GEOCHEMISTRY REPORT

on the

SIDINA PROJECT

Latitude: 55° 25’ 24’’ N
Longitude: 127° 31’ 13’’ W

Omineca Mining Division, British Columbia
NTS Map Sheet 93M 043

For

TAD MINERAL EXPLORATION LTD.
Suite 1470-701 West Georgia Street
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By

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Dated: August 25, 2012

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1.0 SUMMARY

The Hazelton Sidina Property is located 22 kilometres northeast of Hazleton, British Columbia in the Omineca Mining Division. The property was previously explored for vein type gold - silver bearing mineralization by Noranda in 1987 and 1988.

During the period July 10 to July 16, 2012, Rio Minerals Limited carried out a program of grid emplacement and geochemical soil sampling over an area of gold-silver bearing quartz-sulphide vein/replacement mineralization in the Camp and West Creek Zones. Fieldwork was done on behalf of TAD Mineral Exploration Ltd. This report describes and evaluates this programme.

A total of 94 soil samples have been geochemically analyzed at Acme Laboratories Ltd. of Vancouver, BC using multi-element ICP (aqua regia digestion) and mass spectroscopy laboratory methods.

Mineralization consisting of gold, silver, copper, lead, and zinc-bearing sulphides are associated with late-stage quartz veining in fault/fissure/shear zones resulting in multiple, sub-parallel veins. The veins appear to be persistent over considerable strike lengths (>100 meters). The veins are hosted by Cretaceous Bulkley Plutonic Suite (monzonite, quartz monzonite to granite), and extend into the surrounding country rock that consists of hornfels sediments of Middle Jurassic-Late Cretaceous Bowser-Skeena Group. Veins trend west-northwest and northwest (dipping shallow to moderate north) whereas the regional faults trend northeast and are steeply dipping, suggesting the quartz-sulphide veins are tensional (or dilational) pull-apart structures and late-stage infilling of residual metal-enriched hydrothermal fluids.

.

The mineralization observed to date has two mineralogical characteristics that impact the precious metal grades:

- mineralization dominated by arsenopyrite-pyrite banded intergrowths
- mineralization dominated by banded arsenopyrite with minor pyrite-galena-sphalerite-tetrahedrite at the vein margins

Locally, the veins carry small amounts of copper sulphides that include tetrahedrite.

There are a minimum of nine narrow, shallow dipping, quartz-sulphide veins present over the “Camp Area” which to date measures 130 x 150 metres. The area has minimal rock exposure although the depth to bedrock is relatively shallow.

Gold mineralization on the property conforms to a broadly defined intrusion related class of deposits. The distinctive feature of this class of gold deposits are

sheeted arrays of parallel, single-stage quartz veins which are found over 10s to 100s of metres and preferentially located in the pluton's cupola. These types of veins are also described as the "reduced intrusion-related gold systems" represented by Fort Knox, Pogo, Donlin Creek, and Dublin Gulch deposits in Alaska and the Yukon.

2.0 INTRODUCTION

The Sidina Property is located 22 kilometres northeast of Hazleton, British Columbia in the Omineca Mining Division (Figures 1 and 2). The property encompasses occurrences of silver-lead-zinc-gold veins explored by trenches in the early 1980's. Exploration work by Noranda in 1987 and 1988 had focused on the significant gold grades carried by numerous narrow quartz veins hosted within granitic stock and hornfelsed sediments. There was no work reported on the property between 1988 and 2006.

During July of 2012, Rio Minerals Limited carried out a programme of grid and geochemical surveys consisting of the emplacement of three - 750 meter grid lines with 25 meter stations, and the collection of 89 soil samples. The sample sites were marked by pickets with the UTM grid coordinates written on the pickets.

Mineralization consisting of gold, silver, copper, lead, and zinc occurs within multiple, sub-parallel veins. The veins appear to be persistent over considerable strike lengths. The veins are hosted by a Cretaceous monzonite to granite intrusion and extend into the surrounding hornfels (indurated) sediments of the Bowser-Skeena Group.

A follow-up program of Induced Polarization and magnetometer surveys as well as 2,550 meters of diamond drilling at an estimated cost of $624,792.00 is recommended to test the extent of precious metal mineralization in the down-dip and lateral extension of the Upper and Lower Camp Zones. The main objective of the programme would be to determine a drill indicated resource estimate and define boundaries of significant gold silver bearing mineralization. The main areas recommended for drill testing are the north and east extension of the gold-silver-arsenic-copper-lead-zinc bearing quartz-sulphide veins that occur in the Camp and North Zones. A drill hole on the west side of West Creek (parallel and 50 meters west of SD10DDH-6) is also recommended.

3.0 PROPERTY DESCRIPTION

The property is centered on Latitude 55º 25' N and Longitude 127º 30' W within NTS map sheet 93M 043. The Sidina claim group consists of eight un-surveyed contiguous MTO (Mineral Titles Online) tenures located in the Omineca Mining Division of British Columbia, Canada (Figure 2). The total claim area is 3795.22 hectares. Claim data is summarized in the following table and a map showing the claim is presented as Figure 2.

Table 1: Claims and Areas

Tenure Number	Claim Name	Area (ha)	Good To Date
536839	SIDINA	1156.40	2013/aug/29
536840	SUNRISE-2	202.43	2013/aug/29
538846	SIDINA - 5	73.44	2013/aug/29
625745	COLLINS - 3	73.47	2013/aug/29
625746	COLLINS - 4	7.05	2013/aug/29
503449	AMERICAN BOY	460.20	2013/aug/29
505083	AMERICAN BOY - 2	110.44	2013/aug/29
505084	AMERICAN BOY - 3	110.46	2013/aug/29
509751	JANELLE	73.65	2013/aug/29
513260	-	901.29	2013/aug/29
518499	SUNRISE - 3	92.01	2013/aug/29
518579	SUNRISE - 5	18.39	2013/aug/29
524394	SUNRISE - 4	202.37	2013/aug/29
536824	SUNRISE - 6	36.76	2013/aug/29
536838	SUNRISE	275.86	2013/aug/29

Figure 1: General Location of Property

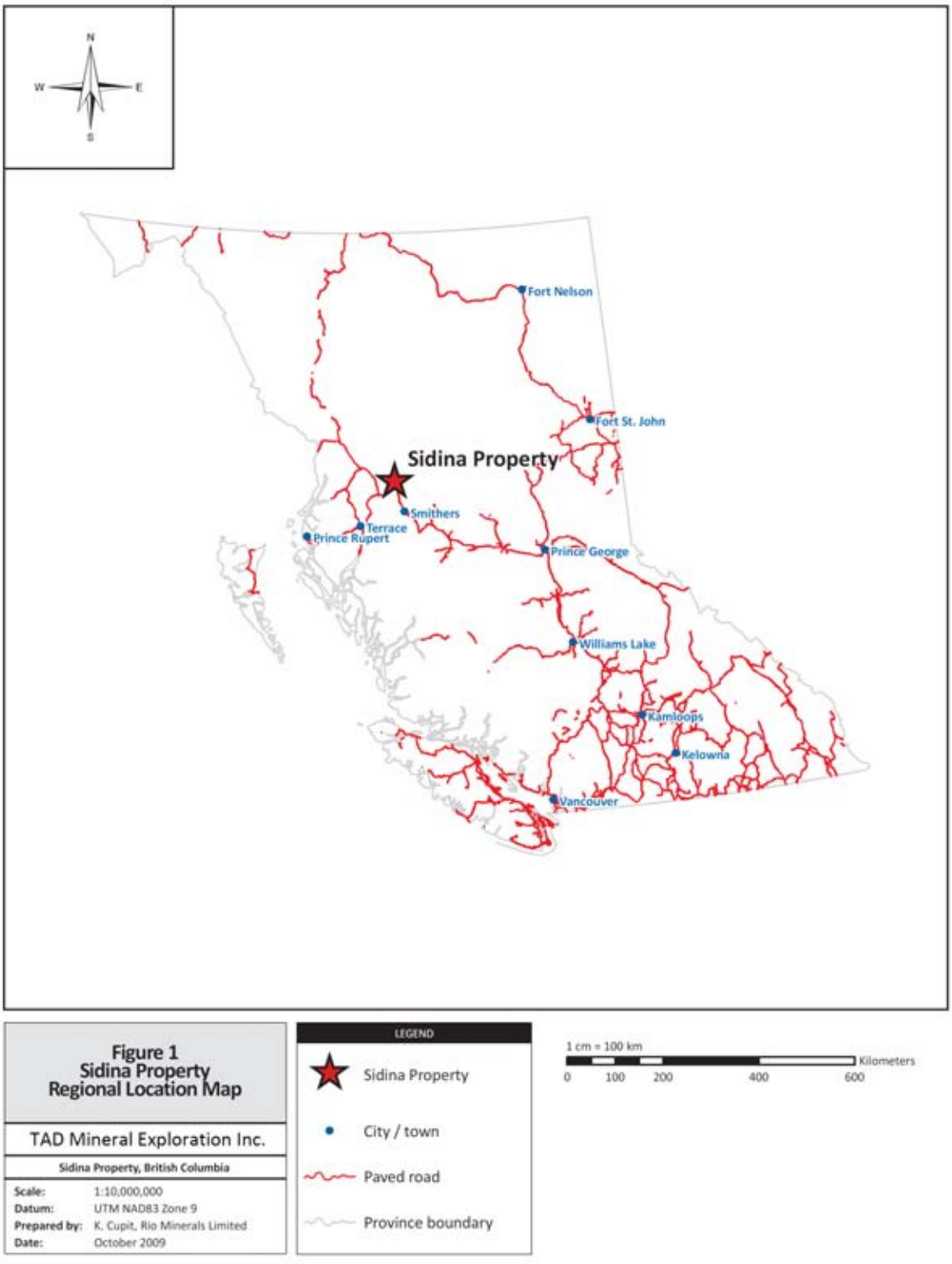
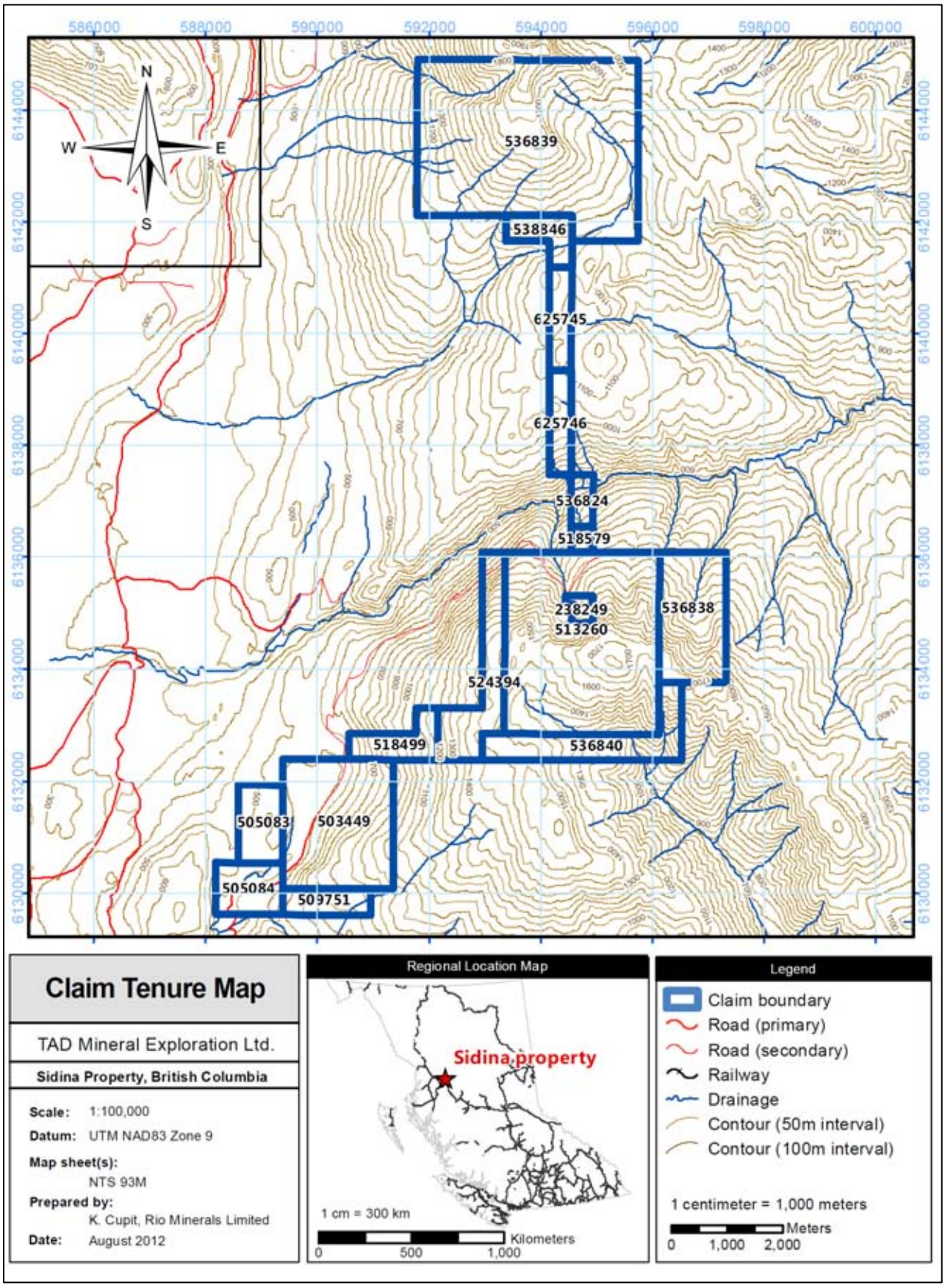


Figure 2: Claim Map



4.0 LOCATION, ACCESS AND TOPOGRAPHY

The Sidina Property is located 22 kilometers northeast of Hazleton, British Columbia, in the Omineca Mining Division (Figure 1). Hazelton and the surrounding communities have a population of approximately 1500. Hazelton lies on Highway 16, the major corridor connecting the main city of Prince George to the deep-sea port of Prince Rupert. The nearest major supply and services center is the town of Smithers, located 70 kilometres south of Hazelton. Logging, mining, and tourism are the main economic activities in the area.

Access to the property is by helicopter from Smithers or via a network of logging roads traversing the western boundary of the property along the banks of Skeena River. The distance from the Sidina gold showings to the main logging road is 4.5 kilometres.

The property is situated at the southern extent of the Skeena Mountains and covers a 28 sq km area ranging from 1035 meters to 1828 meters in elevation. The topography of the property consists of subdued alpine terrain and deeply incised streams. Sidina Creek, West and East Creeks, as well as many others in the area flow throughout the field season, whereas some creeks are dry after July.

Annual precipitation in the valleys ranges from 50 to 100 centimeters, with average summer temperatures around 15 degrees centigrade and winter temperatures ranging from -10 to -15 degrees Celsius. Valleys and mountainsides are forested up to about 1400 metres, with various mixtures of hemlock, spruce, cedar, balsam fir, balsam poplar, and lodge pole pine.

5.0 EXPLORATION HISTORY

The Silverton prospect, located on the south side of Sidina Mountain had a short history of hand production dating back to 1981 which realized 250,655 grams of silver, 415 grams of gold, 9168 kilograms of lead, and 13,066 kilograms of zinc from 143 tonnes of ore (Minfile Report #93M 038).

With the exception of several open-cuts and small pits there are no mining excavations on the property.

1986

During the summer of 1986, Paul Huel staked the Raven 1-6 claims and enacted a small sampling programme with the highest rock sample assaying 0.942 opt Au.

1987-1988

From 1987-1988, Noranda Mining and Exploration Inc. conducted two work programs on the Raven claims which consisted of prospecting, geology, and geochemical surveys. The conclusions and recommendations of that work were summarized in 1988 report by Noranda as follows:

"A large number of quartz-arsenopyrite-sphalerite veins are found in and around granitic Bulkley intrusive and surrounding hornfelsed Bowser Lake Group sediments. High grades for Au-As-Ag-Zn mineralization occur, but over narrow widths (less than 0.3 m). One grab sample (26801) of a quartz-pyrite-arsenopyrite vein assayed 0.882 opt (30.2 gmt) gold and 2.28 opt (78.1 gmt) Ag. The best chip sample (26755) assayed 0.82 opt (28 gmt) Au over 27 cm with 3.09 opt (105 gmt) Ag. Further work should be directed to locating additional gold mineralization as lower grade, large tonnage disseminated or stockwork zones, or as higher grade veins of greater width than found so far on the claims".

The claims were allowed to lapse and lay dormant until staked by Cadre Capital Inc. of Vancouver, B.C. acquired the present claims in 2005.

2006

In 2006 Cadre Capital vended the claims to Golden Sabre Resources, a private company that carried out a limited work program consisting of rock sampling and soil-grid geochemistry.

2009

In 2009, TAD Capital Corp., now TAD Mineral Exploration, carried out a work program which consisted of 11.2 kilometers of grid, 15.0 kilometers of total field magnetics, 30 meters of hand-trenching, and the collection of 151 soil and 51 rock samples. Geological mapping at a scale of 1:5000 was performed along the West Creek area where several narrow quartz-sulphide veins carrying elevated gold values were discovered. Rock sampling consisted mainly of chip and channel sampling across the true widths of exposed veins. A total of 42 rock samples were collected from four areas. Two of the areas had indications of hand drilling and blast trenching dating back to 1981. These are presently designated as the "Camp Area" and the "Southwest Area". Two additional areas prospected in 2009 have revealed new veins and are described in this report. From the total of 42 samples collected, 39 were channel-chip samples taken across the true width of the vein exposures. In total, 34 veins were located within the granitic stock and along the contact aureoles.

The area of interest is situated between two deeply incised creeks that have been named West Creek and East Creek and this vein system was the focus of gold exploration by Noranda in 1987 and 1988.

A total of twelve samples were collected from the vein exposures in the Camp Area. The samples returned gold values ranging from 0.87 to 52.48 g/t gold and from 2.4 to **>**100 g/t silver. The majority of the veins are striking northwesterly and have gentle dips to the northeast. True widths range from 6 to 47 cm. One of the newly discovered mineralized zones consists of two 25 cm thick veins separated by a 30 cm zone of altered monzonite host rock. The veins were exposed in a 0.8 x 1 metre trench and sampled across 0.8 metre width. This sample returned 1.91 g/t gold and 8.0 g/t silver (sample 723372).

Two veins in close proximity to each other have been exposed by shallow hand-trenches (samples 723351 and 723352). The vein dipping gently to the north (723351) contain 20% sulphides with arsenopyrite being the dominant sulphide. The vein dipping gently to the northeast contains relatively high pyrite and lesser arsenopyrite (723352). The later vein returned 52.48 g/t gold and greater than 100 g/t silver - the highest gold assays obtained in from the 2009 program.

In 1988, Noranda had exposed one of the centrally situated veins via trenching. Re-exposure of this trench has resulted in the documentation of a 127 metre quartz-sulphide vein striking 346º. Several locations of this trench were re-excavated for sampling using hand tools (samples 723353-723359 and 723368. The vein is dipping to the east-northeast at a 044º angle and ranges in width from 15 to 35 cm. Four channel samples returned an average weighted content of 3.74 g/t gold and 9.13 g/t silver. One sample from a silica-sulphide cemented fault fracture returned 3.62 g/t gold and 6.4 g/t silver across 6 cm (723356).

A large area situated between the headwaters of West and East Creeks contains a minimum of eight widely scattered veins. Most of the veins have widths to 19 cm. All veins are hosted by the hornfelsed sediments. Six of the veins were found during a prospecting traverse in September of 2009.

A total of nine channel samples were collected from the vein exposures in the North Area. The samples returned gold values ranging from 5.8 ppb to 21.35 g/t gold and from 22.8 to 41.9 g/t silver (samples 723386-723395).

In one location, a horizontal quartz-sulphide vein follows the footwall of the monzonite dyke. It is 10 to 19 cm thick and contains 30% arsenopyrite and 5% pyrite. The strike extension of this vein traverses the East Creek at the 1655m elevation where it is offset by a north-easterly trending, sub-vertical fault. The vein averages 6.7 g/t gold and 15.90 g/t silver from two channel samples collected (samples 723387 and 723389). A short distance further to the west, another dyke hosts a 10 cm vein that returned 21.35 g/t gold and 41.9 g/t silver (sample 723388).

A major fault along the West Creek follows the margin of a 15-metre wide dyke. The fault is steeply dipping to the southeast and is well exposed along the West Creek gorge at the 1565m elevation. Fifty metres east of this location, two minor quartz veins were exposed by digging through a shallow soil horizon. The veins are 8 and 12 cm thick and average 5.6 g/t gold and 26.7 g/t silver. Both veins strike roughly east-west while dipping in opposite directions (samples 723393 and 723394).

Five quartz-sulphide veins located in the 1980's outcrop over an area measuring 70 x 70 metres situated within the southwest part of the thermal aureole. The veins have widths ranging from 8 to 12 centimeters and contain on average 15% sulphides and consist mainly of arsenopyrite. The veins are striking to the northeast and are dipping southeast at various angles. Five samples collected from these veins produced grades ranging from 2.94 g/t to 8.84 g/t gold and from 8.3 g/t to 26.3 g/t silver (723387-723383).

The West Creek forms the best continuous rock exposure centered on the Sidina intrusion. A major fault follows the creek along the west bank. The outcrops reveal fracturing along the north-south trending subsidiary structures.

Five mineralized veins ranging from 6 to 30 cm in width were found along the sides of this creek. Two previously undocumented veins were sampled at the 1500m elevation. One vein was sampled in two locations across true widths of 20 and 30 cm (samples 723364 and 723376 respectively). The samples produced an average weighted value of 7.64 g/t gold and 71.8 g/t silver. The vein strikes to the west and is dipping to the north at 055º. A series of narrow mineralized veins (1.5cm in width) is present in the hanging wall monzonite across a 2 metre width.

A total field magnetic survey was conducted over 15km of grid during the 2009 program, and 5km of grid during the 2010 program. The survey was conducted using two Gem GSM-19 v5.0 Overhauser System total field magnetometers, one of which was used as a base station. Readings were taken at measured 12.5-metre intervals along grid lines, with duplicate measurements taken at the ends of each grid line and at the baseline. Diurnal corrections were performed automatically by GEMLink software from the two devices at the time the data was downloaded to a laptop computer.

Magnetometer readings drop to the east of East Ck, which roughly correlates with the well defined granite-monzonite stock (GM)/hornfels (HFS) boundary. Magnetometer readings over the granite-monzonite stock (in the west and central portion of the grid area), are about 50-150 nT higher than the hornfels (in the east portion of the grid area). There are several 100-200 nT positive anomalies (L 42750 N, stn 93300 E and 93400 E), which may be caused by a change in lithology, alteration and/or structure. The positive peaks do occur on topographic highs and should be trenched to find the cause of the magnetometer anomalies.

There are numerous magnetic lows (25-75 nT below average) that occur as 50-100 meter diameter spots (not interconnected).

There is a cluster of magnetometer low reading 'spots' on West Creek, which appears to correlate with the location of a large scale regional fault along West Creek that is trending northeast and dipping moderate-steep northwest (

2010

In September-October, 2010 Rio Minerals Limited commenced a program of 804 meters of diamond drilling and geochemical evaluation of half split NQ diameter drill core on behalf of TAD Mineral Exploration Ltd. The table 2 lists the location, direction, dip and depth of six drill holes:

Table 2: 2010 Drilling Locations

DDH no	azimuth	dip	easting	northing	elevation	depth m	depth ft	comments
SD10DDH-1	245	-50	593584	6142948	1546	123	403.44	site 1, 50 m W of East Ck
SD10DDH-2		-90	593584	6142948	1546	120	393.6	site 1, 50 m W of East Ck
SD10DDH-3	245	-50	593560	6142985	1554	141	462.48	site 2, 85 m W of East Ck
SD10DDH-4		-90	593560	6142985	1554	162	531.36	site 2, 85 m W of East Ck
SD10DDH-5	65	-60	593560	6142985	1554	87	285.36	site 2, 85 m W of East Ck
SD10DDH-6	250	-53	593289	6143040	1542	171	560.88	site 3, 300 m WNW of site 1
					total=	804	2637.12	

Note- SD10DDH-1 to 5 located at Camp Zone and SD10DDH-6 located at West Ck Zone

Drilling was technically successful in continuous coring across 0.3-1.1 meter interval lengths of quartz-sulphide zones. Core recovery was good-excellent and RQD (rock quality determination) overall was very high.

Table 3 highlights significant assay results with gold above 200 ppb.

Table 3: Select assays for 2010 Drilling

DDH No	Sample No*	From m	To m	Width m	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au g/t
SD10DDH-1	UCZ164007	20.7	21.2	0.5	196.8	3475.9	>10000	>100.0	1.42
SD10DDH-1	LCZ164042	114.95	115.25	0.3	239.7	361.5	161	15.5	0.51
SD10DDH-2	UCZ164056	22.5	23	0.5	379.5	151.1	21400	6.8	0.41
SD10DDH-3	UCZ164104	3.6	4.2	0.6	299.2	60.3	921	6.6	0.21
SD10DDH-3	UCZ164112	13.3	14	0.7	123.4	169.8	2133	4.4	0.67
SD10DDH-3	UCZ164127	38.4	38.9	0.5	65.5	84.4	1177	2.7	0.27
SD10DDH-3	LCZ164152	116.2	116.85	0.65	229.6	362.6	420	13.3	0.58
SD10DDH-3	LCZ164159	133.6	133.9	0.3	100.5	258.8	138	5.1	1.97
SD10DDH-4	UCZ164166	4.5	5.3	0.8	464.1	861.4	4598	19.1	0.38
SD10DDH-4	UCZ164173	15.3	15.65	0.35	1020.3	569.1	7317	28.3	0.92
SD10DDH-4	UCZ164166	4.5	5.3	0.8	464.1	861.4	4598	19.0	0.38
SD10DDH-4	UCZ164173	15.3	15.65	0.35	1020.3	569.0	7317	28.3	0.93
SD10DDH-4	UCZ164186	47.9	48.2	0.3	64.2	140.2	1143	7.4	0.80
SD10DDH-4	LCZ164209	144.55	145.65	1.1	99.8	131.6	142	4.0	0.70
SD10DDH-4	LCZ164212	150.3	150.85	0.55	128.6	522.7	355	6.1	1.44
SD10DDH-4	LCZ164219	161.6	161.9	0.3	171.9	197.0	457	29.2	1.21
SD10DDH-5	UCZ164222	6.32	6.82	0.5	822.4	788.3	241	31.2	1.60
SD10DDH-5	UCZ164239	36.85	37.65	0.8	84.4	148.2	4367	4.0	0.38
SD10DDH-5	UCZ164245	57.7	58	0.3	165.7	58.4	543	3.3	0.30
SD10DDH-5	UCZ164251	79.3	79.6	0.3	160.3	451.7	5263	4.2	0.21
SD10DDH-5	UCZ164256	85.52	85.82	0.3	189.6	266.9	178	11.2	0.56
SD10DDH-6	WCZ164296	84.25	84.65	0.4	101.8	167.9	210	6.7	0.34
SD10DDH-6	WCZ164333	168.45	169.45	1.0	63.6	116.1	214	2.0	0.21

*UCZ=Upper Camp Zone LCZ=Lower Camp Zone

Significant zinc and silver values were associated with some of the gold-bearing mineralization and elevated copper-lead values were also noted in geochemical analysis.

Dyke/sills of the Bulkley Intrusives (about 1-3 meters wide) cut the hornfels (metamorphic aureole) in drill holes SD10DDH-1, 2, and 3. Monzonite/rhyodacite dykes/sills are spatially related to increased chlorite-sericite-quartz alteration and pyrite-arsenopyrite-chalcopyrite-sphalerite-galena-tetrahedrite mineralization. These felsic dykes/sills are late stage emanations from Bulkley and/or Babine Intrusive Complexes and are the likely source of Au-Ag (Cu-Pb-Zn) bearing quartz-sulphide mineralization that occur as 0.3 to 1.1 meter interval length intersections of quartz-sulphide veins. The two types of quartz-sulphide mineralization encountered were:

1) Banded and/or coarse grained pyrite-arsenopyrite
2) Banded and/or coarse grained pyrite-arsenopyrite (with sphalerite-galena-tetrahedrite)

Seven split core samples (from SD10DDH-1, 2, 3, 4 & 6) returned >100 ppm tungsten (W). The anomalous tungsten bearing sample intervals occur adjacent to base and precious metal bearing zones. The following table lists all of the core samples that returned geochemical analysis >100 ppm W:

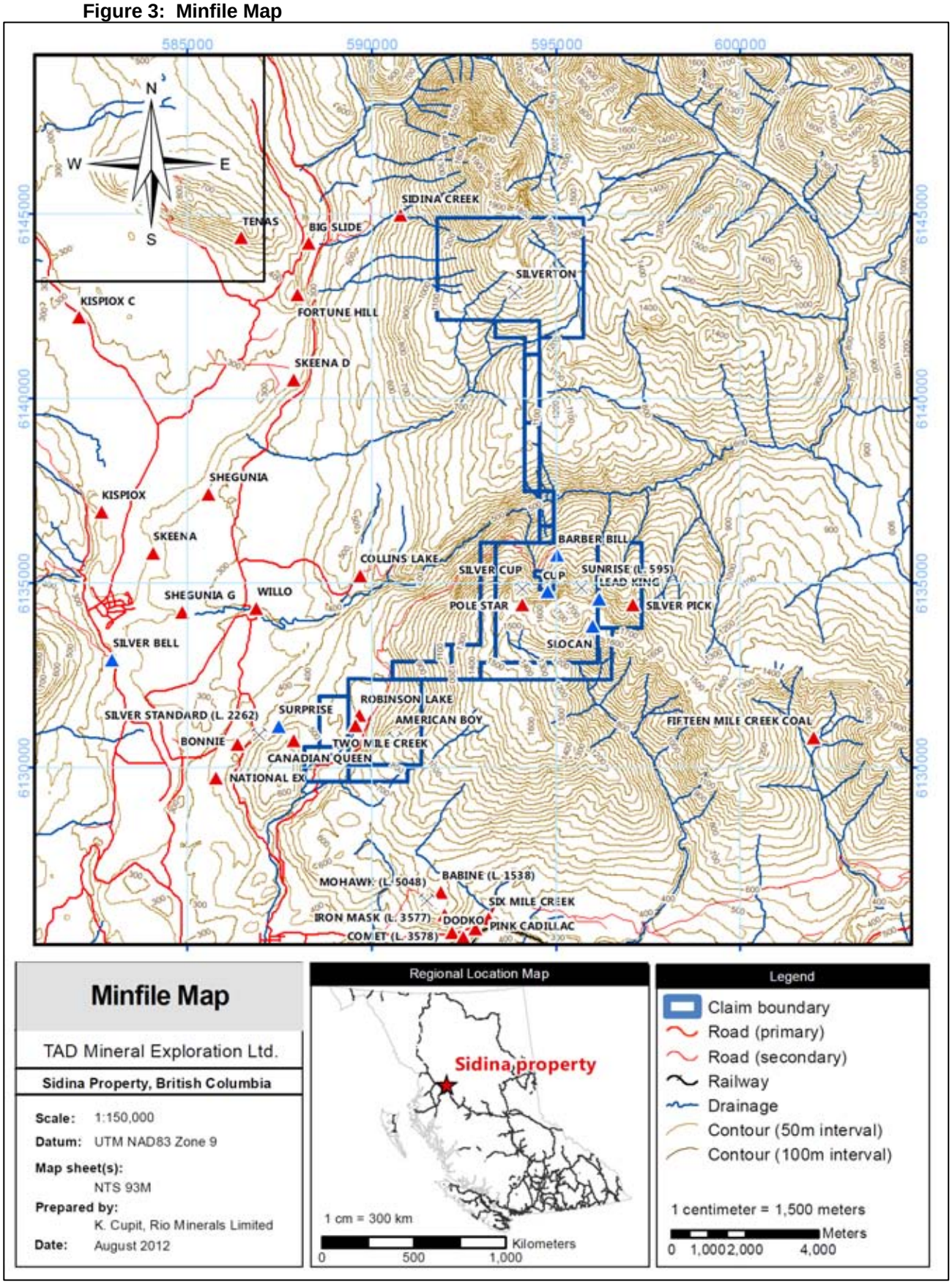
Table 4: Select assays for 2010 Drilling

DDH No	Sample No	From m	To m	Width m	% W
SD10DDH-1	164044	117	118.5	1.5	0.024
SD10DDH-2	164051	13.1	14.4	1.3	0.018
SD10DDH-2	164065	51	52	1	0.124
SD10DDH-3	164149	109.5	112.77	3.27	0.021
SD10DDH-4	164176	19.4	20.1	0.7	0.085
SD10DDH-4	164201	118	119	1.0	0.012
SD10DDH-6	164333	168.45	169.45	1.0	0.060

The drill holes intersected numerous monzonite/rhyodacite dykes/sills which are late stage emanations from Bulkley and/or Babine Intrusive Complexes, and are the likely source of Au-Ag (Cu-Pb-Zn) bearing quartz-sulphide (pyrite-chalcopyrite-sphalerite-galena-tetrahedrite) mineralization that occur as 0.3 to 1.1 meter interval length intersections of quartz-sulphide veins that are spatially related to increased chlorite-sericite-silica alteration.

The Sidina Property possesses vein complexes that may be splays of a richer zone (fold hinge making a structural trap) at depth. There are some converging structural features in the NE (uphill) extension of the Camp Zone.

Figure 3: Minfile Map



6.0 2012 WORK PROGRAM

In July, 2012 Rio Minerals Limited carried out a program of 2250 meters of grid surveys and the collection of 94 soil samples at 25 meter spacing on an area located north of the previous geochemical grid. The fieldwork described in this report was performed between July 10 to July 16, 2012 See Figure 4 for the grid location. .

Figure 5 illustrates the gold values in the soils. There are three samples of interest all each with elevated values of 584 ppb, 703 ppb, and 13,567 ppb gold.

Figure 6 illustrates the silver values in the soils. There are two samples of interest with elevated values of 12.4 ppm, and 16.1 ppm silver.

Figure 7 illustrates the copper values in the soils. There are three samples of interest with elevated values of 153.7 ppm, 102.2 ppm, and 350.9 ppm copper.

Figure 8 illustrates the arsenic values in the soils. There are four samples of interest with elevated values of 2,760.9 ppm, 3,675.5 ppm, 2,401.0 ppm and 4,940.6 ppm arsenic.

There is a weak correlation between the gold values and the arsenic values which may represent possible mineralization. Additional soil lines to the north of the current grid may further develop the gold and arsenic value correlation.

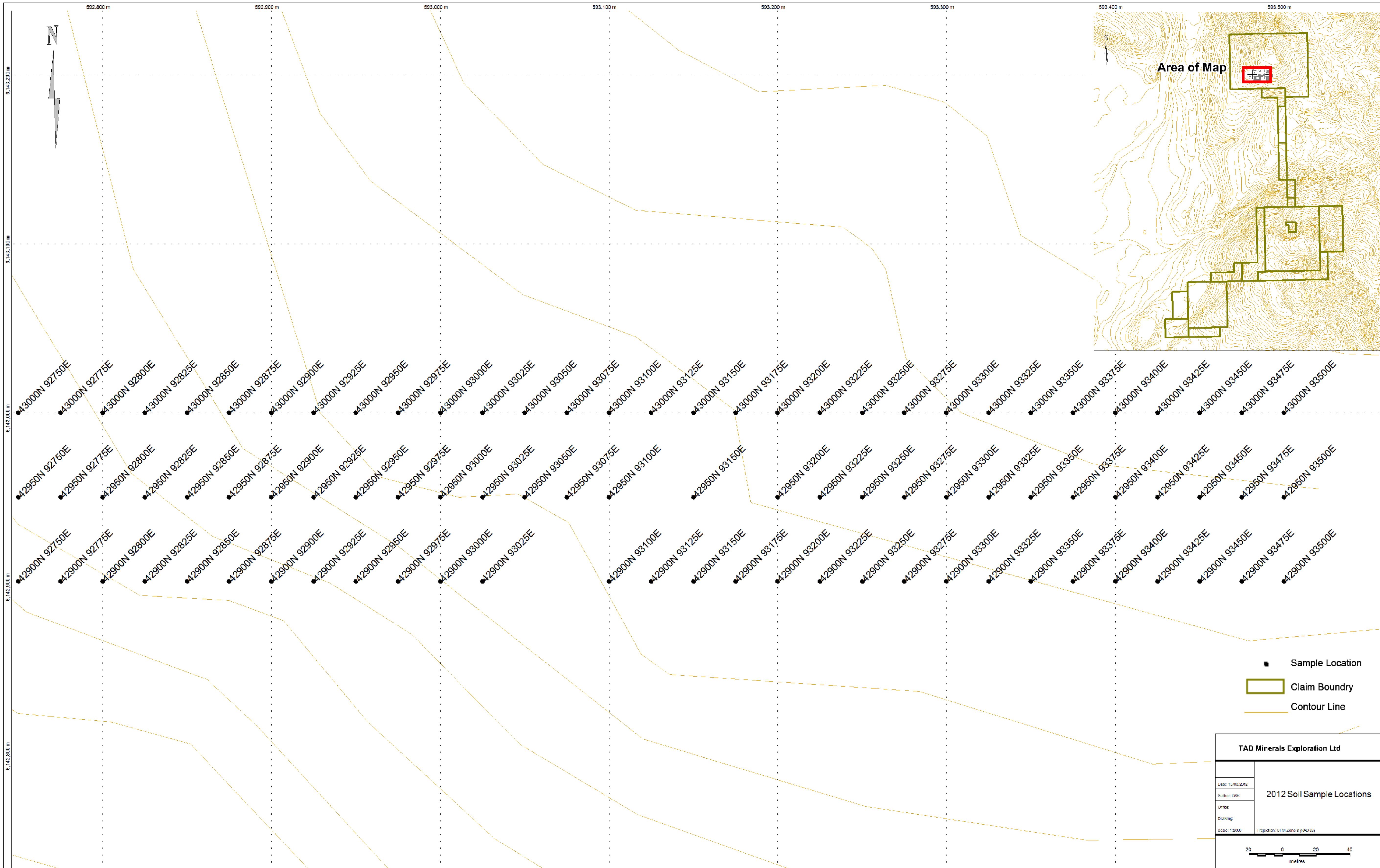


Figure 4 Soil Locations

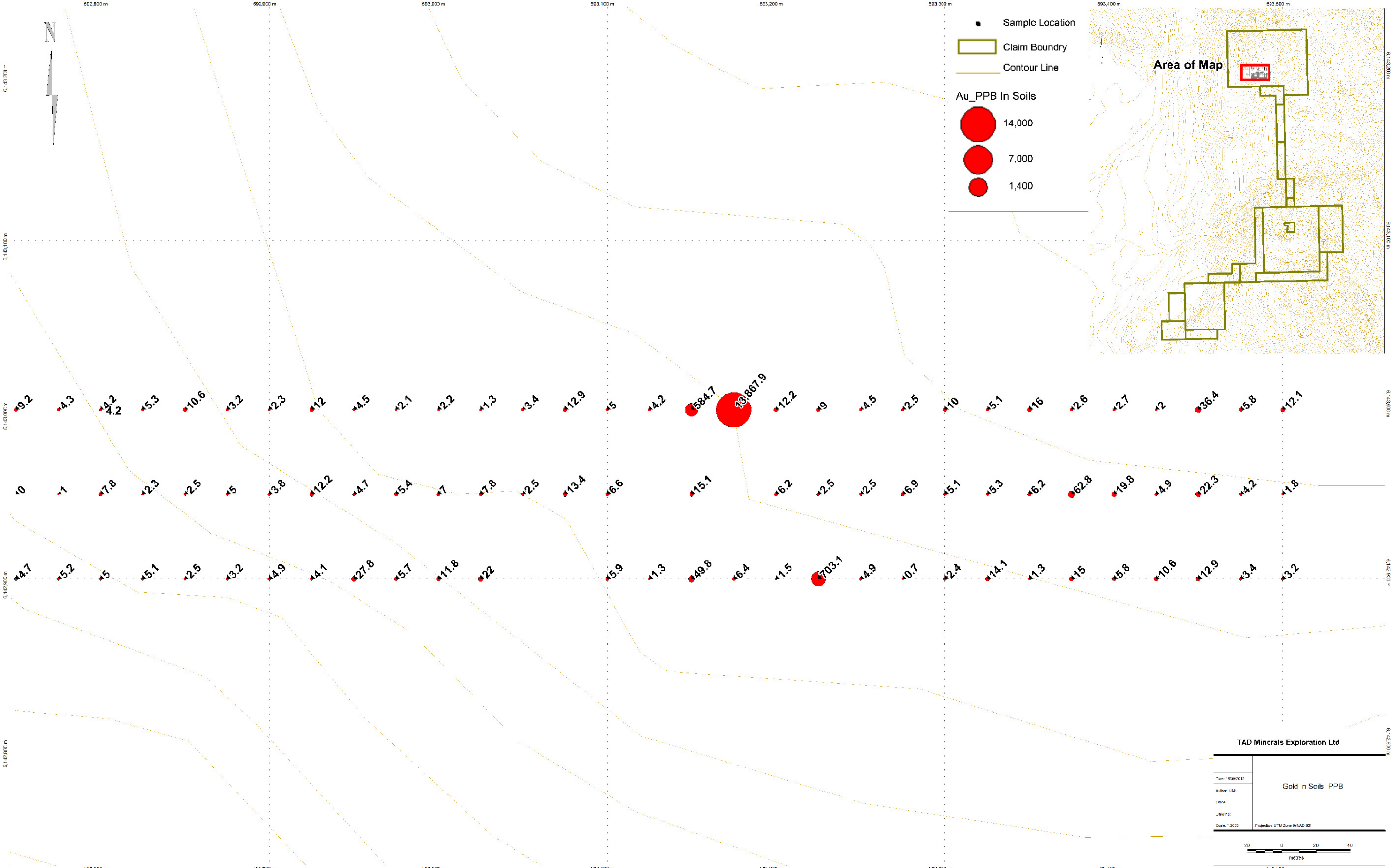


Figure 5 Gold in Soils

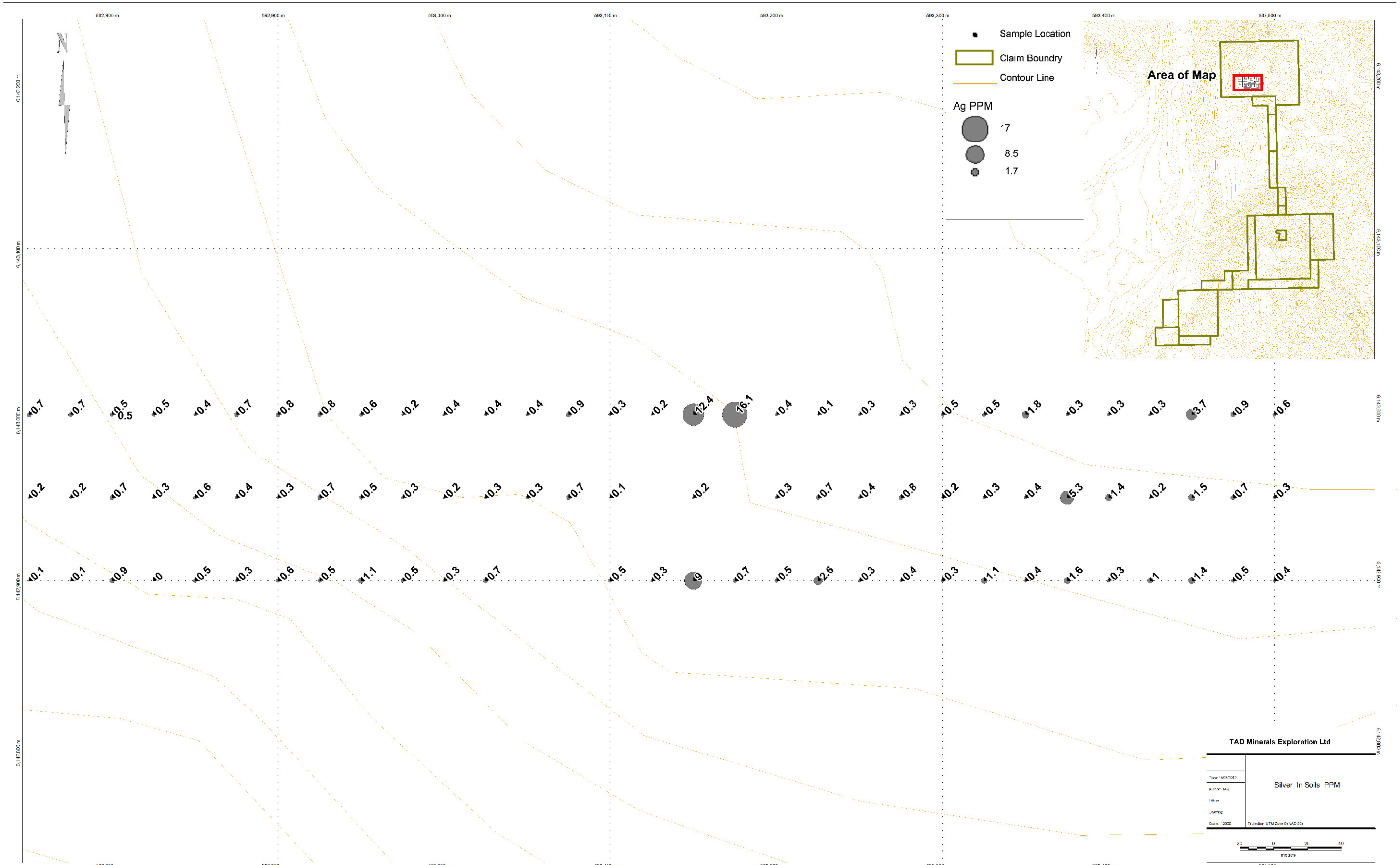


Figure 6 Silver in Soils

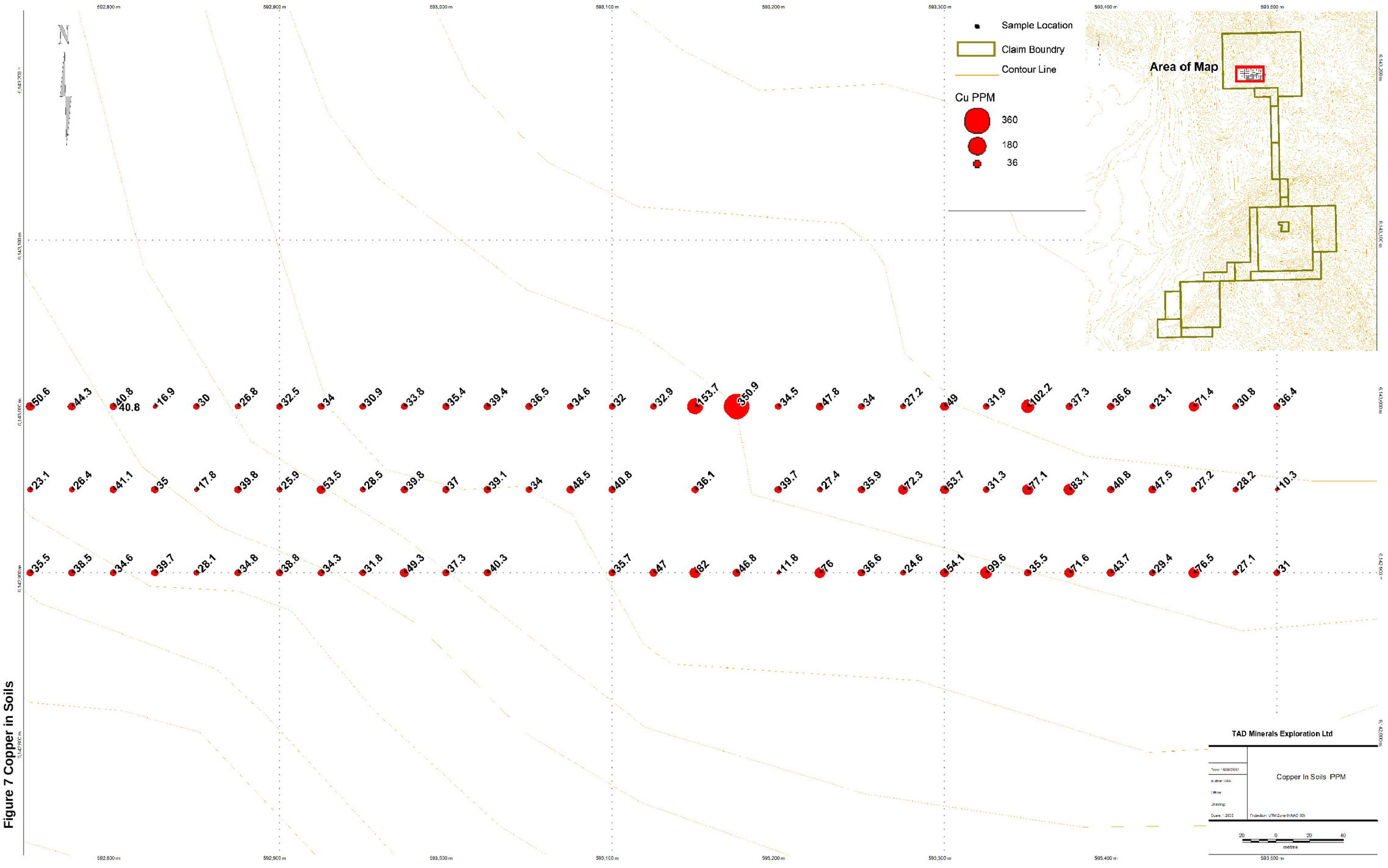


Figure 7 Copper in Soils

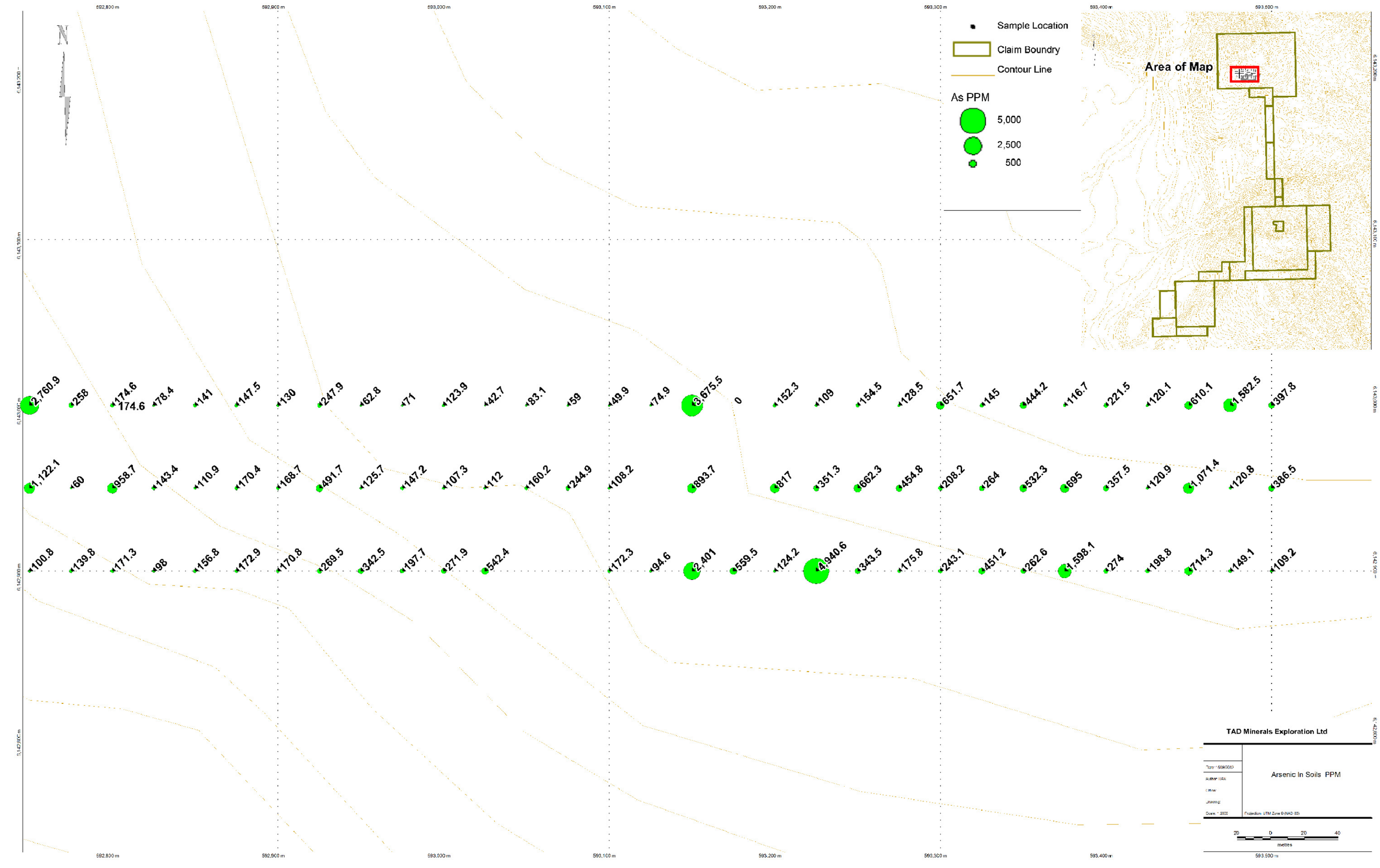


Figure 8 Arsenic in Soils

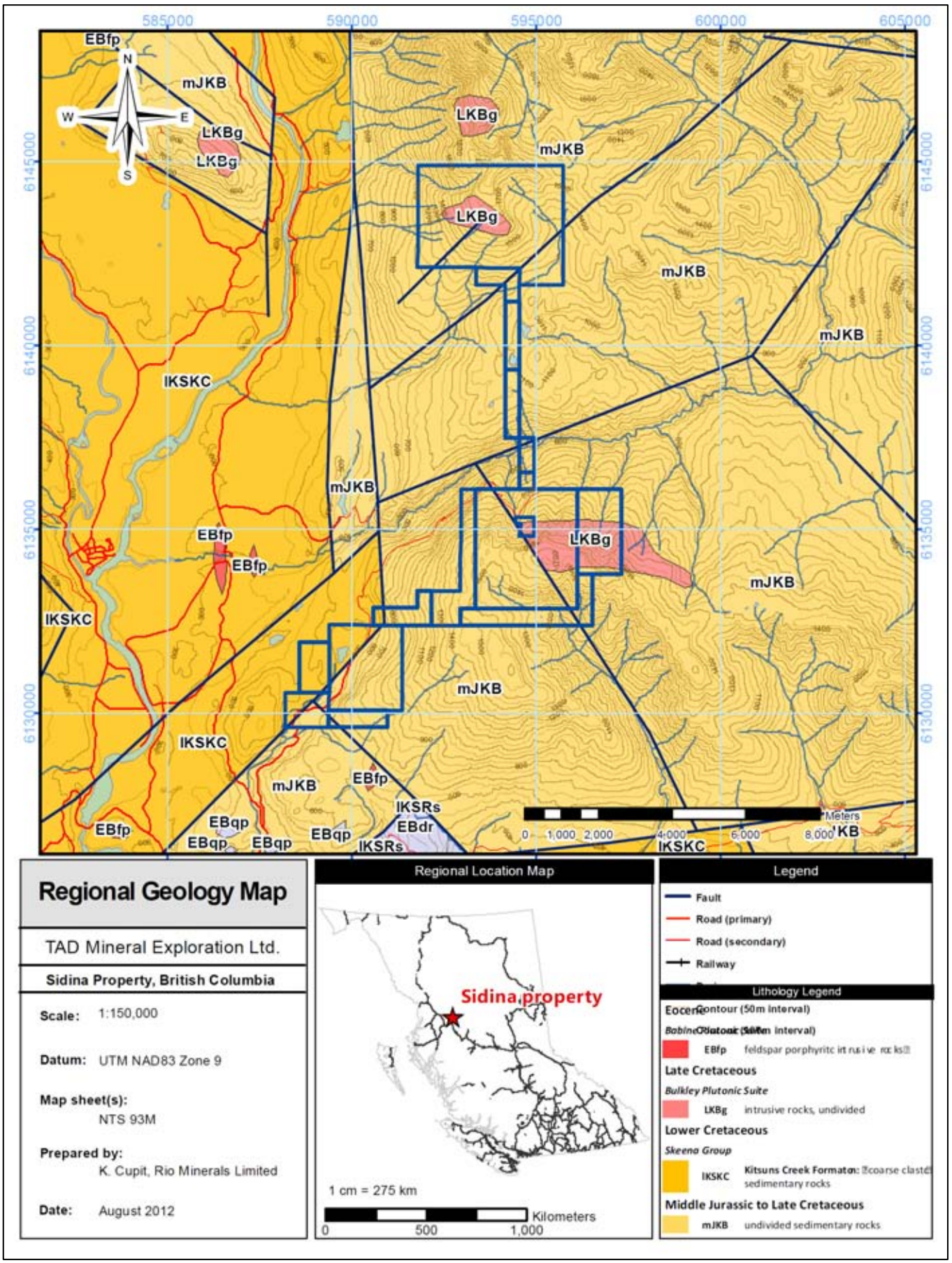
7.0 REGIONAL GEOLOGY

The Sidina Property is situated at the margin of the Jurassic to Cretaceous Bowser basin that produced a succession of marine and non-marine sediments overlapping the Stikina Terrane. This very thick succession of sedimentary rocks has not been subdivided in the area of the southern Babine Range where Sidina Mountain is situated (western part of the 93M map sheet). Present mapping has recognized two stratigraphic components; Middle Jurassic to Upper Cretaceous Bowser Group and overlying Lower Cretaceous Skeena Group (C.A. Evenchik et al, 2008). These rocks consist of clastic sedimentary and minor volcanic rocks deposited in local fault-bounded successor basins and in the Bowser basin, a portion of which underlies the northwestern part of the Hazelton map area.

In the Babine Range, there is no evidence of the Upper Cretaceous calc-alkaline volcanic rocks of the Kasalka Group extruded from several volcanic centers. However, based on the most recent map compilation by the Geological Survey of Canada (C.A. Evenchik et al, 2008), coeval plutonic rocks that formed the Bulkley Intrusions are represented by two elongate granitic stocks traversing the southwest ridges of Sidina Mountain. Aside from contact effects near intrusive bodies, metamorphism is light, reaching prehnite-pumpellyite facies.

The sedimentary strata were subjected to contraction tectonics resulting in the Skeena Fold Belt which affected all Cretaceous and older strata in the region. Most folds in the Babine Range trend northwesterly. Block faulting is present on a regional scale. Northerly faults traversing the western part of the property have been identified by the GSC. These and other faults of this type have controlled the location of the major mountain valley systems, as well as many of the intrusive rock suites and mineral deposits in the area.

Figure 9: Geology Map



8.0 PROPERTY GEOLOGY

8.1 Lithology

The main prospect area is underlain by hornfelsed sediments of the Middle Jurassic to Upper Cretaceous Bowser assemblage. Within the central property area, the Bowser-Skeena sediments were intruded by granite and monzonite of the Late Cretaceous Plutonic Suite. This intrusive event is a focal element of the geology and gold mineralization on the Sidina Property. The stock has an elongate shape measuring 4 km from northwest to southeast and roughly 2 km across based on the most recent map compilation by the Geological Survey of Canada (C.A. Evenchik et al, 2008). This stock locally displays trace amounts of pyrite, plus lesser arsenopyrite and sphalerite. The gold mineralized quartz veins are situated at the southeastern margin of the pluton's cupola. In this area the pluton outcrops over an area measuring 1.5 x 1.5 km.

The outcrop exposure above the tree line is 10% and the overburden thickness ranges from 0.2 to 0.8 metres. With the exception of main creeks, bedrock exposures are scarce below the treeline.

The granites and monzonite phases are surrounded by brownish-black colored, hornfelsed argillites and hornfelsed sandy siltstones. Hornfelsed sediments display a dense, very fine-grained, granulose character, exhibiting accessory amounts of hornblende. The hornfels zone is a highly irregular interface that crudely trends northwest, as evidenced by the jagged distribution of contrasting lithologies in outcrop (G. Thomson, 2007).

Multiple generations of porphyritic monzodiorite and porphyritic rhyodacite dikes occur
along the metamorphic aureole and within surrounding sediments. The massive porphyritic monzodiorite dikes display sharp, linear contacts with surrounding hornfels and trend northwest and northeast. Porphyritic rhyodacite dikes crosscut the Cretaceous granite intrusive and hornfelsed sediments along consistent, high-angle, west-northwest and north-northeast orientations.

8.2 Structure

Structure is dominated by block faulting which might be obscured by the later intrusive events. A northeasterly fault along Pinenut Creek drainage in the southeastern corner of the property was mapped by the GSC.

A northeasterly fault, striking 045º dissects the Sidina pluton in the area of the main showing along West Creek. Oriented diagonal to this fault are numerous shears and open fractures that control pyrite-sericite alteration.

There are numerous shears and fracture zones trending northwesterly, northerly, and northeasterly as demonstrated by bedrock exposures along prominent creeks. Locally, contacts between intrusive and hornfels (indurated) sediment rafts and pendants are followed by zones of brittle shearing.

Other contacts have offsetting movement recorded along planar fractures and appear to control some of the sub-parallel quartz-sulphide veins and lenses. This was documented in the West Creek at the 1320m elevation. The contact is trending 300º and dipping to the northeast at 075º.

Lithological offsets along the observed structures and contacts do not appear to be significant judging from the lack of gouge zones or crushed/brecciated lithologies. Compressional shortening is evidenced by axial-planar cleavages, buckling features and dilatant fractures. These locally contain un-mineralized quartz and quartz-carbonate lenses and stringers.

Hornfels sediments are hardened and have a brittle-fractured appearance. In addition, the numerous rafts, xenoliths, and contact zones within the intrusion are susceptible to shearing.

9.0. ALTERATION AND MINERALIZATION

The presence of hornfels sediments defines the extent of thermal aureole around the Sidina intrusion. The thermal has potential for economic gold-bearing veins forming stockworks or sub-parallel vein arrays.

Hydrothermal alteration affecting hornfels sediments consists of highly irregular and discontinuous zones of quartz-sericite-pyrite and accessory chlorite. These disseminated and fracture controlled zones display pyrite ranging from 5 to 30% and are up to 0.5 mm in size. Quartz-sericite-pyrite altered hornfels commonly occur in scattered outcrops as small, highly jagged masses. Fracture controlled pyritization of both hornfels and granitic rock types is aerially extensive, but does not indicate the areas of quartz-sulphide veining of economic interest.

Mineralization consists of variably spaced, narrow quartz-sulphide veins ranging from 1 to 110 cm in thickness. Sulphide content ranges from 2 to 45%. The veins are hosted by all lithological rock types affected by the thermal aureole and include sheared margins of rhyolite porphyry dykes that cross-cut the granitic pluton.

The majority of the veins found within the Sidina intrusion and the contact aureole are single-phase, gold-bearing, quartz-sulphide type veins. Past work had recognized that the sulphide mineralogy of individual veins varies along

strike and possibly along dip direction. Sulphide content ranges from 2 to 45%, and consists mainly of arsenopyrite (up to 30%) and pyrite (up to 30%).

The mineralization observed to date has two mineralogical characteristics that impact the precious metal grades:

- mineralization dominated by arsenopyrite-pyrite banded intergrowths
- mineralization dominated by banded arsenopyrite with minor pyrite-galena-sphalerite-tetrahedrite at the vein margins

Banded arsenopyrite contains scattered grains of sphalerite. This was identified during microscopic study of one petrographic sample.

Locally, the veins carry small amounts of copper sulphides that include tetrahedrite. This mineral association is of particular significance as it produces the highest gold grades. Locally, the veins also contain up to 0.5% of galena and up to 7% sphalerite. The highest gold grades also correlate with highly anomalous bismuth and antimony.

The quartz-sulphide mineralization appears to be confined to the broad, northwesterly trending contact aureole surrounding the elongate Cretaceous stock. Non-hornfelsed sediments distal to the aureole do not display veining and associated pyritic alteration, as observed to date. The full extent of thermal aureole surrounding the intrusion, which is largely concealed, remains to be established.

Structurally controlled sulphide occurrences (pyrite and arsenopyrite) were also noted in thin, tabular, silicified zones, quartz-sulfide stringer stockworks, and silica-cemented fault breccias.

10.0 SAMPLING METHOD AND APPROACH

A total of 94 soil samples have been geochemically analyzed at Acme Labs, Vancouver, BC. All samples were taken directly from site to Acme Analytical Laboratories in Smithers, BC for sample preparation, and then sent by Acme to Vancouver, BC where they were analyzed for 36-element IDX-15gm ICP-MS. See Appendix B for details on analytical procedures.

Sample sites were located @ 25 meter stations along east-west UTM oriented grid-lines. Sample sites are marked with wooden pickets, painted orange on the top end, inscribed with the sample grid co-ordinates. Samples were taken from the "B" soil horizon at approximately 35 cm from surface.

11.0 DEPOSIT TYPES

Gold mineralization on the property conforms to a broadly defined ‘intrusion related’ class of deposits. The distinctive feature of this class of gold deposits are sheeted arrays of parallel, single-stage quartz veins which are found over 10s to 100s of metres and preferentially located in the pluton’s cupola. These types of veins are also described as the “reduced intrusion-related gold systems” represented by Fort Knox, Pogo, Donlin Creek, and Dublin Gulch deposits in Alaska and the Yukon.

Intrusion associated gold (sub-alkalic), is the main deposit type of interest on the Sidina property. Hydrothermal late stage metal-bearing fluids (resulting in quartz-sulphide fissure veins), are closely associated the emplacement of quartz monzonite stocks, plugs, and dykes. The deposit form is commonly controlled by faults and/or shear zones. Quartz-sulphide vein systems form as fracture-filling late-stage hydrothermal emanations that infill fracture/fault/shear zones. The Sidina Property quartz-sulphide vein systems are the exploration focus of 2010 diamond drilling, however disseminated and/or replacement mineralization (i.e. ‘porphyry gold’) deposit types are also possible, and may be intrusive hosted and/or extend into the surrounding country rock.

Porphyry copper, molybdenum, tungsten is another deposit type worth investigating for on the Sidina Property. There is considerable phyllic alteration (quartz-sericite-pyrite) in the central portions of the Sidina Property granite-monzonite stock and propylitic alteration (chlorite-epidote) near the margins of the stock, suggesting that a potassic alteration zone hosting base and/or precious metals may be present. K-feldspar (adularia) alteration is commonly pervasive near metal-rich portions of porphyry deposits. K-feldspar alteration (producing distinct salmon-pink alteration vein selvages) is an important ore pathfinder for porphyry and vein deposit types.

12.0 CONCLUSIONS AND RECOMMENDATIONS

Mineralization consisting of gold, silver, copper, lead, and zinc-bearing sulphides are associated with late-stage quartz veining in fault/fissure/shear zones resulting in multiple, sub-parallel veins. The veins appear to be persistent over considerable strike lengths (>100 meters). The veins are hosted by Bulkley Plutonic Suite, Cretaceous monzonite, qtz monzonite to granite and extend into the surrounding country rock that consists of hornfels sediments of Middle Jurassic-Late Cretaceous Bowser-Skeena Group.

Veins trend WNW and NW (dipping shallow to moderate N) whereas the regional faults trend NE and dip steeply, suggesting that quartz-sulphide veins are tensional (or dilational) pull-apart structures and late-stage infilling of residual metal-enriched hydrothermal fluids.

Numerous gold-bearing veins are present in three areas situated along the perimeter of the Cretaceous stock which measures 600m in diameter. Indications are that the stock is part of a larger intrusive body mapped digitally by the Geological Survey of Canada in 2008. The composition of the concealed intrusion is unknown but judging from surface exposures it ranges from granite to granodiorite and includes monzonite phases and rhyolite dykes. Gold mineralization on the property conforms to a broadly defined intrusion related class of deposits that refers to gold mineralization within a thermal aureole. The distinctive feature of this class of gold deposits are sheeted arrays of parallel, single-stage quartz veins which are found over 10s to 100s of metres and preferentially located in the pluton's cupola. These types of veins are also described as the "reduced intrusion-related gold systems" represented by the Fort Knox, Pogo, Donlin Creek, and Dublin Gulch deposits in Alaska and the Yukon.

Past work had recognized that the sulphide mineralogy of individual veins varies along strike and possibly along the dip direction. Sulphide content ranges from 2 to 45%, and consists mainly of arsenopyrite (up to 30%) and pyrite (up to 30%).

Mineralization observed to date has two mineralogical characteristics that impact the precious metal grades:

- mineralization dominated by arsenopyrite-pyrite banded intergrowths
- mineralization dominated by banded arsenopyrite with minor pyrite-galena-sphalerite-tetrahedrite at the vein margins

Locally, the veins carry small amounts of copper sulphides that include tetrahedrite. This mineral association is of particular significance since geochemical analysis of tetrahedrite-bearing samples has returned the highest gold grades.

The magnetic total field surveys should be extended to cover the same area of the IP grid. Magnetics may be useful for mapping alteration (e.g. mag low may correlate with clay alteration). Proposed geophysical surveys should cover a large area beyond known surface mineral zones in order to test the entire 600 meter in diameter Bulkley Plutonic Suite granitic stock, and should extend several hundred meters onto the hornfels country rock.

There is a weak correlation between the gold values and the arsenic values which may represent possible mineralization. Additional soil lines to the north of the current grid may further develop the gold and arsenic value correlation.

Further work should be directed to locating additional gold-silver bearing mineralization as lower grade, large tonnage disseminated or stockwork zones or higher grade veins of greater width. A program of geological mapping and sampling, hand-trenching, IP/magnetometer geophysics, and diamond drilling is recommended to test the extent of precious metal mineralization on the property. An induced polarization geophysical survey covering a 2 X 2 km area (centered over the West Creek Zone) is recommended on the Sidina property. This will help identify silicified and mineralized zones of economic interest

Gold mineralization on the property conforms to a broadly defined intrusion related class of deposits that refers to gold mineralization within thermal aureole. The distinctive feature of this class of gold deposits are sheeted arrays of parallel, single-stage quartz veins which are found over 10s to 100s of metres and preferentially located in the pluton's cupola. These types of veins are also described as the "reduced intrusion-related gold systems" represented by Fort Knox, Pogo, Donlin Creek, and Dublin Gulch deposits in Alaska and the Yukon. This style of gold mineralization is sometimes described by a term "orogenic gold" that might be misleading.

A program of 2550 metres of diamond drilling is recommended to test the extent of precious metal mineralization in three locations between the West and East Creeks. The main objective would be to sample and evaluate the density of veining per unit of core length versus grade. Drilling would also allow to collection of vein orientation data from various depths below surface. Drilling should be conducted in areas of interest outlined by the magnetometer and IP geophysical surveys.

13. REFERENCES

A Kikauka 2010 Diamond Drilling Geochemical & Geological Report on the Hazelton North (Sidina) Project BC Assesment report 31214

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C.J.R. Hart, 2005 Classifying, Distinguishing and Exploring for Intrusion Related Gold Systems, The Gangue, October 2007 Issue 87 GAC Mineral Deposits Division, CIM – Geological Society

D. Myers, 1987 Assessment Report 16601, Prospecting, Geology, and Geochemistry. Pinenut Property, Noranda Exploration Company Limited, August 1987

D. Myers, 1988 Assessment Report 17290, Geology and Geochemistry Pinenut Property, Noranda Exploration Company Limited, April 1988

G. R. Thomson, 2007 Technical Report (NI 43-101 Compliant) on the Hazelton Project for Golden Sabre Resources Limited, January 2007

14 CERTIFICATE

I Derrick Strickland, of 910-475 Howe Street, in the City of Vancouver in the Province of British Columbia do hereby certify that:

1. I am a Consulting Geologist working in Vancouver, British Columbia..
2. I hold a Bachelor of Science in Geology (1993)
3. I have been employed in the mineral exploration industry since 1987 and have practiced my profession since graduation.
4. The information for this report has been taken from government and old geological reports and work undertaken by Rio Minerals Ltd.
5. I am a member in good standing with Association of Professional Engineers, Geoscientist of British Columbia.
6. The assessment costs presented in this report are true and accurate to the best of my knowledge.

DATED at Vancouver, British Columbia, this 25th day of August, 2012

Derrick Strickland, P.Geo.

APPENDIX A: STATEMENT OF COSTS

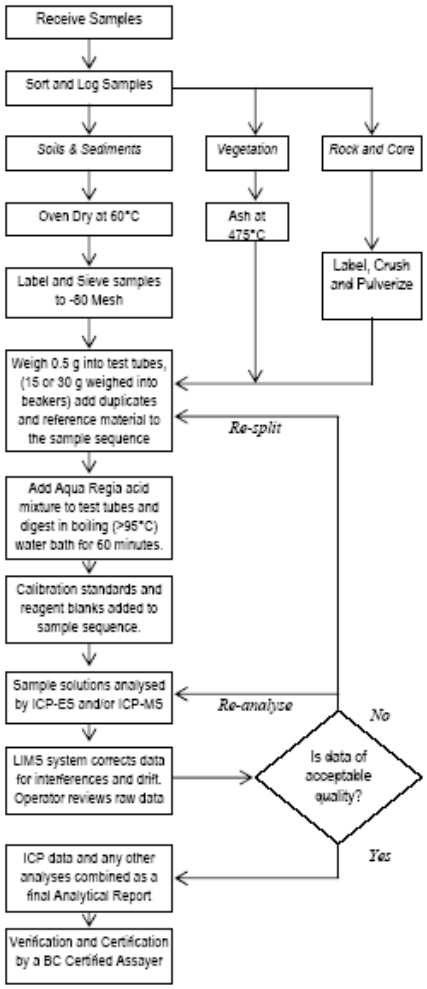
Sidina – Project July, 2012				
Personnel		Rate	Days	Total
Robert Paeseler	July 10 – July 16, 2012	$450	07	$ 3150.00
Andrew Molnar	July 10 – July 16, 2012	$450	07	$ 3150.00
Connor Clarke	July 10 – July 16, 2012	$450	07	$ 3150.00
	Sub-total:			$ 9450.00
Report	-	-	-	$ 4250.00
Sub-total:				$ 13700.00
Expenses				
Analytical	ACME Labs: 93 soil – 1DX2			$ 1898.90
Vehicles	10 x 110			$ 1100.00
Field Supplies				$ 32.88
Transport				$ 8408.07
Fuel				$ 784.18
Lodging & Meals				$ 1689.18
Rentals				$ 350.00
Shipping				$ 36.44
Sub total				$ 14299.65
Total:				$ 27999.65

APPENDIX B: SAMPLE PREPARATION AND ANALYSES

AcmeLabs ACME ANALYTICAL LABORATORIES LTD.

METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE
GROUP 1D & 1DX – ICP & ICP-MS ANALYSIS – AQUA REGIA

Analytical Process



Comments

Sample Preparation

All samples are dried at 60°C. Soil and sediment are sieved to -80 mesh (-180 µm). Moss-mats are disaggregated then sieved to yield -80 mesh sediment. Vegetation is pulverized or ashed (475°C). Rock and drill core is jaw crushed to 70% passing 10 mesh (2 mm), a 250 g riffle split is then pulverized to 85% passing 200 mesh (75 µm) in a mild-steel ring-and-puck mill. Pulp splits of 0.5 g are weighed into test tubes, 15 and 30 g splits are weighed into beakers.

Sample Digestion

A modified Aqua Regia solution of equal parts concentrated ACS grade HCl and HNO_3 and de-mineralised H_2O is added to each sample to leach for one hour in a heating block or hot water bath (>95°C). After cooling the solution is made up to final volume with 5% HCl. Sample weight to solution volume is 1 g per 20 mL.

Sample Analysis

Group 1D: solutions aspirated into a Spectro Ciros Vision or Varian 735 emission spectrometer are analysed for 30 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Group 1DX: solutions aspirated into a Perkin Elmer Elan 6000/9000 ICP mass spectrometer are analysed for 36 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, *Ga*, *Hg*, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, *S*, Sb, *Sc*, *Se*, *Tl*, Sr, Th, Ti, U, V, W, Zn.

Quality Control and Data Verification

QA/QC protocol incorporates a sample-prep blank (G-1) as the first sample in the job which is carried through all stages of preparation to analysis. An Analytical Batch comprises 36 client samples and incorporates a pulp duplicate to monitor analytical precision, a -10 mesh rejects duplicate to monitor sub-sampling variation (drill core only), a reagent blank to measure background and aliquots of in-house Reference Material like STD DS7. Data undergoes a final verification by a British Columbia Certified Assayer who then validates results before it is released to the client.

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Group 1D, 1DX ICP-ES & ICP-MS DETECTION LIMITS

	Group 1D Detection	Group 1DX Detection	Upper Limit
Ag	0.3 ppm	0.1 ppm	100 ppm
Al*	0.01 %	0.01 %	10 %
As	2 ppm	0.5 ppm	10000 ppm
Au	2 ppm	0.5 ppb	100 ppm
B*^	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	2000 ppm
Ca*	0.01 %	0.01 %	40 %
Cd	0.5 ppm	0.1 ppm	2000 ppm
Co	1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	10000 ppm
Fe*	0.01 %	0.01 %	40 %
Ga*	-	1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	100 ppm
K*	0.01 %	0.01 %	10 %
La*	1 ppm	1 ppm	10000 ppm
Mg*	0.01 %	0.01 %	30 %
Mn*	2 ppm	1 ppm	10000 ppm
Mo	1 ppm	0.1 ppm	2000 ppm
Na*	0.01 %	0.001 %	10 %
Ni	1 ppm	0.1 ppm	10000 ppm
P*	0.001 %	0.001 %	5 %
Pb	3 ppm	0.1 ppm	10000 ppm
S	-	0.05 %	10 %
Sb	3 ppm	0.1 ppm	2000 ppm
Sc	-	0.1 ppm	100 ppm
Se	-	0.5 ppm	100 ppm
Sr*	1 ppm	1 ppm	10000 ppm
Th*	2 ppm	0.1 ppm	2000 ppm
Ti*	0.01 %	0.001 %	10 %
Tl	5 ppm	0.1 ppm	1000 ppm
U*	8 ppm	0.1 ppm	2000 ppm
V*	1 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	100 ppm
Zn	1 ppm	1 ppm	10000 ppm

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

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APPENDIX C: ASSAY CERTIFICATES

2012 Soil Samples

Sample	Nad83N	Nad83E	Type	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au PPB	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Hg PPM	Sc PPM	Tl PPM	S %	Ga PPM	Se PPM	Te PPM
42900N 92750E	6142900	592750	Soil	4.6	35.5	11.9	75	0.1	9.5	7.6	445	4.7	101	4.7	0.4	4	0.3	2.2	0.4	50	0.03	0.09	5	13	0.3	70	0.01	1	2.2	0.01	0	0.6	0.12	2.7	<0.1	<0.05	6	0.6	<0.2
42900N 92775E	6142900	592775	Soil	26.6	38.5	12	81	0.1	11.3	9.9	539	6.02	140	5.2	0.2	32	0.5	2.2	0.3	48	0.25	0.07	6	15	0.33	47	0.01	<1	2.6	0.01	0	1.2	0.08	3.2	<0.1	<0.05	5	0.5	<0.2
42900N 92800E	6142900	592800	Soil	20.3	34.6	20.5	90	0.9	6.7	7.3	471	5.94	171	5	0.5	13	0.5	3.7	0.5	48	0.14	0.12	4	11	0.19	53	0	<1	1.7	0.01	0	0.8	0.09	2.7	<0.1	<0.05	6	<0.5	<0.2
42900N 92825E	6142900	592825	Soil	6.2	39.7	18.4	121	<0.1	11.4	14.9	825	3.94	98	5.1	0.9	4	0.4	2.7	0.2	41	0.03	0.03	8	10	0.34	56	<0.001	<1	1.4	0.01	0	0.2	0.03	6.6	<0.1	<0.05	4	<0.5	<0.2
42900N 92850E	6142900	592850	Soil	28.9	28.1	10.8	89	0.5	5.6	4.7	261	2.96	157	2.5	0.5	6	0.4	2.2	0.5	37	0.03	0.11	6	8	0.14	76	0	<1	1.6	0.01	0	1.6	0.05	2.3	<0.1	<0.05	5	<0.5	<0.2
42900N 92875E	6142900	592875	Soil	15.3	34.8	12.3	100	0.3	10.7	8.5	432	3.63	173	3.2	0.6	4	0.6	2.3	0.3	41	0.02	0.07	5	11	0.34	79	<0.001	<1	1.7	0.01	0	0.4	0.03	3.4	<0.1	<0.05	5	<0.5	<0.2
42900N 92900E	6142900	592900	Soil	4.1	38.8	16.3	85	0.6	6.4	5.7	408	4.81	171	4.9	0.7	4	0.3	2.3	0.6	48	0.02	0.2	4	11	0.2	43	0	<1	2	0.01	0	0.9	0.1	2.9	0.1	<0.05	6	0.7	<0.2
42900N 92925E	6142900	592925	Soil	6.1	34.3	17.9	85	0.5	7.2	6.4	560	4.17	270	4.1	0.5	7	0.8	2.9	0.8	44	0.05	0.15	5	11	0.17	70	0	<1	2	0.01	0.1	0.7	0.1	2	<0.1	<0.05	5	<0.5	<0.2
42900N 92950E	6142900	592950	Soil	5.5	31.8	12.3	80	1.1	8.1	6	513	4.04	343	27.8	0.4	6	0.4	2.7	1	54	0.02	0.13	4	12	0.23	64	0	<1	1.9	0.01	0	2.7	0.09	2.1	0.1	<0.05	6	<0.5	<0.2
42900N 92975E	6142900	592975	Soil	6	49.3	21.1	119	0.5	10.3	11.5	1000	4.18	198	5.7	0.7	4	0.6	3.7	1.1	45	0.01	0.11	6	13	0.29	83	0	<1	2	0.01	0.1	1.6	0.05	3.7	<0.1	<0.05	5	<0.5	<0.2
42900N 93000E	6142900	593000	Soil	7.8	37.3	23.3	103	0.3	8	8	911	3.53	272	11.8	0.5	6	1.1	3.2	1.3	40	0.04	0.12	5	9	0.21	91	0	<1	1.4	0.01	0	1.4	0.09	2.8	<0.1	<0.05	5	<0.5	<0.2
42900N 93025E	6142900	593025	Soil	7.5	40.3	32	187	0.7	12.3	12.2	842	4.55	542	22	1	7	0.7	4.6	1.4	44	0.05	0.08	7	13	0.4	63	0	<1	1.9	0.01	0.1	1.8	0.07	4.2	<0.1	<0.05	5	<0.5	<0.2
42900N 93100E	6142900	593100	Soil	7.4	35.7	16.2	82	0.5	9.6	7.2	308	4.36	172	5.9	0.8	5	0.2	2.3	0.5	40	0.03	0.11	5	12	0.35	57	0	<1	2.4	0.01	0	0.7	0.09	3.6	<0.1	<0.05	5	<0.5	<0.2
42900N 93125E	6142900	593125	Soil	5.4	47	13.3	68	0.3	8.8	8.3	330	6.08	94.6	1.3	0.3	5	0.3	1.8	0.3	46	0.03	0.11	4	15	0.31	30	0.01	<1	1.8	0.01	0	0.8	0.1	3.3	<0.1	<0.05	6	0.5	<0.2
42900N 93150E	6142900	593150	Soil	26.7	82	15	188	9	6.4	10.4	262	2.54	2401	49.8	1.3	46	1.3	2.6	0.4	22	0.45	0.15	19	10	0.14	56	0	<1	4.6	0.01	0	0.5	0.31	5.3	<0.1	0.07	4	1.5	<0.2
42900N 93175E	6142900	593175	Soil	36	46.8	21.4	341	0.7	12.9	8.2	374	4.09	560	6.4	1.2	11	0.7	4.5	0.9	42	0.07	0.09	7	14	0.45	78	0	<1	2.2	0.01	0	0.9	0.06	3.9	0.1	<0.05	6	<0.5	<0.2
42900N 93200E	6142900	593200	Soil	25.6	11.8	8.5	40	0.5	2.8	1.7	106	1.16	124	1.5	0.2	5	0.3	0.7	0.4	24	0.03	0.09	6	6	0.09	38	0	<1	1	0.01	0	0.8	0.05	0.7	<0.1	<0.05	6	<0.5	<0.2
42900N 93225E	6142900	593225	Soil	36.1	76	860	669	2.6	9.8	11.9	2132	7.54	4941	703.1	1.5	14	3.8	21.1	19.8	30	0.1	0.26	7	17	0.23	54	0	1	1.5	0.01	0.1	24.5	0.2	1.9	<0.1	0.06	5	<0.5	0.4
42900N 93250E	6142900	593250	Soil	24.6	36.6	21.9	182	0.3	9.2	7.6	414	4.53	344	4.9	1.2	6	0.8	3	0.5	41	0.04	0.09	6	11	0.35	54	0	<1	2.2	0.01	0	1.5	0.1	3.4	<0.1	<0.05	6	<0.5	<0.2
42900N 93275E	6142900	593275	Soil	36.4	24.6	12.9	214	0.4	9.8	8.8	592	3.28	176	0.7	0.5	44	1	1.7	0.4	59	0.39	0.1	4	14	0.51	99	0	<1	1.6	0.01	0.1	0.8	0.03	3.2	<0.1	<0.05	7	<0.5	<0.2
42900N 93300E	6142900	593300	Soil	31.4	54.1	17.1	211	0.3	12.7	17.9	1076	4.15	243	2.4	0.5	43	1.9	4.2	0.3	48	0.39	0.06	6	12	0.5	100	0	<1	1.8	0.01	0	0.6	0.02	4.7	<0.1	<0.05	6	<0.5	<0.2
42900N 93325E	6142900	593325	Soil	27.8	99.6	17.7	675	1.1	12.7	12.1	799	3.75	451	14.1	0.8	69	3.2	4.6	0.6	43	0.64	0.13	13	13	0.46	139	0	<1	2.1	0.01	0.1	0.7	0.14	6.7	0.1	0.06	6	0.6	<0.2
42900N 93350E	6142900	593350	Soil	22.2	35.5	16.1	203	0.4	11.8	12.8	627	3.86	263	1.3	0.6	34	1	2.6	0.4	48	0.28	0.06	7	12	0.5	79	0	<1	1.9	0.01	0	0.4	0.02	4.2	<0.1	<0.05	6	<0.5	<0.2
42900N 93375E	6142900	593375	Soil	315	71.6	41.3	1316	1.6	11.2	42.8	>1000	6.57	1598	15	1.2	124	38.2	8.5	0.6	49	0.98	0.26	10	12	0.32	466	0	<1	2.5	0.02	0.1	0.7	0.13	10.6	0.3	0.14	7	0.8	<0.2
42900N 93400E	6142900	593400	Soil	25.5	43.7	17.6	246	0.3	12.6	11	555	3.87	274	5.8	1.3	27	1	2.6	0.6	44	0.21	0.04	11	12	0.46	121	<0.001	<1	2	0.01	0	0.4	0.04	5	<0.1	<0.05	6	<0.5	<0.2
42900N 93425E	6142900	593425	Soil	12.9	29.4	73.8	98	1	5	4.5	471	2.71	199	10.6	1.2	4	0.6	1.3	1.1	30	0.02	0.13	8	8	0.19	62	0	<1	2.3	0.01	0	34.2	0.08	0.8	0.1	<0.05	8	<0.5	<0.2
42900N 93450E	6142900	593450	Soil	15.1	76.5	15.5	418	1.4	8.6	5.6	243	4.6	714	12.9	0.6	59	2.5	2.4	0.5	46	0.58	0.09	6	12	0.28	57	0	<1	2.2	0.01	0	0.4	0.13	4	<0.1	<0.05	6	1.1	<0.2
42900N 93475E	6142900	593475	Soil	9.2	27.1	16.3	99	0.5	8.6	7.7	418	4.25	149	3.4	0.7	7	0.5	2.3	0.3	41	0.04	0.08	5	12	0.33	53	0	<1	2.1	0.01	0	0.7	0.08	3.6	<0.1	<0.05	6	<0.5	<0.2
42900N 93500E	6142900	593500	Soil	15.4	31	10.9	107	0.4	9.2	7.3	358	3.71	109	3.2	0.8	6	0.2	1.3	0.3	50	0.05	0.09	5	13	0.46	64	0.01	<1	2.6	0.01	0	0.7	0.06	4.4	<0.1	<0.05	6	<0.5	<0.2
42950N 92750E	6142950	592750	Soil	37.5	23.1	11.1	69	0.2	6.8	6.2	479	4.65	1122	<0.5	0.1	67	0.3	2.1	0.3	58	0.68	0.11	5	12	0.21	52	0.01	<1	1.5	0.01	0	0.4	0.06	1.8	<0.1	<0.05	7	0.5	<0.2
42950N 92775E	6142950	592775	Soil	13.3	26.4	12.9	40	0.2	6.4	5.2	328	5.66	60	1	<0.1	10	0.4	1.1	0.2	61	0.04	0.08	4	14	0.14	42	0.02	<1	1.6	0	0	0.3	0.11	1.6	<0.1	<0.05	6	0.7	<0.2
42950N 92800E	6142950	592800	Soil	32.5	41.1	18.7	437	0.7	17.1	15.3	2087	3.75	959	7.8	0.8	38	1.6	3	0.5	37	0.3	0.17	12	12	0.35	146	0	<1	2.4	0.01	0.1	0.7	0.04	6.6	<0.1	<0.05	5	<0.5	<0.2
42950N 92825E	6142950	592825	Soil	9.1	35	15	90	0.3	8.7	7	353	4.4	143	2.3	0.6	5	0.6	1.8	0.4	53	0.02	0.09	5	12	0.27	75	0	<1	2.1	0.01	0.1	0.8	0.07	3.2	0.1	<0.05	7	<0.5	<0.2
42950N 92850E	6142950	592850	Soil	37.9	17.8	8.3	39	0.6	3.2	2.1	112	1.8	111	2.5	0.2	9	0.3	1	0.5	32	0.09	0.13	6	8	0.13	49	0	<1	1.4	0.01	0.1	0.7	0.04	0.8	0.1	<0.05	6	<0.5	<0.2
42950N 92875E	6142950	592875	Soil	6	39.8	17.2	126	0.4	9.1	10.6	617	4.3	170	5	0.9	3	0.3	2.8	0.5	42	<0.01	0.09	5	12	0.31	64	0	<1	2	0.01	0.1	0.6	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
42950N 92900E	6142950	592900	Soil	44.5	25.9	11.3	70	0.3	5.7	4	314	2.4	169	3.8	0.3	6	0.3	1.4	0.4	40	0.02	0.11	5	9	0.16	63	0	<1	1.7	0.01	0.1	0.8	0.06	1.4	<0.1	<0.05	6	<0.5	<0.2
42950N 92925E	6142950	592925	Soil	33.7	53.5	19.7	142	0.7	11.6	13.5	1519	4.75	492	12.2	1.4	10	0.7	7.5	3.1	44	0.06	0.2	5	13	0.27	81	0	1	2.4	0.01	0.1	0.7	0.13	2.7	0.1	<0.05	6	<0.5	0.2
42950N 92950E	6142950	592950	Soil	5.3	28.5	11.5	66	0.5	6.2	4.4	325	3.47	126	4.7	0.2	5	0.2	1.8	0.6	48	0.02	0.13	4	11	0.19	48	0	1	1.6	0.01	0	0.6	0.1	1.1	<0.1	<0.05	6	<0.5	<0.2
42950N 92975E	6142950	592975	Soil	7.3	39.8	15.9	133	0.3	12	12.4	697	4.1	147	5.4	0.7	4	0.4	2.7	0.3	45	0.02	0.07	6	12	0.39	65	0	1	2	0.01	0	0.7	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
42950N 93000E	6142950	593000	Soil	4.4	37	18.5	111	0.2	12.7	11.1	539	4.38	107	7	0.8	4	0.3	2.4	0.4	42	0.02	0.07	5	13	0.37	74	0	1	2.4	0.01	0	0.2	0.09	4.3	<0.1	<0.05	4	<0.5	<0.2
42950N 93025E	6142950	593025	Soil	11.1	39.1	15.1	132	0.3	11.1	9.9	555	4.06	112	7.8	0.8	4	0.4	2.9	0.3	41	0.01	0.07	5	11	0.38	69	0	<1	2.2	0.01	0	0.6	0.08	4	<0.1	<0.05	5	<0.5	<0.2
42950N 93050E	6142950	593050	Soil	6.6	34	15	123	0.3	9.9	9.9	834	4.24	160	2.5	0.5	5	0.4	2.9	0.4	46	0.03	0.12	5	11	0.32	54	0	<1	1.5	0.01	0.1	0.5	0.03	2.9	<0.1	<0.05	6	<0.5	<0.2
42950N 93075E	6142950	593075	Soil	19	48.5	21.6	163	0.7	13.3	15.2	847	4.34	245	13.4	0.9	4	0.6	4.3	2.2	43	0.02	0.07	6	12	0.43	69	0	1	2	0.01	0	1.8	0.05	5	<0.1	<0.05	5	<0.5	<0.2
42950N 93100E	6142950	593100	Soil	8.7	40.8	17.8	106	0.1	13.6	17.3	813	4.05	108	6.6	1	9	0.6	2.9	0.3	44	0.09	0.05	10	11	0.47	86	0	<1	1.7	0.01	0	0.3	0.05	5.5	<0.1	<0.05	5	<0.5	<0.2
42950N 93150E	6142950	593150	Soil	39.8	36.1	25.5	99	0.2	7.8	6.7	538	4.15	894	15.1	1.2	4	0.3	4.6	1.9	37	0.03	0.13	7	11	0.29	42	0.01	1	2.2	0.01	0.1	2	0.07	1.6	<0.1	<0.05	6	0.7	<0.2
42950N 93200E	6142950	593200	Soil	36.8	39.7	56.1	124	0.3	7.9	7	358	5.98	817	6.2	0.6	3	0.6	11.9	0.4	53	0.02	0.1	4	12	0.28	35	0	<1	1.9	0.01	0	0.4	0.1	3.4	<0.1	<0.05	6	<0.5	<0.2
42950N 93225E	6142950	593225	Soil	35.2	27.4	16.7	301	0.7	11.6	7.2	380	3.37	351	2.5	0.6	32	0.8	3.7	1	43	0.28	0.14	7	13	0.44	71	0	<1	1.9	0.01	0.1	0.9	0.04	2.6	0.1	<0.05	7	<0.5	<0.2
42950N 93250E	6142950	593250	Soil	56.8	35.9	291	349	0.4	8.5	18.4	3210	4.06	662	2.5	0.2	79	3.3	8.7	2.5	41	0.79	0.22	6	13	0.25	90	0.01	2	1.4	0.01	0.1	1.7	0.04	1.1	<0.1	0.12	6	<0.5	<0.2
42950N 93275E	6142950	593275	Soil	36.2	72.3	19.9	252	0.8	10	12.8	1405	3.78	455	6.9	1.5	91	4.5	5.7	2	34	0.93	0.21	18	11	0.31	88	0.01	2	1.6	0.01	0.1	4.3	0.07	2.6	<0.1	0.11	6	<0.5	<0.2
42950N 93300E	6142950	593300	Soil	23.2	53.7	25.9	175	0.2	14.4	15.1	776	4.24	208	5.1	1	21	0.5	4.9	0.7	45	0.17	0.04	7	11	0.49	112	<0.001	<1	2.2	0.01	0.1	0.9	0.03	4.6	<0.1	<0.05	6	<0.5	<0.2
42950N 93325E	6142950	593325	Soil	54.5	31.3	14.1	160	0.3	6.5	6.9	430	3.51	264	5.3	0.7	50	1	4.2	0.6	53	0.44	0.07	9	9	0.27	110	0	<1	1.5	0.01	0.1	1	0.03	2.9	0.1	<0.05	8	<0.5	<0.2
42950N 93350E	6142950	593350	Soil	47.5	77.1	46.2	430	0.4	9.9	19.7	1814	5.43	532	6.2	1.3	101	4.2	11.2	10.3	35	0.99	0.29	10	10	0.34	97	0.01	2	1.6	0.01	0.1	52.2	0.03	3.1	<0.1	0.12	5	0.6	0.3
42950N 93375E	6142950	593375	Soil	33.7	83.1	44.8	1213	5.3	11.1	7.9	315	3.32	695	62.8	1.1	53	3.1	3.2	1.1	36	0.43	0.08	13	10	0.32	125	<0.001	<1	2.4	0.01	0.1	0.5	0.38	5.2	0.1	<0.05	6	0.5	<0.2
42950N 93400E	6142950	593400	Soil	16.4	40.8	53.1	210	1.4	10	10.5	652	4.07	358	19.8	1.3	6	0.7	3.2	4.2	44	0.05	0.06	7	11	0.39	79	<0.001	<1	2.4	0.01	0.1	1.5	0.07	3.9	0.1	<0.05	6	<0.5	<0.2
42950N 93425E	6142950	593425	Soil	1.6	47.5	15.1	104	0.2	11.6	12.5	704	3.97	121	4.9	0.9	6	0.2	2.5	0.3	42	0.04	0.03	11	10	0.45	72	0	<1	1.7	0.01	0	0.3	0.02	6	<0.1	<0.05	5	<0.5	<0.2
42950N 93450E	6142950	593450	Soil	33.2	27.2	42.2	555	1.5	8.7	11	1311	4.09	1071	22.3	1.1	64	1.9	4.8	3.5	33	0.68	0.17	8	11	0.41	101	0	<1	1.9	0.01	0.1	1.1	0.13	5.7	0.1	0.07	5	<0.5	<0.2

2012 Soil Samples

Sample	Nad83N	Nad83E	Type	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	Au PPB	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Hg PPM	Sc PPM	Tl PPM	S %	Ga PPM	Se PPM	Te PPM
42950N 93475E	6142950	593475	Soil	7.7	28.2	12	100	0.7	8.3	7.5	412	4.43	121	4.2	0.6	6	0.3	1.6	0.3	46	0.03	0.11	5	12	0.35	55	0	<1	2.2	0.01	0	0.4	0.07	3.5	<0.1	<0.05	6	<0.5	<0.2
42950N 93500E	6142950	593500	Soil	69	10.3	5.3	421	0.3	9.4	7.3	380	3.28	387	1.8	0.5	22	0.4	3.2	0.2	40	0.19	0.06	6	11	0.48	66	<0.001	<1	1.8	0.01	0	0.3	0.02	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92750E	6143000	592750	Soil	16.4	50.6	13.7	125	0.7	13.7	13.6	504	4.5	2761	9.2	0.7	67	1	3	0.5	46	0.68	0.12	7	14	0.37	54	0	<1	2.8	0.01	0.1	1.1	0.06	5.3	<0.1	<0.05	6	1.4	<0.2
43000N 92775E	6143000	592775	Soil	31.1	44.3	10.2	64	0.7	6.6	4.5	219	3.63	258	4.3	0.5	18	0.5	1.8	0.4	44	0.2	0.12	6	9	0.18	59	0	<1	2.1	0.01	0	0.5	0.09	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92800E	6143000	592800	Soil	8.7	40.8	15.2	96	0.5	10.2	9.2	518	5.25	175	4.2	0.7	4	0.3	3.1	0.4	48	0.02	0.13	5	13	0.33	66	0	<1	2.5	0.01	0.1	0.5	0.1	3.8	<0.1	<0.05	7	<0.5	<0.2
43000N 92825E	6143000	592825	Soil	11.8	16.9	9	37	0.5	3.6	2.2	101	1.49	78.4	5.3	<0.1	5	0.1	0.8	0.6	28	0.01	0.12	5	8	0.13	44	0	<1	1.3	0.01	0.1	0.6	0.06	0.4	0.1	<0.05	6	<0.5	<0.2
43000N 92850E	6143000	592850	Soil	15.1	30	13.7	79	0.4	6.7	5.9	622	3.1	141	10.6	0.3	4	0.2	2	0.5	43	0.02	0.12	5	11	0.29	56	0	<1	2.4	0.01	0.1	0.8	0.09	1.8	0.1	<0.05	6	<0.5	<0.2
43000N 92875E	6143000	592875	Soil	18.9	26.8	12.3	65	0.7	7.1	5.5	326	3.62	148	3.2	0.3	5	0.2	1.5	0.3	43	0.02	0.14	5	11	0.26	48	0	<1	1.9	0.01	0.1	0.8	0.1	1.8	0.1	<0.05	6	<0.5	<0.2
43000N 92900E	6143000	592900	Soil	8.8	32.5	9.8	59	0.8	6	3.9	348	2.79	130	2.3	<0.1	7	0.4	1.2	0.4	48	0.02	0.14	5	10	0.19	61	0.01	<1	1.5	0.01	0.1	0.4	0.09	0.7	<0.1	<0.05	7	<0.5	<0.2
43000N 92925E	6143000	592925	Soil	10.7	34	17.7	108	0.8	10.5	9.7	802	5.59	248	12	0.4	5	0.3	2.4	0.4	46	0.05	0.21	5	14	0.38	50	0.01	<1	2.2	0.01	0.1	0.8	0.1	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92950E	6143000	592950	Soil	2	30.9	10.6	73	0.6	12.3	7.8	434	3.9	62.8	4.5	0.2	10	0.3	1.2	0.1	43	0.06	0.09	5	15	0.33	50	0.01	<1	2.6	0.01	0	0.3	0.13	2.4	<0.1	<0.05	5	0.5	<0.2
43000N 92975E	6143000	592975	Soil	2.4	33.8	10.2	93	0.2	12	8	433	5.01	71	2.1	0.2	6	0.3	1.6	0.1	49	0.03	0.1	5	14	0.36	46	0.01	<1	2	0.01	0	0.2	0.08	2.9	<0.1	<0.05	6	<0.5	<0.2
43000N 93000E	6143000	593000	Soil	3.4	35.4	17.3	97	0.4	10.9	10.2	647	5.3	124	2.2	0.3	5	0.2	2.2	0.3	48	0.02	0.11	5	14	0.36	67	0.01	1	2.3	0.01	0	0.3	0.08	3	<0.1	<0.05	6	<0.5	<0.2
43000N 93025E	6143000	593025	Soil	1.6	39.4	12.2	81	0.4	13.5	9.1	530	4.89	42.7	1.3	0.1	8	0.3	1.4	0.1	51	0.05	0.1	5	15	0.39	66	0.01	1	2.2	0.01	0	0.2	0.08	2.1	<0.1	<0.05	6	<0.5	<0.2
43000N 93050E	6143000	593050	Soil	2.3	36.5	14.5	95	0.4	11.3	11.4	777	4.88	83.1	3.4	0.5	6	0.2	2.2	0.2	47	0.03	0.12	5	13	0.37	65	0	<1	2.1	0.01	0.1	0.2	0.07	4.2	<0.1	<0.05	6	<0.5	<0.2
43000N 93075E	6143000	593075	Soil	2.3	34.6	12.8	96	0.9	14	10.7	697	5.32	59	12.9	0.3	8	0.3	1.7	0.2	52	0.04	0.13	5	15	0.39	92	0.01	1	2.6	0.01	0.1	0.3	0.09	3	<0.1	<0.05	6	<0.5	<0.2
43000N 93100E	6143000	593100	Soil	2.9	32	9.9	86	0.3	12.5	7.1	324	4.3	49.9	5	0.4	7	0.3	1.7	0.2	46	0.03	0.09	5	14	0.32	52	0.01	1	2	0.01	0	0.7	0.07	3.3	<0.1	<0.05	5	<0.5	<0.2
43000N 93125E	6143000	593125	Soil	9.2	32.9	12.5	90	0.2	13.4	8.1	432	4.53	74.9	4.2	0.3	9	0.3	1.9	0.3	49	0.05	0.1	4	14	0.33	73	0.01	<1	1.9	0.01	0	0.3	0.06	3.2	<0.1	<0.05	5	<0.5	<0.2
43000N 93150E	6143000	593150	Soil	85.5	154	918	1140	12.4	4.1	14	4474	5.56	3676	584.7	7.7	63	19.9	118	138	6	0.38	0.11	19	2	0.12	108	0	1	0.9	0	0.1	29	0.16	2.2	0.1	<0.05	2	0.8	1.7
43000N 93175E	6143000	593175	Soil	38.3	351	297	1227	16.1	26.1	26.6	6912	14.6	>1000	13868	2.6	69	18.1	81.8	47.9	43	0.25	0.16	11	30	0.32	143	0.01	<1	1.7	0	0.1	2.6	0.26	9.6	0.2	<0.05	5	1.4	0.4
43000N 93200E	6143000	593200	Soil	7.7	34.5	19.5	79	0.4	8.5	7.7	765	3.63	152	12.2	0.6	6	0.6	3.4	0.6	42	0.03	0.12	7	13	0.24	49	0.01	<1	2.3	0	0	1.8	0.09	2.9	0.1	<0.05	5	<0.5	<0.2
43000N 93225E	6143000	593225	Soil	20.8	47.8	16.6	122	0.1	13.2	14.1	875	4.31	109	9	1.3	7	0.3	3.3	0.4	46	0.05	0.09	7	13	0.46	64	0	<1	2.4	0.01	0	0.5	0.05	7	0.1	<0.05	5	0.6	<0.2
43000N 93250E	6143000	593250	Soil	22.2	34	12.4	90	0.3	10.1	9.6	453	3.91	155	4.5	0.9	5	0.2	4.4	0.3	42	0.02	0.06	6	11	0.38	61	0	<1	2.3	0.01	0	0.4	0.04	4.8	<0.1	<0.05	5	<0.5	<0.2
43000N 93275E	6143000	593275	Soil	21.4	27.2	13.2	99	0.3	10.3	6.6	324	3.95	129	2.5	0.6	11	0.5	2.2	0.4	48	0.07	0.1	5	12	0.33	69	0	<1	2.1	0.01	0	0.4	0.06	3.6	<0.1	<0.05	6	<0.5	<0.2
43000N 93300E	6143000	593300	Soil	12.9	49	21.1	261	0.5	11.4	11.6	1053	3.35	652	10	0.4	92	1.4	7.8	0.9	41	0.85	0.18	8	14	0.47	70	0.01	1	1.7	0.01	0.1	0.6	0.06	4.6	<0.1	0.13	5	1.2	<0.2
43000N 93325E	6143000	593325	Soil	12.6	31.9	7.9	37	0.5	8.2	6.9	488	2.63	145	5.1	0.4	72	0.3	3.1	0.3	67	0.68	0.12	7	15	0.6	77	0.08	<1	2	0.02	0.1	0.4	0.06	6	0.1	0.14	7	<0.5	<0.2
43000N 93350E	6143000	593350	Soil	31.7	102	11.5	470	1.8	9	5	433	2.23	444	16	0.5	181	5	18.2	0.4	26	1.66	0.23	11	8	0.24	131	0	1	1.7	0.01	0.1	0.2	0.21	4.9	<0.1	0.22	4	2.3	<0.2
43000N 93375E	6143000	593375	Soil	26.6	37.3	13.5	137	0.3	9.6	11	738	3.46	117	2.6	0.9	61	0.5	4.9	0.3	42	0.49	0.11	7	10	0.34	116	0	<1	1.8	0.01	0	0.5	0.03	5.4	<0.1	<0.05	5	<0.5	<0.2
43000N 93400E	6143000	593400	Soil	44.9	36.6	14.4	166	0.3	10.1	10.7	917	3.84	222	2.7	0.6	82	0.6	6.2	0.3	45	0.64	0.14	5	12	0.37	98	0	<1	1.8	0.01	0	0.2	0.02	5	<0.1	<0.05	6	<0.5	<0.2
43000N 93425E	6143000	593425	Soil	24.4	23.1	11.3	128	0.3	9.6	7.5	352	3.85	120	2	0.6	11	0.4	3.1	0.2	45	0.06	0.06	5	11	0.36	64	0	<1	1.8	0.01	0	0.2	0.02	3.7	<0.1	<0.05	6	<0.5	<0.2
43000N 93450E	6143000	593450	Soil	24.2	71.4	27.3	841	3.7	11.8	8.3	509	3.39	610	36.4	0.9	77	3.4	6.1	0.8	36	0.68	0.12	10	11	0.43	89	0	<1	1.8	0.01	0.1	0.5	0.11	7.5	<0.1	<0.05	5	0.7	<0.2
43000N 93475E	6143000	593475	Soil	54.7	30.8	16	422	0.9	8.5	10.2	1398	4.26	1583	5.8	0.8	76	4.1	8.6	0.4	38	0.69	0.15	9	11	0.3	91	0	1	1.7	0.01	0	1.1	0.09	5.9	0.1	0.09	5	1.1	<0.2
43000N 93500E	6143000	593500	Soil	11	36.4	7.7	648	0.6	12.1	9.7	395	3.14	398	12.1	0.7	31	3	4.6	0.3	39	0.32	0.07	9	11	0.5	60	0	<1	1.7	0.01	0	0.1	0.04	5.7	<0.1	<0.05	5	<0.5	<0.2
42950N 92975E	6142950	592975	Soil	7.3	39.8	15.9	133	0.3	12	12.4	697	4.1	147	5.4	0.7	4	0.4	2.7	0.3	45	0.02	0.07	6	12	0.39	65	0	1	2	0.01	0	0.7	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
43000N 92800E	6143000	592800	Soil	8.7	40.8	15.2	96	0.5	10.2	9.2	518	5.25	175	4.2	0.7	4	0.3	3.1	0.4	48	0.02	0.13	5	13	0.33	66	0	<1	2.5	0.01	0.1	0.5	0.1	3.8	<0.1	<0.05	7	<0.5	<0.2
42900N 92800E	6142900	592800	Soil	20.3	34.6	20.5	90	0.9	6.7	7.3	471	5.94	171	5	0.5	13	0.5	3.7	0.5	48	0.14	0.12	4	11	0.19	53	0	<1	1.7	0.01	0	0.8	0.09	2.7	<0.1	<0.05	6	<0.5	<0.2
42900N 93400E	6142900	593400	Soil	25.5	43.7	17.6	246	0.3	12.6	11	555	3.87	274	5.8	1.3	27	1	2.6	0.6	44	0.21	0.04	11	12	0.46	121	<0.001	<1	2	0.01	0	0.4	0.04	5	<0.1	<0.05	6	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
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Submitted By: Derrick Strickland
Receiving Lab: Canada-Smithers
Received: July 13, 2012
Report Date: August 07, 2012
Page: 1 of 5

CERTIFICATE OF ANALYSIS SMI12000083.1

CLIENT JOB INFORMATION

Project: S-12
Shipment ID:
P.O. Number
Number of Samples: 93

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
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.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	89	Dry at 60C			SMI
SS80	89	Dry at 60C sieve 100g to -80 mesh			SMI
1DX2	89	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Rio Minerals Ltd.
910 - 475 Howe Street
Vancouver BC V6C 2B3
Canada

CC: Andrew Molnar

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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

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Vancouver BC V6C 2B3 Canada

Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
42900N 92750E	Soil		4.6	35.5	11.9	75	0.1	9.5	7.6	445	4.70	100.8	4.7	0.4	4	0.3	2.2	0.4	50	0.03	0.088	5
42900N 92775E	Soil		26.6	38.5	12.0	81	0.1	11.3	9.9	539	6.02	139.8	5.2	0.2	32	0.5	2.2	0.3	48	0.25	0.070	6
42900N 92800E	Soil		20.3	34.6	20.5	90	0.9	6.7	7.3	471	5.94	171.3	5.0	0.5	13	0.5	3.7	0.5	48	0.14	0.119	4
42900N 92825E	Soil		6.2	39.7	18.4	121	<0.1	11.4	14.9	825	3.94	98.0	5.1	0.9	4	0.4	2.7	0.2	41	0.03	0.033	8
42900N 92850E	Soil		28.9	28.1	10.8	89	0.5	5.6	4.7	261	2.96	156.8	2.5	0.5	6	0.4	2.2	0.5	37	0.03	0.111	6
42900N 92875E	Soil		15.3	34.8	12.3	100	0.3	10.7	8.5	432	3.63	172.9	3.2	0.6	4	0.6	2.3	0.3	41	0.02	0.071	5
42900N 92900E	Soil		4.1	38.8	16.3	85	0.6	6.4	5.7	408	4.81	170.8	4.9	0.7	4	0.3	2.3	0.6	48	0.02	0.199	4
42900N 92925E	Soil		6.1	34.3	17.9	85	0.5	7.2	6.4	560	4.17	269.5	4.1	0.5	7	0.8	2.9	0.8	44	0.05	0.147	5
42900N 92950E	Soil		5.5	31.8	12.3	80	1.1	8.1	6.0	513	4.04	342.5	27.8	0.4	6	0.4	2.7	1.0	54	0.02	0.134	4
42900N 92975E	Soil		6.0	49.3	21.1	119	0.5	10.3	11.5	1000	4.18	197.7	5.7	0.7	4	0.6	3.7	1.1	45	0.01	0.114	6
42900N 93000E	Soil		7.8	37.3	23.3	103	0.3	8.0	8.0	911	3.53	271.9	11.8	0.5	6	1.1	3.2	1.3	40	0.04	0.120	5
42900N 93025E	Soil		7.5	40.3	32.0	187	0.7	12.3	12.2	842	4.55	542.4	22.0	1.0	7	0.7	4.6	1.4	44	0.05	0.080	7
42900N 93050E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42900N 93075E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42900N 93100E	Soil		7.4	35.7	16.2	82	0.5	9.6	7.2	308	4.36	172.3	5.9	0.8	5	0.2	2.3	0.5	40	0.03	0.111	5
42900N 93125E	Soil		5.4	47.0	13.3	68	0.3	8.8	8.3	330	6.08	94.6	1.3	0.3	5	0.3	1.8	0.3	46	0.03	0.108	4
42900N 93150E	Soil		26.7	82.0	15.0	188	9.0	6.4	10.4	262	2.54	2401	49.8	1.3	46	1.3	2.6	0.4	22	0.45	0.147	19
42900N 93175E	Soil		36.0	46.8	21.4	341	0.7	12.9	8.2	374	4.09	559.5	6.4	1.2	11	0.7	4.5	0.9	42	0.07	0.088	7
42900N 93200E	Soil		25.6	11.8	8.5	40	0.5	2.8	1.7	106	1.16	124.2	1.5	0.2	5	0.3	0.7	0.4	24	0.03	0.086	6
42900N 93225E	Soil		36.1	76.0	859.5	669	2.6	9.8	11.9	2132	7.54	4941	703.1	1.5	14	3.8	21.1	19.8	30	0.10	0.255	7
42900N 93250E	Soil		24.6	36.6	21.9	182	0.3	9.2	7.6	414	4.53	343.5	4.9	1.2	6	0.8	3.0	0.5	41	0.04	0.091	6
42900N 93275E	Soil		36.4	24.6	12.9	214	0.4	9.8	8.8	592	3.28	175.8	0.7	0.5	44	1.0	1.7	0.4	59	0.39	0.095	4
42900N 93300E	Soil		31.4	54.1	17.1	211	0.3	12.7	17.9	1076	4.15	243.1	2.4	0.5	43	1.9	4.2	0.3	48	0.39	0.064	6
42900N 93325E	Soil		27.8	99.6	17.7	675	1.1	12.7	12.1	799	3.75	451.2	14.1	0.8	69	3.2	4.6	0.6	43	0.64	0.127	13
42900N 93350E	Soil		22.2	35.5	16.1	203	0.4	11.8	12.8	627	3.86	262.6	1.3	0.6	34	1.0	2.6	0.4	48	0.28	0.061	7
42900N 93375E	Soil		315.4	71.6	41.3	1316	1.6	11.2	42.8	>10000	6.57	1598	15.0	1.2	124	38.2	8.5	0.6	49	0.98	0.257	10
42900N 93400E	Soil		25.5	43.7	17.6	246	0.3	12.6	11.0	555	3.87	274.0	5.8	1.3	27	1.0	2.6	0.6	44	0.21	0.039	11
42900N 93425E	Soil		12.9	29.4	73.8	98	1.0	5.0	4.5	471	2.71	198.8	10.6	1.2	4	0.6	1.3	1.1	30	0.02	0.127	8
42900N 93450E	Soil		15.1	76.5	15.5	418	1.4	8.6	5.6	243	4.60	714.3	12.9	0.6	59	2.5	2.4	0.5	46	0.58	0.094	6
42900N 93475E	Soil		9.2	27.1	16.3	99	0.5	8.6	7.7	418	4.25	149.1	3.4	0.7	7	0.5	2.3	0.3	41	0.04	0.084	5

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Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
42900N 92750E	Soil		13	0.30	70	0.005	1	2.16	0.006	0.04	0.6	0.12	2.7	<0.1	<0.05	6	0.6	<0.2
42900N 92775E	Soil		15	0.33	47	0.013	<1	2.60	0.005	0.02	1.2	0.08	3.2	<0.1	<0.05	5	0.5	<0.2
42900N 92800E	Soil		11	0.19	53	0.002	<1	1.73	0.007	0.04	0.8	0.09	2.7	<0.1	<0.05	6	<0.5	<0.2
42900N 92825E	Soil		10	0.34	56	<0.001	<1	1.36	0.005	0.03	0.2	0.03	6.6	<0.1	<0.05	4	<0.5	<0.2
42900N 92850E	Soil		8	0.14	76	0.001	<1	1.57	0.006	0.03	1.6	0.05	2.3	<0.1	<0.05	5	<0.5	<0.2
42900N 92875E	Soil		11	0.34	79	<0.001	<1	1.72	0.008	0.04	0.4	0.03	3.4	<0.1	<0.05	5	<0.5	<0.2
42900N 92900E	Soil		11	0.20	43	0.002	<1	2.00	0.007	0.04	0.9	0.10	2.9	0.1	<0.05	6	0.7	<0.2
42900N 92925E	Soil		11	0.17	70	0.002	<1	2.00	0.006	0.05	0.7	0.10	2.0	<0.1	<0.05	5	<0.5	<0.2
42900N 92950E	Soil		12	0.23	64	0.003	<1	1.85	0.006	0.04	2.7	0.09	2.1	0.1	<0.05	6	<0.5	<0.2
42900N 92975E	Soil		13	0.29	83	0.001	<1	1.98	0.007	0.05	1.6	0.05	3.7	<0.1	<0.05	5	<0.5	<0.2
42900N 93000E	Soil		9	0.21	91	0.001	<1	1.37	0.006	0.04	1.4	0.09	2.8	<0.1	<0.05	5	<0.5	<0.2
42900N 93025E	Soil		13	0.40	63	0.001	<1	1.94	0.007	0.05	1.8	0.07	4.2	<0.1	<0.05	5	<0.5	<0.2
42900N 93050E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42900N 93075E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42900N 93100E	Soil		12	0.35	57	0.001	<1	2.36	0.006	0.04	0.7	0.09	3.6	<0.1	<0.05	5	<0.5	<0.2
42900N 93125E	Soil		15	0.31	30	0.006	<1	1.78	0.005	0.03	0.8	0.10	3.3	<0.1	<0.05	6	0.5	<0.2
42900N 93150E	Soil		10	0.14	56	0.002	<1	4.59	0.006	0.03	0.5	0.31	5.3	<0.1	0.07	4	1.5	<0.2
42900N 93175E	Soil		14	0.45	78	0.002	<1	2.22	0.007	0.04	0.9	0.06	3.9	0.1	<0.05	6	<0.5	<0.2
42900N 93200E	Soil		6	0.09	38	0.002	<1	1.00	0.007	0.04	0.8	0.05	0.7	<0.1	<0.05	6	<0.5	<0.2
42900N 93225E	Soil		17	0.23	54	0.004	1	1.47	0.006	0.06	24.5	0.20	1.9	<0.1	0.06	5	<0.5	0.4
42900N 93250E	Soil		11	0.35	54	0.002	<1	2.17	0.007	0.04	1.5	0.10	3.4	<0.1	<0.05	6	<0.5	<0.2
42900N 93275E	Soil		14	0.51	99	0.003	<1	1.64	0.011	0.09	0.8	0.03	3.2	<0.1	<0.05	7	<0.5	<0.2
42900N 93300E	Soil		12	0.50	100	0.001	<1	1.78	0.007	0.04	0.6	0.02	4.7	<0.1	<0.05	6	<0.5	<0.2
42900N 93325E	Soil		13	0.46	139	0.001	<1	2.07	0.012	0.07	0.7	0.14	6.7	0.1	0.06	6	0.6	<0.2
42900N 93350E	Soil		12	0.50	79	0.002	<1	1.89	0.008	0.04	0.4	0.02	4.2	<0.1	<0.05	6	<0.5	<0.2
42900N 93375E	Soil		12	0.32	466	0.002	<1	2.49	0.015	0.07	0.7	0.13	10.6	0.3	0.14	7	0.8	<0.2
42900N 93400E	Soil		12	0.46	121	<0.001	<1	2.02	0.012	0.04	0.4	0.04	5.0	<0.1	<0.05	6	<0.5	<0.2
42900N 93425E	Soil		8	0.19	62	0.002	<1	2.30	0.007	0.04	34.2	0.08	0.8	0.1	<0.05	8	<0.5	<0.2
42900N 93450E	Soil		12	0.28	57	0.002	<1	2.17	0.008	0.04	0.4	0.13	4.0	<0.1	<0.05	6	1.1	<0.2
42900N 93475E	Soil		12	0.33	53	0.002	<1	2.05	0.006	0.03	0.7	0.08	3.6	<0.1	<0.05	6	<0.5	<0.2

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Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
42900N 93500E	Soil		15.4	31.0	10.9	107	0.4	9.2	7.3	358	3.71	109.2	3.2	0.8	6	0.2	1.3	0.3	50	0.05	0.088	5
42950N 92750E	Soil		37.5	23.1	11.1	69	0.2	6.8	6.2	479	4.65	1122	<0.5	0.1	67	0.3	2.1	0.3	58	0.68	0.114	5
42950N 92775E	Soil		13.3	26.4	12.9	40	0.2	6.4	5.2	328	5.66	60.0	1.0	<0.1	10	0.4	1.1	0.2	61	0.04	0.077	4
42950N 92800E	Soil		32.5	41.1	18.7	437	0.7	17.1	15.3	2087	3.75	958.7	7.8	0.8	38	1.6	3.0	0.5	37	0.30	0.167	12
42950N 92825E	Soil		9.1	35.0	15.0	90	0.3	8.7	7.0	353	4.40	143.4	2.3	0.6	5	0.6	1.8	0.4	53	0.02	0.093	5
42950N 92850E	Soil		37.9	17.8	8.3	39	0.6	3.2	2.1	112	1.80	110.9	2.5	0.2	9	0.3	1.0	0.5	32	0.09	0.127	6
42950N 92875E	Soil		6.0	39.8	17.2	126	0.4	9.1	10.6	617	4.30	170.4	5.0	0.9	3	0.3	2.8	0.5	42	<0.01	0.092	5
42950N 92900E	Soil		44.5	25.9	11.3	70	0.3	5.7	4.0	314	2.40	168.7	3.8	0.3	6	0.3	1.4	0.4	40	0.02	0.108	5
42950N 92925E	Soil		33.7	53.5	19.7	142	0.7	11.6	13.5	1519	4.75	491.7	12.2	1.4	10	0.7	7.5	3.1	44	0.06	0.200	5
42950N 92950E	Soil		5.3	28.5	11.5	66	0.5	6.2	4.4	325	3.47	125.7	4.7	0.2	5	0.2	1.8	0.6	48	0.02	0.131	4
42950N 92975E	Soil		7.3	39.8	15.9	133	0.3	12.0	12.4	697	4.10	147.2	5.4	0.7	4	0.4	2.7	0.3	45	0.02	0.065	6
42950N 93000E	Soil		4.4	37.0	18.5	111	0.2	12.7	11.1	539	4.38	107.3	7.0	0.8	4	0.3	2.4	0.4	42	0.02	0.071	5
42950N 93025E	Soil		11.1	39.1	15.1	132	0.3	11.1	9.9	555	4.06	112.0	7.8	0.8	4	0.4	2.9	0.3	41	0.01	0.073	5
42950N 93050E	Soil		6.6	34.0	15.0	123	0.3	9.9	9.9	834	4.24	160.2	2.5	0.5	5	0.4	2.9	0.4	46	0.03	0.119	5
42950N 93075E	Soil		19.0	48.5	21.6	163	0.7	13.3	15.2	847	4.34	244.9	13.4	0.9	4	0.6	4.3	2.2	43	0.02	0.067	6
42950N 93100E	Soil		8.7	40.8	17.8	106	0.1	13.6	17.3	813	4.05	108.2	6.6	1.0	9	0.6	2.9	0.3	44	0.09	0.048	10
42950N 93125E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42950N 93150E	Soil		39.8	36.1	25.5	99	0.2	7.8	6.7	538	4.15	893.7	15.1	1.2	4	0.3	4.6	1.9	37	0.03	0.126	7
42950N 93175E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42950N 93200E	Soil		36.8	39.7	56.1	124	0.3	7.9	7.0	358	5.98	817.0	6.2	0.6	3	0.6	11.9	0.4	53	0.02	0.096	4
42950N 93225E	Soil		35.2	27.4	16.7	301	0.7	11.6	7.2	380	3.37	351.3	2.5	0.6	32	0.8	3.7	1.0	43	0.28	0.138	7
42950N 93250E	Soil		56.8	35.9	291.1	349	0.4	8.5	18.4	3210	4.06	662.3	2.5	0.2	79	3.3	8.7	2.5	41	0.79	0.220	6
42950N 93275E	Soil		36.2	72.3	19.9	252	0.8	10.0	12.8	1405	3.78	454.8	6.9	1.5	91	4.5	5.7	2.0	34	0.93	0.209	18
42950N 93300E	Soil		23.2	53.7	25.9	175	0.2	14.4	15.1	776	4.24	208.2	5.1	1.0	21	0.5	4.9	0.7	45	0.17	0.044	7
42950N 93325E	Soil		54.5	31.3	14.1	160	0.3	6.5	6.9	430	3.51	264.0	5.3	0.7	50	1.0	4.2	0.6	53	0.44	0.069	9
42950N 93350E	Soil		47.5	77.1	46.2	430	0.4	9.9	19.7	1814	5.43	532.3	6.2	1.3	101	4.2	11.2	10.3	35	0.99	0.285	10
42950N 93375E	Soil		33.7	83.1	44.8	1213	5.3	11.1	7.9	315	3.32	695.0	62.8	1.1	53	3.1	3.2	1.1	36	0.43	0.081	13
42950N 93400E	Soil		16.4	40.8	53.1	210	1.4	10.0	10.5	652	4.07	357.5	19.8	1.3	6	0.7	3.2	4.2	44	0.05	0.064	7
42950N 93425E	Soil		1.6	47.5	15.1	104	0.2	11.6	12.5	704	3.97	120.9	4.9	0.9	6	0.2	2.5	0.3	42	0.04	0.032	11
42950N 93450E	Soil		33.2	27.2	42.2	555	1.5	8.7	11.0	1311	4.09	1071	22.3	1.1	64	1.9	4.8	3.5	33	0.68	0.169	8

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Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
42900N 93500E	Soil		13	0.46	64	0.005	<1	2.64	0.008	0.04	0.7	0.06	4.4	<0.1	<0.05	6	<0.5	<0.2
42950N 92750E	Soil		12	0.21	52	0.009	<1	1.50	0.007	0.04	0.4	0.06	1.8	<0.1	<0.05	7	0.5	<0.2
42950N 92775E	Soil		14	0.14	42	0.019	<1	1.63	0.004	0.02	0.3	0.11	1.6	<0.1	<0.05	6	0.7	<0.2
42950N 92800E	Soil		12	0.35	146	0.001	<1	2.38	0.010	0.07	0.7	0.04	6.6	<0.1	<0.05	5	<0.5	<0.2
42950N 92825E	Soil		12	0.27	75	0.003	<1	2.12	0.007	0.05	0.8	0.07	3.2	0.1	<0.05	7	<0.5	<0.2
42950N 92850E	Soil		8	0.13	49	0.001	<1	1.41	0.008	0.05	0.7	0.04	0.8	0.1	<0.05	6	<0.5	<0.2
42950N 92875E	Soil		12	0.31	64	0.001	<1	2.02	0.008	0.05	0.6	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
42950N 92900E	Soil		9	0.16	63	0.002	<1	1.73	0.008	0.05	0.8	0.06	1.4	<0.1	<0.05	6	<0.5	<0.2
42950N 92925E	Soil		13	0.27	81	0.004	1	2.44	0.006	0.05	0.7	0.13	2.7	0.1	<0.05	6	<0.5	0.2
42950N 92950E	Soil		11	0.19	48	0.003	1	1.63	0.006	0.03	0.6	0.10	1.1	<0.1	<0.05	6	<0.5	<0.2
42950N 92975E	Soil		12	0.39	65	0.002	1	2.03	0.007	0.04	0.7	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
42950N 93000E	Soil		13	0.37	74	0.001	1	2.41	0.006	0.04	0.2	0.09	4.3	<0.1	<0.05	4	<0.5	<0.2
42950N 93025E	Soil		11	0.38	69	0.001	<1	2.18	0.006	0.04	0.6	0.08	4.0	<0.1	<0.05	5	<0.5	<0.2
42950N 93050E	Soil		11	0.32	54	0.002	<1	1.50	0.007	0.05	0.5	0.03	2.9	<0.1	<0.05	6	<0.5	<0.2
42950N 93075E	Soil		12	0.43	69	0.001	1	2.01	0.007	0.04	1.8	0.05	5.0	<0.1	<0.05	5	<0.5	<0.2
42950N 93100E	Soil		11	0.47	86	0.003	<1	1.66	0.006	0.04	0.3	0.05	5.5	<0.1	<0.05	5	<0.5	<0.2
42950N 93125E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42950N 93150E	Soil		11	0.29	42	0.007	1	2.22	0.007	0.06	2.0	0.07	1.6	<0.1	<0.05	6	0.7	<0.2
42950N 93175E	Soil		N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
42950N 93200E	Soil		12	0.28	35	0.001	<1	1.93	0.006	0.03	0.4	0.10	3.4	<0.1	<0.05	6	<0.5	<0.2
42950N 93225E	Soil		13	0.44	71	0.004	<1	1.94	0.008	0.05	0.9	0.04	2.6	0.1	<0.05	7	<0.5	<0.2
42950N 93250E	Soil		13	0.25	90	0.007	2	1.37	0.008	0.08	1.7	0.04	1.1	<0.1	0.12	6	<0.5	<0.2
42950N 93275E	Soil		11	0.31	88	0.007	2	1.58	0.007	0.06	4.3	0.07	2.6	<0.1	0.11	6	<0.5	<0.2
42950N 93300E	Soil		11	0.49	112	<0.001	<1	2.21	0.009	0.06	0.9	0.03	4.6	<0.1	<0.05	6	<0.5	<0.2
42950N 93325E	Soil		9	0.27	110	0.002	<1	1.49	0.009	0.05	1.0	0.03	2.9	0.1	<0.05	8	<0.5	<0.2
42950N 93350E	Soil		10	0.34	97	0.005	2	1.56	0.007	0.07	52.2	0.03	3.1	<0.1	0.12	5	0.6	0.3
42950N 93375E	Soil		10	0.32	125	<0.001	<1	2.36	0.012	0.07	0.5	0.38	5.2	0.1	<0.05	6	0.5	<0.2
42950N 93400E	Soil		11	0.39	79	<0.001	<1	2.37	0.008	0.05	1.5	0.07	3.9	0.1	<0.05	6	<0.5	<0.2
42950N 93425E	Soil		10	0.45	72	0.001	<1	1.70	0.006	0.03	0.3	0.02	6.0	<0.1	<0.05	5	<0.5	<0.2
42950N 93450E	Soil		11	0.41	101	0.001	<1	1.93	0.009	0.07	1.1	0.13	5.7	0.1	0.07	5	<0.5	<0.2

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		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
42950N 93475E	Soil		7.7	28.2	12.0	100	0.7	8.3	7.5	412	4.43	120.8	4.2	0.6	6	0.3	1.6	0.3	46	0.03	0.110	5
42950N 93500E	Soil		69.0	10.3	5.3	421	0.3	9.4	7.3	380	3.28	386.5	1.8	0.5	22	0.4	3.2	0.2	40	0.19	0.058	6
43000N 92750E	Soil		16.4	50.6	13.7	125	0.7	13.7	13.6	504	4.50	2761	9.2	0.7	67	1.0	3.0	0.5	46	0.68	0.117	7
43000N 92775E	Soil		31.1	44.3	10.2	64	0.7	6.6	4.5	219	3.63	258.0	4.3	0.5	18	0.5	1.8	0.4	44	0.20	0.117	6
43000N 92800E	Soil		8.7	40.8	15.2	96	0.5	10.2	9.2	518	5.25	174.6	4.2	0.7	4	0.3	3.1	0.4	48	0.02	0.131	5
43000N 92825E	Soil		11.8	16.9	9.0	37	0.5	3.6	2.2	101	1.49	78.4	5.3	<0.1	5	0.1	0.8	0.6	28	0.01	0.123	5
43000N 92850E	Soil		15.1	30.0	13.7	79	0.4	6.7	5.9	622	3.10	141.0	10.6	0.3	4	0.2	2.0	0.5	43	0.02	0.122	5
43000N 92875E	Soil		18.9	26.8	12.3	65	0.7	7.1	5.5	326	3.62	147.5	3.2	0.3	5	0.2	1.5	0.3	43	0.02	0.138	5
43000N 92900E	Soil		8.8	32.5	9.8	59	0.8	6.0	3.9	348	2.79	130.0	2.3	<0.1	7	0.4	1.2	0.4	48	0.02	0.136	5
43000N 92925E	Soil		10.7	34.0	17.7	108	0.8	10.5	9.7	802	5.59	247.9	12.0	0.4	5	0.3	2.4	0.4	46	0.05	0.214	5
43000N 92950E	Soil		2.0	30.9	10.6	73	0.6	12.3	7.8	434	3.90	62.8	4.5	0.2	10	0.3	1.2	0.1	43	0.06	0.093	5
43000N 92975E	Soil		2.4	33.8	10.2	93	0.2	12.0	8.0	433	5.01	71.0	2.1	0.2	6	0.3	1.6	0.1	49	0.03	0.104	5
43000N 93000E	Soil		3.4	35.4	17.3	97	0.4	10.9	10.2	647	5.30	123.9	2.2	0.3	5	0.2	2.2	0.3	48	0.02	0.111	5
43000N 93025E	Soil		1.6	39.4	12.2	81	0.4	13.5	9.1	530	4.89	42.7	1.3	0.1	8	0.3	1.4	0.1	51	0.05	0.098	5
43000N 93050E	Soil		2.3	36.5	14.5	95	0.4	11.3	11.4	777	4.88	83.1	3.4	0.5	6	0.2	2.2	0.2	47	0.03	0.115	5
43000N 93075E	Soil		2.3	34.6	12.8	96	0.9	14.0	10.7	697	5.32	59.0	12.9	0.3	8	0.3	1.7	0.2	52	0.04	0.126	5
43000N 93100E	Soil		2.9	32.0	9.9	86	0.3	12.5	7.1	324	4.30	49.9	5.0	0.4	7	0.3	1.7	0.2	46	0.03	0.091	5
43000N 93125E	Soil		9.2	32.9	12.5	90	0.2	13.4	8.1	432	4.53	74.9	4.2	0.3	9	0.3	1.9	0.3	49	0.05	0.098	4
43000N 93150E	Soil		85.5	153.7	918.4	1140	12.4	4.1	14.0	4474	5.56	3675	584.7	7.7	63	19.9	117.6	138.1	6	0.38	0.113	19
43000N 93175E	Soil		38.3	350.9	297.3	1227	16.1	26.1	26.6	6912	14.55	>10000	13868	2.6	69	18.1	81.8	47.9	43	0.25	0.161	11
43000N 93200E	Soil		7.7	34.5	19.5	79	0.4	8.5	7.7	765	3.63	152.3	12.2	0.6	6	0.6	3.4	0.6	42	0.03	0.121	7
43000N 93225E	Soil		20.8	47.8	16.6	122	0.1	13.2	14.1	875	4.31	109.0	9.0	1.3	7	0.3	3.3	0.4	46	0.05	0.087	7
43000N 93250E	Soil		22.2	34.0	12.4	90	0.3	10.1	9.6	453	3.91	154.5	4.5	0.9	5	0.2	4.4	0.3	42	0.02	0.060	6
43000N 93275E	Soil		21.4	27.2	13.2	99	0.3	10.3	6.6	324	3.95	128.5	2.5	0.6	11	0.5	2.2	0.4	48	0.07	0.099	5
43000N 93300E	Soil		12.9	49.0	21.1	261	0.5	11.4	11.6	1053	3.35	651.7	10.0	0.4	92	1.4	7.8	0.9	41	0.85	0.184	8
43000N 93325E	Soil		12.6	31.9	7.9	37	0.5	8.2	6.9	488	2.63	145.0	5.1	0.4	72	0.3	3.1	0.3	67	0.68	0.115	7
43000N 93350E	Soil		31.7	102.2	11.5	470	1.8	9.0	5.0	433	2.23	444.2	16.0	0.5	181	5.0	18.2	0.4	26	1.66	0.232	11
43000N 93375E	Soil		26.6	37.3	13.5	137	0.3	9.6	11.0	738	3.46	116.7	2.6	0.9	61	0.5	4.9	0.3	42	0.49	0.105	7
43000N 93400E	Soil		44.9	36.6	14.4	166	0.3	10.1	10.7	917	3.84	221.5	2.7	0.6	82	0.6	6.2	0.3	45	0.64	0.141	5
43000N 93425E	Soil		24.4	23.1	11.3	128	0.3	9.6	7.5	352	3.85	120.1	2.0	0.6	11	0.4	3.1	0.2	45	0.06	0.064	5

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910 - 475 Howe Street
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Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
42950N 93475E	Soil	12	0.35	55	0.002	<1	2.17	0.007	0.03	0.4	0.07	3.5	<0.1	<0.05	6	<0.5	<0.2
42950N 93500E	Soil	11	0.48	66	<0.001	<1	1.84	0.008	0.03	0.3	0.02	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92750E	Soil	14	0.37	54	0.003	<1	2.84	0.010	0.05	1.1	0.06	5.3	<0.1	<0.05	6	1.4	<0.2
43000N 92775E	Soil	9	0.18	59	0.003	<1	2.08	0.008	0.04	0.5	0.09	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92800E	Soil	13	0.33	66	0.003	<1	2.53	0.008	0.05	0.5	0.10	3.8	<0.1	<0.05	7	<0.5	<0.2
43000N 92825E	Soil	8	0.13	44	0.002	<1	1.31	0.007	0.05	0.6	0.06	0.4	0.1	<0.05	6	<0.5	<0.2
43000N 92850E	Soil	11	0.29	56	0.003	<1	2.35	0.007	0.06	0.8	0.09	1.8	0.1	<0.05	6	<0.5	<0.2
43000N 92875E	Soil	11	0.26	48	0.004	<1	1.85	0.008	0.05	0.8	0.10	1.8	0.1	<0.05	6	<0.5	<0.2
43000N 92900E	Soil	10	0.19	61	0.005	<1	1.54	0.008	0.06	0.4	0.09	0.7	<0.1	<0.05	7	<0.5	<0.2
43000N 92925E	Soil	14	0.38	50	0.006	<1	2.15	0.006	0.05	0.8	0.10	2.6	<0.1	<0.05	6	<0.5	<0.2
43000N 92950E	Soil	15	0.33	50	0.010	<1	2.56	0.006	0.04	0.3	0.13	2.4	<0.1	<0.05	5	0.5	<0.2
43000N 92975E	Soil	14	0.36	46	0.008	<1	1.99	0.014	0.03	0.2	0.08	2.9	<0.1	<0.05	6	<0.5	<0.2
43000N 93000E	Soil	14	0.36	67	0.005	1	2.30	0.007	0.04	0.3	0.08	3.0	<0.1	<0.05	6	<0.5	<0.2
43000N 93025E	Soil	15	0.39	66	0.010	1	2.19	0.007	0.04	0.2	0.08	2.1	<0.1	<0.05	6	<0.5	<0.2
43000N 93050E	Soil	13	0.37	65	0.003	<1	2.11	0.008	0.05	0.2	0.07	4.2	<0.1	<0.05	6	<0.5	<0.2
43000N 93075E	Soil	15	0.39	92	0.008	1	2.58	0.008	0.06	0.3	0.09	3.0	<0.1	<0.05	6	<0.5	<0.2
43000N 93100E	Soil	14	0.32	52	0.008	1	1.96	0.005	0.04	0.7	0.07	3.3	<0.1	<0.05	5	<0.5	<0.2
43000N 93125E	Soil	14	0.33	73	0.006	<1	1.85	0.006	0.04	0.3	0.06	3.2	<0.1	<0.05	5	<0.5	<0.2
43000N 93150E	Soil	2	0.12	108	0.001	1	0.92	0.004	0.12	29.0	0.16	2.2	0.1	<0.05	2	0.8	1.7
43000N 93175E	Soil	30	0.32	143	0.006	<1	1.65	0.004	0.08	2.6	0.26	9.6	0.2	<0.05	5	1.4	0.4
43000N 93200E	Soil	13	0.24	49	0.008	<1	2.31	0.004	0.03	1.8	0.09	2.9	0.1	<0.05	5	<0.5	<0.2
43000N 93225E	Soil	13	0.46	64	0.003	<1	2.38	0.006	0.04	0.5	0.05	7.0	0.1	<0.05	5	0.6	<0.2
43000N 93250E	Soil	11	0.38	61	0.001	<1	2.25	0.006	0.03	0.4	0.04	4.8	<0.1	<0.05	5	<0.5	<0.2
43000N 93275E	Soil	12	0.33	69	0.004	<1	2.06	0.006	0.03	0.4	0.06	3.6	<0.1	<0.05	6	<0.5	<0.2
43000N 93300E	Soil	14	0.47	70	0.011	1	1.73	0.009	0.05	0.6	0.06	4.6	<0.1	0.13	5	1.2	<0.2
43000N 93325E	Soil	15	0.60	77	0.078	<1	1.95	0.016	0.05	0.4	0.06	6.0	0.1	0.14	7	<0.5	<0.2
43000N 93350E	Soil	8	0.24	131	0.001	1	1.70	0.010	0.05	0.2	0.21	4.9	<0.1	0.22	4	2.3	<0.2
43000N 93375E	Soil	10	0.34	116	0.002	<1	1.76	0.007	0.04	0.5	0.03	5.4	<0.1	<0.05	5	<0.5	<0.2
43000N 93400E	Soil	12	0.37	98	0.002	<1	1.84	0.007	0.03	0.2	0.02	5.0	<0.1	<0.05	6	<0.5	<0.2
43000N 93425E	Soil	11	0.36	64	0.001	<1	1.81	0.007	0.03	0.2	0.02	3.7	<0.1	<0.05	6	<0.5	<0.2

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Project: S-12
Report Date: August 07, 2012

CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
43000N 93450E	Soil		24.2	71.4	27.3	841	3.7	11.8	8.3	509	3.39	610.1	36.4	0.9	77	3.4	6.1	0.8	36	0.68	0.115	10
43000N 93475E	Soil		54.7	30.8	16.0	422	0.9	8.5	10.2	1398	4.26	1583	5.8	0.8	76	4.1	8.6	0.4	38	0.69	0.149	9
43000N 93500E	Soil		11.0	36.4	7.7	648	0.6	12.1	9.7	395	3.14	397.8	12.1	0.7	31	3.0	4.6	0.3	39	0.32	0.065	9

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CERTIFICATE OF ANALYSIS SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
43000N 93450E	Soil		11	0.43	89	0.001	<1	1.78	0.011	0.05	0.5	0.11	7.5	<0.1	<0.05	5	0.7	<0.2
43000N 93475E	Soil		11	0.30	91	0.002	1	1.65	0.009	0.04	1.1	0.09	5.9	0.1	0.09	5	1.1	<0.2
43000N 93500E	Soil		11	0.50	60	0.002	<1	1.66	0.008	0.03	0.1	0.04	5.7	<0.1	<0.05	5	<0.5	<0.2

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Project: S-12
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QUALITY CONTROL REPORT SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																						
42900N 92800E	Soil		20.3	34.6	20.5	90	0.9	6.7	7.3	471	5.94	171.3	5.0	0.5	13	0.5	3.7	0.5	48	0.14	0.119	4
REP 42900N 92800E	QC		21.2	35.6	20.8	92	0.9	6.7	7.2	485	6.00	174.8	4.2	0.5	13	0.6	3.8	0.6	49	0.13	0.123	5
42900N 93400E	Soil		25.5	43.7	17.6	246	0.3	12.6	11.0	555	3.87	274.0	5.8	1.3	27	1.0	2.6	0.6	44	0.21	0.039	11
REP 42900N 93400E	QC		26.5	44.3	17.6	244	0.3	13.1	11.2	547	3.82	271.8	4.7	1.3	28	1.1	2.6	0.6	44	0.21	0.041	11
42950N 92975E	Soil		7.3	39.8	15.9	133	0.3	12.0	12.4	697	4.10	147.2	5.4	0.7	4	0.4	2.7	0.3	45	0.02	0.065	6
REP 42950N 92975E	QC		7.2	39.7	15.7	132	0.3	12.1	12.3	694	4.17	148.9	5.6	0.7	4	0.4	2.7	0.3	46	0.02	0.067	6
43000N 92800E	Soil		8.7	40.8	15.2	96	0.5	10.2	9.2	518	5.25	174.6	4.2	0.7	4	0.3	3.1	0.4	48	0.02	0.131	5
REP 43000N 92800E	QC		8.7	40.4	15.2	94	0.5	9.7	8.7	504	5.15	173.4	5.1	0.7	4	0.3	3.1	0.4	48	0.02	0.128	4
Reference Materials																						
STD DS9	Standard		11.5	99.5	121.1	297	1.8	37.3	6.9	543	2.18	25.1	122.1	6.0	70	2.3	5.8	6.7	39	0.65	0.078	12
STD DS9	Standard		12.9	100.6	118.1	298	1.8	39.6	7.3	573	2.24	24.6	130.4	5.1	67	2.3	5.4	5.7	40	0.69	0.080	12
STD DS9	Standard		12.7	99.6	115.9	296	1.8	39.0	7.5	568	2.29	24.2	119.5	5.6	62	2.2	5.1	5.9	41	0.68	0.075	12
STD DS9 Expected			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	13.3
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank		<0.1	<0.1	0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	0.8	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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QUALITY CONTROL REPORT SMI12000083.1

		Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
42900N 92800E	Soil		11	0.19	53	0.002	<1	1.73	0.007	0.04	0.8	0.09	2.7	<0.1	<0.05	6	<0.5	<0.2
REP 42900N 92800E	QC		11	0.19	54	0.002	<1	1.74	0.007	0.04	0.8	0.10	2.7	<0.1	<0.05	7	0.7	<0.2
42900N 93400E	Soil		12	0.46	121	<0.001	<1	2.02	0.012	0.04	0.4	0.04	5.0	<0.1	<0.05	6	<0.5	<0.2
REP 42900N 93400E	QC		12	0.46	119	<0.001	<1	2.05	0.009	0.04	0.4	0.03	5.1	<0.1	<0.05	6	<0.5	<0.2
42950N 92975E	Soil		12	0.39	65	0.002	1	2.03	0.007	0.04	0.7	0.07	4.1	<0.1	<0.05	5	<0.5	<0.2
REP 42950N 92975E	QC		12	0.38	65	0.002	<1	2.07	0.007	0.04	0.6	0.07	4.0	<0.1	<0.05	5	<0.5	<0.2
43000N 92800E	Soil		13	0.33	66	0.003	<1	2.53	0.008	0.05	0.5	0.10	3.8	<0.1	<0.05	7	<0.5	<0.2
REP 43000N 92800E	QC		13	0.33	68	0.003	<1	2.52	0.007	0.04	0.5	0.10	3.7	<0.1	<0.05	6	<0.5	<0.2
Reference Materials																		
STD DS9	Standard		111	0.60	277	0.103	2	0.86	0.079	0.35	3.1	0.23	2.4	5.4	0.15	4	5.8	5.1
STD DS9	Standard		117	0.60	295	0.103	3	0.91	0.083	0.36	2.8	0.21	2.2	5.5	0.12	4	4.9	4.8
STD DS9	Standard		121	0.59	289	0.108	2	0.88	0.080	0.35	3.0	0.20	2.4	5.5	0.15	4	5.1	5.0
STD DS9 Expected			121	0.6165	295	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2