.5	<0.2
til032 02+00W	Soil	<1	6	0.08	165	0.004	<20	0.11	0.007	0.02	0.2	0.06	0.1	<0.1	0.33	<1	1.9	<0.2
til032 02+25W	Soil	15	17	0.50	114	0.053	<20	1.19	0.014	0.08	1.2	0.02	7.2	<0.1	<0.05	4	<0.5	<0.2
til032 02+50W	Soil	4	9	0.13	275	0.004	<20	0.95	0.004	0.07	1.1	<0.01	2.6	0.1	<0.05	4	<0.5	0.6
til032 02+75W	Soil	2	4	0.10	303	0.004	<20	0.19	0.006	0.02	0.2	0.06	0.6	0.2	0.37	<1	5.9	<0.2
til032 03+00W	Soil	6	15	0.26	122	0.069	<20	1.03	0.015	0.08	1.0	<0.01	2.2	<0.1	<0.05	6	<0.5	0.2
til032 03+25W	Soil	8	38	0.39	133	0.068	<20	1.37	0.008	0.06	1.2	0.02	3.5	0.2	<0.05	6	<0.5	<0.2
til032 03+50W	Soil	21	18	0.11	147	0.041	<20	4.59	0.009	0.02	1.6	0.09	4.8	<0.1	0.07	4	2.0	0.2
til032 03+75W	Soil	6	10	0.25	72	0.041	<20	0.88	0.007	0.05	2.2	<0.01	1.8	<0.1	<0.05	6	<0.5	<0.2
til032 04+00W	Soil	5	14	0.49	379	0.010	<20	1.67	0.007	0.10	1.0	0.02	5.3	0.1	<0.05	7	<0.5	0.8
til032 04+25W	Soil	5	19	0.49	80	0.098	<20	1.11	0.009	0.09	0.9	0.04	2.5	<0.1	<0.05	8	<0.5	<0.2
til032 04+50W	Soil	21	7	0.11	112	0.004	<20	0.63	0.004	0.15	1.2	<0.01	2.0	<0.1	<0.05	3	<0.5	1.8
til032 04+75W	Soil	4	6	0.13	43	0.058	<20	0.48	0.006	0.06	0.7	<0.01	1.2	<0.1	<0.05	5	<0.5	<0.2
til032 05+00W	Soil	L.N.R.																
CRTIS 001	Soil	15	20	0.59	167	0.067	<20	1.29	0.011	0.14	1.2	0.02	3.5	<0.1	<0.05	5	<0.5	<0.2
AHTID 001	Soil	7	21	0.57	61	0.048	<20	1.46	0.010	0.04	1.5	0.02	1.8	<0.1	<0.05	6	<0.5	0.2
AHTID 002	Soil	8	17	0.47	55	0.037	<20	1.34	0.011	0.05	1.3	0.03	1.4	<0.1	<0.05	5	0.5	<0.2

**Acme**Labs<sup>™</sup> Client: TerraLogic Exploration Inc. Suite 200. 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA A Bureau Veritas Group Company www.acmelab.com Project: Titan Report Date: September 04, 2013 Acme Analytical Laboratories (Vancouver) Ltd. 9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158 1 of 2 1 of 2 Page: Part: QUALITY CONTROL REPORT WHI13000316.2 Method 1DX 3B 1DX Analvte Au Мо Cu Pb Zn Ag Ni Co Mn Fe As Au Th Sr Cd Sb Bi ν Са Unit % ppb ppm ppm ppm ppm ppm ppm ppm ppm % ppm ppb ppm ppm ppm ppm ppm ppm % MDL 2 0.1 0.1 1 0.1 0.1 0.01 0.5 1 0.1 0.1 2 0.01 0.001 0.1 0.1 1 0.5 0.1 0.1 **Pulp Duplicates** til030 03+75E Soil 30 2.0 23.2 56.9 72 0.2 7.6 485 2.52 17.8 24.9 0.5 0.3 0.7 0.7 58 0.26 0.065 11.8 19 REP til030 03+75E QC 2.0 22.7 58.2 70 7.4 492 18.2 27.2 0.8 0.7 0.064 0.3 11.6 2.56 0.5 20 0.3 59 0.29 til030 04+75E Soil 7 2.0 20.9 25.0 52 0.2 8.8 7.8 350 3.06 8.2 4.7 1.5 10 0.2 0.5 0.7 62 0.20 0.065 REP til030 04+75E QC 7 Soil 6 til030 09+00E 3.3 37.3 30.9 115 0.3 14.5 11.1 765 4.02 5.5 4.8 2.4 19 0.3 0.3 1.4 76 0.14 0.04 REP til030 09+00E OC 3.1 36.7 30.1 113 0.3 14.4 11.1 754 4.01 5.4 4.3 2.3 18 0.2 0.4 1.4 75 0.14 0.040 <2 til031 02+50W Soil 8.2 20.2 67.2 178 0.2 11.1 10.7 1859 2.16 5.5 0.7 2.4 15 1.7 0.2 0.7 50 0.24 0.032 REP til031 02+50W QC 9.5 21.0 74.6 185 0.2 11.6 11.7 2075 2.35 5.3 <0.5 2.5 18 1.7 0.2 0.8 56 0.27 0.034 til031 03+25W Soil 5 31.6 56.6 33.4 75 0.2 10.4 7.6 373 2.87 5.6 1.7 4.7 11 0.2 0.3 0.9 44 0.15 0.040 REP til031 03+25W QC 4 til032 04+25W Soil 3 20.0 16.8 16.0 63 < 0.1 5.3 6.2 270 3.01 4.7 < 0.5 4.4 16 0.1 0.3 0.7 74 0.15 0.026 REP til032 04+25W QC 4 AHTID 002 Soil 11 1.5 176 26.8 40 0.2 6.7 5.1 209 1.79 5.4 7.7 0.3 14 0.2 0.3 1.0 38 0.15 0.084 **REP AHTID 002** QC 1.5 16.5 26.5 41 0.2 6.6 5.2 203 1.76 5.1 12.0 0.3 14 0.2 0.3 0.8 38 0.15 0.082 Reference Materials STD DS9 Standard 13.0 106.8 120.2 323 2.0 45.5 8.3 606 2.46 23.1 110.0 5.3 64 2.2 4.3 5.9 43 0.69 0.084 STD DS9 13.2 100.9 117.3 311 1.8 41.5 7.8 599 2.38 22.8 116.0 5.5 68 2.2 4.2 6.1 43 0.73 0.082 Standard STD DS9 Standard 14.3 107.7 127.7 327 2.1 38.7 7.6 551 2.27 26.4 112.9 6.4 70 2.6 5.6 7.3 40 0.68 0.084 STD DS9 Standard 12.1 96.4 130.4 319 1.8 39.5 7.5 567 2.28 27.5 124.2 6.6 58 2.6 5.1 6.4 40 0.68 0.081 STD ORFAS45FA Standard 1.4 695 9 12.8 30 03 365.6 51.5 391 25 01 88 57 5 92 3 <0.1 01 02 309 0.03 0.028 27 0.026 STD OREAS45EA 12.6 0.2 332.5 47.6 7.7 57.0 8.8 3 0.2 0.2 0.03 Standard 1.3 646.8 378 23.16 < 0.1 296 13.4 STD OREAS45EA Standard 1.5 653.8 29 0.3 348.5 50.5 377 25.26 11.4 45.8 10.0 4 <0.1 0.3 0.3 271 0.03 0.028 1.5 599.7 12.5 325.4 9.5 3 0.3 0.3 0.027 STD OREAS45EA Standard 26 0.3 47.4 367 22.52 10.6 56.8 < 0.1 296 0.04 STD OXA71 Standard 82 STD OXA71 Standard 81 STD OXA71 Standard 80 83 STD OXA71 Standard 81 STD OXA71 Standard



Acme Analytical Laboratories (Vancouver) Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

## QUALITY CONTROL REPORT

Client: TerraLogic Exploration Inc.

1 of 2

Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: September 04, 2013

Page:

Part: 2 of 2

### WHI13000316.2

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	Hg	Sc	ті	S	Ga	Se	Те
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
til030 03+75E	Soil	11	25	0.62	244	0.040	<20	1.64	0.012	0.05	1.1	0.02	1.9	<0.1	<0.05	6	<0.5	0.4
REP til030 03+75E	QC	12	25	0.61	259	0.043	<20	1.59	0.013	0.06	1.0	0.02	1.9	0.1	<0.05	6	<0.5	0.8
til030 04+75E	Soil	8	22	0.58	53	0.059	<20	1.64	0.015	0.06	1.7	0.02	2.6	<0.1	<0.05	6	<0.5	0.3
REP til030 04+75E	QC																	
til030 09+00E	Soil	8	31	1.10	238	0.076	<20	3.28	0.011	0.25	1.4	0.04	4.2	0.2	<0.05	11	<0.5	<0.2
REP til030 09+00E	QC	8	31	1.09	241	0.075	<20	3.21	0.011	0.26	1.4	0.05	4.2	0.2	<0.05	11	<0.5	<0.2
til031 02+50W	Soil	6	26	0.30	146	0.035	<20	0.82	0.008	0.07	3.0	0.02	1.6	0.1	<0.05	5	<0.5	1.0
REP til031 02+50W	QC	7	29	0.31	149	0.039	<20	0.85	0.007	0.08	1.4	0.03	1.9	0.2	<0.05	5	<0.5	0.9
til031 03+25W	Soil	10	20	0.51	116	0.050	<20	1.76	0.010	0.10	1.8	0.03	3.4	0.1	<0.05	5	<0.5	<0.2
REP til031 03+25W	QC																	
til032 04+25W	Soil	5	19	0.49	80	0.098	<20	1.11	0.009	0.09	0.9	0.04	2.5	<0.1	<0.05	8	<0.5	<0.2
REP til032 04+25W	QC																	
AHTID 002	Soil	8	17	0.47	55	0.037	<20	1.34	0.011	0.05	1.3	0.03	1.4	<0.1	<0.05	5	0.5	<0.2
REP AHTID 002	QC	8	17	0.47	57	0.036	<20	1.31	0.010	0.05	1.5	0.05	1.6	<0.1	<0.05	5	<0.5	<0.2
Reference Materials																		
STD DS9	Standard	11	126	0.64	351	0.099	<20	0.94	0.082	0.37	2.7	0.20	2.3	5.5	0.12	5	5.3	5.1
STD DS9	Standard	12	123	0.63	336	0.103	<20	0.96	0.082	0.41	3.0	0.19	2.5	5.3	0.13	5	4.7	4.9
STD DS9	Standard	13	118	0.63	326	0.105	<20	0.92	0.075	0.38	2.7	0.18	2.6	5.4	0.16	4	4.4	5.6
STD DS9	Standard	12	117	0.65	316	0.092	<20	0.97	0.092	0.38	2.6	0.22	2.4	5.5	0.12	5	5.2	5.4
STD OREAS45EA	Standard	6	932	0.09	139	0.075	<20	2.90	0.022	0.05	<0.1	<0.01	68.5	<0.1	<0.05	13	0.7	<0.2
STD OREAS45EA	Standard	6	883	0.09	138	0.075	<20	2.72	0.020	0.05	<0.1	<0.01	71.0	<0.1	<0.05	11	0.6	<0.2
STD OREAS45EA	Standard	7	804	0.10	137	0.085	<20	3.00	0.019	0.05	<0.1	<0.01	78.8	<0.1	<0.05	12	1.4	<0.2
STD OREAS45EA	Standard	6	881	0.09	137	0.077	<20	2.83	0.018	0.05	<0.1	<0.01	73.4	<0.1	<0.05	11	1.1	<0.2
STD OXA71	Standard																	
STD OXA71	Standard																	
STD OXA71	Standard																	
STD OXA71	Standard																	
STD OXA71	Standard																	

Acr	<b>ne</b> Lab	)S <sup>™</sup>										Client	:	<b>Terra</b> Suite 2 Cranbr	<b>aLogic</b> 00, 44 - 1 ook BC V	2th Ave. 1C 2R7	<b>oratio</b> S. CANADA	n Inc.			
A Bureau Verita	as Group Company	-		www.a	acmela	b.com						Project:		Titan							
cmo Analytical Lab	oratorios (Vancouv	or) I td										Report [	Date:	Septen	nber 04, 2	2013					
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QUALITY (	CONTROL	REP	OR1	Γ												WH	1130	0003	16.	2	
		3B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
		nnh	nnm	maa	maa	ppm	maa	maa	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	maa	maa	%	%
		644	66.0	P P	1.1.		P P	P P										1.1.			
		2	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
STD OXA71 Expected		<b>2</b> 84.9	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
STD OXA71 Expected STD DS9 Expected		84.9	0.1 12.84	<b>0.1</b>	<b>0.1</b> 126	<b>1</b> 317	<b>0.1</b>	<b>0.1</b> 40.3	<b>0.1</b> 7.6	<b>1</b> 575	<b>0.01</b> 2.33	<b>0.5</b> 25.5	<b>0.5</b> 118	<b>0.1</b> 6.38	<b>1</b> 69.6	<b>0.1</b>	<b>0.1</b>	<b>0.1</b> 6.32	<b>2</b>	<b>0.01</b> 0.7201	<b>0.001</b> 0.0819
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp	pected	84.9	0.1 12.84 1.78	0.1 108 709	<b>0.1</b> 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	<b>1</b> 575 400	0.01 2.33 22.65	<b>0.5</b> 25.5 11.4	0.5 118 53	<b>0.1</b> 6.38 10.7	<b>1</b> 69.6 4.05	0.1 2.4 0.03	<b>0.1</b> 4.94 0.64	0.1 6.32 0.26	2 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK	pected Blank	2 84.9 <2	0.1 12.84 1.78	0.1 108 709	<b>0.1</b> 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	1 575 400	0.01 2.33 22.65	<b>0.5</b> 25.5 11.4	0.5 118 53	<b>0.1</b> 6.38 10.7	<b>1</b> 69.6 4.05	0.1 2.4 0.03	<b>0.1</b> 4.94 0.64	0.1 6.32 0.26	2 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK	pected Blank Blank	2 84.9 <2	0.1 12.84 1.78	0.1 108 709	0.1 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	1 575 400	0.01 2.33 22.65	<b>0.5</b> 25.5 11.4	0.5 118 53	0.1 6.38 10.7	1 69.6 4.05	0.1 2.4 0.03	0.1 4.94 0.64	0.1 6.32 0.26	2 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK	pected Blank Blank Blank Blank	2 84.9 2<2	0.1 12.84 1.78	0.1 108 709	0.1 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	1 575 400	0.01 2.33 22.65	0.5 25.5 11.4	<b>0.5</b> 118 53	0.1 6.38 10.7	1 69.6 4.05	0.1 2.4 0.03	<b>0.1</b> 4.94 0.64	0.1 6.32 0.26	<b>2</b> 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK BLK	bected Blank Blank Blank Blank Blank	2 84.9 	0.1 12.84 1.78	0.1 108 709	0.1 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	1 575 400	0.01 2.33 22.65	<b>0.5</b> 25.5 11.4	<b>0.5</b> 118 53	0.1 6.38 10.7	1 69.6 4.05	0.1 2.4 0.03	0.1 4.94 0.64	0.1 6.32 0.26	2 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK BLK BLK	Dected Blank Blank Blank Blank Blank Blank	2 84.9 	0.1 12.84 1.78	0.1 108 709	0.1 126 14.3	1 317 30.6	0.1 1.83 0.311	<b>0.1</b> 40.3 357	0.1 7.6 52	1 575 400	0.01 2.33 22.65	<b>0.5</b> 25.5 11.4	0.5 118 53	0.1 6.38 10.7	1 69.6 4.05	0.1 2.4 0.03	0.1 4.94 0.64	0.1 6.32 0.26	2 40 295	0.01 0.7201 0.032	0.001 0.0819 0.029
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK BLK BLK BLK	Dected Blank Blank Blank Blank Blank Blank Blank Blank	2 84.9 <2 <2 <2 <2 <2 <2 <2 3	0.1 12.84 1.78	0.1 108 709 <0.1	0.1 126 14.3 <0.1	1 317 30.6	0.1 1.83 0.311 <0.1	0.1 40.3 357 <0.1	0.1 7.6 52 <0.1	1 575 400 	0.01 2.33 22.65 	0.5 25.5 11.4 <0.5	0.5 118 53 	0.1 6.38 10.7	1 69.6 4.05	0.1 2.4 0.03	0.1 4.94 0.64	0.1 6.32 0.26	2 40 295 	0.01 0.7201 0.032 	0.001
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK BLK BLK BLK BLK BLK	Dected Blank Blank Blank Blank Blank Blank Blank Blank Blank	2 84.9 <2 <2 <2 <2 <2 <2 3	0.1 12.84 1.78 (0.1 <0.1	0.1 108 709 <0.1 <0.1	0.1 126 14.3 <0.1	1 317 30.6 	0.1 1.83 0.311 	0.1 40.3 357 <0.1 <0.1	0.1 7.6 52 <0.1 <0.1	1 575 400 	0.01 2.33 22.65 	0.5 25.5 11.4 <0.5 <0.5	0.5 118 53 <0.5	0.1 6.38 10.7 	1 69.6 4.05 <1 <1	0.1 2.4 0.03 <0.1 <0.1	0.1 4.94 0.64 	0.1 6.32 0.26 (0.1 <0.1	2 40 295 	0.01 0.7201 0.032 	0.001 0.0819 0.029 
STD OXA71 Expected STD DS9 Expected STD OREAS45EA Exp BLK BLK BLK BLK BLK BLK BLK BLK BLK	Dected Blank Blank Blank Blank Blank Blank Blank Blank Blank Blank	2 84.9 <2 <2 <2 <2 <2 3 3	<pre>0.1 12.84 1.78 </pre>	0.1 108 709 <0.1 <0.1 <0.1	0.1 126 14.3 <0.1 <0.1 <0.1 <0.1	1 317 30.6 	0.1 1.83 0.311 <0.1 <0.1 <0.1 <0.1	0.1 40.3 357 <0.1 <0.1 <0.1 <0.1	0.1 7.6 52 <0.1 <0.1 <0.1	1 575 400 	0.01 2.33 22.65 	0.5 25.5 11.4 <0.5 <0.5 <0.5	0.5 118 53 <0.5	0.1 6.38 10.7 <0.1 <0.1 <0.1	1 69.6 4.05	0.1 2.4 0.03 <0.1	0.1 4.94 0.64 	0.1 6.32 0.26 (0.1 <0.1 <0.1	2 40 295 (2) (2) (2) (2) (2) (2) (2) (2)	0.01 0.7201 0.032 	0.001 0.0819 0.029 0.029 0.029 0.029 0.029 0.020 0.001 <0.001





Acme Analytical Laboratories (Vancouver) Ltd. 9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

### CERTIFICATE OF ANALYSIS

#### **CLIENT JOB INFORMATION**

Project:	Titan
Shipment ID:	TI13-001
P.O. Number	
Number of Samples:	1

#### 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.

#### TerraLogic Exploration Inc. Invoice To: Suite 200, 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA

CC:

Jesse Campbell

Client: TerraLogic Exploration Inc. Suite 200, 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA

Submitted By:	Chris Gallagher
Receiving Lab:	Canada-Whitehorse
Received:	August 29, 2013
Report Date:	September 10, 2013
Page:	1 of 2

### WHI13000380.1

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	1	Dry at 60C			WHI
SS80	1	Dry at 60C sieve 100g to -80 mesh			WHI
3B	1	Fire assay fusion Au by ICP-ES	30	Completed	VAN
1DX	1	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	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. Acre 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.

Acn	<b>ne</b> l ah	)S <sup>™</sup>										Clien	t:	<b>Terr</b> Suite : Cranb	<b>aLogi</b> 200, 44 - rook BC	<b>ic Exp</b> 12th Ave V1C 2R7	lorati e. s. CANAD	on Inc	;_		
A Bureau Veritas	Group Company	5		www.	acmela	ab.com						Project		Titan							
Acme Analytical Labor	atories (Vancouve	er) Ltd.										Report	Date:	Septe	mber 10,	2013					
9050 Shaughnessy St	Vancouver BC V	6P 6E5 (	CANAE	A																	
PHONE (604) 253-315	58											Page:		2 of 2					Par	t: 1	of 2
CERTIFICA	TE OF AN	IALY	SIS													WF	4113	000	380.	1	
	Method	3B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	2	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
til032 05+00W	Soil	49	1.9	425.8	6.4	68	0.3	7.8	2.9	283	0.33	<0.5	2.0	0.3	200	3.1	1.1	0.1	3	5.50	0.089

Acn	AcmeLabs <sup>™</sup> A Bureau Veritas Group Company www.acmelab.com Pl															<b>ic Exp</b> 12th Ave V1C 2R7	<b>olorati</b> e. S. 7 CANAD	on In A	с.	
A Bureau Veritas	Group Company			www.	acmel	ab.com						Projec	t:	Titan						
Acme Analytical Labor	atories (Vancouve	er) Ltd.										Report	t Date:	Septe	mber 10,	2013				
9050 Shaughnessy St PHONE (604) 253-315	cme Analytical Laboratories (Vancouver) Ltd. )50 Shaughnessy St_Vancouver BC V6P 6E5 CANADA HONE (604) 253-3158																		Part:	2 of 2
CERTIFICA	TE OF AN	IALY	SIS													Wł	4113	000	380.1	
	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX		
	Analyte	La	Cr	Mg	Ва	Ті	в	AI	Na	к	w	Hg	Sc	ті	S	Ga	Se	Те		
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm		
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2		
til032 05+00W	Soil	12	7	0.10	184	0.006	<20	0.33	0.008	0.01	0.5	0.10	0.5	0.1	0.27	1	6.8	<0.2		

Acm	<b>e</b> Lab	)S <sup>™</sup>										Client	:	<b>Terra</b> Suite 20 Cranbro	<b>aLogic</b> 00, 44 - 1 ook BC V	2th Ave. 1C 2R7 (	<b>oratio</b> s. CANADA	n Inc.			
A Bureau Veritas Gro	up Company			www.	acmela	b.com						Project:		Titan							
cme Analytical Laborato	ries (Vancouve	ar) I ta										Report I	Date:	Septem	ber 10, 2	013					
		r = r = r																			
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				-								-				\ A /1 1	1400		00	1	
QUALITY CO	NIROL	REP	OR													VVH	1130	0003	80.	1	
	Method	3B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	v	Ca	F
	Unit	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	2	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																					
til032 05+00W	Soil	49	1.9	425.8	6.4	68	0.3	7.8	2.9	283	0.33	<0.5	2.0	0.3	200	3.1	1.1	0.1	3	5.50	0.089
REP til032 05+00W	QC	I.S.																			
Reference Materials																					
STD DS9	Standard		11.1	103.9	130.4	291	1.7	35.9	7.1	520	2.15	24.4	111.8	5.6	64	2.3	5.3	6.7	37	0.63	0.077
	Standard		1.3	594 3	13.9	26	0.2	205.0	45.8	348	22.01	9.2	59.0	9.6	3	<0.1	0.3	0.2	255	0.03	0.026
STD UREAS45EA				000				200.0	10.0	0.0											
STD OREAS45EA STD OXA71	Standard	119						235.5	10.0	0.0											
STD OREAS45EA STD OXA71 STD DS9 Expected	Standard	119	12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
STD OREAS4SEA STD OXA71 STD DS9 Expected STD OREAS45EA Expected	Standard	119	12.84 1.78	108 709	126 14.3	317 30.6	1.83 0.311	40.3	7.6	575 400	2.33 22.65	25.5 11.4	118 53	6.38 10.7	69.6 4.05	2.4 0.03	4.94 0.64	6.32 0.26	40 295	0.7201	0.0819
STD OREAS4SEA STD OXA71 STD DS9 Expected STD OREAS45EA Expected STD OXA71 Expected	Standard	84.9	12.84 1.78	108 709	126 14.3	317 30.6	1.83 0.311	40.3 357	7.6	575 400	2.33 22.65	25.5 11.4	118 53	6.38 10.7	69.6 4.05	2.4 0.03	4.94 0.64	6.32 0.26	40 295	0.7201	0.0819
STD OREAS4SEA STD OXA71 STD DS9 Expected STD OREAS45EA Expected STD OXA71 Expected BLK	Standard Blank	119 84.9	12.84 1.78 <0.1	108 709 <0.1	126 14.3 <0.1	317 30.6	1.83 0.311 <0.1	40.3 357 <0.1	7.6 52 <0.1	575 400 <1	2.33 22.65 <0.01	25.5 11.4 <0.5	118 53 <0.5	6.38 10.7 <0.1	69.6 4.05 <1	2.4 0.03 <0.1	4.94 0.64 <0.1	6.32 0.26 <0.1	40 295 <2	0.7201 0.032 <0.01	0.0819



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Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: September 10, 2013

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### WHI13000380.1

	Method	102	101	102	101	102	101	101	102	102	101	102	101	101	102	101	101	108
	Analyte	la.	Cr	Ma	Ba	Ті	B		Na	ĸ	w	На	Sc	т	S	Ga	Se	Te
	Unit	nnm	nnm	%	nnm	%	nnm	%	%	%	nnm	nnm	nnm	nnm	%	nnm	nnm	nnm
	MDI	1	1	0.01	بر 1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	2011 1	0.5	0.2
Pulp Duplicates		· ·			-						•		•••	•		•		
til032 05+00W	Soil	12	7	0.10	184	0.006	<20	0.33	0.008	0.01	0.5	0.10	0.5	0.1	0.27	1	6.8	<0.2
REP til032 05+00W	QC																	
Reference Materials																		
STD DS9	Standard	10	109	0.60	261	0.097	<20	0.84	0.070	0.36	2.9	0.20	2.0	5.0	0.11	4	4.6	4.7
STD OREAS45EA	Standard	6	708	0.09	129	0.080	<20	2.59	0.020	0.04	<0.1	<0.01	69.1	<0.1	<0.05	10	<0.5	<0.2
STD OXA71	Standard																	
STD DS9 Expected		13.3	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
STD OREAS45EA Expected		8.19	849	0.095	148	0.106		3.32	0.027	0.053		0.34	78	0.072	0.044	11.7	2.09	0.11
STD OXA71 Expected																		
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	< 0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank																	

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### QUALITY CONTROL REPORT

5.2 Rock Samples



Acme Analytical Laboratories (Vancouver) Ltd. 9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

### CERTIFICATE OF ANALYSIS

#### **CLIENT JOB INFORMATION**

Project:	Titan
Shipment ID:	TI13-002
P.O. Number	
Number of Samples:	5

#### 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:	TerraLogic Exploration Inc.
	Suite 200, 44 - 12th Ave. S.
	Cranbrook BC V1C 2R7
	CANADA

CC:

Jesse Campbell

Client: TerraLogic Exploration Inc. Suite 200, 44 - 12th Ave. S. Cranbrook BC V1C 2R7 CANADA

Submitted By:	Chris Gallagher
Receiving Lab:	Canada-Whitehorse
Received:	August 20, 2013
Report Date:	September 13, 2013
Page:	1 of 2

### WHI13000315.1

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-500	5	Crush, split and pulverize 500 g rock to 200 mesh			VAN
3B01	5	Fire assay fusion Au by ICP-ES	30	Completed	VAN
1D01	5	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	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. Acre 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.

Acn	<b>1e</b> Lab	)S <sup>™</sup>										Clien	t:	<b>Terr</b> Suite : Cranb	<b>raLog</b> 200, 44 - prook BC	IC Exp 12th Ave V1C 2R7	<b>lorati</b> e. S. <sup>7</sup> CANAD.	on Inc A	-		
A Bureau Veritas	Group Company			www.	acmela	b.com						Project	:	Titan							
Acme Analytical Labor	atories (Vancouve	⊃r) I td										Report	Date:	Septe	mber 13,	, 2013					
9050 Shaughnessy St PHONE (604) 253-315	Vancouver BC V 58	6P 6E5	CANAD	A								Page:		2 of 2					Pa	rt: 1	of 2
CERTIFICA	TE OF AN	JALY	SIS													W	4113	000	315	.1	
	Method	WGHT	3B	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	Wgt	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	v	Ca	Р
	Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	2160	1	100	3	125	0.3	1	1	2	0.01	2	2	1	0.5	-2	3	1	0.01	0.001
	ROCK	1.01	3160		100	3001	135	7.0	25	10	1524	4.14	27	< <u></u>	8 227	1.0	< 3	< 3	24	<0.01	0.008
	Rock	0.01	93	<1	26	40	57	<0.4	20	10	857	3.49	21	S	<u> </u>	<0.5	<	<	4	1 60	0.031
AHTIR008	Rock	1 21	<2	4	107	7	76	<0.3	16	18	495	4 00	16	4	17	<0.5	<3	-5	72	1.05	0.079
AHTIR009	Rock	1.09	5	4	62	36	129	0.5	5	10	864	6.48	5	5	6	<0.5	<3	7	92	0.33	0.105
I																					



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### CERTIFICATE OF ANALYSIS

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Client:

Project: Titan Report Date: September 13, 2013

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# WHI13000315.1

TerraLogic Exploration Inc.

	Method	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	La	Cr	Mg	Ва	Ti	в	AI	Na	κ	w	S	Hg	ті	Ga	Sc
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5
AHTIR005	Rock	2	12	0.01	397	0.001	<20	0.06	<0.01	0.04	<2	0.74	<1	<5	<5	<5
AHTIR006	Rock	8	26	1.61	181	0.002	<20	1.66	<0.01	0.18	<2	0.47	<1	<5	5	<5
AHTIR007	Rock	25	35	1.10	150	0.004	<20	1.25	0.01	0.15	<2	0.16	<1	<5	6	6
AHTIR008	Rock	6	25	1.05	11	0.101	<20	1.64	0.07	0.07	<2	1.14	<1	<5	8	6
AHTIR009	Rock	5	4	1.64	16	0.280	<20	1.63	0.03	0.12	<2	2.22	<1	<5	12	11

Acm	eLab	)S™										Client	:	<b>Terra</b> Suite 2 Cranbro	<b>aLogi(</b> 00, 44 - 1 ook BC V	<b>C Expl</b> 12th Ave. /1C 2R7 (	<b>oratio</b> s. canada	n Inc.			
A Bureau Veritas Gro	up Company			www.a	acmela	b.com						Project:		Titan							
Acme Analytical Laborator 2050 Shaughnessy St Va	ies (Vancouve ncouver BC V	er) Ltd. 6P 6E5 C	CANAD	A								Report I	Date:	Septerr	nber 13, 2	2013					
PHONE (604) 253-3158												Page:		1 of 1					Par	t: 1 o	of 2
QUALITY CO	NTROL	REP	OR	Γ												WH	1130	0003	815.	1	
	Method	WGHT	3B	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	11
	Analyte	Wgt	Au	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	v	Ca	I
	Unit	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	2	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	0.00
Pulp Duplicates																					
AHTIR009	Rock	1.09	5	4	62	36	129	0.5	5	10	864	6.48	5	5	6	<0.5	<3	7	92	0.33	0.10
REP AHTIR009	QC		5	4	61	35	127	0.5	4	10	829	6.18	4	5	6	<0.5	<3	7	89	0.32	0.10
Reference Materials																					
STD DS9	Standard			13	111	130	328	1.7	41	8	591	2.40	28	6	72	2.5	8	7	42	0.73	0.08
STD OREAS45EA	Standard			2	704	17	27	<0.3	406	58	413	26.08	15	13	3	<0.5	<3	<3	318	0.03	0.028
STD OXC109	Standard		209																		
STD OXC109 Expected			201																		
STD DS9 Expected				12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
STD OREAS45EA Expected				1.78	709	14.3	30.6	0.311	357	52	400	22.65	11.4	10.7	4.05				295	0.032	0.029
BLK	Blank		<2																		
BLK	Blank			<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.00
Prep Wash																					
G1-WHI	Pren Blank		-2	-1	2	-0	40	-0.0	4	4	000	0 40	-0	6	<b>F7</b>	<0 E	-2	-0	40	0.50	0.00



Acme Analytical Laboratories (Vancouver) Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA PHONE (604) 253-3158

# QUALITY CONTROL REPORT

Client: TerraLogic Exploration Inc.

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Suite 200, 44 - 12th Ave. S.

Cranbrook BC V1C 2R7 CANADA

Project: Titan Report Date: September 13, 2013

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	Method	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D	1D
	Analyte	La	Cr	Mg	Ва	Ti	в	AI	Na	к	w	S	Hg	ті	Ga	Sc
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5
Pulp Duplicates																
AHTIR009	Rock	5	4	1.64	16	0.280	<20	1.63	0.03	0.12	<2	2.22	<1	<5	12	11
REP AHTIR009	QC	5	3	1.58	15	0.270	<20	1.56	0.03	0.12	<2	2.15	<1	<5	13	11
Reference Materials																
STD DS9	Standard	13	120	0.64	333	0.106	<20	0.96	0.09	0.42	3	0.17	<1	<5	5	<5
STD OREAS45EA	Standard	7	903	0.10	154	0.092	<20	3.37	0.02	0.06	<2	<0.05	<1	<5	8	88
STD OXC109	Standard															
STD OXC109 Expected																
STD DS9 Expected		13.3	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	0.1615	0.2	5.3	4.59	2.5
STD OREAS45EA Expected		8.19	849	0.095	148	0.106		3.32	0.027	0.053		0.044	0.34		11.7	78
BLK	Blank															
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5
Prep Wash																
G1-WHI	Prep Blank	12	9	0.53	169	0.123	<20	0.96	0.09	0.52	<2	<0.05	<1	<5	6	<5
#### Appendix VI – Bedrock Geologic Mapping

6.1 Station Locations6.2 Lithology6.3 Mineralization6.4 Structure

## 6.1 Appendix - Station Locations

Station Number	Project	Date	Location Method	Map Datum	UTM Zone	Easting	Northing	Accuracy (m)	Notes
AHTIG005	TI	8/9/2013	GPS	NAD83	8N	537924	6594639	4	
AHTIG004	TI	8/9/2013	GPS	NAD83	8N	538129	6594348	4	
AHTIG006	TI	8/9/2013	GPS	NAD83	8N	540483	6592469	7	location if moose south, 5 m shaft sunk into bedrock
AHTIG007	TI	8/9/2013	GPS	NAD83	8N	540496	6592490	9	

## 6.2 Appendix - Lithology

Wednesday, December 11, 2013

Station Number	Date	Degree of Transport	Major Rock Type
AHTIG004	8/9/2013	float	vein
AHTIG004	8/9/2013	subcrop	metasiltstone
AHTIG005	8/9/2013	subcrop	quartzite
AHTIG006	8/9/2013	outcrop	metasiltstone
AHTIG007	8/9/2013	subcrop	quartzite

# 6.3 Appendix - Mineralization

Wednesday, December 11, 2013

Station Number	Date	Mineral	Style	Grain Size
AHTIG004	8/9/2013	galena	disseminated	medium
AHTIG004	8/9/2013	pyrite	disseminated	fine
AHTIG004	8/9/2013	pyrite	disseminated	fine
AHTIG004	8/9/2013	arsenopyrite	disseminated	fine
AHTIG005	8/9/2013	pyrite	disseminated	
AHTIG006	8/9/2013	pyrite	disseminated	fine
AHTIG007	8/9/2013	pyrite	disseminated	fine
AHTIG007	8/9/2013	chalcopyrite	disseminated	fine

#### 6.4 Appendix - Structure

Station Number	Structure Number	Name	Azimuth	Dip	Quality	Notes
AHTIG006	1	compositional layering	145	21	good	
AHTIG006	2	fracture	264	64	good	qtz-calcite veining after fractures
AHTIG006	3	fracture	136	14	good	qtz-calcite veining after fractures