BC Geological Survey
Assessment Report
33131

Geochemical, Geological Report
On the
HARMONY PROPERTY

Nanaimo Mining Division, British Columbia, Canada
NTS Map 092F14
Northing: 5518000 - 5524000
Easting: 332000 - 338000

Prepared for:

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1 SUMMARY

Altamont carried out an exploration program on the Harmony Property in 2012 that included the collection of 50 rock samples and 33 stream sediment samples, and the creation of 3 survey grids where 781 soil samples collected. In addition geological mapping and prospecting was undertaken Samples were collected from the LH-12, LL-12, south of Regan Lake, and the H-12 areas.

The Harmony Property consists of six contiguous non-surveyed mineral tenures 2,418.2 hectares in size. The mineral property is located 16 km to 22 km southwest of the town of Campbell River, British Columbia on NTS mapsheet 92F14 centered at latitude 49° 49’ 12” N and 125° 18’ 03” W. The Harmony Property Mineral Tenures are 100% owned by Altamont, and are located in the Nanaimo Mining Division of British Columbia.

The Harmony Property is underlain by Karmutsen Formation basalt of Triassic age. The Karmutsen basalt in the area includes massive flows, pillowed flows, and thinner layers of hyaloclastite and pillow breccia. Layering is crudely developed in Karmutsen basalt and generally has a shallow dip. In the northeast portion of the Harmony tenures, Upper Cretaceous Nanaimo Group clastic sediments overlie the Karmutsen basalt. The entire sequence of volcanic and sedimentary rocks is cut by Late Eocene- Early Oligocene age Mt. Washington Plutonic Suite, quartz diorite that occur immediately south of the Harmony Property.

In order to evaluate the economic potential of the Harmony Property, a program of property wide soil sampling, mapping, trenching, and ground geophysics is warranted. The expected cost of the programme is $254.560 CND

2 INTRODUCTION

In the preparation of this report, the author utilized both British Columbia and Federal Government of Canada geological maps, geological reports and claim maps. Information was also obtained from British Columbia Government websites such as the Map Place (www.em.gov.bc.ca/mining/Geolsurv/MapPlace), Mineral Titles Online (www.mtonline.gov.bc.ca), as well as the mineral assessment work reports from the Harmony Property area that have been historically filed by various companies. The results of geochemical and geological surveys carried out over the Harmony Property by Altamont in 2012 were also reviewed and are incorporated into this report.

The author reserves the right, but will not be obliged; to revise the report and conclusions if additional information becomes known subsequent to the date of this report.

2.1 Units and Measurements

g	Grams
kg	Kilograms
g/t	Grams per metric tonne
oz	Troy ounces
oz/st	Ounces per short tonne
ppb	Parts per billion
ppm	Parts per million
st	Short ton
t	Metric tonne

mm	Millimeters
m	Meters
km	Kilometers
ha	Hectares
'	Feet
"	Inch

°C	Celsius Degree
$	Canadian Dollars

1 oz (troy)	=	31.103	g
1 oz (troy)/st	=	34.286	g/t
1 pound (lb)	=	0.454	kg
1 pound (lb)	=	1.215	troy pound
1 short ton	=	0.907	t
1 g	=	0.03215	oz (troy)

1 short ton = 2000 pounds (lb) = 0.907 tonne
1 pound = 16 oz = 0.454 kg = 14.5833 troy ounces

1 inch	=	2.54	cm
1 foot	=	0.3048	m
1 mile	=	1.6	km
1 ha	=	0.01	km^2

1 square mile = 640 acres = 259 hectares

3 TERMS OF REFERENCE

This report has been written to fulfill the requirements for filing assessment work under the British Columbia Mineral Tenure Act. It describes the exploration undertaken on the Harmony Property. This report is not compliant with National Instrument 43-101 and Form 43-101F1, and should not be used as a “Technical Report” under National Instrument 43-101.

4 PROPERTY DESCRIPTION AND LOCATION

The Harmony Property is located approximately 16 km to 22 km southwest of the town of Campbell River, British Columbia, Canada (Figure 1). The property consists of six contiguous Mineral Claims covering approximately 2,418.2 hectares. The Mineral Claims are registered in the Nanaimo Mining Division of British Columbia on map sheets 092F.074 and 92F.084. Altamont is the 100% owner of the Mineral Claims. The Harmony Property Mineral Claims were staked using the British Columbia Mineral Titles Online computer Internet system. With the British Columbia mineral claim staking system there can be no internal fractions or open ground. The centre of the property is located at latitude 49° 49’ 12” N and 125° 18’ 03” W longitude, located on NTS map sheet 092F14. Claim data is summarized in Table 1, while a map showing all the claims is presented in Figure 2. Altamont is the 100% registered owner of the Mineral Claims.

Table 1: Property Claim Information

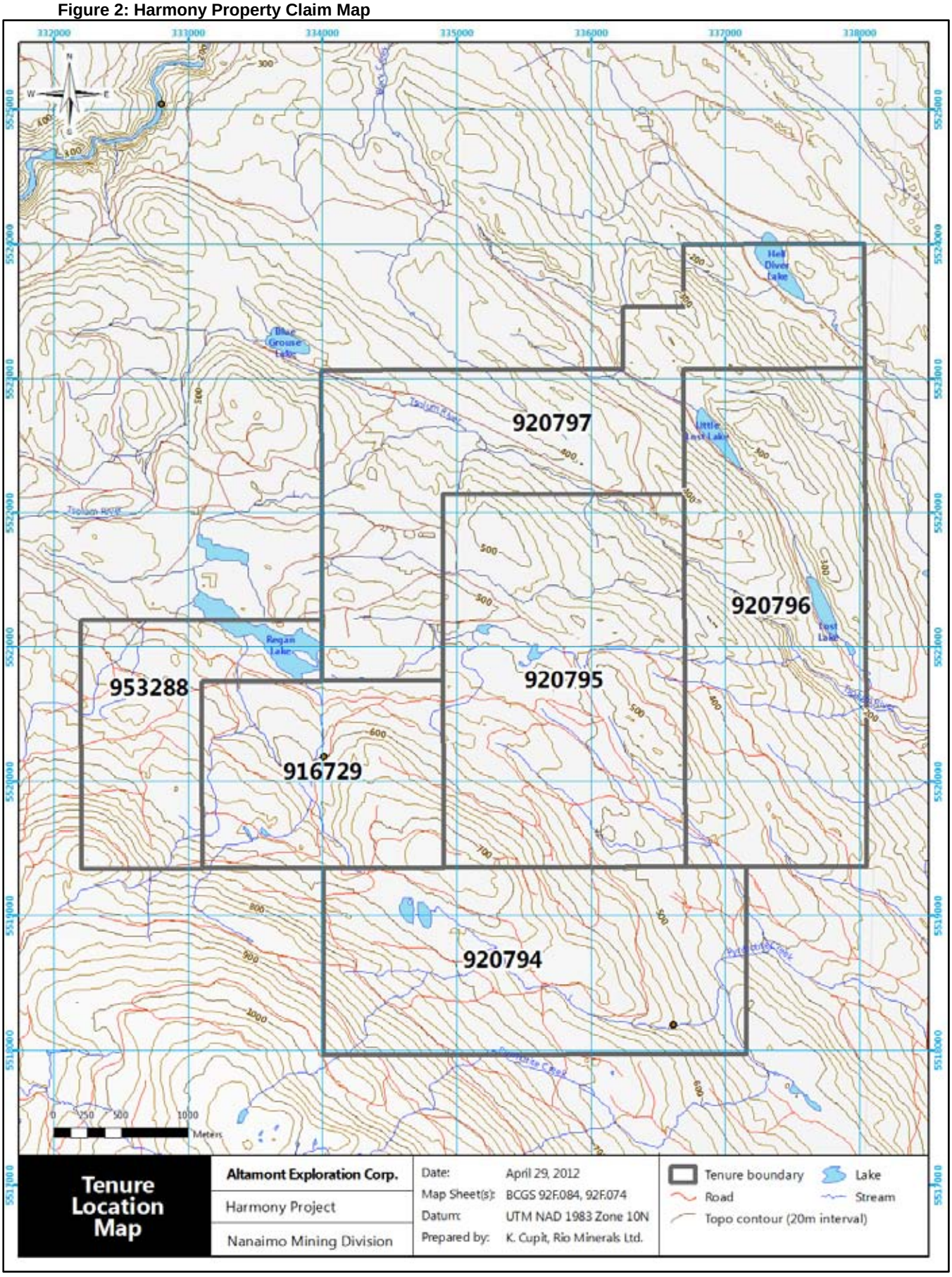
Tenure Number	Claim	Owner	Good To Date	Area in Ha
916729	H-1	ALTAMONT EXPLORATION CORP.	2017/Jun/15	250.19
920795	H-2	ALTAMONT EXPLORATION CORP.	2017/Jun/15	500.32
920796	H-2	ALTAMONT EXPLORATION CORP.	2017/Jun/15	500.28
920794	H-3	ALTAMONT EXPLORATION CORP.	2017/Jun/15	437.95
920797	H-4	ALTAMONT EXPLORATION CORP.	2017/Jun/15	520.98
953288	H-5	ALTAMONT EXPLORATION CORP.	2017/Jun/15	208.48

There has been no historical production on the Harmony Property, and the author is not aware of any environmental liabilities that have potentially accrued from any historical activity.

Altamont carried out an exploration program on the Harmony Property in 2012 that included the collection of 50 rock samples and 33 stream sediment samples, and the creation of 3 survey grids where 781 soil samples collected. In addition geological mapping and prospecting was undertaken. The cost of the 2012 exploration program was $116,035.86 see Appendix 1 for statement of costs.

Figure 1: Regional Location Map

Figure 2: Harmony Property Claim Map



5 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE

5.1 Access

The Harmony Property has good year round road access from the city of Campbell River, British Columbia. From the Inter-Island Highway, a series of two lane gravel roads traverse through the centre of the Mineral Claims. Logging roads provide access to the rest of the Mineral Claims. Campbell River, Comox, and airports are located approximately 18 km and 30 km respectively from the property.

5.2 Climate

The climate is typical of the eastern coast of Vancouver Island, British Columbia, with warm and dry summers, and mild winters with rain and snow. The temperature in the summer averages 20 degrees Celsius, and in the winter averages +1 degrees Celsius. In winters snow may reach 90 cm (2.95 feet). Although the area normally has about eleven months of snow-free conditions, historical exploration has been successfully conducted throughout the year. Water is readily accessible in the project area.

5.3 Physiography

The Harmony Property is located in low-lying, coastal terrain covered by second growth forest and numerous logging blocks. Elevation across most of the Harmony Property ranges between 200 and 650 metres above sea level (ASL); slopes are mostly gentle to moderate. The amount of rock outcrop is highly variable across the district, and in most of the area ranges between 0 and 10%.

5.4 Local Resources and Infrastructure

The town of Campbell River is located approximately 16 to 22 kilometres to the northeast of the Harmony Property. The town and area have a long mining history and as such, most services are readily available. The city of Comox with a population of 13,000 is located 30 kilometres east of the property. The property size is sufficient to accommodatefuture mining operations, potential tailings storage areas; potential waste disposal areas, and potential processing plant sites but Altamont has to acquire surface rights to build these facilities.

6 HISTORY

The historical work on the Harmony Property is described in the following sections, where Section 6.1 deals with the work carried out in 1986, Section 6.2 outlines the work performed in 1988, and Section 6.3 describes the work carried out in 1991.

6.1 Historical Work 1986

In 1986 Joseph L. Paquet carried out an prospecting program on the Harmony Property. The work consisted of the collection of 54 rock samples (Figure 3) prospecting and rock sampling of outcrops along the main rivers located on the property. (Paquet, 1987. see Figure 3). Three samples #1B, #1F, #5A all had >10,000 ppm copper. See table 2 for selected assays for the 1986 program.

Table 2: Select Rock Samples Paquet

Sample ID	Map No	Au ppb	Au oz/t	Ag ppm	Cu ppm	Pb ppm	Zn ppm
#1 B	B			7	>10000	3	68
#1 F	4			16.2	>10000	2	380
#5 A	5			1.6	>10000	2	33
DV-8	6	22		10.5	7377	8	308
#1 C	7			1.6	4390	2	52
#1 A	8			1.4	3920	4	43
DV-12	9	3		0.7	1809	2	32
DV-9	10	4		2.8	1802	3	108
DV-13	11	1		2.4	1470	2	31
Har-3	12	5		0.3	996	8	108
#2 A	13			0.4	695	3	55
#1 H	14			0.4	645	2	21
DV-10	15	1		0.7	526	9	113

6.2 . Historical Work 1988

A much larger property, which included the current property was optioned from Mr. Paquet by Visible Gold and Westmin Resources in 1987. In 1988, Westmin Resources commissioned line cutting and an airborne EM resistivity magnetometer survey over a large area which included the Harmony claim area. The EM survey mapped numerous bedrock conductors which occur as broad conductive units which are best represented by the 7200 Hz resistivity data. Numerous discrete thin conductive bedrock sources were also identified. The conductors are generally non- magnetic. The total field and enhanced magnetic contour maps yielded valuable information about the magnetic rock units and bedrock structures within the survey area (Wright, 1988).

6.3 **Historical Work 1991**

In 1991, the property was held under option by a joint venture between Westmin Resources Ltd. and Visible Gold Inc. and was owned by J.L. Paquet. The area of the Harmony claims formed part of a larger claim position extending approximately 12 kilometers to the south.

The area mapped in 1991 covered what was then called the Harmony 17 claim and extended about 200 meters into the west side of Harmony 7 claim. This area is currently covered by tenure 953288 (H-5), and tenure 916729 (H-1).

The 1991 programme was focused on epithermal veins similar to other occurrences known in the general Mount Washington area. Epithermal veins with anomalous precious metals were located within the area both in bedrock and float along Regan Creek on the former Harmony 17 and Harmony 7 claims which are currently covered by tenure 953288 (H-5), and tenure 916729 (H-1). The work reported 1991 was the first programme reported in this area.

Walker reported that an attempt was made to do first pass geological mapping and rock sampling on all of Harmony 17 and a small part of Harmony 7, an area of about 500 ha, at a scale of 1:10,000. Progress was impeded by overgrown roads, washouts, limited outcrop, and rain. Figure 4 summarizes the geological mapping performed by Walker in 1991. Forty-six rock samples were collected for which descriptions were provided and are included as Table 2. Assays were not reported for this sampling programme. Regan Creek was mapped at a scale of 1:2000 over a nominal area of 20 ha, Figure 4) (Walker, 1991).

Figure 3: Joseph L. Paquet Mapping

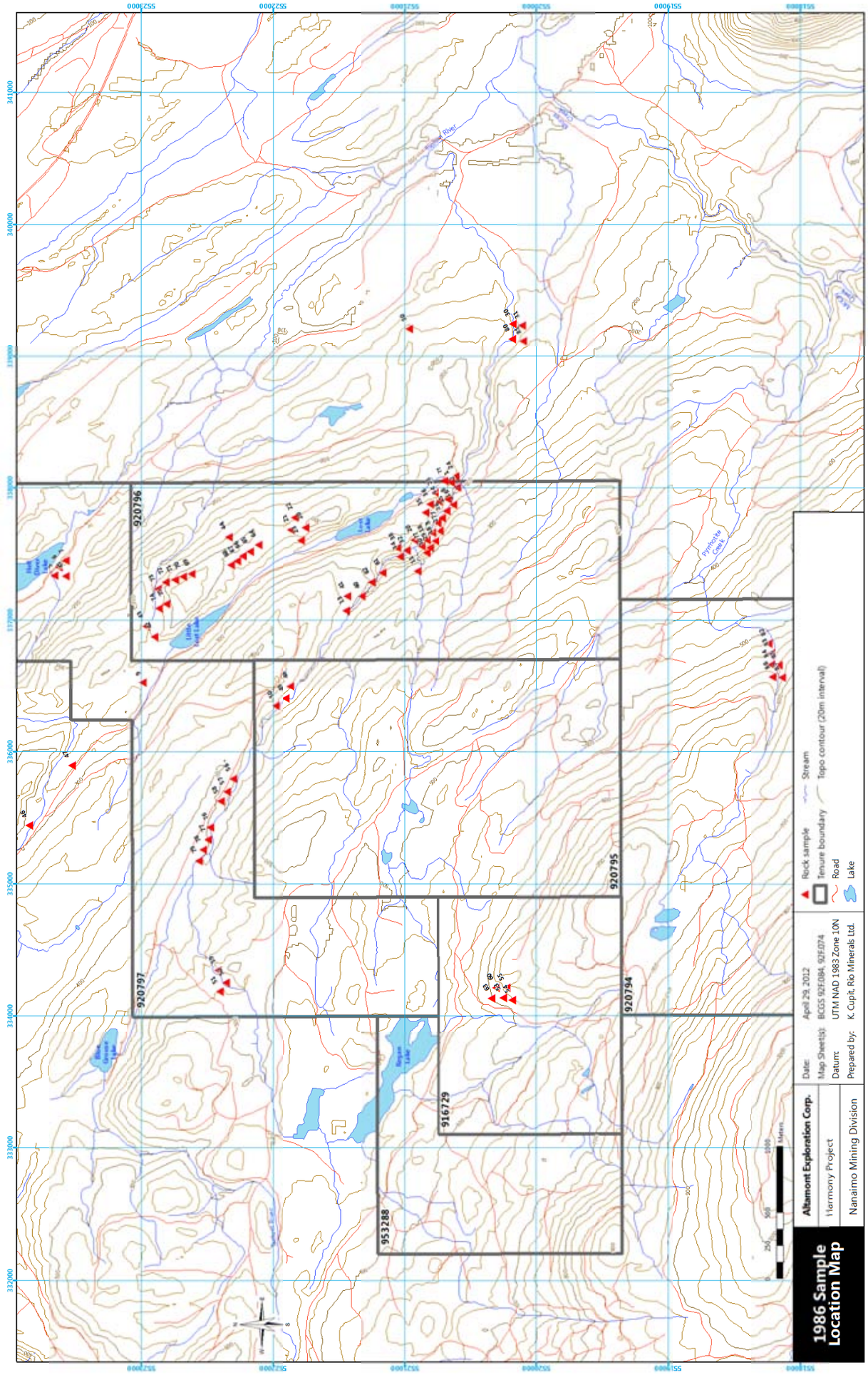


Figure 4: Walker 1991 Map

332600 332800 333000 333200 333400 333600 333800 334000

5521000 5520800 5520600 5520400 5520200 5520000

N W E S

Regan Lake

920797

916729

953288

Scarp

110

90RW10-12-8 Carb-qtz 50cm 94 Sulf. banded

170/75

145/90

170 / 75

145 / 90

Quartz carbonate

150/70

160/90

Washout

Carb alt 1m 015/75

155 / 90

2cm cr. vein 90RW10-16-1

600

Mod. sheared/2m, no gouge

Fracture cleavage

Carb alt, 30cm 155/25

Carb altered 155

Carb alteration, realgar

Steep shear clvg

140/80

325 / 50?

30 cm carb-qtz vein; 90RW10-16-2 in 4m carb alt. zone, realga

120/15

025/60?

130/20

Qtz vein bx to 30cm in 4m carb zone, sph, gn, py, grey sulf

Qtz vein, py, grey sulf. 10cm carb altd basalt zone

300 / 15

20cm qtz, sph, gn, py, carb alt

110/90

205 / 60

30cm carb alt zone, qtz-calcite veins to 1cm

150 / 90

0.7m carb qtz sph gn

170/50

5cm qtz vein: spy, gn, py in 20cm carb alt. zone

164665

quartz, ankerite, calcite, pyrite

132/10

170 / 50

140 / 20

159/80

285/85

164663

164664

quartz, calcite, pyrite, pyrolusite, chlorite

quartz, ankerite, calcite, chlorite

qtz carb sulphide

139/78

953288

Regional Location

920797

920796

920795

916729

920794

0 100 200 Meters

Regan Creek Geology Map	**Altamont Exploration Corp.**	Date:	May 14, 2012
	Harmony Project	Map Sheet(s):	BCGS 92F.084, 92F.074
	Nanaimo Mining Division	Datum:	UTM NAD 1983 Zone 10N
		Prepared by:	K. Cupit, Rio Minerals Ltd.

Vein
Shearing
Fault (strike and dip)
Rock sample
Fault with vein
Fracture (strike and dip)
Outcrop, Upper Triassic Karmutsen basalt flow, minor pillows, breccia, amygdules
Tenure boundary
Road
Lake
Stream
20m contour
Breccia dyke

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

After Green et al 2005

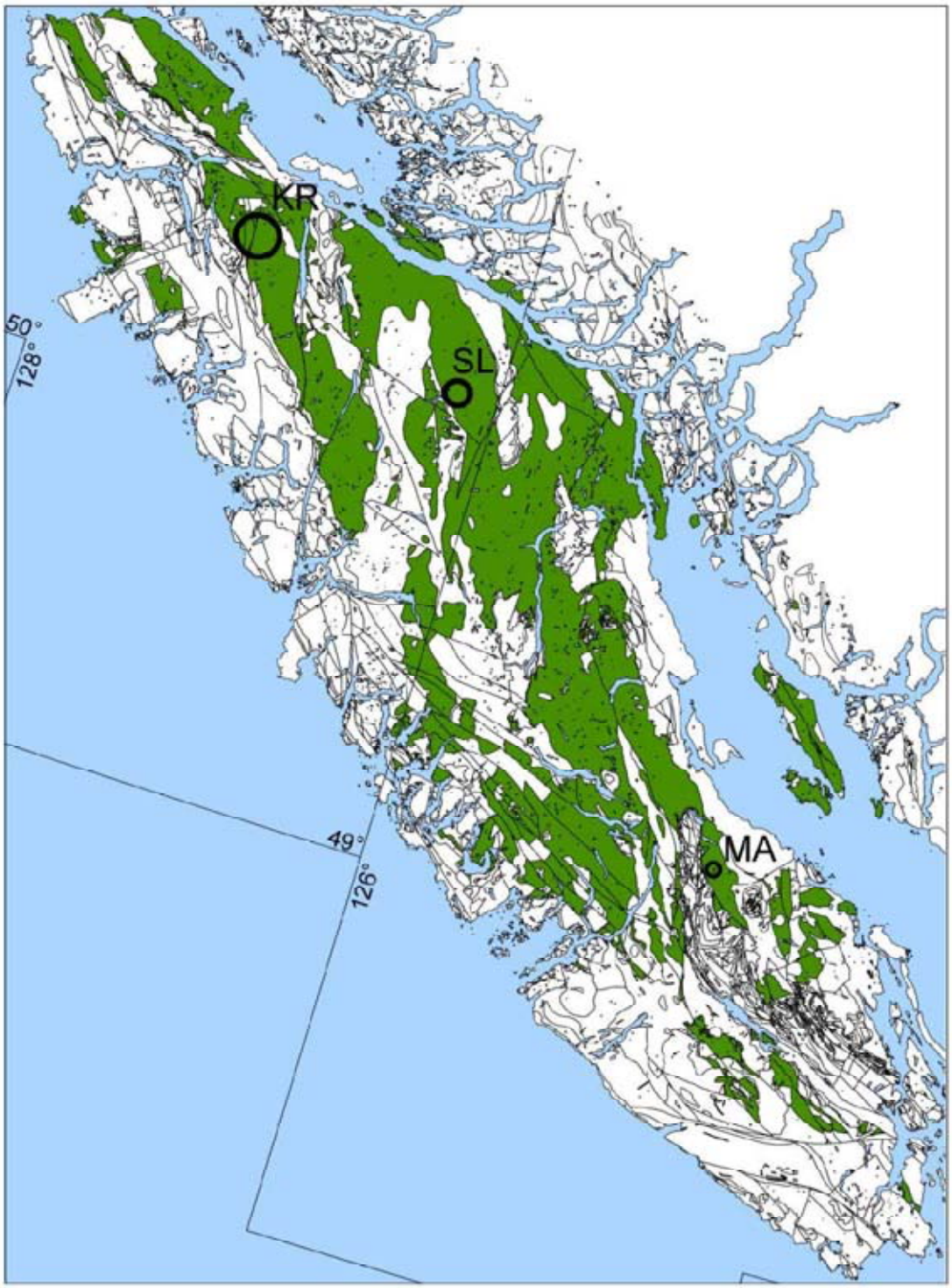
The Wrangellia Terrane is a complex and variable terrane that extends from Vancouver Island to central Alaska . Wrangellia is most commonly characterized by widespread exposures of Triassic flood basalts and complementary intrusive rocks (Jones *et al.*, 1977). Triassic flood basalts extend in a discontinuous belt from Vancouver and Queen Charlotte Islands (Karmutsen Formation), through southeast Alaska and the Kluane Ranges in southwest Yukon, and into the Wrangell Mountains and Alaska Range in east and central Alaska (Nikolai Formation). This belt of flood basalt sequences has distinct similarities and is recognized as representing a once-contiguous terrane (Jones *et al.*, 1977).

The enormous exposures of the Karmutsen appear to represent a single flood basalt event (Richards *et al.*, 1989). A mantle plume initiation model has been proposed for the Wrangellia flood basalts based on (1) relatively limited geochemical data, (2) the nature of the underlying and overlying formations, (3) rapid uplift prior to volcanism, (4) the lack of evidence of rifting associated with volcanism and (5) the short duration and high eruption rate of volcanism (Richards *et al.*, 1991). The basalt flows are estimated to have erupted a minimum volume of 1x106 km^3 (Panuska, 1990) within a maximum of five million years (Carlisle and Suzuki, 1974).

Widespread areas of British Columbia are underlain by the distinctive flood basalt sequences of the Karmutsen Formation (Figure 5). Approximately 35% of northern and central Vancouver Island consists of Karmutsen basalt (Barker *et al.*, 1989). Exposures of the Karmutsen are also extensive on the southern Queen Charlotte Islands, although the base of the formation is not exposed. On Vancouver Island, both underlying island arc rocks of the Paleozoic Sicker Group and the Karmutsen Formation are intruded by mafic sills thought to be associated with the Karmutsen (Barker *et al.*, 1989). The Karmutsen Formation is commonly intercalated with small lenses of marine sediments and is capped by shallow-water limestone (Carlisle and Suzuki, 1974).

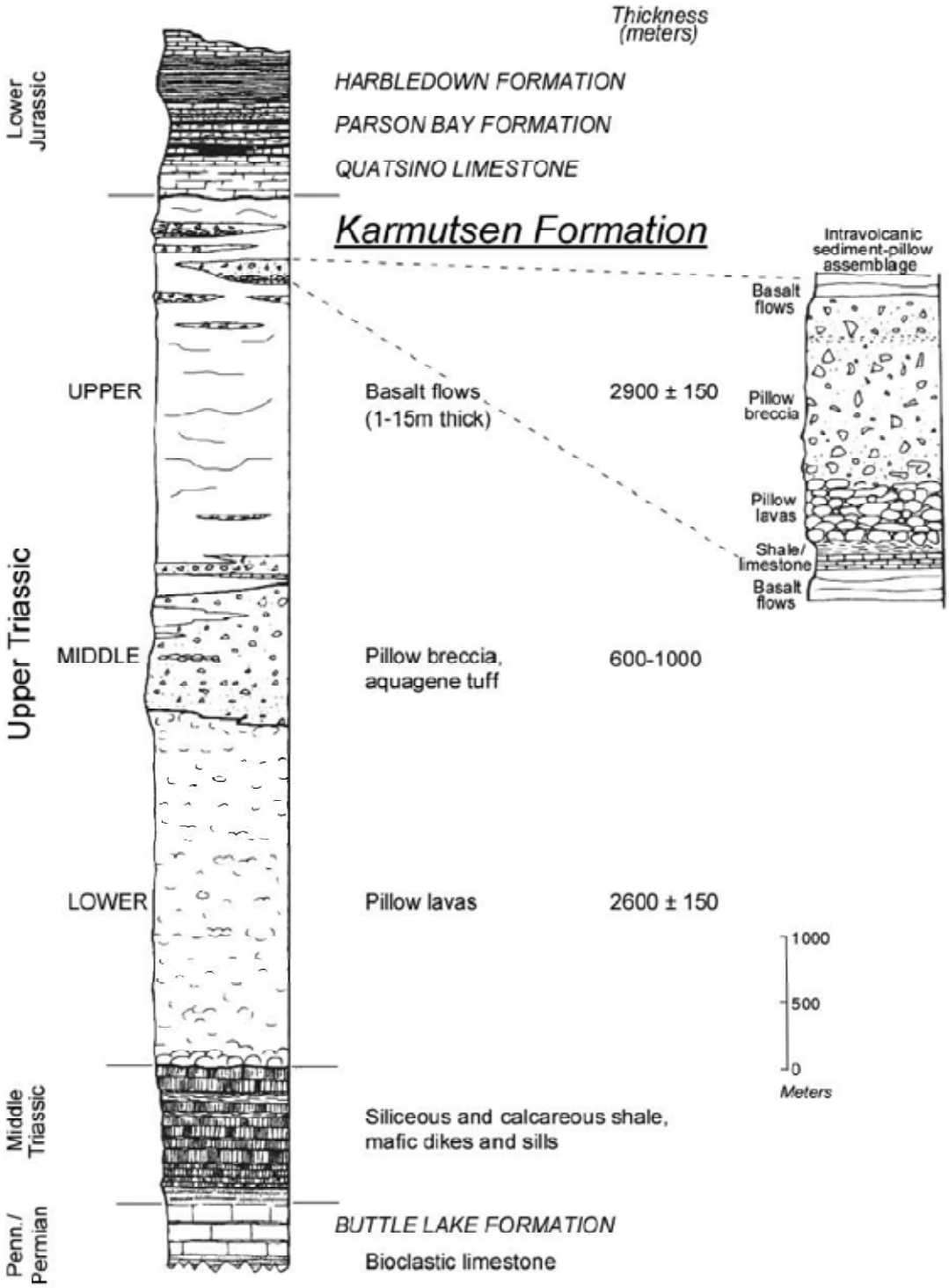
The Karmutsen Formation forms thick flood-volcanic sequences throughout the densely-forested regions of northern and central Vancouver Island. The predominantly extrusive, marine sequences locally exceed 6000 m in thickness (Carlisle and Suzuki, 1974), however, extensive faulting throughout the Karmutsen makes reconstruction of the stratigraphic thickness challenging. Diagnostic units of the Karmutsen are often divided into (1) a lower member of exclusively pillow lava (2500 ± 150 m) (2) a middle member of pillow breccia and aquagene tuff (600–1100 m) and (3) an upper member of massive basalt flows (2600 ± 150 m) (Carlisle & Suzuki, 1974) (Figure 6)

Figure 5: Karmutsen Formation



Map of Vancouver Island showing exposures of flood basalt from the Karmutsen Formation (green) (after Massey *et al.*, [2003a, 2003b]).

Figure 6: Stratigraphic column



Composite stratigraphic column depicting flood basalt sequences of the Karmutsen Formation and major sedimentary sequences on northern Vancouver Island (modified after Carlisle and Susuki [1974]).

7.2 **Property Geology**

The Harmony Property are underlain by Karmutsen Formation basalt of Triassic age. The Karmutsen basalt in the area includes massive flows, pillowed flows, and thinner beds of hyaloclastite and pillow breccia. Layering is apparently shallow in dip. In the northeast portion of the Harmony tenures, Upper Cretaceous Nanaimo Group clastic sediments overlie the Karmutsen basalt. The entire sequence of volcanic and sedimentary rocks is cut by Late Eocene- Early Oligocene age Mt Washington Plutonic Suite, quartz diorite. Intrusive rocks are not known to occur on the Harmony tenures. (Figure 7)

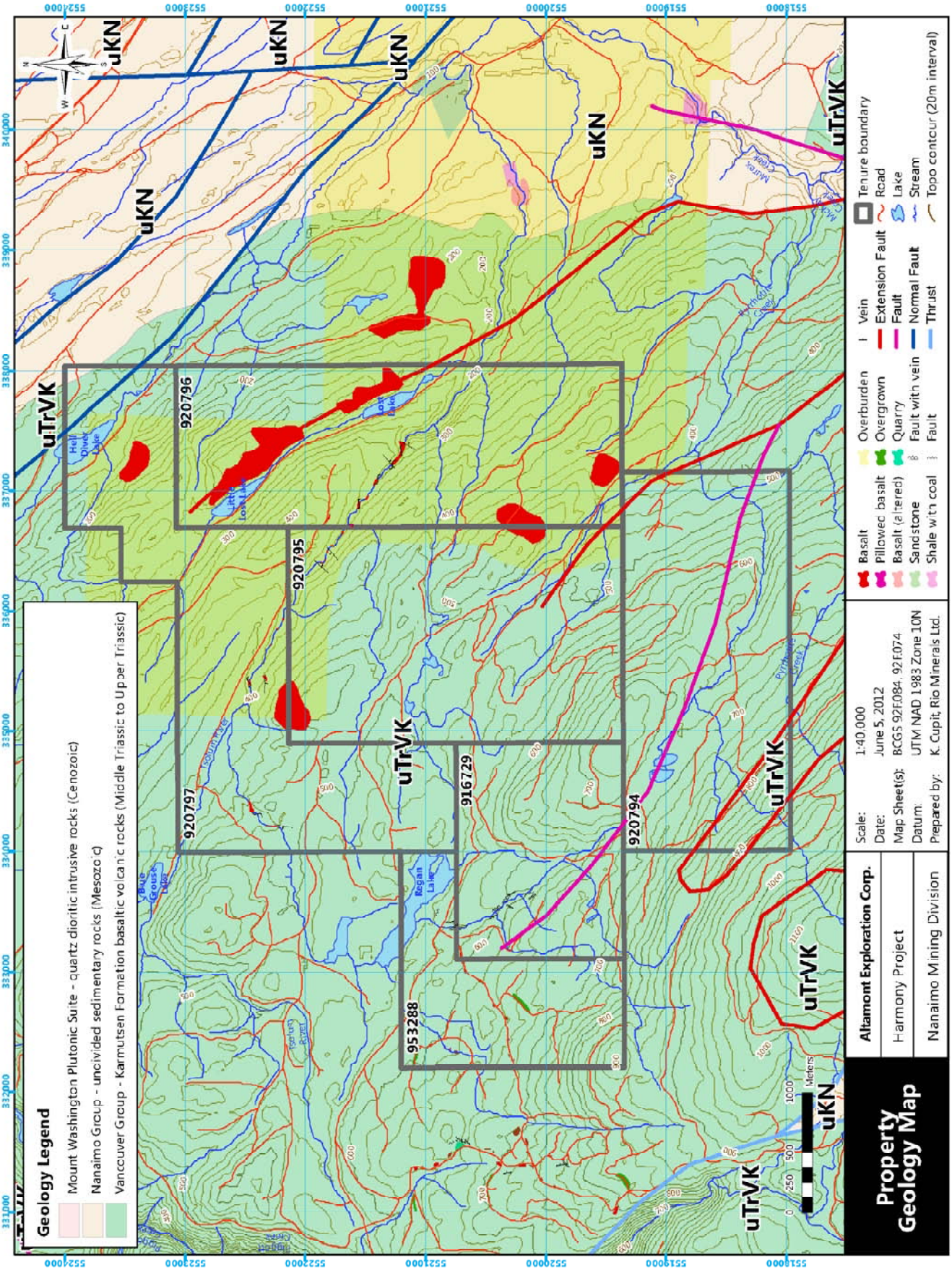
The Upper Triassic Karmutsen Formation is a thick sequence of metabasaltic (tholeiitic) rocks that underlies a large part of Vancouver Island and forms all of the lower plate and part of the middle plate on Mount Washington. Pillow lavas and pillow breccias of this unit underlie part of the northeastern and southern lower slopes of the mountain. Nowhere, apart from a few roadcuts in pillow breccia near the ski village, do they produce the spectacular outcrops common elsewhere on Vancouver Island. In many exposures the pillows and original pillow fragments have been deformed and brecciated and can only be identified by a few remaining characteristic shapes and lighter coloured pillow rims. Nests of quartz and epidote, so common as space-filling between pillows elsewhere, are also lacking. In many instances field identification of pillow breccia and aquagene tuff is still possible on the evidence of small devitrified, silica-rimmed lava pellets visible with a hand-lens in the matrix on a fresh surface. Low-grade metamorphism of the basaltic rocks to prehnite-pumpellyite grade is generally believed to have occurred in pre-Tertiary time and some retrograde change to yet lower chlorite grade may have attended Tertiary faulting.

7.3 **MINERALIZATION**

There are several surface showings located on the Harmony Property. A description of mineralization data available from 2006 exploration program and other historical work carried out on the Harmony Property is provided in the following sections:

Faults were exposed only in the bed of Regan Creek and in a rock quarry on Piggott Main. The faults and shears of widely differing attitudes are exposed in these areas and are probably common but unexposed throughout the area. Both steep and shallow dipping faults are important. Sheared basalt and gouge seams mark fault planes. The Harmony Property is characterized by major NW trending extension and normal faults. The faults and shears have widely differing attitudes from steep and shallow dipping faults. Sheared basalt and gouge seams mark fault planes. In the bed of Regan Creek the exposed faults are commonly, and often altered with quartz-carbonate-ankerite as late stage fracture filling extends

Figure 7: Property Geology



several meters away from the fault. Some of these altered faults host veins/veinlets of quartz-carbonate, often containing sphalerite, galena , pyrite, chalcopyrite, grey sulfide and realgar. Quartz-carbonate-sulphide mineralization is found in the bed of Regan Creek where outcrops and boulders indicate epithermal style veins. The Harmony Property also hosts the Harmony 7 and Milkideal MINFILE occurrences. Reports of previous geological fieldwork do not describe the Harmony 7 and Milkideal occurrence, however several samples taken returned geochemical analysis with elevated gold-silver-copper-zinc values. The best historic geochemical analysis revealed a sample content of 2.91 grams per tonne gold, 46.97 grams per tonne silver and 0.55 per cent zinc (Paquet, 1991)

Lost Lake and Little Lost Lake are located in the northeast portion of the Harmony Property. The two lakes are situated adjacent to a major regional fault structure (azimuth 150 degrees). This regional fault occurs on the east side of both lakes and extends 5 kilometers to the southeast. Smaller scale faulting is localized adjacent to the regional fault. Near Lost Lake, the Tsolum River runs southeast and there are some southeast trending fault structures as well as conjugate east trending faults that follow creeks.

The Lost Lake and Little Lost Lake grid areas are underlain by amygdaloidal basalt with 0.1-1% disseminated magnetite, 0.1-5% chlorite, 0.1-0.5% calcite (as fracture filling), variable silicification consisting of 0.1-3% late-stage milky and partly clear quartz veining 0.1-3 cm width, minor vuggy quartz, and 0.1-1% disseminated & fracture filling pyrite (minor pyrrhotite). Occasionally, chalcopyrite, arsenopyrite and malachite (secondary) occur as disseminations and blebs.

Geochemical sample grids emplaced during the 2012 programme on Lost Lake and Little Lost Lake reveal elevated Cu in soil located near Tsolum River in the grid area 200-600 meters southeast of Lost Lake and 150 trending regional fault immediately northeast of Little Lost Lake. The copper in soil anomalies at Lost Lake and Little Lost Lake are defined by sample analysis as having values greater than 112 ppm Cu, with a maximum value of 409.4 ppm Cu on Lost Lake grid, and 350.8 ppm Cu on Little Lost Lake grid. Bedrock in the area of anomalous copper in soil anomalies consists of amygdaloidal basalt with variable (0.1-5% by volume) quartz-calcite-chlorite alteration, sparse disseminated & fracture filling pyrite-pyrrhotite, and trace amounts of chalcopyrite, arsenopyrite & malachite.

8 DEPOSIT TYPES

There are three potential deposit types that can be explored for on the Harmony property; Intrusion related, Low Sulphidation Epithermal (Geothermal) and Precious Metal Quartz-Sulphide Vein Model. This is based on the known showing and direct observation by the author.

8.1 Intrusion Related Quartz-Sulphide Vein/Breccia Model

These type of deposits occur near high level magma sources that generate low salinity, two-phase vapour plumes resulting in upflowing parts of hydrothermal systems with magmatically driven fluids deposited in steep structures.

Intrusion-related zones of gold-copper bearing quartz-calcite veins and breccia occur in a felsic dyke that is located 250 meters east of the Milkideal mineral occurrence. The alteration associated with intrusion-related mineralization consists of sodic plagioclase, quartz, magnetite and chlorite. The environment of formation for this type of intrusion-related deposit type is peripheral to porphyry deposits (e.g. Mount Washington Copper).

8.2 Low-Sulphidation Epithermal (Geothermal)

These type of deposits result from a sub-volcanic environment with interaction and mixing of flowing, steam-heated entrained meteoric or seawater. Heat originated by sub-volcanic intrusive rocks combined with a series of fracture and breccia controlled conduits are superimposed in an area giving rise to sequential precious metal bearing quartz-sulphide mineralization.

Low-sulphidation epithermal zones of gold-copper-zinc-arsenic bearing quartz-calcite veins and breccia occur in the area of the Milkideal and Harmony MINFILE mineral occurrences. The alteration associated with low-sulphidation epithermal mineralization consists of sodic plagioclase, K-feldspar, quartz, calcite and chlorite. The environment of formation for this type of low-sulphidation epithermal deposit type is replacement and fracture filling (veining) of mafic volcanic rocks in the shallower (low temperature) parts of a geothermal system (e.g. Blackdome Mine)

8.3 Harmony Precious Metal Quartz-Sulphide Vein Model

The Harmony Gold-Copper Veins also displays an example of a vein-type mineralization model. A vein-type deposit is a tabular shaped zone of mineralization, usually inclined and discordant, and is typically narrow compared to its length and depth. Most vein deposits occur in fault or fissure openings or in shear zones within country rock. A vein deposit is sometimes referred to as a (metalliferous) lode deposit. A great many valuable ore minerals, such as native gold or silver or metal sulphides, are deposited along with gangue minerals, mainly quartz and/or calcite, in a vein structure.

As hot (hydrothermal) fluids rise towards the surface from cooling intrusive rocks (magma charged with water, various acids, and metals in small concentrations) through fractures, faults, brecciated rocks, porous layers and other channels (like a plumbing system), they cool or react chemically with the country rock. Some metal-bearing fluids create ore deposits, particularly if the fluids are directed through a structure where the temperature, pressure and other chemical conditions are favourable for the precipitation and deposition of ore (metallic) minerals. Moving metal-bearing fluids can also react with the rocks they are passing through to produce an alteration zone with distinctive, new mineralogy.

These near vertically oriented veins have formed along structures related to Eocene faults in a crudely horizontally layered, variably altered basalt . It is possible that quartz-sulphide veins on the Harmony Property are related to extension during emplacement of the Eocene Mt Washington Plutonic Suite intrusions. Northwest and north orientation are the dominant trends of mineralization, with steep dips southwest and west respectively.

Exploration Guides for vein-type deposits:

1. A suitable fracture or plumbing system must be identified, i.e. tectonic terrane.
2. A zone of high silica + clays + pyrite may indicate a vein system at depth, i.e. represents a good drill target.
3. Trace element geochemistry provides pathfinders to mineralization, e.g. arsenic, antimony, mercury, manganese and selenium.
4. Detailed mapping of alteration both on the hanging-wall and footwall to indicate possible direction to mineralization.
5. Basic identification of 'ore' and gangue mineralogy both in the field and in the laboratory (assay, X-ray, etc.).

The Harmony Project is characterized by major NW trending extension and normal faults. The faults and shears have widely differing attitudes from steep and shallow dipping faults sheared basalt and gouge seams mark fault planes. In the bed of Regan Creek the exposed faults are commonly, and often altered with quartz-carbonate-ankerite as late stage fracture filling extends several meters away from the fault. Some of these altered faults host veins/veinlets of quartz-carbonate, often containing sphalerite, galena, pyrite, chalcopyrite, grey sulfide and realgar. Quartz-carbonate-sulphide mineralization is found in the bed of Regan Creek where outcrops and boulders indicate epithermal style veins. A 3.2 meter wide felsic intrusive dyke outcrops on the southeast portion of the Harmony mineral tenures. Geological mapping indicates this felsic dyke has a northwest trend, and steep dip to the southwest.

9 EXPLORATION

Altamont contracted Rio Minerals Limited to carry out an exploration program from February 29 to April 26th, 2012 consisting of the following (Figure 8):

Soil sampling at three separate grid surveys:

- LH-12 Grid: 2,500 metres consisting of seven - 300 - 500 metre lines with 25 metre stations oriented at 050° - 100 soil samples;

- LL-12 Grid: 18,550 metres, eighteen – 1000 to 1300 metre lines with 50 metre stations oriented east-west - 394 soil samples;

- H-12 Grid: 4,225 metres, twelve - 325 to 400 meter lines with 25 metre stations oriented north-south - 287 soil samples;

Hand-trenching and rock sampling at the LL-12, LH-12, H-12, and R-12 locations – a total of 50 rock samples were collected;

Regional stream sediment sampling – 33 samples (Figure 15)

Regional prospecting and mapping – 50 rock samples (Figure 9)

Goals for the field season were to verify and to compile previous geological work and to outline new areas of possible mineralization. The town of Campbell River, B.C. acted as the base of operations for the duration of the program.

Andris Kikauka, P.Geo. conducted the geological fieldwork on the Harmony Property. Geological fieldwork consisted of mapping and sampling of the LH-12, LL-12, H-12, and Regan Creek areas.

9.1 **Rock Sampling Results**

A total of 50 rock samples were collected by the author during 2012 exploration program. The rock samples were taken from hand trenching and chip sampling across one metre or less and from grab samples of angular float material within the property boundaries (Figure 9).(see Appendix 2 for rock descriptions and assays)

Sample locations and analytical results are shown on Figures 9.

LH-12 Area Lost Lake Geology Map

The LH-12 area is located on the northwest portion of mineral tenure 920796 immediately northeast of Little Lost Lake. The grid area is underlain by Karmutsen Formation basalt of Triassic age. Locally, the Karmutsen Formation includes massive flows, pillowed flows, and thinner (0.1-5 meter width range) layers of hyaloclastite and pillow breccia. Basalt textures are amygdaloidal with 1-4 mm light colored secondary minerals including quartz, chalcedony, calcite, & chlorite in a dark green to black colored phaneritic groundmass. Variable amounts of magnetite ranging from 0.1 - 0.5% by volume occur as 0.1 - 0.2 mm sized disseminations in basalt. (Figure 10).

The LH-12 area is structurally dominated by a regional normal fault that strikes northwest parallel to the northeast shore of Little Lost Lake. The northwest trending fault is characterized by a cliff-forming scarp and abundant carbonate vein/replacement. There is a north trending fault in the northwest part of the grid area that may be a conjugate fault related to the regional northwest trend. The main direction of fractures/joints trends northwest and dips steeply to the south. Local topographic highs are elongated northwest.

The main alteration minerals present include secondary quartz, calcite, and chlorite. Approximately 0.01 - 0.02% pyrite occurs as 0.1 - 0.5 mm sized disseminations and fracture filling mineralization in the basalt. Trace amounts of chalcopyrite and malachite occurs as late stage fracture filling. A total of 11 rock chip channel samples were taken from surface outcrop with the 3 highest copper values summarized in the table below:

Table 3: LH-12 rock chip channel sample geochemical analysis highlights:

Sample ID	Width cm	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
164606	120	2.1	<0.1	252.3	0.9	55	3
164609	18	1.9	0.1	279.2	1.2	90	0.7
164612	15	9.4	<0.1	242.2	0.9	62	<0.5

Rock chip sample 164606 was taken at the base of the fault scarp cliff and is located at a soil sample station that returned a geochemical analysis of 350.8 ppm Cu.

LL-12 Area (Lost Lake-Tsolum Creek Area)

The LL-12 grid area is located on the west and central portions of mineral tenures 920796 & 920797 respectively. The grid area is underlain by Karmutsen Formation basalt of Triassic age. Locally, the Karmutsen Formation includes massive flows, pillowed flows, and thinner (0.1-5 meter width range) layers of hyaloclastite and pillow breccia. Basalt textures are amygdaloidal with 1-4 mm light colored secondary minerals including quartz, chalcedony, calcite, & chlorite in a dark green to black colored phaneritic groundmass. Variable amounts of magnetite ranging from 0.1 - 1% by volume occur as 0.1 - 0.5 mm sized disseminations in basalt. (Figure 11).

The LL-12 area is structurally dominated by a regional fault that strikes northwest, parallel to the northeast shore of Lost Lake. The northwest trending fault contains minor amounts (0.1-1%) carbonate-quartz veining. There is also localized northwest trending faulting with a steep southwest dip along the Tsolum River. The main direction of fractures/joints trends northwest and dips steeply to the south. Local topographic highs are elongated northwest.

The main alteration minerals present on the LL-12 grid and area northwest of the LL-12 grid include secondary quartz, calcite, chlorite, ankerite, and pyrolusite. Approximately 0.1 - 1% pyrite occurs as 0.1 - 2 mm sized disseminations and fracture filling mineralization hosted in basalt and associated with alteration minerals. Trace amounts of chalcopyrite and malachite occurs as late stage fracture filling. A total of 16 rock chip channel samples were taken from surface outcrop and 8 rock - grab samples were taken from the LL-12 area. The three highest copper values in rock chip samples are summarized in the table below:

Table 4: LL-12 rock chip channel sample geochemical analysis highlights:

Sample ID	Width cm	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
164616	100	6.1	<0.1	358.0	1.8	79	4.1
164620	60	10.8	0.6	356.3	0.9	19	1.9
164621	100	4.3	0.2	543.2	0.9	75	1.2

Rock chip sample 164621 was taken at the base of the fault scarp cliff and is located approximately half way between two soil sample stations that returned geochemical analysis of 257.8 and 223.7 ppm Cu.

Southwest LL-12 Area

The Southwest LL-12 area is located on the northwest portion of mineral tenure 920797 and about 600 meters southeast of Blue Grouse Lake. The area is underlain by Karmutsen Formation basalt of Triassic age. Locally, the Karmutsen Formation includes massive flows, pillowed flows and thinner (0.1-5 meter width range) layers of hyaloclastite and pillow breccia. Basalt textures are amygdaloidal with 1-4 mm light colored secondary minerals including quartz, chalcedony,

calcite, & chlorite in a dark green to black colored phaneritic groundmass. Variable amounts of magnetite ranging from 0.1-0.5% by volume occur as 0.1-0.2 mm sized disseminations in basalt. A north-northeast trending fault is characterized by a cliff-forming scarp and abundant quartz-carbonate vein/replacement. Fractures/joints associated with the fault zone contain secondary chlorite, limonite, ankerite, sericite, pyrite, and arsenopyrite. (Figure 12).

Approximately 0.1% pyrite and arsenopyrite occurs as 0.1-1 mm sized disseminations and fracture filling mineralization in quartz-carbonate altered basalt. One rock chip grab (angular shaped float below the faulted cliff-forming scarp) returned the geochemical analysis summarized in the table listed below:

Table 5: Southwest LL-12 rock chip grab sample highlights:

Sample ID	Width cm	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
164666	grab	4.0	0.2	625.5	0.4	24	3.3

H-12 Area

The H-12 grid area is located on the southeast portion of mineral tenure 920794. The grid area is underlain by Karmutsen Formation basalt of Triassic age. Locally, the Karmutsen Formation includes massive flows, pillowed flows and thinner (0.1-5 meter width range) layers of hyaloclastite and pillow breccia. Basalt textures are amygdaloidal with 1-5 mm light colored secondary minerals including quartz, chalcedony, calcite, & chlorite in a dark green to black colored phaneritic groundmass. Variable amounts of magnetite ranging from 0.1 - 1.5% by volume occur as 0.1 - 1 mm sized disseminations in basalt. The relative increase in magnetite in the area of the Milkideal mineral occurrences are reflected in a weak but well defined airborne total field magnetic anomaly (source: Map place BC,http://www.empr.gov.bc.ca/Mining/Geoscience /MapPlace. The magnetic anomaly covers the grid area and correlates with increased silicification. (Figure 14).

The H-12 grid area is structurally dominated by northwest trending fractures/joints with steep dips to the southwest. The main direction of fractures/joints in the H-12 area trends northwest and dips steeply to the south. Local topographic highs are elongated northwest.

The main alteration minerals present include secondary quartz, calcite, chlorite, ankerite, and pyrolusite. Approximately 0.1-1% pyrite occurs as 0.1-2 mm sized dissemination and fracture filling mineralization hosted in basalt and associated with alteration minerals. Trace amounts of chalcopyrite and malachite occurs as late stage fracture filling. A total of 6 rock chip channel samples taken from surface outcrop and 6 rock grab samples were taken from the H-12 area. The two highest copper values in rock chip samples returned from geochemical analysis are summarized in the table below:

Table 6: H-12 outcrop rock chip channel sample geochemical analysis highlights:

Sample ID	Width cm	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
164629	50	54.4	3.2	324.3	28.2	176	979.6
164632	100	1.4	<0.1	270.7	1.0	82	11.5
164626	float	654.1	1.8	115.1	57.8	9	2066.7
164630	float	2094.8	2.0	30.7	35.7	471	8915.2

Rock chip float (grab) samples 164626 and 164630 contains the first and second highest Au and As geochemical analysis of all samples submitted. The origin of the float has not b en identified, but the angular shape of the float suggests that it is relatively close to source.

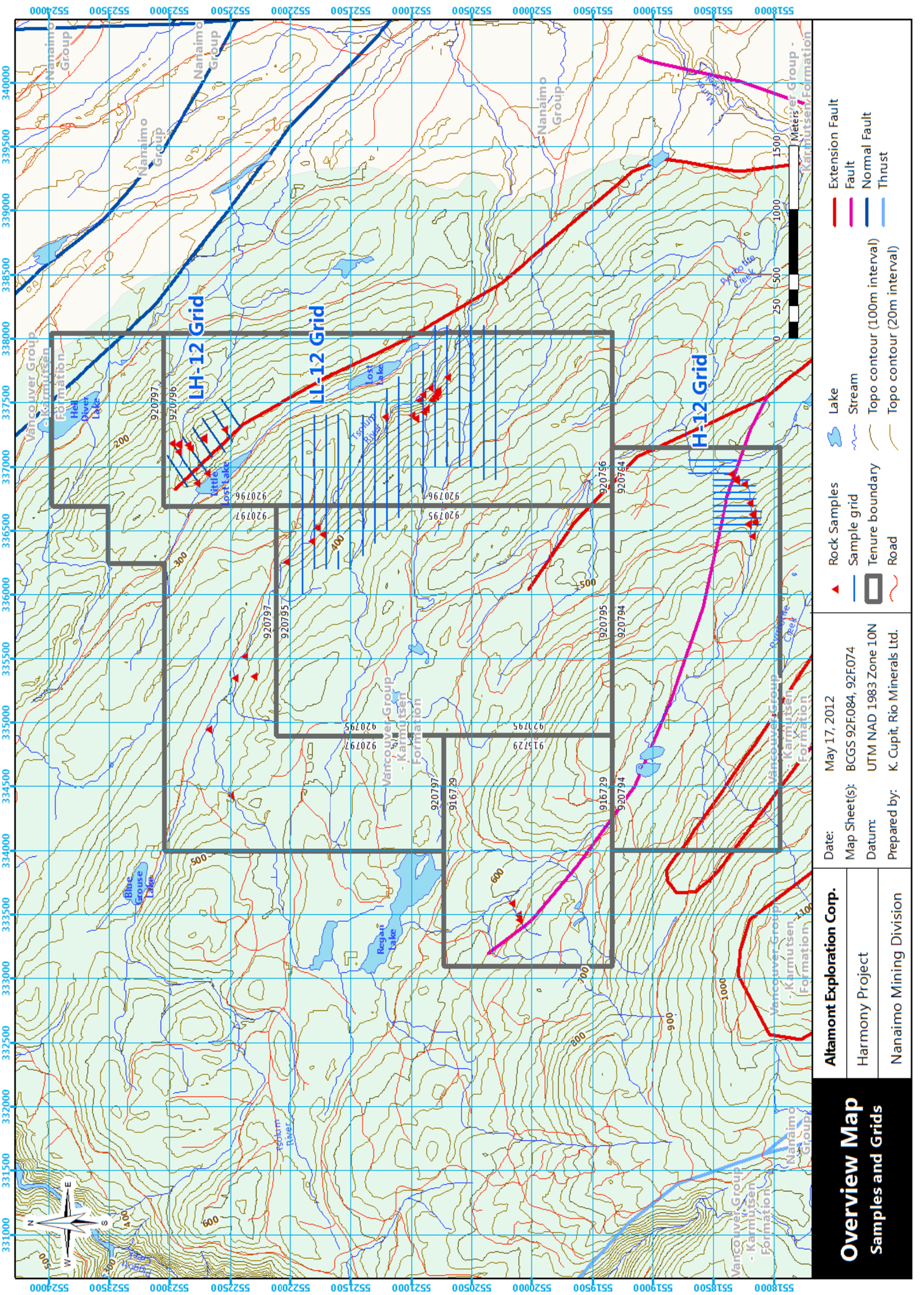
Blue Grouse Lake area mineral occurrence:

Blue Grouse Lake area is located on the northwest portion of mineral tenure 920797 and about 600 m southeast of Blue Grouse Lake. The area is underlain by Karmutsen Formation basalt of Triassic age. Locally, the Karmutsen Formation includes massive flows, pillowed flows and thinner (0.1-5 meter width range) layers of hyaloclastite and pillow breccia. Basalt textures are amygdaloidal with 1-4 mm light colored secondary minerals including quartz, chalcedony, calcite, & chlorite in a dark green to black colored phaneritic groundmass. Variable amounts of magnetite ranging from 0.1-0.5% by volume occur as 0.1-0.2 mm sized disseminations in basalt. A north-northeast trending fault is characterized by a cliff-forming scarp and abundant quartz-carbonate vein/replacement. Fractures/joints associated with the fault zone contain secondary chlorite, limonite, ankerite, sericite, pyrite and arsenopyrite. Approximately 0.1% pyrite and arsenopyrite occurs as 0.1-1 mm sized dissemination and fracture filling mineralization in quartz-carbonate altered basalt (figure 11). One rock chip grab (angular shaped float below the faulted cliff-forming scarp) returned geochemical analysis summarized in the table:

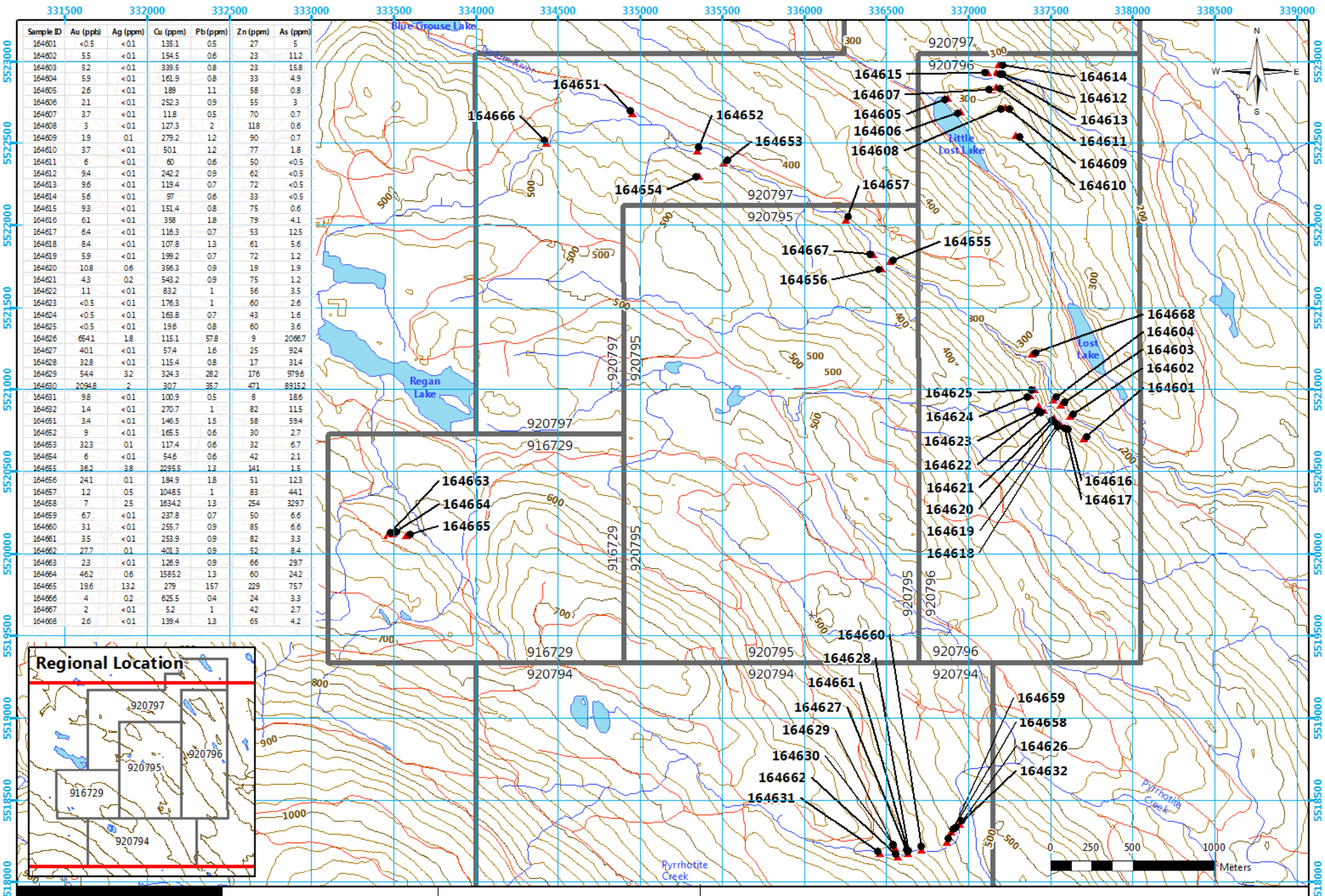
Table 7: Blue Grouse Lake rock chip grab sample geochemical analysis highlights:

Sample ID	Width cm	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
164666	grab	4.0	0.2	625.5	0.4	24	3.3

Figure 8: Summary Map



Sample ID	Au (ppb)	Ag (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	As (ppm)
164601	<0.5	<0.1	135.1	0.5	27	5
164602	5.5	<0.1	154.5	0.6	23	11.2
164603	5.2	<0.1	339.5	0.8	23	15.8
164604	5.9	<0.1	161.9	0.8	33	4.9
164605	2.6	<0.1	189	1.1	58	0.8
164606	2.1	<0.1	252.3	0.9	55	3
164607	3.7	<0.1	111.8	0.5	70	0.7
164608	3	<0.1	127.3	2	118	0.6
164609	1.9	0.1	279.2	1.2	90	0.7
164610	3.7	<0.1	50.1	1.2	77	1.8
164611	6	<0.1	60	0.6	50	<0.5
164612	9.4	<0.1	242.2	0.9	62	<0.5
164613	9.6	<0.1	119.4	0.7	72	<0.5
164614	5.6	<0.1	97	0.6	33	<0.5
164615	9.3	<0.1	151.4	0.8	75	0.6
164616	6.1	<0.1	358	1.8	79	4.1
164617	6.4	<0.1	116.3	0.7	53	12.5
164618	8.4	<0.1	107.8	1.3	61	5.6
164619	5.9	<0.1	199.2	0.7	72	1.2
164620	10.8	0.6	356.3	0.9	19	1.9
164621	4.3	0.2	543.2	0.9	75	1.2
164622	1.1	<0.1	83.2	1	56	3.5
164623	<0.5	<0.1	176.3	1	60	2.6
164624	<0.5	<0.1	163.8	0.7	43	1.6
164625	<0.5	<0.1	19.6	0.8	60	3.6
164626	654.1	1.8	115.1	57.8	9	2066.7
164627	40.1	<0.1	57.4	1.6	25	92.4
164628	32.8	<0.1	115.4	0.8	17	31.4
164629	54.4	3.2	324.3	28.2	176	979.6
164630	2094.8	2	30.7	35.7	471	8915.2
164631	9.8	<0.1	100.9	0.5	8	18.6
164632	1.4	<0.1	270.7	1	82	11.5
164651	3.4	<0.1	146.5	1.5	58	59.4
164652	9	<0.1	165.5	0.6	30	2.7
164653	32.3	0.1	117.4	0.6	32	6.7
164654	6	<0.1	54.6	0.6	42	2.1
164655	36.2	3.8	2295.5	1.3	141	1.5
164656	24.1	0.1	184.9	1.8	51	12.3
164657	1.2	0.5	1048.5	1	83	44.1
164658	7	2.5	1634.2	1.3	254	329.7
164659	6.7	<0.1	237.8	0.7	50	6.6
164660	3.1	<0.1	255.7	0.9	85	6.6
164661	3.5	<0.1	253.9	0.9	82	3.3
164662	27.7	0.1	401.3	0.9	52	8.4
164663	2.3	<0.1	126.9	0.9	66	29.7
164664	46.2	0.6	1585.2	1.3	60	24.2
164665	19.6	13.2	279	1.57	229	75.7
164666	4	0.2	625.5	0.4	24	3.3
164667	2	<0.1	5.2	1	42	2.7
164668	2.6	<0.1	139.4	1.3	65	4.2



Rock Sample Map (2012)

Altamont Exploration Corp.	
Harmony Project	
Nanaimo Mining Division	
Date:	May 12, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Rock Samples; Tenure boundary; Road; Lake; Stream; Topo contour (100m interval); Topo contour (20m interval)

Figure 9: Rock Sample Locations

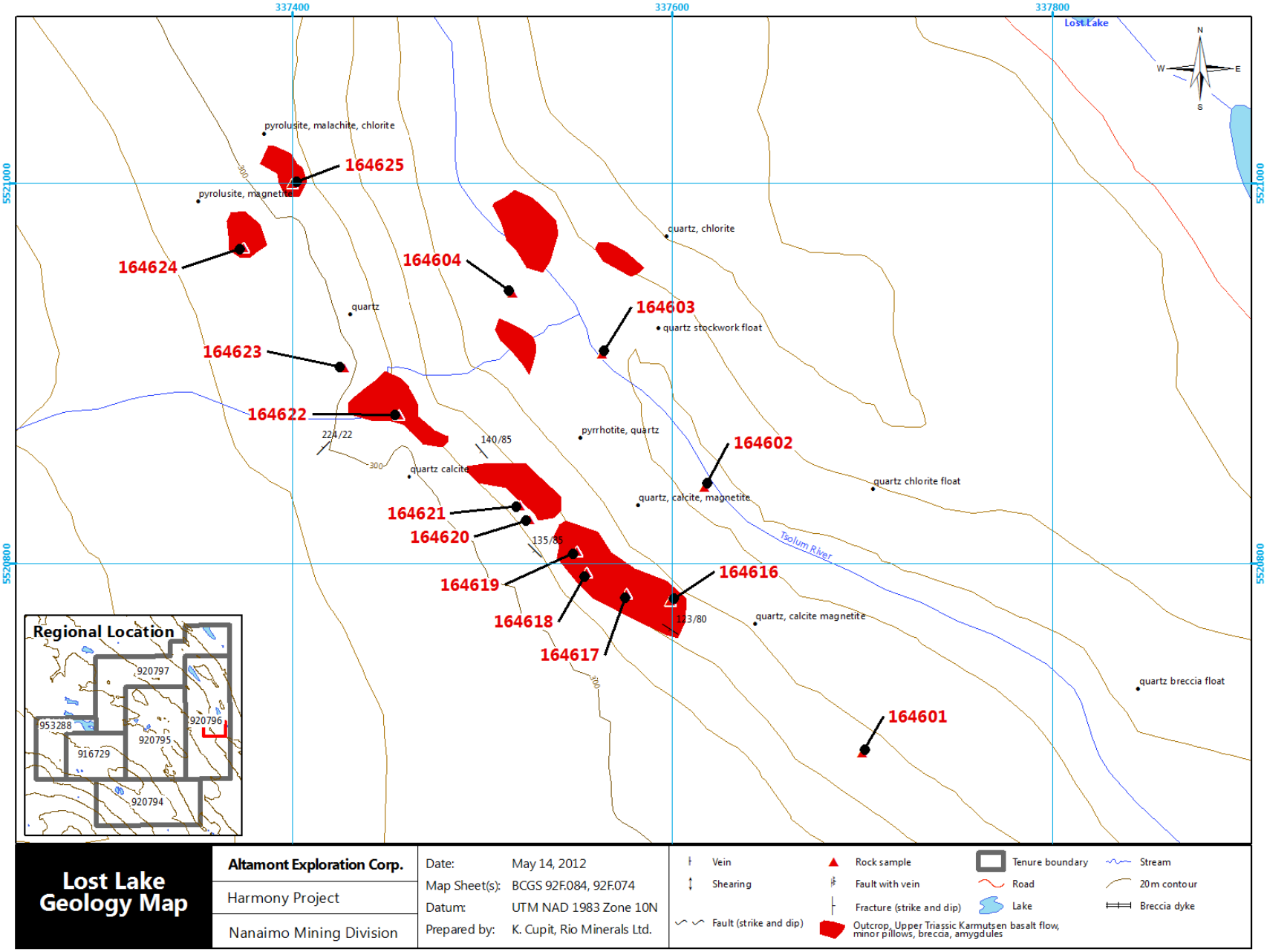


Figure 10: Lost Lake Geology Map

Figure 11: Lost Lake-Tsolum Creek Geology West

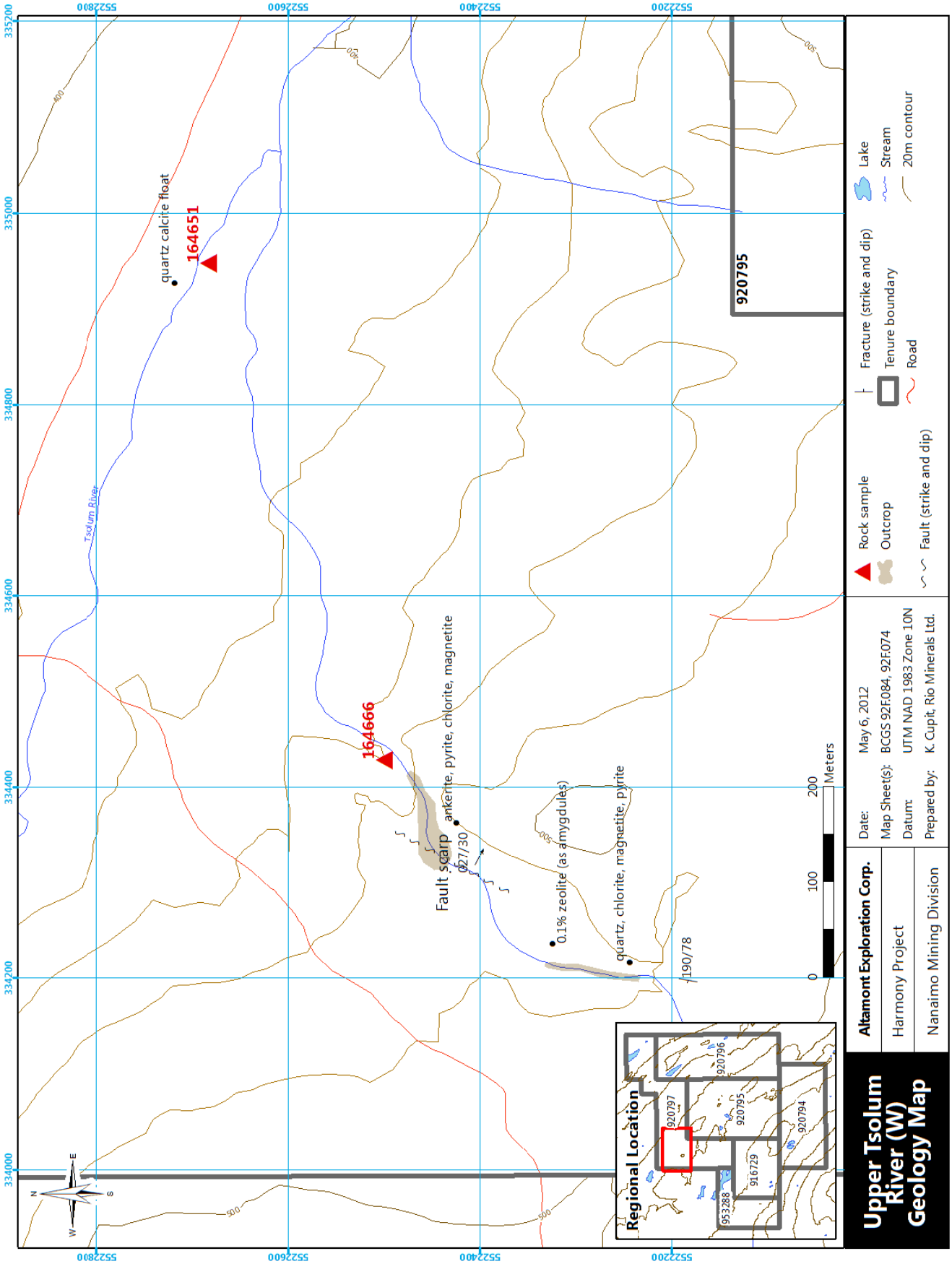


Figure 12: Lost Lake-Tsolum Creek Geology Mid

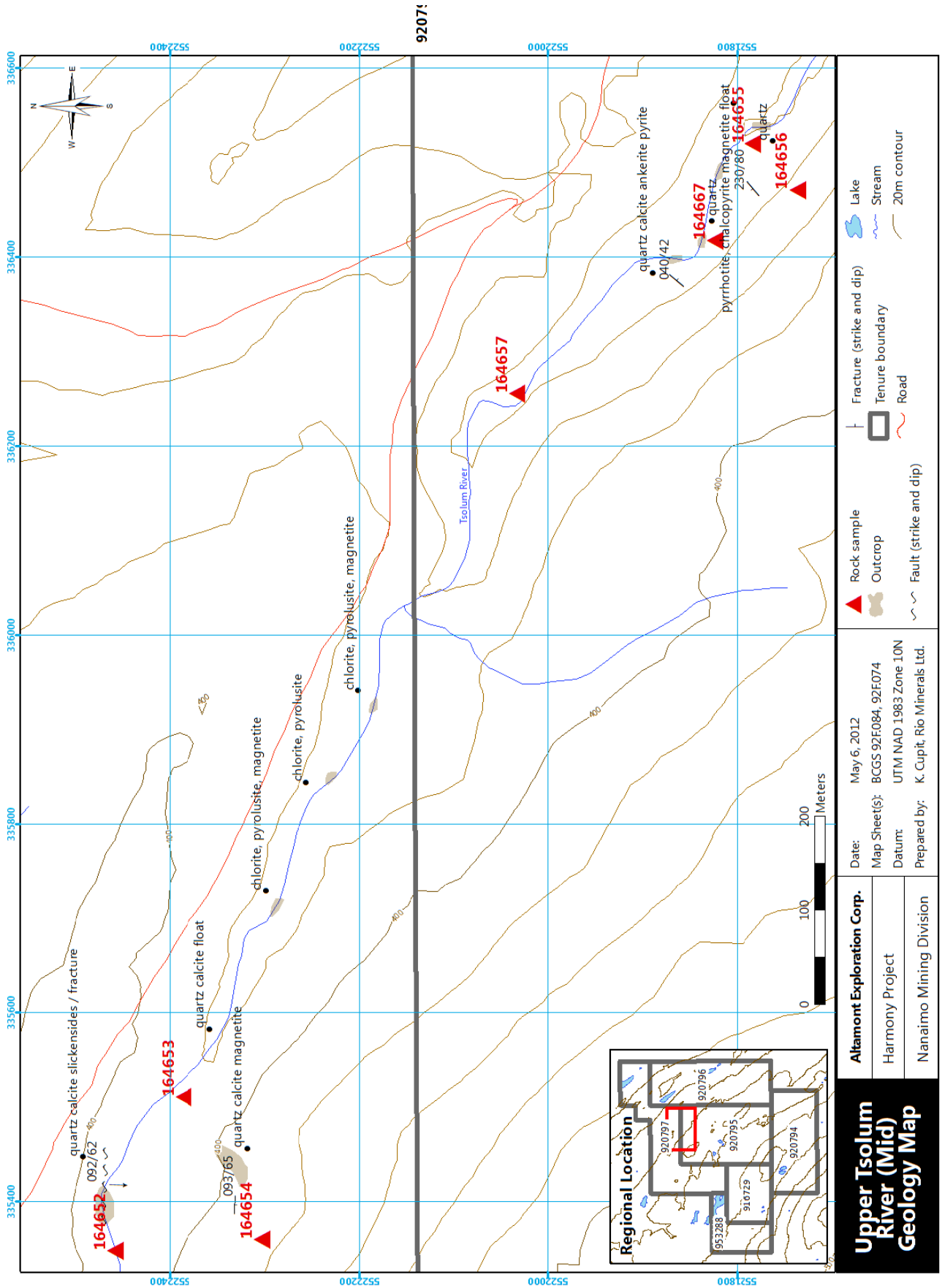
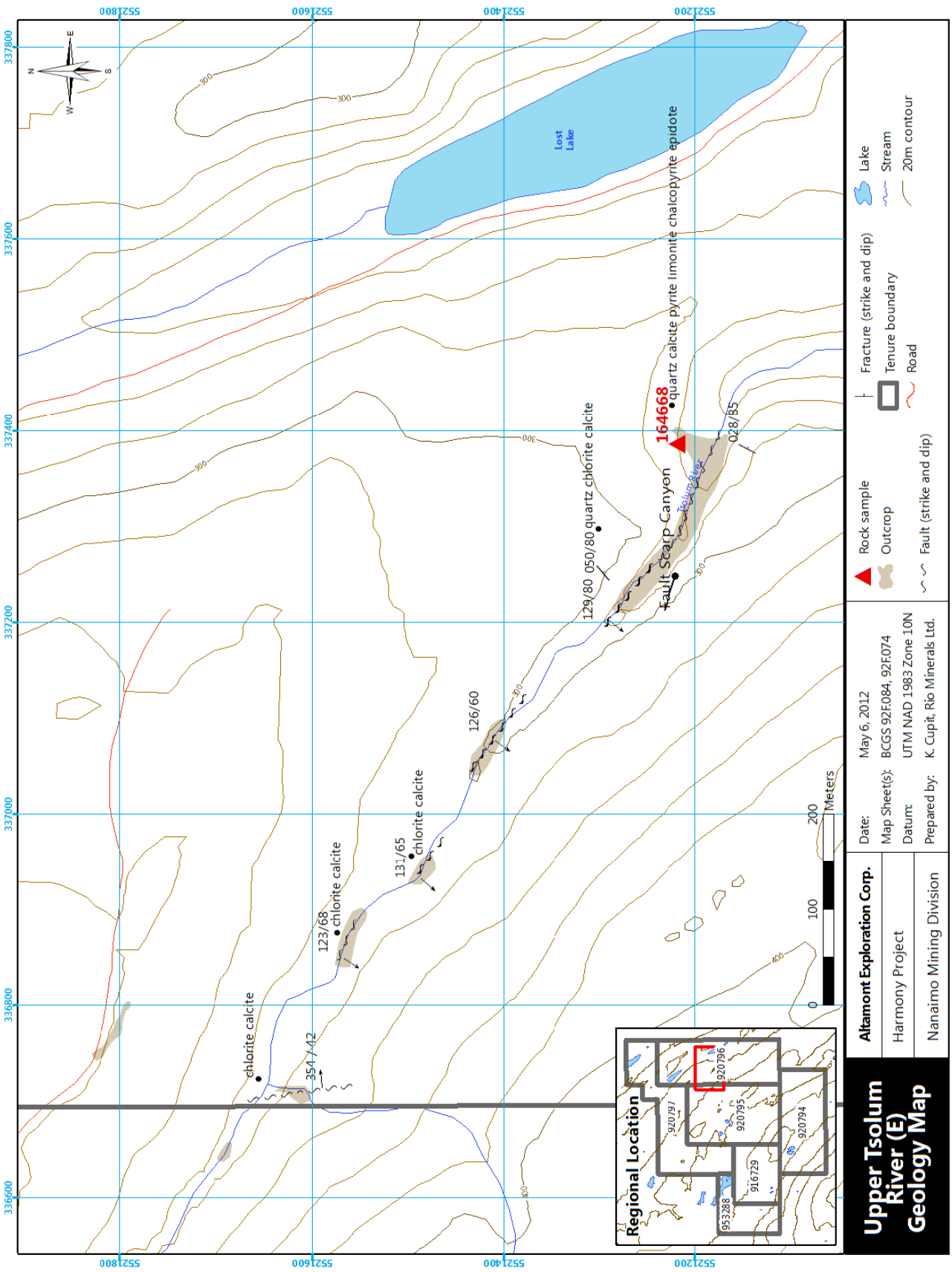
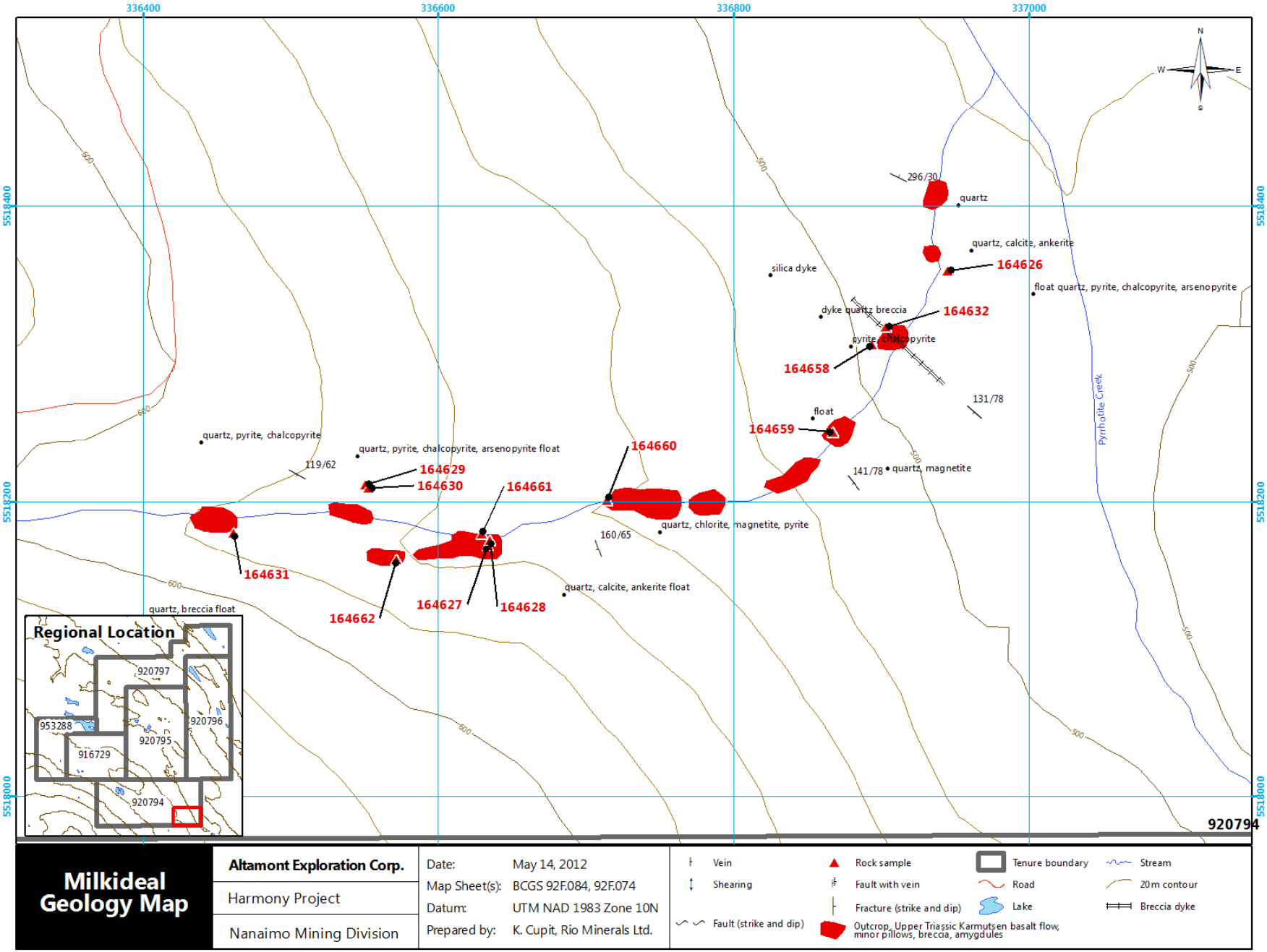


Figure 13: Lost Lake-Tsolum Creek Geology East





Milkideal Geology Map

Altamont Exploration Corp.	
Harmony Project	
Nanaimo Mining Division	
Date:	May 14, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Vein
Shearing
Fault (strike and dip)
Rock sample
Fault with vein
Fracture (strike and dip)
Outcrop, Upper Triassic Karmutsen basalt flow, minor pillows, breccia, amygdules
Tenure boundary
Road
Lake
Stream
20m contour
Breccia dyke

Figure 14: Milkideal Geology Map

9.2 Stream Sediment Survey

A regional stream sediment sampling was carried out to establish the metal content of sediments brought down by drainage systems in various areas of the Harmony Property. The sediment survey results indicated in Figure 15. (see Appendix 3 for stream sediment data and assay results)

The stream sediment sampling programme on the Harmony Project consisted of a total of 33 samples taken at 300-500 meter intervals along major and secondary drainages. Four of the samples taken contain elevated copper, gold, and arsenic values and are summarized in the following table:

Table 8: Stream Sediment Survey Follow Up

Sample No.	Location-MTO #	Cu ppm	As ppm	Au ppb	Drainage description
SS 8100	Center of 920797	82.7	25.1	190.2	015 azimuth drainage located south of Tsolum River.
SS 8087	E portion of 920794	2,418.7	236.0	325.3	E trending and bends to the N where sample was taken, felsic dyke and silicified and pyritic float in creek.
SS 5525	250 meters E of 920794	915.2	249.5	5.2	ENE drainage, extensive carbonate & ankerite alteration in creek.
SS 5227	E portion of 920794	90.1	371.7	3.6	E trending drainage, possible west extension of SS 5525 sample.

The four samples listed above require detailed follow-up exploration to explain the cause of anomalous Cu-Au-As values in stream sediments that occur in a cluster near the eastern portion of tenure 920794. A program of detailed stream sediment sampling and geological mapping/sampling is recommended to assess the causative source of stream sediment sample anomalies.

9.3 Soil Geochemical Survey

A total of 781 soil samples were collected from three soil grids at LH-12 (100 samples), LL-12 (394 samples), H-12 (287 samples) area (See figure7 for the locations of soil grids, appendix 4 for soil data and results)

9.3.1 Geochemistry Results

H-12 Grid:

The H-12 grid is located in the southeast portion of mineral tenure 920794. A total of 287 samples were taken at 25 meter intervals along north-south oriented lines spaced 50 meters apart for 12 lines in total averaging 375 meters length for each line.

A summary of geochemical analysis of samples taken on the H-12 grid is summarized as follows:
Au- 5 of 287 samples range from 93.4-996.5 ppb Au (Figure 20)

Cu- 6 of 287 samples range from 119.4-154.4 ppm Cu (Figure 21)
Elevated values in Au and As are located in the southeast and northeast portion of the grid area. These anomalies have not been defined and further sampling is required to define their extent. The gold in soil anomalies require follow up hand-trenching to determine their cause.

LL-12 Grid:

The LL-12 grid is located in the central portion of mineral tenures 920795 and 920796. A total of 394 samples were taken at 50 meter intervals along east-west oriented lines spaced 100 meters apart for 18 lines in total averaging 1050 m length for each line. (

A summary of geochemical analysis of samples taken on the LL-12 grid is summarized as follows:
Au- 11 of 394 samples range from 14-60.4 ppb Au (Figure 16)
Cu- 56 of 394 samples range from 100-409 ppm Cu (Figure 17)

Elevated values in Cu are located in the east central portion of the grid area 200-300 meters west of Lost Lake. This Cu soil anomaly is located along a steep area of basalt outcrop along the west side of the Tsolum River. The area was investigated and rock chip samples from the area contained trace to 0.1% of chalcopyrite and trace amounts of malachite which partly explains the copper in soil anomaly. There are several other zones of anomalous Cu in soil in the west central and north central portion of the LL-12 grid.

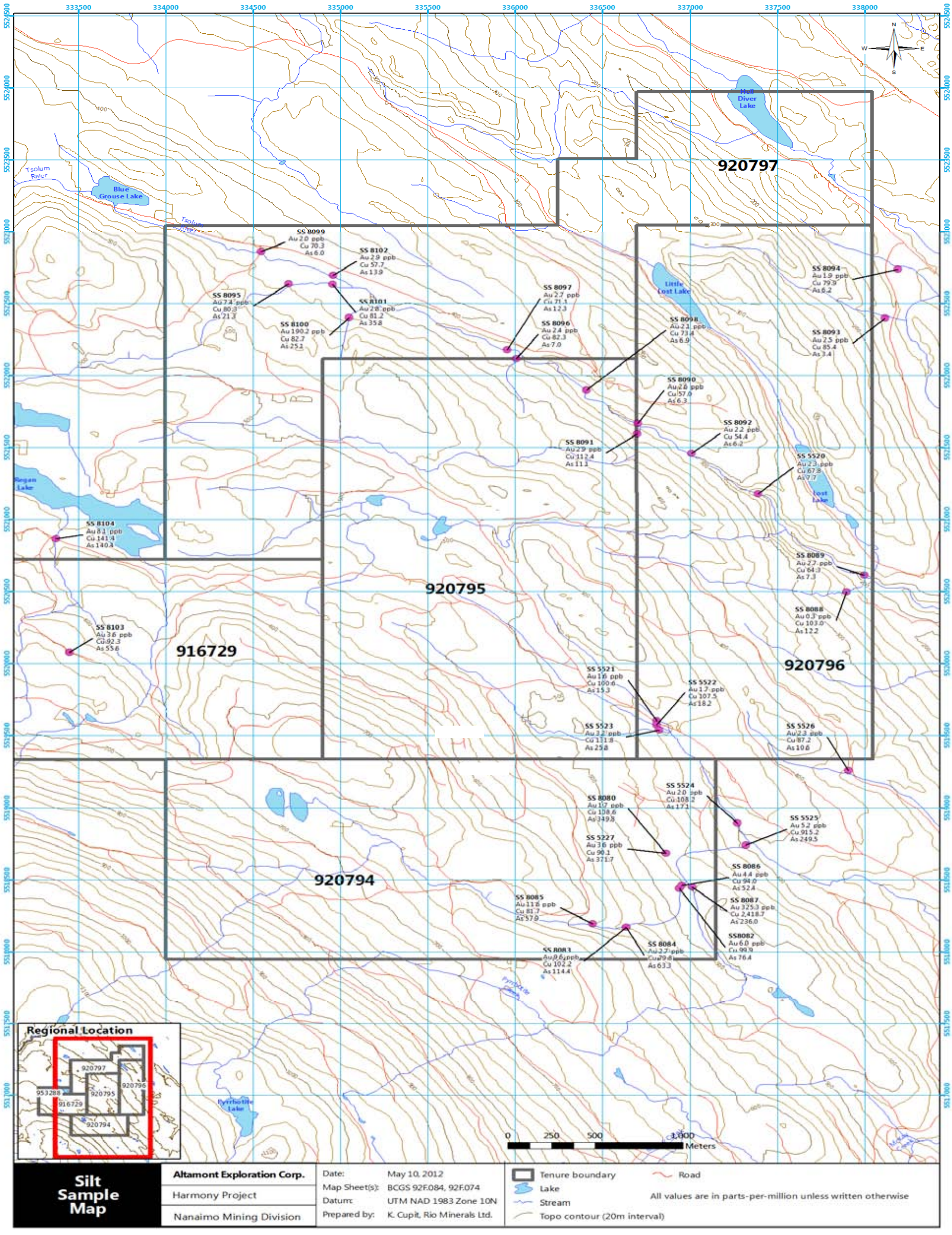
Elevated Au and As values do not correlate with anomalous Cu. Several Cu-As-Au anomalies occur at the edge of the grid and additional soil sampling is recommended to determine their extent. Elevated Cu-Au-As values in soil should be hand trenched to identify the cause of these soil anomalies.

LH-12 Grid:

The LH-12 grid is located in the northwest portion of mineral tenure 920796. A total of 100 samples were taken at 25 meter intervals along 055° oriented lines spaced 100 meters apart for 7 lines in total averaging 300 meters length for each line.
A summary of geochemical analysis of samples taken on the H-12 grid is summarized as follows:
Au- 5 of 100 samples range from 10.9-20.3 ppb Au (Figure 18)
Cu- 6 of 100 samples range from 112.9-350.8 ppm Cu (Figure 19)

Elevated Cu values are located in the southwest portion of the grid area. These anomalies have not been defined and further sampling is required to define the extent of the anomalies. The elevated Cu is associated with a regional northwest trending fault and this structure requires further follow up exploration. Hand trenching and further soil sampling along the surface trace of the regional fault is recommended.

Figure 15: Stream Sample Map



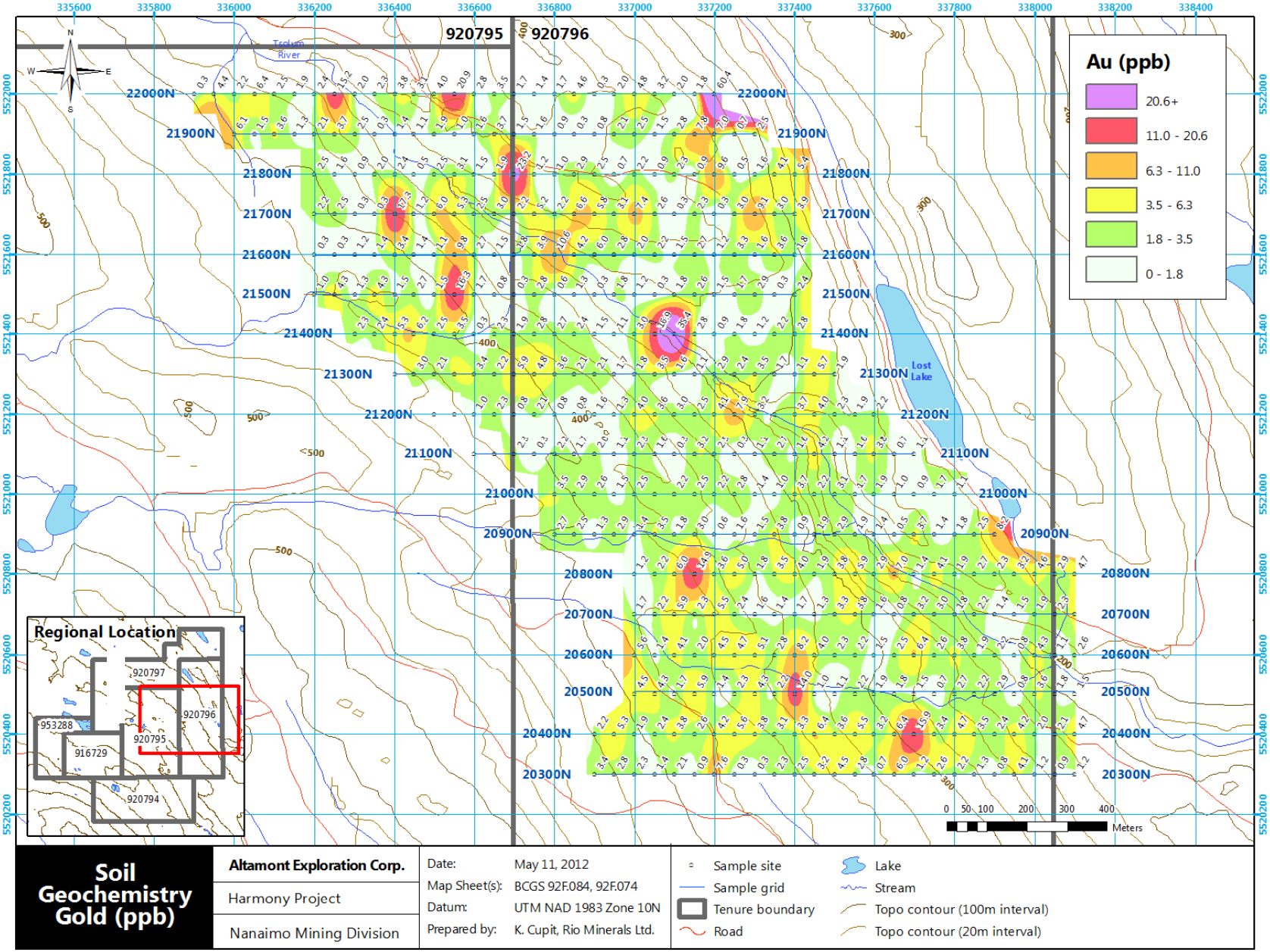


Figure 16 LL-12 Grid Gold

Figure 17 LL-12 Grid Copper

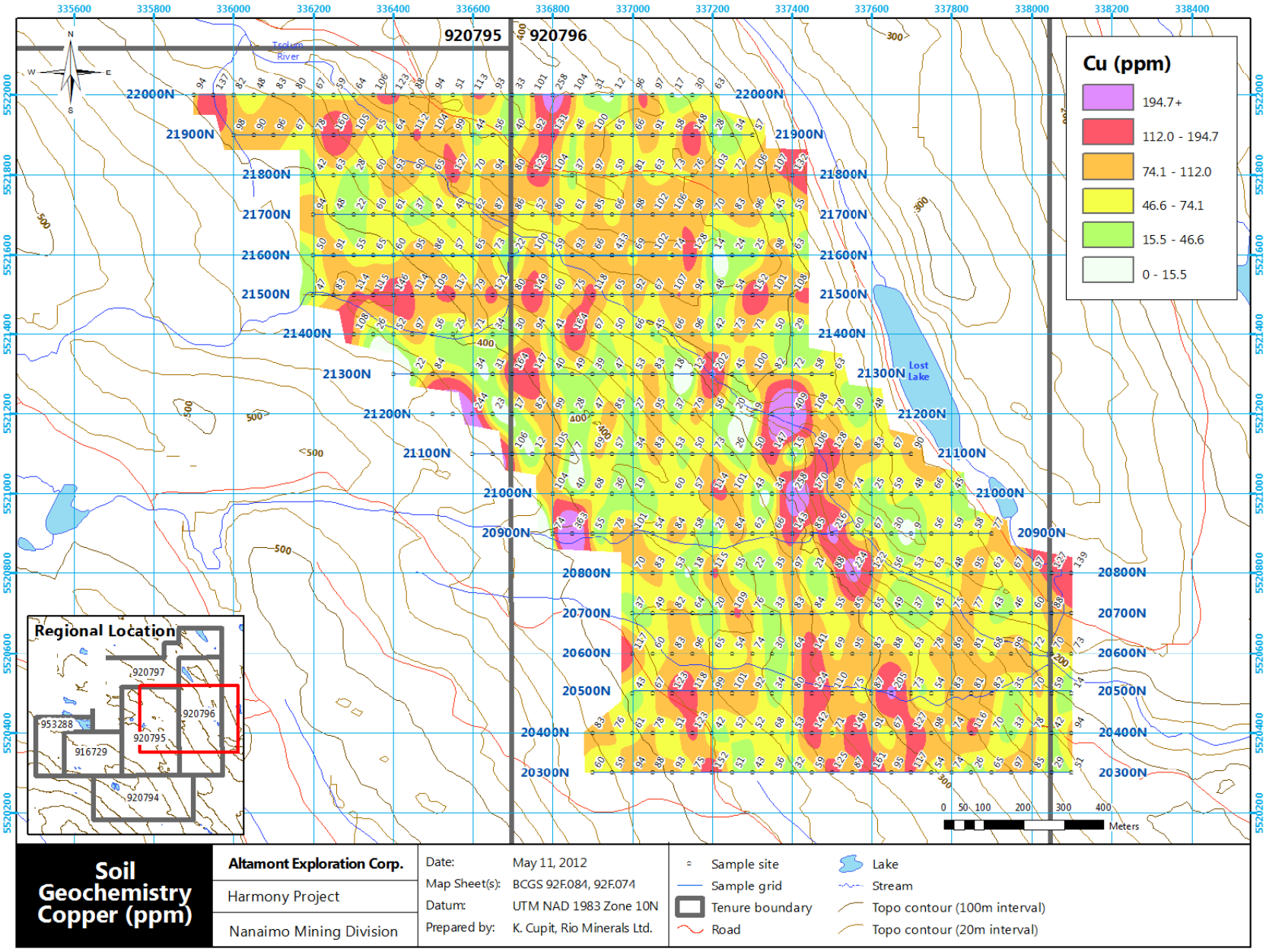


Figure 18 LH-12 Grid Copper

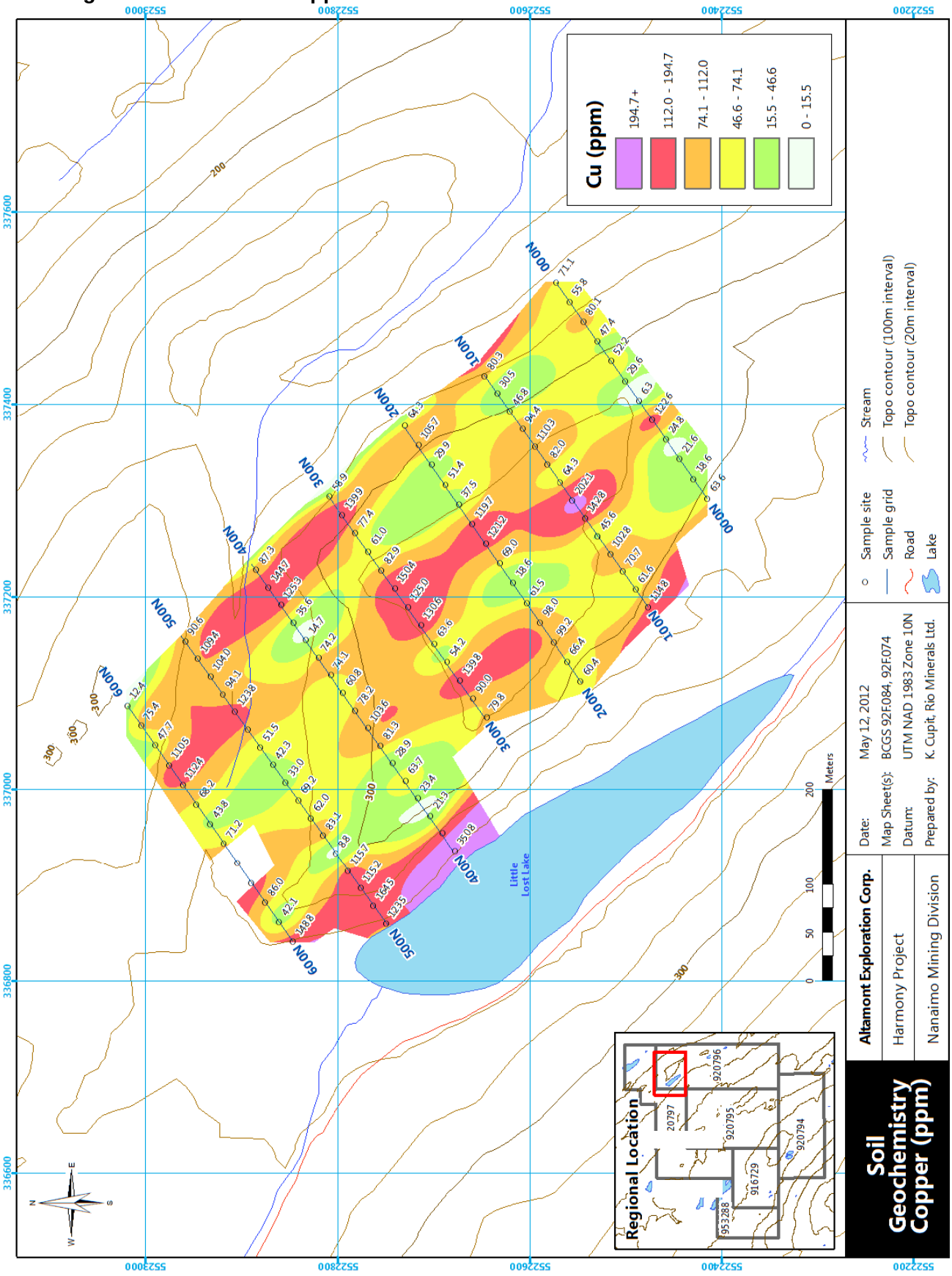
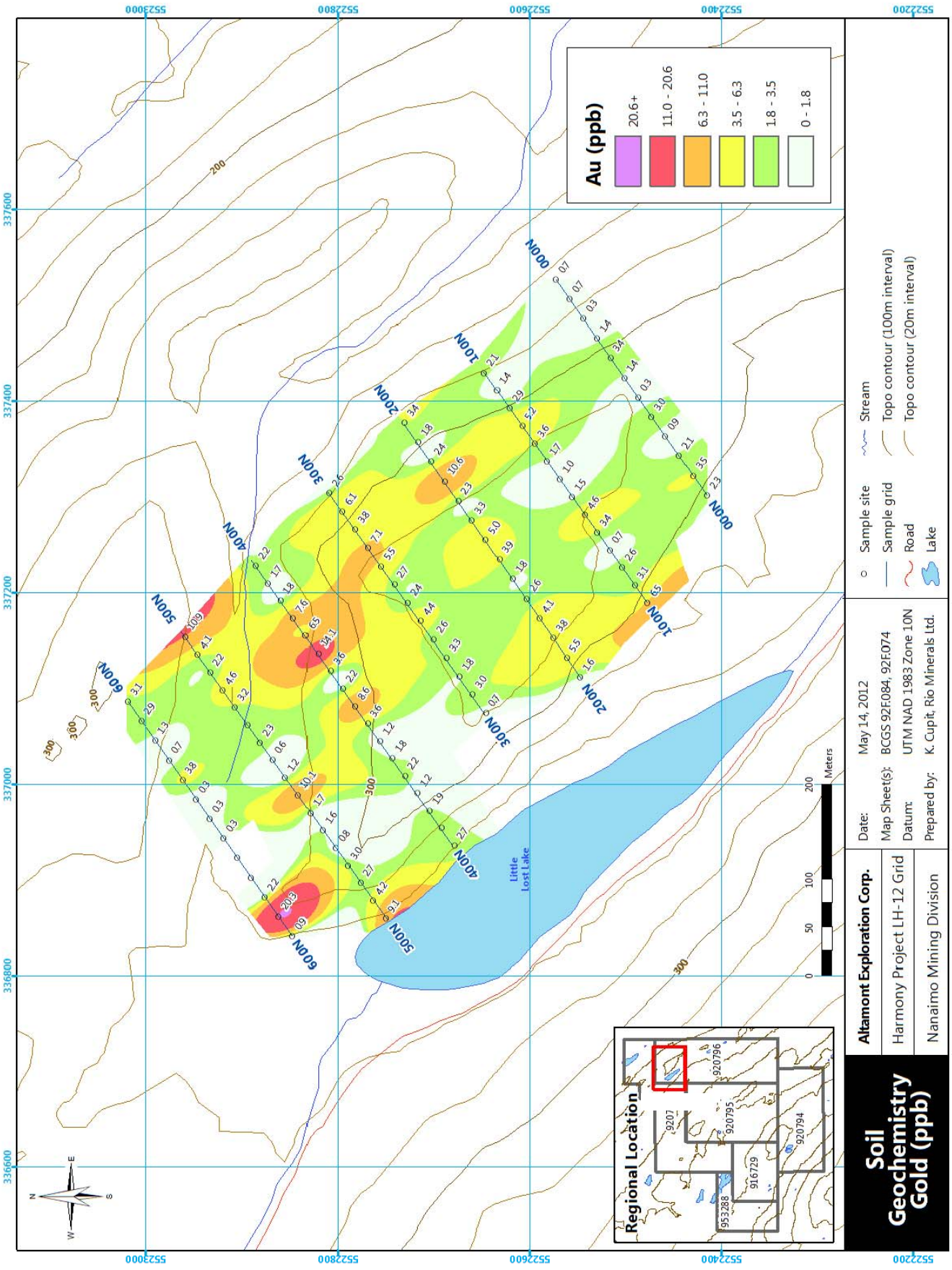


Figure 19 LH-12 Grid Gold



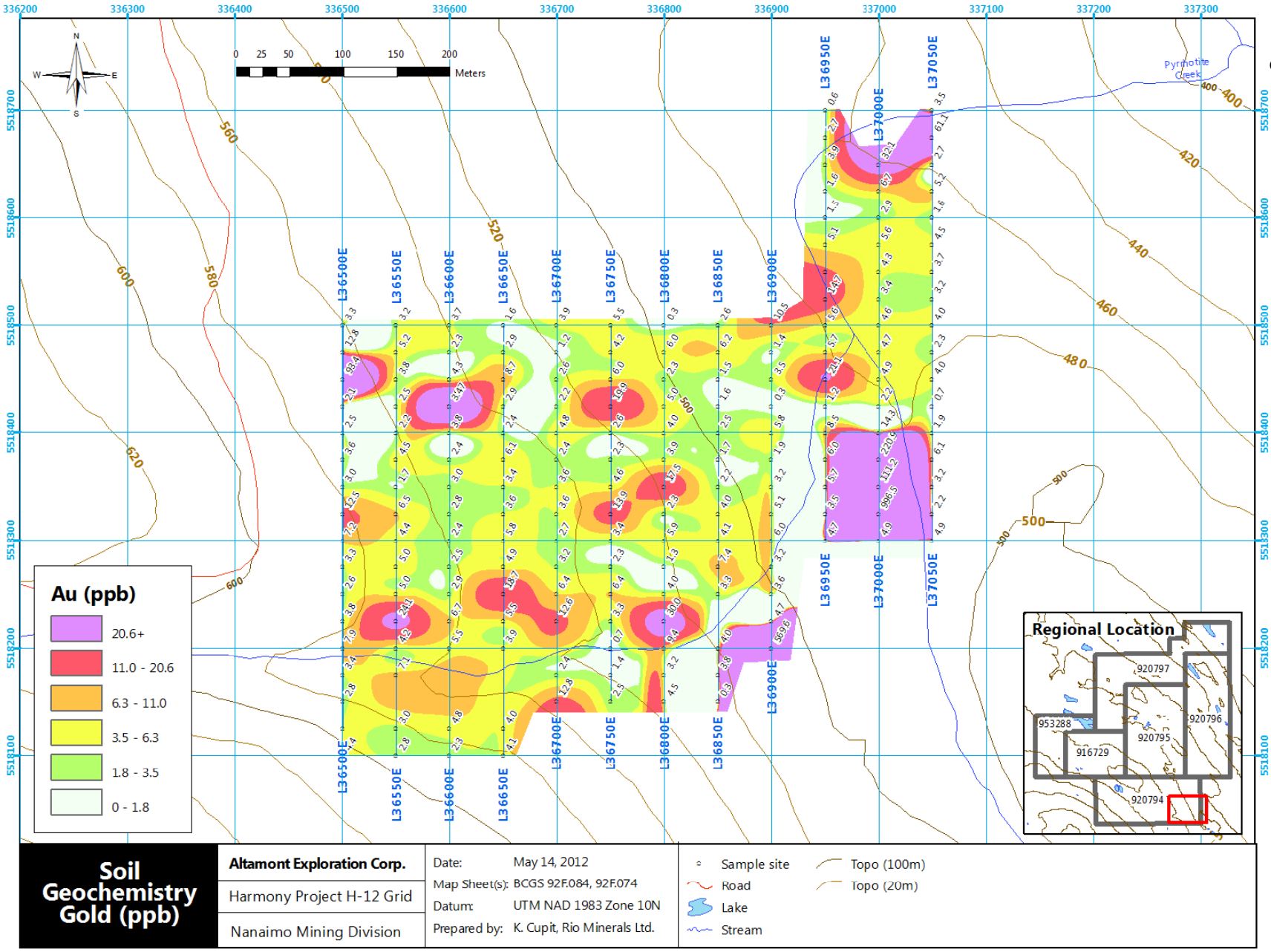
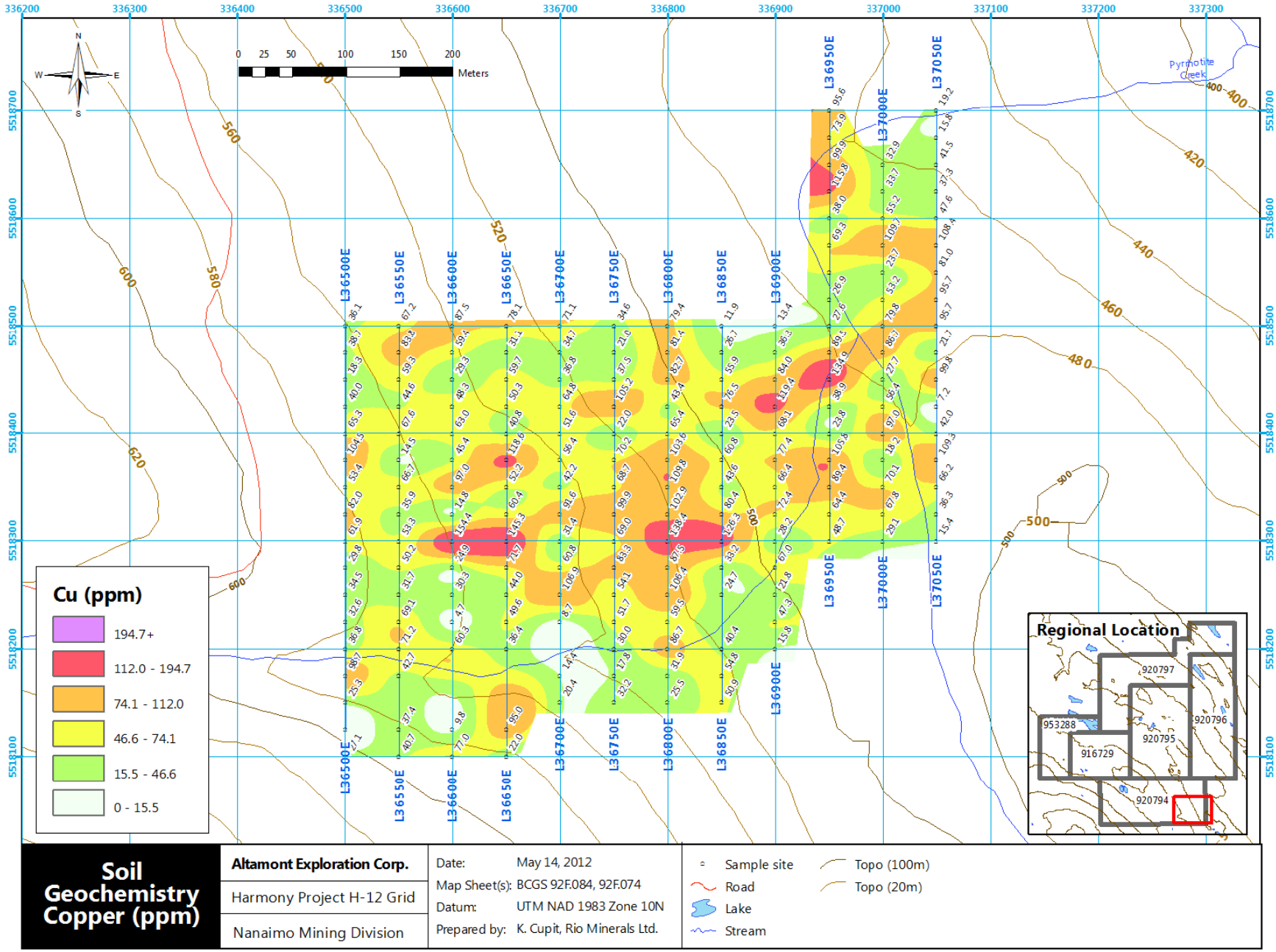


Figure 20 H-12 Grid Gold

Figure 21 L-12 Grid Copper



10 SAMPLING PREPARATION, ANALYSIS AND SECURITY

The rock chip channel samples collected during 2012 were placed in marked poly bags, sealed with zap straps, placed into marked rice bags, double sealed with zap straps, and shipped directly to Acme Analytical Laboratories of Vancouver, British Columbia for Group 1DX2 - 31 element ICP analysis.

Stream sediment samples collected during this survey were placed in Hubco silt sample bags, which were then dried, placed into marked poly bags, sealed with zap straps, placed into marked rice bags, double sealed with zap straps, and shipped directly to Acme Analytical Laboratories of Vancouver, British Columbia for Group 1DX15 - 36 elements ICP analysis.

Soil samples from the 2012 exploration work were collected from the “B” horizon, typically at a depth of 20-50 cm, with a shovel and spoon. Soil samples were placed in marked Kraft envelopes, which were then dried, placed into marked poly bags, sealed with zap straps, placed into marked rice bags, double sealed with zap straps, and shipped directly to Acme Analytical Laboratories of Vancouver, British Columbia for Group 1DX15 - 31 element ICP analysis.

All the rock and soil samples collected during 2012 exploration work were prepared and analyzed by Acme Analytical Laboratories which is an independent accredited laboratory located in Vancouver, BC. Canada. Acme Analytical Laboratories is currently registered with ISO 9001:2000 and ISO/IEC 17025:2005 accreditation which requires implementing and maintaining a quality assurance system that is compliant with one of the three applicable models (i.e. ISO 9001, 9002 or 9003).

Each soil sample was dried and sieved to provide an -80-mesh fraction. A 30 gm split was collected from the -80-mesh fraction. All samples were leached with 60ml 2-2-2 HCL-HNO_3-H_2O at 95^{o}C for one hour and then diluted to 200ml. (Acme analysis code Group 1-DX).

All rock samples were crushed to -10 mesh followed by pulverizing a 250-gram split to -150 mesh (95%). A 30-gram cut of the -150-mesh material from each sample was then analyzed for Group 1DX2 - 31 element ICP analysis. (Acme Analytical Laboratories analysis code Group 1-DX2).

All sample pulps and rejects are stored by Acme Analytical Laboratories in Vancouver, British Columbia. All of the samples are recorded in a number of digital database formats, using Excel spreadsheets.

The sample preparation, security and analytical procedures used by the laboratories are considered adequate by the author for the 2012 exploration work as conducted by Altamont.

During the March-April, 2012 Harmony Programme, a total of 50 rock samples were collected by the author and were placed in marked poly bags. All the rock samples were under the care and control of the author and a witness sample of each rock sample was retained and is available for viewing. The samples were prepared and analyzed by Acme Analytical Laboratories in Vancouver, BC. Canada using analytical code 1DX2.

11 ADJACENT PROPERTIES

Adjacent properties are held by various companies and private individuals. There are various mineral showings on the adjacent properties which are shown on Figure 22.

11.1 Ideal Occurrence

Currently owned by North Bay Resources. The main showing consists of a 1 to 8 centimeter wide, 230^0 striking shear zone, with 10^0 to 20^0 northwest dips.. The zone is hosted within the Benson conglomerate, about 1 meter above the unconformity with the Karmutsen Formation. The shear zone contains quartz and calcite veinlets up to 1.5 centimeters in width and locally up to 4 centimeters in width. The veins and adjacent rocks contain pyrite, sphalerite, galena and chalcopyrite. The wallrock is moderately to strongly iron-carbonate altered.

A composite of grab samples of the veinlets (1 to 3 centimeters wide) assayed 9.87 grams per tonne gold, 24.6 grams per tonne silver, 0.05 per cent copper, 0.8 per cent lead, 1.2 per cent zinc and 0.4 per cent arsenic.

A quartz-pyrrhotite-chalcopyrite veinlet occurs in a shear zone in basalt, on the east wall of Murex Creek about 1.5 kilometers upstream from the above occurrence. A sample (Sample 49A) assayed 0.42 % copper and 2.43 per cent zinc.

Realgar and arsenopyrite occur as disseminations and lenses in calcite veins. This showing is located about 2 kilometres to the northwest of the main showing on a southern branch of McKay Creek. (Benvenuto, 1986).

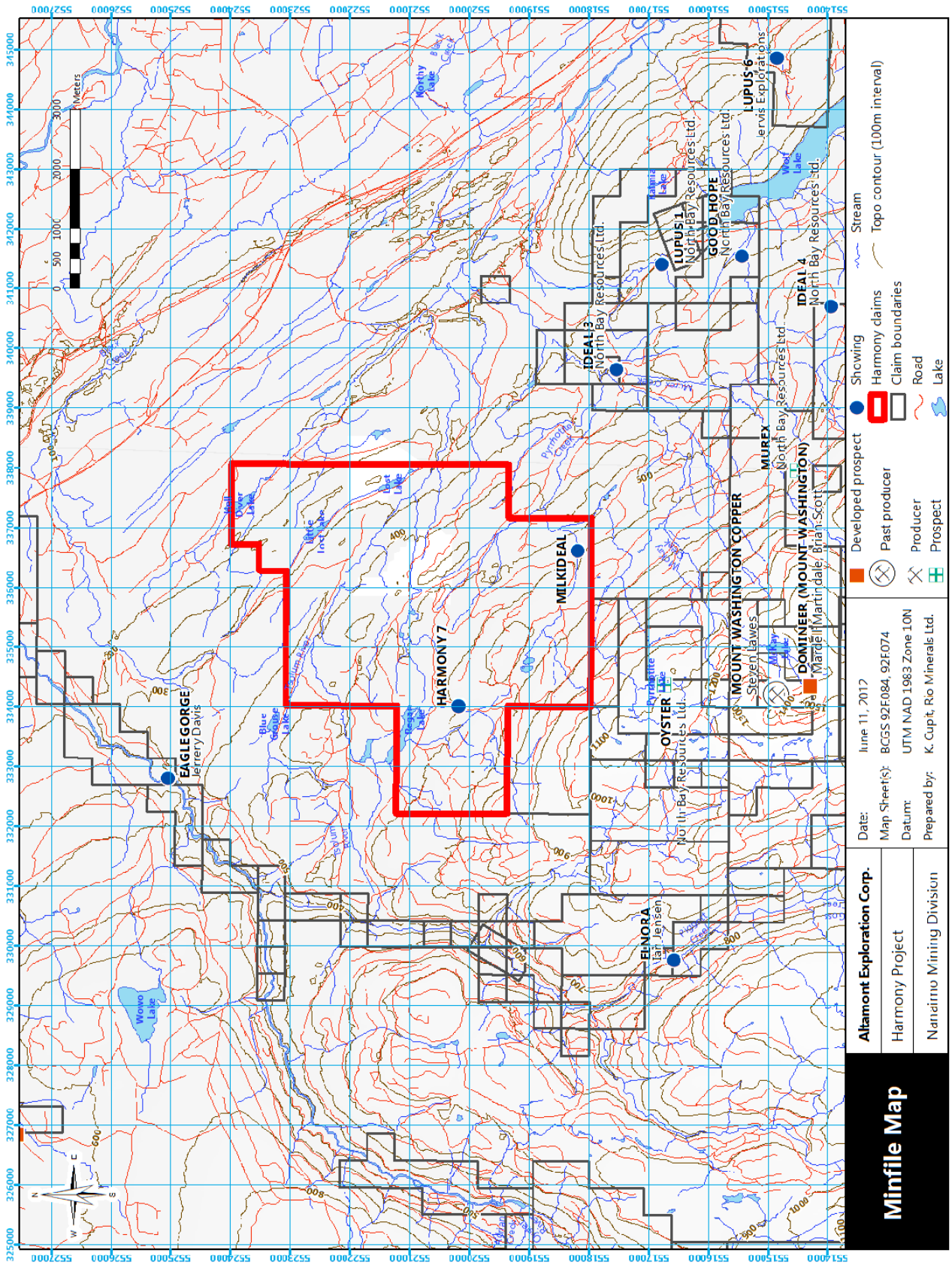
11.2 Good Hope

Currently owned by North Bay Resources. The Good Hope arsenic showing occurs about 800 metres northwest of the north end of Wolf Lake. The showing is exposed in a dry creek bed at an elevation of 260 metres. For about 75 metres the creek follows, and has exposed, a breccia zone in andesitic rocks. This zone varies from 0.6 to 3.6 metres in width, strikes 035 degrees and appears to dip steeply to the southeast. It contains lenses and veins of calcite up to 1.8 metres in width, in which numerous shattered and angular fragments of andesite are embedded. These bodies of calcite outcrop at intervals of about 45 metres along the creek bottom and contain occasional lenticular masses of realgar. The largest exposure of this arsenic sulphide measures

1.2 metres in length with a maximum width of 23 centimetres. Tiny veinlets of arsenopyrite occur locally within the andesitic wall rock. In some instances realgar has been replaced by native arsenic. Chalcopyrite has also been observed. The best assay from this zone was 4.9 grams per ton silver and 0.1 per cent copper over 2 metres (Cooke, 1985).

The Cliff showing was discovered on the Lupus claims in the probable vicinity of the Good Hope arsenic showing. A 5 centimetre wide pyrite-arsenopyrite-quartz vein occurs in Nanaimo Group sediments. The vein has a vertical dip and a westerly trend. A grab sample assayed 15.77 grams per tonne silver, 0.10 grams per tonne gold, 0.52 per cent arsenic and 0.13 per cent copper (Verley,. 1986).

Figure 22 Adjacent Properties



11.3 Mount Washington

Currently owned by Steven Lawes. The Mount Washington Copper deposit is located on a ridge on the north side of Mount Washington, 400 metres north of the Domineer/ Lakeview occurrence . The Tertiary quartz diorite stock is variably porphyritic and is centered on McKay Lake northeast of the summit of Mount Washington. Several sills and dykes of diorite, quartz diorite and quartz diorite porphyry are related to the stock.

The Mount Washington Copper deposit is considered to be a porphyry-type deposit with a later superimposed epithermal gold-copper-arsenic event. Mineralization has been defined over a length of more than 750 metres, and continues further to the south as the auriferous epithermal zone of the Domineer/Lakeview occurrence.

The mineralization is contained in a 1.5 to 7.6 metre wide subhorizontal tabular zone at or near the contact of Comox Formation sediments and the "Pit diorite" sill of the Mount Washington Intrusive Suite. The zone contains a stockwork of chalcopyrite- pyrite-quartz veins, and disseminated chalcopyrite in the sediments and the sill. Low gold and silver values are associated with the veins. Bornite, covellite, realgar, orpiment, pyrrhotite, arsenopyrite, molybdenite, sphalerite and galena are present.

Between 1964 and 1967, 381,773 tonnes of ore was mined from two open pits producing 131 kilograms of gold, 7235 kilograms of silver and 3548 tonnes of copper. An estimated 305,720 tonnes grading 1.07 per cent copper remain adjacent to the open pit.

11.4 Domineer

Currently owned by Mardell Martindale and Brian Scott. The Domineer epithermal deposit comprises the Domineer, Lakeview, and West Grid zones. The deposit lies 400 metres south of the Mount Washington Copper open pit.

The centre of the Lakeview zone is located 510 metres to the west of the Domineer zone, and the West Grid zone lies about 200 metres northwest of the Lakeview. The zones form a continuous shallow-dipping tabular body of argillic alteration containing discontinuous, en echelon or stacked lenses of mineralization.

The mineralized zone occurs within a sub horizontal package of Tertiary pyroclastics and underlying clastic sediments of the Upper Cretaceous Nanaimo Group (Comox Formation). Intruding both formations is a Late Eocene to Early Oligocene quartz diorite stock of the Mount Washington Intrusive Suite (formerly Catface Intrusions - dated at 35 million years (+/- 6 million years).

Mineralization at the Domineer deposit has a defined strike length of 1.5 kilometres and an average width of 61 metres. Diamond drilling indicates that mineralization extends from the Domineer zone to the Lakeview-West Grid area. Mineralization

consists of a tabular zone of alteration containing a stockwork of auriferous quartz-pyrite-arsenopyrite veins and lenses. The zone occurs within one of several sub horizontal fractures and breccias which post-date the Tertiary intrusions and volcanic activity, and may represent either thrust faults or decollements (Muller, 1989).

Enveloping the quartz-sulphide veins and lenses, is a zone of pervasive kaolinite alteration. A 2 to 5 metre wide zone of hydrothermal breccia usually lies at the centre of the alteration zone. This breccia consists of angular clasts of altered wallrock in a matrix of quartz and sulphides. Locally, the sulphides envelop these clasts and exhibit a banded appearance. Away from the central alteration zone is a stockwork of smaller quartz-sulphide veins. With increasing distance the veins decrease in size and frequency, alteration becomes limited to vein selvages and chlorite becomes the dominant alteration mineral.

The dominant sulphide minerals within the gold zone are pyrite and arsenopyrite. Chalcopyrite, covellite, sphalerite, galena, bornite, tennantite, wehrlite, hessite, chalcocite, realgar and orpiment are also present in varying amounts. Pyrrhotite, molybdenite and magnetite are present in the general vicinity but appear to be unrelated to the gold-bearing mineralization.

Two high grade pods have been identified. A northern pod, centred on the Domineer showing, averaged 6.99 grams per tonne gold and 58.63 grams per tonne silver over an average thickness of 1.6 metres. The southern pod, centred 180 metres to the south of the northern pod, averaged 7.06 grams per tonne gold and 45.26 grams per tonne silver over an average thickness of 2.56 metres (Bristow, 1987).

Underground exploration and surface diamond drilling to August 1989 have established drill indicated reserves of 550,298 tonnes grading 6.75 grams per tonne gold and 32.23 grams per tonne silver (George Cross News Letter August 3, 1989),

12 INTERPRETATION AND CONCLUSIONS

The Harmony Property lies within a geological and structural environment located proximal to the prolific Mount Washington-Domineer deposit. The Harmony Property mineral claims contain the Harmony-7 and Milkideal mineral showings.

The data presented in this report is based on published assessment reports available from the British Columbia Ministry of Mines, Minfile data, the Geological Survey of Canada, and the Geological Survey of BC. Data was collected by the author from work conducted during March and April of 2012 on the Harmony Property. The historical information and data collected during the course of present study is considered sufficient to provide an opinion about the merit of the Harmony Property as a viable exploration target.

The mineralization found on the Harmony Property may have formed as mesothermal veins along structures related to Middle Jurassic thrust faults marginal to ophiolitic crustal and or mantle lithologies. The most applicable deposit model considered for the Harmony Property is Au-Cu Vein model which requires a systematic exploration approach by understanding local geology, structure, alteration, and geochemical trends. The available historical data and reports suggest that the distribution of many mineral deposits in south-eastern British Columbia is controlled, at least in part, by deep crustal structures. The crustal structures appear to have controlled the distribution of granitic magmas, outflow of hydrothermal fluids, and the formation of a variety of mineral deposit types.

The stream sediment survey results indicated that the Harmony area stands out in terms of relative concentration of gold, copper, and lead.

The 2012 exploration work has outlined soil geochemical anomalies on all three exploration grids and in the Regan Lake area. The highest areas of anomalous geochemical response may indicate areas of buried undiscovered mineralization and should be investigated by a program of thorough geophysical surveying, prospecting, trenching, and more detailed geochemical/geophysical surveys in the areas of greatest interest.

Based on the review of the historical data and results of present study, it is concluded that the Harmony Property is a property of merit and possesses a good potential for discovery of copper, gold and other mineralization. Good road access and availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target.

The author is of the opinion that the present study has met it original objectives and provides the basis for listing on the TSX Venture Exchange.

13 RECOMMENDATIONS

Data Compilation, Geophysical Surveying, Trenching and Sampling

The suggested Phase 1 work program includes compilation of all the historical geological, geophysical and geochemical data available for the Harmony Property, and rendering this data into a digital database in GIS formats for further interpretation. This work will include georeferencing historical survey grids; samples, trenches, geophysical survey locations, and detailed property geological maps.

The fieldwork component of this phase will include geophysical surveying, geological mapping, and trenching and sampling as warranted on the soil geochemical anomalies, geophysical survey trends, and historical trenching and locations. The intent of this work would be to define the relationship of soil geochemical anomalies with the underlying and exposed bedrock mineralization. A 20-line kilometre 3-D Induced Polarization ground geophysical survey is proposed as part of this exploration. This work should be carried out on the following target areas: LH-12, LL-12, south of Regan Lake, and the H-12 areas. As well continue to 7map, prospect, and sample entire property.

BUDGET

Item	Unit	Rate	Number of Units	Total ($)
GIS Software Licensing	Lump Sum	$2,500	1	2,500
Maps production and Report	Lump Sum	$10,000	1	10,000
Bond and permitting	Lump Sum	$10,000	1	10,000
3-D IP Geophysical Survey	line-km	$3,500	20	70,000
Geological mapping and Prospecting 2 persons crew	days	$1,100	35	38,500
Geologist	days	$600	35	21,000
Assaying rock samples	sample	$35	500	17,500
Trenching	days	$1,000	10	10,000
Accommodation and Meals	days	$200	105	21,000
Vehicles : 2 – 4x4 trucks	days	$300	30	9,000
Supplies and Rentals	Lump Sum	$7,000	1	7,000
Reports	Lump Sum	$15,000	1	15,000
		Subtotal		$231,500
Contingency (10%)				$23,150
TOTAL (CANADIAN DOLLARS)				$254,650

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15 CERTIFICATE OF AUTHOR

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 Altamont Exploration Corp.
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 15 th day of July, 2012

Derrick Strickland, P.Geo.

APPENDIX 1

APPENDIX 1: STATEMENT OF COSTS

Personnel		**Rate**	**Days**	**Total**
Andris Kikauka P. Geo	March 11 – April 29, 2012	$650	15	$9,750
Robert Paeseler	February 29 – April 07, 2012	$450	20	$ 9,000
Andrew Molnar	February 29 – April 26, 2012	$500	30	$15,000
Lyle Gregory	February 29 – April 29, 2012	$450	32	$14,400
Christopher Bragg	February 29 – April 29, 2012	$450	32	$14,400
	Sub-total:			$62,550
Administration	5%	-	-	$3,127.
Sub-total:				$65,677.
Expenses				
Analytical	ACME Labs: 781 soil, 5 rock, 33 silt – 1DX2			$15,389.95
Vehicles	62 x 110			$ 6,820.00
Field Supplies				$ 1,300.22
Transport				$ 1,400.50
Fuel				$ 3,373.88
Lodging & Meals				$14,162.05
Rentals				$ 2,325.00
Shipping				$ 586.76
Assessment Report				$5,000
Sub total				$50,358.36
Total:				$116,035.86

APPENDIX 2

Harmony Rock Samples 2012

Sample Prefix	Sample ID	Locality	Easting NAD 83	Northing NAD 83	Elev (m)	Sample Type	Lithology	Lith Alteration	Vein Characteristics	Total Sulfides %	Vein Strike	Vein Dip	Sample Width (cm)	Comments	Au ppb	Cu ppm	Pb ppm	Zn ppm	As ppm
H12	164601	LL-12	337700	5520700	223	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.01	NA	NA	float	trace py, milky qtz veins, minor brecciation (clast supported)					
H12	164602	LL-12	337617	5520840	226	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.01	NA	NA	float	trace py, milky & clear qtz veins, minor brecciation (clast supported)					
H12	164603	LL-12	337563	5520910	280	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.01	NA	NA	float	milky qtz veins, minor brecciation (clast supported)					
H12	164604	LL-12	337516	5520942	264	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.01	NA	NA	float	trace py, qtz-calcite 1-6 mm amygdules					
H12	164605	LH-12	336873	5522774	298	outcrop	amyg basalt, minor volcanic breccia	calcite	milky qtz	0.01	20	78 W	100	trace py, qtz-calcite 1-4 mm amygdules	2.6	189	1.1	58	0.8
H12	164606	LH-12	336952	5522691	284	outcrop	amyg basalt, minor volcanic breccia	chlorite, calcite	milky qtz	0.01	128	75 SW	120	trace py, qtz-calcite 1-4 mm amygdules	2.1	252.3	0.9	55	3
H12	164607	LH-12	337143	5522826	292	outcrop	amygdaloidal basalt	calcite	qtz veinlets fracture fill	0.01	105	80 S	20	milky qtz veins 0.1 cm wide	3.7	11.8	0.5	70	0.7
H12	164608	LH-12	337215	5522717	335	outcrop	amygdaloidal basalt	chlorite, calcite	milky and clear qtz	0.01	110	70 S	42	trace py, qtz-calcite 1-4 mm amygdules, 1% magnetite, 0.1% pyrolusite	3	127.3	2	118	0.6
H12	164609	LH-12	337228	5522720	333	outcrop	amygdaloidal basalt	calcite	qtz veinlets fracture fill	0.01	115	68 S	18	trace py, milky qtz veins	1.9	279.2	1.2	90	0.7
H12	164610	LH-12	337290	5522550	336	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.01	NA		105	trace py, qtz-calcite 1-4 mm amygdules, 1% magnetite, 0.1% pyrolusite	3.7	50.1	1.2	77	1.8
H12	164611	LH-12	337170	5522845	278	outcrop	amygdaloidal basalt	chlorite, calcite	milky and clear qtz	0.01	NA		85	trace py, qtz-calcite 1-6 mm amygdules, 0.5% magnetite	6	60	0.6	50	<0.5
H12	164612	LH-12	337185	5522926	259	outcrop	amygdaloidal basalt	chlorite, calcite	qtz (vuggy texture)	0.02	110	76 S	15	trace malachite, & py, milky qtz veins, minor vuggy qtz	9.4	242.2	0.9	62	<0.5
H12	164613	LH-12	337170	5522929	254	outcrop	amyg basalt, minor volcanic breccia	chlorite, calcite	qtz vein & breccia texture	0.01	0	85 E	110	trace py, milky qtz veins in N-S, sub-vertical fault zone	9.6	119.4	0.7	72	<0.5
H12	164614	LH-12	337184	5522983	264	outcrop	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.02	NA		32	trace py, trace chalcopyrite	5.6	97	0.6	33	<0.5
H12	164615	LH-12	337117	5522929	258	outcrop	amyg basalt, minor volcanic breccia	chlorite, calcite	qtz vein & breccia texture	0.01	110	80 S	100	trace py, vuggy & milky qtz veins, minor brecciation (clast supported)	9.3	151.4	0.8	75	0.6
H12	164616	LL-12	337599	5520780	314	outcrop	amygdaloidal basalt	chlorite, calcite	milky and clear qtz	0.01	multi-directional		100	1% qtz as 0.1 vns, 0.5% diss mag , trace py, 0.1% calcite	6.1	358.0	1.8	79	4.1
H12	164617	LL-12	337576	5520784	279	outcrop	amygdaloidal basalt	chlorite, calcite	milky and clear qtz	0.05	multi-directional		100	2% qtz as 0.1 vns, 0.5% diss mag , trace py, 0.1% calcite	6.4	116.3	0.7	53	12.5
H12	164618	LL-12	337555	5520795	280	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.15	120	80 S	100	0.1% qtz as 0.1 vns, 0.5% diss mag , 0.2% py, 0.1% calcite	8.4	107.8	1.3	61	5.6
H12	164619	LL-12	337550	5520806	270	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.35	135	85 SW	75	0.5% qtz as 0.1 vns, 0.5% diss mag , trace py, 0.1% calcite	5.9	199.2	0.7	72	1.2
H12	164620	LL-12	337525	5520823	276	outcrop	amygdaloidal basalt	chlorite, calcite	milky and clear qtz	0.35	140	85 SW	60	1% qtz as 0.1 vns, 0.5% diss mag , trace py, 0.1% calcite	10.8	356.3	0.9	19	1.9
H12	164621	LL-12	337520	5520830	274	outcrop	amyg basalt, minor volcanic breccia	chlorite, calcite	milky and clear qtz	1	130		100	1% qtz as 0.1 vns, 0.5% diss mag , 1% py, 0.1% pyrolusite, 0.1% calcite	4.3	543.2	0.9	75	1.2
H12	164622	LL-12	337456	5520878	303	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	1	48	22 NW	100	2% qtz as 0.1 vns, 0.5% diss mag , 1% py, 0.1% pyrolusite, 0.1% calcite	1.1	83.2	1.0	56	3.5
H12	164623	LL-12	337427	5520903	303	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.15	NA		60	5% qtz as 0.1-0.5 cm vns, 0.5% diss mag, 0.1% pyrolusite, 0.1% calcite	<0.5	176.3	1.0	60	2.6
H12	164624	LL-12	337374	5520966	298	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.25	NA		60	5% qtz as 0.1-0.5 cm vns, 0.5% diss mag, 0.1% pyrolusite	<0.5	163.8	0.7	43	1.6
H12	164625	LL-12	337400	5521000	278	outcrop	amygdaloidal basalt	chlorite, calcite	milky qtz	0.05	NA		50	massive chlorite, 0.3% diss mag, 0.1% pyrolusite, fault zone	<0.5	19.6	0.8	60	3.6
H12	164626	H-12	336945	5518356	521	grab (float)	amygdaloidal basalt	ankerite, calcite	milky and clear qtz	3.3	NA		float	angular float, 8% qtz, 2% py, 0.3% cpy, 0.3% calcite, 0.5% ankerite, 0.2% arsenopyrite	654.1	115.1	57.8	9	2066.7
H12	164627	H-12	336633	5518170	557	grab (float)	amygdaloidal basalt	ankerite, calcite	milky and clear qtz	0.3	NA		float	angular float, 3% qtz, 2% py, 0.3% cpy, 0.3% calcite, 0.5% ankerite	40.1	57.4	1.6	25	92.4
H12	164628	H-12	336635	5518174	558	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz vein & breccia texture	0.5	NA		float	angular float, 1% qtz, 2% py, 0.3% cpy, 0.3% calcite, 0.5% ankerite	32.8	115.4	0.8	17	31.4
H12	164629	H-12	336550	5518211	590	outcrop	amyg basalt, minor volcanic breccia	ankerite, calcite	milky and clear qtz	1.5	120	62 SW	50	silicified, , 3% qtz, 0.3% py, 0.1% cpy	54.4	324.3	28.2	176	979.6
H12	164630	H-12	336552	5518209	590	grab (float)	amygdaloidal basalt	ankerite, calcite, sericite	banded, layered, & vuggy qtz	2.3	NA		float	angular float, 2% py, 0.3% cpy, 0.3% calcite, 0.5% ankerite, 0.5% arsenopyrite	2094.8	30.7	35.7	471	8915.2
H12	164631	H-12	336461	5518179	601	grab (float)	amygdaloidal basalt	chlorite, calcite	qtz (breccia texture)	0.2	NA		float	angular float, 60% qtz as 1-30 cm wide veins, 0.2% py	9.8	100.9	0.5	8	18.6
H12	164632	H-12	336903	5518318	498	outcrop	felsic dyke (3.2 m wide)	chlorite, calcite	qtz vein & breccia texture	0.3	130	78 SW		silicified felsic dyke, 12% qtz as 0.1-4 cm veins, minor breccia texture	1.4	270.7	1.0	82	11.5
H12	164651	LL-12	334948	5522682	417	grab (float)	amygdaloidal basalt	ankerite, calcite	qtz vein & breccia texture	0.3			float	angular float, 4% qtz as 0.1-0.5 cm wide veins, 0.3% py, 0.2% lim, 0.5% ank, 1% cal	3.4	146.5	1.5	58	59.4
H12	164652	LL-12	335348	5522457	410	outcrop	amygdaloidal basalt	calcite, chlorite	qtz vein & breccia texture	0.1	90	62 S	35	silicified fault-fracture zone, 2% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% cal	9.0	165.5	0.6	30	2.7
H12	164653	LL-12	335511	5522385	401	grab (float)	amygdaloidal basalt	ankerite, calcite, chlorite	qtz vein & breccia texture	0.1			float	angular float, 4% qtz as 0.1-0.5 cm wide veins, 0.1% py, 0.5% lim, 0.1% ank, 0.1% cal, 1.5% chl	32.3	117.4	0.6	32	6.7
H12	164654	LL-12	335360	5522302	423	outcrop	amygdaloidal basalt	ankerite, calcite	qtz vein & breccia texture	0.1	90	65 S	25	2% qtz as 0.1-0.3 cm wide veins, 0.1% py, 0.2% lim, 0.5% ank, 1% cal, 0.3% mag, 0.1% hem	6.0	54.6	0.6	42	2.1
H12	164655	LL-12	336520	5521782	319	grab (float)	felsic altered rock	calcite, sericite	sulphide-silica replacement	9			float	sub-rounded float, 5% qtz as 0.1-0.5 cm bands, 8% pyo, 0.3% cpy, 0.1% lim, 3% mag, 1% ser	36.2	2295.5	1.3	141	1.5
H12	164656	LL-12	336471	5521735	336	outcrop	amygdaloidal basalt	calcite, chlorite	qtz vein & breccia texture	0.1	45	80 NW	60	2% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.1% lim, 0.5% ank, 0.1% cal	24.1	184.9	1.8	51	12.3
H12	164657	LL-12	336256	5522032	365	grab (float)	amygdaloidal basalt	ankerite, calcite	qtz vein & breccia texture	0.2			float	angular float, 60% qtz as 0.1-8 cm wide veins, 0.1% py, 0.3% lim, 0.5% ank, 2% cal, 0.1% chalcopyrite	1.2	1048.5	1.0	83	44.1
H12	164658	H-12	336894	5518306	504	grab (float)	amygdaloidal basalt	ankerite, calcite	qtz vein & breccia texture	1			float	angular float, 15% qtz as 0.1-1 cm wide veins, 0.8% py, 0.1% lim, 0.3% ank, 1% cal, 0.1% chalcopyrite	7.0	1634.2	1.3	254	329.7
H12	164659	H-12	336867	5518247	520	outcrop	amygdaloidal basalt	calcite, chlorite	milky qtz	0.1	140	78 SW	27	5% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% lim, 0.5% ank, 1% cal, 0.3% mag, trace limonite	6.7	237.8	0.7	50	6.6
H12	164660	H-12	336714	5518201	532	outcrop	amygdaloidal basalt	ankerite, calcite	qtz vein & breccia texture	0.1	160	65 W	40	5% qtz as 0.1-0.2 cm wide veins, 0.1% py, 1% cal, 0.3% mag, hosted in amygdaloidal basalt	3.1	255.7	0.9	85	6.6
H12	164661	H-12	336629	5518178	542	outcrop	amyg basalt, minor volcanic breccia	calcite, chlorite	milky and clear qtz	0.1	7	80 E	35	2% qtz as 0.1-0.2 cm wide veins, 0.1% py, 1% cal, 0.3% mag, 1% chlorite	3.5	253.9	0.9	82	3.3
H12	164662	H-12	336571	5518160	556	outcrop	amyg basalt, minor volcanic breccia	calcite, chlorite	milky and clear qtz	0.1	10	89 W	65	2% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% lim, 0.5% ank, 1% cal, 0.3% mag, trace chalcopyrite	27.7	401.3	0.9	52	8.4
H12	164663	Regan Ck	333460	5520114	628	outcrop	amygdaloidal basalt	ankerite, calcite	qtz carb veining in fault zone	0.1	160	80 W	50	4% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% ankerite, 1% cal, trace limonite	2.3	126.9	0.9	66	29.7
H12	164664	Regan Ck	333494	5520121	620	outcrop	amygdaloidal basalt	ankerite, calcite	qtz carb veining in fault zone	0.3	11	82 W	85	5% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% lim, 0.5% ank, 1% cal, 0.2% chalcopyrite	46.2	1585.2	1.3	60	24.2
H12	164665	Regan Ck	333577	5520114	609	outcrop	amyg basalt, minor volcanic breccia	ankerite, calcite	qtz vein & breccia texture, fault zone	0.8	140	26 SW	150	5% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.2% lim, 0.5% ank, 1% cal, trace limonite	19.6	279.0	157.0	229	75.7
H12	164666	LL-12	334429	5522499	447	outcrop	amyg basalt, minor volcanic breccia	ankerite, calcite, sericite	qtz carb veining in fault zone	0.2			float	5% qtz as 0.1-0.2 cm wide veins, 0.1% py, 0.1% lim, 0.1% arsenopyrite, 0.5% ank, 1% cal, trace limonite	4.0	625.5	0.4	24	3.3
H12	164667	LL-12	336418	5521823	346	outcrop	amygdaloidal basalt	calcite, chlorite	qtz vein & breccia texture	0.1	137	42 NE	25	2% qtz as 0.1-1.5 cm wide veins & breccia, 0.1% py, 0.2% lim ,0.1% cal, trace limonite	2.0	5.2	1.0	42	2.7
H12	164668	LL-12	337386	5521218	256	outcrop	amygdaloidal basalt	calcite, chlorite	milky and clear qtz	0.2	35	85 SE	42	3% qtz as 0.1-0.2 cm wide veins, 0.2% py, trace lim, 0.5% ank, 1% cal, trace limonite, chalcopyrite	2.6	139.4	1.0	65	4.2

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Client: **Rio Minerals Ltd.**
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Submitted By: Derrick Strickland
Receiving Lab: Canada-Vancouver
Received: March 14, 2012
Report Date: March 21, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001161.1

CLIENT JOB INFORMATION

Project: H-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 4

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	4	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	4	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC: Andrew Molnar

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

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Project: H-11
Report Date: March 21, 2012

CERTIFICATE OF ANALYSIS VAN12001161.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164601	Rock	1.93	0.7	135.1	0.5	27	<0.1	16.1	11.3	279	2.56	5.0	<0.5	0.5	16	0.6	<0.1	<0.1	84	3.07	0.047
164602	Rock	1.16	0.6	154.5	0.6	23	<0.1	18.3	11.7	329	2.61	11.2	5.5	0.4	18	<0.1	0.1	<0.1	133	4.52	0.039
164603	Rock	2.42	0.5	339.5	0.8	23	<0.1	29.6	13.7	484	2.97	15.8	5.2	0.3	15	0.3	0.1	<0.1	115	5.10	0.033
164604	Rock	3.84	0.8	161.9	0.8	33	<0.1	28.0	15.9	348	3.71	4.9	5.9	0.5	25	0.2	0.2	<0.1	154	4.89	0.049

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Project: H-11
Report Date: March 21, 2012

CERTIFICATE OF ANALYSIS VAN12001161.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164601	Rock	5	6	0.37	11	0.477	15	1.90	0.088	<0.01	<0.1	<0.01	4.0	<0.1	<0.05	10	<0.5	<0.2
164602	Rock	3	12	0.51	6	0.413	20	2.74	0.013	<0.01	<0.1	<0.01	3.5	<0.1	0.06	13	<0.5	<0.2
164603	Rock	3	30	0.79	10	0.342	16	3.06	0.048	<0.01	<0.1	<0.01	7.0	<0.1	0.08	15	<0.5	<0.2
164604	Rock	4	20	0.69	10	0.473	29	3.19	0.024	<0.01	<0.1	<0.01	6.1	<0.1	0.07	17	<0.5	<0.2

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

Project: H-11
Report Date: March 21, 2012

QUALITY CONTROL REPORT VAN12001161.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
164601	Rock	1.93	0.7	135.1	0.5	27	<0.1	16.1	11.3	279	2.56	5.0	<0.5	0.5	16	0.6	<0.1	<0.1	84	3.07	0.047
REP 164601	QC		0.6	136.5	0.6	27	<0.1	16.4	11.5	286	2.61	5.5	<0.5	0.5	16	0.6	<0.1	<0.1	85	3.15	0.047
164602	Rock	1.16	0.6	154.5	0.6	23	<0.1	18.3	11.7	329	2.61	11.2	5.5	0.4	18	<0.1	0.1	<0.1	133	4.52	0.039
REP 164602	QC		0.6	156.5	0.7	23	<0.1	19.4	11.8	330	2.70	11.0	5.4	0.4	18	<0.1	0.1	<0.1	137	4.66	0.040
Reference Materials																					
STD DS8	Standard		11.9	102.0	111.9	286	1.7	36.3	6.8	586	2.32	24.3	104.2	5.8	61	2.2	5.3	5.9	38	0.65	0.070
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
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
Prep Wash																					
G1	Prep Blank	<0.01	0.1	2.5	2.7	44	<0.1	2.4	4.0	545	1.85	<0.5	<0.5	4.4	65	<0.1	<0.1	<0.1	36	0.52	0.069

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

Project: H-11
Report Date: March 21, 2012

QUALITY CONTROL REPORT VAN12001161.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
164601	Rock	5	6	0.37	11	0.477	15	1.90	0.088	<0.01	<0.1	<0.01	4.0	<0.1	<0.05	10	<0.5	<0.2
REP 164601	QC	5	6	0.37	11	0.508	14	1.95	0.087	<0.01	<0.1	<0.01	4.1	<0.1	<0.05	10	<0.5	<0.2
164602	Rock	3	12	0.51	6	0.413	20	2.74	0.013	<0.01	<0.1	<0.01	3.5	<0.1	0.06	13	<0.5	<0.2
REP 164602	QC	3	12	0.51	6	0.428	18	2.82	0.014	<0.01	<0.1	<0.01	3.4	<0.1	0.07	14	<0.5	<0.2
Reference Materials																		
STD DS8	Standard	13	112	0.57	262	0.099	2	0.85	0.084	0.40	2.9	0.20	2.3	5.1	0.16	4	5.5	4.7
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	11	5	0.48	162	0.112	<1	1.00	0.123	0.52	0.2	<0.01	2.5	0.3	<0.05	5	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 06, 2012
Report Date: April 23, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001631.1

CLIENT JOB INFORMATION

Project: H-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 11

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	11	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	11	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC: Andrew Molnar
Derrick Strickland

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

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

Project: H-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001631.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164605	Rock	3.28	0.2	189.0	1.1	58	<0.1	58.1	26.2	747	4.39	0.8	2.6	0.4	32	<0.1	<0.1	<0.1	173	3.72	0.030
164606	Rock	3.41	0.3	252.3	0.9	55	<0.1	51.1	23.2	594	4.02	3.0	2.1	0.5	31	0.2	<0.1	<0.1	121	2.54	0.036
164607	Rock	1.04	0.1	11.8	0.5	70	<0.1	56.7	28.0	783	4.88	0.7	3.7	0.4	21	<0.1	<0.1	<0.1	150	1.70	0.036
164608	Rock	4.29	0.5	127.3	2.0	118	<0.1	34.8	30.4	797	6.53	0.6	3.0	0.8	17	<0.1	0.3	<0.1	218	3.08	0.071
164609	Rock	4.16	0.6	279.2	1.2	90	0.1	41.2	29.1	824	5.95	0.7	1.9	0.7	12	<0.1	0.2	<0.1	228	2.62	0.056
164610	Rock	3.72	0.4	50.1	1.2	77	<0.1	44.6	28.4	916	5.37	1.8	3.7	0.5	15	<0.1	1.8	<0.1	169	2.78	0.047
164611	Rock	3.29	0.5	60.0	0.6	50	<0.1	54.3	28.0	586	4.68	<0.5	6.0	0.4	26	<0.1	<0.1	<0.1	171	4.04	0.045
164612	Rock	5.37	0.4	242.2	0.9	62	<0.1	41.4	24.0	561	4.23	<0.5	9.4	0.5	23	<0.1	<0.1	<0.1	175	4.53	0.042
164613	Rock	6.31	0.3	119.4	0.7	72	<0.1	50.4	30.4	691	5.68	<0.5	9.6	0.6	24	<0.1	<0.1	<0.1	214	3.49	0.050
164614	Rock	3.18	0.5	97.0	0.6	33	<0.1	25.9	18.3	471	3.45	<0.5	5.6	0.5	17	0.2	<0.1	<0.1	122	2.97	0.068
164615	Rock	1.95	0.3	151.4	0.8	75	<0.1	54.8	32.5	938	6.54	0.6	9.3	0.6	57	0.2	<0.1	<0.1	250	3.53	0.046

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001631.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164605	Rock	4	58	2.12	9	0.444	13	4.22	0.270	0.06	<0.1	<0.01	15.2	<0.1	<0.05	14	<0.5	<0.2
164606	Rock	5	32	1.78	10	0.442	9	3.16	0.110	0.05	<0.1	0.02	7.0	<0.1	<0.05	9	<0.5	<0.2
164607	Rock	5	26	2.22	15	0.393	5	2.93	0.084	0.06	<0.1	0.01	9.5	<0.1	<0.05	9	<0.5	<0.2
164608	Rock	8	7	1.47	26	0.640	16	3.41	0.065	<0.01	<0.1	<0.01	8.5	<0.1	<0.05	15	<0.5	<0.2
164609	Rock	6	15	1.61	34	0.636	10	2.95	0.078	0.01	<0.1	<0.01	8.8	<0.1	<0.05	13	<0.5	<0.2
164610	Rock	5	22	1.67	24	0.460	9	3.13	0.059	0.02	<0.1	0.01	7.1	<0.1	<0.05	11	<0.5	<0.2
164611	Rock	4	49	1.94	10	0.410	16	3.57	0.040	<0.01	<0.1	<0.01	12.4	<0.1	<0.05	15	<0.5	<0.2
164612	Rock	3	21	1.48	4	0.591	9	3.07	0.027	<0.01	<0.1	<0.01	7.7	<0.1	<0.05	12	<0.5	<0.2
164613	Rock	4	29	2.32	15	0.662	12	3.83	0.033	<0.01	<0.1	<0.01	13.0	<0.1	<0.05	13	<0.5	<0.2
164614	Rock	5	9	1.13	18	0.463	15	2.34	0.044	0.03	<0.1	<0.01	4.0	<0.1	<0.05	12	<0.5	<0.2
164615	Rock	4	35	2.87	14	0.735	10	4.02	0.061	0.03	<0.1	<0.01	16.1	<0.1	<0.05	14	<0.5	<0.2

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

Project: H-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001631.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
164611	Rock	3.29	0.5	60.0	0.6	50	<0.1	54.3	28.0	586	4.68	<0.5	6.0	0.4	26	<0.1	<0.1	<0.1	171	4.04	0.045
REP 164611	QC		0.4	56.1	0.5	51	<0.1	55.3	27.1	575	4.49	<0.5	6.8	0.4	25	0.1	<0.1	<0.1	169	4.01	0.043
Reference Materials																					
STD DS8	Standard		14.4	111.0	126.0	306	1.8	38.2	7.7	610	2.43	24.3	101.1	8.0	70	2.2	5.5	6.9	43	0.74	0.069
STD DS8	Standard		12.1	109.8	117.4	302	1.8	34.6	7.0	589	2.44	24.3	93.9	6.6	71	2.4	5.5	6.2	42	0.71	0.075
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	<0.1	0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	0.2	3.0	4.3	50	<0.1	2.8	4.3	652	2.15	<0.5	<0.5	7.8	76	<0.1	<0.1	<0.1	43	0.58	0.073
G1	Prep Blank	<0.01	0.2	2.9	4.4	51	<0.1	2.7	4.3	620	2.18	<0.5	<0.5	8.0	73	<0.1	<0.1	<0.1	42	0.57	0.072

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

Project: H-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001631.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
164611	Rock	4	49	1.94	10	0.410	16	3.57	0.040	<0.01	<0.1	<0.01	12.4	<0.1	<0.05	15	<0.5	<0.2
REP 164611	QC	4	48	1.93	10	0.397	15	3.58	0.038	<0.01	<0.1	<0.01	12.0	<0.1	<0.05	14	<0.5	<0.2
Reference Materials																		
STD DS8	Standard	17	122	0.61	280	0.128	3	0.96	0.099	0.43	3.1	0.18	2.5	5.6	0.15	5	5.4	4.7
STD DS8	Standard	16	112	0.60	275	0.119	4	0.90	0.085	0.40	2.6	0.18	2.4	5.3	0.15	4	5.8	5.4
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	19	6	0.57	169	0.155	<1	1.06	0.113	0.55	<0.1	<0.01	2.7	0.4	<0.05	5	<0.5	<0.2
G1	Prep Blank	20	7	0.54	155	0.157	<1	1.04	0.110	0.52	<0.1	<0.01	2.7	0.4	<0.05	5	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 09, 2012
Report Date: April 24, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001633.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 3

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

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

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC: Andrew Molnar
Derrick Strickland

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

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

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001633.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164616	Rock	3.01	0.5	358.0	1.8	79	<0.1	42.1	29.8	711	6.39	4.1	6.1	0.7	26	0.2	<0.1	<0.1	212	3.37	0.060
164617	Rock	2.65	0.3	116.3	0.7	53	<0.1	44.0	26.5	569	5.31	12.5	6.4	0.4	36	<0.1	<0.1	<0.1	187	3.23	0.052
164618	Rock	2.51	0.2	107.8	1.3	61	<0.1	45.3	28.5	720	5.79	5.6	8.4	0.5	37	<0.1	<0.1	0.2	198	2.40	0.053

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

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001633.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164616	Rock	8	17	2.01	15	0.633	18	3.73	0.044	<0.01	<0.1	<0.01	11.7	<0.1	<0.05	17	0.6	<0.2
164617	Rock	6	19	1.62	11	0.472	13	3.31	0.047	0.04	<0.1	<0.01	8.1	<0.1	<0.05	16	<0.5	<0.2
164618	Rock	7	21	1.64	10	0.485	11	2.89	0.047	0.03	<0.1	<0.01	9.7	0.1	<0.05	14	<0.5	<0.2

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

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001633.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Reference Materials																					
STD DS8	Standard		13.0	106.8	124.8	303	1.8	37.6	7.4	609	2.47	24.9	113.1	6.8	69	2.4	5.1	5.6	43	0.71	0.075
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
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
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	2.2	3.9	43	<0.1	2.5	4.1	540	1.91	<0.5	1.3	5.0	67	<0.1	<0.1	<0.1	38	0.53	0.075

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

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001633.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																		
STD DS8	Standard	17	117	0.60	275	0.128	1	0.90	0.083	0.40	2.7	0.21	2.6	5.2	0.16	5	5.1	5.0
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	12	7	0.52	169	0.138	<1	0.93	0.079	0.46	<0.1	<0.01	2.3	0.2	<0.05	5	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 09, 2012
Report Date: April 24, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001634.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number 11.397
Number of Samples: 7

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	7	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	7	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

Invoice To: Rio Minerals Ltd.
910 - 475 Howe Street
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Canada

CC: Andrew Molnar
Derrick Strickland

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

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001634.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164619	Rock	3.10	0.2	199.2	0.7	72	<0.1	41.1	25.5	691	5.18	1.2	5.9	0.4	15	0.2	<0.1	<0.1	177	3.16	0.051
164620	Rock	3.64	0.2	356.3	0.9	19	0.6	17.7	11.6	322	3.24	1.9	10.8	0.3	16	<0.1	<0.1	<0.1	140	5.11	0.030
164621	Rock	2.45	0.3	543.2	0.9	75	0.2	42.5	22.1	584	4.93	1.2	4.3	0.4	15	0.2	<0.1	0.2	174	3.11	0.044
164622	Rock	2.74	0.3	83.2	1.0	56	<0.1	43.0	27.1	776	5.36	3.5	1.1	0.4	28	<0.1	<0.1	0.1	215	3.61	0.047
164623	Rock	3.31	0.3	176.3	1.0	60	<0.1	45.7	28.6	758	5.20	2.6	<0.5	0.5	21	0.1	<0.1	0.1	163	2.65	0.044
164624	Rock	3.74	0.4	163.8	0.7	43	<0.1	30.1	17.7	429	3.10	1.6	<0.5	0.5	30	0.2	<0.1	<0.1	105	1.94	0.053
164625	Rock	2.42	0.3	19.6	0.8	60	<0.1	68.9	33.7	831	5.62	3.6	<0.5	0.4	18	0.1	<0.1	<0.1	202	2.63	0.040

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

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

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001634.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164619	Rock	6	17	1.48	7	0.488	6	2.91	0.043	0.03	<0.1	<0.01	7.0	<0.1	<0.05	11	<0.5	<0.2
164620	Rock	3	13	0.70	3	0.317	10	3.55	0.047	<0.01	<0.1	<0.01	3.4	<0.1	<0.05	16	0.5	<0.2
164621	Rock	4	27	1.40	21	0.391	18	2.76	0.042	<0.01	<0.1	<0.01	5.8	<0.1	<0.05	12	0.5	<0.2
164622	Rock	5	29	2.01	28	0.441	13	3.55	0.049	0.03	<0.1	<0.01	15.4	<0.1	<0.05	12	<0.5	<0.2
164623	Rock	5	24	2.11	40	0.621	18	2.73	0.051	0.02	<0.1	<0.01	11.0	<0.1	<0.05	14	<0.5	<0.2
164624	Rock	5	9	0.75	40	0.507	9	1.65	0.116	0.04	<0.1	<0.01	3.5	<0.1	<0.05	7	<0.5	<0.2
164625	Rock	5	94	2.55	17	0.427	15	3.61	0.030	<0.01	<0.1	<0.01	18.2	<0.1	<0.05	11	<0.5	<0.2

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

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001634.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Reference Materials																					
STD DS8	Standard		13.0	106.8	124.8	303	1.8	37.6	7.4	609	2.47	24.9	113.1	6.8	69	2.4	5.1	5.6	43	0.71	0.075
STD DS8	Standard		11.9	113.9	121.4	312	1.8	38.0	7.8	588	2.44	26.2	115.9	6.6	67	2.3	5.4	6.6	41	0.68	0.078
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	0.2	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	3.8	3.2	42	<0.1	3.4	3.7	530	1.83	<0.5	2.8	5.3	65	<0.1	<0.1	<0.1	38	0.79	0.077

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001634.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																		
STD DS8	Standard	17	117	0.60	275	0.128	1	0.90	0.083	0.40	2.7	0.21	2.6	5.2	0.16	5	5.1	5.0
STD DS8	Standard	14	117	0.60	282	0.122	3	0.88	0.081	0.41	3.1	0.21	2.3	5.0	0.16	5	4.5	4.9
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	14	7	0.65	154	0.130	<1	0.83	0.082	0.43	<0.1	<0.01	1.9	0.3	<0.05	4	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 10, 2012
Report Date: April 24, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001697.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 7

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	7	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	7	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC: Andrew Molnar
Derrick Strickland

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

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001697.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164626	Rock	0.45	0.3	115.1	57.8	9	1.8	34.5	26.0	1610	2.99	2067	654.1	0.3	11	<0.1	32.6	<0.1	17	2.10	0.036
164627	Rock	2.93	0.4	57.4	1.6	25	<0.1	16.8	11.6	268	2.58	92.4	40.1	0.2	26	0.2	1.0	<0.1	99	5.78	0.025
164628	Rock	1.44	0.5	115.4	0.8	17	<0.1	11.0	9.5	193	1.94	31.4	32.8	0.3	12	<0.1	0.1	<0.1	62	3.41	0.036
164629	Rock	2.66	0.3	324.3	28.2	176	3.2	54.5	34.3	2149	7.77	979.6	54.4	0.3	29	0.5	9.7	<0.1	78	4.76	0.077
164630	Rock	1.72	0.2	30.7	35.7	471	2.0	15.3	14.3	3092	6.09	8915	2095	<0.1	28	3.5	84.8	0.3	9	5.97	0.005
164631	Rock	2.19	0.3	100.9	0.5	8	<0.1	5.1	3.9	167	1.30	18.6	9.8	0.2	6	<0.1	0.2	<0.1	48	3.94	0.022
164632	Rock	3.00	0.3	270.7	1.0	82	<0.1	54.0	34.7	1059	7.81	11.5	1.4	0.5	74	0.3	0.4	<0.1	249	3.03	0.064

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

Project: LL-11
Report Date: April 24, 2012

CERTIFICATE OF ANALYSIS VAN12001697.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164626	Rock	2	5	0.65	19	0.002	4	0.31	0.004	0.27	0.5	0.03	10.5	<0.1	1.81	<1	<0.5	<0.2
164627	Rock	3	15	0.37	3	0.281	9	2.74	0.028	<0.01	<0.1	<0.01	6.0	<0.1	<0.05	12	<0.5	<0.2
164628	Rock	3	8	0.45	5	0.410	10	1.81	0.034	<0.01	<0.1	<0.01	2.2	<0.1	<0.05	10	0.6	<0.2
164629	Rock	8	24	1.90	10	0.001	9	0.36	0.004	0.22	0.1	0.14	16.2	<0.1	0.96	1	<0.5	<0.2
164630	Rock	2	6	1.49	4	0.002	2	0.08	0.003	0.05	0.2	0.09	2.5	<0.1	3.63	<1	<0.5	<0.2
164631	Rock	2	8	0.28	2	0.245	6	2.26	0.009	<0.01	<0.1	<0.01	1.8	<0.1	<0.05	10	<0.5	<0.2
164632	Rock	7	75	2.96	18	0.102	5	3.70	0.082	0.07	<0.1	0.01	21.1	<0.1	<0.05	15	<0.5	<0.2

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

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001697.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
164626	Rock	0.45	0.3	115.1	57.8	9	1.8	34.5	26.0	1610	2.99	2067	654.1	0.3	11	<0.1	32.6	<0.1	17	2.10	0.036
REP 164626	QC		0.3	114.6	56.6	9	1.8	35.1	25.8	1583	3.01	2087	663.7	0.3	12	<0.1	32.8	<0.1	17	2.05	0.034
164628	Rock	1.44	0.5	115.4	0.8	17	<0.1	11.0	9.5	193	1.94	31.4	32.8	0.3	12	<0.1	0.1	<0.1	62	3.41	0.036
REP 164628	QC		0.5	117.3	0.7	17	<0.1	11.0	9.7	201	2.01	32.5	17.2	0.3	13	<0.1	0.1	<0.1	65	3.54	0.037
Reference Materials																					
STD DS8	Standard		11.9	113.9	121.4	312	1.8	38.0	7.8	588	2.44	26.2	115.9	6.6	67	2.3	5.4	6.6	41	0.68	0.078
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
BLK	Blank		<0.1	0.2	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	0.4	3.2	9.7	50	0.2	2.5	3.6	481	1.75	0.6	<0.5	6.1	59	0.1	0.5	0.1	33	0.45	0.068

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

Project: LL-11
Report Date: April 24, 2012

QUALITY CONTROL REPORT VAN12001697.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
164626	Rock	2	5	0.65	19	0.002	4	0.31	0.004	0.27	0.5	0.03	10.5	<0.1	1.81	<1	<0.5	<0.2
REP 164626	QC	2	5	0.64	20	0.002	5	0.30	0.004	0.27	0.5	0.03	10.3	<0.1	1.78	<1	<0.5	<0.2
164628	Rock	3	8	0.45	5	0.410	10	1.81	0.034	<0.01	<0.1	<0.01	2.2	<0.1	<0.05	10	0.6	<0.2
REP 164628	QC	3	8	0.46	6	0.424	10	1.88	0.038	<0.01	<0.1	<0.01	2.4	<0.1	<0.05	10	<0.5	<0.2
Reference Materials																		
STD DS8	Standard	14	117	0.60	282	0.122	3	0.88	0.081	0.41	3.1	0.21	2.3	5.0	0.16	5	4.5	4.9
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	11	6	0.46	146	0.120	2	0.83	0.077	0.42	<0.1	<0.01	1.8	0.3	<0.05	4	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 27, 2012
Report Date: May 08, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12002003.1

CLIENT JOB INFORMATION

Project: H-11
Shipment ID: Bag 4, sent 26/4/12
P.O. Number NA-12327
Number of Samples: 9

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	9	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	9	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

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

Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002003.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164651	Rock	1.96	0.3	146.5	1.5	58	<0.1	42.0	30.0	1157	4.59	59.4	3.4	0.3	27	0.8	4.2	<0.1	165	5.16	0.034
164652	Rock	1.89	0.1	165.5	0.6	30	<0.1	26.9	15.4	413	2.96	2.7	9.0	0.4	16	4.8	<0.1	<0.1	108	4.21	0.038
164653	Rock	1.48	0.5	117.4	0.6	32	0.1	23.1	14.3	490	2.85	6.7	32.3	0.3	11	0.2	0.3	<0.1	126	4.20	0.035
164654	Rock	2.22	0.1	54.6	0.6	42	<0.1	30.7	21.5	557	4.07	2.1	6.0	0.3	25	<0.1	<0.1	<0.1	174	5.85	0.033
164655	Rock	2.79	3.8	2296	1.3	141	3.8	34.5	100.9	1014	13.34	1.5	36.2	0.2	30	0.3	<0.1	3.4	182	3.29	0.070
164656	Rock	2.50	0.4	184.9	1.8	51	0.1	47.3	25.7	698	4.50	12.3	24.1	0.5	17	1.4	<0.1	<0.1	206	3.66	0.042
164657	Rock	2.50	0.3	1048	1.0	83	0.5	47.9	26.9	1732	5.15	44.1	1.2	0.2	48	0.3	15.1	<0.1	167	6.98	0.026
164658	Rock	0.77	0.7	1634	1.3	254	2.5	10.2	6.1	2818	6.54	329.7	7.0	<0.1	23	1.3	423.6	<0.1	20	4.48	0.016
164659	Rock	1.54	0.5	237.8	0.7	50	<0.1	25.0	15.5	531	3.54	6.6	6.7	0.4	21	<0.1	1.2	<0.1	155	2.35	0.045

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CERTIFICATE OF ANALYSIS VAN12002003.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164651	Rock	5	48	1.60	13	0.124	10	1.54	0.012	0.05	<0.1	1.34	21.1	<0.1	0.08	6	<0.5	<0.2
164652	Rock	4	10	0.76	8	0.435	12	2.74	0.032	0.01	<0.1	<0.01	4.6	<0.1	0.06	11	<0.5	<0.2
164653	Rock	4	12	0.59	13	0.423	9	2.85	0.020	<0.01	<0.1	0.08	5.5	<0.1	0.06	15	<0.5	<0.2
164654	Rock	4	26	1.41	6	0.398	15	3.35	0.027	<0.01	<0.1	<0.01	9.2	<0.1	0.07	13	<0.5	<0.2
164655	Rock	3	49	2.01	2	0.416	<1	3.60	0.083	0.04	0.4	<0.01	11.5	0.2	5.02	10	4.0	1.1
164656	Rock	4	37	2.07	13	0.565	10	3.65	0.047	0.01	<0.1	0.02	16.7	<0.1	0.11	13	<0.5	<0.2
164657	Rock	4	48	3.25	5	0.170	4	1.29	0.019	<0.01	0.3	2.06	11.6	<0.1	0.12	3	<0.5	<0.2
164658	Rock	1	4	1.60	26	0.002	<1	0.11	0.003	0.02	0.2	2.02	1.9	<0.1	0.09	<1	<0.5	<0.2
164659	Rock	5	22	1.06	14	0.583	6	2.08	0.069	0.02	<0.1	0.04	7.2	<0.1	<0.05	7	<0.5	<0.2

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910 - 475 Howe Street
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Project: H-11
Report Date: May 08, 2012

QUALITY CONTROL REPORT VAN12002003.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
164653	Rock	1.48	0.5	117.4	0.6	32	0.1	23.1	14.3	490	2.85	6.7	32.3	0.3	11	0.2	0.3	<0.1	126	4.20	0.035
REP 164653	QC		0.5	114.6	0.6	32	<0.1	22.3	14.5	487	2.91	6.4	30.5	0.4	11	0.3	0.4	<0.1	127	4.35	0.036
Core Reject Duplicates																					
164656	Rock	2.50	0.4	184.9	1.8	51	0.1	47.3	25.7	698	4.50	12.3	24.1	0.5	17	1.4	<0.1	<0.1	206	3.66	0.042
DUP 164656	QC		0.5	186.4	1.9	45	0.2	43.3	23.2	659	4.32	13.0	14.3	0.4	16	1.8	<0.1	<0.1	195	3.68	0.037
Reference Materials																					
STD DS8	Standard		14.2	115.3	133.6	328	1.9	41.9	8.2	651	2.54	24.6	107.1	7.7	71	2.1	5.1	6.0	44	0.79	0.073
STD DS9	Standard		14.2	106.9	131.8	312	1.8	40.8	7.4	588	2.30	24.6	151.5	6.9	75	2.3	5.1	5.9	41	0.76	0.073
STD DS9 Expected			12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
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
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	4.5	3.0	42	<0.1	2.4	3.9	531	1.97	<0.5	3.2	5.0	80	<0.1	<0.1	0.1	37	0.56	0.067

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Project: H-11
Report Date: May 08, 2012

QUALITY CONTROL REPORT VAN12002003.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
164653	Rock	4	12	0.59	13	0.423	9	2.85	0.020	<0.01	<0.1	0.08	5.5	<0.1	0.06	15	<0.5	<0.2
REP 164653	QC	4	12	0.59	12	0.438	12	2.94	0.020	<0.01	<0.1	0.09	5.8	<0.1	0.06	14	<0.5	<0.2
Core Reject Duplicates																		
164656	Rock	4	37	2.07	13	0.565	10	3.65	0.047	0.01	<0.1	0.02	16.7	<0.1	0.11	13	<0.5	<0.2
DUP 164656	QC	4	34	1.85	11	0.540	12	3.49	0.040	<0.01	<0.1	0.02	16.0	<0.1	0.14	12	<0.5	<0.2
Reference Materials																		
STD DS8	Standard	19	134	0.65	293	0.125	3	1.01	0.098	0.44	3.2	0.23	2.8	5.7	0.18	5	5.5	5.6
STD DS9	Standard	16	124	0.63	308	0.123	2	1.01	0.088	0.40	2.9	0.21	2.6	5.4	0.17	5	5.0	4.9
STD DS9 Expected		15.7	119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	13	4	0.49	141	0.116	<1	0.93	0.083	0.44	<0.1	<0.01	2.2	0.3	<0.05	4	<0.5	<0.2

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 27, 2012
Report Date: May 08, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12002004.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID: Bag 5, sent 26/04/12
P.O. Number 12-327
Number of Samples: 6

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	6	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	6	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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Project: H-12
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002004.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164660	Rock	1.16	0.5	255.7	0.9	85	<0.1	27.0	17.1	612	3.83	6.6	3.1	0.5	25	<0.1	<0.1	<0.1	144	1.54	0.068
164661	Rock	1.46	0.3	253.9	0.9	82	<0.1	39.7	25.9	744	5.75	3.3	3.5	0.7	18	<0.1	<0.1	<0.1	197	2.03	0.075
164662	Rock	1.52	0.3	401.3	0.9	52	0.1	32.4	20.3	597	3.96	8.4	27.7	0.6	18	<0.1	0.1	<0.1	170	3.29	0.066
164663	Rock	0.94	0.4	126.9	0.9	66	<0.1	71.1	34.5	1114	6.30	29.7	2.3	0.6	46	<0.1	<0.1	<0.1	246	2.34	0.035
164664	Rock	2.64	0.8	1585	1.3	60	0.6	53.3	25.2	842	4.48	24.2	46.2	0.6	31	0.4	0.3	<0.1	177	3.52	0.063
164665	Rock	2.33	0.2	279.0	157.0	229	13.2	52.6	31.9	1195	6.21	75.7	19.6	0.5	31	0.8	63.5	<0.1	137	3.02	0.070

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Project: H-12
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002004.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164660	Rock	7	15	1.27	12	0.613	7	2.01	0.185	0.06	<0.1	<0.01	6.4	<0.1	<0.05	8	<0.5	<0.2
164661	Rock	8	17	1.55	8	0.705	10	2.73	0.063	0.02	<0.1	<0.01	8.1	<0.1	<0.05	14	<0.5	<0.2
164662	Rock	4	18	1.21	15	0.633	8	2.90	0.064	<0.01	0.1	<0.01	7.8	<0.1	<0.05	11	<0.5	<0.2
164663	Rock	4	153	3.13	24	0.539	4	6.44	0.133	0.29	<0.1	0.04	22.5	<0.1	<0.05	16	<0.5	<0.2
164664	Rock	6	31	2.01	13	0.553	18	3.39	0.082	0.02	0.1	0.02	9.0	<0.1	0.05	14	<0.5	<0.2
164665	Rock	7	59	1.64	21	0.042	16	1.43	0.022	0.16	<0.1	0.30	24.0	<0.1	0.31	7	<0.5	<0.2

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Report Date: May 08, 2012

QUALITY CONTROL REPORT VAN12002004.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Reference Materials																					
STD DS8	Standard		14.3	109.7	124.1	299	1.8	40.1	7.4	585	2.39	22.8	115.6	6.7	62	2.1	4.8	5.7	39	0.67	0.072
STD DS9	Standard		12.6	105.9	118.3	300	1.8	40.3	7.4	560	2.26	22.8	111.8	6.0	65	2.0	4.5	5.5	38	0.68	0.075
STD DS9 Expected			12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
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
Prep Wash																					
G1	Prep Blank	<0.01	<0.1	6.9	2.7	45	<0.1	2.9	3.6	526	1.86	<0.5	4.2	5.5	52	<0.1	<0.1	<0.1	34	0.44	0.068

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QUALITY CONTROL REPORT VAN12002004.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																		
STD DS8	Standard	15	122	0.59	260	0.114	4	0.89	0.085	0.40	2.8	0.20	2.3	5.6	0.15	4	4.9	5.1
STD DS9	Standard	13	122	0.60	268	0.108	5	0.92	0.080	0.38	2.7	0.19	2.2	5.0	0.15	4	4.3	4.0
STD DS9 Expected		15.7	119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	12	5	0.49	140	0.107	2	0.85	0.079	0.44	<0.1	<0.01	2.2	0.3	<0.05	4	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 30, 2012
Report Date: May 07, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12002022.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID: Bag 2, 29/04/12
P.O. Number 12-397
Number of Samples: 4

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

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

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

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

CC:

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.

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

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

Project: H-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002022.1

Method		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
164665	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
164666	Rock	1.57	0.4	625.5	0.4	24	0.2	28.5	18.1	483	3.31	3.3	4.0	0.4	20	0.2	<0.1	<0.1	111	3.37	0.045
164667	Rock	1.44	<0.1	5.2	1.0	42	<0.1	51.0	27.3	1362	4.68	2.7	2.0	0.2	80	0.3	0.1	<0.1	115	10.82	0.021
164668	Rock	2.00	0.4	139.4	1.3	65	<0.1	42.2	26.2	715	5.64	4.2	2.6	0.6	16	0.1	<0.1	<0.1	222	3.70	0.069

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

Project: H-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002022.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
164665	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
164666	Rock	4	14	1.20	9	0.227	17	2.43	0.057	0.01	<0.1	<0.01	4.7	<0.1	<0.05	11	<0.5	<0.2
164667	Rock	3	77	3.64	6	0.006	6	0.89	0.015	0.11	<0.1	0.01	15.4	<0.1	<0.05	3	<0.5	<0.2
164668	Rock	7	31	1.57	7	0.508	11	3.44	0.037	0.01	<0.1	<0.01	9.2	<0.1	<0.05	15	<0.5	<0.2

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

Project: H-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002022.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Reference Materials																					
STD DS8	Standard		12.7	105.0	103.5	284	1.8	36.1	7.2	583	2.33	23.5	106.2	6.2	63	2.2	5.1	5.5	40	0.67	0.075
STD DS9	Standard		12.9	109.4	115.2	302	1.8	39.8	7.8	580	2.30	24.8	111.5	6.3	71	2.3	5.7	6.2	41	0.72	0.079
STD DS9 Expected			12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08
BLK	Blank		<0.1	0.3	0.6	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1	Prep Blank	<0.01	0.2	6.4	3.3	45	<0.1	2.8	3.8	559	1.94	0.6	2.5	5.5	66	<0.1	0.1	<0.1	39	0.50	0.077

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

Project: H-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002022.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Reference Materials																		
STD DS8	Standard	14	113	0.57	260	0.117	2	0.87	0.085	0.39	2.7	0.19	2.4	4.9	0.16	4	4.1	4.9
STD DS9	Standard	14	118	0.61	302	0.122	3	0.96	0.085	0.39	2.8	0.20	2.5	5.3	0.17	5	5.5	5.1
STD DS9 Expected		15.7	119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		14.6	115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	12	5	0.50	162	0.130	2	0.99	0.111	0.50	<0.1	<0.01	2.7	0.3	<0.05	5	<0.5	<0.2

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APPENDIX 3

Harmony Project Silt Samples 2012

Sample #	Sampler	UTM Zone	Easting	Northing	Elv (m)	Site Description	Silt %	Sand %	Gravel %	Organics %	Depth(cm)	Color	Site Rating	Drainage	Direction(°)	Flow	Width (M)	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm
SS 5520	RP	10U	337390	5521178	250	Tsolum Creek	10	30	60	0	3	brown	poor	perennial	128	fast	4	2.3	<0.1	67.8	2.0	41	7.7
SS 5521	CB	10U	336808	5519602	452	Running Tributary	80	20			2	brown	good	perennial	130	med	1	1.6	<0.1	100.6	6.4	75	15.3
SS 5522	CB	10U	336810	5519575	458	Running Tributary	80	20			2	brown	good	perennial	116	med	1	1.7	0.3	107.5	6.2	95	18.2
SS 5523	RP	10U	336825	5519540	450	Flowing Stream	30	30	20	20	3	grey/brown	poor	perennial	120	med	2	3.2	<0.1	131.8	4.2	83	25.8
SS 5524	RP	10U	337270	5518895	412	Flowing Stream	70	20	8	2	3	brown	moderate	perennial	178	med	3	2.0	<0.1	108.2	5.5	87	17.1
SS 5525	RP	10U	337318	5518741	410	Running Tributary	10	70	20		3	grey	poor	perennial	34	fast	2.5	5.2	<0.1	915.2	4.4	100	249.5
SS 5526	RP	10U	337905	5519257	368	Running Tributary	70	20	10		2	red/brown	moderate	perennial	96	fast	1	2.3	0.1	87.2	5.7	74	10.6
SS 5227	AK	10U	336860	5518685	486	Sieve-running trib	40	60	-	-	4	brown	good	perennial	102	med	1	3.6	0.2	90.1	8.7	98	372
SS 8080	AK	10U	336860	5518685	486	duplicate of 5227	40	20	10	30	3	black-brown	moderate	perennial	102	med	1	1.7	0.4	108.6	17.7	85	350
SS 8081	LG	10U	336937	5518440	500	seive sample	20	80	-	-	3	grey-brown	moderate	perennial	42	fast	3	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
SS8082	LG	10U	336937	5518440	500	reg silt sample	30	20	10	40	3	brown-black	poor	perennial	42	fast	3	6	<0.1	99.9	4.7	84	76.4
SS 8083	LG	10U	336633	5518170	557	rock canyon	10	30	60		10	brown-black	good	perennial	272	med	3	9.6	<0.1	102.2	6	110	114
SS 8084	LG	10U	336633	5518170	557	rock canyon	40	-	30	30	10	brown-black	good	perennial	272	med	3	2.7	<0.1	79.8	6.5	75	63.3
SS 8085	LG	10U	336444	5518195	586	main creek	30	45	5	20	2	brown	moderate	perennial	108	fast	3	11.6	<0.1	81.7	5.6	79	57.9
SS 8086	CB	10U	336954	5518462	476	Running Tributary	50	30	10	10	10	grey/brown	mod	perennial	245	fast	5	4.4	<0.1	94.0	3.4	59	52.4
SS 8087	CB	10U	337011	5518450	478	Running Tributary	40	50		10	8	brown	mod	perennial	162	med	5	325.3	0.1	2418.7	5.5	72	236.0
SS 8088	CB	10U	0337896	5520499	230	Running Tributary	50	20	20	10	5	brown	mod	perennial	260	fast	2	<0.5	0.2	103.0	6.2	68	12.2
SS 8089	CB	10U	0337996	5520612	191	Tsolum River	50	40	10		10	brown	good	perennial	312	fast	6	2.7	<0.1	64.3	1.3	42	7.3
SS 8090	RP	10U	0336700	5521670	315	Running Tributary	10	75	10	5	10	grey	poor	perennial	120	fast	4	2.6	<0.1	57.0	1.3	38	6.3
SS 8091	LG	10U	0336697	5521596	323	Running Tributary	25	25	50		8	brown	mod	perennial	215	fast	2	2.9	0.1	112.4	11.1	85	11.1
SS 8092	RP	10U	0337010	5521460	308	Tsolum River	20	70	10		10	grey	mod	perennial	110	fast	5	2.2	<0.1	54.4	1.4	41	6.2
SS 8093	RP	10U	0338115	5522400	158	Small Stream in Cutblock	20	75		5	8	red/brown	poor	perennial	110	slow	0.5	2.5	0.2	85.4	4.5	74	3.4
SS 8094	LG	10U	0338190	5522740	121	Running Tributary	40	40	20		10	brown	good	perennial	90	fast	2	1.9	<0.1	79.9	5.3	56	6.2
SS 8095	LG	10U	0334703	5522636	409	Running Tributary	40	40	10	10	10	brown	poor	perennial	237	med	5	7.4	<0.1	80.3	4.5	51	21.3
SS 8096	LG	10U	0336006	5522116	361	Running Tributary	60	10	20	10	8	black	poor	perennial	215	slow	1	2.4	0.3	82.3	5.8	58	7.0
SS 8097	LG	10U	0335954	5522179	363	Tsolsum River	60	40			6	brown	good	perennial	288	med	6	2.7	<0.1	71.1	2.3	47	12.3
SS 8098	LG	10U	0336407	5521898	323	Tsolsum River	20	40	40		10	brown	good	perennial	312	med	6	2.1	<0.1	73.4	1.5	44	6.9
SS 8099	LG	10U	0334546	5522861	418	Tsolsum River	20	20	60		10	brown	poor	perennial	262	slow	2	2.0	<0.1	70.3	2.9	63	6.0
SS 8100	LG	10U	0335049	5522404	417	Running Tributary	30	55	10	5	5	brown	mod	perennial	200	slow	1	190.2	0.1	82.7	7.5	117	25.1
SS 8101	LG	10U	0334954	5522635	402	Running Tributary	35	60		5	5	brown	good	perennial	288	fast	4	2.8	<0.1	81.2	4.7	54	35.8
SS 8102	LG	10U	0334958	5522696	402	Tsolsum River	10	40	50		8	brown	mod	perennial	316	med	6	2.9	<0.1	57.7	5.7	51	13.9
SS 8103	AK	10U	333447	5520080	650	Regan Trib	10	10	80		5	brown	poor	perennial	12	fast	4	3.6	<0.1	92.3	6.5	81	55.6
SS 8104	AK	10U	333370	5520870	580	Regan main	10	30	60		4	brown	poor	perennial	11	fast	3	8.1	0.8	141.4	22.0	102	140.4

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: March 13, 2012
Report Date: March 22, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001142.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number NA-12327
Number of Samples: 16

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	16	Dry at 60C			VAN
SS80	16	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	16	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:

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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Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001142.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
5220	Silt	0.2	67.8	2.0	41	<0.1	29.1	16.2	555	3.95	7.7	2.3	0.6	22	<0.1	0.3	<0.1	172	1.35	0.042	4
5221	Silt	0.6	100.6	6.4	75	<0.1	43.5	27.8	1449	6.08	15.3	1.6	0.6	26	0.2	0.5	<0.1	238	1.55	0.044	6
5222	Silt	0.8	107.5	6.2	95	0.3	47.4	28.9	4231	6.33	18.2	1.7	0.5	24	0.3	0.4	<0.1	221	1.14	0.068	12
5223	Silt	0.4	131.8	4.2	83	<0.1	46.9	31.2	1644	5.86	25.8	3.2	0.6	29	0.2	0.6	<0.1	209	1.59	0.048	7
5224	Silt	0.5	108.2	5.5	87	<0.1	42.6	24.2	1575	5.14	17.1	2.0	0.5	21	0.3	0.5	<0.1	206	1.45	0.049	7
5225	Silt	1.2	915.2	4.4	100	<0.1	51.2	64.3	2022	5.90	249.5	5.2	0.5	12	0.4	1.7	<0.1	177	0.98	0.036	4
5226	Silt	0.5	87.2	5.7	74	0.1	43.3	22.2	1336	5.84	10.6	2.3	0.6	22	0.2	0.4	<0.1	225	1.15	0.051	7
8086	Silt	0.4	94.0	3.4	59	<0.1	36.6	21.6	824	4.59	52.4	4.4	0.5	12	0.2	0.7	<0.1	148	1.05	0.037	7
8087	Silt	1.2	2419	5.5	72	0.1	33.5	37.9	959	4.22	236.0	325.3	0.4	10	0.4	1.2	<0.1	120	0.71	0.028	4
8088	Silt	0.4	103.0	6.2	68	0.2	41.7	20.7	1023	5.23	12.2	<0.5	0.5	23	0.2	0.7	<0.1	198	1.29	0.046	8
8089	Silt	0.2	64.3	1.3	42	<0.1	27.5	15.5	481	5.02	7.3	2.7	0.6	19	0.1	0.3	<0.1	231	1.38	0.043	5
8090	Silt	0.3	57.0	1.3	38	<0.1	24.9	14.7	490	3.95	6.3	2.6	0.6	21	<0.1	0.3	<0.1	177	1.24	0.042	4
8091	Silt	0.6	112.4	11.1	85	0.1	40.5	30.3	3768	5.11	11.1	2.9	0.4	28	0.4	0.4	<0.1	180	1.53	0.060	9
8092	Silt	0.3	54.4	1.4	41	<0.1	27.3	15.1	467	5.09	6.2	2.2	0.8	21	<0.1	0.3	<0.1	227	1.35	0.042	5
8093	Silt	0.6	85.4	4.5	74	0.2	46.0	26.9	1775	6.01	3.4	2.5	0.8	21	0.3	0.2	<0.1	202	0.79	0.058	9
8094	Silt	0.5	79.9	5.3	56	<0.1	32.8	20.6	1445	4.55	6.2	1.9	0.6	23	0.2	0.4	<0.1	185	1.25	0.056	7

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001142.1

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
5220	Silt	35	0.84	31	0.323	6	2.06	0.025	0.02	<0.1	0.05	9.2	<0.1	<0.05	7	<0.5	<0.2
5221	Silt	72	1.03	50	0.465	4	3.30	0.020	0.03	<0.1	0.05	17.3	<0.1	<0.05	11	<0.5	<0.2
5222	Silt	77	0.68	64	0.326	4	4.16	0.009	0.02	<0.1	0.14	19.8	<0.1	<0.05	10	1.9	<0.2
5223	Silt	66	1.04	64	0.383	6	3.16	0.020	0.03	<0.1	0.07	17.3	<0.1	<0.05	9	0.9	<0.2
5224	Silt	60	0.81	43	0.402	5	3.35	0.013	0.02	<0.1	0.09	13.9	<0.1	<0.05	9	0.7	<0.2
5225	Silt	57	1.18	33	0.248	5	3.21	0.018	0.03	<0.1	0.04	10.4	<0.1	<0.05	10	0.6	<0.2
5226	Silt	76	0.62	54	0.453	3	3.55	0.008	0.02	<0.1	0.07	13.8	<0.1	<0.05	11	1.1	<0.2
8086	Silt	51	0.86	30	0.251	4	2.43	0.011	0.02	<0.1	0.05	12.3	<0.1	<0.05	8	0.8	<0.2
8087	Silt	45	0.66	23	0.142	3	3.04	0.009	0.03	<0.1	0.07	8.3	<0.1	<0.05	7	0.8	<0.2
8088	Silt	68	0.75	47	0.387	4	3.23	0.009	0.02	<0.1	0.10	14.7	<0.1	<0.05	9	1.0	<0.2
8089	Silt	38	0.74	28	0.331	6	1.78	0.018	0.02	<0.1	0.04	8.7	<0.1	<0.05	7	<0.5	<0.2
8090	Silt	31	0.66	29	0.302	5	1.79	0.020	0.02	<0.1	0.05	8.3	<0.1	<0.05	7	<0.5	<0.2
8091	Silt	60	0.92	58	0.339	15	3.26	0.015	0.03	<0.1	0.13	13.5	<0.1	<0.05	9	1.3	<0.2
8092	Silt	33	0.63	29	0.333	6	1.77	0.017	0.02	<0.1	0.04	8.1	<0.1	<0.05	7	<0.5	<0.2
8093	Silt	71	0.60	80	0.344	2	3.90	0.011	0.02	<0.1	0.07	13.7	<0.1	<0.05	11	1.2	<0.2
8094	Silt	49	0.67	43	0.354	4	2.81	0.011	0.02	<0.1	0.07	13.3	<0.1	<0.05	9	1.0	<0.2

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

Project: LL-11
Report Date: March 22, 2012

QUALITY CONTROL REPORT VAN12001142.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
8091	Silt	0.6	112.4	11.1	85	0.1	40.5	30.3	3768	5.11	11.1	2.9	0.4	28	0.4	0.4	<0.1	180	1.53	0.060	9
REP 8091	QC	0.5	112.0	11.3	85	0.1	40.5	30.4	3773	5.21	11.2	3.7	0.4	29	0.4	0.4	<0.1	173	1.46	0.060	9
Reference Materials																					
STD DS8	Standard	12.8	107.2	119.3	300	1.7	37.5	7.7	587	2.43	26.0	110.3	6.4	66	2.4	5.3	6.6	44	0.68	0.072	14
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	2	<0.01	<0.001	<1

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QUALITY CONTROL REPORT VAN12001142.1

	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																	
8091	Silt	60	0.92	58	0.339	15	3.26	0.015	0.03	<0.1	0.13	13.5	<0.1	<0.05	9	1.3	<0.2
REP 8091	QC	58	0.92	57	0.324	16	3.35	0.015	0.02	<0.1	0.12	12.6	<0.1	<0.05	9	1.5	<0.2
Reference Materials																	
STD DS8	Standard	122	0.60	283	0.112	1	0.90	0.108	0.40	3.2	0.22	3.1	5.3	0.09	5	6.5	4.8
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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1020 Cordova St. East Vancouver BC V6A 4A3 Canada

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Client: **Rio Minerals Ltd.**
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 10, 2012
Report Date: April 23, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001696.1

CLIENT JOB INFORMATION

Project: H-11
Shipment ID:
P.O. Number NA-12327
Number of Samples: 7

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	7	Dry at 60C			VAN
SS80	7	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	7	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: Derrick Strickland
Andrew Molnar

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: H-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001696.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
5227	Silt	1.3	90.1	8.7	98	0.2	55.2	44.0	7309	5.01	371.7	3.6	0.3	15	0.5	0.5	<0.1	161	1.09	0.054	10
8080	Silt	1.4	108.6	17.7	85	0.4	38.2	53.1	>10000	3.24	349.8	1.7	<0.1	24	0.7	0.5	<0.1	83	1.20	0.103	16
8081	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
8082	Silt	0.5	99.9	4.7	84	<0.1	43.4	26.0	953	5.36	76.4	6.0	0.4	13	0.5	0.9	<0.1	178	1.22	0.037	4
8083	Silt	0.6	102.2	6.0	110	<0.1	62.0	34.2	1142	6.69	114.4	9.6	0.5	13	0.1	1.1	<0.1	193	1.20	0.032	4
8084	Silt	0.5	79.8	6.5	75	<0.1	38.7	23.9	1008	4.97	63.3	2.7	0.5	13	0.2	0.6	<0.1	160	0.99	0.035	4
8085	Silt	0.6	81.7	5.6	79	<0.1	39.5	26.3	1203	5.04	57.9	11.6	0.4	15	0.2	0.6	<0.1	154	1.06	0.042	4

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910 - 475 Howe Street
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Project: H-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001696.1

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
5227	Silt	60	0.53	64	0.260	4	3.78	0.009	0.02	<0.1	0.16	11.4	<0.1	<0.05	9	0.6	<0.2
8080	Silt	45	0.20	91	0.086	6	3.87	0.005	0.02	0.2	0.31	7.5	0.1	0.08	5	1.5	<0.2
8081	Silt	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
8082	Silt	54	1.07	33	0.325	4	2.56	0.015	0.04	<0.1	0.04	9.8	<0.1	<0.05	10	<0.5	<0.2
8083	Silt	72	1.46	42	0.362	3	3.19	0.016	0.03	<0.1	0.03	11.3	<0.1	<0.05	12	<0.5	<0.2
8084	Silt	51	0.89	36	0.250	3	2.50	0.011	0.02	<0.1	0.05	8.8	<0.1	<0.05	9	<0.5	<0.2
8085	Silt	53	0.93	41	0.246	3	2.71	0.012	0.02	<0.1	0.06	9.5	<0.1	<0.05	9	0.7	<0.2

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

Project: H-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001696.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
8084	Silt	0.5	79.8	6.5	75	<0.1	38.7	23.9	1008	4.97	63.3	2.7	0.5	13	0.2	0.6	<0.1	160	0.99	0.035	4
REP 8084	QC	0.4	86.6	6.5	79	<0.1	42.8	25.2	1043	5.28	65.5	4.1	0.5	13	0.2	0.7	<0.1	173	1.06	0.037	4
8085	Silt	0.6	81.7	5.6	79	<0.1	39.5	26.3	1203	5.04	57.9	11.6	0.4	15	0.2	0.6	<0.1	154	1.06	0.042	4
REP 8085	QC	0.5	83.2	5.4	80	<0.1	39.9	25.7	1233	4.98	60.8	52.8	0.4	15	0.2	0.6	<0.1	154	1.01	0.040	4
Reference Materials																					
STD DS8	Standard	13.5	112.4	122.8	319	1.8	39.8	7.8	634	2.47	25.6	117.8	6.8	66	2.2	5.3	6.6	44	0.68	0.083	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	0.2	<0.1	<1	<0.1	<0.1	<0.1	2	0.02	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Project: H-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001696.1

	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																	
8084	Silt	51	0.89	36	0.250	3	2.50	0.011	0.02	<0.1	0.05	8.8	<0.1	<0.05	9	<0.5	<0.2
REP 8084	QC	54	0.91	38	0.259	3	2.58	0.012	0.03	<0.1	0.06	9.3	<0.1	<0.05	9	<0.5	<0.2
8085	Silt	53	0.93	41	0.246	3	2.71	0.012	0.02	<0.1	0.06	9.5	<0.1	<0.05	9	0.7	<0.2
REP 8085	QC	52	0.90	42	0.235	4	2.58	0.012	0.02	<0.1	0.05	8.9	<0.1	<0.05	9	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	124	0.64	280	0.123	2	0.89	0.085	0.39	3.1	0.19	2.5	5.5	0.13	5	5.4	5.5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 24, 2012
Report Date: May 04, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001945.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID:
P.O. Number 12-327
Number of Samples: 8

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	8	Dry at 60C			VAN
SS80	8	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	8	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
DISP2	8	Heat treatment of Soils and Sediments			VAN

ADDITIONAL COMMENTS

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

CC: Andrew Molnar
Derrick Strickland

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Acme Analytical Laboratories (Vancouver) Ltd.
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Phone (604) 253-3158 Fax (604) 253-1716
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-12
Report Date: May 04, 2012

CERTIFICATE OF ANALYSIS VAN12001945.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
8095	Silt	0.3	80.3	4.5	51	<0.1	34.5	21.8	909	4.60	21.3	7.4	0.7	20	0.2	0.4	<0.1	180	1.38	0.028	5
8096	Silt	0.8	82.3	5.8	58	0.3	33.5	24.4	2478	4.21	7.0	2.4	0.2	28	0.3	0.4	0.1	170	1.12	0.073	32
8097	Silt	0.2	71.1	2.3	47	<0.1	29.1	19.3	754	4.44	12.3	2.7	0.6	26	0.1	0.3	<0.1	172	1.36	0.039	5
8098	Silt	0.2	73.4	1.5	44	<0.1	27.9	16.7	612	4.08	6.9	2.1	0.6	28	<0.1	0.3	<0.1	156	1.27	0.048	5
8099	Silt	0.3	70.3	2.9	63	<0.1	42.1	23.2	565	4.85	6.0	2.0	0.6	22	0.1	0.3	<0.1	170	1.13	0.022	4
8100	Silt	0.5	82.7	7.5	117	0.1	39.7	21.4	1904	4.56	25.1	190.2	0.4	29	0.4	0.8	0.1	158	1.15	0.054	10
8101	Silt	0.3	81.2	4.7	54	<0.1	35.2	21.2	1102	4.94	35.8	2.8	0.7	22	0.2	0.4	<0.1	172	1.23	0.031	6
8102	Silt	0.3	57.7	5.7	51	<0.1	26.6	19.5	1183	4.04	13.9	2.9	0.6	22	0.2	0.3	<0.1	149	1.04	0.040	6

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

Project: H-12
Report Date: May 04, 2012

CERTIFICATE OF ANALYSIS VAN12001945.1

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
8095	Silt	47	0.83	35	0.356	5	2.37	0.020	0.02	<0.1	0.06	11.2	<0.1	<0.05	8	<0.5	<0.2
8096	Silt	96	0.57	48	0.234	4	3.83	0.008	0.01	<0.1	0.26	28.5	<0.1	<0.05	9	2.5	<0.2
8097	Silt	41	0.79	37	0.338	5	2.12	0.020	0.02	<0.1	0.06	11.0	<0.1	<0.05	8	<0.5	<0.2
8098	Silt	34	0.77	33	0.300	4	2.04	0.022	0.02	<0.1	0.06	9.4	<0.1	<0.05	7	<0.5	<0.2
8099	Silt	66	0.94	46	0.398	4	3.20	0.012	0.02	<0.1	0.05	11.0	<0.1	<0.05	11	<0.5	<0.2
8100	Silt	62	0.64	62	0.328	5	3.32	0.009	0.02	<0.1	0.15	13.7	<0.1	<0.05	9	0.7	<0.2
8101	Silt	57	0.74	38	0.352	5	2.60	0.014	0.02	<0.1	0.09	11.9	<0.1	<0.05	9	<0.5	<0.2
8102	Silt	44	0.61	43	0.284	4	2.19	0.013	0.02	<0.1	0.07	10.8	<0.1	<0.05	8	<0.5	<0.2

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

Project: H-12
Report Date: May 04, 2012

QUALITY CONTROL REPORT VAN12001945.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
8098	Silt	0.2	73.4	1.5	44	<0.1	27.9	16.7	612	4.08	6.9	2.1	0.6	28	<0.1	0.3	<0.1	156	1.27	0.048	5
REP 8098	QC	0.3	78.1	1.6	44	<0.1	30.9	17.3	660	4.21	7.5	2.8	0.6	29	0.1	0.4	<0.1	161	1.43	0.049	5
8100	Silt	0.5	82.7	7.5	117	0.1	39.7	21.4	1904	4.56	25.1	190.2	0.4	29	0.4	0.8	0.1	158	1.15	0.054	10
REP 8100	QC	0.5	86.1	7.7	119	0.1	41.5	21.6	1921	4.63	24.7	2.0	0.5	30	0.3	0.8	<0.1	157	1.17	0.057	10
Reference Materials																					
STD DS8	Standard	13.0	106.5	119.8	299	1.8	34.5	7.4	566	2.34	25.9	118.7	6.6	62	2.4	6.0	6.4	42	0.64	0.081	14
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	0.2	<0.1	<1	<0.1	<0.1	<0.1	<1	0.03	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	0.002	<1

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

Project: H-12
Report Date: May 04, 2012

QUALITY CONTROL REPORT VAN12001945.1

	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																	
8098	Silt	34	0.77	33	0.300	4	2.04	0.022	0.02	<0.1	0.06	9.4	<0.1	<0.05	7	<0.5	<0.2
REP 8098	QC	37	0.79	35	0.327	6	2.16	0.024	0.02	<0.1	0.07	10.5	<0.1	<0.05	7	<0.5	<0.2
8100	Silt	62	0.64	62	0.328	5	3.32	0.009	0.02	<0.1	0.15	13.7	<0.1	<0.05	9	0.7	<0.2
REP 8100	QC	63	0.61	59	0.335	5	3.25	0.010	0.02	<0.1	0.14	13.6	<0.1	<0.05	9	1.0	<0.2
Reference Materials																	
STD DS8	Standard	112	0.61	279	0.111	2	0.87	0.085	0.39	3.2	0.21	2.3	5.6	0.11	4	5.7	5.3
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 27, 2012
Report Date: May 06, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12002005.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID: Bag 5, sent 26/04/12
P.O. Number 12-327
Number of Samples: 2

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	2	Dry at 60C			VAN
SS80	2	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	2	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:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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

Project: H-12
Report Date: May 06, 2012

CERTIFICATE OF ANALYSIS VAN12002005.1

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
8103	Silt	0.5	92.3	6.5	81	<0.1	42.4	26.9	1313	5.27	55.6	3.6	0.5	18	0.2	0.4	<0.1	168	1.04	0.038	6
8104	Silt	0.4	141.4	22.0	102	0.8	62.1	33.9	1562	6.06	140.4	8.1	0.5	19	0.3	6.5	<0.1	166	1.16	0.044	6

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Project: H-12
Report Date: May 06, 2012

CERTIFICATE OF ANALYSIS VAN12002005.1

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
8103	Silt	58	0.87	46	0.269	4	3.11	0.009	0.03	<0.1	0.08	8.9	<0.1	<0.05	10	0.6	<0.2
8104	Silt	87	1.17	40	0.196	11	2.77	0.011	0.04	<0.1	0.17	17.0	<0.1	<0.05	8	0.6	<0.2

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

Project: H-12
Report Date: May 06, 2012

QUALITY CONTROL REPORT VAN12002005.1

		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																						
8103	Silt		0.5	92.3	6.5	81	<0.1	42.4	26.9	1313	5.27	55.6	3.6	0.5	18	0.2	0.4	<0.1	168	1.04	0.038	6
REP 8103	QC		0.5	95.7	6.3	82	<0.1	43.8	26.1	1333	5.24	56.2	3.7	0.6	18	0.3	0.4	<0.1	165	1.04	0.039	5
Reference Materials																						
STD DS8	Standard		12.3	112.3	126.0	303	1.7	38.4	7.3	610	2.42	25.6	106.5	6.7	71	2.3	5.9	7.4	40	0.65	0.074	15
STD DS9	Standard		12.3	105.7	126.1	307	1.8	38.8	7.4	566	2.28	25.2	123.2	6.3	74	2.3	5.8	7.1	41	0.66	0.085	14
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
STD DS9 Expected			12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844	15.7
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: H-12
Report Date: May 06, 2012

QUALITY CONTROL REPORT VAN12002005.1

		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																		
8103	Silt		58	0.87	46	0.269	4	3.11	0.009	0.03	<0.1	0.08	8.9	<0.1	<0.05	10	0.6	<0.2
REP 8103	QC		59	0.84	45	0.270	5	2.97	0.009	0.03	<0.1	0.08	8.8	<0.1	<0.05	10	0.7	<0.2
Reference Materials																		
STD DS8	Standard		115	0.58	267	0.112	<1	0.83	0.083	0.38	3.1	0.20	2.1	5.2	0.13	5	4.2	5.0
STD DS9	Standard		116	0.61	295	0.112	1	0.89	0.075	0.35	2.7	0.19	2.1	5.2	0.15	5	5.4	4.4
STD DS8 Expected			115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
STD DS9 Expected			119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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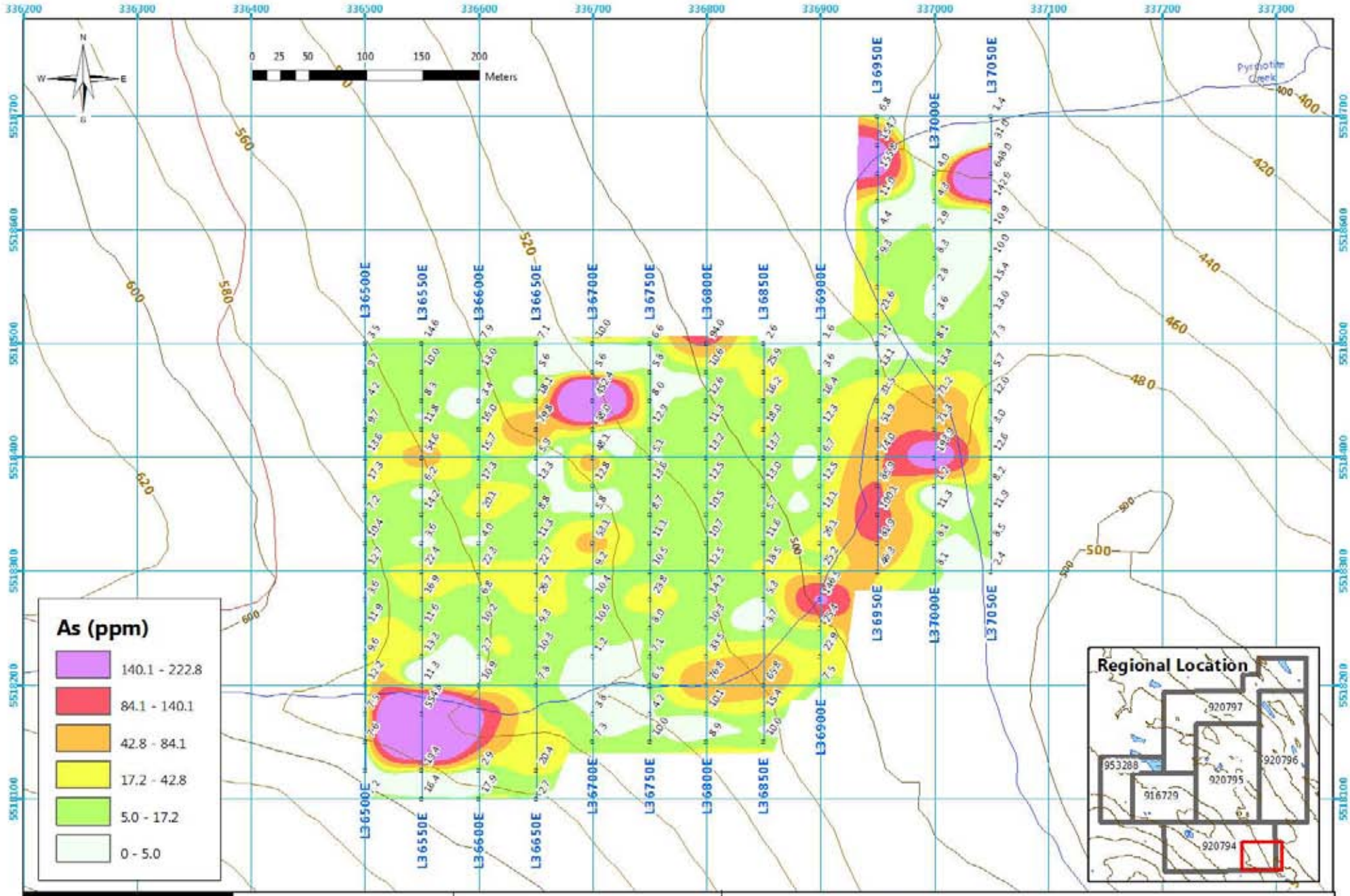
APPENDIX 4



Soil Geochemistry Arsenic (ppm)

Altamont Exploration Corp.

Harmony Project H-12 Grid

Nanaimo Mining Division

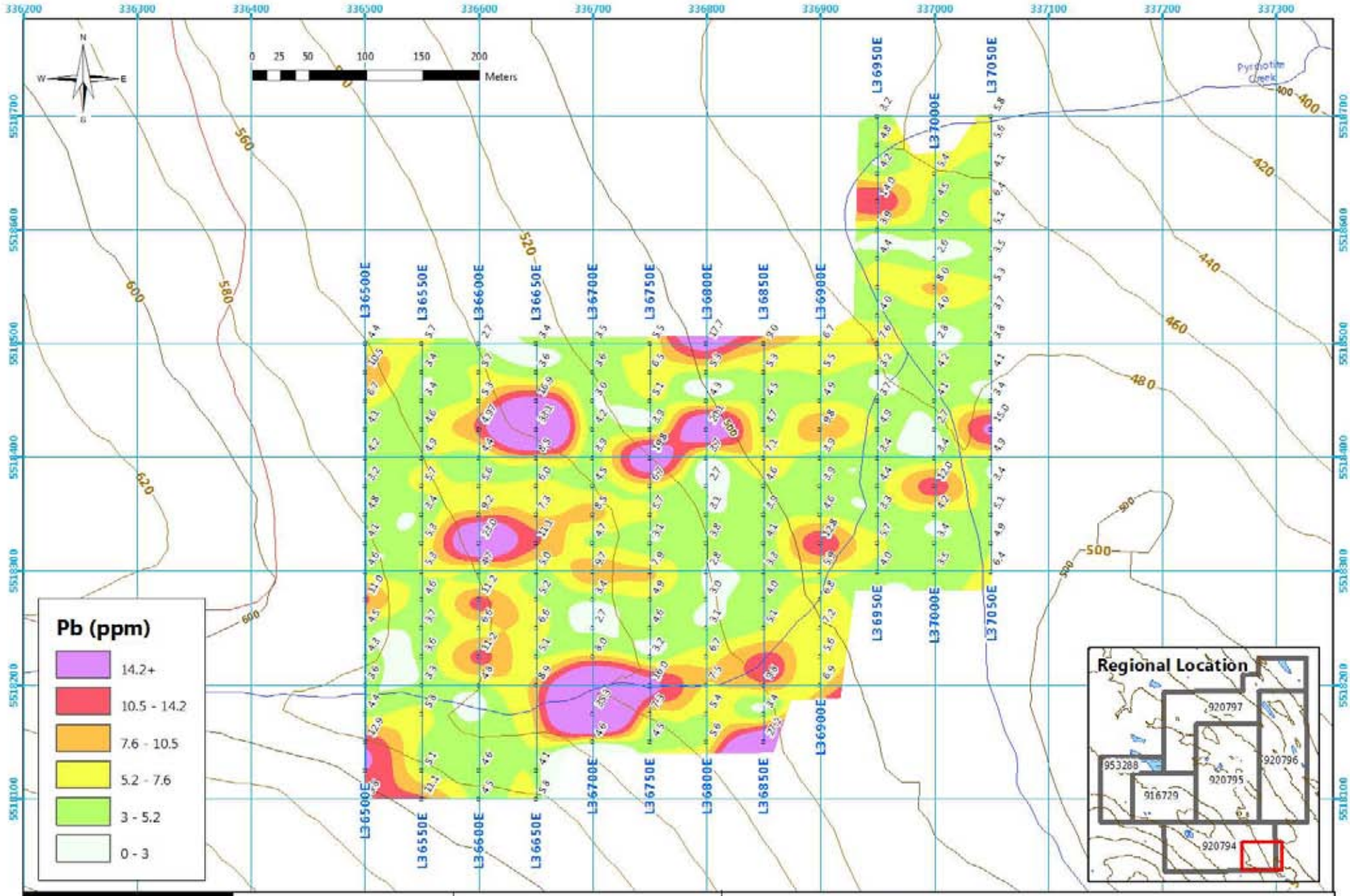
Date: May 14, 2012

Map Sheet(s): BCGS 92F.084, 92F.074

Datum: UTM NAD 1983 Zone 10N

Prepared by: K. Cupit, Rio Minerals Ltd.

Sample site
Road
Lake
Stream
Topo (100m)
Topo (20m)



Soil Geochemistry Lead (ppm)

Altamont Exploration Corp.

Harmony Project H-12 Grid

Nanaimo Mining Division

Date: May 14, 2012

Map Sheet(s): BCGS 92F.084, 92F.074

Datum: UTM NAD 1983 Zone 10N

Prepared by: K. Cupit, Rio Minerals Ltd.

Sample site

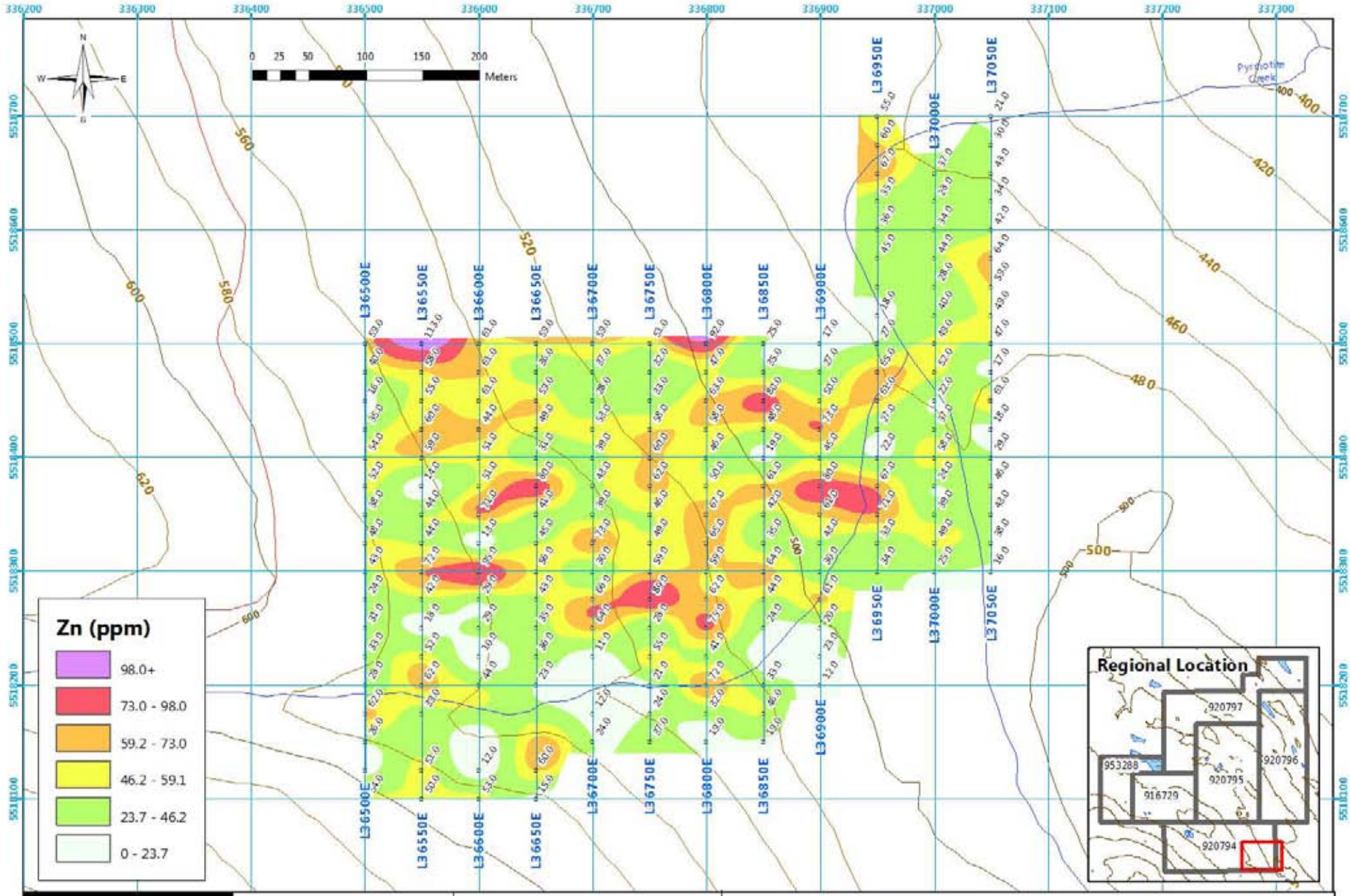
Road

Lake

Stream

Topo (100m)

Topo (20m)



Soil Geochemistry Zinc (ppm)

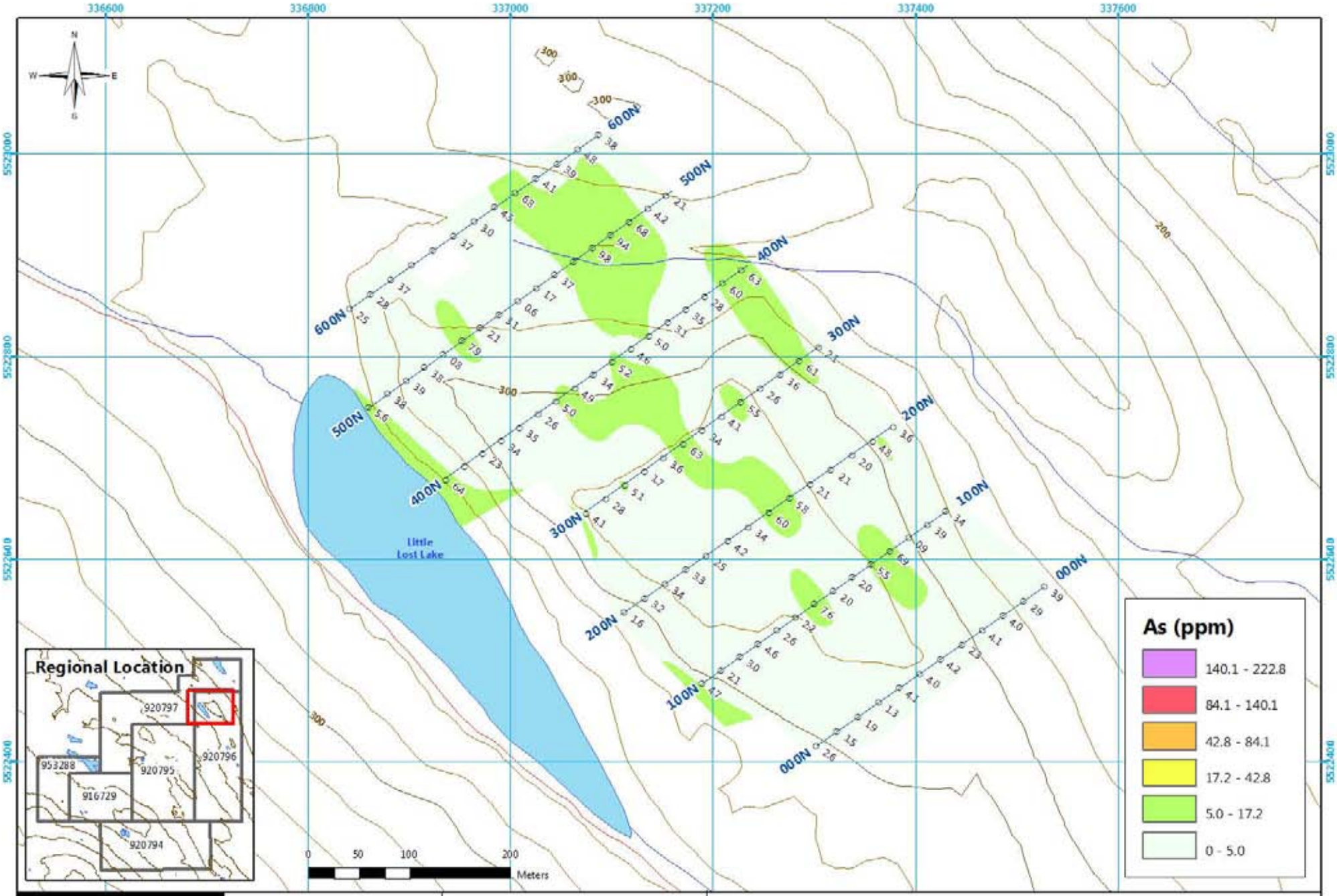
Altamont Exploration Corp.

Harmony Project H-12 Grid

Nanaimo Mining Division

Date: May 14, 2012
Map Sheet(s): BCGS 92F.084, 92F.074
Datum: UTM NAD 1983 Zone 10N
Prepared by: K. Cupit, Rio Minerals Ltd.

Sample site
Road
Lake
Stream
Topo (100m)
Topo (20m)



Soil Geochemistry Arsenic (ppm)

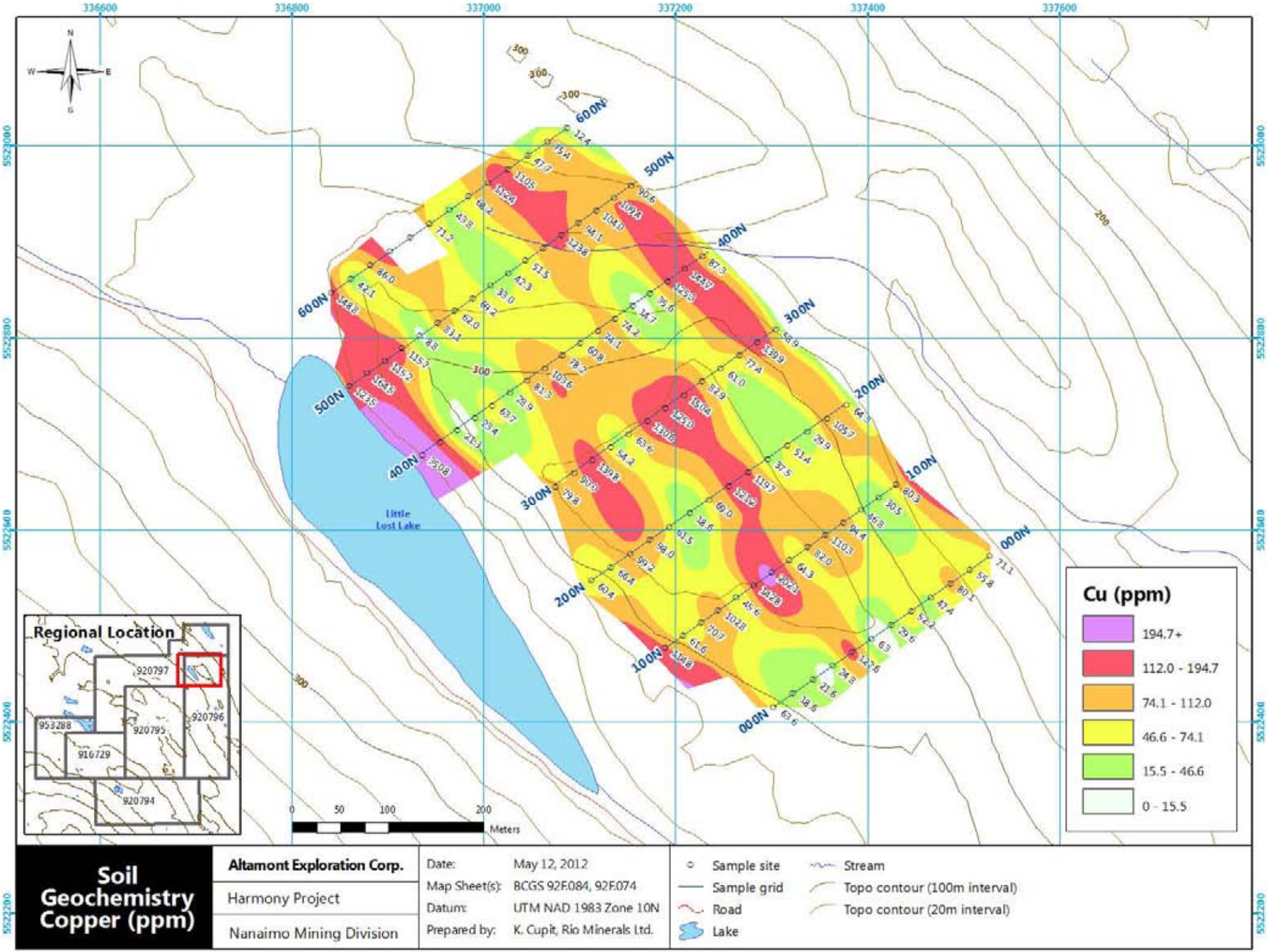
Altamont Exploration Corp.

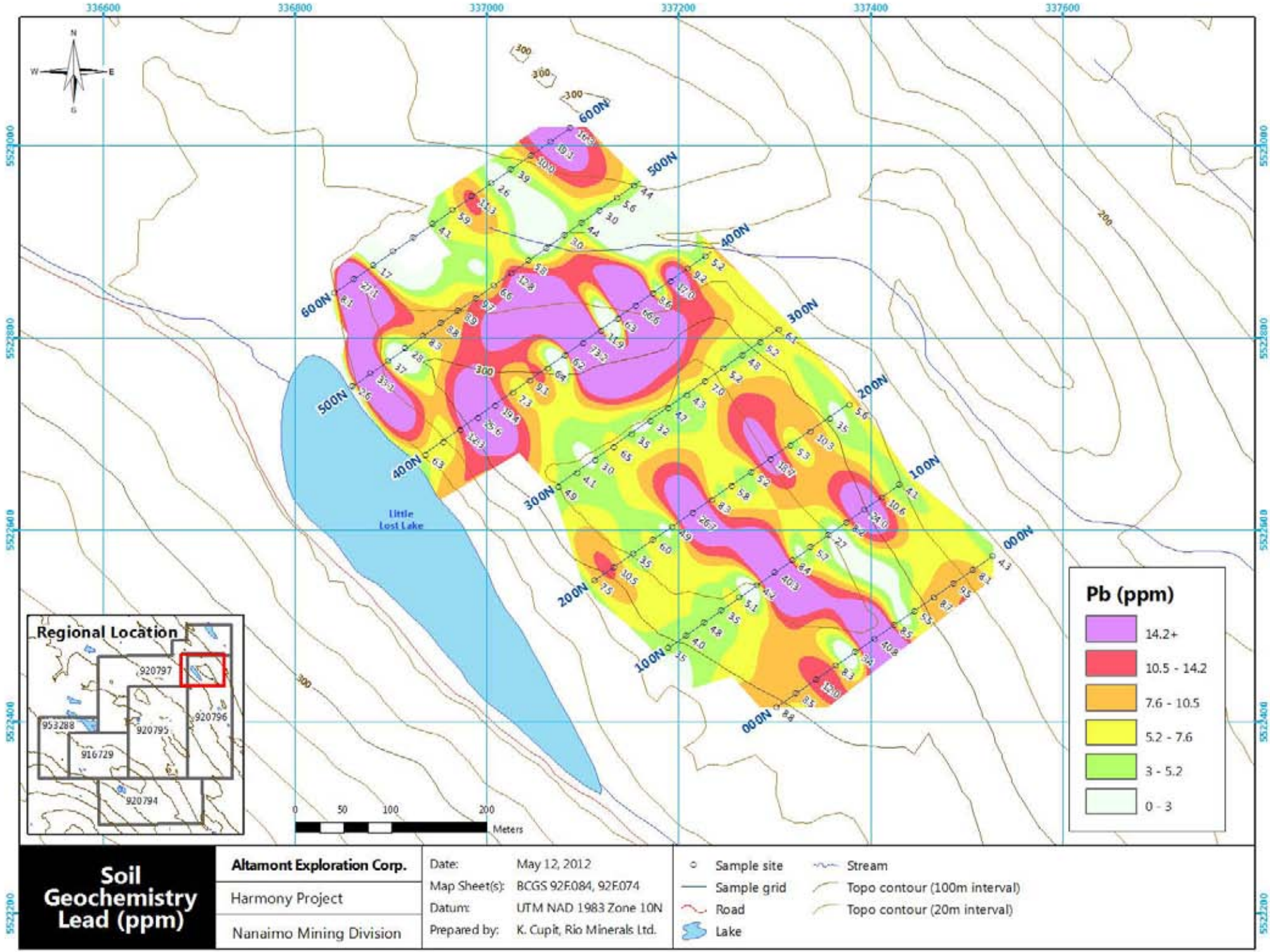
Harmony Project LH-12 Grid

Nanaimo Mining Division

Date:	May 14, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Sample grid
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)


336600
336800
337000
337200
337400
337600
5523000
5522800
5522600
5522400
5522200
N
W
E
S
600N
500N
400N
300N
200N
100N
000N
Little Lost Lake
Regional Location
920797
920796
953288
920795
916729
920794
0
50
100
200
Meters
Cu (ppm)
194.7+
112.0 - 194.7
74.1 - 112.0
46.6 - 74.1
15.5 - 46.6
0 - 15.5
Soil Geochemistry Copper (ppm)
Altamont Exploration Corp.
Harmony Project
Nanaimo Mining Division
Date: May 12, 2012
Map Sheet(s): BCGS 92F.084, 92F.074
Datum: UTM NAD 1983 Zone 10N
Prepared by: K. Cupit, Rio Minerals Ltd.
Sample site
Sample grid
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)



Soil Geochemistry Lead (ppm)

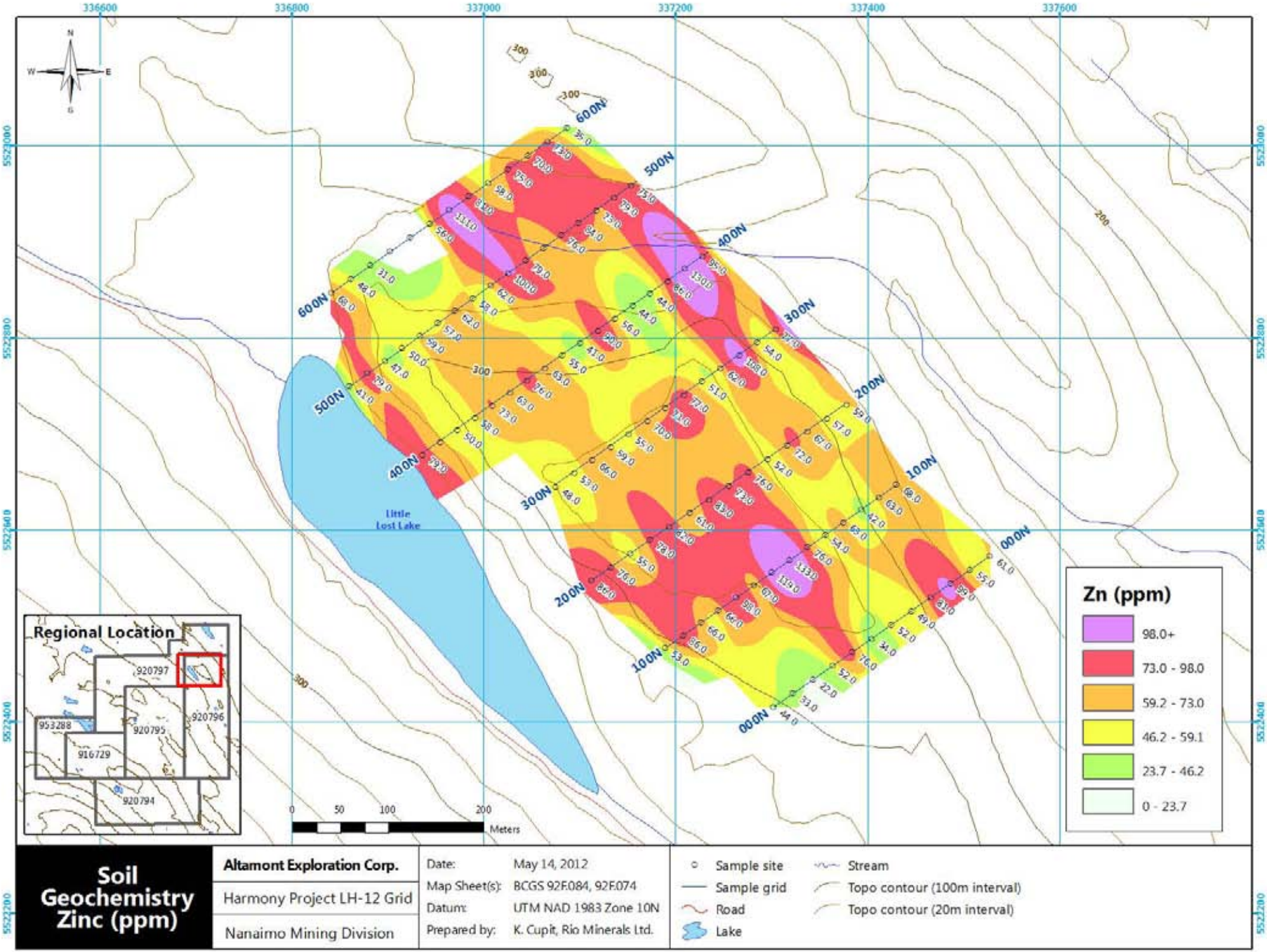
Altamont Exploration Corp.

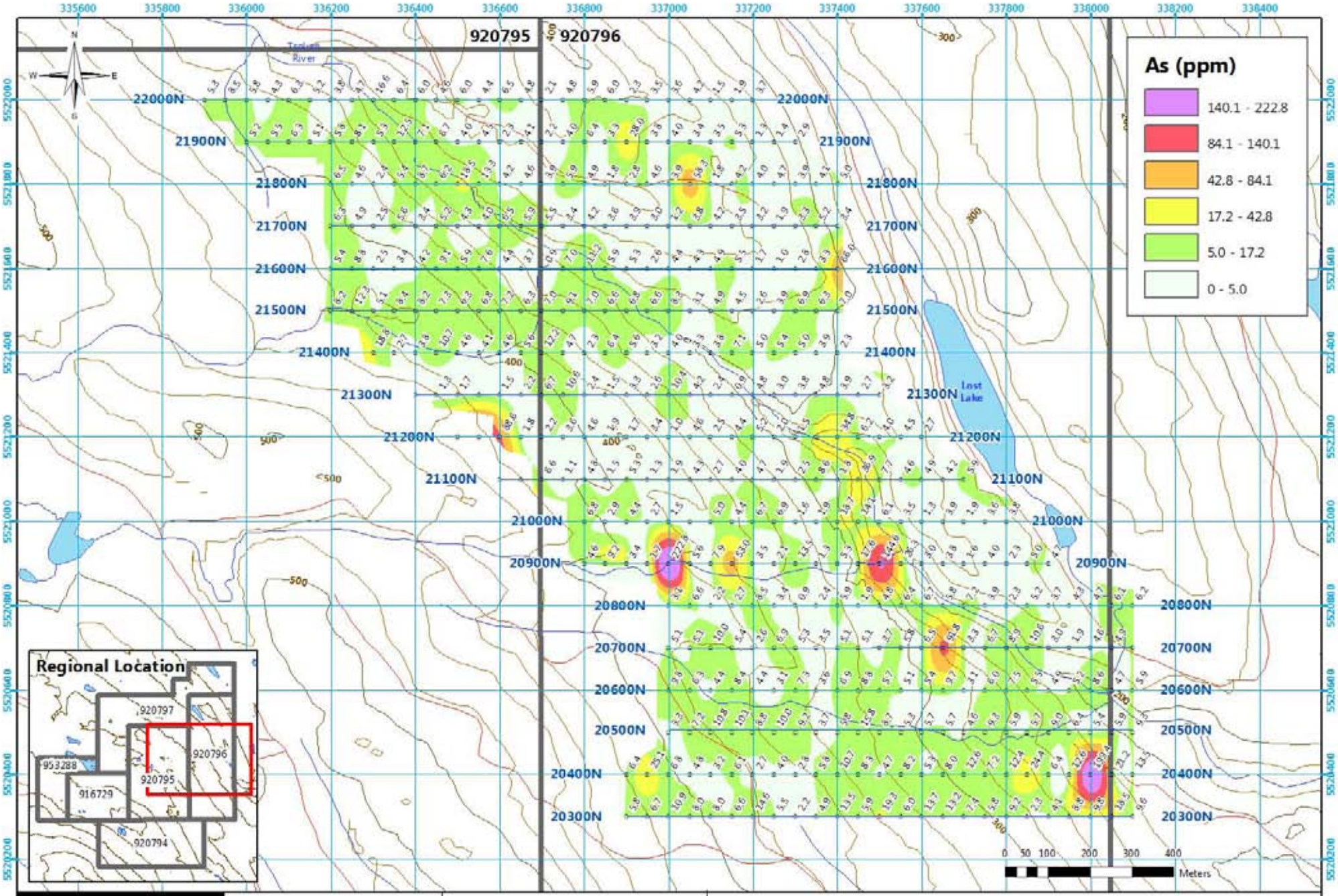
Harmony Project

Nanaimo Mining Division

Date:	May 12, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

- Sample site
- Sample grid
- Road
- Lake
- Stream
- Topo contour (100m interval)
- Topo contour (20m interval)


336600
336800
337000
337200
337400
337600
5523000
5522800
5522600
5522400
5522200
N
W
E
S
600N
500N
400N
300N
200N
100N
000N
Little Lost Lake
Regional Location
920797
920796
920795
953288
916729
920794
0
50
100
200
Meters
Zn (ppm)
98.0+
73.0 - 98.0
59.2 - 73.0
46.2 - 59.1
23.7 - 46.2
0 - 23.7
Soil Geochemistry Zinc (ppm)
Altamont Exploration Corp.
Harmony Project LH-12 Grid
Nanaimo Mining Division
Date: May 14, 2012
Map Sheet(s): BCGS 92F.084, 92F.074
Datum: UTM NAD 1983 Zone 10N
Prepared by: K. Cupit, Rio Minerals Ltd.
Sample site
Sample grid
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)



Soil Geochemistry Arsenic (ppm)

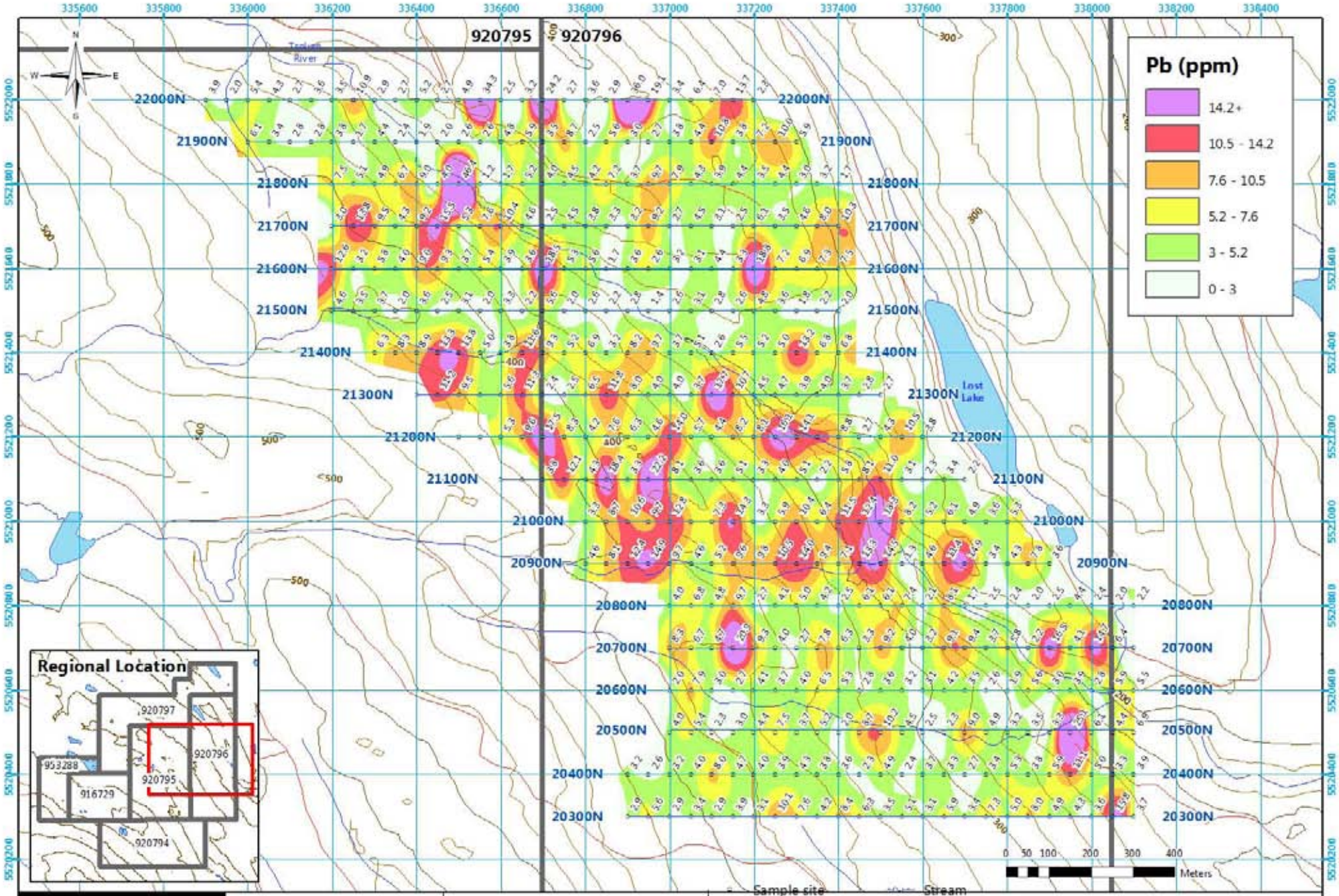
Altamont Exploration Corp.

Harmony Project LL-12 Grid

Nanaimo Mining Division

Date:	May 11, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Sample grid
Tenure boundary
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)



Soil Geochemistry Lead (ppm)

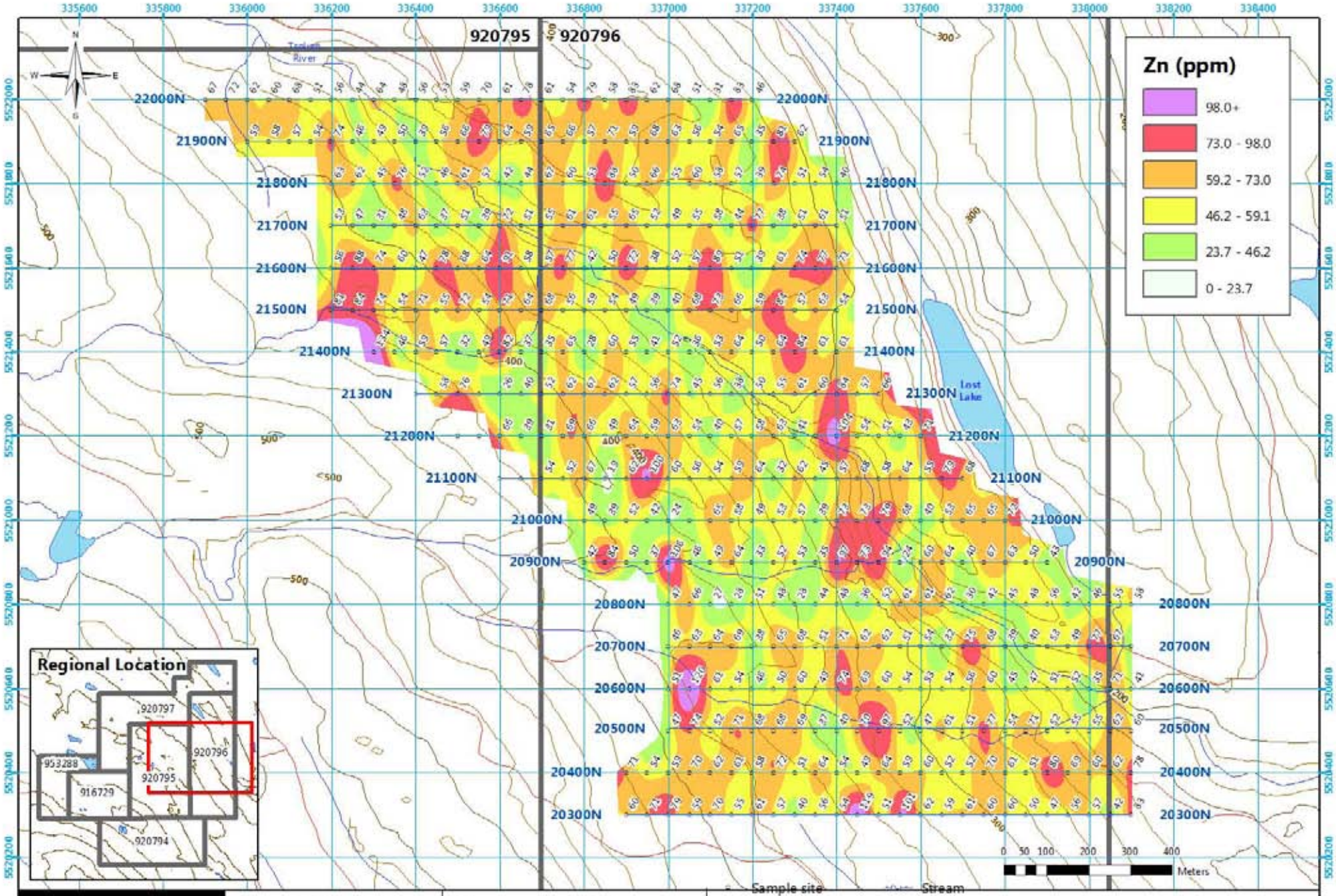
Altamont Exploration Corp.

Harmony Project LL-12 Grid

Nanaimo Mining Division

Date:	May 11, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Sample site
Sample grid
Tenure boundary
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)



Soil Geochemistry Zinc (ppm)

Altamont Exploration Corp.

Harmony Project LL-12 Grid

Nanaimo Mining Division

Date:	May 11, 2012
Map Sheet(s):	BCGS 92F.084, 92F.074
Datum:	UTM NAD 1983 Zone 10N
Prepared by:	K. Cupit, Rio Minerals Ltd.

Sample site
Sample grid
Tenure boundary
Road
Lake
Stream
Topo contour (100m interval)
Topo contour (20m interval)

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
100N 075E	LH-12	337189	5522477	0.6	114.8	3.5	53	0.1	42.0	17.4	317	5.61	4.7	6.5	0.9	12	0.1	0.4	0.1	215	0.78	0.051	4	84	0.63	37	0.348	3	4.14	0.007	0.02	0.1	0.09	13.4	0.1	0.03	11	0.7	0.1
100N 100E	LH-12	337208	5522490	0.5	61.6	4.0	86	0.1	29.9	16.5	546	6.10	2.1	3.1	0.7	11	0.2	0.3	0.1	202	0.86	0.110	4	64	0.39	25	0.470	3	2.83	0.007	0.02	0.1	0.09	7.9	0.1	0.03	12	0.3	0.1
100N 125E	LH-12	337226	5522503	0.4	70.7	4.8	66	0.1	44.0	19.8	516	6.52	3.0	2.6	0.9	11	0.1	0.4	0.1	236	0.79	0.084	3	92	0.53	33	0.555	3	4.65	0.007	0.02	0.1	0.09	7.2	0.1	0.03	14	0.3	0.1
100N 150E	LH-12	337245	5522516	0.6	102.8	3.5	66	0.1	55.4	23.5	406	6.19	4.6	0.7	1.1	10	0.2	0.4	0.1	238	0.77	0.062	3	96	0.78	25	0.528	3	4.92	0.006	0.02	0.1	0.06	12.4	0.1	0.03	13	0.3	0.1
100N 175E	LH-12	337263	5522529	0.5	45.6	5.1	98	0.1	37.6	20.2	792	6.53	2.6	3.4	0.8	15	0.1	0.4	0.1	190	0.99	0.197	3	81	0.49	39	0.373	3	3.41	0.008	0.02	0.1	0.12	8.0	0.1	0.03	14	0.3	0.1
100N 200E	LH-12	337282	5522542	0.3	142.8	4.2	67	0.1	37.0	40.6	749	5.80	2.2	4.6	0.9	10	0.2	0.4	0.1	179	0.80	0.106	6	73	0.42	24	0.449	2	3.72	0.008	0.02	0.1	0.08	12.0	0.1	0.03	13	0.6	0.1
100N 225E	LH-12	337300	5522555	0.6	202.1	40.3	119	0.3	20.9	108.9	10000	5.43	7.6	1.5	0.5	17	1.2	0.6	0.4	124	0.91	0.226	8	51	0.18	87	0.234	3	2.45	0.008	0.03	0.1	0.18	6.7	0.1	0.03	11	0.9	0.1
100N 250E	LH-12	337319	5522569	0.3	64.3	8.4	133	0.1	46.6	27.8	1586	7.78	2.0	1.0	0.7	17	0.2	0.3	0.1	264	0.57	0.164	2	48	0.92	74	0.605	2	4.56	0.023	0.06	0.1	0.06	6.2	0.1	0.03	17	0.3	0.1
100N 275E	LH-12	337337	5522582	0.5	82.0	5.7	76	0.1	37.1	19.3	466	7.30	2.0	1.7	1.3	10	0.1	0.4	0.1	238	0.72	0.098	3	83	0.36	31	0.513	2	4.56	0.007	0.02	0.1	0.09	11.2	0.1	0.03	16	0.3	0.1
100N 300E	LH-12	337356	5522595	0.8	110.3	2.7	54	0.1	41.5	20.5	363	6.10	5.5	3.6	1.2	9	0.1	0.3	0.1	224	0.82	0.162	6	79	0.68	16	0.472	4	5.10	0.008	0.02	0.1	0.08	20.0	0.1	0.03	12	1.2	0.1
100N 325E	LH-12	337374	5522608	0.8	94.4	8.2	63	0.1	37.1	19.4	445	5.90	6.9	5.2	1.3	10	0.1	0.4	0.1	206	0.73	0.156	5	69	0.64	24	0.460	3	3.98	0.007	0.03	0.1	0.15	11.9	0.1	0.03	13	0.3	0.1
100N 350E	LH-12	337393	5522621	0.2	46.8	24.0	42	0.1	8.7	11.3	524	9.04	0.9	2.9	0.5	8	0.4	0.5	0.4	232	1.82	0.032	3	26	0.20	21	0.521	2	1.69	0.010	0.02	0.1	0.09	4.1	0.1	0.03	15	0.3	0.1
100N 375E	LH-12	337411	5522634	0.4	30.5	10.6	63	0.1	21.4	17.4	998	7.31	3.9	1.4	0.7	9	0.2	0.4	0.2	218	0.91	0.125	2	53	0.35	30	0.484	2	2.40	0.006	0.02	0.1	0.05	4.7	0.1	0.03	15	0.3	0.1
100N 400E	LH-12	337430	5522647	0.6	80.3	4.1	68	0.1	44.7	23.0	575	6.66	3.4	2.1	0.9	11	0.1	0.3	0.1	221	0.87	0.076	3	67	0.71	28	0.522	3	3.63	0.008	0.02	0.1	0.10	10.6	0.1	0.03	16	0.3	0.1
200N 075E	LH-12	337112	5522547	0.3	60.4	7.5	86	0.1	40.3	19.1	599	5.76	1.6	1.6	0.7	13	0.2	0.4	0.1	192	0.80	0.061	3	74	0.38	38	0.553	2	3.63	0.008	0.02	0.1	0.03	6.6	0.1	0.03	13	0.3	0.1
200N 100E	LH-12	337132	5522561	0.3	66.4	10.5	76	0.1	50.3	25.9	971	5.15	3.2	5.5	0.7	16	0.1	0.4	0.1	174	1.03	0.066	4	59	0.56	43	0.408	3	3.11	0.007	0.02	0.1	0.09	7.8	0.1	0.03	11	0.3	0.1
200N 125E	LH-12	337153	5522575	0.6	99.2	3.5	55	0.1	41.7	18.5	332	5.67	3.4	3.8	0.9	11	0.1	0.4	0.1	213	0.76	0.059	6	82	0.53	23	0.507	2	4.21	0.007	0.01	0.1	0.12	15.4	0.1	0.03	12	0.3	0.1
200N 150E	LH-12	337173	5522589	0.3	98.0	6.0	78	0.1	45.8	23.1	1002	5.22	3.3	4.1	0.7	14	0.1	0.4	0.1	190	0.90	0.054	4	74	0.62	42	0.497	2	3.44	0.007	0.02	0.1	0.11	9.4	0.1	0.03	11	0.3	0.1
200N 175E	LH-12	337194	5522603	0.5	61.5	4.9	82	0.1	38.8	19.1	973	5.50	2.5	2.6	0.7	12	0.1	0.4	0.1	193	0.82	0.063	3	73	0.43	33	0.383	2	3.23	0.007	0.02	0.1	0.08	7.0	0.1	0.03	12	0.3	0.1
200N 200E	LH-12	337214	5522617	0.4	18.6	26.7	61	0.1	15.7	15.3	4111	4.92	4.2	1.8	0.5	11	0.3	0.5	0.3	151	1.00	0.127	3	49	0.24	51	0.339	2	1.92	0.007	0.03	0.1	0.13	4.1	0.1	0.03	12	0.3	0.1
200N 225E	LH-12	337235	5522631	0.5	69.0	8.3	83	0.1	32.1	23.9	634	6.47	3.4	3.9	0.7	14	0.2	0.3	0.2	208	0.85	0.077	3	75	0.35	33	0.511	2	2.92	0.007	0.02	0.1	0.05	6.1	0.1	0.03	14	0.3	0.1
200N 250E	LH-12	337255	5522646	0.7	121.2	5.8	73	0.1	57.9	24.0	471	6.39	6.0	5.0	1.0	11	0.3	0.5	0.1	256	0.80	0.091	4	95	0.72	34	0.581	4	4.86	0.008	0.02	0.1	0.11	16.0	0.1	0.03	13	0.3	0.1
200N 275E	LH-12	337276	5522660	0.5	119.7	5.2	76	0.1	56.1	24.2	741	6.21	5.8	3.3	1.1	12	0.1	0.5	0.1	231	0.82	0.074	3	99	0.74	43	0.465	2	4.72	0.006	0.02	0.1	0.08	13.5	0.1	0.03	13	0.3	0.1
200N 300E	LH-12	337296	5522674	0.4	37.5	18.7	52	0.1	13.1	21.9	1794	4.16	2.1	2.3	0.6	7	0.3	0.3	0.2	140	0.68	0.098	6	33	0.16	36	0.299	2	2.41	0.007	0.01	0.1	0.13	6.7	0.1	0.03	10	0.3	0.1
200N 325E	LH-12	337317	5522688	0.5	51.4	5.3	72	0.1	43.8	21.4	480	6.42	2.1	10.6	0.8	13	0.1	0.3	0.1	216	0.84	0.059	3	73	0.46	41	0.513	2	3.39	0.008	0.02	0.1	0.05	7.2	0.1	0.03	14	0.3	0.1
200N 350E	LH-12	337337	5522702	0.4	29.9	10.3	67	0.1	20.6	21.5	1219	4.59	2.0	2.4	0.5	12	0.2	0.3	0.1	165	0.83	0.050	3	38	0.26	40	0.380	2	2.06	0.007	0.02	0.1	0.07	4.1	0.1	0.03	10	0.3	0.1
200N 375E	LH-12	337358	5522716	0.7	105.7	3.5	57	0.1	45.1	20.5	430	6.03	4.8	1.8	0.9	12	0.1	0.4	0.1	229	0.84	0.062	4	69	0.67	25	0.509	3	3.52	0.007	0.01	0.1	0.07	12.4	0.1	0.03	12	0.3	0.1
200N 400E	LH-12	337378	5522730	0.6	64.3	5.6	59	0.1	41.3	19.0	353	5.85	3.6	3.4	0.9	12	0.2	0.3	0.1	209	0.83	0.061	3	68	0.50	27	0.483	2	3.69	0.006	0.02	0.1	0.11	6.4	0.1	0.03	12	0.3	0.1
300N 100E	LH-12	337075	5522645	0.6	79.8	4.9	48	0.1	48.3	19.1	287	5.74	4.1	0.7	0.8	12	0.1	0.4	0.1	218	0.74	0.038	2	86	0.55	28	0.454	2	4.83	0.008	0.01	0.1	0.06	6.8	0.1	0.03	13	0.3	0.1
300N 125E	LH-12	337094	5522659	0.7	90.0	4.1	53	0.1	36.5	17.1	348	6.70	2.8	3.0	1.1	11	0.1	0.3	0.1	257	0.85	0.072	4	102	0.43	19	0.536	2	4.83	0.006	0.01	0.1	0.08	16.1	0.1	0.03	13	0.3	0.1
300N 150E	LH-12	337113	5522672	0.6	139.8	3.0	66	0.1	57.5	26.8	526	6.54	5.1	1.8	1.0	11	0.1	0.3	0.2	267	0.87	0.085	4	107	0.78	29	0.532	3	5.06	0.007	0.02	0.1	0.11	18.4	0.1	0.03	13	0.3	0.1
300N 175E	LH-12	337132	5522686	0.4	54.2	6.5	59	0.1	28.2	15.5	499	5.20	1.7	3.3	0.7	12	0.1	0.3	0.1	184	0.83	0.042	3	57	0.32	28	0.429	2	2.63	0.007	0.01	0.1	0.05	6.7	0.1	0.03	11	0.3	0.1
300N 200E	LH-12	337151	5522700	0.4	63.6	3.5	55	0.1	33.0	22.2	555	4.82	3.6	2.6	0.5	13	0.2	0.9	0.1	191	0.93	0.036	6	61	0.44	21	0.430	2	2.63	0.007	0.01	0.1	0.16	8.4	0.1	0.03	10	0.3	0.1
300N 225E	LH-12	337170	5522713	0.7	130.6	3.2	70	0.1	54.6	24.9	401	6.34	6.3	4.4	1.2	10	0.2	0.4	0.1	253	0.74	0.104	6	101	0.80	24	0.535	2	4.94	0.006	0.02	0.1	0.10	18.6	0.1	0.03	13	0.3	0.1
300N 250E	LH-12	337189	5522727	0.5	125.0	4.7	71	0.1	40.1	31.6	1197	5.60	3.4	2.4	0.9	14	0.1	0.3	0.1	216	0.73	0.116	9	65	0.60	34	0.492	2	3.94	0.011	0.02	0.1	0.12	14.5	0.1	0.03	12	0.3	0.1
300N 275E	LH-12	337209	5522741	0.5	150.4	4.3	77	0.1	47.7	20.8	381	7.03	4.1	2.7	0.9	15	0.1	0.5	0.1	264	0.80	0.077	3	82	0.61	46	0.585	2	5.13	0.010	0.03	0.1	0.11	6.6	0.1	0.03	14	0.3	0.1
300N 300E	LH-12	337228	5522754	0.7	82.9	7.0	51	0.1	25.1	13.2	327	6.65	5.5	5.5	1.2	8	0.2	0.5	0.1	226	0.80	0.238	4	75	0.38	18	0.454	2	5.26	0.007	0.01	0.1	0.16	15.7	0.1	0.05	14	0.8	0.1
300N 325E	LH-12	337247	5522768	0.6	61.0	5.2	62	0.1	26.2	17.3	571	6.29	2.6	7.1	1.0	8	0.2	0.3	0.1	156	0.47	0.252	8	72	0.21	18	0.347	3	4.73	0.008	0.02	0.1	0.27	12.7	0.1	0.03	13	0.9	0.1
300N 350E	LH-12	337266	5522782	0.8	77.4	4.8	108	0.1	40.0	34.8	576	5.40	3.6	3.8	1.0	8	0.2	0.4	0.1	161	0.66	0.170	8	62	0.31	28	0.366	5	5.36	0.008	0.02	0.1	0.26	15.0	0.1	0.09	10	1.7	0.1
300N 375E	LH-12	337285	5522795	1.2	139.9	5.2	54	0.1	43.9	22.9	517	6.52	6.1	6.1	1.3	11	0.2	0.5	0.1	211	0.75	0.119	6	83	0.65	33	0.496	3	6.41	0.007	0.02	0.1	0.20	23.0	0.1	0.03	12	0.7	0.1
300N 400E	LH-12	337304	5522809	0.3	58.9	6.1	77	0.1	25.3	20.0	656	7.06	2.1	2.6	0.7	11	0.2	0.4	0.1	202	0.99	0.107	3	52	0.27	29	0.430	5	2.68	0.007	0.02	0.1	0.06	6.0	0.1	0.03	14	0.3	0.1
400N 000E	LH-12	336936	5522678	0.3	350.8	6.3	79	0.1	83.2	37.5	1009	7.73	6.4	2.7	0.6	66	0.2	0.7	0.1	273	1.25	0.038	6	108	1.87	38	0.381	3	5.94	0.037	0.03	0.1	0.16	21.9	0.1	0.05	14	0.6	0.1
400N 025E	LH-12	336954	5522691																																				
400N 050E	LH-12	336972	5522704	0.3	21.3	12.3	50	0.1	25.9	17.2	1010	4.67	2.3	1.9	0.4	14	0.2	0.8	0.1	168	0.95	0.036	3	46	0.37	36	0.362	3	2.04	0.008	0.02	0.1	0.08	4.0	0.1	0.05	9	0.3	0.1
400N 075E	LH-12	336991	5522717	0.3	23.4	25.6	58	0.1	18.6	16.7	2870	5.20	3.4	1.2	0.5	13	0.3	0.5	0.3	179	1.22	0.113	3	53	0.32	42	0.401	4	2.20	0.007	0.02	0.1	0.07	5.5	0.1	0.10	11	0.9	0.1
400N 100E	LH-12	337009	5522730	0.4	63.7	19.4	73	0.1	32.1	21.5	3683	6.41	3.5	2.2	0.7	15	0.3	0.6	0.1	226	0.99	0.131	4	64	0.41	66	0.471	3	3.44	0.009	0.03	0.1	0.11	8.2	0.1	0.06	14	0.3	0.1
400N 125E	LH-12	337027	5522743	0.3	28.9	7.3	63	0.1	22.0	17.1	1177	6.60	2.6	1.8	0.7	13	0.2	0.3	0.1	193	1.07	0.108	3	63	0.30	34	0.469	4	2.56	0.007	0.01	0.1	0.10	5.1	0.1	0.06	13	0.3	0.1
400N 150E	LH-12	337045	5522756	0.4	81.3	9.1	76	0.1	40.4	21.5	634	6.83	5.0	1.2	0.9	12	0.2	0.6	0.1	240	0.92	0.107	3	80	0.53	34	0.570	5	4.71	0.008	0.02	0.1	0.11	7.0	0.1	0.08	14	0.3	0.1
400N 175E	LH-12	337064	5522769	0.6	103.6	6.4	63	0.1	49.3	22.3	670	7.12	4.9	3.6	1.1	13	0.2	0.5	0.1	280	0.93	0.076	4	107	0.62	35	0.626	4	5.71	0.007	0.02	0.1	0.11	16.4	0.1	0.05	15	0.3	0.1
400N 200E	LH-12	337082	5522781	0.5	78.2	6.2	55	0.1	38.2	20.8	315	7.40	3.4	8.6	1.0	11	0.1	0.4	0.1	260	0.77	0.092	5	97	0.48	24	0.573	2	5.20	0.007	0.02	0.1	0.15	11.2	0.1	0.06	15	0.3	0.1
400N 225E	LH-12	337100	5522794	0.4	60.8	73.2	41	0.1	29.7	114.3	2947	2.43	5.2	2.2	0.1	21	0.5	0.5	0.6	79	0.61	0.141	24	34	0.14	44	0.122	3	4.23	0.008	0.04	0.1	0.19	12.4	0.1	0.17	6	2.0	0.1
400N 250E	LH-12	337118	5522807	0.4	74.1	11.9	90	0.1	68.2	69.8	1148	5.73	4.6	3.6	0.6	17	0.3	0.5	0.1	200	1.03	0.067	8	62	0.63	33	0.484	4	3.66	0.009	0.03	0.1	0.08	9.1	0.1	0.09	12	0.3	0.1
400N 275E	LH-12	337137	5522820	0.4	74.2	6.3	56	0.1	48.7	23.5	537	6.96	5.0	14.1	0.7	17	0.2	0.6	0.1	259	1.04	0.064	4	77	0.64	28	0.636	5	3.65	0.009	0.02	0.1	0.06	7.6	0.1	0.07	14	0.3	0.1
400N 300E	LH-12	337155	5522833	0.2	14.7	66.6	44	0.1	14.0	7.8	333	3.98	3.1	6.5	0.3	16	0.4	0.7	0.5	169	1.34	0.050	2	26	0.23	16	0.349	3	1.33	0.011	0.04	0.1	0.12	3.6	0.1	0.11	9	0.3	0.1
400N 325E	LH-12	337173	5522846	0.5	35.6	8.6	44	0.1	20.9	12.3	317	8.40	3.5	7.6	0.5	13	0.3	0.7	0.2	368	1.24	0.072	2	84	0.40	14	0.704	4	2.37	0.006	0.01	0.1	0.11	6.0	0.1	0.07	22	0.3	0.1
400N 350E	LH-12	337191	5522859	0.5	125.3	17.0	86	0.1	33.2	41.6	1570	7.02	2.8	1.8	0.7	27	0.3	0.5	0.2	203	1.19	0.106	5	77	0.39	38	0.454	4	3.62	0.010	0.02	0.1	0.12	8.3	0.1	0.12	15	0.8	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
400N 375E	LH-12	337210	5522872	1.0	144.7	9.2	130	0.2	56.1	28.6	873	8.45	6.0	1.7	1.2	26	0.4	0.3	0.3	268	1.20	0.089	4	101	0.96	50	0.582	5	4.27	0.009	0.03	0.1	0.05	8.3	0.1	0.08	16	0.7	0.1
400N 400E	LH-12	337228	5522885	0.8	87.3	5.2	95	0.2	49.0	23.3	640	6.15	6.3	2.2	0.9	23	0.4	0.5	0.1	215	0.90	0.057	4	82	0.72	66	0.404	4	4.21	0.010	0.02	0.1	0.09	11.7	0.1	0.07	13	0.3	0.1
500N 000E	LH-12	336860	5522750	0.6	123.5	2.6	41	0.1	45.5	20.6	340	5.73	5.6	9.1	0.8	24	0.3	0.5	0.1	240	0.93	0.023	4	86	0.74	68	0.492	3	3.95	0.010	0.01	0.1	0.08	9.8	0.1	0.03	11	0.9	0.1
500N 025E	LH-12	336878	5522763	0.4	164.5	33.1	79	0.1	61.1	33.9	2828	6.04	3.8	4.2	0.5	45	0.3	0.3	0.2	226	1.88	0.044	7	65	2.22	33	0.498	4	5.10	0.146	0.06	0.1	0.12	20.0	0.1	0.03	12	0.7	0.1
500N 050E	LH-12	336897	5522776	0.5	115.2	3.7	47	0.1	45.9	21.4	337	6.69	3.9	2.7	1.1	13	0.1	0.5	0.1	254	0.90	0.045	5	94	0.66	22	0.581	2	4.90	0.006	0.02	0.1	0.09	16.6	0.1	0.03	13	0.5	0.1
500N 075E	LH-12	336915	5522789	0.5	115.7	2.8	50	0.1	48.0	22.1	311	6.58	3.8	3.0	1.0	12	0.1	0.4	0.1	257	0.93	0.044	6	93	0.63	26	0.599	4	4.87	0.009	0.01	0.1	0.12	19.8	0.1	0.03	13	0.3	0.1
500N 100E	LH-12	336933	5522802	0.1	8.8	8.3	59	0.1	13.1	16.8	1348	3.73	0.8	0.8	0.3	18	0.2	0.2	0.1	119	1.16	0.034	3	35	0.32	29	0.337	1	1.71	0.009	0.02	0.1	0.05	3.8	0.1	0.03	7	0.3	0.1
500N 125E	LH-12	336952	5522815	0.5	83.1	8.8	57	0.1	35.8	27.2	1940	5.61	7.9	1.6	0.8	13	0.3	0.7	0.1	204	0.88	0.100	4	67	0.55	27	0.469	4	3.70	0.007	0.02	0.1	0.14	10.3	0.1	0.03	11	0.8	0.1
500N 150E	LH-12	336970	5522828	0.5	62.0	8.9	62	0.1	40.1	48.2	1122	4.84	2.1	1.7	0.6	13	0.1	0.4	0.1	178	0.91	0.059	8	60	0.49	26	0.485	3	3.33	0.007	0.02	0.1	0.08	9.3	0.1	0.03	11	0.3	0.1
500N 175E	LH-12	336989	5522841	0.3	69.2	9.7	58	0.1	35.2	17.4	817	6.70	3.1	10.1	0.8	13	0.2	0.4	0.1	256	0.93	0.065	3	71	0.45	35	0.574	1	3.41	0.013	0.02	0.1	0.07	8.9	0.1	0.03	13	0.3	0.1
500N 200E	LH-12	337007	5522854	0.3	33.0	6.6	62	0.1	22.4	30.8	676	7.77	0.6	1.2	0.6	16	0.2	0.3	0.1	202	0.80	0.041	7	64	0.19	29	0.494	1	2.32	0.007	0.01	0.1	0.06	6.4	0.1	0.03	16	0.3	0.1
500N 225E	LH-12	337025	5522868	0.3	42.3	12.8	100	0.1	33.5	27.6	2042	5.39	1.7	0.6	0.7	32	0.3	0.3	0.1	163	1.06	0.065	5	64	0.37	75	0.482	4	2.57	0.007	0.02	0.1	0.09	5.9	0.1	0.03	12	0.3	0.1
500N 250E	LH-12	337044	5522881	0.6	51.5	5.8	79	0.1	36.4	19.7	443	5.29	3.7	2.3	0.7	18	0.2	0.4	0.1	195	0.90	0.043	3	60	0.44	44	0.451	3	3.07	0.007	0.02	0.1	0.08	7.3	0.1	0.03	10	0.3	0.1
500N 275E	LH-12	337062	5522894																																					
500N 300E	LH-12	337080	5522907	0.6	123.8	3.0	76	0.1	50.5	24.5	831	6.28	9.8	3.2	1.1	52	0.3	0.6	0.1	225	1.26	0.042	8	96	0.95	74	0.372	3	3.61	0.013	0.04	0.1	0.09	25.1	0.1	0.03	11	0.3	0.1
500N 325E	LH-12	337099	5522920	0.8	94.1	4.4	84	0.1	53.6	23.7	524	7.24	9.4	4.6	0.9	17	0.3	0.5	0.1	276	0.86	0.097	4	87	0.79	45	0.526	3	4.33	0.008	0.04	0.1	0.09	9.9	0.1	0.03	14	0.3	0.1
500N 350E	LH-12	337117	5522933	0.6	104.0	3.0	73	0.1	53.2	26.7	483	6.84	6.8	2.2	0.9	14	0.3	0.5	0.1	252	0.77	0.063	5	100	0.85	44	0.406	3	5.01	0.006	0.02	0.1	0.12	13.4	0.1	0.03	12	1.3	0.1
500N 375E	LH-12	337136	5522946	0.7	109.4	5.6	79	0.1	52.4	27.3	821	6.70	4.2	4.1	1.1	17	0.2	0.4	0.1	229	0.86	0.076	9	87	0.73	53	0.526	3	4.85	0.007	0.02	0.1	0.12	14.7	0.1	0.03	14	1.0	0.1
500N 400E	LH-12	337154	5522959	0.5	90.6	4.4	75	0.1	41.7	24.9	1479	6.97	2.1	10.9	0.8	15	0.2	0.4	0.1	218	0.94	0.068	5	73	0.50	45	0.435	4	3.48	0.008	0.01	0.1	0.09	9.0	0.1	0.03	14	0.3	0.1
20900N 36800E	LL-12	336800	5520900	0.5	73.8	4.6	42	0.1	25.7	13.1	268	5.68	4.6	2.7	1.0	8	0.2	0.4	0.1	242	0.77	0.047	3	90	0.50	18	0.447	5	3.13	0.007	0.01	0.1	0.06	8.7	0.1	0.03	12	0.3	0.1
20900N 36850E	LL-12	336850	5520900	0.5	362.9	8.1	84	0.1	62.6	23.2	751	4.87	9.2	2.5	0.6	15	0.5	0.4	0.1	172	0.98	0.048	4	56	0.68	26	0.444	5	3.04	0.008	0.02	0.1	0.07	7.0	0.1	0.03	9	0.3	0.1
20900N 36900E	LL-12	336900	5520900	0.3	55.2	12.4	50	0.2	13.9	18.4	1334	5.00	3.4	1.3	0.5	10	0.2	0.3	0.1	215	0.96	0.036	3	52	0.33	21	0.499	5	1.54	0.007	0.01	0.1	0.08	8.2	0.1	0.03	10	0.3	0.1
20900N 36950E	LL-12	336950	5520900	0.2	77.8	14.9	37	0.1	7.1	8.0	504	5.21	1.7	2.9	0.4	4	0.2	0.4	0.1	186	0.35	0.031	3	22	0.11	16	0.502	2	0.61	0.011	0.01	0.1	0.04	2.7	0.1	0.03	8	0.3	0.1
20900N 37000E	LL-12	337000	5520900	0.9	100.8	9.7	106	0.2	37.1	41.4	5133	7.18	222.8	1.4	0.4	25	0.5	0.5	0.1	164	0.96	0.081	10	68	0.53	63	0.211	4	3.94	0.009	0.02	0.1	0.18	18.1	0.1	0.06	6	1.4	0.1
20900N 37050E	LL-12	337050	5520900	0.5	53.7	4.6	46	0.1	23.2	12.4	225	5.74	5.6	3.5	0.7	9	0.2	0.6	0.1	223	0.59	0.021	3	60	0.24	24	0.495	3	2.76	0.007	0.01	0.1	0.07	4.5	0.1	0.03	12	0.3	0.1
20900N 37100E	LL-12	337100	5520900	0.3	84.0	5.2	49	0.1	33.8	15.7	332	4.77	7.9	1.8	0.7	13	0.2	1.2	0.1	196	0.76	0.021	2	60	0.45	36	0.459	4	3.12	0.007	0.01	0.1	0.04	5.9	0.1	0.03	10	0.3	0.1
20900N 37150E	LL-12	337150	5520900	0.6	57.6	9.6	64	0.1	18.8	17.2	682	9.32	53.0	3.0	0.6	8	0.3	0.6	0.2	345	0.99	0.084	3	74	0.40	25	0.530	5	2.40	0.008	0.01	0.1	0.07	5.2	0.1	0.03	19	0.3	0.1
20900N 37200E	LL-12	337200	5520900	0.2	23.1	9.8	33	0.1	8.6	13.1	729	3.95	3.5	0.6	0.3	8	0.2	0.2	0.1	176	0.92	0.032	2	26	0.19	15	0.403	6	1.30	0.008	0.01	0.1	0.04	4.9	0.1	0.03	9	0.3	0.1
20900N 37250E	LL-12	337250	5520900	0.3	84.0	10.5	52	0.2	14.0	24.2	1283	3.78	2.1	1.6	0.4	9	0.9	0.3	0.2	160	1.23	0.036	3	36	0.37	19	0.490	6	1.90	0.006	0.01	0.1	0.05	6.1	0.1	0.05	9	0.3	0.1
20900N 37300E	LL-12	337300	5520900	0.5	62.4	14.0	53	0.1	21.2	26.2	1737	4.69	13.5	1.5	0.4	19	0.5	0.4	0.1	194	1.72	0.040	5	55	0.58	32	0.433	9	2.32	0.008	0.01	0.1	0.06	8.4	0.1	0.03	11	0.3	0.1
20900N 37350E	LL-12	337350	5520900	0.2	66.1	9.4	35	0.1	6.4	13.2	694	4.13	1.3	3.8	0.5	9	0.3	0.2	0.2	154	0.97	0.036	3	30	0.13	16	0.437	4	1.09	0.007	0.01	0.1	0.04	3.2	0.1	0.03	9	0.3	0.1
20900N 37400E	LL-12	337400	5520900	0.4	143.0	7.1	97	0.1	64.9	39.2	865	8.66	5.3	0.9	0.8	21	0.2	0.2	0.1	310	0.36	0.062	5	61	2.13	68	0.664	2	5.43	0.020	0.03	0.1	0.07	11.3	0.1	0.03	16	0.3	0.1
20900N 37450E	LL-12	337450	5520900	0.6	85.3	13.3	73	0.2	22.7	25.7	1669	8.41	17.6	1.9	0.6	17	0.5	0.5	0.2	314	0.56	0.068	6	57	0.44	38	0.530	3	2.95	0.007	0.03	0.1	0.11	5.5	0.1	0.03	19	0.3	0.1
20900N 37500E	LL-12	337500	5520900	0.6	215.9	14.5	94	0.2	48.7	42.0	3890	7.46	144.6	2.9	0.6	26	0.5	0.5	0.1	223	1.35	0.073	9	80	0.87	55	0.319	5	3.78	0.010	0.02	0.1	0.19	16.7	0.1	0.03	10	0.3	0.1
20900N 37550E	LL-12	337550	5520900	0.2	60.3	1.3	24	0.1	17.4	9.9	309	2.63	26.3	1.9	0.6	16	0.1	0.2	0.1	122	1.20	0.033	4	23	0.44	16	0.302	5	1.61	0.012	0.01	0.1	0.03	7.5	0.1	0.03	6	0.3	0.1
20900N 37600E	LL-12	337600	5520900	0.4	66.8	4.6	60	0.1	33.3	16.2	334	4.99	3.0	1.4	0.6	15	0.1	0.4	0.1	215	0.85	0.050	3	62	0.46	30	0.577	3	2.96	0.006	0.02	0.1	0.07	4.6	0.1	0.03	11	0.3	0.1
20900N 37650E	LL-12	337650	5520900	0.3	30.1	11.4	64	0.1	19.9	16.5	2204	4.26	3.8	0.5	0.6	15	0.2	0.5	0.1	165	1.09	0.106	3	47	0.28	40	0.445	3	2.03	0.007	0.02	0.1	0.07	5.4	0.1	0.03	10	0.3	0.1
20900N 37700E	LL-12	337700	5520900	0.3	8.7	14.9	40	0.1	18.7	18.3	2804	2.61	1.6	3.7	0.4	13	0.2	0.3	0.2	102	0.70	0.039	2	74	0.35	33	0.242	3	1.54	0.006	0.02	0.1	0.03	4.5	0.1	0.03	7	0.3	0.1
20900N 37750E	LL-12	337750	5520900	0.5	56.0	3.4	67	0.2	36.1	19.7	409	5.39	4.0	1.4	0.8	14	0.1	0.6	0.1	215	0.92	0.052	4	72	0.51	29	0.558	3	3.28	0.008	0.02	0.1	0.17	9.8	0.1	0.03	12	0.3	0.1
20900N 37800E	LL-12	337800	5520900	0.2	59.0	4.3	63	0.1	28.8	18.4	711	4.54	2.3	1.8	0.6	14	0.1	0.4	0.1	170	0.93	0.087	3	50	0.36	34	0.468	3	2.30	0.010	0.02	0.1	0.06	6.5	0.1	0.03	10	0.3	0.1
20900N 37850E	LL-12	337850	5520900	0.5	57.7	7.8	50	0.1	34.0	17.2	458	4.81	5.0	2.5	0.7	14	0.2	0.5	0.1	206	0.94	0.040	4	72	0.48	32	0.518	4	2.66	0.009	0.01	0.1	0.08	10.3	0.1	0.03	11	0.3	0.1
20900N 37900E	LL-12	337900	5520900	0.5	76.5	3.6	43	0.1	41.7	20.3	336	4.72	4.7	8.2	0.7	15	0.1	0.4	0.1	199	1.06	0.029	4	70	0.58	28	0.539	5	3.41	0.007	0.01	0.1	0.07	9.9	0.1	0.03	10	0.3	0.1
21000N 36800E	LL-12	336800	5521000	0.6	103.7	3.3	49	0.1	37.3	21.7	348	5.09	6.8	3.5	0.9	10	0.2	0.5	0.1	214	0.75	0.061	7	71	0.49	20	0.455	4	4.36	0.006	0.01	0.1	0.16	17.7	0.1	0.03	11	0.3	0.1
21000N 36850E	LL-12	336850	5521000	0.3	39.8	8.7	39	0.1	18.8	9.5	200	5.59	2.9	2.9	0.7	10	0.2	0.6	0.1	227	0.58	0.035	2	62	0.21	20	0.497	2	2.53	0.007	0.01	0.1	0.09	4.4	0.1	0.03	12	0.3	0.1
21000N 36900E	LL-12	336900	5521000	0.3	67.5	10.6	52	0.1	33.4	14.8	338	5.92	4.4	2.6	0.6	13	0.4	0.5	0.1	216	0.86	0.037	3	63	0.38	23	0.503	4	3.02	0.014	0.01	0.1	0.05	5.4	0.1	0.03	13	0.3	0.1
21000N 36950E	LL-12	336950	5521000	0.3	35.8	9.7	42	0.1	14.5	7.4	260	6.10	2.7	1.5	0.7	9	0.2	0.6	0.1	223	0.57	0.054	3	59	0.17	14	0.453	2	2.09	0.009	0.01	0.1	0.09	4.0	0.1	0.03	14	0.3	0.1
21000N 37000E	LL-12	337000	5521000	0.1	18.5	12.8	24	0.1	7.5	3.6	147	3.23	1.5	2.5	0.4	8	0.2	0.4	0.1	186	0.53	0.018	2	27	0.14	19	0.424	2	0.95	0.006	0.01	0.1	0.05	2.3	0.1	0.03	9	0.3	0.1
21000N 37050E	LL-12	337050	5521000																																					
21000N 37100E	LL-12	337100	5521000	0.4	59.6	7.3	65	0.1	28.0	13.8	302	6.87	5.0	2.2	0.7	12	0.2	0.6	0.1	228	0.66	0.068	2	75	0.36	26	0.540	3	3.10	0.009	0.02	0.1	0.09	5.8	0.1	0.03	14	0.3	0.1
21000N 37150E	LL-12	337150	5521000	0.3	56.6	14.3	58	0.1	21.5	33.3	3493	5.11	4.4	2.5	0.6	16	0.2	0.3	0.2	188	0.58	0.080	5	36	0.49	61	0.599	3	2.23	0.009	0.02	0.1	0.12	6.6	0.1	0.03	12	0.3	0.1
21000N 37200E	LL-12	337200	5521000	0.4	114.3	3.3	49	0.1	52.4	24.2	425	5.23	6.7	2.2	1.0	14	0.2	0.5	0.1	206	0.93	0.043	3	82	0.81	42	0.511	4	4.40	0.009	0.01	0.1	0.10	13.0	0.1	0.03	11	0.3	0.1
21000N 37250E	LL-12	337250	5521000	0.5	101.4	5.9	53	0.1	53.7	23.1	376	6.55	6.9	2.8	0.9	14	0.2	0.6	0.1	243	0.83	0.046	4	85	0.72	35	0.631	3	3.84	0.009	0.02	0.1	0.17	12.0	0.1	0.03	13	0.5	0.1
21000N 37300E	LL-12	337300	5521000	0.2	43.0	10.4	57	0.1	20.7	15.6	794	5.25	1.6	1.4	0.6	11	0.2	0.4	0.1	186	0.56	0.044	3	46	0.20	35	0.472	2	2.30	0.007	0.02	0.1	0.07	3.9	0.1	0.03	11	0.3	0.1
21000N 37350E	LL-12	337350	5521000	0.3	34.4	6.4	39	0.1	17.2	10.0	464	5.64	1.9	1.0	0.6	11	0.2	0.4	0.1	221	0.82	0.048	3	42	0.32	19	0.399	3	2.33	0.007	0.02	0.1	0.08	4.3	0.1	0.03	13	0.3	0.1
21000N 37400E	LL-12	337400	5521000	0.4	257.8	11.5	73	0.1	67.1	40.2	1918	6.80	18.7	3.7	0.4	35	0.3	0.3	0.1	231	1.08	0.063	6	107	2.55	55	0.309	5	4.04	0.011	0.03	0.1	0.05	15.6	0.1	0.03	14	0.3	0.1
21000N 37450E	LL-12	337450	5521000	0.4	170.3	12.4	73	0.1	48.0	30.9	2342	5.75	14.1	2.2	0.4	59	0.3	0.3	0.1	183	1.24	0.111	6	69	1.41	93	0.249	3	3.44	0.010	0.04	0.1	0.09	11.5	0.1	0.03	12	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
21000N 37500E	LL-12	337500	5521000	0.5	88.7	18.3	79	0.1	48.7	37.2	2647	6.54	6.1	3.1	0.4	27	0.4	0.3	0.2	228	1.69	0.059	5	83	1.50	35	0.478	5	3.22	0.023	0.03	0.1	0.12	13.4	0.1	0.03	13	0.3	0.1
21000N 37550E	LL-12	337550	5521000	0.4	73.5	8.2	68	0.1	25.9	21.9	2626	5.67	3.5	1.7	0.4	12	0.2	0.3	0.1	188	1.40	0.068	3	60	0.52	35	0.383	3	2.42	0.006	0.01	0.1	0.07	6.6	0.1	0.03	13	0.3	0.1
21000N 37600E	LL-12	337600	5521000	0.2	25.3	5.2	40	0.1	14.3	10.8	296	3.78	1.3	1.9	0.4	9	0.1	0.3	0.1	141	0.66	0.033	2	41	0.18	18	0.386	2	1.53	0.010	0.01	0.1	0.06	3.1	0.1	0.03	8	0.3	0.1
21000N 37650E	LL-12	337650	5521000	0.4	58.5	6.1	53	0.1	31.5	16.2	432	5.02	3.9	1.0	0.6	13	0.2	0.4	0.1	190	0.82	0.039	3	59	0.47	32	0.486	3	2.98	0.006	0.02	0.1	0.06	7.5	0.1	0.03	11	0.3	0.1
21000N 37700E	LL-12	337700	5521000	0.4	47.6	4.9	65	0.1	29.0	15.9	355	5.95	1.9	0.9	0.6	11	0.2	0.4	0.1	210	0.75	0.055	3	63	0.37	24	0.563	3	2.53	0.007	0.02	0.1	0.09	7.0	0.1	0.03	12	0.3	0.1
21000N 37750E	LL-12	337750	5521000	0.4	65.8	3.6	65	0.1	35.4	18.7	511	5.11	3.6	1.7	0.6	14	0.2	0.4	0.1	191	0.96	0.054	5	61	0.54	27	0.500	3	2.96	0.008	0.02	0.1	0.08	9.7	0.1	0.03	11	0.5	0.1
21000N 37800E	LL-12	337800	5521000	0.4	44.5	5.3	72	0.1	34.8	19.8	1034	4.88	3.8	1.1	0.5	15	0.1	0.4	0.1	189	1.02	0.043	5	61	0.54	30	0.443	3	2.63	0.011	0.01	0.1	0.06	7.1	0.1	0.03	10	0.3	0.1
21100N 36600E	LL-12	336600	5521100																																					
21100N 36650E	LL-12	336650	5521100																																					
21100N 36700E	LL-12	336700	5521100	0.6	106.4	3.8	54	0.1	35.8	19.4	431	5.70	6.6	2.3	0.7	11	0.1	0.5	0.1	212	0.76	0.043	6	67	0.56	32	0.467	3	3.25	0.007	0.02	0.1	0.11	11.0	0.1	0.03	12	0.3	0.1
21100N 36750E	LL-12	336750	5521100	0.2	12.2	12.1	52	0.1	8.2	11.7	573	6.11	1.1	0.3	0.6	6	0.3	0.3	0.3	201	0.74	0.055	3	35	0.13	20	0.516	2	1.25	0.008	0.01	0.1	0.07	3.8	0.1	0.03	12	0.3	0.1
21100N 36800E	LL-12	336800	5521100	0.7	104.9	4.3	67	0.1	47.3	22.2	406	6.88	4.8	2.2	1.0	8	0.2	0.5	0.1	241	0.70	0.058	3	94	0.66	25	0.526	3	4.75	0.005	0.02	0.1	0.14	12.3	0.1	0.03	14	0.8	0.1
21100N 36850E	LL-12	336850	5521100	0.1	7.0	18.4	19	0.1	3.2	2.8	122	2.16	1.5	1.7	0.2	4	0.2	0.4	0.2	152	0.86	0.019	2	12	0.07	12	0.357	3	0.74	0.009	0.01	0.1	0.05	1.3	0.1	0.03	6	0.3	0.1
21100N 36900E	LL-12	336900	5521100	0.4	69.3	3.3	62	0.1	32.9	18.5	378	6.08	5.3	2.0	0.6	10	0.2	0.5	0.1	207	0.69	0.042	3	72	0.49	27	0.491	2	3.46	0.007	0.01	0.1	0.07	6.4	0.1	0.03	12	0.3	0.1
21100N 36950E	LL-12	336950	5521100	0.3	56.9	22.2	100	0.1	28.7	37.6	3779	7.55	1.3	1.1	0.6	22	0.3	0.4	0.2	221	0.66	0.061	5	40	0.74	67	0.710	2	2.53	0.021	0.03	0.1	0.13	8.2	0.1	0.03	19	0.3	0.1
21100N 37000E	LL-12	337000	5521100	0.4	34.0	8.1	60	0.1	17.0	9.4	427	8.28	1.9	2.3	0.7	7	0.2	0.4	0.2	245	0.76	0.104	2	66	0.29	17	0.518	1	2.56	0.007	0.01	0.1	0.09	5.1	0.1	0.03	19	0.3	0.1
21100N 37050E	LL-12	337050	5521100	0.4	83.3	3.6	56	0.1	43.0	20.9	318	7.24	4.3	1.6	0.9	8	0.2	0.5	0.1	260	0.63	0.051	3	84	0.63	20	0.544	2	4.39	0.007	0.01	0.1	0.14	11.8	0.1	0.03	14	0.5	0.1
21100N 37100E	LL-12	337100	5521100	0.4	52.5	3.6	54	0.1	30.6	17.0	382	5.93	2.7	0.3	0.6	10	0.1	0.4	0.1	213	0.76	0.038	2	59	0.40	34	0.604	2	3.13	0.007	0.01	0.1	0.15	5.6	0.1	0.03	12	0.3	0.1
21100N 37150E	LL-12	337150	5521100	0.4	50.0	5.1	59	0.1	29.2	17.0	395	5.36	4.0	3.2	0.7	11	0.2	0.4	0.1	189	0.78	0.053	3	64	0.43	23	0.512	2	3.02	0.006	0.02	0.1	0.09	7.1	0.1	0.03	12	0.3	0.1
21100N 37200E	LL-12	337200	5521100	0.4	72.8	3.3	64	0.1	43.2	19.9	369	6.06	4.7	2.5	0.8	11	0.1	0.4	0.1	223	0.71	0.050	4	71	0.66	30	0.602	3	4.22	0.007	0.02	0.1	0.12	10.8	0.1	0.03	13	0.5	0.1
21100N 37250E	LL-12	337250	5521100	0.2	26.1	4.0	32	0.1	13.0	8.5	271	4.84	1.9	0.3	0.5	11	0.1	0.4	0.1	201	0.70	0.028	2	45	0.20	17	0.473	2	1.56	0.008	0.01	0.1	0.05	3.7	0.1	0.03	11	0.3	0.1
21100N 37300E	LL-12	337300	5521100	0.4	49.5	5.1	62	0.1	25.5	19.8	1190	5.55	2.5	1.1	0.5	17	0.2	0.2	0.1	195	0.86	0.053	3	38	1.05	69	0.513	2	2.72	0.013	0.02	0.1	0.04	6.4	0.1	0.03	12	0.3	0.1
21100N 37350E	LL-12	337350	5521100	0.4	147.2	2.2	45	0.1	40.5	19.8	563	4.35	8.6	2.7	0.5	15	0.1	0.2	0.1	175	1.14	0.029	4	69	0.98	32	0.350	5	3.08	0.007	0.03	0.1	0.06	12.6	0.1	0.03	9	0.3	0.1
21100N 37400E	LL-12	337400	5521100	0.3	15.4	5.8	57	0.1	23.4	16.3	355	6.03	1.8	1.6	0.4	14	0.2	0.2	0.1	211	2.14	0.059	2	69	0.70	12	0.554	6	2.93	0.008	0.01	0.1	0.04	6.8	0.1	0.03	14	0.3	0.1
21100N 37450E	LL-12	337450	5521100	0.3	106.4	8.1	68	0.1	82.9	36.8	1503	6.34	36.9	4.2	0.2	32	0.1	0.3	0.1	198	1.90	0.049	6	174	2.89	33	0.274	7	3.87	0.012	0.06	0.1	0.05	26.8	0.1	0.03	13	0.6	0.1
21100N 37500E	LL-12	337500	5521100	0.3	127.8	11.0	58	0.1	38.9	22.6	1000	4.93	7.7	1.1	0.7	27	0.1	0.5	0.1	183	1.08	0.041	7	66	0.89	57	0.365	3	3.58	0.009	0.03	0.1	0.05	15.7	0.1	0.03	11	0.5	0.1
21100N 37550E	LL-12	337550	5521100	0.4	86.7	3.1	64	0.1	41.8	21.3	447	5.22	4.6	1.6	0.7	13	0.2	0.4	0.1	193	0.89	0.058	3	68	0.60	39	0.499	3	3.93	0.007	0.02	0.1	0.11	9.1	0.1	0.03	11	0.3	0.1
21100N 37600E	LL-12	337600	5521100	0.3	82.8	2.3	55	0.1	45.7	22.9	534	5.41	4.9	3.8	0.7	19	0.1	0.4	0.1	217	0.88	0.046	6	85	0.76	58	0.484	3	4.05	0.008	0.02	0.1	0.09	17.7	0.1	0.03	11	0.3	0.1
21100N 37650E	LL-12	337650	5521100	0.3	67.4	3.4	79	0.1	42.4	20.3	537	5.26	4.2	0.7	0.5	12	0.1	0.4	0.1	183	0.86	0.098	2	64	0.62	37	0.516	2	3.48	0.007	0.02	0.1	0.09	6.8	0.1	0.03	11	0.3	0.1
21100N 37700E	LL-12	337700	5521100	0.4	89.7	2.2	68	0.1	48.0	22.5	574	5.39	5.9	1.1	0.6	12	0.2	0.4	0.1	200	0.94	0.053	2	69	0.79	62	0.505	4	3.87	0.007	0.02	0.1	0.10	10.7	0.1	0.03	11	0.3	0.1
21200N 36500E	LL-12	336500	5521200																																					
21200N 36550E	LL-12	336550	5521200																																					
21200N 36600E	LL-12	336600	5521200	0.5	243.8	5.3	66	0.6	44.1	24.6	549	6.56	88.6	1.0	0.2	11	0.2	1.6	0.1	186	0.66	0.038	11	66	0.30	14	0.064	2	1.91	0.005	0.01	0.1	0.08	12.4	0.1	0.03	8	1.0	0.1
21200N 36650E	LL-12	336650	5521200	0.4	22.7	9.6	39	0.1	11.5	5.5	173	5.11	1.8	2.3	0.3	12	0.1	0.4	0.1	237	0.61	0.024	2	34	0.20	22	0.531	2	1.34	0.007	0.01	0.1	0.08	2.4	0.1	0.03	13	0.3	0.1
21200N 36700E	LL-12	336700	5521200	0.3	16.9	17.5	31	0.2	8.8	4.3	290	3.36	2.2	0.8	0.3	12	0.1	0.5	0.2	148	0.57	0.032	2	28	0.14	22	0.356	1	0.99	0.007	0.02	0.1	0.06	2.2	0.1	0.03	8	0.3	0.1
21200N 36750E	LL-12	336750	5521200	0.4	82.1	8.3	69	0.1	30.1	16.2	456	6.25	3.6	2.1	0.6	9	0.2	0.7	0.1	229	0.83	0.052	2	69	0.45	22	0.560	3	3.54	0.006	0.01	0.1	0.08	6.9	0.1	0.03	14	0.3	0.1
21200N 36800E	LL-12	336800	5521200	0.3	98.8	4.2	66	0.1	48.6	21.8	345	5.96	4.6	0.8	0.8	9	0.2	0.5	0.1	215	0.68	0.042	3	86	0.63	34	0.479	2	4.73	0.007	0.01	0.1	0.10	11.8	0.1	0.03	12	0.5	0.1
21200N 36850E	LL-12	336850	5521200	0.3	28.1	7.6	49	0.1	17.4	9.0	292	5.17	1.9	0.8	0.4	12	0.2	0.5	0.1	195	0.73	0.038	2	43	0.26	27	0.409	2	1.88	0.007	0.01	0.1	0.05	4.1	0.1	0.03	11	0.3	0.1
21200N 36900E	LL-12	336900	5521200	0.2	46.5	6.3	64	0.1	24.1	16.2	1502	5.83	1.7	1.6	0.6	13	0.1	0.4	0.1	199	0.75	0.060	4	49	0.48	36	0.556	3	2.56	0.007	0.01	0.1	0.06	7.4	0.1	0.03	13	0.3	0.1
21200N 36950E	LL-12	336950	5521200	0.5	84.9	4.6	59	0.1	39.3	19.9	408	6.64	3.4	1.3	1.0	12	0.2	0.3	0.1	238	0.64	0.050	4	67	0.68	32	0.596	2	4.14	0.007	0.02	0.1	0.16	12.5	0.1	0.03	14	0.5	0.1
21200N 37000E	LL-12	337000	5521200	0.2	26.7	14.0	63	0.1	15.1	19.6	1944	5.38	1.0	4.0	0.5	11	0.2	0.3	0.3	181	0.43	0.055	4	37	0.32	51	0.741	2	1.45	0.008	0.02	0.1	0.08	4.2	0.1	0.03	14	0.3	0.1
21200N 37050E	LL-12	337050	5521200	0.5	95.3	5.7	54	0.1	40.0	19.9	442	6.32	4.6	3.6	0.9	12	0.2	0.4	0.1	232	0.78	0.052	5	71	0.72	29	0.604	5	4.01	0.006	0.02	0.1	0.11	11.4	0.1	0.03	13	0.3	0.1
21200N 37100E	LL-12	337100	5521200	0.4	36.7	4.4	40	0.1	27.4	14.5	238	5.94	2.5	3.0	0.5	9	0.1	0.3	0.1	211	0.70	0.047	2	64	0.34	19	0.531	2	2.79	0.005	0.01	0.1	0.08	4.6	0.1	0.03	12	0.3	0.1
21200N 37150E	LL-12	337150	5521200	0.4	78.8	8.2	57	0.1	29.3	18.7	872	4.92	4.4	2.5	0.5	14	0.2	0.4	0.1	185	0.76	0.068	4	49	0.55	28	0.446	3	2.68	0.006	0.02	0.1	0.09	6.9	0.1	0.03	11	0.3	0.1
21200N 37200E	LL-12	337200	5521200	0.3	56.3	8.1	58	0.1	31.7	18.8	1092	5.50	5.2	4.1	0.6	10	0.2	0.4	0.1	219	0.82	0.056	3	56	0.52	33	0.544	4	2.60	0.006	0.01	0.1	0.07	5.0	0.1	0.03	12	0.3	0.1
21200N 37250E	LL-12	337250	5521200	0.3	20.3	16.1	63	0.1	31.7	19.4	813	5.17	2.0	7.9	0.4	50	0.3	0.3	0.2	177	1.46	0.058	4	60	0.85	21	0.363	5	2.83	0.008	0.02	0.1	0.05	6.0	0.1	0.03	12	0.3	0.1
21200N 37300E	LL-12	337300	5521200	0.2	8.8	14.1	41	0.1	23.4	13.4	376	4.08	1.5	3.2	0.3	27	0.1	0.3	0.2	161	1.93	0.022	3	46	0.91	9	0.445	6	2.41	0.008	0.01	0.1	0.05	6.8	0.1	0.03	10	0.3	0.1
21200N 37350E	LL-12	337350	5521200																																					
21200N 37400E	LL-12	337400	5521200	0.8	409.4	8.8	104	0.2	55.0	54.3	2927	11.80	34.8	3.7	0.5	22	0.2	0.2	0.1	327	1.91	0.139	10	75	2.51	26	0.457	4	3.92	0.006	0.01	0.1	0.06	24.3	0.1	0.03	18	0.3	0.1
21200N 37450E	LL-12	337450	5521200	0.3	108.2	2.7	54	0.1	37.5	22.3	758	4.97	6.2	4.0	0.8	26	0.1	0.3	0.1	186	1.28	0.047	7	62	0.84	50	0.388	4	3.25	0.027	0.03	0.1	0.07	15.9	0.1	0.03	11	0.3	0.1
21200N 37500E	LL-12	337500	5521200	0.3	78.0	4.3	51	0.1	33.4	19.6	1342	4.67	4.0	2.3	0.5	19	0.1	0.3	0.1	185	1.22	0.056	4	55	0.58	40	0.428	4	3.05	0.017	0.03	0.1	0.02	10.8	0.1	0.03	11	0.3	0.1
21200N 37550E	LL-12	337550	5521200	0.2	30.4	10.5	43	0.1	18.1	15.2	1377	4.27	4.5	1.9	0.5	14	0.1	0.4	0.2	161	0.88	0.085	2	47	0.23	32	0.395	3	1.88	0.009	0.03	0.1	0.07	4.4	0.1	0.03	10	0.3	0.1
21200N 37600E	LL-12	337600	5521200	0.4	47.9	3.8	71	0.1	30.1	15.6	381	5.09	2.7	2.2	0.6	12	0.1	0.3	0.1	187	0.85	0.054	3	56	0.40	30	0.516	3	2.78	0.011	0.01	0.1	0.07	6.4	0.1	0.03	11	0.3	0.1
21300N 36400E	LL-12	336400	5521300																																					
21300N 36450E	LL-12	336450	5521300	0.2	22.1	11.2	58	0.1	12.8	21.9	1498	5.43	1.3	3.0	0.5	9	0.2	0.2	0.2	155	0.82	0.051	3	28	0.15	22	0.284	5	1.62	0.008	0.02	0.1	0.11	3.3	0.1	0.03	13	0.3	0.1
21300N 36500E	LL-12	336500	5521300	0.4	84.1	9.5	76	0.2	19.2	40.1	2749	5.69	1.7	2.1	0.7	8	0.2	0.3	0.2	176	0.51	0.100	5	58	0.15	25	0.420	2	2.74	0.006	0.01	0.1	0.12	5.5	0.1	0.03	13	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
21300N 36550E	LL-12	336550	5521300																																				
21300N 36600E	LL-12	336600	5521300	0.3	34.0	5.6	26	0.1	17.2	8.7	180	4.67	1.5	3.4	0.4	11	0.1	0.3	0.1	191	0.64	0.026	4	49	0.22	15	0.396	2	2.27	0.008	0.01	0.1	0.09	4.8	0.1	0.03	12	0.3	0.1
21300N 36650E	LL-12	336650	5521300	0.4	31.0	11.3	40	0.1	20.4	9.3	227	4.99	2.2	2.2	0.5	10	0.2	0.5	0.1	189	0.71	0.027	2	40	0.31	23	0.449	2	2.10	0.006	0.01	0.1	0.07	3.9	0.1	0.03	11	0.3	0.1
21300N 36700E	LL-12	336700	5521300	0.4	163.8	2.4	52	0.1	57.7	24.1	429	5.87	6.7	5.9	0.9	10	0.2	0.4	0.1	225	0.78	0.040	3	100	0.89	46	0.477	3	4.99	0.007	0.01	0.1	0.16	18.7	0.1	0.03	12	0.6	0.1
21300N 36750E	LL-12	336750	5521300	0.6	147.1	2.5	62	0.1	49.3	24.4	514	6.63	10.6	4.8	1.0	8	0.1	0.3	0.1	219	0.72	0.118	3	84	0.82	26	0.467	4	5.74	0.006	0.01	0.1	0.20	16.5	0.1	0.03	12	0.7	0.1
21300N 36800E	LL-12	336800	5521300	0.2	39.7	6.5	67	0.1	16.5	17.0	675	4.19	2.4	3.6	0.7	13	0.4	0.2	0.1	140	0.92	0.045	3	37	0.33	22	0.299	3	1.73	0.005	0.01	0.1	0.04	4.0	0.1	0.03	10	0.3	0.1
21300N 36850E	LL-12	336850	5521300	0.4	49.0	11.8	62	0.1	20.4	24.9	1265	5.84	1.5	2.1	0.5	27	0.3	0.3	0.2	156	0.66	0.091	5	43	0.35	25	0.335	2	2.24	0.006	0.02	0.1	0.09	5.3	0.1	0.03	14	0.3	0.1
21300N 36900E	LL-12	336900	5521300	0.4	38.7	8.0	57	0.1	19.6	28.9	686	5.25	3.3	2.1	0.5	10	0.2	0.3	0.1	170	0.75	0.102	3	40	0.34	21	0.396	2	2.09	0.005	0.02	0.1	0.11	4.6	0.1	0.03	12	0.3	0.1
21300N 36950E	LL-12	336950	5521300	0.4	47.0	4.0	56	0.1	23.8	23.4	526	5.87	2.6	1.7	0.5	11	0.2	0.2	0.1	199	0.62	0.088	3	47	0.20	19	0.468	2	3.69	0.010	0.01	0.1	0.16	5.8	0.1	0.03	12	0.3	0.1
21300N 37000E	LL-12	337000	5521300	0.4	52.6	4.0	74	0.1	30.9	16.7	617	6.33	10.4	1.8	0.7	16	0.2	0.3	0.1	235	0.90	0.077	3	67	0.60	28	0.578	4	2.60	0.009	0.01	0.1	0.06	5.8	0.1	0.03	12	0.3	0.1
21300N 37050E	LL-12	337050	5521300	0.6	82.6	3.7	45	0.1	33.1	23.7	473	5.82	4.2	3.5	0.6	12	0.1	0.2	0.1	264	0.80	0.037	5	52	0.59	18	0.511	3	3.02	0.006	0.01	0.1	0.05	7.1	0.1	0.03	13	0.3	0.1
21300N 37100E	LL-12	337100	5521300	0.3	18.1	17.7	56	0.1	17.3	14.1	956	5.04	2.4	1.6	0.4	10	0.2	0.2	0.2	207	1.83	0.056	2	75	0.56	26	0.513	4	2.34	0.011	0.01	0.1	0.09	6.6	0.1	0.03	11	0.3	0.1
21300N 37150E	LL-12	337150	5521300	0.2	11.8	10.7	38	0.1	12.0	6.5	249	4.24	0.9	1.1	0.3	6	0.2	0.2	0.1	185	0.93	0.023	2	53	0.18	11	0.384	2	1.40	0.007	0.01	0.1	0.05	4.2	0.1	0.03	10	0.3	0.1
21300N 37200E	LL-12	337200	5521300	0.6	201.8	4.5	50	0.1	25.1	13.0	399	5.84	4.8	2.9	0.9	10	0.3	0.3	0.1	207	0.82	0.107	4	51	0.41	19	0.456	2	3.43	0.006	0.02	0.1	0.07	9.6	0.1	0.03	12	0.3	0.1
21300N 37250E	LL-12	337250	5521300	0.6	44.8	4.7	55	0.1	30.4	13.9	310	5.52	3.0	2.4	0.5	11	0.1	0.3	0.1	204	0.81	0.070	2	57	0.40	33	0.520	2	3.05	0.007	0.02	0.1	0.16	5.1	0.1	0.03	13	0.3	0.1
21300N 37300E	LL-12	337300	5521300	0.5	100.0	3.9	61	0.1	44.4	22.8	530	5.81	3.8	3.5	0.8	14	0.1	0.3	0.1	216	0.95	0.049	3	80	0.67	39	0.544	3	3.91	0.010	0.02	0.1	0.09	12.4	0.1	0.03	13	0.3	0.1
21300N 37350E	LL-12	337350	5521300	0.5	82.4	4.0	60	0.1	47.1	21.6	474	5.82	4.8	1.7	0.8	13	0.2	0.3	0.1	216	0.89	0.056	2	80	0.66	58	0.543	3	4.17	0.006	0.02	0.1	0.11	9.1	0.1	0.03	13	0.3	0.1
21300N 37400E	LL-12	337400	5521300	0.4	72.3	3.7	84	0.1	45.1	21.5	599	5.90	3.9	1.1	0.7	13	0.1	0.4	0.1	205	0.87	0.095	2	71	0.60	45	0.557	2	4.40	0.006	0.02	0.1	0.08	6.3	0.1	0.03	14	0.3	0.1
21300N 37450E	LL-12	337450	5521300	0.5	57.7	2.8	57	0.1	36.6	23.5	534	4.49	2.7	5.7	0.6	16	0.1	0.2	0.1	175	1.03	0.037	6	53	0.56	41	0.436	3	3.28	0.010	0.01	0.1	0.10	11.2	0.1	0.03	10	0.3	0.1
21300N 37500E	LL-12	337500	5521300	0.4	62.9	2.7	66	0.1	39.4	20.6	555	5.37	3.2	1.9	0.6	13	0.1	0.2	0.1	201	0.89	0.056	5	66	0.51	35	0.510	3	3.33	0.008	0.01	0.1	0.13	9.7	0.1	0.03	12	0.3	0.1
21400N 36300E	LL-12	336300	5521400	0.8	108.3	6.3	134	0.3	86.7	53.8	1109	5.62	18.8	2.3	0.3	17	0.2	0.1	0.1	152	0.70	0.072	5	58	0.96	38	0.236	4	3.45	0.010	0.02	0.1	0.10	4.9	0.1	0.03	14	0.5	0.1
21400N 36350E	LL-12	336350	5521400	0.3	25.6	8.3	46	0.1	13.5	12.2	410	7.86	2.7	2.4	0.6	8	0.3	0.2	0.2	258	1.34	0.047	3	63	0.33	19	0.599	5	1.81	0.006	0.01	0.1	0.04	4.6	0.1	0.03	13	0.3	0.1
21400N 36400E	LL-12	336400	5521400	0.3	52.3	8.9	59	0.1	23.1	12.2	301	6.14	3.8	5.3	0.6	11	0.2	0.4	0.1	227	0.70	0.035	2	53	0.31	27	0.481	2	2.30	0.007	0.01	0.1	0.08	4.8	0.1	0.03	12	0.3	0.1
21400N 36450E	LL-12	336450	5521400	0.3	96.9	13.3	57	0.1	21.7	11.5	232	6.19	10.7	6.2	0.2	8	0.1	0.3	0.1	225	0.42	0.027	2	116	0.40	18	0.066	2	1.68	0.004	0.01	0.1	0.05	6.8	0.1	0.03	9	0.3	0.1
21400N 36500E	LL-12	336500	5521400	0.2	55.6	13.8	32	0.1	19.4	9.2	286	3.49	4.6	2.5	0.4	6	0.1	0.4	0.1	134	0.43	0.022	3	37	0.20	22	0.266	3	1.74	0.004	0.01	0.1	0.07	4.1	0.1	0.03	7	0.3	0.1
21400N 36550E	LL-12	336550	5521400	0.2	24.9	5.0	49	0.1	15.6	10.8	451	4.19	4.1	3.5	0.4	7	0.1	0.3	0.1	164	0.52	0.038	2	45	0.17	19	0.314	3	1.63	0.004	0.01	0.1	0.03	3.7	0.1	0.03	9	0.3	0.1
21400N 36600E	LL-12	336600	5521400	0.4	70.6	3.8	82	0.1	39.1	29.2	1132	6.42	4.6	0.3	0.7	11	0.1	0.4	0.1	204	0.66	0.027	8	78	0.47	35	0.424	2	3.94	0.007	0.02	0.1	0.07	12.2	0.1	0.03	12	0.3	0.1
21400N 36650E	LL-12	336650	5521400	0.3	34.2	11.6	37	0.1	18.2	7.6	246	5.71	5.6	2.3	0.5	9	0.1	0.6	0.1	234	0.60	0.049	2	49	0.24	17	0.446	3	1.79	0.006	0.02	0.1	0.09	3.9	0.1	0.03	12	0.3	0.1
21400N 36700E	LL-12	336700	5521400	0.4	29.9	9.3	35	0.1	14.7	7.0	216	5.54	12.2	1.9	0.4	10	0.3	0.5	0.1	233	0.67	0.088	2	46	0.20	22	0.462	2	1.62	0.006	0.01	0.1	0.08	3.9	0.1	0.03	13	0.3	0.1
21400N 36750E	LL-12	336750	5521400	0.4	93.6	5.2	65	0.1	42.1	22.9	524	6.30	4.7	2.8	0.8	11	0.2	0.4	0.1	209	0.73	0.044	4	70	0.52	48	0.473	3	3.84	0.006	0.01	0.1	0.09	8.8	0.1	0.03	13	0.3	0.1
21400N 36800E	LL-12	336800	5521400	0.3	40.6	6.9	28	0.1	17.7	9.0	343	5.06	2.3	2.7	0.5	10	0.1	0.4	0.1	205	0.68	0.027	2	46	0.23	26	0.466	3	1.91	0.006	0.01	0.1	0.06	4.5	0.1	0.03	12	0.3	0.1
21400N 36850E	LL-12	336850	5521400	0.4	163.8	3.2	60	0.1	38.7	18.9	404	5.74	6.4	2.4	0.8	10	0.3	0.4	0.1	206	0.86	0.079	3	61	0.62	23	0.477	5	3.55	0.005	0.02	0.1	0.11	8.4	0.1	0.03	11	0.3	0.1
21400N 36900E	LL-12	336900	5521400	0.4	66.6	8.2	55	0.1	28.1	13.9	580	5.49	5.6	1.5	0.6	13	0.2	0.4	0.1	202	0.96	0.062	3	53	0.47	31	0.513	3	2.66	0.006	0.01	0.1	0.08	6.4	0.1	0.03	11	0.3	0.1
21400N 36950E	LL-12	336950	5521400	0.4	50.4	9.7	41	0.1	15.7	18.8	1098	3.87	3.2	1.1	0.4	15	0.1	0.4	0.1	159	0.81	0.026	5	34	0.22	25	0.298	2	1.68	0.006	0.01	0.1	0.06	4.2	0.1	0.03	9	0.3	0.1
21400N 37000E	LL-12	337000	5521400	0.3	65.6	3.7	52	0.1	33.6	17.7	357	5.64	4.0	3.0	0.7	11	0.1	0.5	0.1	218	0.93	0.037	2	65	0.56	24	0.571	4	3.33	0.007	0.01	0.1	0.10	7.8	0.1	0.03	13	0.6	0.1
21400N 37050E	LL-12	337050	5521400	0.4	44.7	5.1	36	0.1	23.4	12.1	273	6.12	3.3	16.9	0.6	11	0.1	0.3	0.1	242	0.82	0.032	2	57	0.36	20	0.585	2	2.70	0.006	0.01	0.1	0.09	5.6	0.1	0.03	12	0.3	0.1
21400N 37100E	LL-12	337100	5521400	0.4	65.8	2.6	53	0.1	30.4	16.1	316	5.72	3.8	35.4	0.7	11	0.1	0.3	0.1	236	0.85	0.053	3	51	0.48	24	0.519	4	3.39	0.008	0.01	0.1	0.11	9.8	0.1	0.03	11	0.3	0.1
21400N 37150E	LL-12	337150	5521400	0.4	95.9	5.5	64	0.1	41.1	20.9	520	4.96	7.1	2.8	0.7	16	0.2	0.4	0.1	186	0.93	0.085	3	62	0.73	49	0.509	4	3.78	0.007	0.02	0.1	0.10	9.9	0.1	0.03	11	0.3	0.1
21400N 37200E	LL-12	337200	5521400	0.3	42.0	5.2	50	0.1	29.9	13.0	329	4.65	5.0	0.9	0.6	15	0.1	0.3	0.1	170	0.90	0.060	2	56	0.45	34	0.467	3	2.73	0.006	0.02	0.1	0.08	4.9	0.1	0.03	11	0.3	0.1
21400N 37250E	LL-12	337250	5521400	0.4	73.2	5.0	64	0.1	35.9	17.2	501	5.17	5.4	1.8	0.7	12	0.2	0.4	0.1	194	0.87	0.059	3	62	0.57	31	0.493	3	3.19	0.006	0.01	0.1	0.09	7.6	0.1	0.03	11	0.3	0.1
21400N 37300E	LL-12	337300	5521400	0.6	71.0	13.2	84	0.1	45.0	26.5	892	6.29	5.0	1.2	0.7	13	0.2	0.4	0.1	198	0.66	0.115	5	83	0.52	36	0.445	2	3.91	0.006	0.02	0.1	0.07	9.3	0.1	0.03	13	0.3	0.1
21400N 37350E	LL-12	337350	5521400	0.4	50.4	6.8	61	0.1	31.1	18.8	1121	4.52	3.9	2.2	0.5	20	0.2	0.4	0.1	171	1.09	0.055	6	56	0.52	34	0.365	2	2.63	0.008	0.01	0.1	0.05	8.6	0.1	0.03	10	0.3	0.1
21400N 37400E	LL-12	337400	5521400	0.3	29.0	6.8	61	0.1	19.7	14.4	550	3.82	2.3	2.8	0.4	18	0.1	0.3	0.1	149	1.03	0.046	4	44	0.33	20	0.327	2	1.88	0.008	0.01	0.1	0.06	5.1	0.1	0.03	8	0.3	0.1
21500N 36200E	LL-12	336200	5521500	0.5	47.1	4.6	81	0.1	21.7	13.0	319	6.68	8.2	1.0	0.6	10	0.2	0.8	0.1	244	0.52	0.052	3	60	0.34	29	0.523	3	2.20	0.007	0.02	0.1	0.05	4.1	0.1	0.03	13	0.6	0.1
21500N 36250E	LL-12	336250	5521500	0.7	82.7	3.5	84	0.2	36.8	29.1	5529	5.37	12.3	4.3	0.4	18	0.5	0.5	0.1	180	0.95	0.055	9	72	0.57	51	0.258	5	3.75	0.010	0.02	0.1	0.12	17.5	0.1	0.03	9	1.7	0.1
21500N 36300E	LL-12	336300	5521500	0.6	114.2	3.7	74	0.1	44.1	21.7	442	7.06	5.1	1.3	0.7	11	0.1	0.6	0.1	273	0.72	0.062	4	72	0.59	35	0.545	4	4.30	0.016	0.02	0.1	0.11	10.5	0.1	0.03	14	0.3	0.1
21500N 36350E	LL-12	336350	5521500	0.4	114.7	2.0	54	0.1	49.8	24.6	461	5.89	8.4	4.3	0.8	13	0.1	0.5	0.1	252	0.84	0.035	10	93	0.91	44	0.514	6	4.20	0.012	0.02	0.1	0.14	22.7	0.1	0.03	12	1.0	0.1
21500N 36400E	LL-12	336400	5521500	0.6	145.8	3.6	71	0.1	57.4	27.8	449	6.86	8.2	1.5	1.1	13	0.1	0.6	0.1	250	0.67	0.054	3	101	0.79	70	0.521	3	5.88	0.008	0.02	0.1	0.11	12.1	0.1	0.03	13	0.5	0.1
21500N 36450E	LL-12	336450	5521500	0.5	113.7	2.5	55	0.1	47.4	20.7	318	6.72	7.3	2.7	0.8	15	0.1	0.4	0.1	275	0.77	0.047	3	86	0.67	54	0.562	4	4.29	0.008	0.01	0.1	0.10	9.4	0.1	0.03	13	0.6	0.1
21500N 36500E	LL-12	336500	5521500	0.4	108.6	3.1	72	0.1	53.2	25.4	589	7.03	6.3	1.5	0.9	10	0.1	0.6	0.1	265	0.73	0.068	2	101	0.78	42	0.515	3	4.97	0.007	0.02	0.1	0.13	11.4	0.1	0.03	13	0.3	0.1
21500N 36550E	LL-12	336550	5521500	0.4	117.3	2.0	54	0.1	54.4	26.8	441	5.89	6.8	16.3	0.9	12	0.1	0.5	0.1	231	0.82	0.029	3	88	1.00	42	0.500	4	4.21	0.013	0.02	0.1	0.10	15.6	0.1	0.03	11	0.7	0.1
21500N 36600E	LL-12	336600	5521500	0.4	78.9	3.3	71	0.1	41.7	23.8	873	5.53	7.2	1.7	0.7	11	0.1	0.6	0.1	215	0.87	0.065	3	69	0.60	29	0.528	4	3.79	0.008	0.02	0.1	0.07	8.2	0.1	0.03	12	0.7	0.1
21500N 36650E	LL-12	336650	5521500	0.6	121.3	2.2	64	0.1	49.9	26.3	416	6.13	6.3	0.8	1.1	15	0.1	0.5	0.1	255	0.99	0.031	4	97	0.84	47	0.591	4	4.81	0.009	0.02	0.1	0.17	18.5	0.1	0.03	12	0.6	0.1
21500N 36700E	LL-12	336700	5521500	0.6	79.5	5.6	68	0.1	29.3	15.2	304	6.66	7.0	0.3	0.8	10	0.2	0.5	0.1	229	0.65	0.060	3	66	0.50	26	0.489	2	3.43	0.009	0.02	0.1	0.08	6.6	0.1	0.03	13	0.3	0.1
21500N 36750E	LL-12	336750	5521500	0.4	148.8	2.0	56	0.1	46.4	23.8	457	5.49	9.1	2.8	0.8	12	0.1	0.5	0.1	226	0.84	0.040	3	58	0.77	50	0.481	5	4.18	0.008	0.01	0.1	0.12	10.6	0.1	0.03	11	0.8	0.1
21500N 36800E	LL-12	336800	5521500	0.4	60.2	2.6	59	0.1	30.2	24.8	1118	6.56	7.0	0.6	0.7	10	0.2	0.4	0.1	271	0.81	0.109	2	61	0.52	21	0.518	4	3.33	0.009	0.01	0.1	0.13	7.4	0.1	0.03	12	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
21500N 36850E	LL-12	336850	5521500	0.5	75.4	2.2	54	0.1	33.0	17.5	367	5.71	6.6	1.3	0.9	10	0.1	0.4	0.1	255	0.83	0.042	6	61	0.61	23	0.548	5	3.34	0.007	0.02	0.1	0.19	14.2	0.1	0.03	10	0.7	0.1
21500N 36900E	LL-12	336900	5521500	0.5	117.9	2.8	49	0.1	34.4	22.1	625	6.14	6.8	0.3	0.7	15	0.1	0.4	0.1	252	0.95	0.042	7	61	0.58	31	0.601	4	3.84	0.011	0.01	0.1	0.13	10.5	0.1	0.03	13	0.7	0.1
21500N 36950E	LL-12	336950	5521500	0.3	64.7	1.4	39	0.1	25.4	18.0	517	4.35	6.6	1.8	0.6	16	0.1	0.3	0.1	185	1.18	0.030	3	34	0.66	25	0.379	4	2.25	0.016	0.01	0.1	0.05	7.6	0.1	0.03	7	0.3	0.1
21500N 37000E	LL-12	337000	5521500	0.5	91.6	2.6	40	0.1	26.8	17.1	552	4.41	8.3	1.2	0.7	16	0.1	0.3	0.1	175	0.95	0.034	3	37	0.60	33	0.332	3	2.46	0.013	0.01	0.1	0.07	8.6	0.1	0.03	8	0.6	0.1
21500N 37050E	LL-12	337050	5521500	0.3	66.5	3.1	68	0.1	33.7	17.5	559	5.05	3.1	0.3	0.5	14	0.2	0.5	0.1	208	1.02	0.055	3	73	0.48	33	0.574	3	3.23	0.010	0.02	0.1	0.08	8.7	0.1	0.03	12	0.3	0.1
21500N 37100E	LL-12	337100	5521500	0.7	107.3	2.8	73	0.1	52.5	26.8	363	6.17	4.9	1.8	0.9	13	0.2	0.5	0.1	246	0.88	0.050	3	79	0.79	44	0.589	4	4.30	0.008	0.02	0.1	0.13	10.5	0.1	0.03	12	0.7	0.1
21500N 37150E	LL-12	337150	5521500	0.6	94.3	2.6	66	0.1	45.1	21.5	283	6.26	4.5	2.6	0.7	14	0.1	0.5	0.1	252	0.91	0.043	2	76	0.69	22	0.620	4	3.83	0.008	0.01	0.1	0.07	8.4	0.1	0.03	13	0.3	0.1
21500N 37200E	LL-12	337200	5521500	0.4	47.7	4.8	59	0.1	30.2	14.9	241	5.72	2.6	1.5	0.6	11	0.1	0.5	0.1	231	0.83	0.047	2	65	0.41	20	0.573	3	2.93	0.008	0.01	0.1	0.07	5.6	0.1	0.03	13	0.3	0.1
21500N 37250E	LL-12	337250	5521500	0.4	54.3	3.6	84	0.1	38.0	21.1	486	5.20	3.9	1.7	0.6	16	0.2	0.4	0.1	209	0.98	0.072	4	70	0.56	28	0.456	4	3.35	0.009	0.02	0.1	0.08	7.6	0.1	0.03	11	0.3	0.1
21500N 37300E	LL-12	337300	5521500	0.4	151.5	1.8	57	0.1	54.9	24.9	551	6.47	6.9	2.9	0.8	31	0.1	0.5	0.1	277	0.88	0.056	7	88	0.77	73	0.518	3	4.83	0.009	0.03	0.1	0.19	22.4	0.1	0.03	13	0.7	0.1
21500N 37350E	LL-12	337350	5521500	0.4	100.8	2.2	63	0.1	45.2	28.3	548	5.20	6.3	0.3	0.9	15	0.1	0.4	0.1	237	1.01	0.053	4	82	0.82	61	0.478	4	4.11	0.008	0.02	0.1	0.08	14.1	0.1	0.03	12	0.5	0.1
21500N 37400E	LL-12	337400	5521500	0.3	108.3	2.0	54	0.1	49.5	27.7	573	5.69	7.0	2.4	0.7	39	0.1	0.4	0.1	247	1.12	0.041	5	88	0.85	75	0.543	3	4.41	0.012	0.02	0.1	0.10	16.9	0.1	0.03	12	0.3	0.1
21600N 36200E	LL-12	336200	5521600	0.4	50.4	12.6	56	0.1	21.5	15.7	559	5.63	5.4	0.3	0.6	9	0.2	0.7	0.2	221	0.73	0.067	2	51	0.36	21	0.444	2	2.31	0.007	0.02	0.1	0.13	5.6	0.1	0.03	11	0.3	0.1
21600N 36250E	LL-12	336250	5521600	0.4	91.4	3.2	88	0.1	47.2	27.9	820	5.89	8.8	0.3	0.7	11	0.1	0.4	0.1	215	0.84	0.093	3	74	0.74	35	0.478	4	3.94	0.008	0.02	0.1	0.05	8.9	0.1	0.03	11	0.3	0.1
21600N 36300E	LL-12	336300	5521600	0.6	55.4	5.8	74	0.1	34.6	24.1	354	7.23	2.5	1.2	1.0	7	0.1	0.4	0.1	223	0.58	0.075	3	79	0.42	24	0.484	2	4.21	0.007	0.02	0.1	0.08	7.9	0.1	0.03	14	0.3	0.1
21600N 36350E	LL-12	336350	5521600	0.7	64.6	4.0	60	0.1	36.9	27.9	886	5.48	3.4	1.4	0.7	13	0.1	0.4	0.1	226	0.95	0.041	5	70	0.67	30	0.519	3	3.49	0.008	0.01	0.1	0.07	10.2	0.1	0.03	12	0.3	0.1
21600N 36400E	LL-12	336400	5521600	0.5	60.2	9.0	47	0.1	26.4	19.5	1494	3.87	4.2	3.4	0.5	15	0.1	0.4	0.1	156	0.92	0.038	7	41	0.47	30	0.309	3	2.21	0.010	0.02	0.1	0.09	6.3	0.1	0.03	9	0.3	0.1
21600N 36450E	LL-12	336450	5521600	0.6	95.1	9.3	78	0.1	38.2	28.1	755	6.30	9.1	1.4	0.7	9	0.2	0.7	0.1	217	0.76	0.156	3	65	0.53	25	0.438	4	4.05	0.007	0.02	0.1	0.19	10.8	0.1	0.03	13	0.7	0.1
21600N 36500E	LL-12	336500	5521600	0.7	86.0	3.7	68	0.1	45.0	24.1	406	6.85	5.9	1.1	0.7	12	0.1	0.5	0.1	254	0.77	0.052	3	77	0.60	38	0.540	3	3.84	0.008	0.02	0.1	0.12	9.0	0.1	0.03	13	0.3	0.1
21600N 36550E	LL-12	336550	5521600	0.4	56.7	5.4	64	0.1	26.4	15.7	664	5.59	7.6	9.8	0.6	12	0.1	0.6	0.1	218	0.82	0.074	2	58	0.40	29	0.507	3	2.57	0.008	0.02	0.1	0.08	5.9	0.1	0.03	11	0.3	0.1
21600N 36600E	LL-12	336600	5521600	0.5	65.4	3.9	91	0.2	37.1	19.8	405	6.42	4.4	2.7	0.8	12	0.2	0.5	0.1	256	0.86	0.044	3	83	0.51	33	0.638	3	3.52	0.008	0.02	0.1	0.17	12.5	0.1	0.03	13	0.3	0.1
21600N 36650E	LL-12	336650	5521600	0.5	72.5	3.6	58	0.1	41.7	19.9	297	6.12	3.7	1.5	0.7	12	0.1	0.4	0.1	256	0.90	0.037	5	77	0.54	23	0.571	4	3.24	0.011	0.01	0.1	0.10	12.5	0.1	0.03	12	0.3	0.1
21600N 36700E	LL-12	336700	5521600	0.5	21.7	18.5	57	0.1	11.2	8.0	371	7.90	0.9	1.8	0.4	7	0.2	0.6	0.3	356	0.98	0.047	2	48	0.18	11	0.833	1	1.50	0.007	0.02	0.1	0.05	4.7	0.1	0.03	17	0.3	0.1
21600N 36750E	LL-12	336750	5521600	0.7	99.5	5.3	77	0.1	38.5	18.3	388	6.21	7.0	3.9	0.9	10	0.2	0.6	0.1	252	0.74	0.057	3	70	0.63	28	0.558	4	4.27	0.008	0.02	0.1	0.10	10.9	0.1	0.03	12	0.3	0.1
21600N 36800E	LL-12	336800	5521600	0.4	59.0	5.6	42	0.1	26.8	18.2	692	4.52	11.2	10.6	0.6	23	0.1	0.4	0.1	188	1.15	0.030	4	39	0.63	39	0.353	5	2.12	0.014	0.01	0.1	0.07	8.4	0.1	0.03	8	0.3	0.1
21600N 36850E	LL-12	336850	5521600	0.3	92.7	1.7	50	0.1	38.1	22.0	491	4.83	5.9	4.2	0.6	25	0.1	0.5	0.1	211	1.40	0.024	7	57	0.87	34	0.464	4	3.05	0.035	0.02	0.1	0.08	16.3	0.1	0.03	10	0.3	0.1
21600N 36900E	LL-12	336900	5521600	0.4	75.5	4.2	81	0.1	40.5	18.8	312	6.13	4.3	2.4	0.7	15	0.2	0.5	0.1	230	0.86	0.094	2	65	0.62	28	0.550	3	3.52	0.014	0.02	0.1	0.06	7.0	0.1	0.03	13	0.3	0.1
21600N 36950E	LL-12	336950	5521600	0.6	102.9	5.4	60	0.6	46.7	17.5	744	4.21	3.2	2.1	1.0	17	0.2	0.4	0.1	155	0.81	0.066	7	96	0.59	51	0.443	3	5.22	0.012	0.02	0.1	0.17	15.2	0.1	0.03	13	0.8	0.1
21600N 37000E	LL-12	337000	5521600	0.6	68.8	3.2	52	0.1	40.3	18.0	244	5.68	4.4	2.0	0.7	13	0.1	0.4	0.1	233	0.71	0.042	3	70	0.53	29	0.579	2	3.91	0.009	0.01	0.1	0.16	8.2	0.1	0.03	11	0.7	0.1
21600N 37050E	LL-12	337050	5521600	0.4	101.9	3.1	57	0.1	40.4	21.0	416	5.77	4.3	2.2	0.8	15	0.1	0.4	0.1	239	0.89	0.047	4	68	0.63	35	0.549	3	3.75	0.008	0.02	0.1	0.10	11.8	0.1	0.03	11	0.3	0.1
21600N 37100E	LL-12	337100	5521600	0.5	74.4	4.4	89	0.1	47.8	20.6	562	5.45	4.9	1.5	0.7	13	0.2	0.5	0.1	215	0.92	0.084	2	65	0.66	38	0.571	5	3.89	0.012	0.02	0.1	0.11	7.3	0.1	0.03	11	0.3	0.1
21600N 37150E	LL-12	337150	5521600	0.5	128.4	3.3	51	0.1	47.7	23.6	587	5.12	5.5	2.7	0.8	19	0.2	0.4	0.1	236	1.07	0.044	8	75	0.86	53	0.576	5	4.14	0.013	0.02	0.1	0.09	19.3	0.1	0.03	11	0.6	0.1
21600N 37200E	LL-12	337200	5521600	0.2	13.5	18.8	39	0.1	8.4	8.1	1124	3.12	1.7	1.2	0.4	12	0.2	0.4	0.2	142	1.09	0.035	3	28	0.14	33	0.452	2	1.27	0.007	0.01	0.1	0.04	3.5	0.1	0.03	8	0.3	0.1
21600N 37250E	LL-12	337250	5521600	0.3	24.2	7.2	61	0.1	13.7	17.7	1308	5.60	1.0	3.3	0.5	8	0.2	0.3	0.2	170	1.04	0.086	2	48	0.16	21	0.366	2	2.01	0.008	0.01	0.1	0.07	4.6	0.1	0.03	13	0.3	0.1
21600N 37300E	LL-12	337300	5521600	0.3	25.4	6.9	74	0.1	21.0	12.8	346	5.41	2.8	1.6	0.6	11	0.2	0.4	0.1	194	0.96	0.082	2	56	0.32	26	0.544	2	2.26	0.007	0.02	0.1	0.07	5.0	0.1	0.03	11	0.3	0.1
21600N 37350E	LL-12	337350	5521600	0.3	97.9	7.3	77	0.1	27.5	21.7	1147	5.60	3.3	3.6	0.8	13	0.2	0.6	0.1	212	0.61	0.166	4	68	0.20	38	0.431	1	3.78	0.007	0.02	0.1	0.13	11.6	0.1	0.03	13	0.5	0.1
21600N 37400E	LL-12	337400	5521600	0.4	62.6	7.5	71	0.1	33.5	20.9	871	6.17	66.0	1.8	0.6	12	0.2	0.7	0.1	237	0.89	0.085	3	64	0.38	40	0.542	3	3.47	0.008	0.02	0.1	0.06	7.8	0.1	0.03	13	0.3	0.1
20500N 37000E	LL-12	337000	5520500	0.4	42.7	4	47	0.05	19.9	10.2	358	4.95	3.3	4.5	0.6	12	0.1	0.4	0.05	189	0.77	0.034	3	49	0.24	29	0.44	5	2.09	0.007	0.01	0.05	0.05	4.9	0.05	0.025	11	0.25	0.1
20500N 37050E	LL-12	337050	5520500	0.4	67.4	5.4	74	0.1	35	17.3	484	5.43	7.2	4.3	0.6	15	0.2	0.4	0.05	209	0.8	0.086	2	66	0.43	39	0.482	5	2.94	0.008	0.02	0.05	0.07	5.5	0.05	0.025	12	0.25	0.1
20500N 37100E	LL-12	337100	5520500	0.5	122.9	2.3	52	0.05	54.6	22.4	392	6.46	10.8	1.7	0.9	23	0.2	0.5	0.05	237	0.99	0.041	5	98	0.82	60	0.575	6	4.19	0.008	0.01	0.05	0.08	13.2	0.05	0.025	13	0.25	0.1
20500N 37150E	LL-12	337150	5520500	0.4	117.9	3	71	0.05	61.2	24.8	579	6.46	10.1	5.9	0.8	22	0.1	0.4	0.05	226	0.99	0.065	5	97	0.9	62	0.489	6	4.35	0.009	0.02	0.05	0.06	12.3	0.05	0.025	13	0.25	0.1
20500N 37200E	LL-12	337200	5520500	0.4	98.8	4.4	68	0.05	35.2	16.5	414	5.64	8.8	1.4	0.8	12	0.1	0.5	0.05	206	0.96	0.065	3	56	0.53	26	0.515	4	3.04	0.008	0.01	0.05	0.08	7.6	0.05	0.025	11	0.25	0.1
20500N 37250E	LL-12	337250	5520500	0.5	100.7	7.5	68	0.05	47.2	22.3	521	6.14	10	2.3	0.8	19	0.2	0.6	0.05	232	0.97	0.049	4	82	0.78	55	0.501	6	3.67	0.007	0.03	0.05	0.08	11.4	0.05	0.025	12	0.25	0.1
20500N 37300E	LL-12	337300	5520500	0.5	91.6	3.7	69	0.05	40.8	20.1	362	6.09	9.2	4.3	0.9	13	0.2	0.4	0.05	223	0.99	0.069	3	72	0.58	22	0.534	6	3.98	0.007	0.01	0.05	0.11	8.9	0.05	0.025	11	0.25	0.1
20500N 37350E	LL-12	337350	5520500	0.5	34.2	5.2	37	0.1	15.1	9.2	236	5.45	3.7	2.2	0.4	15	0.1	0.4	0.05	226	0.8	0.036	3	49	0.24	16	0.466	3	1.73	0.008	0.01	0.05	0.04	4	0.05	0.025	11	0.25	0.1
20500N 37400E	LL-12	337400	5520500	0.4	80.3	2	40	0.05	40.7	19.1	403	5.5	5.8	14	0.6	13	0.1	0.3	0.05	203	1.1	0.028	3	63	0.67	19	0.498	4	2.93	0.007	0.01	0.05	0.06	8.6	0.05	0.025	10	0.25	0.1
20500N 37450E	LL-12	337450	5520500	0.8	123.5	8.7	70	0.2	41.4	32.6	1844	6.5	15.8	1	0.8	34	0.2	0.7	0.05	251	1.3	0.082	10	73	0.7	53	0.488	10	3.87	0.02	0.09	0.05	0.1	12.5	0.05	0.025	14	0.25	0.1
20500N 37500E	LL-12	337500	5520500	0.8	109.8	10.2	97	0.2	38.9	25.1	2948	5.94	8.7	1.1	1.1	20	0.3	0.5	0.1	218	0.99	0.068	13	67	0.63	50	0.499	6	3.86	0.01	0.03	0.05	0.11	13.5	0.05	0.025	12	0.25	0.1
20500N 37550E	LL-12	337550	5520500	0.7	74.8	4.5	52	0.2	31.2	19.3	590	7.03	5.3	2.2	0.6	16	0.1	0.7	0.05	282	0.93	0.054	8	71	0.44	32	0.585	3	3.17	0.011	0.01	0.05	0.08	9.8	0.05	0.025	14	0.25	0.1
20500N 37600E	LL-12	337600	5520500	0.4	86.8	2.5	47	0.1	35.7	18.4	382	5.99	5.7	1.9	0.8	14	0.1	0.5	0.05	230	1.04	0.037	7	62	0.55	22	0.577	5	3.59	0.007	0.01	0.05	0.08	10.6	0.05	0.025	11	0.25	0.1
20500N 37650E	LL-12	337650	5520500	0.3	204.8	2.3	61	0.1	48.8	30.2	749	6.24	5.7	1.8	0.8	15	0.2	0.3	0.05	208	0.86	0.037	5	95	1.27	43	0.41	4	4.27	0.008	0.02	0.05	0.09	13.9	0.05	0.025	12	0.25	0.1
20500N 37700E	LL-12	337700	5520500	0.4	73	9	51	0.05	33.8	15.5	976	4.5	4.6	1.5	0.6	20	0.1	0.4	0.05	179	1.13	0.039	3	51	0.53	64	0.511	4	3.24	0.011	0.02	0.05	0.06	6.8	0.05	0.025	11	0.25	0.1
20500N 37750E	LL-12	337750	5520500	0.4	54	4.9	77	0.05	32.1	18	405	5.96	9.3	0.7	0.7	14	0.2	0.5	0.05	201	0.89	0.078	3	63	0.4	31	0.556	3	3.19	0.008	0.02	0.05	0.09	6.4	0.05	0.025	12	0.25	0.1
20500N 37800E	LL-12	337800	5520500	0.3	82.6	3.2	54	0.05	39	16.8	487	5.26	5.9	2.7	0.6	19	0.1	0.5	0.05	202	1.15	0.049	3	67	0.6	39	0.562	3	3.38	0.009	0.02	0.05	0.07	9.2	0.05	0.025	11	0.25	0.1
20500N 37850E	LL-12	337850	5520500	0.4	81.3	3.5	71	0.05	41.6	18.7	545	6.05	5.7	2.2	0.8	14	0.2	0.5	0.05	230	0.98	0.056	3	68	0.52	38	0.552	4	3.78	0.007	0.01	0.05	0.1	8.4	0.05	0.025	12	0.25	0.1
20500N 37900E	LL-12	337900	5520500	0.4	82.1	3.3	52	0.05	34.3	19.3	385	5.66	9	2.9	0.5	15	0.2	0.7	0.05	215	0.87	0.031	4	67	0.48	34	0.444	5	3.08	0.01	0.01	0.05	0.05	9	0.05	0.025	10	0.25	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
20500N 37950E	LL-12	337950	5520500	0.3	35	25.1	55	0.1	19.8	11.9	1392	4.68	6.4	0.8	0.4	18	0.2	0.7	0.2	183	0.95	0.065	2	44	0.31	45	0.434	4	1.86	0.007	0.03	0.05	0.11	4.3	0.05	0.025	10	0.25	0.1
20500N 38000E	LL-12	338000	5520500	0.5	70	6.1	55	0.1	33.1	16.5	432	6.07	5.4	3.6	0.7	15	0.1	0.5	0.05	235	0.92	0.061	3	67	0.48	32	0.582	4	3.56	0.007	0.02	0.05	0.13	7.8	0.05	0.025	13	0.25	0.1
20500N 38050E	LL-12	338050	5520500	1	59.2	4.4	62	0.1	25.9	15.2	401	6.3	5.9	1.8	0.6	14	0.2	0.4	0.05	233	0.97	0.082	3	49	0.46	21	0.57	4	2.92	0.008	0.02	0.05	0.07	6.2	0.05	0.025	12	0.25	0.1
20500N 38100E	LL-12	338100	5520500	0.5	14	6.9	60	0.05	33.4	14.4	612	6.7	9.3	1.5	0.4	9	0.1	0.3	0.05	195	0.16	0.062	4	132	0.52	21	0.026	2	1.9	0.009	0.02	0.05	0.06	11.2	0.05	0.025	14	0.25	0.1
20600N 37000E	LL-12	337000	5520600	0.4	116.9	2	51	0.05	45.9	21.7	437	5.69	9.8	5.6	1	17	0.1	0.5	0.05	228	1.04	0.031	6	80	0.88	74	0.525	5	3.85	0.013	0.02	0.05	0.06	19.8	0.05	0.025	11	0.25	0.1
20600N 37050E	LL-12	337050	5520600	0.6	60.2	7.9	120	0.1	44.5	24.8	1874	5.89	6.3	1.4	0.8	22	0.3	0.4	0.05	194	1.01	0.074	6	72	0.58	55	0.443	4	3.52	0.015	0.03	0.05	0.08	9.9	0.05	0.025	12	0.5	0.1
20600N 37100E	LL-12	337100	5520600	0.4	83.4	3	61	0.05	35.3	18.3	337	6.75	4.4	4.1	0.9	13	0.1	0.4	0.05	253	0.83	0.059	4	81	0.46	21	0.571	3	3.63	0.007	0.02	0.05	0.14	14.5	0.05	0.025	13	0.25	0.1
20600N 37150E	LL-12	337150	5520600	0.6	95.6	2.7	54	0.05	39.1	19.7	442	5.87	8.4	2	1	12	0.05	0.5	0.05	231	0.96	0.082	3	67	0.66	19	0.49	5	3.94	0.007	0.01	0.05	0.11	12.8	0.05	0.025	11	0.25	0.1
20600N 37200E	LL-12	337200	5520600	0.4	64.5	4.1	46	0.05	26.2	13	335	6.27	4.4	4.5	0.9	11	0.2	0.5	0.05	238	0.81	0.071	4	68	0.38	19	0.494	4	2.98	0.007	0.01	0.05	0.16	10.2	0.05	0.025	12	0.25	0.1
20600N 37250E	LL-12	337250	5520600	0.3	53.8	3.7	50	0.05	25.2	14.3	602	5.64	3.1	4.7	0.6	12	0.1	0.5	0.05	217	0.88	0.042	3	62	0.36	23	0.502	4	2.35	0.007	0.01	0.05	0.07	6.8	0.05	0.025	11	0.25	0.1
20600N 37300E	LL-12	337300	5520600	0.7	73.7	4	60	0.1	33.2	25.5	819	5.74	7.3	5.1	0.7	16	0.2	0.5	0.05	218	0.88	0.049	6	63	0.45	25	0.523	4	3.54	0.008	0.02	0.05	0.09	8.1	0.05	0.025	12	0.25	0.1
20600N 37350E	LL-12	337350	5520600	0.3	30.4	6.5	49	0.05	17.1	9.3	257	5.54	3.6	2.8	0.5	14	0.1	0.4	0.05	211	0.8	0.054	2	54	0.26	20	0.484	3	1.97	0.007	0.01	0.05	0.08	4.1	0.05	0.025	11	0.25	0.1
20600N 37400E	LL-12	337400	5520600	0.6	64	5.3	74	0.1	34.9	17.2	375	6.96	6.9	8.2	0.8	14	0.2	0.7	0.05	248	0.81	0.079	3	74	0.48	32	0.561	4	3.67	0.008	0.02	0.05	0.11	7.5	0.05	0.025	14	0.25	0.1
20600N 37450E	LL-12	337450	5520600	0.6	140.6	2.8	69	0.1	59.9	30.6	685	6.13	8.8	4	1.1	22	0.05	0.5	0.05	240	1	0.057	7	94	0.87	63	0.525	5	4.84	0.014	0.02	0.05	0.11	17.3	0.05	0.025	12	0.25	0.1
20600N 37500E	LL-12	337500	5520600	0.4	69	3.6	60	0.05	40.8	19.5	324	5.89	5.7	2.3	0.8	14	0.1	0.5	0.05	205	0.82	0.052	3	76	0.49	33	0.486	4	3.84	0.007	0.01	0.05	0.07	6.9	0.05	0.025	12	0.25	0.1
20600N 37550E	LL-12	337550	5520600	0.4	95.2	3.2	54	0.05	41.9	18.2	388	5.21	5.1	2.2	0.8	15	0.2	0.5	0.05	214	0.91	0.048	4	80	0.56	52	0.492	3	3.62	0.008	0.02	0.05	0.11	11.2	0.05	0.025	11	0.25	0.1
20600N 37600E	LL-12	337600	5520600	0.5	81.9	3.1	53	0.05	42.3	19.1	332	5.18	5.4	1.5	0.8	16	0.3	0.6	0.05	208	0.87	0.04	4	73	0.54	45	0.561	4	3.82	0.008	0.01	0.05	0.14	10.6	0.05	0.025	11	0.25	0.1
20600N 37650E	LL-12	337650	5520600	0.4	88.2	4.2	54	0.05	40.1	18.6	588	5.36	9.7	2.5	0.8	19	0.2	0.7	0.05	211	1.01	0.058	4	71	0.62	63	0.434	5	3.33	0.009	0.01	0.05	0.12	11.3	0.05	0.025	10	0.25	0.1
20600N 37700E	LL-12	337700	5520600	0.5	63.4	3.5	56	0.05	34.1	18.5	759	5	3.1	6.4	0.8	15	0.2	0.5	0.05	189	0.92	0.041	4	65	0.43	35	0.491	3	3.16	0.008	0.01	0.05	0.08	10.6	0.05	0.025	11	0.25	0.1
20600N 37750E	LL-12	337750	5520600	0.3	77.5	2.6	60	0.05	43.5	19.6	407	5.43	6	2.6	0.8	16	0.05	0.5	0.05	207	1.01	0.044	3	74	0.6	49	0.523	5	3.51	0.008	0.01	0.05	0.11	9.8	0.05	0.025	11	0.25	0.1
20600N 37800E	LL-12	337800	5520600	0.3	88.6	1.9	45	0.05	44.8	20.4	564	4.81	7.5	3.8	0.8	36	0.1	0.5	0.05	201	1.11	0.041	6	80	0.75	80	0.457	6	3.57	0.012	0.01	0.05	0.06	12.9	0.05	0.025	10	0.25	0.1
20600N 37850E	LL-12	337850	5520600	0.5	80.7	5.6	47	0.05	37.1	17.7	494	5.3	5.5	1.9	0.7	15	0.1	0.5	0.05	224	0.96	0.043	3	68	0.53	37	0.525	4	3.21	0.008	0.01	0.05	0.09	9.9	0.05	0.025	11	0.25	0.1
20600N 37900E	LL-12	337900	5520600	0.5	68	3	51	0.1	26.8	19.7	615	5.72	4.9	2.2	0.6	14	0.05	0.5	0.05	251	0.93	0.044	4	53	0.44	20	0.563	3	2.67	0.009	0.01	0.05	0.07	7.9	0.05	0.025	11	0.25	0.1
20600N 37950E	LL-12	337950	5520600	0.5	99.1	3.9	52	0.2	25	18.8	898	5.54	5.2	0.8	0.6	15	0.2	0.4	0.05	221	0.9	0.045	5	51	0.44	28	0.47	3	2.76	0.008	0.01	0.05	0.08	9.1	0.05	0.025	11	0.25	0.1
20600N 38000E	LL-12	338000	5520600	0.4	71.5	2.8	35	0.05	29.2	18.3	626	4.59	8.6	4.3	0.8	18	0.1	0.3	0.05	190	1.01	0.027	5	48	0.62	30	0.386	4	2.75	0.012	0.01	0.05	0.05	10.7	0.05	0.025	8	0.5	0.1
20600N 38050E	LL-12	338050	5520600	0.5	69.6	5.9	71	0.05	39.5	19	1134	5.5	4.7	1.1	0.6	20	0.2	0.4	0.05	216	0.97	0.048	6	69	0.5	37	0.401	3	3.35	0.01	0.01	0.05	0.07	9	0.05	0.025	10	0.25	0.1
20600N 38100E	LL-12	338100	5520600	0.2	73.2	5.5	41	0.05	27.7	15.2	596	3.69	5.9	2.6	0.6	34	0.1	0.5	0.05	162	1.53	0.055	5	50	0.59	29	0.379	4	2.53	0.013	0.02	0.05	0.07	14.1	0.05	0.025	8	0.25	0.1
20700N 37000E	LL-12	337000	5520700	0.3	37.2	8.3	46	0.05	19.6	10.7	543	4.08	5.1	1.7	0.4	16	0.1	0.5	0.05	183	0.79	0.048	3	40	0.33	34	0.387	2	1.68	0.008	0.02	0.05	0.07	4.6	0.05	0.025	10	0.25	0.1
20700N 37050E	LL-12	337050	5520700	0.4	49	6.7	63	0.05	25.3	13.9	397	5.94	5.1	2.2	0.6	14	0.2	0.8	0.05	225	0.78	0.058	2	56	0.35	34	0.478	2	2.4	0.008	0.02	0.05	0.08	4.6	0.05	0.025	12	0.25	0.1
20700N 37100E	LL-12	337100	5520700	0.5	81.5	4.7	64	0.05	40.8	18.1	348	5.95	10	5.9	0.8	12	0.2	0.5	0.05	217	0.78	0.055	3	71	0.54	26	0.521	4	3.6	0.008	0.01	0.05	0.12	8.7	0.05	0.025	11	0.25	0.1
20700N 37150E	LL-12	337150	5520700	0.4	64.1	20.9	69	0.05	34.4	18.7	1554	6.07	5.4	2.3	0.8	12	0.3	0.8	0.2	223	0.8	0.077	3	63	0.44	40	0.498	4	3.16	0.007	0.02	0.05	0.11	7.4	0.05	0.025	13	0.25	0.1
20700N 37200E	LL-12	337200	5520700	0.3	20.4	9.3	38	0.05	12.9	15.5	1179	6.2	2.6	5.5	0.6	11	0.2	0.4	0.1	228	1.12	0.06	3	43	0.26	20	0.385	3	2.05	0.009	0.01	0.05	0.1	4.9	0.05	0.025	14	0.25	0.1
20700N 37250E	LL-12	337250	5520700	0.5	108.9	4	65	0.05	48.7	23	501	5.74	6.9	2.4	0.9	14	0.1	0.5	0.1	217	0.96	0.053	3	70	0.78	47	0.547	4	4.68	0.007	0.02	0.05	0.09	10	0.05	0.025	12	0.25	0.1
20700N 37300E	LL-12	337300	5520700	0.3	75.6	2.7	68	0.05	40.3	19.4	638	4.79	5.3	1.6	0.7	14	0.2	0.4	0.05	195	1.02	0.055	4	59	0.62	44	0.508	3	3.49	0.008	0.01	0.05	0.13	9.5	0.05	0.025	10	0.25	0.1
20700N 37350E	LL-12	337350	5520700	0.4	32.8	7.8	51	0.05	21.4	13.1	506	4.09	3.5	1.4	0.5	12	0.2	0.4	0.05	163	0.82	0.089	2	47	0.3	30	0.393	3	2.14	0.007	0.01	0.05	0.05	4.6	0.05	0.025	9	0.25	0.1
20700N 37400E	LL-12	337400	5520700	0.4	82.8	6.3	71	0.05	31.6	16.1	377	4.97	5.1	1.7	0.9	14	0.2	0.9	0.05	202	0.75	0.046	3	69	0.42	39	0.471	2	3.31	0.006	0.02	0.05	0.12	7.2	0.05	0.025	10	0.25	0.1
20700N 37450E	LL-12	337450	5520700	0.3	83.5	3.3	62	0.05	34.6	17.3	412	4.73	5.1	1.3	0.8	13	0.2	0.5	0.05	195	0.91	0.057	3	62	0.54	38	0.48	4	3.24	0.008	0.01	0.05	0.14	9.1	0.05	0.025	10	0.25	0.1
20700N 37500E	LL-12	337500	5520700	0.4	54.7	9.2	62	0.05	25.4	13.9	305	5.1	3.7	3.3	0.6	13	0.2	0.6	0.05	184	0.8	0.071	2	53	0.32	22	0.453	3	2.82	0.007	0.02	0.05	0.08	5.7	0.05	0.025	11	0.25	0.1
20700N 37550E	LL-12	337550	5520700	0.4	84.5	4	51	0.05	39.4	18.9	538	4.82	5.8	3.8	0.7	14	0.1	0.4	0.05	186	1.04	0.045	3	56	0.68	19	0.485	5	2.87	0.006	0.02	0.05	0.05	10.7	0.05	0.025	10	0.25	0.1
20700N 37600E	LL-12	337600	5520700	0.5	65.3	3.2	54	0.05	36.8	17.9	293	5.31	6.5	1.6	0.7	12	0.2	0.5	0.05	213	0.87	0.052	3	70	0.47	24	0.518	3	4.18	0.006	0.01	0.05	0.1	7.7	0.05	0.025	11	0.25	0.1
20700N 37650E	LL-12	337650	5520700	0.4	49.1	9.1	32	0.05	18.4	9.5	247	4.17	91.8	0.8	0.5	14	0.1	0.5	0.05	162	0.72	0.032	2	40	0.24	26	0.376	2	1.77	0.006	0.02	0.05	0.08	3.5	0.05	0.025	9	0.25	0.1
20700N 37700E	LL-12	337700	5520700	0.6	37.2	9.4	75	0.1	24.5	26	892	5.26	3.3	3.2	0.4	16	0.2	0.5	0.05	200	1.05	0.057	4	52	0.36	21	0.45	4	2.22	0.008	0.02	0.05	0.06	4.6	0.05	0.025	11	0.25	0.1
20700N 37750E	LL-12	337750	5520700	0.4	44.9	3.7	68	0.1	34.6	23.1	705	6.1	6.7	3	0.5	14	0.1	0.2	0.05	211	0.78	0.05	4	83	0.64	31	0.285	2	2.93	0.007	0.02	0.05	0.05	7.6	0.05	0.025	11	0.25	0.1
20700N 37800E	LL-12	337800	5520700	0.2	74.9	5.8	39	0.05	26.2	18.5	769	4.11	8.9	1.8	0.6	22	0.2	0.4	0.05	160	1.28	0.035	6	39	0.69	30	0.349	5	2.12	0.017	0.02	0.05	0.07	9.9	0.05	0.025	8	0.25	0.1
20700N 37850E	LL-12	337850	5520700	0.2	77.4	2.2	40	0.05	31.7	17.7	593	3.93	10.6	2.2	0.7	22	0.05	0.3	0.05	161	1.26	0.03	4	43	0.88	36	0.345	4	2.64	0.014	0.02	0.05	0.06	11.1	0.05	0.025	8	0.25	0.1
20700N 37900E	LL-12	337900	5520700	0.3	43.1	16.5	53	0.05	25.8	16	1059	4.13	3	1.4	0.5	25	0.2	0.5	0.05	169	1.02	0.037	3	49	0.36	45	0.393	3	2.23	0.008	0.02	0.05	0.07	5.2	0.05	0.025	9	0.25	0.1
20700N 37950E	LL-12	337950	5520700	0.3	46.2	4.1	49	0.05	26.8	14.3	728	4.08	1.9	1.5	0.5	17	0.1	0.4	0.05	163	1.05	0.039	3	48	0.36	30	0.436	2	2.51	0.011	0.01	0.05	0.06	6.1	0.05	0.025	9	0.25	0.1
20700N 38000E	LL-12	338000	5520700	0.3	60.2	14.7	77	0.05	28.2	15.8	1326	4.52	4.6	1.9	0.6	27	0.2	0.5	0.05	175	1.1	0.104	3	48	0.49	61	0.438	3	2.81	0.008	0.03	0.05	0.04	7.1	0.05	0.025	10	0.25	0.1
20700N 38050E	LL-12	338050	5520700	0.3	88.2	6.4	67	0.1	48.3	24.1	813	4.91	4.9	2.3	0.6	23	0.2	0.5	0.05	178	1.13	0.094	4	67	0.7	82	0.461	3	4	0.009	0.02	0.05	0.07	9.5	0.05	0.025	11	0.25	0.1
20700N 38100E	LL-12	338100	5520700																																				
20800N 37000E	LL-12	337000	5520800	0.4	69.7	4	47	0.05	25.8	12	299	5.76	3.1	1.2	0.8	9	0.1	0.5	0.05	206	0.75	0.06	3	61	0.35	19	0.392	2	3.45	0.006	0.01	0.05	0.15	7.2	0.05	0.025	12	0.25	0.1
20800N 37050E	LL-12	337050	5520800	0.7	82.6	6.8	66	0.05	28.7	16.7	449	6.55	6.6	2.2	0.9	10	0.2	0.8	0.05	223	0.76	0.102	3	61	0.47	23	0.466	3	3.6	0.006	0.02	0.05	0.13	7.3	0.05	0.025	13	0.25	0.1
20800N 37100E	LL-12	337100	5520800	0.5	53	4.8	27	0.05	21.2	10.3	170	5.96	2.2	6	0.5	10	0.05	0.5	0.05	223	0.62	0.028	3	50	0.28	19	0.436	2	2.77	0.007	0.01	0.05	0.14	4.4	0.05	0.025	13	0.25	0.1
20800N 37150E	LL-12	337150	5520800	0.3	18.4	9.7	28	0.1	8.4	4.1	195	7.36	2.7	14.9	0.4	8	0.2	0.8	0.2	274	0.7	0.069	2	46	0.1	14	0.42	2	1.57	0.006	0.01	0.05	0.09	3.1	0.05	0.025	18	0.25	0.1
20800N 37200E	LL-12	337200	5520800	0.5	114.8	2.7	51	0.05	43.4	21.2	458	5.96	8.5	3.6	0.9	15	0.2	0.5	0.05	217	0.99	0.038	6	77	0.76	37	0.535	5	3.78	0.008	0.02	0.05	0.13	16.3	0.05	0.025	12	0.6	0.1
20800N 37250E	LL-12	337250	5520800	0.4	55.1	4.1	48	0.1	32.6	15.7	334	6.03	3.4	5	0.5	12	0.2	0.5	0.05	212	0.83	0.039	3	67	0.37	28	0.536	3	2.93	0.007	0.01	0.05	0.1	5.3	0.05	0.025	12	0.25	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
20800N 37300E	LL-12	337300	5520800	0.2	21.8	5	28	0.05	10.9	5.7	177	4.28	0.9	1.8	0.4	9	0.1	0.4	0.05	171	0.54	0.02	2	37	0.14	16	0.396	2	1.22	0.007	0.01	0.05	0.05	2.7	0.05	0.025	9	0.25	0.1
20800N 37350E	LL-12	337350	5520800	0.4	35	4.2	44	0.05	19.2	11.5	307	4.45	2.4	3.5	0.6	12	0.2	0.5	0.05	162	0.88	0.023	3	46	0.25	24	0.421	3	2.15	0.008	0.01	0.05	0.03	4	0.05	0.025	10	0.25	0.1
20800N 37400E	LL-12	337400	5520800	0.6	97.2	2.5	48	0.05	43.4	21	373	5.72	5.9	4	1.1	12	0.2	0.5	0.05	211	0.93	0.051	3	75	0.65	22	0.526	5	3.89	0.007	0.01	0.05	0.11	14.7	0.05	0.025	11	0.25	0.1
20800N 37450E	LL-12	337450	5520800	0.3	21.1	6.1	36	0.05	13.1	11	474	3.69	1.9	1.9	0.5	11	0.2	0.4	0.2	131	0.79	0.039	2	37	0.19	22	0.38	2	1.6	0.007	0.005	0.05	0.05	3.4	0.05	0.025	8	0.25	0.1
20800N 37500E	LL-12	337500	5520800	0.5	87.7	6.1	52	0.05	39.9	20.5	540	6.11	4.8	3.8	0.8	13	0.2	0.6	0.05	224	0.85	0.05	4	74	0.57	32	0.536	4	3.91	0.007	0.01	0.05	0.12	9.3	0.05	0.025	12	0.25	0.1
20800N 37550E	LL-12	337550	5520800	0.5	223.7	7.4	61	0.2	29.4	24.4	1061	7.64	6.4	5.9	0.6	24	0.2	0.5	0.05	241	1.18	0.064	4	50	0.62	20	0.511	4	2.68	0.007	0.01	0.05	0.09	6.8	0.05	0.025	14	0.25	0.1
20800N 37600E	LL-12	337600	5520800	0.4	121.6	2.1	61	0.1	35.4	18.2	513	5.25	6.7	2.9	0.8	17	0.1	0.2	0.05	169	0.99	0.088	4	43	0.66	25	0.358	4	3.48	0.011	0.02	0.05	0.08	9.2	0.05	0.025	11	0.25	0.1
20800N 37650E	LL-12	337650	5520800	0.5	55.6	8.1	62	0.1	22.2	16.8	692	6.43	5.8	7	0.5	20	0.2	0.4	0.05	220	1.03	0.073	4	56	0.38	21	0.573	5	2.48	0.008	0.01	0.05	0.1	5.9	0.05	0.025	13	0.25	0.1
20800N 37700E	LL-12	337700	5520800	0.3	52.9	1.7	30	0.05	23.1	14.9	382	4.65	7.2	1.4	0.6	16	0.05	0.3	0.05	167	0.97	0.017	5	43	0.52	28	0.397	5	2.41	0.011	0.005	0.05	0.04	7.7	0.05	0.025	9	0.25	0.1
20800N 37750E	LL-12	337750	5520800	0.4	63.4	2.5	42	0.1	22.8	12.6	335	4.36	3.9	4.1	0.7	15	0.05	0.3	0.05	187	1.08	0.035	4	52	0.4	25	0.445	4	2.75	0.008	0.01	0.05	0.05	11	0.05	0.025	9	0.25	0.1
20800N 37800E	LL-12	337800	5520800	0.4	48	2.4	45	0.05	26.3	14.5	621	4.34	2.3	1.9	0.6	14	0.05	0.2	0.05	165	1.02	0.038	3	41	0.39	27	0.461	4	2.57	0.009	0.01	0.05	0.05	5.9	0.05	0.025	10	0.25	0.1
20800N 37850E	LL-12	337850	5520800	0.4	95.1	2	48	0.05	41.6	21.3	402	5.44	5.2	2.7	0.8	18	0.2	0.4	0.05	226	1.18	0.031	4	81	0.71	39	0.527	4	3.83	0.008	0.01	0.05	0.07	19.5	0.05	0.025	11	0.25	0.1
20800N 37900E	LL-12	337900	5520800	0.5	61.8	2.5	56	0.05	36.7	18.3	303	5.46	3.7	2.3	0.8	14	0.1	0.4	0.05	199	1.08	0.051	3	64	0.56	28	0.553	4	3.34	0.007	0.02	0.05	0.13	10.6	0.05	0.025	12	0.25	0.1
20800N 37950E	LL-12	337950	5520800	0.9	66.8	4.4	42	0.05	33.7	17.4	505	6.05	4.3	3.2	0.7	15	0.1	0.5	0.05	235	0.97	0.047	3	65	0.45	22	0.592	4	3.54	0.008	0.01	0.05	0.13	6.9	0.05	0.025	13	0.25	0.1
20800N 38000E	LL-12	338000	5520800	0.5	97.3	2.4	46	0.05	36.2	18.9	410	5.16	4.7	4.6	0.8	15	0.1	0.4	0.05	217	1.15	0.04	5	63	0.66	28	0.554	4	3.35	0.009	0.02	0.05	0.13	16.2	0.05	0.025	11	0.25	0.1
20800N 38050E	LL-12	338050	5520800	0.5	127.4	2	55	0.05	43.2	22	542	5.53	6.1	2.9	0.9	18	0.1	0.5	0.05	210	1.1	0.034	4	60	0.76	40	0.538	4	3.98	0.01	0.02	0.05	0.1	10.9	0.05	0.025	11	0.25	0.1
20800N 38100E	LL-12	338100	5520800	0.5	139.3	2.2	58	0.05	49.8	25	397	6.13	6.2	4.7	1	15	0.1	0.5	0.05	225	1.11	0.038	3	72	0.83	30	0.587	5	4.23	0.009	0.01	0.05	0.08	13.8	0.05	0.025	12	0.25	0.1
L20300N 36900E	LL-12	336900	5520300	0.3	60.4	2.9	60	0.1	38.1	17.5	313	5.55	5.8	3.4	0.6	13	0.2	0.3	0.1	222	0.92	0.025	3	68	0.50	27	0.500	5	3.02	0.007	0.02	0.1	0.04	6.5	0.1	0.05	11	0.3	0.1
L20300N 36950E	LL-12	336950	5520300	0.3	58.5	5.6	71	0.1	34.9	18.5	398	5.66	6.7	2.8	0.6	13	0.2	0.4	0.1	205	0.81	0.044	3	66	0.49	35	0.468	5	3.02	0.006	0.02	0.1	0.06	6.8	0.1	0.03	11	0.3	0.1
L20300N 37000E	LL-12	337000	5520300	0.4	94.1	2.9	79	0.1	53.1	27.7	596	6.66	10.9	2.3	0.8	16	0.1	0.3	0.1	242	0.85	0.054	3	89	0.91	79	0.487	7	4.20	0.007	0.02	0.1	0.05	10.5	0.1	0.07	12	0.3	0.1
L20300N 37050E	LL-12	337050	5520300	0.3	87.8	3.4	59	0.1	44.5	22.8	442	5.90	8.0	1.4	0.7	14	0.1	0.3	0.1	226	0.99	0.035	3	82	0.75	35	0.487	4	3.74	0.008	0.02	0.1	0.07	10.5	0.1	0.06	11	0.3	0.1
L20300N 37100E	LL-12	337100	5520300	0.4	92.8	2.9	70	0.1	49.8	23.6	407	6.80	8.0	2.1	0.8	15	0.2	0.4	0.1	255	0.85	0.039	3	93	0.79	43	0.581	5	4.09	0.007	0.02	0.1	0.07	10.4	0.1	0.06	13	0.3	0.1
L20300N 37150E	LL-12	337150	5520300	0.3	75.2	3.9	55	0.1	35.9	18.1	505	5.52	6.6	0.9	0.6	18	0.1	0.4	0.1	209	1.08	0.026	3	72	0.57	28	0.394	5	2.93	0.010	0.02	0.1	0.04	9.0	0.1	0.03	11	0.3	0.1
L20300N 37200E	LL-12	337200	5520300	0.4	152.0	3.1	61	0.1	65.6	28.9	565	6.88	14.6	7.6	1.0	22	0.2	0.4	0.1	240	0.97	0.048	5	104	1.08	87	0.605	7	5.09	0.010	0.02	0.1	0.09	15.8	0.1	0.03	13	0.5	0.1
L20300N 37250E	LL-12	337250	5520300	0.3	50.8	10.1	57	0.1	30.3	16.7	444	5.04	5.5	0.3	0.5	19	0.4	0.3	0.1	198	1.01	0.042	5	62	0.53	29	0.429	5	2.47	0.014	0.03	0.1	0.06	7.0	0.1	0.07	11	0.3	0.1
L20300N 37300E	LL-12	337300	5520300	0.1	42.5	7.6	40	0.1	20.9	12.5	408	4.79	2.2	0.3	0.5	14	0.3	0.4	0.1	196	0.70	0.023	3	50	0.23	21	0.419	4	2.07	0.014	0.02	0.1	0.05	4.7	0.1	0.03	10	0.3	0.1
L20300N 37350E	LL-12	337350	5520300	0.2	56.2	4.2	56	0.1	32.3	16.7	391	5.32	4.9	2.3	0.6	12	0.1	0.4	0.1	196	0.87	0.048	2	63	0.40	26	0.526	4	3.08	0.007	0.02	0.1	0.09	5.8	0.1	0.03	11	0.3	0.1
L20300N 37400E	LL-12	337400	5520300	0.2	31.7	8.4	54	0.1	18.0	11.9	743	5.78	13.5	2.5	0.5	11	0.2	0.7	0.1	200	0.79	0.105	2	58	0.25	22	0.483	4	2.24	0.006	0.02	0.1	0.06	3.9	0.1	0.03	12	0.3	0.1
L20300N 37450E	LL-12	337450	5520300	0.3	59.3	6.3	119	0.5	30.9	15.6	445	5.41	5.9	3.2	0.5	14	0.4	0.4	0.1	199	0.90	0.059	2	56	0.42	29	0.545	5	2.75	0.011	0.02	0.1	0.16	4.9	0.1	0.03	11	0.3	0.1
L20300N 37500E	LL-12	337500	5520300	0.3	124.9	3.5	51	0.1	52.4	23.3	547	5.64	19.3	4.5	0.8	20	0.1	0.5	0.1	225	1.14	0.041	6	86	0.94	52	0.484	5	3.95	0.015	0.02	0.1	0.05	15.7	0.1	0.03	11	0.3	0.1
L20300N 37550E	LL-12	337550	5520300	0.3	86.9	5.1	101	0.1	43.3	21.3	390	6.08	6.0	2.8	0.7	14	0.4	0.4	0.1	206	0.80	0.041	4	77	0.49	30	0.568	4	3.73	0.010	0.02	0.1	0.10	9.5	0.1	0.03	12	0.3	0.1
L20300N 37600E	LL-12	337600	5520300	0.6	160.8	3.1	62	0.1	65.1	28.1	468	7.68	13.7	0.7	0.9	20	0.2	0.5	0.1	290	0.78	0.074	6	106	0.78	87	0.710	3	5.72	0.009	0.02	0.1	0.09	14.6	0.1	0.03	13	0.3	0.1
L20300N 37650E	LL-12	337650	5520300	0.6	94.9	5.9	59	0.1	43.6	22.6	554	6.22	13.2	6.0	0.7	14	0.3	0.5	0.1	253	1.15	0.087	5	69	0.74	25	0.631	7	3.77	0.016	0.02	0.1	0.10	11.6	0.1	0.09	12	0.3	0.1
L20300N 37700E	LL-12	337700	5520300	0.4	116.5	3.4	61	0.1	41.6	20.5	430	5.81	7.4	1.2	0.9	11	0.2	0.4	0.1	216	0.93	0.092	2	70	0.59	25	0.549	6	4.69	0.009	0.02	0.1	0.09	9.8	0.1	0.03	11	0.3	0.1
L20300N 37750E	LL-12	337750	5520300	0.2	54.1	7.3	60	0.1	23.6	12.8	390	5.96	5.8	2.6	0.7	10	0.2	0.4	0.1	208	0.80	0.140	3	56	0.36	18	0.436	4	3.18	0.008	0.02	0.1	0.10	6.6	0.1	0.03	12	0.3	0.1
L20300N 37800E	LL-12	337800	5520300	0.6	73.9	5.0	60	0.1	25.3	15.5	415	6.81	9.2	2.2	0.9	9	0.1	0.4	0.1	212	0.71	0.297	4	81	0.43	22	0.408	4	4.31	0.006	0.02	0.1	0.19	10.3	0.1	0.09	12	0.3	0.1
L20300N 37850E	LL-12	337850	5520300	0.3	25.9	8.0	50	0.1	13.2	12.6	695	4.32	2.3	1.3	0.5	14	0.2	0.3	0.1	168	0.82	0.063	3	39	0.18	28	0.427	4	1.71	0.007	0.02	0.1	0.07	3.7	0.1	0.03	9	0.3	0.1
L20300N 37900E	LL-12	337900	5520300	0.5	64.9	4.9	47	0.1	36.6	16.5	545	5.99	4.1	0.8	0.8	12	0.2	0.3	0.1	219	0.88	0.063	3	75	0.48	41	0.542	4	3.63	0.006	0.02	0.1	0.10	6.2	0.1	0.03	12	0.3	0.1
L20300N 37950E	LL-12	337950	5520300	0.4	97.4	4.3	56	0.1	38.6	18.1	379	5.50	8.8	4.1	0.8	11	0.2	0.4	0.1	207	0.96	0.094	3	61	0.59	21	0.500	6	3.83	0.009	0.02	0.1	0.12	12.2	0.1	0.03	10	0.3	0.1
L20300N 38000E	LL-12	338000	5520300	0.4	84.8	3.6	57	0.1	42.1	20.5	472	5.79	9.8	1.2	0.7	12	0.1	0.5	0.1	209	1.05	0.076	3	57	0.67	21	0.557	7	3.48	0.007	0.02	0.1	0.10	9.1	0.1	0.03	11	0.3	0.1
L20300N 38050E	LL-12	338050	5520300	0.3	28.6	15.8	42	0.1	17.1	12.5	817	4.54	18.5	0.9	0.4	16	0.2	0.5	0.1	181	0.99	0.041	3	44	0.27	39	0.439	4	1.75	0.007	0.02	0.1	0.05	3.8	0.1	0.03	9	0.3	0.1
L20300N 38100E	LL-12	338100	5520300	0.4	50.6	3.7	83	0.1	33.4	20.2	517	6.00	9.6	1.2	0.6	11	0.2	0.3	0.1	209	0.87	0.103	3	68	0.44	31	0.446	4	2.87	0.009	0.02	0.1	0.06	7.5	0.1	0.03	11	0.3	0.1
L36600E 18200N	H-12	336600	5518200	0.6	60.3	4.8	44	0.1	22.7	11.5	209	7.11	10.9	5.5	0.6	6	0.1	0.4	0.1	221	0.33	0.047	3	63	0.32	38	0.248	2	3.15	0.006	0.02	0.1	0.05	5.3	0.1	0.03	14	0.3	0.1
L36600E 18225N	H-12	336600	5518225	0.1	4.7	11.2	10	0.1	2.7	1.2	55	1.00	2.7	6.7	0.2	6	0.1	0.2	0.1	93	0.15	0.025	1	10	0.04	11	0.166	2	0.25	0.007	0.02	0.1	0.06	1.0	0.1	0.03	4	0.3	0.1
L36600E 18250N	H-12	336600	5518250	0.4	30.3	6.6	29	0.1	10.0	4.5	120	4.66	10.2	2.9	0.4	5	0.1	0.6	0.1	169	0.30	0.036	2	40	0.16	13	0.230	2	1.47	0.006	0.02	0.1	0.06	2.9	0.1	0.03	9	0.3	0.1
L36600E 18275N	H-12	336600	5518275	0.4	24.9	11.2	29	0.1	10.3	4.2	130	4.56	6.8	2.5	0.5	6	0.2	0.5	0.1	178	0.23	0.036	2	43	0.13	22	0.249	2	1.67	0.008	0.02	0.1	0.06	2.7	0.1	0.03	9	0.3	0.1
L36600E 18300N	H-12	336600	5518300	1.1	154.4	4.7	95	0.1	60.3	27.7	418	7.85	22.3	2.4	1.0	7	0.2	0.9	0.1	224	0.40	0.061	3	84	0.72	54	0.325	3	6.36	0.006	0.03	0.1	0.10	9.5	0.1	0.03	14	0.3	0.1
L36600E 18325N	H-12	336600	5518325	0.2	14.8	23.0	13	0.1	4.1	2.3	156	2.76	4.0	2.8	0.3	5	0.1	0.7	0.1	260	0.20	0.043	2	20	0.05	14	0.719	3	0.42	0.008	0.03	0.1	0.06	0.9	0.1	0.03	8	0.3	0.1
L36600E 18350N	H-12	336600	5518350	1.3	97.0	9.2	71	0.2	39.6	54.5	3306	4.97	20.1	3.0	0.5	13	0.2	1.1	0.1	150	0.58	0.072	6	53	0.45	47	0.234	2	3.81	0.007	0.02	0.1	0.14	8.5	0.1	0.03	10	0.3	0.1
L36600E 18375N	H-12	336600	5518375	0.6	45.4	5.6	51	0.1	17.8	9.4	195	6.77	17.3	2.4	0.6	6	0.1	0.8	0.1	227	0.44	0.042	2	57	0.29	25	0.312	2	2.56	0.005	0.02	0.1	0.08	4.4	0.1	0.03	14	0.3	0.1
L36600E 18400N	H-12	336600	5518400	0.7	63.0	4.4	51	0.1	22.7	11.4	192	6.48	15.7	3.8	0.6	6	0.1	0.5	0.1	209	0.43	0.041	2	56	0.30	30	0.324	3	3.41	0.005	0.02	0.1	0.10	5.1	0.1	0.03	13	0.3	0.1
L36600E 18425N	H-12	336600	5518425	0.8	67.3	11.7	62	0.1	28.8	19.9	699	5.44	14.7	48.7	0.5	11	0.1	0.5	0.1	189	0.60	0.041	4	50	0.43	38	0.250	1	2.81	0.006	0.02	0.1	0.10	6.1	0.1	0.03	11	0.3	0.1
L36600E 18450N	H-12	336600	5518450	0.7	22.6	6.7	51	0.1	11.8	9.6	281	4.23	2.7	4.2	0.6	9	0.1	0.3	0.1	132	0.37	0.029	3	31	0.22	28	0.222	1	1.75	0.005	0.02	0.1	0.04	2.9	0.1	0.03	10	0.3	0.1
L36650E 18200N	H-12	336650	5518200	0.4	36.4	8.9	23	0.1	10.2	4.5	136	4.65	7.8	3.9	0.4	5	0.1	0.7	0.1	173	0.28	0.036	2	36	0.16	15	0.216	4	1.66	0.006	0.02	0.1	0.09	2.8	0.1	0.06	10	0.3	0.1
L36650E 18225N	H-12	336650	5518225	0.6	49.6	5.1	36	0.3	15.7	6.5	147	7.69	10.3	5.5	0.6	4	0.1	0.6	0.1	243	0.24	0.065	2	69	0.22	15	0.308	3	3.12	0.005	0.02	0.1	0.19	4.6	0.1	0.08	17	0.6	0.1
L36650E 18250N	H-12	336650	5518250	0.5	44.0	6.6	35	0.1	13.4	5.8	164	6.74	9.3	18.7	0.5	5	0.1	0.6	0.1	217	0.29	0.055	2	57	0.21	14	0.348	3	2.76	0.005	0.02	0.1	0.11	3.4	0.1	0.10	14	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
L36650E 18275N	H-12	336650	5518275	1.1	71.7	5.2	43	0.2	19.0	19.0	348	5.16	26.7	4.9	0.4	7	0.5	0.7	0.1	190	0.40	0.064	6	45	0.23	25	0.240	1	3.11	0.006	0.02	0.1	0.20	7.7	0.1	0.08	10	1.0	0.1
L36650E 18300N	H-12	336650	5518300	0.8	145.3	5.0	56	0.1	41.6	22.8	718	5.92	22.7	5.8	1.0	7	0.2	0.6	0.1	163	0.46	0.059	4	67	0.57	36	0.261	3	5.51	0.007	0.02	0.1	0.15	12.0	0.1	0.05	9	1.2	0.1
L36650E 18325N	H-12	336650	5518325	0.7	60.4	11.1	45	0.1	19.3	10.3	352	5.77	11.3	3.6	0.5	7	0.1	0.9	0.1	210	0.38	0.052	2	50	0.28	26	0.318	3	2.48	0.006	0.02	0.1	0.14	5.2	0.1	0.03	12	0.3	0.1
L36650E 18350N	H-12	336650	5518350	0.5	52.2	7.3	41	0.1	14.5	6.6	250	5.98	8.8	3.4	0.7	5	0.1	0.7	0.1	188	0.37	0.086	2	52	0.23	18	0.244	3	2.53	0.007	0.02	0.1	0.13	4.7	0.1	0.05	11	0.3	0.1
L36650E 18375N	H-12	336650	5518375	0.8	118.6	6.0	80	0.1	48.9	28.3	513	7.08	13.3	6.1	1.0	8	0.1	0.6	0.1	205	0.52	0.064	4	83	0.58	46	0.314	3	5.65	0.006	0.02	0.1	0.11	9.7	0.1	0.08	13	0.7	0.1
L36650E 18400N	H-12	336650	5518400	0.4	40.8	8.5	31	0.1	13.7	14.1	355	5.76	5.9	2.4	0.4	7	0.1	0.6	0.1	221	0.38	0.040	4	47	0.18	26	0.326	2	2.09	0.005	0.02	0.1	0.08	4.1	0.1	0.06	12	0.3	0.1
L36650E 18425N	H-12	336650	5518425	1.2	50.3	33.1	49	0.1	8.1	50.8	2279	4.27	79.8	2.9	0.2	13	0.4	0.9	0.2	172	0.64	0.103	7	25	0.12	34	0.302	3	0.98	0.012	0.09	0.1	0.22	4.9	0.1	0.09	10	0.3	0.1
L36650E 18450N	H-12	336650	5518450	0.6	59.7	16.9	59	0.1	18.1	16.0	1279	5.89	18.1	8.7	0.4	16	0.3	0.6	0.1	208	0.66	0.050	5	40	0.35	34	0.495	3	1.92	0.008	0.02	0.1	0.08	5.3	0.1	0.03	13	0.3	0.1
L20400N 36900E	LL-12	336900	5520400	0.5	82.9	3.2	71	0.05	47.4	21.4	346	6.34	6.4	2.2	0.8	14	0.2	0.4	0.05	229	0.95	0.038	3	81	0.7	35	0.563	3	3.69	0.009	0.02	0.05	0.06	8.5	0.05	0.025	12	0.25	0.1
L20400N 36950E	LL-12	336950	5520400	0.2	76.4	2.6	54	0.05	43.1	18.7	352	5.39	25.1	5.3	0.6	14	0.2	0.4	0.05	204	1	0.027	3	71	0.7	41	0.397	4	3.1	0.007	0.02	0.05	0.05	9.7	0.05	0.025	11	0.25	0.1
L20400N 37000E	LL-12	337000	5520400	0.3	61.3	3.2	59	0.05	37.3	22.3	573	4.84	6.8	1.9	0.6	16	0.1	0.3	0.05	183	1.03	0.042	4	60	0.61	41	0.374	3	2.88	0.008	0.02	0.05	0.05	7.9	0.05	0.025	10	0.25	0.1
L20400N 37050E	LL-12	337050	5520400	0.4	78	4	70	0.05	41.6	18.1	279	6.17	4.8	2.4	0.7	12	0.2	0.4	0.05	226	0.74	0.039	3	83	0.5	39	0.508	5	3.73	0.007	0.02	0.05	0.07	8.5	0.05	0.025	12	0.25	0.1
L20400N 37100E	LL-12	337100	5520400	0.2	51	8	62	0.05	31.7	15.1	607	5.12	3.2	3.8	0.6	17	0.2	0.4	0.05	194	0.9	0.043	3	60	0.42	35	0.428	3	3.06	0.01	0.02	0.05	0.04	6.7	0.05	0.025	11	0.25	0.1
L20400N 37150E	LL-12	337150	5520400	0.5	123.3	4.7	61	0.05	40.2	20.7	561	6.2	6.1	2.6	0.9	12	0.2	0.4	0.05	213	0.82	0.099	4	63	0.61	24	0.464	2	4.37	0.012	0.02	0.05	0.12	11.7	0.05	0.025	12	0.8	0.1
L20400N 37200E	LL-12	337200	5520400	0.2	41.5	4	58	0.05	21.3	14	329	4.83	2.7	4.2	0.6	12	0.1	0.4	0.05	179	0.84	0.049	2	51	0.27	25	0.527	3	2.27	0.008	0.01	0.05	0.05	5.4	0.05	0.025	11	0.25	0.1
L20400N 37250E	LL-12	337250	5520400	0.4	52.3	3.9	72	0.1	32.7	15.4	300	5.81	4	5.6	0.6	13	0.2	0.3	0.05	211	0.84	0.05	3	62	0.45	36	0.495	2	2.84	0.007	0.02	0.05	0.06	7.7	0.05	0.025	12	0.25	0.1
L20400N 37300E	LL-12	337300	5520400	0.3	51.9	4.3	51	0.05	22.6	14.9	1368	5.21	2.8	3.8	0.6	11	0.1	0.5	0.05	202	0.93	0.053	3	46	0.27	25	0.443	4	2.63	0.008	0.01	0.05	0.09	5	0.05	0.025	11	0.25	0.1
L20400N 37350E	LL-12	337350	5520400	0.3	67.8	3.8	64	0.05	37.4	19.9	644	5.91	5.8	3.1	0.6	12	0.2	0.4	0.05	218	0.95	0.062	3	61	0.52	36	0.55	3	3.22	0.008	0.01	0.05	0.11	7.1	0.05	0.025	12	0.25	0.1
L20400N 37400E	LL-12	337400	5520400	0.3	52.7	3.6	54	0.05	25.1	16.4	882	5.27	10.7	3.3	0.6	12	0.05	0.4	0.05	194	0.75	0.051	3	51	0.35	34	0.416	4	2.62	0.007	0.01	0.05	0.05	5.1	0.05	0.025	10	0.25	0.1
L20400N 37450E	LL-12	337450	5520400	0.5	142.1	2.3	49	0.05	40.8	20.4	474	5.72	8.3	6.4	0.9	15	0.1	0.4	0.05	232	1.08	0.047	5	59	0.81	29	0.511	8	3.37	0.008	0.02	0.05	0.14	15.7	0.05	0.025	11	0.25	0.1
L20400N 37500E	LL-12	337500	5520400	0.5	70.5	4.9	64	0.1	35	23.4	892	4.78	4.7	3.6	0.7	17	0.1	0.4	0.05	193	1.07	0.042	6	53	0.5	30	0.461	3	2.9	0.008	0.02	0.05	0.06	9.7	0.05	0.025	10	0.25	0.1
L20400N 37550E	LL-12	337550	5520400	0.5	148.3	2.4	59	0.05	55.5	26.8	463	6.72	8.2	5.5	1.1	15	0.1	0.5	0.05	252	0.94	0.052	11	90	0.87	43	0.547	5	4.77	0.008	0.02	0.05	0.17	23.1	0.05	0.025	13	0.25	0.1
L20400N 37600E	LL-12	337600	5520400	0.3	91.2	3.7	60	0.05	36.3	18.7	459	6.39	5.3	3.2	0.8	14	0.2	0.4	0.05	233	0.84	0.049	3	69	0.47	32	0.57	4	3.17	0.009	0.02	0.05	0.11	8.3	0.05	0.025	12	0.25	0.1
L20400N 37650E	LL-12	337650	5520400	0.5	67.2	3.3	52	0.05	38.5	20.1	383	6.54	8	6.4	0.7	14	0.1	0.5	0.05	254	0.96	0.059	3	72	0.53	30	0.658	4	3.74	0.008	0.02	0.05	0.11	7.9	0.05	0.025	12	0.5	0.1
L20400N 37700E	LL-12	337700	5520400	0.6	127.1	2.7	52	0.1	44.4	22.1	379	6.73	12.6	15.9	0.9	15	0.2	0.5	0.05	268	0.97	0.053	8	82	0.63	38	0.619	5	4.25	0.008	0.02	0.05	0.28	17.2	0.05	0.025	13	0.25	0.1
L20400N 37750E	LL-12	337750	5520400	0.5	97.7	3.4	70	0.1	47.4	20.8	421	7.07	7.2	3.4	0.9	14	0.05	0.3	0.1	261	0.85	0.064	3	85	0.67	48	0.576	3	4.34	0.007	0.02	0.05	0.09	8.9	0.05	0.025	14	0.25	0.1
L20400N 37800E	LL-12	337800	5520400	0.5	74.3	5.3	61	0.1	30.5	21.7	635	5.39	12.4	4.7	0.6	18	0.1	0.4	0.05	200	0.95	0.047	6	55	0.43	36	0.517	3	3.02	0.012	0.02	0.05	0.11	7.9	0.05	0.025	11	0.25	0.1
L20400N 37850E	LL-12	337850	5520400	0.7	116.2	3.8	51	0.05	44.6	21.8	452	5.85	24.4	3.5	0.8	12	0.05	0.4	0.05	233	1.04	0.044	3	67	0.74	25	0.582	4	3.8	0.008	0.01	0.05	0.14	11.2	0.05	0.025	11	0.25	0.1
L20400N 37900E	LL-12	337900	5520400	0.4	69.7	5.9	80	0.05	39	20.1	499	6.51	6.4	2.4	0.7	13	0.2	0.4	0.05	227	0.87	0.104	3	69	0.47	55	0.575	3	3.33	0.009	0.02	0.05	0.13	6.4	0.05	0.025	13	0.25	0.1
L20400N 37950E	LL-12	337950	5520400	0.3	33.1	11.1	69	0.05	22.6	18.1	1364	5.18	12.6	4.2	0.5	19	0.1	0.4	0.05	198	1.13	0.067	4	52	0.4	44	0.482	3	2.07	0.011	0.02	0.05	0.09	5.2	0.05	0.025	10	0.25	0.1
L20400N 38000E	LL-12	338000	5520400	0.8	78.2	5	60	0.05	35.3	26.6	1468	5.92	199.4	2	0.6	15	0.1	0.4	0.05	242	0.92	0.076	5	62	0.49	40	0.487	4	2.86	0.01	0.02	0.7	0.07	7.1	0.05	0.025	12	0.25	0.1
L20400N 38050E	LL-12	338050	5520400	0.5	41.6	3.3	62	0.05	25.1	18.7	664	5.93	21.2	2.1	0.5	14	0.05	0.4	0.05	232	0.97	0.07	3	55	0.37	26	0.535	4	2.32	0.012	0.01	0.05	0.04	4.8	0.05	0.025	11	0.25	0.1
L20400N 38100E	LL-12	338100	5520400	0.6	94.2	3.9	78	0.05	38.4	21.6	573	7.05	13.5	4.7	0.7	14	0.1	0.4	0.05	250	0.97	0.075	3	67	0.56	34	0.665	4	3.33	0.01	0.02	0.05	0.12	8.5	0.05	0.025	13	0.6	0.1
L21600N 36900E	LL-12	336900	5521600	0.5	65.8	3.6	72	0.05	38.3	18.6	363	5.38	5.3	6	0.6	16	0.1	0.4	0.1	178	0.76	0.053	4	73	0.42	26	0.458	3	2.79	0.009	0.005	0.05	0.05	6.9	0.05	0.025	11	0.25	0.1
L21600N 36950E	LL-12	336950	5521600	0.3	43.2	2.6	38	0.05	22	10.6	193	4.74	2.6	2.8	0.5	11	0.1	0.3	0.05	177	0.68	0.031	4	57	0.3	16	0.411	1	2.04	0.007	0.005	0.05	0.07	7	0.05	0.025	10	0.25	0.1
L000N 125E	LH-12	337302	5522415	0.4	63.6	8.8	44	0.1	32.9	18.5	459	4.87	2.6	2.3	0.7	17	0.2	0.5	0.3	177	0.88	0.034	4	53	0.46	26	0.465	4	2.91	0.009	0.01	0.1	0.04	7.3	0.1	0.03	10	0.3	0.1
L000N 150E	LH-12	337322	5522429	0.2	18.6	8.5	33	0.1	11.3	10.1	458	4.93	1.5	3.5	0.4	13	0.1	0.4	0.3	165	1.40	0.037	3	36	0.25	20	0.407	2	1.71	0.008	0.01	0.1	0.02	4.1	0.1	0.03	10	0.3	0.1
L000N 175E	LH-12	337343	5522444	0.2	21.6	12.0	22	0.1	7.1	4.8	685	2.82	1.9	2.1	0.3	12	0.3	0.4	0.3	131	1.23	0.029	2	20	0.15	20	0.334	3	1.17	0.010	0.01	0.1	0.01	4.3	0.1	0.03	7	0.3	0.1
L000N 200E	LH-12	337363	5522458	0.2	24.8	8.3	52	0.1	11.1	12.9	782	5.55	1.3	0.9	0.6	11	0.3	0.2	0.2	167	1.60	0.091	3	50	0.23	24	0.463	5	2.00	0.024	0.01	0.1	0.02	5.4	0.1	0.03	13	0.3	0.1
L000N 225E	LH-12	337384	5522472	0.5	122.6	3.4	76	0.1	51.0	24.4	489	7.12	4.1	3.0	1.1	13	0.2	0.5	0.1	246	0.74	0.087	5	75	0.96	39	0.519	3	5.16	0.012	0.02	0.1	0.07	16.5	0.1	0.03	14	0.9	0.1
L000N 250E	LH-12	337404	5522487	0.1	6.3	40.8	34	0.1	6.0	7.3	817	3.41	4.0	0.3	0.3	18	0.5	0.7	0.4	139	1.21	0.065	2	11	0.12	18	0.351	2	1.24	0.009	0.01	0.1	0.02	2.3	0.1	0.03	10	0.3	0.1
L000N 275E	LH-12	337425	5522501	0.4	29.6	8.5	52	0.1	16.2	9.7	436	7.22	4.2	1.4	0.8	10	0.2	0.5	0.2	219	0.78	0.131	2	45	0.26	18	0.462	1	2.20	0.007	0.01	0.1	0.06	4.8	0.1	0.03	15	0.3	0.1
L000N 300E	LH-12	337445	5522515	0.4	52.2	5.5	49	0.1	22.4	13.4	357	6.92	2.3	3.4	1.1	11	0.2	0.5	0.1	211	0.81	0.077	4	59	0.35	28	0.455	2	3.18	0.007	0.01	0.1	0.10	8.2	0.1	0.03	14	0.3	0.1
L000N 325E	LH-12	337466	5522530	0.4	47.4	8.7	81	0.1	29.0	15.8	478	6.39	4.1	1.4	1.0	12	0.2	0.5	0.1	185	0.73	0.108	3	52	0.40	32	0.420	2	3.17	0.008	0.02	0.1	0.10	6.8	0.1	0.03	13	0.3	0.1
L000N 350E	LH-12	337486	5522544	0.4	80.1	9.5	99	0.1	26.6	48.2	1886	7.30	4.0	0.3	0.8	15	0.3	0.4	0.2	190	0.81	0.124	3	47	0.33	41	0.416	2	2.31	0.008	0.02	0.1	0.06	5.1	0.1	0.03	19	0.3	0.1
L000N 375E	LH-12	337507	5522558	0.4	55.8	8.1	55	0.1	32.4	17.5	710	4.50	2.9	0.7	0.8	19	0.2	0.5	0.1	158	0.73	0.041	5	49	0.42	57	0.395	2	3.17	0.019	0.02	0.1	0.06	6.9	0.1	0.03	10	0.3	0.1
L000N 400E	LH-12	337527	5522573	0.3	71.1	4.3	61	0.1	44.7	21.0	431	5.80	3.9	0.7	0.8	20	0.2	0.4	0.1	201	0.80	0.053	4	70	0.56	55	0.478	3	3.82	0.008	0.02	0.1	0.07	8.6	0.1	0.03	12	0.3	0.1
L600N 100E	LH-12	336841	5522847	0.6	148.8	8.1	68	0.1	37.9	29.9	1548	6.12	2.5	0.9	0.5	21	0.2	0.3	0.1	203	1.14	0.043	5	74	0.84	33	0.432	4	2.77	0.009	0.01	0.1	0.04	9.0	0.1	0.03	12	0.3	0.1
L600N 125E	LH-12	336861	5522861	0.3	42.1	27.1	48	0.1	20.6	14.9	627	5.59	2.8	20.3	0.5	16	0.4	0.5	0.2	188	0.96	0.052	3	55	0.29	25	0.422	2	1.84	0.007	0.01	0.1	0.06	4.6	0.1	0.03	13	0.3	0.1
L600N 150E	LH-12	336882	5522876	0.4	86.0	1.7	31	0.1	35.3	17.3	255	4.54	3.7	2.2	0.8	14	0.2	0.3	0.1	175	0.86	0.020	3	55	0.50	20	0.469	3	3.23	0.007	0.01	0.1	0.08	10.3	0.1	0.03	10	0.3	0.1
L600N 175E	LH-12	336902	5522890																																				
L600N 200E	LH-12	336923	5522904																																				
L600N 225E	LH-12	336943	5522919	0.4	71.2	4.1	56	0.1	32.1	15.4	506	5.08	3.7	0.3	0.7	21	0.2	0.4	0.1	193	0.73	0.041	4	59	0.45	56	0.436	3	2.99	0.008	0.03	0.1	0.05	6.7	0.1	0.03	11	0.3	0.1
L600N 250E	LH-12	336964	5522933	0.3	43.8	5.9	111	0.1	32.9	16.4	557	4.74	3.0	0.3	0.6	21	0.3	0.4	0.1	161	0.82	0.052	3	53	0.41	46	0.418	1	2.50	0.007	0.02	0.1	0.05	5.5	0.1	0.03	10	0.3	0.1
L600N 275E	LH-12	336984	5522947	0.4	68.2	11.3	81	0.1	33.5	18.2	1147	4.61	4.5	0.3	0.7	22	0.5	0.4	0.1	165	0.81	0.068	4	55	0.51	60	0.402	3	2.89	0.009	0.02	0.1	0.03	8.9	0.1	0.03	10	0.3	0.1
L600N 300E	LH-12	337005	5522962	0.5	112.4	2.6	58	0.1	47.1	22.4	437	5.75	6.8	3.8	1.1	21	0.2	0.4	0.1	212	0.97	0.037	8	75	0.85	42	0.499	4	4.03	0.009	0.03	0.1	0.08	17.0	0.1	0.03	12	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
L600N 325E	LH-12	337025	5522976	0.4	110.5	3.9	75	0.1	45.0	22.0	711	6.05	4.1	0.7	0.9	18	0.2	0.4	0.1	215	0.93	0.077	4	56	0.84	40	0.489	4	3.79	0.009	0.02	0.1	0.06	9.8	0.1	0.03	13	0.3	0.1
L600N 350E	LH-12	337046	5522990	0.6	47.7	10.0	70	0.1	27.5	15.5	1636	6.39	3.9	1.3	0.7	13	0.3	0.6	0.1	205	0.63	0.106	5	58	0.42	44	0.403	2	3.42	0.010	0.02	0.1	0.15	7.4	0.1	0.03	14	0.9	0.1
L600N 375E	LH-12	337066	5523005	0.5	75.4	19.1	73	0.1	33.5	16.4	1543	5.74	4.8	2.9	0.8	15	0.4	0.7	0.1	185	0.84	0.088	3	55	0.50	49	0.405	2	3.12	0.008	0.01	0.1	0.11	7.4	0.1	0.03	12	0.3	0.1
L600N 400E	LH-12	337087	5523019	0.2	12.4	16.3	35	0.1	10.2	6.4	349	6.51	3.8	3.1	0.6	12	0.4	0.4	0.2	198	0.92	0.119	3	45	0.19	30	0.431	1	1.49	0.007	0.01	0.1	0.07	3.1	0.1	0.03	17	0.3	0.1
L21700N 36200E	LL-12	336200	5521700	0.4	94.4	3.0	53	0.1	44.2	21.8	345	5.79	6.3	2.2	1.1	13	0.1	0.6	0.1	215	0.74	0.038	4	85	0.61	26	0.488	3	4.55	0.007	0.01	0.1	0.11	14.5	0.1	0.03	12	0.6	0.1
L21700N 36250E	LL-12	336250	5521700	0.4	47.9	13.8	47	0.1	24.8	13.6	616	5.66	4.9	2.5	0.7	12	0.2	0.7	0.1	209	0.69	0.057	3	56	0.39	21	0.449	3	2.82	0.008	0.01	0.1	0.13	5.9	0.1	0.03	12	0.3	0.1
L21700N 36300E	LL-12	336300	5521700	0.2	22.1	9.5	31	0.1	9.8	15.1	634	3.49	2.5	0.3	0.4	15	0.2	0.4	0.1	137	0.56	0.038	3	37	0.14	25	0.349	2	1.42	0.008	0.01	0.1	0.11	3.5	0.1	0.03	8	0.3	0.1
L21700N 36350E	LL-12	336350	5521700	0.2	60.3	4.3	48	0.1	27.3	14.2	346	5.63	5.6	0.3	0.6	13	0.2	0.5	0.2	212	0.64	0.057	2	54	0.40	32	0.441	2	2.75	0.009	0.01	0.1	0.06	5.1	0.1	0.03	12	0.3	0.1
L21700N 36400E	LL-12	336400	5521700	0.3	60.7	9.2	63	0.1	18.2	20.4	407	6.57	3.4	17.3	0.7	13	0.3	0.4	0.2	218	0.60	0.054	3	46	0.35	29	0.509	2	2.17	0.010	0.01	0.1	0.07	5.1	0.1	0.03	14	0.3	0.1
L21700N 36450E	LL-12	336450	5521700	0.4	36.9	15.5	37	0.1	18.9	16.5	370	4.33	5.2	1.2	0.4	12	0.3	0.4	0.2	161	0.63	0.067	4	39	0.26	18	0.326	2	2.37	0.008	0.01	0.1	0.13	4.9	0.1	0.03	10	0.3	0.1
L21700N 36500E	LL-12	336500	5521700	0.5	47.3	5.3	51	0.1	23.7	14.2	333	6.81	4.3	6.0	1.0	23	0.2	0.4	0.1	247	0.87	0.062	4	63	0.45	21	0.578	3	2.89	0.013	0.01	0.1	0.09	10.0	0.1	0.03	15	0.3	0.1
L21700N 36550E	LL-12	336550	5521700	0.4	48.8	7.6	39	0.1	23.0	12.8	378	5.29	4.0	5.3	0.7	18	0.2	0.5	0.1	207	0.87	0.036	3	51	0.38	26	0.507	3	2.46	0.010	0.01	0.1	0.08	6.4	0.1	0.03	11	0.3	0.1
L21700N 36600E	LL-12	336600	5521700	0.4	62.3	10.4	72	0.1	23.4	27.2	1273	5.26	6.5	2.5	0.6	20	0.2	0.5	0.1	174	0.76	0.042	7	47	0.34	32	0.461	2	2.34	0.010	0.01	0.1	0.08	7.1	0.1	0.03	11	0.3	0.1
L21700N 36650E	LL-12	336650	5521700	0.4	87.0	4.6	51	0.1	36.7	20.3	745	4.74	5.9	3.0	0.6	29	0.1	0.6	0.1	179	1.27	0.048	6	53	0.72	30	0.441	4	2.95	0.018	0.02	0.1	0.08	11.5	0.1	0.03	10	0.3	0.1
L21700N 36700E	LL-12	336700	5521700	0.3	86.1	2.5	55	0.1	42.4	21.2	414	4.83	5.5	2.2	0.8	28	0.2	0.4	0.1	186	1.02	0.036	4	73	0.68	71	0.442	4	3.65	0.013	0.01	0.1	0.06	11.4	0.1	0.03	10	0.3	0.1
L21700N 36750E	LL-12	336750	5521700	0.5	51.8	4.5	61	0.1	34.6	17.1	470	5.90	3.4	5.2	0.8	17	0.1	0.5	0.1	209	0.78	0.063	3	69	0.44	30	0.535	2	3.23	0.014	0.02	0.1	0.08	6.5	0.1	0.03	14	0.3	0.1
L21700N 36800E	LL-12	336800	5521700	0.5	79.9	3.8	61	0.1	42.0	20.8	309	5.39	4.2	2.2	1.0	17	0.2	0.5	0.1	210	0.88	0.044	4	75	0.59	25	0.522	3	3.80	0.011	0.02	0.1	0.14	13.4	0.1	0.03	11	0.7	0.1
L21700N 36850E	LL-12	336850	5521700	0.5	61.3	3.3	55	0.1	36.1	18.2	464	5.45	3.6	6.6	0.7	15	0.1	0.5	0.2	214	0.85	0.044	3	68	0.50	33	0.579	3	3.31	0.010	0.01	0.1	0.06	7.5	0.1	0.03	12	0.7	0.1
L21700N 36900E	LL-12	336900	5521700	0.4	84.9	3.2	65	0.1	40.3	21.0	549	5.39	3.9	5.8	0.7	15	0.1	0.5	0.1	193	0.86	0.059	4	63	0.54	32	0.532	3	3.25	0.009	0.01	0.1	0.09	10.1	0.1	0.03	11	0.3	0.1
L21700N 36950E	LL-12	336950	5521700	0.3	66.0	9.2	52	0.1	27.8	15.0	528	4.91	3.0	3.1	0.7	15	0.2	0.6	0.1	188	0.80	0.067	4	56	0.39	30	0.458	3	2.78	0.009	0.01	0.1	0.04	8.9	0.1	0.03	11	0.6	0.1
L21700N 37000E	LL-12	337000	5521700	0.3	98.2	2.7	49	0.1	37.2	18.2	318	5.72	1.2	7.4	1.0	11	0.1	0.4	0.1	183	0.62	0.058	6	61	0.41	17	0.436	3	3.44	0.010	0.01	0.1	0.06	14.5	0.1	0.03	13	0.3	0.1
L21700N 37050E	LL-12	337050	5521700	0.4	102.4	4.5	55	0.1	43.2	21.2	438	5.37	3.8	2.6	0.8	14	0.2	0.6	0.1	202	0.85	0.052	4	72	0.62	32	0.534	3	4.10	0.009	0.01	0.1	0.09	10.5	0.1	0.03	11	0.3	0.1
L21700N 37100E	LL-12	337100	5521700	0.5	105.6	3.1	58	0.1	54.2	23.9	325	6.07	4.2	0.3	0.9	13	0.2	0.5	0.1	223	0.79	0.043	3	83	0.63	35	0.573	4	5.05	0.008	0.01	0.1	0.12	9.8	0.1	0.03	13	0.3	0.1
L21700N 37150E	LL-12	337150	5521700	0.3	97.9	2.5	44	0.1	38.2	19.9	322	5.02	3.5	2.3	0.8	14	0.2	0.4	0.1	207	0.92	0.044	4	57	0.59	18	0.541	4	3.56	0.009	0.01	0.1	0.12	10.4	0.1	0.03	11	0.6	0.1
L21700N 37200E	LL-12	337200	5521700	0.4	69.9	6.1	77	0.1	35.4	20.2	579	5.89	3.2	0.3	0.7	12	0.3	0.6	0.1	206	0.76	0.087	3	64	0.44	26	0.536	2	3.51	0.008	0.01	0.1	0.09	7.0	0.1	0.03	13	0.3	0.1
L21700N 37250E	LL-12	337250	5521700	0.4	82.7	3.5	38	0.1	29.1	35.8	486	4.24	1.9	3.0	0.7	13	0.1	0.3	0.1	168	0.83	0.047	8	54	0.46	21	0.465	3	3.26	0.012	0.01	0.1	0.10	11.2	0.1	0.03	11	0.3	0.1
L21700N 37300E	LL-12	337300	5521700	0.4	95.8	4.6	51	0.1	40.9	19.8	542	5.33	3.3	9.1	0.8	15	0.1	0.6	0.1	205	0.94	0.048	3	69	0.59	34	0.548	4	3.89	0.009	0.01	0.1	0.13	11.5	0.1	0.03	12	0.3	0.1
L21700N 37350E	LL-12	337350	5521700	0.3	45.4	8.0	61	0.1	29.2	17.1	756	5.24	5.2	3.0	0.6	15	0.2	0.5	0.1	189	1.02	0.065	3	54	0.53	26	0.543	3	2.52	0.009	0.01	0.1	0.10	6.3	0.1	0.03	12	0.3	0.1
L21700N 37400E	LL-12	337400	5521700	0.5	54.6	10.3	51	0.1	29.2	17.0	616	5.72	3.4	3.9	0.7	17	0.2	0.7	0.3	226	0.94	0.069	3	58	0.39	30	0.532	4	3.00	0.009	0.01	0.1	0.07	6.5	0.1	0.03	13	0.3	0.1
L36550E 18175N	H-12	336550	5518175	1.3	42.7	5.8	39	0.2	14.2	7.5	175	7.09	554.8	7.1	0.6	6	0.1	0.4	0.1	252	0.26	0.051	3	61	0.19	25	0.397	2	2.66	0.006	0.02	0.1	0.12	3.6	0.1	0.03	16	0.5	0.1
L36550E 18200N	H-12	336550	5518200	0.5	71.2	3.3	62	0.1	30.6	15.6	193	4.57	11.3	4.2	0.8	5	0.1	0.4	0.1	146	0.33	0.036	2	60	0.32	31	0.156	2	3.84	0.005	0.01	0.1	0.11	5.8	0.1	0.03	8	0.6	0.1
L36550E 18225N	H-12	336550	5518225	0.5	69.1	3.6	52	0.2	26.6	11.5	173	6.32	13.3	24.1	0.8	4	0.1	0.4	0.1	173	0.29	0.040	2	65	0.33	31	0.189	2	3.76	0.005	0.01	0.1	0.12	6.0	0.1	0.03	11	0.6	0.1
L36550E 18250N	H-12	336550	5518250	0.5	31.7	3.7	18	0.1	7.3	3.2	77	6.00	11.6	5.0	0.4	4	0.1	0.5	0.1	260	0.13	0.038	2	48	0.08	8	0.278	1	1.08	0.004	0.01	0.1	0.04	1.8	0.1	0.03	14	0.3	0.1
L36550E 18275N	H-12	336550	5518275	0.5	50.2	4.6	42	0.1	16.7	8.0	155	5.40	16.9	5.0	0.7	4	0.1	0.5	0.1	194	0.29	0.030	2	51	0.25	14	0.289	2	2.58	0.004	0.01	0.1	0.09	3.5	0.1	0.03	10	0.3	0.1
L36550E 18300N	H-12	336550	5518300	0.7	53.3	5.3	72	0.2	33.6	61.1	1032	5.55	22.4	4.4	0.6	9	0.1	0.5	0.1	170	0.45	0.047	4	53	0.40	41	0.235	2	2.80	0.007	0.02	0.1	0.08	5.4	0.1	0.03	10	0.3	0.1
L36550E 18325N	H-12	336550	5518325	0.3	35.9	5.3	44	0.1	13.1	8.6	282	7.04	3.6	6.5	0.6	9	0.1	0.7	0.1	273	0.38	0.026	2	55	0.15	16	0.510	2	2.05	0.006	0.01	0.1	0.07	3.7	0.1	0.03	15	0.3	0.1
L36550E 18350N	H-12	336550	5518350	0.7	66.7	3.4	44	0.1	22.1	10.3	170	6.38	14.2	1.7	0.8	5	0.1	0.6	0.1	204	0.36	0.037	2	65	0.25	19	0.323	2	3.73	0.005	0.01	0.1	0.10	5.3	0.1	0.03	11	0.7	0.1
L36550E 18375N	H-12	336550	5518375	0.4	14.5	5.7	14	0.1	4.1	2.2	96	4.44	6.2	4.5	0.4	4	0.1	0.4	0.1	274	0.08	0.027	2	27	0.02	6	0.344	2	0.56	0.005	0.01	0.1	0.02	1.0	0.1	0.03	12	0.3	0.1
L36550E 18400N	H-12	336550	5518400	1.2	67.6	4.9	59	0.1	31.2	17.2	381	5.76	54.6	2.2	0.6	9	0.1	0.6	0.1	203	0.55	0.034	4	58	0.48	36	0.328	3	2.89	0.007	0.02	0.1	0.06	6.1	0.1	0.03	11	0.3	0.1
L36550E 18425N	H-12	336550	5518425	0.6	44.6	4.6	60	0.1	23.4	11.1	229	6.29	11.8	2.5	0.5	9	0.1	0.5	0.1	205	0.50	0.040	3	51	0.32	28	0.303	3	2.46	0.006	0.02	0.1	0.05	4.3	0.1	0.03	12	0.3	0.1
L36550E 18450N	H-12	336550	5518450	0.6	59.3	3.4	55	0.2	22.2	10.2	156	5.99	8.3	3.8	0.6	6	0.2	0.5	0.1	191	0.41	0.037	2	58	0.27	22	0.305	2	2.67	0.006	0.02	0.1	0.05	4.7	0.1	0.03	10	0.3	0.1
L36550E 18475N	H-12	336550	5518475	0.6	83.8	3.4	58	0.3	38.8	18.4	252	4.68	10.0	5.2	0.9	6	0.2	0.4	0.1	145	0.53	0.025	2	61	0.54	33	0.214	3	3.66	0.007	0.01	0.1	0.07	8.1	0.1	0.03	8	0.3	0.1
L36550E 18500N	H-12	336550	5518500	1.0	67.2	5.7	113	0.3	26.7	88.9	7299	5.35	14.6	3.2	0.3	11	0.2	0.3	0.1	154	0.53	0.090	8	58	0.17	47	0.162	3	4.11	0.006	0.02	0.1	0.21	9.3	0.1	0.05	8	1.0	0.1
L36600E 18425N	H-12	336600	5518425	0.7	48.3	4.9	44	0.1	16.8	8.3	142	6.09	16.0	3.4	0.5	9	0.1	0.4	0.1	219	0.42	0.042	3	55	0.19	31	0.306	2	2.61	0.007	0.02	0.1	0.10	4.5	0.1	0.03	12	0.6	0.1
L36600E 18450N	H-12	336600	5518450	0.8	29.3	5.3	61	0.1	15.3	13.2	448	4.18	3.4	4.3	0.6	9	0.1	0.2	0.1	142	0.39	0.030	4	35	0.26	31	0.228	2	2.10	0.006	0.02	0.1	0.04	3.3	0.1	0.03	10	0.3	0.1
L36600E 18475N	H-12	336600	5518475	0.7	59.4	5.7	61	0.1	22.1	9.9	182	6.70	13.0	2.3	0.6	5	0.1	0.6	0.1	200	0.34	0.047	2	61	0.26	22	0.289	3	3.44	0.005	0.02	0.1	0.08	4.1	0.1	0.03	12	0.3	0.1
L36600E 18500N	H-12	336600	5518500	0.4	87.5	2.7	61	0.1	34.6	16.0	202	5.48	7.9	3.7	0.7	6	0.1	0.5	0.1	189	0.49	0.032	2	56	0.39	21	0.353	3	3.39	0.007	0.01	0.1	0.06	7.6	0.1	0.03	10	0.3	0.1
L36650E 18475N	H-12	336650	5518475	0.6	31.1	3.6	36	0.1	13.4	9.1	202	4.48	5.6	2.9	0.4	7	0.1	0.3	0.1	178	0.51	0.029	2	44	0.24	15	0.290	2	1.58	0.006	0.01	0.1	0.03	3.4	0.1	0.03	9	0.3	0.1
L36650E 18500N	H-12	336650	5518500	0.7	78.1	3.4	59	0.1	39.4	25.9	374	4.92	7.1	1.6	0.5	8	0.1	0.4	0.1	165	0.57	0.042	3	48	0.54	26	0.321	4	2.73	0.006	0.01	0.1	0.07	6.2	0.1	0.03	10	0.3	0.1
L36700E 18225N	H-12	336700	5518225	0.1	8.7	8.0	11	0.1	2.8	1.2	73	2.12	1.2	12.6	0.4	3	0.1	0.3	0.1	197	0.06	0.014	2	15	0.01	4	0.321	1	0.23	0.004	0.01	0.1	0.02	0.7	0.1	0.03	7	0.3	0.1
L36700E 18250N	H-12	336700	5518250	0.5	106.9	2.7	64	0.2	47.0	22.4	285	5.39	10.6	6.4	0.8	7	0.1	0.4	0.1	182	0.56	0.025	3	75	0.64	48	0.291	3	4.24	0.007	0.01	0.1	0.09	11.6	0.1	0.03	10	0.3	0.1
L36700E 18275N	H-12	336700	5518275	0.6	60.8	3.4	66	0.2	27.3	12.8	196	5.41	10.4	3.2	0.6	9	0.2	0.5	0.1	165	0.51	0.038	2	54	0.35	23	0.280	4	3.09	0.008	0.01	0.1	0.09	5.8	0.1	0.03	9	0.3	0.1
L36700E 18300N	H-12	336700	5518300	0.3	31.4	9.7	30	0.2	12.2	5.8	161	3.42	9.2	2.7	0.3	10	0.2	0.5	0.1	136	0.37	0.036	2	31	0.15	26	0.208	3	1.38	0.007	0.02	0.1	0.08	3.1	0.1	0.03	7	0.3	0.1
L36700E 18325N	H-12	336700	5518325	0.9	91.6	4.7	73	0.2	30.5	28.0	578	4.96	53.1	3.6	0.7	7	0.1	0.4	0.1	151	0.40	0.064	4	48	0.35	31	0.249	3	3.76	0.007	0.02	0.1	0.16	7.6	0.1	0.03	10	0.8	0.1
L36700E 18350N	H-12	336700	5518350	0.5	42.2	8.5	39	0.1	14.2	6.7	235	5.52	5.8	3.6	0.6	5	0.1	0.5	0.1	219	0.31	0.055	2	53	0.19	17	0.278	2	2.55	0.006	0.01	0.1	0.15	4.8	0.1	0.03	12	0.3	0.1
L36700E 18375N	H-12	336700	5518375	0.5	56.4	4.5	43	0.1	18.3	8.8	240	6.08	12.8	2.4	0.7	5	0.1	0.5	0.1	190	0.45	0.062	2	55	0.28	16	0.277	2	2.80	0.005	0.01	0.1	0.07	6.0	0.1	0.03	12	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
L36700E 18400N	H-12	336700	5518400	0.7	51.6	3.9	39	0.1	20.1	10.0	252	7.38	48.1	4.8	0.7	5	0.1	0.4	0.1	206	0.28	0.052	2	72	0.28	15	0.279	2	3.17	0.005	0.01	0.1	0.12	4.8	0.1	0.03	13	0.7	0.1
L36700E 18425N	H-12	336700	5518425	1.7	64.8	4.2	53	0.2	10.9	15.3	184	11.01	38.0	2.2	0.6	6	0.1	0.6	0.1	212	0.25	0.053	1	77	0.13	13	0.293	1	4.03	0.005	0.01	0.1	0.18	4.2	0.1	0.03	14	0.3	0.1
L36700E 18450N	H-12	336700	5518450	1.6	36.8	3.0	28	0.1	13.4	6.0	107	4.68	452.4	2.6	0.4	7	0.1	0.5	0.1	161	0.37	0.024	2	39	0.17	12	0.241	2	1.73	0.006	0.01	0.3	0.04	3.6	0.1	0.03	9	0.3	0.1
L36700E 18475N	H-12	336700	5518475	0.5	34.7	3.6	37	0.1	14.2	7.8	143	4.97	5.6	1.2	0.5	6	0.1	0.4	0.1	182	0.41	0.039	2	43	0.18	17	0.336	3	1.94	0.006	0.01	0.1	0.06	4.0	0.1	0.03	10	0.3	0.1
L36700E 18500N	H-12	336700	5518500	0.9	71.1	3.5	59	0.1	32.5	17.1	277	5.79	10.0	3.9	0.5	6	0.1	0.5	0.1	200	0.57	0.039	2	52	0.52	24	0.365	3	2.70	0.006	0.01	0.1	0.06	5.8	0.1	0.03	11	0.3	0.1
H-12 L37050E 183	H-12	337050	5518300	0.3	15.4	6.4	16	0.1	5.6	2.7	93	5.72	2.4	4.9	0.4	7	0.1	0.6	0.1	292	0.27	0.019	2	42	0.07	12	0.467	1	0.78	0.005	0.01	0.1	0.01	1.3	0.1	0.03	14	0.3	0.1
H-12 L37050E 183	H-12	337050	5518325	0.4	36.3	4.9	38	0.2	15.0	7.0	178	4.89	8.5	2.2	0.4	7	0.1	1.1	0.2	186	0.47	0.022	2	44	0.22	15	0.323	2	1.73	0.005	0.01	0.1	0.06	3.5	0.1	0.03	10	0.3	0.1
H-12 L37050E 183	H-12	337050	5518350	0.5	66.2	5.1	43	0.1	18.5	7.5	158	7.32	11.9	3.2	0.7	6	0.2	0.7	0.1	260	0.34	0.032	2	75	0.22	15	0.454	2	2.62	0.005	0.01	0.1	0.07	4.2	0.1	0.03	15	0.5	0.1
H-12 L37050E 183	H-12	337050	5518375	0.4	109.3	3.4	46	0.1	26.9	11.7	221	5.77	8.2	6.1	0.7	7	0.1	0.6	0.1	220	0.57	0.020	2	58	0.46	26	0.415	3	2.91	0.006	0.01	0.1	0.06	6.3	0.1	0.03	12	0.3	0.1
H-12 L37050E 184	H-12	337050	5518400	0.3	42.0	4.9	29	0.1	11.1	4.9	155	5.94	12.6	1.9	0.5	8	0.1	0.7	0.1	229	0.44	0.035	2	54	0.17	14	0.456	3	1.72	0.006	0.01	0.1	0.06	3.2	0.1	0.03	12	0.3	0.1
H-12 L37050E 184	H-12	337050	5518425	0.1	7.2	15.0	18	0.2	3.1	1.7	237	0.75	3.0	0.7	0.1	7	0.2	0.1	0.1	65	0.36	0.029	1	7	0.09	7	0.172	2	0.26	0.006	0.02	0.1	0.06	0.9	0.1	0.06	2	0.3	0.1
H-12 L37050E 184	H-12	337050	5518450	0.5	99.8	3.4	61	0.1	27.3	13.6	259	6.56	12.0	4.0	0.8	7	0.4	0.6	0.1	238	0.57	0.042	3	73	0.41	19	0.464	2	3.60	0.006	0.01	0.1	0.12	10.2	0.1	0.03	13	0.3	0.1
H-12 L37050E 184	H-12	337050	5518475	0.3	21.7	4.1	17	0.1	7.1	4.0	74	2.53	5.7	2.3	0.2	13	0.2	0.3	0.1	116	0.35	0.022	4	25	0.09	23	0.216	1	0.90	0.007	0.01	0.1	0.08	2.2	0.1	0.03	6	0.8	0.1
H-12 L37050E 185	H-12	337050	5518500	0.4	95.7	3.8	47	0.1	27.6	11.9	212	6.55	7.3	4.0	0.6	9	0.2	0.6	0.1	247	0.59	0.040	2	77	0.37	22	0.509	2	3.57	0.006	0.01	0.1	0.06	6.6	0.1	0.03	13	0.3	0.1
H-12 L37050E 185	H-12	337050	5518525	0.4	95.7	3.7	49	0.1	33.9	15.8	313	6.02	13.0	3.2	0.8	11	0.2	0.6	0.1	209	0.78	0.078	4	73	0.57	36	0.511	4	4.01	0.007	0.01	0.1	0.14	10.8	0.1	0.03	13	0.3	0.1
H-12 L37050E 185	H-12	337050	5518550	0.5	81.0	5.3	59	0.1	31.4	18.5	390	6.65	15.4	3.7	0.8	9	0.1	0.6	0.1	263	0.71	0.058	3	75	0.50	27	0.528	4	3.77	0.007	0.01	0.1	0.11	9.0	0.1	0.03	14	0.3	0.1
H-12 L37050E 185	H-12	337050	5518575	0.6	108.4	3.5	64	0.1	40.2	20.6	320	6.96	10.0	4.5	0.9	9	0.1	0.6	0.1	279	0.75	0.048	4	96	0.59	29	0.586	4	4.21	0.007	0.01	0.1	0.12	15.9	0.1	0.03	13	0.7	0.1
H-12 L37050E 186	H-12	337050	5518600	0.6	47.6	5.1	42	0.1	18.0	9.3	211	7.44	10.9	1.6	0.7	7	0.1	0.7	0.1	274	0.49	0.045	2	78	0.28	15	0.523	3	3.11	0.006	0.01	0.1	0.08	4.6	0.1	0.03	15	0.3	0.1
H-12 L37050E 186	H-12	337050	5518625	1.8	37.3	6.4	34	0.1	11.1	16.0	170	4.43	142.6	5.2	0.5	10	0.1	0.3	0.1	232	0.46	0.021	7	47	0.11	18	0.498	1	1.72	0.006	0.01	0.1	0.06	4.8	0.1	0.03	15	0.3	0.1
H-12 L37050E 186	H-12	337050	5518650	5.1	41.5	4.1	43	0.1	16.6	13.4	588	6.19	648.0	2.7	0.3	16	0.1	0.5	0.1	341	1.01	0.036	5	59	0.30	18	0.283	3	1.90	0.006	0.01	0.1	0.10	7.1	0.1	0.03	9	0.7	0.1
H-12 L37050E 186	H-12	337050	5518675	2.0	15.8	5.6	30	0.1	5.7	9.8	225	2.83	31.0	61.1	0.2	7	0.1	0.4	0.1	184	0.40	0.017	2	26	0.10	9	0.323	1	0.71	0.005	0.01	0.1	0.04	1.9	0.1	0.03	9	0.3	0.1
H-12 L37050E 187	H-12	337050	5518700	0.8	19.2	5.8	21	0.1	5.4	2.5	71	5.89	1.4	3.5	0.3	3	0.1	0.5	0.1	322	0.31	0.009	1	43	0.07	5	0.551	2	0.88	0.004	0.01	0.1	0.03	1.8	0.1	0.03	15	0.3	0.1
H-12 L37000E 183	H-12	337000	5518300	0.4	29.1	3.5	25	0.1	9.6	4.3	106	4.61	8.1	4.9	0.5	3	0.1	0.4	0.1	183	0.18	0.026	2	48	0.11	11	0.248	1	1.60	0.004	0.01	0.1	0.07	2.5	0.1	0.03	10	0.3	0.1
H-12 L37000E 183	H-12	337000	5518325	0.4	67.8	3.4	49	0.3	26.1	11.4	226	4.69	8.1	996.5	0.6	4	0.1	0.4	0.1	179	0.35	0.036	2	59	0.35	17	0.302	2	2.63	0.005	0.01	0.1	0.12	6.9	0.1	0.03	9	0.6	0.1
H-12 L37000E 183	H-12	337000	5518350	0.6	70.1	4.2	39	0.1	21.7	9.3	198	5.57	11.3	111.2	0.8	5	0.1	0.5	0.1	190	0.41	0.042	2	65	0.34	16	0.308	3	3.46	0.006	0.01	0.1	0.14	5.2	0.1	0.03	9	0.3	0.1
H-12 L37000E 183	H-12	337000	5518375	0.3	18.2	12.0	24	0.2	6.5	2.6	110	7.07	1.2	220.9	0.3	3	0.1	0.4	0.2	413	0.13	0.017	2	38	0.06	9	0.664	1	0.76	0.005	0.01	0.1	0.06	1.4	0.1	0.03	18	0.3	0.1
H-12 L37000E 184	H-12	337000	5518400	1.0	97.0	3.4	58	0.1	39.2	28.9	1085	5.01	193.9	14.3	0.6	5	0.1	0.9	0.1	161	0.44	0.020	6	67	0.44	36	0.182	2	3.08	0.006	0.01	0.1	0.07	8.0	0.1	0.03	9	0.5	0.1
H-12 L37000E 184	H-12	337000	5518425	0.9	56.4	2.7	37	0.1	18.0	7.7	159	5.72	71.3	2.2	0.6	5	0.1	0.6	0.1	174	0.20	0.032	3	66	0.23	21	0.299	2	3.03	0.005	0.01	0.1	0.13	5.1	0.1	0.03	10	0.6	0.1
H-12 L37000E 184	H-12	337000	5518450	0.7	27.7	4.1	22	0.1	6.8	3.4	74	5.04	71.2	4.9	0.3	4	0.1	1.1	0.1	237	0.16	0.012	2	40	0.08	13	0.321	1	1.00	0.004	0.01	0.1	0.03	2.0	0.1	0.03	12	0.3	0.1
H-12 L37000E 184	H-12	337000	5518475	0.5	86.7	4.2	52	0.1	33.3	13.0	231	5.64	13.4	4.7	0.8	6	0.2	0.4	0.1	197	0.54	0.030	2	87	0.46	17	0.430	2	4.04	0.005	0.01	0.1	0.14	8.2	0.1	0.03	11	0.3	0.1
H-12 L37000E 185	H-12	337000	5518500	0.3	79.8	2.8	49	0.1	34.0	15.9	254	5.70	8.1	4.6	0.7	6	0.1	0.5	0.1	212	0.49	0.035	4	82	0.42	24	0.445	2	3.49	0.007	0.01	0.1	0.10	10.8	0.1	0.03	11	0.3	0.1
H-12 L37000E 185	H-12	337000	5518525	0.4	53.2	4.0	40	0.1	24.6	12.0	176	5.50	3.6	3.4	0.7	5	0.1	0.4	0.1	221	0.41	0.035	3	73	0.28	22	0.422	2	3.05	0.006	0.01	0.1	0.08	9.3	0.1	0.03	11	0.3	0.1
H-12 L37000E 185	H-12	337000	5518550	0.6	23.7	8.0	28	0.1	8.9	3.7	131	7.81	2.8	4.3	0.6	5	0.1	0.6	0.1	338	0.30	0.039	2	72	0.14	10	0.531	1	1.80	0.005	0.01	0.1	0.03	2.3	0.1	0.03	18	0.3	0.1
H-12 L37000E 185	H-12	337000	5518575	0.4	109.7	2.6	44	0.1	31.4	13.1	224	5.43	8.3	5.6	0.9	6	0.1	0.4	0.1	204	0.53	0.033	3	71	0.43	16	0.449	3	3.81	0.007	0.01	0.1	0.12	9.5	0.1	0.03	10	0.3	0.1
H-12 L37000E 186	H-12	337000	5518600	0.3	55.2	4.0	34	0.1	16.3	7.0	187	5.26	2.9	2.9	0.5	5	0.1	0.5	0.1	217	0.39	0.021	2	57	0.25	13	0.424	2	2.18	0.007	0.01	0.1	0.09	5.5	0.1	0.03	11	0.3	0.1
H-12 L37000E 186	H-12	337000	5518625	0.5	33.7	4.5	28	0.1	8.8	4.5	120	5.52	4.3	6.7	0.5	5	0.1	0.5	0.1	249	0.29	0.019	2	51	0.11	10	0.475	1	1.47	0.006	0.01	0.1	0.05	2.5	0.1	0.03	14	0.3	0.1
H-12 L37000E 186	H-12	337000	5518650	1.1	32.9	5.4	37	0.1	10.7	10.7	146	7.86	4.0	32.1	0.3	5	0.1	0.4	0.1	349	0.35	0.026	2	63	0.13	13	0.567	1	1.65	0.004	0.01	0.1	0.04	2.9	0.1	0.03	20	0.3	0.1
H-12 L36950E 183	H-12	336950	5518300	0.6	48.7	4.0	34	0.1	13.8	8.2	153	5.75	46.3	4.7	0.5	4	0.1	1.1	0.1	217	0.22	0.023	2	58	0.16	16	0.285	1	2.17	0.006	0.01	0.1	0.07	3.8	0.1	0.03	12	0.3	0.1
H-12 L36950E 183	H-12	336950	5518325	0.6	64.4	5.7	33	0.1	18.0	8.5	177	6.09	81.9	3.5	0.5	5	0.1	1.0	0.1	222	0.33	0.023	2	51	0.32	27	0.373	1	1.77	0.006	0.02	0.1	0.10	5.5	0.1	0.03	10	0.3	0.1
H-12 L36950E 183	H-12	336950	5518350	0.4	89.4	3.3	71	0.1	41.2	23.9	339	5.16	100.1	5.7	0.6	6	0.1	0.8	0.1	167	0.47	0.016	4	64	0.53	41	0.188	2	2.95	0.006	0.02	0.1	0.08	11.3	0.1	0.03	9	0.3	0.1
H-12 L36950E 183	H-12	336950	5518375	0.6	105.8	4.4	67	0.1	38.1	26.6	659	4.42	85.9	6.0	0.5	10	0.1	0.7	0.1	140	0.61	0.026	4	51	0.63	42	0.184	2	2.39	0.008	0.02	0.1	0.06	8.3	0.1	0.03	8	0.3	0.1
H-12 L36950E 184	H-12	336950	5518400	0.4	23.8	3.4	22	0.1	7.8	4.0	95	3.67	74.0	8.5	0.3	5	0.1	0.7	0.1	199	0.32	0.014	2	35	0.13	12	0.261	2	0.99	0.005	0.01	0.1	0.03	3.1	0.1	0.03	10	0.3	0.1
H-12 L36950E 184	H-12	336950	5518425	0.2	38.9	4.9	27	0.1	11.0	5.1	114	5.41	51.9	1.2	0.3	4	0.1	0.8	0.1	220	0.22	0.022	2	49	0.14	15	0.266	1	1.47	0.005	0.01	0.1	0.04	3.2	0.1	0.03	11	0.3	0.1
H-12 L36950E 184	H-12	336950	5518450	0.8	134.9	3.7	61	0.1	37.6	19.4	293	6.04	31.5	21.1	0.7	5	0.2	0.5	0.1	216	0.39	0.038	3	71	0.46	24	0.409	2	3.79	0.006	0.02	0.1	0.12	9.5	0.1	0.03	10	0.8	0.1
H-12 L36950E 184	H-12	336950	5518475	0.7	89.5	3.2	65	0.1	35.3	17.2	284	5.64	13.1	5.7	0.8	5	0.1	0.5	0.1	211	0.48	0.035	3	71	0.51	25	0.414	2	3.66	0.006	0.01	0.1	0.14	7.9	0.1	0.03	10	0.3	0.1
H-12 L36950E 185	H-12	336950	5518500	0.2	27.6	7.6	27	0.1	6.5	3.4	145	4.25	1.1	5.6	0.3	5	0.1	0.2	0.1	308	0.28	0.014	2	36	0.07	8	0.565	1	0.62	0.005	0.01	0.1	0.03	1.7	0.1	0.03	11	0.3	0.1
H-12 L36950E 185	H-12	336950	5518525	0.3	26.9	4.0	18	0.1	8.6	3.9	80	5.61	21.6	14.7	0.5	3	0.1	0.7	0.1	212	0.18	0.017	2	53	0.10	8	0.227	1	1.76	0.004	0.01	0.1	0.09	2.4	0.1	0.03	12	0.3	0.1
H-12 L36950E 185	H-12	336950	5518550																																					
H-12 L36950E 185	H-12	336950	5518575	0.6	69.3	4.4	45	0.1	25.7	11.6	193	6.22	9.3	5.1	0.6	5	0.1	0.3	0.1	226	0.32	0.034	3	70	0.34	23	0.346	1	3.05	0.005	0.01	0.1	0.18	7.3	0.1	0.03	13	0.3	0.1
H-12 L36950E 186	H-12	336950	5518600	0.4	38.0	3.9	36	0.1	16.2	7.3	132	5.43	4.4	1.5	0.5	6	0.1	0.5	0.1	201	0.38	0.025	6	57	0.22	16	0.424	1	2.20	0.005	0.01	0.1	0.11	3.9	0.1	0.03	10	0.3	0.1
H-12 L36950E 186	H-12	336950	5518625	0.5	115.8	14.0	35	0.1	20.3	10.8	728	2.70	11.0	1.6	0.3	16	0.2	0.6	0.1	112	0.90	0.036	4	35	0.34	25	0.216	2	1.96	0.010	0.02	0.1	0.11	6.3	0.1	0.03	6	0.3	0.1
H-12 L36950E 186	H-12	336950	5518650	0.9	99.9	4.2	67	0.1	37.8	26.4	850	4.37	155.8	3.9	0.4	11	0.2	1.0	0.1	140	0.73	0.023	3	49	0.67	35	0.167	3	2.43	0.009	0.02	0.1	0.05	7.7	0.1	0.03	8	0.3	0.1
H-12 L36950E 186	H-12	336950	5518675	1.1	73.9	4.8	60	0.2	29.0	22.8	6054	3.35	154.7	2.7	0.4	10	0.2	0.3	0.1	103	0.61	0.037	7	53	0.26	35	0.211	3	3.13	0.007	0.02	0.1	0.16	9.7	0.1	0.03	6	0.6	0.1
H-12 L36950E 187	H-12	336950	5518700	0.5	95.6	3.2	55	0.1	37.8	18.4	294	5.92	6.8	0.6	0.8	7	0.1	0.4	0.1	263	0.68	0.027	4	84	0.56	25	0.552	2	3.63	0.009	0.01	0.1	0.10	12.5	0.1	0.03	12	0.3	0.1
H-12 L36750E 182	H-12	336750	5518200	0.5	30.0	16.0	21	0.1	9.5	4.6	150	3.68	6.5	0.7	0.2	4	0.1	0.5	0.2	158	0.34	0.046	2	30	0.14	10	0.210	1	1.30	0.005	0.01	0.1	0.08	2.7	0.1	0.03	8	0.3	0.1
H-12 L36750E 182	H-12	336750	5518225	0.5	51.7	3.2	55	0.1	21.5	10.1	165	5.23	7.1	3.3	0.7	5	0.1	0.4	0.1	193	0.36	0.031	2	63	0.28	21	0.278	1	3.05	0.007	0.01	0.1	0.07	4.8	0.1	0.03	11	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
H-12 L36750E 182	H-12	336750	5518250	0.5	54.1	4.6	28	0.1	12.1	5.8	139	6.82	8.0	6.4	0.6	4	0.1	0.7	0.1	259	0.23	0.034	2	58	0.16	12	0.351	4	2.59	0.006	0.01	0.1	0.11	4.8	0.1	0.03	17	0.8	0.1
H-12 L36750E 182	H-12	336750	5518275	0.6	83.3	4.9	89	0.1	50.9	21.5	394	6.60	23.8	2.3	0.7	11	0.2	0.7	0.1	216	0.58	0.050	5	71	0.61	66	0.333	3	3.53	0.008	0.03	0.1	0.05	7.4	0.1	0.03	13	0.8	0.1
H-12 L36750E 183	H-12	336750	5518300	0.5	69.0	7.9	59	0.1	23.1	10.9	296	6.32	10.5	3.4	0.7	7	0.2	0.8	0.1	235	0.44	0.048	3	63	0.30	27	0.427	4	2.83	0.009	0.01	0.1	0.15	6.0	0.1	0.03	14	0.6	0.1
H-12 L36750E 183	H-12	336750	5518325	0.6	99.9	3.1	49	0.1	30.2	14.4	268	6.21	11.1	13.9	0.9	6	0.1	0.6	0.1	195	0.61	0.069	3	68	0.56	19	0.390	3	3.83	0.006	0.01	0.1	0.14	8.5	0.1	0.03	11	1.1	0.1
H-12 L36750E 183	H-12	336750	5518350	0.8	68.7	5.7	46	0.1	16.2	10.1	514	6.60	8.7	4.6	0.8	5	0.1	0.6	0.1	219	0.34	0.047	2	62	0.26	20	0.252	4	3.16	0.006	0.01	0.1	0.14	5.6	0.1	0.03	13	0.3	0.1
H-12 L36750E 183	H-12	336750	5518375	0.8	70.2	6.7	62	0.1	26.7	13.8	356	8.18	13.6	2.3	0.7	7	0.1	0.7	0.1	221	0.42	0.082	3	70	0.36	25	0.296	4	3.76	0.006	0.02	0.1	0.12	5.1	0.1	0.03	16	0.7	0.1
H-12 L36750E 184	H-12	336750	5518400	0.3	22.0	19.8	60	0.1	10.3	5.6	1380	5.17	5.1	2.6	0.5	7	0.3	0.6	0.3	208	0.36	0.075	3	39	0.09	34	0.292	3	1.28	0.006	0.02	0.1	0.03	2.7	0.1	0.03	13	0.3	0.1
H-12 L36750E 184	H-12	336750	5518425	0.7	105.2	3.9	58	0.1	38.2	19.2	378	5.23	12.9	19.9	0.9	6	0.1	0.7	0.1	174	0.50	0.039	2	63	0.57	23	0.346	3	4.01	0.006	0.02	0.1	0.15	9.1	0.1	0.03	10	0.9	0.1
H-12 L36750E 184	H-12	336750	5518450	0.5	37.5	5.1	33	0.1	11.8	6.8	159	6.18	8.0	6.0	0.6	8	0.1	0.6	0.1	265	0.25	0.040	3	51	0.11	22	0.406	2	1.83	0.006	0.01	0.1	0.08	3.7	0.1	0.03	14	0.7	0.1
H-12 L36750E 184	H-12	336750	5518475	0.4	21.0	6.5	32	0.1	8.3	3.9	195	5.86	5.8	4.2	0.4	6	0.1	0.6	0.1	226	0.29	0.032	2	46	0.09	14	0.360	1	1.25	0.005	0.01	0.1	0.02	2.5	0.1	0.03	12	0.3	0.1
H-12 L36750E 185	H-12	336750	5518500	0.5	34.6	5.5	51	0.1	16.2	7.5	219	5.75	6.6	5.5	0.6	7	0.1	0.6	0.1	219	0.44	0.046	3	45	0.23	23	0.343	3	2.23	0.006	0.01	0.1	0.07	3.3	0.1	0.03	14	0.6	0.1
H-12 L36800E 182	H-12	336800	5518200	0.4	86.7	7.5	72	0.1	40.0	26.1	1082	5.26	76.8	9.4	0.6	10	0.1	1.1	0.1	163	0.84	0.033	4	54	0.88	37	0.241	4	2.64	0.012	0.02	0.1	0.04	10.1	0.1	0.03	9	0.8	0.1
H-12 L36800E 182	H-12	336800	5518225	0.7	59.5	6.7	41	0.1	19.4	9.7	180	5.51	33.5	30.0	0.7	6	0.1	0.5	0.1	174	0.29	0.032	2	48	0.31	32	0.118	3	3.13	0.007	0.02	0.1	0.10	5.1	0.1	0.03	12	0.6	0.1
H-12 L36800E 182	H-12	336800	5518250	0.4	106.4	3.1	75	0.1	39.7	16.4	295	5.28	10.3	4.0	0.8	8	0.1	0.6	0.1	188	0.59	0.029	3	62	0.62	38	0.385	3	3.76	0.008	0.02	0.1	0.07	7.4	0.1	0.03	11	0.3	0.1
H-12 L36800E 182	H-12	336800	5518275	0.5	87.5	3.0	62	0.2	33.4	13.1	221	6.03	14.2	1.3	0.7	6	0.2	0.7	0.1	204	0.47	0.033	2	73	0.43	29	0.389	3	3.80	0.007	0.01	0.1	0.11	7.6	0.1	0.03	12	0.3	0.1
H-12 L36800E 183	H-12	336800	5518300	0.4	138.4	2.8	59	0.1	46.0	22.2	341	5.07	12.5	5.9	0.8	10	0.2	0.7	0.1	170	0.66	0.017	4	60	0.74	66	0.322	5	3.62	0.007	0.02	0.1	0.09	10.4	0.1	0.03	10	0.3	0.1
H-12 L36800E 183	H-12	336800	5518325	0.5	102.9	3.8	65	0.1	38.7	17.4	432	6.57	10.7	2.3	0.9	9	0.1	0.7	0.1	228	0.66	0.048	3	74	0.66	44	0.471	3	4.10	0.009	0.02	0.1	0.09	10.4	0.1	0.03	13	0.6	0.1
H-12 L36800E 183	H-12	336800	5518350	0.4	109.8	3.1	67	0.1	45.7	23.9	388	5.68	10.5	17.5	0.9	9	0.1	0.7	0.1	190	0.71	0.040	2	75	0.77	39	0.432	4	4.89	0.007	0.02	0.1	0.09	8.5	0.1	0.03	12	0.9	0.1
H-12 L36800E 183	H-12	336800	5518375	0.4	103.6	2.7	50	0.1	36.8	18.1	341	4.61	12.5	3.9	0.9	8	0.1	0.6	0.1	150	0.65	0.023	4	53	0.66	40	0.292	1	3.14	0.007	0.02	0.1	0.12	11.8	0.1	0.03	8	0.7	0.1
H-12 L36800E 184	H-12	336800	5518400	0.6	65.4	3.7	46	0.1	27.2	13.7	266	4.70	13.2	4.0	0.7	7	0.1	0.6	0.1	153	0.47	0.032	3	58	0.34	35	0.221	2	2.54	0.007	0.01	0.1	0.09	7.9	0.1	0.03	9	1.0	0.1
H-12 L36800E 184	H-12	336800	5518425	0.5	43.4	20.1	58	0.1	14.0	13.2	909	4.91	11.3	5.0	0.7	8	0.3	0.8	0.2	189	0.32	0.071	3	50	0.16	35	0.252	3	2.11	0.009	0.02	0.1	0.07	4.8	0.1	0.03	11	0.3	0.1
H-12 L36800E 184	H-12	336800	5518450	0.6	82.7	4.3	63	0.1	26.3	15.6	367	4.99	12.6	2.3	0.7	7	0.1	0.6	0.1	167	0.44	0.033	3	52	0.37	25	0.256	3	2.49	0.006	0.01	0.1	0.12	6.3	0.1	0.03	10	0.6	0.1
H-12 L36800E 184	H-12	336800	5518475	0.6	81.4	5.3	47	0.1	21.2	12.7	277	5.38	10.6	6.0	0.7	5	0.1	0.6	0.1	173	0.35	0.042	3	56	0.32	20	0.269	3	2.53	0.005	0.01	0.1	0.13	5.4	0.1	0.03	11	0.7	0.1
H-12 L36800E 185	H-12	336800	5518500	1.7	79.4	17.7	92	0.3	26.5	142.9	9283	4.14	94.0	0.3	0.3	18	0.5	1.6	0.2	112	0.45	0.093	8	42	0.22	86	0.154	4	2.71	0.008	0.04	0.1	0.20	7.7	0.1	0.08	8	1.7	0.1
H-12 L36850E 182	H-12	336850	5518250	0.3	24.7	5.1	24	0.1	9.3	4.6	137	5.59	3.7	3.3	0.5	6	0.1	0.6	0.1	218	0.31	0.026	2	45	0.14	12	0.343	1	1.78	0.006	0.01	0.1	0.05	3.0	0.1	0.03	14	0.3	0.1
H-12 L36850E 182	H-12	336850	5518275	0.4	33.2	4.0	44	0.1	17.2	8.2	162	4.88	5.3	7.4	0.4	8	0.1	0.6	0.1	183	0.45	0.024	2	42	0.23	15	0.302	3	1.97	0.008	0.01	0.1	0.03	3.6	0.1	0.03	10	0.5	0.1
H-12 L36850E 183	H-12	336850	5518300	0.7	126.3	3.3	64	0.1	48.3	20.3	301	5.92	18.5	4.1	0.9	8	0.1	0.7	0.1	192	0.50	0.035	3	72	0.63	40	0.385	2	4.70	0.007	0.02	0.1	0.09	8.1	0.1	0.03	11	1.1	0.1
H-12 L36850E 183	H-12	336850	5518325	0.6	80.4	4.1	35	0.1	19.3	8.2	193	6.08	11.6	4.0	0.6	7	0.1	0.9	0.1	210	0.48	0.047	3	60	0.32	21	0.444	3	2.86	0.006	0.01	0.1	0.11	6.3	0.1	0.03	12	0.3	0.1
H-12 L36850E 183	H-12	336850	5518350	0.3	43.6	3.9	42	0.1	14.3	8.1	186	4.96	5.7	2.2	0.6	7	0.1	0.5	0.1	177	0.34	0.026	3	49	0.14	19	0.268	2	2.30	0.006	0.01	0.1	0.08	4.4	0.1	0.03	10	0.3	0.1
H-12 L36850E 183	H-12	336850	5518375	0.5	60.8	4.6	61	0.1	25.3	13.3	369	5.62	13.0	1.7	0.7	7	0.2	0.6	0.1	183	0.40	0.042	3	58	0.31	31	0.277	2	2.72	0.007	0.01	0.1	0.09	8.1	0.1	0.03	11	0.7	0.1
H-12 L36850E 184	H-12	336850	5518400	0.6	23.5	7.1	19	0.1	8.6	4.5	230	4.01	13.7	2.5	0.6	5	0.1	0.4	0.1	158	0.30	0.016	3	37	0.15	19	0.262	2	1.36	0.005	0.01	0.1	0.08	2.7	0.1	0.03	10	0.3	0.1
H-12 L36850E 184	H-12	336850	5518425	0.6	76.5	4.7	48	0.2	29.6	16.8	283	5.45	18.0	1.6	0.7	8	0.1	0.6	0.1	177	0.42	0.036	10	62	0.32	37	0.227	2	3.02	0.008	0.01	0.1	0.13	6.9	0.1	0.03	10	0.8	0.1
H-12 L36850E 184	H-12	336850	5518450	0.5	55.9	4.5	80	0.2	25.4	12.9	243	6.03	16.2	1.5	0.8	6	0.1	0.6	0.1	185	0.33	0.045	3	64	0.27	35	0.284	1	3.08	0.009	0.01	0.1	0.13	5.5	0.1	0.03	11	0.3	0.1
H-12 L36850E 184	H-12	336850	5518475	0.4	26.7	5.3	35	0.2	10.7	7.4	309	4.10	25.9	6.2	0.4	13	0.2	0.6	0.1	151	0.60	0.027	3	34	0.15	21	0.289	2	1.18	0.006	0.01	0.1	0.04	2.9	0.1	0.03	9	0.3	0.1
H-12 L36850E 185	H-12	336850	5518500	0.3	11.9	9.0	25	0.1	10.2	4.4	238	5.01	2.6	2.6	0.3	12	0.2	0.4	0.1	295	0.70	0.039	2	49	0.16	11	0.618	4	1.20	0.010	0.01	0.1	0.03	3.3	0.1	0.03	13	0.3	0.1
L36500E 18100N	H-12	336500	5518100	0.5	27.1	9.8	54	0.1	11.8	50.8	2358	4.57	7.2	4.4	0.3	13	0.1	0.4	0.2	157	0.46	0.040	5	37	0.21	51	0.180	1	1.57	0.009	0.02	0.1	0.06	4.7	0.1	0.03	10	0.3	0.1
L36500E 18125N	H-12	336500	5518125																																				
L36500E 18150N	H-12	336500	5518150	0.6	25.3	12.9	26	0.1	8.2	55.3	1309	4.24	7.6	2.8	0.4	17	0.1	0.6	0.1	181	0.40	0.050	4	28	0.12	39	0.336	1	1.08	0.010	0.02	0.1	0.08	3.9	0.1	0.03	10	0.3	0.1
L36500E 18175N	H-12	336500	5518175	0.2	98.7	4.4	62	0.1	34.4	17.0	389	6.78	7.5	3.4	0.8	12	0.2	0.6	0.1	253	0.86	0.055	3	78	0.50	23	0.578	3	3.45	0.010	0.02	0.1	0.05	9.2	0.1	0.03	14	0.3	0.1
L36500E 18200N	H-12	336500	5518200	0.4	36.8	3.6	28	0.1	12.3	5.6	136	5.33	12.2	7.9	0.5	5	0.1	0.5	0.1	177	0.18	0.043	2	46	0.19	19	0.182	1	1.86	0.008	0.01	0.1	0.11	3.5	0.1	0.03	11	0.3	0.1
L36500E 18225N	H-12	336500	5518225	0.4	32.6	4.3	33	0.1	11.5	5.4	168	4.84	9.6	3.8	0.5	6	0.1	0.4	0.1	161	0.33	0.039	2	40	0.22	13	0.238	1	1.66	0.008	0.02	0.1	0.03	3.4	0.1	0.03	11	0.3	0.1
L36500E 18250N	H-12	336500	5518250	0.5	34.5	4.5	31	0.1	10.3	5.2	129	4.49	11.9	2.6	0.5	5	0.1	0.4	0.1	155	0.23	0.050	2	38	0.16	12	0.147	1	1.92	0.005	0.02	0.1	0.05	3.3	0.1	0.03	10	0.3	0.1
L36500E 18275N	H-12	336500	5518275	0.3	29.8	11.0	24	0.1	7.9	3.6	104	3.39	3.6	3.3	0.4	6	0.1	0.5	0.1	176	0.17	0.038	2	29	0.11	12	0.350	1	1.41	0.006	0.02	0.1	0.10	2.5	0.1	0.03	8	0.3	0.1
L36500E 18300N	H-12	336500	5518300	0.7	61.9	4.6	43	0.1	21.5	10.2	201	7.09	12.7	7.2	0.7	6	0.1	0.6	0.1	203	0.31	0.054	2	67	0.36	23	0.317	1	3.19	0.009	0.02	0.1	0.09	5.5	0.1	0.03	13	0.3	0.1
L36500E 18325N	H-12	336500	5518325	0.6	82.0	4.1	48	0.1	27.8	14.6	221	5.92	10.4	12.5	0.8	6	0.1	0.5	0.1	183	0.28	0.027	3	61	0.40	33	0.227	1	3.38	0.006	0.02	0.1	0.08	6.8	0.1	0.03	12	0.3	0.1
L36500E 18350N	H-12	336500	5518350	0.4	53.4	4.8	38	0.1	19.4	22.8	305	4.34	7.2	3.0	0.5	10	0.1	0.5	0.1	143	0.50	0.034	5	35	0.39	33	0.269	1	1.91	0.009	0.02	0.1	0.07	5.7	0.1	0.03	9	0.3	0.1
L36500E 18375N	H-12	336500	5518375	0.6	104.5	3.2	52	0.1	37.8	20.2	266	5.00	17.3	3.6	0.8	6	0.1	0.6	0.1	162	0.40	0.025	3	59	0.48	40	0.238	1	3.38	0.007	0.01	0.1	0.08	7.4	0.1	0.03	9	0.3	0.1
L36500E 18400N	H-12	336500	5518400	0.7	65.3	4.2	54	0.1	30.5	15.0	280	5.63	13.6	2.5	0.6	9	0.1	0.6	0.1	182	0.62	0.035	3	61	0.53	26	0.404	1	2.82	0.007	0.02	0.1	0.08	6.1	0.1	0.03	10	0.3	0.1
L36500E 18425N	H-12	336500	5518425	0.4	40.0	4.1	35	0.1	17.8	8.1	164	5.75	9.7	2.1	0.6	7	0.1	0.5	0.1	216	0.40	0.025	2	55	0.28	19	0.403	1	2.32	0.007	0.01	0.1	0.06	4.1	0.1	0.03	11	0.3	0.1
L36500E 18450N	H-12	336500	5518450	0.4	18.3	6.7	16	0.1	6.5	3.0	107	3.19	4.2	93.4	0.3	5	0.1	0.5	0.1	159	0.20	0.016	2	24	0.09	14	0.286	1	0.72	0.005	0.01	0.1	0.02	1.6	0.1	0.03	6	0.3	0.1
L36500E 18475N	H-12	336500	5518475	0.4	38.7	10.5	40	0.1	16.1	8.0	168	4.79	9.7	12.8	0.6	7	0.2	0.6	0.1	164	0.36	0.045	2	49	0.26	20	0.278	1	2.16	0.008	0.02	0.1	0.11	4.3	0.1	0.03	10	0.3	0.1
L36500E 18500N	H-12	336500	5518500	0.4	36.1	4.4	59	0.1	18.0	17.6	464	5.19	3.5	3.3	0.5	11	0.1	0.4	0.1	192	0.66	0.033	4	48	0.32	27	0.358	1	1.94	0.008	0.01	0.1	0.04	4.5	0.1	0.03	12	0.3	0.1
L36550E 18100N	H-12	336550	5518100	0.5	40.7	11.1	50	0.1	19.2	8.4	481	4.70	16.4	2.8	0.6	9	0.1	0.5	0.1	167	0.33	0.030	3	40	0.24	39	0.180	1	2.11	0.008	0.03	0.1	0.08	4.3	0.1	0.03	10	0.3	0.1
L36550E 18125N	H-12	336550	5518125	0.5	37.4	5.1	51	0.1	21.9	10.1	251	4.21	19.4	3.0	0.4	9	0.1	0.4	0.1	152	0.30	0.030	3	39	0.34	39	0.165	1	1.92	0.009	0.02	0.1	0.06	4.4	0.1	0.03	9	0.3	0.1
L36600E 18100N	H-12	336600	5518100	0.5	77.0	4.5	53	0.1	28.3	12.8	241	5.95	17.9	2.3	0.8	5	0.1	0.7	0.1	168	0.34	0.023	2	60	0.47	24	0.243	1	3.10	0.006	0.02	0.1	0.08	5.3	0.1	0.03	11	0.3	0.1
L36600E 18125N	H-12	336600	5518125	0.2	9.8	4.6	12	0.1	4.3	2.4	115	3.66	2.9	4.8	0.4	5	0.1	0.4	0.1	215	0.11	0.012	2	26	0.04	7	0.344	1	0.39	0.004	0.01	0.1	0.03	1.1	0.1	0.03	9	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
L36650E 18100N	H-12	336650	5518100	0.3	22.0	5.8	15	0.1	4.8	2.6	91	4.54	2.7	4.1	0.4	6	0.1	0.4	0.1	216	0.20	0.021	2	32	0.08	10	0.397	1	0.83	0.005	0.01	0.1	0.05	1.6	0.1	0.03	12	0.3	0.1
L36650E 18125N	H-12	336650	5518125	0.8	95.0	4.1	60	0.1	27.5	12.4	197	6.04	20.4	4.0	0.9	5	0.1	0.5	0.1	169	0.22	0.036	2	66	0.38	32	0.213	1	4.52	0.006	0.02	0.1	0.12	6.3	0.1	0.03	11	0.3	0.1
L36700E 18150N	H-12	336700	5518150	0.4	20.4	4.6	24	0.1	7.6	4.4	127	5.60	7.3	12.8	0.5	4	0.1	0.4	0.1	187	0.20	0.020	3	43	0.13	13	0.223	1	1.33	0.006	0.01	0.1	0.04	2.3	0.1	0.03	12	0.3	0.1
L36700E 18175N	H-12	336700	5518175	0.3	14.4	35.3	12	0.1	4.2	2.3	92	2.26	3.8	2.4	0.2	4	0.1	0.9	0.2	135	0.23	0.034	2	15	0.05	12	0.341	1	0.42	0.008	0.03	0.1	0.07	1.8	0.1	0.03	5	0.3	0.1
L36750E 18150N	H-12	336750	5518150	0.5	32.2	4.5	37	0.1	10.9	6.7	155	4.97	10.0	2.5	0.6	5	0.1	0.3	0.1	157	0.29	0.032	3	39	0.19	20	0.224	1	2.10	0.005	0.01	0.1	0.08	3.6	0.1	0.03	11	0.3	0.1
L36750E 18175N	H-12	336750	5518175	0.3	17.8	7.3	24	0.1	6.6	3.5	129	4.08	4.2	1.4	0.4	4	0.1	0.4	0.1	159	0.22	0.023	2	31	0.13	16	0.237	1	1.04	0.005	0.02	0.1	0.06	1.9	0.1	0.03	10	0.3	0.1
L36800E 18150N	H-12	336800	5518150	0.5	25.5	5.6	19	0.1	8.0	4.8	126	4.85	8.9	4.5	0.4	6	0.1	0.5	0.2	189	0.24	0.031	3	35	0.11	19	0.323	1	1.34	0.007	0.02	0.1	0.09	2.9	0.1	0.03	11	0.3	0.1
L36800E 18175N	H-12	336800	5518175	0.4	31.9	5.4	32	0.1	13.1	6.5	177	5.04	10.1	3.2	0.4	6	0.1	0.4	0.1	165	0.33	0.030	2	41	0.25	23	0.240	1	1.68	0.005	0.02	0.1	0.04	3.3	0.1	0.03	10	0.3	0.1
L36850E 18150N	H-12	336850	5518150	0.2	50.9	27.2	19	0.1	7.2	8.5	992	1.73	10.0	0.3	0.1	18	0.2	0.8	0.1	96	0.50	0.037	3	12	0.12	30	0.259	1	0.66	0.010	0.01	0.1	0.18	2.7	0.1	0.03	5	0.3	0.1
L36850E 18175N	H-12	336850	5518175	0.4	54.8	3.4	46	0.1	18.3	8.5	164	4.46	15.4	3.8	0.6	5	0.2	0.5	0.1	130	0.29	0.024	2	41	0.29	23	0.142	1	2.49	0.005	0.01	0.1	0.07	4.5	0.1	0.03	8	0.3	0.1
L36850E 18200N	H-12	336850	5518200	0.5	40.4	9.8	33	0.1	17.3	10.8	237	4.04	65.8	4.0	0.4	7	0.2	1.1	0.1	133	0.46	0.017	3	37	0.45	25	0.181	2	1.66	0.009	0.02	0.1	0.10	5.8	0.1	0.03	9	0.3	0.1
L36900E 18200N	H-12	336900	5518200	0.3	15.8	6.9	12	0.1	4.6	2.3	77	3.53	7.5	569.6	0.4	4	0.1	0.5	0.1	200	0.08	0.020	2	23	0.03	9	0.255	1	0.53	0.004	0.01	0.1	0.03	1.0	0.1	0.03	9	0.3	0.1
L36900E 18225N	H-12	336900	5518225	0.4	47.3	5.6	23	0.1	8.0	5.9	170	6.47	22.9	4.7	0.6	5	0.1	1.3	0.1	236	0.20	0.027	2	50	0.12	11	0.334	1	2.10	0.005	0.01	0.1	0.13	4.1	0.1	0.03	15	0.3	0.1
L36900E 18250N	H-12	336900	5518250	0.4	21.8	7.2	20	0.1	8.1	3.7	112	6.11	25.4	3.6	0.3	6	0.1	1.1	0.1	234	0.30	0.029	2	43	0.16	9	0.417	1	1.23	0.006	0.01	0.1	0.07	2.5	0.1	0.03	15	0.3	0.1
L36900E 18275N	H-12	336900	5518275	0.4	67.0	6.8	61	0.1	30.9	20.4	478	4.62	146.5	3.2	0.5	10	0.1	2.3	0.1	125	0.57	0.027	3	45	0.75	30	0.166	2	2.07	0.012	0.02	0.1	0.09	7.7	0.1	0.03	7	0.3	0.1
L36900E 18300N	H-12	336900	5518300	0.4	28.2	5.9	30	0.3	7.9	3.8	114	6.21	25.2	6.0	0.5	5	0.1	1.2	0.2	253	0.26	0.028	2	49	0.14	15	0.417	1	1.97	0.006	0.01	0.1	0.08	3.5	0.1	0.03	15	0.3	0.1
H-12 L36900E 183	H-12	336900	5518325	0.6	72.4	12.8	43	0.1	14.0	7.6	353	7.13	26.1	5.1	0.5	6	0.1	0.9	0.2	247	0.42	0.068	2	48	0.28	21	0.425	2	1.90	0.006	0.02	0.1	0.07	4.5	0.1	0.03	14	0.3	0.1
H-12 L36900E 183	H-12	336900	5518350	0.5	66.4	4.6	61	0.1	17.4	8.6	206	6.17	13.1	3.2	0.6	7	0.2	0.7	0.1	190	0.48	0.059	2	54	0.28	22	0.354	2	2.77	0.007	0.01	0.1	0.10	5.2	0.1	0.03	11	0.6	0.1
H-12 L36900E 183	H-12	336900	5518375	0.6	77.4	3.9	80	0.1	32.0	16.9	226	5.60	12.5	1.9	0.8	5	0.1	0.5	0.1	201	0.34	0.043	3	72	0.36	45	0.308	2	4.36	0.006	0.01	0.1	0.18	8.1	0.1	0.03	12	0.3	0.1
H-12 L36900E 184	H-12	336900	5518400	0.4	68.1	3.9	45	0.1	24.8	12.1	171	5.73	6.7	5.8	0.7	6	0.1	0.7	0.1	201	0.39	0.018	3	63	0.31	30	0.329	2	2.53	0.007	0.01	0.1	0.09	7.6	0.1	0.03	11	0.3	0.1
H-12 L36900E 184	H-12	336900	5518425	0.9	119.4	9.8	73	0.4	39.4	52.6	2229	4.82	12.3	0.3	0.4	11	0.2	0.4	0.1	151	0.49	0.046	7	64	0.38	44	0.212	2	2.84	0.007	0.02	0.1	0.08	6.0	0.1	0.03	9	0.3	0.1
H-12 L36900E 184	H-12	336900	5518450	0.8	84.0	4.9	50	0.1	19.7	10.4	228	6.49	16.4	3.5	0.4	7	0.3	0.7	0.1	213	0.45	0.038	3	61	0.28	22	0.371	2	2.20	0.005	0.01	0.1	0.07	4.9	0.1	0.03	13	0.3	0.1
H-12 L36900E 184	H-12	336900	5518475	0.3	36.3	5.5	27	0.1	10.3	4.6	127	6.70	3.6	1.4	0.5	4	0.1	0.7	0.1	245	0.30	0.045	2	58	0.14	11	0.367	1	1.73	0.007	0.01	0.1	0.09	3.4	0.1	0.03	14	0.3	0.1
H-12 L36900E 185	H-12	336900	5518500	0.3	13.4	6.7	17	0.1	5.8	2.8	116	5.56	1.6	10.5	0.4	4	0.1	0.4	0.1	276	0.29	0.031	2	43	0.07	10	0.537	1	0.80	0.005	0.01	0.1	0.04	1.8	0.1	0.03	16	0.3	0.1
LL-12 L21800N 36	LL-12	336200	5521800	0.6	42.0	7.5	63	0.1	21.7	16.5	521	6.47	6.5	2.5	0.7	8	0.2	0.6	0.1	218	0.65	0.158	2	64	0.38	24	0.454	2	3.29	0.007	0.01	0.1	0.11	5.4	0.1	0.03	15	0.3	0.1
LL-12 L21800N 36	LL-12	336250	5521800	0.4	62.9	5.1	62	0.1	39.2	20.0	439	6.41	4.6	1.6	0.8	10	0.2	0.6	0.1	221	0.64	0.072	2	81	0.47	27	0.533	2	3.81	0.013	0.01	0.1	0.06	7.5	0.1	0.03	12	0.3	0.1
LL-12 L21800N 36	LL-12	336300	5521800	0.3	27.8	4.9	45	0.1	21.0	10.3	220	5.95	2.4	0.9	0.5	10	0.1	0.4	0.1	218	0.60	0.042	3	63	0.28	29	0.533	1	2.29	0.008	0.01	0.1	0.08	4.1	0.1	0.03	12	0.3	0.1
LL-12 L21800N 36	LL-12	336350	5521800	0.5	59.9	6.7	76	0.1	31.7	16.1	318	6.10	5.4	2.0	0.6	11	0.1	0.5	0.1	213	0.59	0.058	2	63	0.38	47	0.534	2	3.42	0.009	0.02	0.1	0.11	5.1	0.1	0.03	13	0.3	0.1
LL-12 L21800N 36	LL-12	336400	5521800	0.4	93.1	9.0	52	0.1	40.7	20.2	826	4.95	8.7	2.4	0.7	21	0.2	0.5	0.1	187	1.10	0.057	6	54	0.68	39	0.460	6	3.04	0.008	0.02	0.1	0.11	10.0	0.1	0.03	10	0.3	0.1
LL-12 L21800N 36	LL-12	336450	5521800	0.4	90.1	4.0	46	0.1	31.1	17.2	366	5.00	6.2	0.5	2.3	11	0.2	0.5	0.1	201	0.77	0.032	5	59	0.50	33	0.518	3	3.08	0.009	0.01	0.1	0.07	8.9	0.1	0.03	10	0.3	0.1
LL-12 L21800N 36	LL-12	336500	5521800	0.4	65.4	46.4	61	0.1	27.1	21.6	1539	4.12	18.5	2.5	0.3	24	0.4	0.6	0.3	137	1.08	0.070	4	37	0.57	36	0.259	4	1.85	0.022	0.02	0.1	0.11	7.7	0.1	0.06	7	0.5	0.1
LL-12 L21800N 36	LL-12	336550	5521800	0.2	126.7	1.2	57	0.1	44.1	24.2	758	4.88	13.3	3.1	0.6	40	0.1	0.8	0.1	164	2.03	0.050	6	47	1.32	31	0.381	7	2.69	0.047	0.04	0.1	0.14	14.7	0.1	0.03	10	0.3	0.1
LL-12 L21800N 36	LL-12	336600	5521800	0.3	70.3	1.7	42	0.1	41.2	19.2	846	4.31	4.2	1.5	0.6	25	0.1	0.3	0.1	173	1.25	0.025	4	63	0.76	59	0.446	4	3.02	0.013	0.02	0.1	0.04	10.1	0.1	0.03	10	0.5	0.1
LL-12 L21800N 36	LL-12	336650	5521800	0.4	93.5	5.2	44	0.1	40.5	20.5	577	4.07	4.6	1.9	0.6	21	0.1	0.3	0.1	161	1.13	0.038	6	63	0.76	38	0.440	3	3.12	0.011	0.02	0.1	0.06	10.7	0.1	0.03	11	0.3	0.1
LL-12 L21800N 36	LL-12	336700	5521800	0.4	79.8	4.0	67	0.1	41.3	22.0	544	5.58	3.9	23.2	0.7	13	0.2	0.4	0.1	223	0.77	0.044	4	77	0.50	37	0.540	3	3.44	0.009	0.01	0.1	0.06	8.1	0.1	0.03	13	0.3	0.1
LL-12 L21800N 36	LL-12	336750	5521800	0.4	124.8	4.5	60	0.1	46.0	21.8	604	5.47	5.9	1.2	0.8	16	0.3	0.4	0.1	211	0.92	0.048	4	73	0.79	46	0.562	4	3.94	0.008	0.02	0.1	0.12	12.3	0.1	0.03	12	0.3	0.1
LL-12 L21800N 36	LL-12	336800	5521800	0.3	104.0	4.2	53	0.1	45.4	21.3	520	5.18	4.9	1.0	0.7	17	0.1	0.5	0.1	208	0.86	0.055	4	76	0.68	57	0.540	3	3.88	0.009	0.02	0.1	0.13	16.0	0.1	0.03	11	0.3	0.1
LL-12 L21800N 36	LL-12	336850	5521800	0.5	37.1	7.2	88	0.1	29.2	16.0	2894	2.98	1.8	2.9	0.6	18	0.1	0.3	0.1	123	1.05	0.043	5	58	0.46	52	0.406	3	2.59	0.010	0.01	0.1	0.07	10.1	0.1	0.03	10	0.3	0.1
LL-12 L21800N 36	LL-12	336900	5521800	0.4	96.6	3.7	50	0.1	37.9	20.8	639	4.92	2.8	2.5	0.6	16	0.1	0.4	0.1	198	0.81	0.040	5	64	0.58	37	0.472	3	3.42	0.017	0.03	0.1	0.06	12.9	0.1	0.03	11	0.3	0.1
LL-12 L21800N 36	LL-12	336950	5521800	0.3	58.5	9.7	66	0.1	29.7	18.0	525	5.45	4.6	0.7	0.7	13	0.2	0.5	0.1	201	0.77	0.065	3	65	0.41	37	0.532	3	3.04	0.007	0.02	0.1	0.06	7.2	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337000	5521800	0.5	80.6	7.9	55	0.1	34.3	17.4	590	4.87	3.9	2.2	0.7	11	0.2	0.5	0.1	184	0.87	0.069	3	61	0.52	27	0.501	3	3.18	0.009	0.02	0.1	0.08	10.7	0.1	0.03	11	0.3	0.1
LL-12 L21800N 37	LL-12	337050	5521800	0.5	62.8	4.3	60	0.1	40.6	20.3	420	5.37	58.3	0.9	0.8	12	0.1	0.6	0.1	207	0.78	0.083	2	82	0.51	30	0.580	3	4.52	0.007	0.02	0.1	0.06	7.5	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337100	5521800	0.3	73.4	3.9	58	0.1	31.1	18.1	310	5.61	1.8	2.3	0.6	13	0.1	0.5	0.1	216	0.84	0.033	3	63	0.34	26	0.610	3	2.81	0.009	0.01	0.1	0.06	7.3	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337150	5521800	0.4	76.2	4.4	57	0.1	40.8	25.8	990	5.32	4.2	0.9	0.6	19	0.1	0.4	0.1	211	1.05	0.040	6	61	0.66	35	0.536	3	3.10	0.017	0.02	0.1	0.05	9.4	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337200	5521800	0.6	103.4	3.5	39	0.3	39.2	21.4	441	5.23	4.0	9.6	0.9	13	0.1	0.4	0.1	200	0.77	0.034	6	92	0.52	30	0.489	2	4.49	0.011	0.02	0.1	0.11	13.7	0.1	0.03	13	0.6	0.1
LL-12 L21800N 37	LL-12	337250	5521800	0.4	72.1	4.4	74	0.1	30.5	14.7	350	6.00	4.7	0.5	0.7	12	0.2	0.5	0.1	219	0.80	0.071	2	60	0.44	26	0.557	3	2.95	0.007	0.02	0.1	0.07	5.9	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337300	5521800	0.6	105.5	3.0	51	0.1	43.5	21.3	375	5.64	3.9	1.6	0.8	14	0.1	0.4	0.1	215	0.87	0.044	3	71	0.58	38	0.558	3	4.24	0.009	0.01	0.1	0.09	9.1	0.1	0.03	12	0.3	0.1
LL-12 L21800N 37	LL-12	337350	5521800	0.5	107.0	3.2	54	0.1	43.7	20.7	445	5.31	4.1	4.1	0.8	17	0.2	0.4	0.1	214	1.08	0.036	4	70	0.74	37	0.598	3	3.76	0.009	0.02	0.1	0.09	11.5	0.1	0.03	11	0.3	0.1
LL-12 L21800N 37	LL-12	337400	5521800	0.3	132.2	1.7	40	0.1	41.0	20.4	487	5.17	5.0	5.4	0.7	45	0.1	0.4	0.1	217	1.11	0.021	5	66	0.74	49	0.488	4	3.89	0.010	0.03	0.1	0.12	17.2	0.1	0.03	11	0.3	0.1
L21900N 36000E	LL-12	336000	5521900	0.4	97.7	6.1	59	0.1	38.0	17.3	336	6.70	5.2	6.1	0.7	16	0.2	0.5	0.1	264	0.79	0.045	3	79	0.45	23	0.490	3	3.26	0.006	0.03	0.1	0.09	8.2	0.1	0.03	14	0.3	0.1
L21900N 36050E	LL-12	336050	5521900	0.4	89.7	3.4	58	0.1	44.3	23.1	396	5.94	5.5	1.5	0.9	11	0.1	0.4	0.1	233	0.78	0.059	4	82	0.54	31	0.522	4	3.90	0.008	0.02	0.1	0.12	13.7	0.1	0.03	12	0.3	0.1
L21900N 36100E	LL-12	336100	5521900	0.4	95.7	2.8	57	0.1	56.7	25.4	557	5.89	6.3	3.6	0.9	15	0.1	0.4	0.1	234	0.93	0.034	4	89	0.80	50	0.574	4	3.99	0.009	0.03	0.1	0.17	12.9	0.1	0.03	12	0.3	0.1
L21900N 36150E	LL-12	336150	5521900	0.3	67.4	2.8	54	0.1	32.8	19.2	732	5.81	5.1	1.3	0.7	13	0.1	0.4	0.1	231	0.83	0.165	4	70	0.36	30	0.494	4	2.96	0.008	0.01	0.1	0.07	9.1	0.1	0.03	12	0.3	0.1
L21900N 36200E	LL-12	336200	5521900	0.4	78.0	3.8	74	0.1	40.6	21.1	417	6.71	5.8	2.1	0.8	13	0.2	0.5	0.1	251	0.83	0.055	3	84	0.46	36	0.605	4	3.77	0.013	0.02	0.1	0.14	7.7	0.1	0.03	13	0.3	0.1
L21900N 36250E	LL-12	336250	5521900	0.3	159.5	1.7	46	0.1	47.1	23.8	639	5.01	8.1	3.7	0.8	27	0.1	0.4	0.1	220	1.30	0.050	6	69	0.91	43	0.521	6	3.78	0.013	0.02	0.1	0.10	18.4	0.1	0.03	11	0.3	0.1
L21900N 36300E	LL-12	336300	5521900	0.4	105.1	4.4	49	0.1	33.6	19.3	409	4.67	5.3	2.5	0.7	19	0.1	0.5	0.1	191	0.95	0.037	8	54	0.47	58	0.491	4	3.28	0.010	0.02	0.1	0.14	13.4	0.1	0.03	10	0.3	0.1

2012 Soil data

SampleID	Grid	Easting	Northing	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
L21900N 36350E	LL-12	336350	5521900	0.3	64.6	2.4	50	0.1	34.5	19.7	535	4.81	12.5	0.3	0.7	17	0.1	0.4	0.1	193	1.01	0.025	4	46	0.54	37	0.411	4	2.65	0.012	0.01	0.1	0.05	7.8	0.1	0.03	8	0.3	0.1
L21900N 36400E	LL-12	336400	5521900	0.2	63.8	1.9	39	0.1	27.8	16.0	546	3.99	7.1	1.4	0.7	24	0.1	0.2	0.1	176	1.37	0.039	5	33	0.59	29	0.360	4	1.93	0.019	0.02	0.1	0.04	8.5	0.1	0.03	7	0.3	0.1
L21900N 36450E	LL-12	336450	5521900	0.3	111.8	2.0	56	0.1	46.3	25.2	531	5.52	6.7	1.1	0.7	20	0.1	0.6	0.1	221	1.24	0.038	5	72	0.88	33	0.529	5	3.78	0.012	0.02	0.1	0.09	14.2	0.1	0.03	11	0.3	0.1
L21900N 36500E	LL-12	336500	5521900	0.5	103.5	2.6	66	0.1	49.6	24.2	378	5.67	4.0	1.9	0.8	17	0.1	0.3	0.1	224	0.97	0.052	4	75	0.60	36	0.569	4	3.99	0.009	0.02	0.1	0.09	12.8	0.1	0.03	12	0.3	0.1
L21900N 36550E	LL-12	336550	5521900	0.4	99.4	2.6	79	0.1	46.3	24.6	384	5.65	4.5	1.0	0.8	15	0.1	0.4	0.1	229	0.95	0.044	4	73	0.60	35	0.584	4	3.73	0.009	0.02	0.1	0.10	12.5	0.1	0.03	12	0.3	0.1
L21900N 36600E	LL-12	336600	5521900	0.5	43.7	4.8	64	0.1	29.2	14.1	194	5.64	2.3	1.6	0.6	15	0.1	0.4	0.1	223	0.66	0.044	3	64	0.23	20	0.551	2	2.58	0.008	0.01	0.1	0.07	4.2	0.1	0.03	12	0.3	0.1
L21900N 36650E	LL-12	336650	5521900	0.4	56.3	5.9	59	0.1	32.9	16.8	468	5.06	4.1	3.7	0.6	20	0.2	0.5	0.1	209	1.01	0.058	3	63	0.38	37	0.505	3	2.83	0.008	0.01	0.1	0.06	5.9	0.1	0.03	12	0.3	0.1
L21900N 36700E	LL-12	336700	5521900	0.2	40.1	3.5	65	0.1	31.1	16.7	318	4.65	2.2	1.5	0.6	19	0.1	0.4	0.1	194	0.99	0.043	3	61	0.32	33	0.524	4	2.75	0.010	0.01	0.1	0.07	5.5	0.1	0.03	11	0.3	0.1
L21900N 36750E	LL-12	336750	5521900	0.3	91.9	8.7	66	0.1	36.0	20.1	802	5.41	4.0	1.6	0.8	18	0.1	0.5	0.1	213	0.98	0.076	4	58	0.43	35	0.534	4	3.35	0.008	0.03	0.1	0.08	8.8	0.1	0.03	12	0.3	0.1
L21900N 36800E	LL-12	336800	5521900	0.6	130.8	2.5	57	0.1	52.1	24.8	406	5.73	6.4	0.9	0.9	14	0.1	0.4	0.1	238	0.91	0.053	4	84	0.81	37	0.544	3	4.56	0.008	0.02	0.1	0.08	19.6	0.1	0.03	12	0.3	0.1
L21900N 36850E	LL-12	336850	5521900	0.4	45.9	5.6	71	0.1	36.3	19.4	432	5.41	3.3	0.3	0.7	14	0.1	0.4	0.1	204	0.79	0.048	3	62	0.38	33	0.556	3	3.13	0.007	0.01	0.1	0.07	5.6	0.1	0.03	12	0.3	0.1
L21900N 36900E	LL-12	336900	5521900	0.4	100.3	3.0	59	0.1	49.0	23.0	434	5.41	28.0	0.8	1.0	17	0.1	0.4	0.1	215	0.98	0.042	4	72	0.62	37	0.580	4	3.76	0.009	0.02	0.1	0.16	12.5	0.1	0.03	12	0.3	0.1
L21900N 36950E	LL-12	336950	5521900	0.4	65.0	2.7	68	0.1	39.1	21.4	419	5.36	3.8	2.1	0.6	17	0.1	0.5	0.1	219	1.09	0.043	5	68	0.48	31	0.595	3	3.36	0.010	0.02	0.1	0.22	11.7	0.1	0.03	12	0.3	0.1
L21900N 37000E	LL-12	337000	5521900	0.4	65.5	3.8	63	0.1	39.5	19.8	477	5.92	4.0	2.5	0.7	17	0.1	0.5	0.1	235	1.03	0.057	3	70	0.44	29	0.610	3	3.39	0.010	0.02	0.1	0.12	7.1	0.1	0.03	13	0.3	0.1
L21900N 37050E	LL-12	337050	5521900	0.5	91.0	4.4	56	0.1	32.3	16.1	339	5.52	3.4	1.5	0.6	17	0.1	0.5	0.1	230	0.94	0.038	3	61	0.43	29	0.557	3	2.81	0.009	0.02	0.1	0.06	6.5	0.1	0.03	11	0.3	0.1
L21900N 37100E	LL-12	337100	5521900	0.4	58.1	10.8	54	0.1	28.1	15.4	1179	5.26	3.5	2.8	0.6	16	0.3	0.6	0.1	210	1.03	0.068	3	54	0.41	28	0.514	3	2.79	0.008	0.01	0.1	0.09	7.3	0.1	0.03	12	0.3	0.1
L21900N 37150E	LL-12	337150	5521900	0.6	148.0	3.8	65	0.1	46.9	24.0	491	5.42	5.3	7.8	1.1	14	0.2	0.4	0.1	220	0.87	0.080	4	74	0.60	27	0.504	3	4.53	0.007	0.02	0.1	0.23	12.4	0.1	0.03	12	0.3	0.1
L21900N 37200E	LL-12	337200	5521900	0.2	27.9	7.2	35	0.1	10.1	8.9	349	3.81	1.3	7.0	0.5	15	0.2	0.3	0.1	153	1.43	0.035	3	29	0.21	13	0.452	5	1.76	0.009	0.01	0.1	0.03	4.6	0.1	0.03	11	0.3	0.1
L21900N 37250E	LL-12	337250	5521900	0.3	33.6	10.0	81	0.1	20.2	32.7	2149	5.30	1.4	0.7	0.6	14	0.2	0.3	0.1	170	0.85	0.092	4	47	0.18	41	0.480	2	2.20	0.009	0.02	0.1	0.08	5.2	0.1	0.03	12	0.3	0.1
L21900N 37300E	LL-12	337300	5521900	0.3	56.5	5.9	62	0.1	29.4	17.7	1249	4.42	2.9	2.5	0.7	18	0.1	0.4	0.1	172	1.06	0.073	3	52	0.36	37	0.494	3	2.71	0.009	0.02	0.1	0.08	6.4	0.1	0.03	11	0.3	0.1
L22000N 35900E	LL-12	335900	5522000	0.4	93.8	3.9	67	0.1	39.2	21.6	1460	5.82	5.3	0.3	0.7	15	0.1	0.6	0.1	228	0.99	0.064	4	74	0.51	32	0.579	4	3.21	0.008	0.02	0.1	0.11	9.3	0.1	0.03	12	0.3	0.1
L22000N 35950E	LL-12	335950	5522000	0.5	136.8	2.0	72	0.1	59.9	34.0	481	6.55	8.5	4.4	0.9	15	0.2	0.5	0.1	249	1.02	0.049	4	90	0.89	42	0.566	5	4.67	0.009	0.01	0.1	0.13	17.1	0.1	0.03	12	0.3	0.1
L22000N 36000E	LL-12	336000	5522000	0.4	81.5	5.4	62	0.1	39.2	19.5	447	5.58	5.8	2.2	0.8	15	0.1	0.4	0.1	215	0.85	0.060	4	70	0.54	46	0.508	3	3.39	0.008	0.02	0.1	0.09	10.3	0.1	0.03	12	0.3	0.1
L22000N 36050E	LL-12	336050	5522000	0.4	48.3	4.3	60	0.1	28.2	15.0	279	5.77	4.3	6.4	0.9	12	0.1	0.4	0.1	221	0.69	0.057	3	70	0.31	33	0.526	3	3.54	0.008	0.01	0.1	0.12	6.7	0.1	0.03	12	0.3	0.1
L22000N 36100E	LL-12	336100	5522000	0.4	83.2	2.7	68	0.1	37.8	20.0	533	5.25	6.3	2.5	0.9	13	0.1	0.4	0.1	208	0.86	0.052	3	69	0.49	33	0.498	4	3.65	0.007	0.02	0.1	0.11	10.7	0.1	0.03	11	0.3	0.1
L22000N 36150E	LL-12	336150	5522000	0.5	79.9	3.6	51	0.1	36.1	18.2	354	6.23	5.2	1.9	0.8	13	0.1	0.5	0.1	239	0.74	0.046	3	71	0.42	26	0.536	4	3.36	0.011	0.01	0.1	0.11	8.1	0.1	0.03	12	0.3	0.1
L22000N 36200E	LL-12	336200	5522000	0.4	67.3	3.5	56	0.1	33.7	19.3	572	5.19	3.8	2.4	0.7	15	0.1	0.4	0.1	202	0.85	0.044	3	59	0.41	26	0.526	3	3.16	0.009	0.01	0.1	0.08	7.0	0.1	0.03	12	0.3	0.1
L22000N 36250E	LL-12	336250	5522000	0.4	59.2	10.9	44	0.1	26.4	15.9	558	5.15	4.7	15.2	0.5	18	0.2	0.5	0.1	216	0.92	0.028	4	52	0.37	28	0.502	3	2.48	0.010	0.01	0.1	0.10	6.4	0.1	0.03	11	0.3	0.1
L22000N 36300E	LL-12	336300	5522000	0.3	64.3	2.9	64	0.1	31.8	22.7	1401	4.73	16.6	2.0	0.8	20	0.2	0.3	0.1	158	0.98	0.076	6	54	0.53	51	0.334	4	2.73	0.017	0.02	0.1	0.06	12.0	0.1	0.03	9	0.3	0.1
L22000N 36350E	LL-12	336350	5522000	0.3	106.4	2.7	48	0.1	37.9	21.9	583	4.65	6.4	2.3	0.6	29	0.1	0.5	0.1	172	1.40	0.041	5	48	0.91	32	0.400	3	2.56	0.021	0.03	0.1	0.05	12.1	0.1	0.03	9	0.6	0.1
L22000N 36400E	LL-12	336400	5522000	0.4	123.3	5.2	56	0.1	41.9	20.5	439	5.24	6.0	3.8	0.8	14	0.1	0.5	0.1	204	0.86	0.046	4	63	0.66	31	0.519	4	3.52	0.008	0.02	0.1	0.14	12.8	0.1	0.03	11	0.3	0.1
L22000N 36450E	LL-12	336450	5522000	0.3	88.0	2.7	53	0.1	39.4	19.8	304	5.13	4.6	3.1	0.6	19	0.2	0.5	0.1	201	0.89	0.028	3	62	0.58	59	0.511	2	3.32	0.010	0.01	0.1	0.07	8.6	0.1	0.03	11	0.6	0.1
L22000N 36500E	LL-12	336500	5522000	0.4	94.1	4.9	59	0.1	41.1	21.6	502	5.32	6.0	4.0	0.8	17	0.1	0.6	0.1	225	1.01	0.071	4	63	0.73	41	0.562	2	3.44	0.010	0.02	0.1	0.09	13.8	0.1	0.03	11	1.0	0.1
L22000N 36550E	LL-12	336550	5522000	0.4	51.4	34.3	70	0.1	24.5	20.4	2304	4.86	4.4	20.9	0.4	18	0.3	0.6	0.3	188	0.91	0.074	4	43	0.35	28	0.407	3	2.24	0.010	0.02	0.1	0.09	5.2	0.1	0.03	11	0.6	0.1
L22000N 36600E	LL-12	336600	5522000	0.5	113.4	2.5	61	0.1	56.7	25.9	397	5.91	6.5	2.8	0.9	16	0.1	0.5	0.1	236	0.85	0.048	3	91	0.84	41	0.586	3	4.59	0.009	0.02	0.1	0.10	12.5	0.1	0.03	13	0.3	0.1
L22000N 36650E	LL-12	336650	5522000	0.4	92.9	3.2	78	0.1	46.2	24.2	471	5.72	4.8	3.5	0.8	16	0.1	0.4	0.1	222	0.90	0.051	5	70	0.66	49	0.585	1	3.49	0.008	0.02	0.1	0.17	11.7	0.1	0.03	12	1.0	0.1
L22000N 36700E	LL-12	336700	5522000	0.2	33.4	24.2	61	0.1	16.4	14.6	2705	4.56	2.1	1.7	0.6	13	0.4	0.4	0.3	175	1.06	0.073	3	41	0.22	45	0.475	1	1.97	0.010	0.01	0.1	0.07	4.8	0.1	0.03	11	0.3	0.1
L22000N 36750E	LL-12	336750	5522000	0.5	100.9	2.7	54	0.1	43.5	20.4	409	5.57	4.8	1.4	0.9	15	0.1	0.5	0.1	227	0.91	0.048	5	79	0.67	39	0.571	2	3.95	0.010	0.01	0.1	0.15	15.8	0.1	0.03	11	0.3	0.1
L22000N 36800E	LL-12	336800	5522000	0.5	257.8	3.6	79	0.1	50.8	25.6	504	6.15	5.9	1.7	0.8	18	0.1	0.6	0.1	240	0.88	0.069	4	75	0.70	35	0.626	3	3.82	0.008	0.02	0.1	0.20	10.2	0.1	0.03	13	0.6	0.1
L22000N 36850E	LL-12	336850	5522000	0.4	103.6	2.9	58	0.1	52.1	23.9	468	6.00	6.0	4.6	0.9	14	0.1	0.4	0.1	236	0.93	0.046	5	87	0.80	44	0.595	4	4.01	0.008	0.01	0.1	0.17	15.8	0.1	0.03	11	0.3	0.1
L22000N 36900E	LL-12	336900	5522000	0.2	30.7	36.0	83	0.1	22.8	25.1	4328	4.95	2.3	0.3	0.4	17	0.4	0.5	0.4	165	1.34	0.066	4	38	0.31	54	0.391	1	1.94	0.009	0.02	0.1	0.09	5.4	0.1	0.03	11	0.8	0.1
L22000N 36950E	LL-12	336950	5522000	0.2	11.9	19.1	62	0.1	13.8	16.1	4329	3.70	3.5	2.0	0.4	18	0.2	0.4	0.3	130	1.63	0.080	2	40	0.28	68	0.360	2	1.67	0.010	0.02	0.1	0.64	5.5	0.1	0.03	10	0.3	0.1
L22000N 37000E	LL-12	337000	5522000	0.5	95.8	3.4	68	0.1	46.9	21.6	403	5.94	3.6	4.8	0.9	12	0.2	0.5	0.1	229	0.80	0.069	4	82	0.59	24	0.604	5	4.38	0.008	0.01	0.1	0.19	11.2	0.1	0.03	13	0.9	0.1
L22000N 37050E	LL-12	337050	5522000	0.4	97.0	6.4	51	0.1	37.6	19.6	750	5.37	4.2	3.2	0.7	16	0.1	0.5	0.1	209	0.90	0.063	4	65	0.59	36	0.547	1	3.44	0.009	0.02	0.1	0.08	10.4	0.1	0.03	11	0.5	0.1
L22000N 37100E	LL-12	337100	5522000	0.1	17.1	7.0	31	0.1	14.8	9.2	288	4.12	1.5	2.0	0.5	14	0.1	0.4	0.2	161	0.81	0.034	2	41	0.21	19	0.454	1	1.77	0.009	0.01	0.1	0.05	2.6	0.1	0.03	10	0.3	0.1
L22000N 37150E	LL-12	337150	5522000	0.3	29.6	13.7	83	0.1	27.7	28.7	1942	4.82	1.9	1.8	0.6	15	0.3	0.4	0.2	148	0.79	0.055	7	42	0.25	37	0.475	1	2.18	0.009	0.02	0.1	0.08	5.3	0.1	0.03	10	0.3	0.1
L22000N 37200E	LL-12	337200	5522000	0.5	63.1	2.3	46	0.1	32.2	19.0	325	5.46	3.7	60.4	0.6	14	0.1	0.3	0.1	219	1.02	0.063	5	56	0.51	12	0.611	3	2.81	0.009	0.01	0.1	0.09	8.1	0.1	0.03	11	0.5	0.1

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: March 07, 2012
Report Date: March 17, 2012
Page: 1 of 7

CERTIFICATE OF ANALYSIS VAN12001045.1

CLIENT JOB INFORMATION

Project: LH-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 177

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	164	Dry at 60C			VAN
SS80	164	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	164	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:

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

Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
100N 000E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 025E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 050E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 075E	Soil	0.6	114.8	3.5	53	<0.1	42.0	17.4	317	5.61	4.7	6.5	0.9	12	0.1	0.4	0.1	215	0.78	0.051	4
100N 100E	Soil	0.5	61.6	4.0	86	<0.1	29.9	16.5	546	6.10	2.1	3.1	0.7	11	0.2	0.3	0.1	202	0.86	0.110	4
100N 125E	Soil	0.4	70.7	4.8	66	<0.1	44.0	19.8	516	6.52	3.0	2.6	0.9	11	<0.1	0.4	<0.1	236	0.79	0.084	3
100N 150E	Soil	0.6	102.8	3.5	66	<0.1	55.4	23.5	406	6.19	4.6	0.7	1.1	10	0.2	0.4	<0.1	238	0.77	0.062	3
100N 175E	Soil	0.5	45.6	5.1	98	<0.1	37.6	20.2	792	6.53	2.6	3.4	0.8	15	0.1	0.4	0.1	190	0.99	0.197	3
100N 200E	Soil	0.3	142.8	4.2	67	<0.1	37.0	40.6	749	5.80	2.2	4.6	0.9	10	0.2	0.4	<0.1	179	0.80	0.106	6
100N 225E	Soil	0.6	202.1	40.3	119	0.3	20.9	108.9	>10000	5.43	7.6	1.5	0.5	17	1.2	0.6	0.4	124	0.91	0.226	8
100N 250E	Soil	0.3	64.3	8.4	133	<0.1	46.6	27.8	1586	7.78	2.0	1.0	0.7	17	0.2	0.3	0.1	264	0.57	0.164	2
100N 275E	Soil	0.5	82.0	5.7	76	<0.1	37.1	19.3	466	7.30	2.0	1.7	1.3	10	0.1	0.4	0.1	238	0.72	0.098	3
100N 300E	Soil	0.8	110.3	2.7	54	<0.1	41.5	20.5	363	6.10	5.5	3.6	1.2	9	0.1	0.3	<0.1	224	0.82	0.162	6
100N 325E	Soil	0.8	94.4	8.2	63	<0.1	37.1	19.4	445	5.90	6.9	5.2	1.3	10	0.1	0.4	0.1	206	0.73	0.156	5
100N 350E	Soil	0.2	46.8	24.0	42	<0.1	8.7	11.3	524	9.04	0.9	2.9	0.5	8	0.4	0.5	0.4	232	1.82	0.032	3
100N 375E	Soil	0.4	30.5	10.6	63	<0.1	21.4	17.4	998	7.31	3.9	1.4	0.7	9	0.2	0.4	0.2	218	0.91	0.125	2
100N 400E	Soil	0.6	80.3	4.1	68	<0.1	44.7	23.0	575	6.66	3.4	2.1	0.9	11	<0.1	0.3	<0.1	221	0.87	0.076	3
200N 000E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 025E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 050E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 075E	Soil	0.3	60.4	7.5	86	<0.1	40.3	19.1	599	5.76	1.6	1.6	0.7	13	0.2	0.4	0.1	192	0.80	0.061	3
200N 100E	Soil	0.3	66.4	10.5	76	<0.1	50.3	25.9	971	5.15	3.2	5.5	0.7	16	0.1	0.4	0.1	174	1.03	0.066	4
200N 125E	Soil	0.6	99.2	3.5	55	<0.1	41.7	18.5	332	5.67	3.4	3.8	0.9	11	0.1	0.4	<0.1	213	0.76	0.059	6
200N 150E	Soil	0.3	98.0	6.0	78	<0.1	45.8	23.1	1002	5.22	3.3	4.1	0.7	14	0.1	0.4	<0.1	190	0.90	0.054	4
200N 175E	Soil	0.5	61.5	4.9	82	<0.1	38.8	19.1	973	5.50	2.5	2.6	0.7	12	0.1	0.4	<0.1	193	0.82	0.063	3
200N 200E	Soil	0.4	18.6	26.7	61	<0.1	15.7	15.3	4111	4.92	4.2	1.8	0.5	11	0.3	0.5	0.3	151	1.00	0.127	3
200N 225E	Soil	0.5	69.0	8.3	83	<0.1	32.1	23.9	634	6.47	3.4	3.9	0.7	14	0.2	0.3	0.2	208	0.85	0.077	3
200N 250E	Soil	0.7	121.2	5.8	73	<0.1	57.9	24.0	471	6.39	6.0	5.0	1.0	11	0.3	0.5	<0.1	256	0.80	0.091	4
200N 275E	Soil	0.5	119.7	5.2	76	<0.1	56.1	24.2	741	6.21	5.8	3.3	1.1	12	0.1	0.5	<0.1	231	0.82	0.074	3
200N 300E	Soil	0.4	37.5	18.7	52	<0.1	13.1	21.9	1794	4.16	2.1	2.3	0.6	7	0.3	0.3	0.2	140	0.68	0.098	6

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

Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

		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
100N 000E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 025E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 050E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
100N 075E	Soil		84	0.63	37	0.348	3	4.14	0.007	0.02	<0.1	0.09	13.4	<0.1	<0.05	11	0.7	<0.2
100N 100E	Soil		64	0.39	25	0.470	3	2.83	0.007	0.02	<0.1	0.09	7.9	<0.1	<0.05	12	<0.5	<0.2
100N 125E	Soil		92	0.53	33	0.555	3	4.65	0.007	0.02	<0.1	0.09	7.2	<0.1	<0.05	14	<0.5	<0.2
100N 150E	Soil		96	0.78	25	0.528	3	4.92	0.006	0.02	<0.1	0.06	12.4	<0.1	<0.05	13	<0.5	<0.2
100N 175E	Soil		81	0.49	39	0.373	3	3.41	0.008	0.02	<0.1	0.12	8.0	<0.1	<0.05	14	<0.5	<0.2
100N 200E	Soil		73	0.42	24	0.449	2	3.72	0.008	0.02	<0.1	0.08	12.0	<0.1	<0.05	13	0.6	<0.2
100N 225E	Soil		51	0.18	87	0.234	3	2.45	0.008	0.03	<0.1	0.18	6.7	0.1	<0.05	11	0.9	<0.2
100N 250E	Soil		48	0.92	74	0.605	2	4.56	0.023	0.06	<0.1	0.06	6.2	<0.1	<0.05	17	<0.5	<0.2
100N 275E	Soil		83	0.36	31	0.513	2	4.56	0.007	0.02	<0.1	0.09	11.2	<0.1	<0.05	16	<0.5	<0.2
100N 300E	Soil		79	0.68	16	0.472	4	5.10	0.008	0.02	<0.1	0.08	20.0	<0.1	<0.05	12	1.2	<0.2
100N 325E	Soil		69	0.64	24	0.460	3	3.98	0.007	0.03	<0.1	0.15	11.9	<0.1	<0.05	13	<0.5	<0.2
100N 350E	Soil		26	0.20	21	0.521	2	1.69	0.010	0.02	<0.1	0.09	4.1	<0.1	<0.05	15	<0.5	<0.2
100N 375E	Soil		53	0.35	30	0.484	2	2.40	0.006	0.02	<0.1	0.05	4.7	<0.1	<0.05	15	<0.5	<0.2
100N 400E	Soil		67	0.71	28	0.522	3	3.63	0.008	0.02	<0.1	0.10	10.6	<0.1	<0.05	16	<0.5	<0.2
200N 000E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 025E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 050E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
200N 075E	Soil		74	0.38	38	0.553	2	3.63	0.008	0.02	<0.1	0.03	6.6	<0.1	<0.05	13	<0.5	<0.2
200N 100E	Soil		59	0.56	43	0.408	3	3.11	0.007	0.02	<0.1	0.09	7.8	<0.1	<0.05	11	<0.5	<0.2
200N 125E	Soil		82	0.53	23	0.507	2	4.21	0.007	0.01	<0.1	0.12	15.4	<0.1	<0.05	12	<0.5	<0.2
200N 150E	Soil		74	0.62	42	0.497	2	3.44	0.007	0.02	<0.1	0.11	9.4	<0.1	<0.05	11	<0.5	<0.2
200N 175E	Soil		73	0.43	33	0.383	2	3.23	0.007	0.02	<0.1	0.08	7.0	<0.1	<0.05	12	<0.5	<0.2
200N 200E	Soil		49	0.24	51	0.339	2	1.92	0.007	0.03	<0.1	0.13	4.1	<0.1	<0.05	12	<0.5	<0.2
200N 225E	Soil		75	0.35	33	0.511	2	2.92	0.007	0.02	<0.1	0.05	6.1	<0.1	<0.05	14	<0.5	<0.2
200N 250E	Soil		95	0.72	34	0.581	4	4.86	0.008	0.02	<0.1	0.11	16.0	<0.1	<0.05	13	<0.5	<0.2
200N 275E	Soil		99	0.74	43	0.465	2	4.72	0.006	0.02	<0.1	0.08	13.5	<0.1	<0.05	13	<0.5	<0.2
200N 300E	Soil		33	0.16	36	0.299	2	2.41	0.007	0.01	<0.1	0.13	6.7	<0.1	<0.05	10	<0.5	<0.2

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Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
200N 325E	Soil	0.5	51.4	5.3	72	<0.1	43.8	21.4	480	6.42	2.1	10.6	0.8	13	0.1	0.3	0.1	216	0.84	0.059	3
200N 350E	Soil	0.4	29.9	10.3	67	<0.1	20.6	21.5	1219	4.59	2.0	2.4	0.5	12	0.2	0.3	0.1	165	0.83	0.050	3
200N 375E	Soil	0.7	105.7	3.5	57	<0.1	45.1	20.5	430	6.03	4.8	1.8	0.9	12	0.1	0.4	<0.1	229	0.84	0.062	4
200N 400E	Soil	0.6	64.3	5.6	59	<0.1	41.3	19.0	353	5.85	3.6	3.4	0.9	12	0.2	0.3	<0.1	209	0.83	0.061	3
300N 000E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 025E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 050E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 075E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 100E	Soil	0.6	79.8	4.9	48	<0.1	48.3	19.1	287	5.74	4.1	0.7	0.8	12	<0.1	0.4	<0.1	218	0.74	0.038	2
300N 125E	Soil	0.7	90.0	4.1	53	<0.1	36.5	17.1	348	6.70	2.8	3.0	1.1	11	0.1	0.3	<0.1	257	0.85	0.072	4
300N 150E	Soil	0.6	139.8	3.0	66	<0.1	57.5	26.8	526	6.54	5.1	1.8	1.0	11	0.1	0.3	0.2	267	0.87	0.085	4
300N 175E	Soil	0.4	54.2	6.5	59	<0.1	28.2	15.5	499	5.20	1.7	3.3	0.7	12	0.1	0.3	0.1	184	0.83	0.042	3
300N 200E	Soil	0.4	63.6	3.5	55	<0.1	33.0	22.2	555	4.82	3.6	2.6	0.5	13	0.2	0.9	<0.1	191	0.93	0.036	6
300N 225E	Soil	0.7	130.6	3.2	70	<0.1	54.6	24.9	401	6.34	6.3	4.4	1.2	10	0.2	0.4	<0.1	253	0.74	0.104	6
300N 250E	Soil	0.5	125.0	4.7	71	<0.1	40.1	31.6	1197	5.60	3.4	2.4	0.9	14	0.1	0.3	<0.1	216	0.73	0.116	9
300N 275E	Soil	0.5	150.4	4.3	77	<0.1	47.7	20.8	381	7.03	4.1	2.7	0.9	15	0.1	0.5	<0.1	264	0.80	0.077	3
300N 300E	Soil	0.7	82.9	7.0	51	<0.1	25.1	13.2	327	6.65	5.5	5.5	1.2	8	0.2	0.5	0.1	226	0.80	0.238	4
300N 325E	Soil	0.6	61.0	5.2	62	<0.1	26.2	17.3	571	6.29	2.6	7.1	1.0	8	0.2	0.3	0.1	156	0.47	0.252	8
300N 350E	Soil	0.8	77.4	4.8	108	<0.1	40.0	34.8	576	5.40	3.6	3.8	1.0	8	0.2	0.4	0.1	161	0.66	0.170	8
300N 375E	Soil	1.2	139.9	5.2	54	<0.1	43.9	22.9	517	6.52	6.1	6.1	1.3	11	0.2	0.5	<0.1	211	0.75	0.119	6
300N 400E	Soil	0.3	58.9	6.1	77	<0.1	25.3	20.0	656	7.06	2.1	2.6	0.7	11	0.2	0.4	0.1	202	0.99	0.107	3
400N 000E	Soil	0.3	350.8	6.3	79	0.1	83.2	37.5	1009	7.73	6.4	2.7	0.6	66	0.2	0.7	<0.1	273	1.25	0.038	6
400N 025E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
400N 050E	Soil	0.3	21.3	12.3	50	<0.1	25.9	17.2	1010	4.67	2.3	1.9	0.4	14	0.2	0.8	0.1	168	0.95	0.036	3
400N 075E	Soil	0.3	23.4	25.6	58	<0.1	18.6	16.7	2870	5.20	3.4	1.2	0.5	13	0.3	0.5	0.3	179	1.22	0.113	3
400N 100E	Soil	0.4	63.7	19.4	73	<0.1	32.1	21.5	3683	6.41	3.5	2.2	0.7	15	0.3	0.6	0.1	226	0.99	0.131	4
400N 125E	Soil	0.3	28.9	7.3	63	<0.1	22.0	17.1	1177	6.60	2.6	1.8	0.7	13	0.2	0.3	0.1	193	1.07	0.108	3
400N 150E	Soil	0.4	81.3	9.1	76	<0.1	40.4	21.5	634	6.83	5.0	1.2	0.9	12	0.2	0.6	0.1	240	0.92	0.107	3
400N 175E	Soil	0.6	103.6	6.4	63	<0.1	49.3	22.3	670	7.12	4.9	3.6	1.1	13	0.2	0.5	<0.1	280	0.93	0.076	4
400N 200E	Soil	0.5	78.2	6.2	55	<0.1	38.2	20.8	315	7.40	3.4	8.6	1.0	11	0.1	0.4	0.1	260	0.77	0.092	5

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Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

	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
200N 325E	Soil	73	0.46	41	0.513	2	3.39	0.008	0.02	<0.1	0.05	7.2	<0.1	<0.05	14	<0.5	<0.2
200N 350E	Soil	38	0.26	40	0.380	2	2.06	0.007	0.02	<0.1	0.07	4.1	<0.1	<0.05	10	<0.5	<0.2
200N 375E	Soil	69	0.67	25	0.509	3	3.52	0.007	0.01	<0.1	0.07	12.4	<0.1	<0.05	12	<0.5	<0.2
200N 400E	Soil	68	0.50	27	0.483	2	3.69	0.006	0.02	<0.1	0.11	6.4	<0.1	<0.05	12	<0.5	<0.2
300N 000E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 025E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 050E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 075E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
300N 100E	Soil	86	0.55	28	0.454	2	4.83	0.008	0.01	<0.1	0.06	6.8	<0.1	<0.05	13	<0.5	<0.2
300N 125E	Soil	102	0.43	19	0.536	2	4.83	0.006	0.01	<0.1	0.08	16.1	<0.1	<0.05	13	<0.5	<0.2
300N 150E	Soil	107	0.78	29	0.532	3	5.06	0.007	0.02	<0.1	0.11	18.4	<0.1	<0.05	13	<0.5	<0.2
300N 175E	Soil	57	0.32	28	0.429	2	2.63	0.007	0.01	<0.1	0.05	6.7	<0.1	<0.05	11	<0.5	<0.2
300N 200E	Soil	61	0.44	21	0.430	2	2.63	0.007	0.01	<0.1	0.16	8.4	<0.1	<0.05	10	<0.5	<0.2
300N 225E	Soil	101	0.80	24	0.535	2	4.94	0.006	0.02	<0.1	0.10	18.6	<0.1	<0.05	13	<0.5	<0.2
300N 250E	Soil	65	0.60	34	0.492	2	3.94	0.011	0.02	<0.1	0.12	14.5	<0.1	<0.05	12	<0.5	<0.2
300N 275E	Soil	82	0.61	46	0.585	2	5.13	0.010	0.03	<0.1	0.11	6.6	<0.1	<0.05	14	<0.5	<0.2
300N 300E	Soil	75	0.38	18	0.454	2	5.26	0.007	0.01	<0.1	0.16	15.7	<0.1	0.05	14	0.8	<0.2
300N 325E	Soil	72	0.21	18	0.347	3	4.73	0.008	0.02	<0.1	0.27	12.7	<0.1	<0.05	13	0.9	<0.2
300N 350E	Soil	62	0.31	28	0.366	5	5.36	0.008	0.02	<0.1	0.26	15.0	<0.1	0.09	10	1.7	<0.2
300N 375E	Soil	83	0.65	33	0.496	3	6.41	0.007	0.02	<0.1	0.20	23.0	<0.1	<0.05	12	0.7	<0.2
300N 400E	Soil	52	0.27	29	0.430	5	2.68	0.007	0.02	<0.1	0.06	6.0	<0.1	<0.05	14	<0.5	<0.2
400N 000E	Soil	108	1.87	38	0.381	3	5.94	0.037	0.03	<0.1	0.16	21.9	<0.1	0.05	14	0.6	<0.2
400N 025E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
400N 050E	Soil	46	0.37	36	0.362	3	2.04	0.008	0.02	<0.1	0.08	4.0	<0.1	0.05	9	<0.5	<0.2
400N 075E	Soil	53	0.32	42	0.401	4	2.20	0.007	0.02	<0.1	0.07	5.5	<0.1	0.10	11	0.9	<0.2
400N 100E	Soil	64	0.41	66	0.471	3	3.44	0.009	0.03	<0.1	0.11	8.2	<0.1	0.06	14	<0.5	<0.2
400N 125E	Soil	63	0.30	34	0.469	4	2.56	0.007	0.01	<0.1	0.10	5.1	<0.1	0.06	13	<0.5	<0.2
400N 150E	Soil	80	0.53	34	0.570	5	4.71	0.008	0.02	<0.1	0.11	7.0	<0.1	0.08	14	<0.5	<0.2
400N 175E	Soil	107	0.62	35	0.626	4	5.71	0.007	0.02	<0.1	0.11	16.4	<0.1	0.05	15	<0.5	<0.2
400N 200E	Soil	97	0.48	24	0.573	2	5.20	0.007	0.02	<0.1	0.15	11.2	<0.1	0.06	15	<0.5	<0.2

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

Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

		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
400N 225E	Soil		0.4	60.8	73.2	41	<0.1	29.7	114.3	2947	2.43	5.2	2.2	<0.1	21	0.5	0.5	0.6	79	0.61	0.141	24
400N 250E	Soil		0.4	74.1	11.9	90	<0.1	68.2	69.8	1148	5.73	4.6	3.6	0.6	17	0.3	0.5	<0.1	200	1.03	0.067	8
400N 275E	Soil		0.4	74.2	6.3	56	<0.1	48.7	23.5	537	6.96	5.0	14.1	0.7	17	0.2	0.6	<0.1	259	1.04	0.064	4
400N 300E	Soil		0.2	14.7	66.6	44	<0.1	14.0	7.8	333	3.98	3.1	6.5	0.3	16	0.4	0.7	0.5	169	1.34	0.050	2
400N 325E	Soil		0.5	35.6	8.6	44	<0.1	20.9	12.3	317	8.40	3.5	7.6	0.5	13	0.3	0.7	0.2	368	1.24	0.072	2
400N 350E	Soil		0.5	125.3	17.0	86	0.1	33.2	41.6	1570	7.02	2.8	1.8	0.7	27	0.3	0.5	0.2	203	1.19	0.106	5
400N 375E	Soil		1.0	144.7	9.2	130	0.2	56.1	28.6	873	8.45	6.0	1.7	1.2	26	0.4	0.3	0.3	268	1.20	0.089	4
400N 400E	Soil		0.8	87.3	5.2	95	0.2	49.0	23.3	640	6.15	6.3	2.2	0.9	23	0.4	0.5	<0.1	215	0.90	0.057	4
500N 000E	Soil		0.6	123.5	2.6	41	<0.1	45.5	20.6	340	5.73	5.6	9.1	0.8	24	0.3	0.5	<0.1	240	0.93	0.023	4
500N 025E	Soil		0.4	164.5	33.1	79	0.1	61.1	33.9	2828	6.04	3.8	4.2	0.5	45	0.3	0.3	0.2	226	1.88	0.044	7
500N 050E	Soil		0.5	115.2	3.7	47	<0.1	45.9	21.4	337	6.69	3.9	2.7	1.1	13	0.1	0.5	<0.1	254	0.90	0.045	5
500N 075E	Soil		0.5	115.7	2.8	50	<0.1	48.0	22.1	311	6.58	3.8	3.0	1.0	12	0.1	0.4	<0.1	257	0.93	0.044	6
500N 100E	Soil		<0.1	8.8	8.3	59	<0.1	13.1	16.8	1348	3.73	0.8	0.8	0.3	18	0.2	0.2	0.1	119	1.16	0.034	3
500N 125E	Soil		0.5	83.1	8.8	57	<0.1	35.8	27.2	1940	5.61	7.9	1.6	0.8	13	0.3	0.7	<0.1	204	0.88	0.100	4
500N 150E	Soil		0.5	62.0	8.9	62	<0.1	40.1	48.2	1122	4.84	2.1	1.7	0.6	13	0.1	0.4	<0.1	178	0.91	0.059	8
500N 175E	Soil		0.3	69.2	9.7	58	<0.1	35.2	17.4	817	6.70	3.1	10.1	0.8	13	0.2	0.4	<0.1	256	0.93	0.065	3
500N 200E	Soil		0.3	33.0	6.6	62	<0.1	22.4	30.8	676	7.77	0.6	1.2	0.6	16	0.2	0.3	0.1	202	0.80	0.041	7
500N 225E	Soil		0.3	42.3	12.8	100	<0.1	33.5	27.6	2042	5.39	1.7	0.6	0.7	32	0.3	0.3	0.1	163	1.06	0.065	5
500N 250E	Soil		0.6	51.5	5.8	79	<0.1	36.4	19.7	443	5.29	3.7	2.3	0.7	18	0.2	0.4	<0.1	195	0.90	0.043	3
500N 275E	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
500N 300E	Soil		0.6	123.8	3.0	76	<0.1	50.5	24.5	831	6.28	9.8	3.2	1.1	52	0.3	0.6	<0.1	225	1.26	0.042	8
500N 325E	Soil		0.8	94.1	4.4	84	<0.1	53.6	23.7	524	7.24	9.4	4.6	0.9	17	0.3	0.5	<0.1	276	0.86	0.097	4
500N 350E	Soil		0.6	104.0	3.0	73	0.1	53.2	26.7	483	6.84	6.8	2.2	0.9	14	0.3	0.5	0.1	252	0.77	0.063	5
500N 375E	Soil		0.7	109.4	5.6	79	<0.1	52.4	27.3	821	6.70	4.2	4.1	1.1	17	0.2	0.4	0.1	229	0.86	0.076	9
500N 400E	Soil		0.5	90.6	4.4	75	<0.1	41.7	24.9	1479	6.97	2.1	10.9	0.8	15	0.2	0.4	0.1	218	0.94	0.068	5
20500N 37000E	Soil		0.4	42.7	4.0	47	<0.1	19.9	10.2	358	4.95	3.3	4.5	0.6	12	0.1	0.4	<0.1	189	0.77	0.034	3
20500N 37050E	Soil		0.4	67.4	5.4	74	0.1	35.0	17.3	484	5.43	7.2	4.3	0.6	15	0.2	0.4	<0.1	209	0.80	0.086	2
20500N 37100E	Soil		0.5	122.9	2.3	52	<0.1	54.6	22.4	392	6.46	10.8	1.7	0.9	23	0.2	0.5	<0.1	237	0.99	0.041	5
20500N 37150E	Soil		0.4	117.9	3.0	71	<0.1	61.2	24.8	579	6.46	10.1	5.9	0.8	22	0.1	0.4	<0.1	226	0.99	0.065	5
20500N 37200E	Soil		0.4	98.8	4.4	68	<0.1	35.2	16.5	414	5.64	8.8	1.4	0.8	12	0.1	0.5	<0.1	206	0.96	0.065	3

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Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

	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
400N 225E	Soil	34	0.14	44	0.122	3	4.23	0.008	0.04	<0.1	0.19	12.4	<0.1	0.17	6	2.0	<0.2
400N 250E	Soil	62	0.63	33	0.484	4	3.66	0.009	0.03	<0.1	0.08	9.1	<0.1	0.09	12	<0.5	<0.2
400N 275E	Soil	77	0.64	28	0.636	5	3.65	0.009	0.02	<0.1	0.06	7.6	<0.1	0.07	14	<0.5	<0.2
400N 300E	Soil	26	0.23	16	0.349	3	1.33	0.011	0.04	<0.1	0.12	3.6	<0.1	0.11	9	<0.5	<0.2
400N 325E	Soil	84	0.40	14	0.704	4	2.37	0.006	0.01	<0.1	0.11	6.0	<0.1	0.07	22	<0.5	<0.2
400N 350E	Soil	77	0.39	38	0.454	4	3.62	0.010	0.02	<0.1	0.12	8.3	<0.1	0.12	15	0.8	<0.2
400N 375E	Soil	101	0.96	50	0.582	5	4.27	0.009	0.03	<0.1	0.05	8.3	<0.1	0.08	16	0.7	<0.2
400N 400E	Soil	82	0.72	66	0.404	4	4.21	0.010	0.02	<0.1	0.09	11.7	<0.1	0.07	13	<0.5	<0.2
500N 000E	Soil	86	0.74	68	0.492	3	3.95	0.010	0.01	<0.1	0.08	9.8	<0.1	<0.05	11	0.9	<0.2
500N 025E	Soil	65	2.22	33	0.498	4	5.10	0.146	0.06	<0.1	0.12	20.0	<0.1	<0.05	12	0.7	<0.2
500N 050E	Soil	94	0.66	22	0.581	2	4.90	0.006	0.02	<0.1	0.09	16.6	<0.1	<0.05	13	0.5	<0.2
500N 075E	Soil	93	0.63	26	0.599	4	4.87	0.009	0.01	<0.1	0.12	19.8	<0.1	<0.05	13	<0.5	<0.2
500N 100E	Soil	35	0.32	29	0.337	1	1.71	0.009	0.02	<0.1	0.05	3.8	<0.1	<0.05	7	<0.5	<0.2
500N 125E	Soil	67	0.55	27	0.469	4	3.70	0.007	0.02	<0.1	0.14	10.3	<0.1	<0.05	11	0.8	<0.2
500N 150E	Soil	60	0.49	26	0.485	3	3.33	0.007	0.02	<0.1	0.08	9.3	<0.1	<0.05	11	<0.5	<0.2
500N 175E	Soil	71	0.45	35	0.574	1	3.41	0.013	0.02	<0.1	0.07	8.9	<0.1	<0.05	13	<0.5	<0.2
500N 200E	Soil	64	0.19	29	0.494	1	2.32	0.007	<0.01	<0.1	0.06	6.4	<0.1	<0.05	16	<0.5	<0.2
500N 225E	Soil	64	0.37	75	0.482	4	2.57	0.007	0.02	<0.1	0.09	5.9	<0.1	<0.05	12	<0.5	<0.2
500N 250E	Soil	60	0.44	44	0.451	3	3.07	0.007	0.02	<0.1	0.08	7.3	<0.1	<0.05	10	<0.5	<0.2
500N 275E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
500N 300E	Soil	96	0.95	74	0.372	3	3.61	0.013	0.04	<0.1	0.09	25.1	<0.1	<0.05	11	<0.5	<0.2
500N 325E	Soil	87	0.79	45	0.526	3	4.33	0.008	0.04	<0.1	0.09	9.9	<0.1	<0.05	14	<0.5	<0.2
500N 350E	Soil	100	0.85	44	0.406	3	5.01	0.006	0.02	<0.1	0.12	13.4	<0.1	<0.05	12	1.3	<0.2
500N 375E	Soil	87	0.73	53	0.526	3	4.85	0.007	0.02	<0.1	0.12	14.7	<0.1	<0.05	14	1.0	<0.2
500N 400E	Soil	73	0.50	45	0.435	4	3.48	0.008	0.01	<0.1	0.09	9.0	<0.1	<0.05	14	<0.5	<0.2
20500N 37000E	Soil	49	0.24	29	0.440	5	2.09	0.007	0.01	<0.1	0.05	4.9	<0.1	<0.05	11	<0.5	<0.2
20500N 37050E	Soil	66	0.43	39	0.482	5	2.94	0.008	0.02	<0.1	0.07	5.5	<0.1	<0.05	12	<0.5	<0.2
20500N 37100E	Soil	98	0.82	60	0.575	6	4.19	0.008	0.01	<0.1	0.08	13.2	<0.1	<0.05	13	<0.5	<0.2
20500N 37150E	Soil	97	0.90	62	0.489	6	4.35	0.009	0.02	<0.1	0.06	12.3	<0.1	<0.05	13	<0.5	<0.2
20500N 37200E	Soil	56	0.53	26	0.515	4	3.04	0.008	0.01	<0.1	0.08	7.6	<0.1	<0.05	11	<0.5	<0.2

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Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

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
20500N 37250E	Soil	0.5	100.7	7.5	68	<0.1	47.2	22.3	521	6.14	10.0	2.3	0.8	19	0.2	0.6	<0.1	232	0.97	0.049	4
20500N 37300E	Soil	0.5	91.6	3.7	69	<0.1	40.8	20.1	362	6.09	9.2	4.3	0.9	13	0.2	0.4	<0.1	223	0.99	0.069	3
20500N 37350E	Soil	0.5	34.2	5.2	37	0.1	15.1	9.2	236	5.45	3.7	2.2	0.4	15	0.1	0.4	<0.1	226	0.80	0.036	3
20500N 37400E	Soil	0.4	80.3	2.0	40	<0.1	40.7	19.1	403	5.50	5.8	14.0	0.6	13	0.1	0.3	<0.1	203	1.10	0.028	3
20500N 37450E	Soil	0.8	123.5	8.7	70	0.2	41.4	32.6	1844	6.50	15.8	1.0	0.8	34	0.2	0.7	<0.1	251	1.30	0.082	10
20500N 37500E	Soil	0.8	109.8	10.2	97	0.2	38.9	25.1	2948	5.94	8.7	1.1	1.1	20	0.3	0.5	0.1	218	0.99	0.068	13
20500N 37550E	Soil	0.7	74.8	4.5	52	0.2	31.2	19.3	590	7.03	5.3	2.2	0.6	16	0.1	0.7	<0.1	282	0.93	0.054	8
20500N 37600E	Soil	0.4	86.8	2.5	47	0.1	35.7	18.4	382	5.99	5.7	1.9	0.8	14	0.1	0.5	<0.1	230	1.04	0.037	7
20500N 37650E	Soil	0.3	204.8	2.3	61	0.1	48.8	30.2	749	6.24	5.7	1.8	0.8	15	0.2	0.3	<0.1	208	0.86	0.037	5
20500N 37700E	Soil	0.4	73.0	9.0	51	<0.1	33.8	15.5	976	4.50	4.6	1.5	0.6	20	0.1	0.4	<0.1	179	1.13	0.039	3
20500N 37750E	Soil	0.4	54.0	4.9	77	<0.1	32.1	18.0	405	5.96	9.3	0.7	0.7	14	0.2	0.5	<0.1	201	0.89	0.078	3
20500N 37800E	Soil	0.3	82.6	3.2	54	<0.1	39.0	16.8	487	5.26	5.9	2.7	0.6	19	0.1	0.5	<0.1	202	1.15	0.049	3
20500N 37850E	Soil	0.4	81.3	3.5	71	<0.1	41.6	18.7	545	6.05	5.7	2.2	0.8	14	0.2	0.5	<0.1	230	0.98	0.056	3
20500N 37900E	Soil	0.4	82.1	3.3	52	<0.1	34.3	19.3	385	5.66	9.0	2.9	0.5	15	0.2	0.7	<0.1	215	0.87	0.031	4
20500N 37950E	Soil	0.3	35.0	25.1	55	0.1	19.8	11.9	1392	4.68	6.4	0.8	0.4	18	0.2	0.7	0.2	183	0.95	0.065	2
20500N 38000E	Soil	0.5	70.0	6.1	55	0.1	33.1	16.5	432	6.07	5.4	3.6	0.7	15	0.1	0.5	<0.1	235	0.92	0.061	3
20500N 38050E	Soil	1.0	59.2	4.4	62	0.1	25.9	15.2	401	6.30	5.9	1.8	0.6	14	0.2	0.4	<0.1	233	0.97	0.082	3
20500N 38100E	Soil	0.5	14.0	6.9	60	<0.1	33.4	14.4	612	6.70	9.3	1.5	0.4	9	0.1	0.3	<0.1	195	0.16	0.062	4
20600N 37000E	Soil	0.4	116.9	2.0	51	<0.1	45.9	21.7	437	5.69	9.8	5.6	1.0	17	0.1	0.5	<0.1	228	1.04	0.031	6
20600N 37050E	Soil	0.6	60.2	7.9	120	0.1	44.5	24.8	1874	5.89	6.3	1.4	0.8	22	0.3	0.4	<0.1	194	1.01	0.074	6
20600N 37100E	Soil	0.4	83.4	3.0	61	<0.1	35.3	18.3	337	6.75	4.4	4.1	0.9	13	0.1	0.4	<0.1	253	0.83	0.059	4
20600N 37150E	Soil	0.6	95.6	2.7	54	<0.1	39.1	19.7	442	5.87	8.4	2.0	1.0	12	<0.1	0.5	<0.1	231	0.96	0.082	3
20600N 37200E	Soil	0.4	64.5	4.1	46	<0.1	26.2	13.0	335	6.27	4.4	4.5	0.9	11	0.2	0.5	<0.1	238	0.81	0.071	4
20600N 37250E	Soil	0.3	53.8	3.7	50	<0.1	25.2	14.3	602	5.64	3.1	4.7	0.6	12	0.1	0.5	<0.1	217	0.88	0.042	3
20600N 37300E	Soil	0.7	73.7	4.0	60	0.1	33.2	25.5	819	5.74	7.3	5.1	0.7	16	0.2	0.5	<0.1	218	0.88	0.049	6
20600N 37350E	Soil	0.3	30.4	6.5	49	<0.1	17.1	9.3	257	5.54	3.6	2.8	0.5	14	0.1	0.4	<0.1	211	0.80	0.054	2
20600N 37400E	Soil	0.6	64.0	5.3	74	0.1	34.9	17.2	375	6.96	6.9	8.2	0.8	14	0.2	0.7	<0.1	248	0.81	0.079	3
20600N 37450E	Soil	0.6	140.6	2.8	69	0.1	59.9	30.6	685	6.13	8.8	4.0	1.1	22	<0.1	0.5	<0.1	240	1.00	0.057	7
20600N 37500E	Soil	0.4	69.0	3.6	60	<0.1	40.8	19.5	324	5.89	5.7	2.3	0.8	14	0.1	0.5	<0.1	205	0.82	0.052	3
20600N 37550E	Soil	0.4	95.2	3.2	54	<0.1	41.9	18.2	388	5.21	5.1	2.2	0.8	15	0.2	0.5	<0.1	214	0.91	0.048	4

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

Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

	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
20500N 37250E	Soil	82	0.78	55	0.501	6	3.67	0.007	0.03	<0.1	0.08	11.4	<0.1	<0.05	12	<0.5	<0.2
20500N 37300E	Soil	72	0.58	22	0.534	6	3.98	0.007	0.01	<0.1	0.11	8.9	<0.1	<0.05	11	<0.5	<0.2
20500N 37350E	Soil	49	0.24	16	0.466	3	1.73	0.008	0.01	<0.1	0.04	4.0	<0.1	<0.05	11	<0.5	<0.2
20500N 37400E	Soil	63	0.67	19	0.498	4	2.93	0.007	0.01	<0.1	0.06	8.6	<0.1	<0.05	10	<0.5	<0.2
20500N 37450E	Soil	73	0.70	53	0.488	10	3.87	0.020	0.09	<0.1	0.10	12.5	<0.1	<0.05	14	<0.5	<0.2
20500N 37500E	Soil	67	0.63	50	0.499	6	3.86	0.010	0.03	<0.1	0.11	13.5	<0.1	<0.05	12	<0.5	<0.2
20500N 37550E	Soil	71	0.44	32	0.585	3	3.17	0.011	0.01	<0.1	0.08	9.8	<0.1	<0.05	14	<0.5	<0.2
20500N 37600E	Soil	62	0.55	22	0.577	5	3.59	0.007	0.01	<0.1	0.08	10.6	<0.1	<0.05	11	<0.5	<0.2
20500N 37650E	Soil	95	1.27	43	0.410	4	4.27	0.008	0.02	<0.1	0.09	13.9	<0.1	<0.05	12	<0.5	<0.2
20500N 37700E	Soil	51	0.53	64	0.511	4	3.24	0.011	0.02	<0.1	0.06	6.8	<0.1	<0.05	11	<0.5	<0.2
20500N 37750E	Soil	63	0.40	31	0.556	3	3.19	0.008	0.02	<0.1	0.09	6.4	<0.1	<0.05	12	<0.5	<0.2
20500N 37800E	Soil	67	0.60	39	0.562	3	3.38	0.009	0.02	<0.1	0.07	9.2	<0.1	<0.05	11	<0.5	<0.2
20500N 37850E	Soil	68	0.52	38	0.552	4	3.78	0.007	0.01	<0.1	0.10	8.4	<0.1	<0.05	12	<0.5	<0.2
20500N 37900E	Soil	67	0.48	34	0.444	5	3.08	0.010	0.01	<0.1	0.05	9.0	<0.1	<0.05	10	<0.5	<0.2
20500N 37950E	Soil	44	0.31	45	0.434	4	1.86	0.007	0.03	<0.1	0.11	4.3	<0.1	<0.05	10	<0.5	<0.2
20500N 38000E	Soil	67	0.48	32	0.582	4	3.56	0.007	0.02	<0.1	0.13	7.8	<0.1	<0.05	13	<0.5	<0.2
20500N 38050E	Soil	49	0.46	21	0.570	4	2.92	0.008	0.02	<0.1	0.07	6.2	<0.1	<0.05	12	<0.5	<0.2
20500N 38100E	Soil	132	0.52	21	0.026	2	1.90	0.009	0.02	<0.1	0.06	11.2	<0.1	<0.05	14	<0.5	<0.2
20600N 37000E	Soil	80	0.88	74	0.525	5	3.85	0.013	0.02	<0.1	0.06	19.8	<0.1	<0.05	11	<0.5	<0.2
20600N 37050E	Soil	72	0.58	55	0.443	4	3.52	0.015	0.03	<0.1	0.08	9.9	<0.1	<0.05	12	0.5	<0.2
20600N 37100E	Soil	81	0.46	21	0.571	3	3.63	0.007	0.02	<0.1	0.14	14.5	<0.1	<0.05	13	<0.5	<0.2
20600N 37150E	Soil	67	0.66	19	0.490	5	3.94	0.007	0.01	<0.1	0.11	12.8	<0.1	<0.05	11	<0.5	<0.2
20600N 37200E	Soil	68	0.38	19	0.494	4	2.98	0.007	0.01	<0.1	0.16	10.2	<0.1	<0.05	12	<0.5	<0.2
20600N 37250E	Soil	62	0.36	23	0.502	4	2.35	0.007	0.01	<0.1	0.07	6.8	<0.1	<0.05	11	<0.5	<0.2
20600N 37300E	Soil	63	0.45	25	0.523	4	3.54	0.008	0.02	<0.1	0.09	8.1	<0.1	<0.05	12	<0.5	<0.2
20600N 37350E	Soil	54	0.26	20	0.484	3	1.97	0.007	0.01	<0.1	0.08	4.1	<0.1	<0.05	11	<0.5	<0.2
20600N 37400E	Soil	74	0.48	32	0.561	4	3.67	0.008	0.02	<0.1	0.11	7.5	<0.1	<0.05	14	<0.5	<0.2
20600N 37450E	Soil	94	0.87	63	0.525	5	4.84	0.014	0.02	<0.1	0.11	17.3	<0.1	<0.05	12	<0.5	<0.2
20600N 37500E	Soil	76	0.49	33	0.486	4	3.84	0.007	0.01	<0.1	0.07	6.9	<0.1	<0.05	12	<0.5	<0.2
20600N 37550E	Soil	80	0.56	52	0.492	3	3.62	0.008	0.02	<0.1	0.11	11.2	<0.1	<0.05	11	<0.5	<0.2

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910 - 475 Howe Street
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Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

		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
20600N 37600E	Soil		0.5	81.9	3.1	53	<0.1	42.3	19.1	332	5.18	5.4	1.5	0.8	16	0.3	0.6	<0.1	208	0.87	0.040	4
20600N 37650E	Soil		0.4	88.2	4.2	54	<0.1	40.1	18.6	588	5.36	9.7	2.5	0.8	19	0.2	0.7	<0.1	211	1.01	0.058	4
20600N 37700E	Soil		0.5	63.4	3.5	56	<0.1	34.1	18.5	759	5.00	3.1	6.4	0.8	15	0.2	0.5	<0.1	189	0.92	0.041	4
20600N 37750E	Soil		0.3	77.5	2.6	60	<0.1	43.5	19.6	407	5.43	6.0	2.6	0.8	16	<0.1	0.5	<0.1	207	1.01	0.044	3
20600N 37800E	Soil		0.3	88.6	1.9	45	<0.1	44.8	20.4	564	4.81	7.5	3.8	0.8	36	0.1	0.5	<0.1	201	1.11	0.041	6
20600N 37850E	Soil		0.5	80.7	5.6	47	<0.1	37.1	17.7	494	5.30	5.5	1.9	0.7	15	0.1	0.5	<0.1	224	0.96	0.043	3
20600N 37900E	Soil		0.5	68.0	3.0	51	0.1	26.8	19.7	615	5.72	4.9	2.2	0.6	14	<0.1	0.5	<0.1	251	0.93	0.044	4
20600N 37950E	Soil		0.5	99.1	3.9	52	0.2	25.0	18.8	898	5.54	5.2	0.8	0.6	15	0.2	0.4	<0.1	221	0.90	0.045	5
20600N 38000E	Soil		0.4	71.5	2.8	35	<0.1	29.2	18.3	626	4.59	8.6	4.3	0.8	18	0.1	0.3	<0.1	190	1.01	0.027	5
20600N 38050E	Soil		0.5	69.6	5.9	71	<0.1	39.5	19.0	1134	5.50	4.7	1.1	0.6	20	0.2	0.4	<0.1	216	0.97	0.048	6
20600N 38100E	Soil		0.2	73.2	5.5	41	<0.1	27.7	15.2	596	3.69	5.9	2.6	0.6	34	0.1	0.5	<0.1	162	1.53	0.055	5
20700N 37000E	Soil		0.3	37.2	8.3	46	<0.1	19.6	10.7	543	4.08	5.1	1.7	0.4	16	0.1	0.5	<0.1	183	0.79	0.048	3
20700N 37050E	Soil		0.4	49.0	6.7	63	<0.1	25.3	13.9	397	5.94	5.1	2.2	0.6	14	0.2	0.8	<0.1	225	0.78	0.058	2
20700N 37100E	Soil		0.5	81.5	4.7	64	<0.1	40.8	18.1	348	5.95	10.0	5.9	0.8	12	0.2	0.5	<0.1	217	0.78	0.055	3
20700N 37150E	Soil		0.4	64.1	20.9	69	<0.1	34.4	18.7	1554	6.07	5.4	2.3	0.8	12	0.3	0.8	0.2	223	0.80	0.077	3
20700N 37200E	Soil		0.3	20.4	9.3	38	<0.1	12.9	15.5	1179	6.20	2.6	5.5	0.6	11	0.2	0.4	0.1	228	1.12	0.060	3
20700N 37250E	Soil		0.5	108.9	4.0	65	<0.1	48.7	23.0	501	5.74	6.9	2.4	0.9	14	0.1	0.5	0.1	217	0.96	0.053	3
20700N 37300E	Soil		0.3	75.6	2.7	68	<0.1	40.3	19.4	638	4.79	5.3	1.6	0.7	14	0.2	0.4	<0.1	195	1.02	0.055	4
20700N 37350E	Soil		0.4	32.8	7.8	51	<0.1	21.4	13.1	506	4.09	3.5	1.4	0.5	12	0.2	0.4	<0.1	163	0.82	0.089	2
20700N 37400E	Soil		0.4	82.8	6.3	71	<0.1	31.6	16.1	377	4.97	5.1	1.7	0.9	14	0.2	0.9	<0.1	202	0.75	0.046	3
20700N 37450E	Soil		0.3	83.5	3.3	62	<0.1	34.6	17.3	412	4.73	5.1	1.3	0.8	13	0.2	0.5	<0.1	195	0.91	0.057	3
20700N 37500E	Soil		0.4	54.7	9.2	62	<0.1	25.4	13.9	305	5.10	3.7	3.3	0.6	13	0.2	0.6	<0.1	184	0.80	0.071	2
20700N 37550E	Soil		0.4	84.5	4.0	51	<0.1	39.4	18.9	538	4.82	5.8	3.8	0.7	14	0.1	0.4	<0.1	186	1.04	0.045	3
20700N 37600E	Soil		0.5	65.3	3.2	54	<0.1	36.8	17.9	293	5.31	6.5	1.6	0.7	12	0.2	0.5	<0.1	213	0.87	0.052	3
20700N 37650E	Soil		0.4	49.1	9.1	32	<0.1	18.4	9.5	247	4.17	91.8	0.8	0.5	14	0.1	0.5	<0.1	162	0.72	0.032	2
20700N 37700E	Soil		0.6	37.2	9.4	75	0.1	24.5	26.0	892	5.26	3.3	3.2	0.4	16	0.2	0.5	<0.1	200	1.05	0.057	4
20700N 37750E	Soil		0.4	44.9	3.7	68	0.1	34.6	23.1	705	6.10	6.7	3.0	0.5	14	0.1	0.2	<0.1	211	0.78	0.050	4
20700N 37800E	Soil		0.2	74.9	5.8	39	<0.1	26.2	18.5	769	4.11	8.9	1.8	0.6	22	0.2	0.4	<0.1	160	1.28	0.035	6
20700N 37850E	Soil		0.2	77.4	2.2	40	<0.1	31.7	17.7	593	3.93	10.6	2.2	0.7	22	<0.1	0.3	<0.1	161	1.26	0.030	4
20700N 37900E	Soil		0.3	43.1	16.5	53	<0.1	25.8	16.0	1059	4.13	3.0	1.4	0.5	25	0.2	0.5	<0.1	169	1.02	0.037	3

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Client: **Rio Minerals Ltd.**
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Vancouver BC V6C 2B3 Canada

Project: LH-11
Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

	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
20600N 37600E	Soil	73	0.54	45	0.561	4	3.82	0.008	0.01	<0.1	0.14	10.6	<0.1	<0.05	11	<0.5	<0.2
20600N 37650E	Soil	71	0.62	63	0.434	5	3.33	0.009	0.01	<0.1	0.12	11.3	<0.1	<0.05	10	<0.5	<0.2
20600N 37700E	Soil	65	0.43	35	0.491	3	3.16	0.008	0.01	<0.1	0.08	10.6	<0.1	<0.05	11	<0.5	<0.2
20600N 37750E	Soil	74	0.60	49	0.523	5	3.51	0.008	0.01	<0.1	0.11	9.8	<0.1	<0.05	11	<0.5	<0.2
20600N 37800E	Soil	80	0.75	80	0.457	6	3.57	0.012	0.01	<0.1	0.06	12.9	<0.1	<0.05	10	<0.5	<0.2
20600N 37850E	Soil	68	0.53	37	0.525	4	3.21	0.008	0.01	<0.1	0.09	9.9	<0.1	<0.05	11	<0.5	<0.2
20600N 37900E	Soil	53	0.44	20	0.563	3	2.67	0.009	0.01	<0.1	0.07	7.9	<0.1	<0.05	11	<0.5	<0.2
20600N 37950E	Soil	51	0.44	28	0.470	3	2.76	0.008	0.01	<0.1	0.08	9.1	<0.1	<0.05	11	<0.5	<0.2
20600N 38000E	Soil	48	0.62	30	0.386	4	2.75	0.012	0.01	<0.1	0.05	10.7	<0.1	<0.05	8	0.5	<0.2
20600N 38050E	Soil	69	0.50	37	0.401	3	3.35	0.010	0.01	<0.1	0.07	9.0	<0.1	<0.05	10	<0.5	<0.2
20600N 38100E	Soil	50	0.59	29	0.379	4	2.53	0.013	0.02	<0.1	0.07	14.1	<0.1	<0.05	8	<0.5	<0.2
20700N 37000E	Soil	40	0.33	34	0.387	2	1.68	0.008	0.02	<0.1	0.07	4.6	<0.1	<0.05	10	<0.5	<0.2
20700N 37050E	Soil	56	0.35	34	0.478	2	2.40	0.008	0.02	<0.1	0.08	4.6	<0.1	<0.05	12	<0.5	<0.2
20700N 37100E	Soil	71	0.54	26	0.521	4	3.60	0.008	0.01	<0.1	0.12	8.7	<0.1	<0.05	11	<0.5	<0.2
20700N 37150E	Soil	63	0.44	40	0.498	4	3.16	0.007	0.02	<0.1	0.11	7.4	<0.1	<0.05	13	<0.5	<0.2
20700N 37200E	Soil	43	0.26	20	0.385	3	2.05	0.009	0.01	<0.1	0.10	4.9	<0.1	<0.05	14	<0.5	<0.2
20700N 37250E	Soil	70	0.78	47	0.547	4	4.68	0.007	0.02	<0.1	0.09	10.0	<0.1	<0.05	12	<0.5	<0.2
20700N 37300E	Soil	59	0.62	44	0.508	3	3.49	0.008	0.01	<0.1	0.13	9.5	<0.1	<0.05	10	<0.5	<0.2
20700N 37350E	Soil	47	0.30	30	0.393	3	2.14	0.007	0.01	<0.1	0.05	4.6	<0.1	<0.05	9	<0.5	<0.2
20700N 37400E	Soil	69	0.42	39	0.471	2	3.31	0.006	0.02	<0.1	0.12	7.2	<0.1	<0.05	10	<0.5	<0.2
20700N 37450E	Soil	62	0.54	38	0.480	4	3.24	0.008	0.01	<0.1	0.14	9.1	<0.1	<0.05	10	<0.5	<0.2
20700N 37500E	Soil	53	0.32	22	0.453	3	2.82	0.007	0.02	<0.1	0.08	5.7	<0.1	<0.05	11	<0.5	<0.2
20700N 37550E	Soil	56	0.68	19	0.485	5	2.87	0.006	0.02	<0.1	0.05	10.7	<0.1	<0.05	10	<0.5	<0.2
20700N 37600E	Soil	70	0.47	24	0.518	3	4.18	0.006	0.01	<0.1	0.10	7.7	<0.1	<0.05	11	<0.5	<0.2
20700N 37650E	Soil	40	0.24	26	0.376	2	1.77	0.006	0.02	<0.1	0.08	3.5	<0.1	<0.05	9	<0.5	<0.2
20700N 37700E	Soil	52	0.36	21	0.450	4	2.22	0.008	0.02	<0.1	0.06	4.6	<0.1	<0.05	11	<0.5	<0.2
20700N 37750E	Soil	83	0.64	31	0.285	2	2.93	0.007	0.02	<0.1	0.05	7.6	<0.1	<0.05	11	<0.5	<0.2
20700N 37800E	Soil	39	0.69	30	0.349	5	2.12	0.017	0.02	<0.1	0.07	9.9	<0.1	<0.05	8	<0.5	<0.2
20700N 37850E	Soil	43	0.88	36	0.345	4	2.64	0.014	0.02	<0.1	0.06	11.1	<0.1	<0.05	8	<0.5	<0.2
20700N 37900E	Soil	49	0.36	45	0.393	3	2.23	0.008	0.02	<0.1	0.07	5.2	<0.1	<0.05	9	<0.5	<0.2

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Vancouver BC V6C 2B3 Canada

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Report Date: March 17, 2012

CERTIFICATE OF ANALYSIS VAN12001045.1

		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
20700N 37950E	Soil		0.3	46.2	4.1	49	<0.1	26.8	14.3	728	4.08	1.9	1.5	0.5	17	0.1	0.4	<0.1	163	1.05	0.039	3
20700N 38000E	Soil		0.3	60.2	14.7	77	<0.1	28.2	15.8	1326	4.52	4.6	1.9	0.6	27	0.2	0.5	<0.1	175	1.10	0.104	3
20700N 38050E	Soil		0.3	88.2	6.4	67	0.1	48.3	24.1	813	4.91	4.9	2.3	0.6	23	0.2	0.5	<0.1	178	1.13	0.094	4
20700N 38100E	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
20800N 37000E	Soil		0.4	69.7	4.0	47	<0.1	25.8	12.0	299	5.76	3.1	1.2	0.8	9	0.1	0.5	<0.1	206	0.75	0.060	3
20800N 37050E	Soil		0.7	82.6	6.8	66	<0.1	28.7	16.7	449	6.55	6.6	2.2	0.9	10	0.2	0.8	<0.1	223	0.76	0.102	3
20800N 37100E	Soil		0.5	53.0	4.8	27	<0.1	21.2	10.3	170	5.96	2.2	6.0	0.5	10	<0.1	0.5	<0.1	223	0.62	0.028	3
20800N 37150E	Soil		0.3	18.4	9.7	28	0.1	8.4	4.1	195	7.36	2.7	14.9	0.4	8	0.2	0.8	0.2	274	0.70	0.069	2
20800N 37200E	Soil		0.5	114.8	2.7	51	<0.1	43.4	21.2	458	5.96	8.5	3.6	0.9	15	0.2	0.5	<0.1	217	0.99	0.038	6
20800N 37250E	Soil		0.4	55.1	4.1	48	0.1	32.6	15.7	334	6.03	3.4	5.0	0.5	12	0.2	0.5	<0.1	212	0.83	0.039	3
20800N 37300E	Soil		0.2	21.8	5.0	28	<0.1	10.9	5.7	177	4.28	0.9	1.8	0.4	9	0.1	0.4	<0.1	171	0.54	0.020	2
20800N 37350E	Soil		0.4	35.0	4.2	44	<0.1	19.2	11.5	307	4.45	2.4	3.5	0.6	12	0.2	0.5	<0.1	162	0.88	0.023	3
20800N 37400E	Soil		0.6	97.2	2.5	48	<0.1	43.4	21.0	373	5.72	5.9	4.0	1.1	12	0.2	0.5	<0.1	211	0.93	0.051	3
20800N 37450E	Soil		0.3	21.1	6.1	36	<0.1	13.1	11.0	474	3.69	1.9	1.9	0.5	11	0.2	0.4	0.2	131	0.79	0.039	2
20800N 37500E	Soil		0.5	87.7	6.1	52	<0.1	39.9	20.5	540	6.11	4.8	3.8	0.8	13	0.2	0.6	<0.1	224	0.85	0.050	4
20800N 37550E	Soil		0.5	223.7	7.4	61	0.2	29.4	24.4	1061	7.64	6.4	5.9	0.6	24	0.2	0.5	<0.1	241	1.18	0.064	4
20800N 37600E	Soil		0.4	121.6	2.1	61	0.1	35.4	18.2	513	5.25	6.7	2.9	0.8	17	0.1	0.2	<0.1	169	0.99	0.088	4
20800N 37650E	Soil		0.5	55.6	8.1	62	0.1	22.2	16.8	692	6.43	5.8	7.0	0.5	20	0.2	0.4	<0.1	220	1.03	0.073	4
20800N 37700E	Soil		0.3	52.9	1.7	30	<0.1	23.1	14.9	382	4.65	7.2	1.4	0.6	16	<0.1	0.3	<0.1	167	0.97	0.017	5
20800N 37750E	Soil		0.4	63.4	2.5	42	0.1	22.8	12.6	335	4.36	3.9	4.1	0.7	15	<0.1	0.3	<0.1	187	1.08	0.035	4
20800N 37800E	Soil		0.4	48.0	2.4	45	<0.1	26.3	14.5	621	4.34	2.3	1.9	0.6	14	<0.1	0.2	<0.1	165	1.02	0.038	3
20800N 37850E	Soil		0.4	95.1	2.0	48	<0.1	41.6	21.3	402	5.44	5.2	2.7	0.8	18	0.2	0.4	<0.1	226	1.18	0.031	4
20800N 37900E	Soil		0.5	61.8	2.5	56	<0.1	36.7	18.3	303	5.46	3.7	2.3	0.8	14	0.1	0.4	<0.1	199	1.08	0.051	3
20800N 37950E	Soil		0.9	66.8	4.4	42	<0.1	33.7	17.4	505	6.05	4.3	3.2	0.7	15	0.1	0.5	<0.1	235	0.97	0.047	3
20800N 38000E	Soil		0.5	97.3	2.4	46	<0.1	36.2	18.9	410	5.16	4.7	4.6	0.8	15	0.1	0.4	<0.1	217	1.15	0.040	5
20800N 38050E	Soil		0.5	127.4	2.0	55	<0.1	43.2	22.0	542	5.53	6.1	2.9	0.9	18	0.1	0.5	<0.1	210	1.10	0.034	4
20800N 38100E	Soil		0.5	139.3	2.2	58	<0.1	49.8	25.0	397	6.13	6.2	4.7	1.0	15	0.1	0.5	<0.1	225	1.11	0.038	3

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	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
20700N 37950E	Soil	48	0.36	30	0.436	2	2.51	0.011	0.01	<0.1	0.06	6.1	<0.1	<0.05	9	<0.5	<0.2
20700N 38000E	Soil	48	0.49	61	0.438	3	2.81	0.008	0.03	<0.1	0.04	7.1	<0.1	<0.05	10	<0.5	<0.2
20700N 38050E	Soil	67	0.70	82	0.461	3	4.00	0.009	0.02	<0.1	0.07	9.5	<0.1	<0.05	11	<0.5	<0.2
20700N 38100E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
20800N 37000E	Soil	61	0.35	19	0.392	2	3.45	0.006	0.01	<0.1	0.15	7.2	<0.1	<0.05	12	<0.5	<0.2
20800N 37050E	Soil	61	0.47	23	0.466	3	3.60	0.006	0.02	<0.1	0.13	7.3	<0.1	<0.05	13	<0.5	<0.2
20800N 37100E	Soil	50	0.28	19	0.436	2	2.77	0.007	0.01	<0.1	0.14	4.4	<0.1	<0.05	13	<0.5	<0.2
20800N 37150E	Soil	46	0.10	14	0.420	2	1.57	0.006	0.01	<0.1	0.09	3.1	<0.1	<0.05	18	<0.5	<0.2
20800N 37200E	Soil	77	0.76	37	0.535	5	3.78	0.008	0.02	<0.1	0.13	16.3	<0.1	<0.05	12	0.6	<0.2
20800N 37250E	Soil	67	0.37	28	0.536	3	2.93	0.007	0.01	<0.1	0.10	5.3	<0.1	<0.05	12	<0.5	<0.2
20800N 37300E	Soil	37	0.14	16	0.396	2	1.22	0.007	0.01	<0.1	0.05	2.7	<0.1	<0.05	9	<0.5	<0.2
20800N 37350E	Soil	46	0.25	24	0.421	3	2.15	0.008	0.01	<0.1	0.03	4.0	<0.1	<0.05	10	<0.5	<0.2
20800N 37400E	Soil	75	0.65	22	0.526	5	3.89	0.007	0.01	<0.1	0.11	14.7	<0.1	<0.05	11	<0.5	<0.2
20800N 37450E	Soil	37	0.19	22	0.380	2	1.60	0.007	<0.01	<0.1	0.05	3.4	<0.1	<0.05	8	<0.5	<0.2
20800N 37500E	Soil	74	0.57	32	0.536	4	3.91	0.007	0.01	<0.1	0.12	9.3	<0.1	<0.05	12	<0.5	<0.2
20800N 37550E	Soil	50	0.62	20	0.511	4	2.68	0.007	0.01	<0.1	0.09	6.8	<0.1	<0.05	14	<0.5	<0.2
20800N 37600E	Soil	43	0.66	25	0.358	4	3.48	0.011	0.02	<0.1	0.08	9.2	<0.1	<0.05	11	<0.5	<0.2
20800N 37650E	Soil	56	0.38	21	0.573	5	2.48	0.008	0.01	<0.1	0.10	5.9	<0.1	<0.05	13	<0.5	<0.2
20800N 37700E	Soil	43	0.52	28	0.397	5	2.41	0.011	<0.01	<0.1	0.04	7.7	<0.1	<0.05	9	<0.5	<0.2
20800N 37750E	Soil	52	0.40	25	0.445	4	2.75	0.008	0.01	<0.1	0.05	11.0	<0.1	<0.05	9	<0.5	<0.2
20800N 37800E	Soil	41	0.39	27	0.461	4	2.57	0.009	0.01	<0.1	0.05	5.9	<0.1	<0.05	10	<0.5	<0.2
20800N 37850E	Soil	81	0.71	39	0.527	4	3.83	0.008	0.01	<0.1	0.07	19.5	<0.1	<0.05	11	<0.5	<0.2
20800N 37900E	Soil	64	0.56	28	0.553	4	3.34	0.007	0.02	<0.1	0.13	10.6	<0.1	<0.05	12	<0.5	<0.2
20800N 37950E	Soil	65	0.45	22	0.592	4	3.54	0.008	0.01	<0.1	0.13	6.9	<0.1	<0.05	13	<0.5	<0.2
20800N 38000E	Soil	63	0.66	28	0.554	4	3.35	0.009	0.02	<0.1	0.13	16.2	<0.1	<0.05	11	<0.5	<0.2
20800N 38050E	Soil	60	0.76	40	0.538	4	3.98	0.010	0.02	<0.1	0.10	10.9	<0.1	<0.05	11	<0.5	<0.2
20800N 38100E	Soil	72	0.83	30	0.587	5	4.23	0.009	0.01	<0.1	0.08	13.8	<0.1	<0.05	12	<0.5	<0.2

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QUALITY CONTROL REPORT VAN12001045.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
100N 100E	Soil	0.5	61.6	4.0	86	<0.1	29.9	16.5	546	6.10	2.1	3.1	0.7	11	0.2	0.3	0.1	202	0.86	0.110	4
REP 100N 100E	QC	0.5	62.2	4.1	83	<0.1	30.5	17.3	554	6.23	2.0	3.5	0.7	10	0.2	0.3	0.1	209	0.86	0.108	4
200N 250E	Soil	0.7	121.2	5.8	73	<0.1	57.9	24.0	471	6.39	6.0	5.0	1.0	11	0.3	0.5	<0.1	256	0.80	0.091	4
REP 200N 250E	QC	0.7	116.9	5.6	70	<0.1	54.1	24.0	465	6.43	5.9	4.5	1.0	10	0.2	0.5	<0.1	252	0.84	0.087	4
300N 125E	Soil	0.7	90.0	4.1	53	<0.1	36.5	17.1	348	6.70	2.8	3.0	1.1	11	0.1	0.3	<0.1	257	0.85	0.072	4
REP 300N 125E	QC	0.7	90.5	4.2	54	<0.1	35.6	16.9	338	6.67	2.9	3.1	1.2	11	0.2	0.2	<0.1	261	0.87	0.073	4
300N 300E	Soil	0.7	82.9	7.0	51	<0.1	25.1	13.2	327	6.65	5.5	5.5	1.2	8	0.2	0.5	0.1	226	0.80	0.238	4
REP 300N 300E	QC	0.8	80.7	6.9	51	<0.1	24.3	13.2	340	6.73	5.6	3.9	1.3	8	0.1	0.5	0.1	220	0.79	0.231	4
400N 075E	Soil	0.3	23.4	25.6	58	<0.1	18.6	16.7	2870	5.20	3.4	1.2	0.5	13	0.3	0.5	0.3	179	1.22	0.113	3
REP 400N 075E	QC	0.3	23.8	25.6	56	<0.1	18.5	17.4	2988	5.27	3.7	1.6	0.5	12	0.3	0.5	0.3	185	1.25	0.113	3
20500N 37150E	Soil	0.4	117.9	3.0	71	<0.1	61.2	24.8	579	6.46	10.1	5.9	0.8	22	0.1	0.4	<0.1	226	0.99	0.065	5
REP 20500N 37150E	QC	0.4	116.5	3.0	71	<0.1	60.6	25.0	564	6.44	10.6	3.9	0.7	22	0.1	0.4	<0.1	231	0.97	0.068	5
20600N 37300E	Soil	0.7	73.7	4.0	60	0.1	33.2	25.5	819	5.74	7.3	5.1	0.7	16	0.2	0.5	<0.1	218	0.88	0.049	6
REP 20600N 37300E	QC	0.7	74.9	4.4	61	0.1	37.2	28.4	890	6.27	8.4	2.6	0.8	16	0.1	0.5	<0.1	239	0.88	0.054	7
20700N 37000E	Soil	0.3	37.2	8.3	46	<0.1	19.6	10.7	543	4.08	5.1	1.7	0.4	16	0.1	0.5	<0.1	183	0.79	0.048	3
REP 20700N 37000E	QC	0.4	36.0	8.2	44	<0.1	20.4	11.0	582	4.36	5.0	1.4	0.4	17	0.2	0.5	<0.1	190	0.80	0.046	3
20800N 37100E	Soil	0.5	53.0	4.8	27	<0.1	21.2	10.3	170	5.96	2.2	6.0	0.5	10	<0.1	0.5	<0.1	223	0.62	0.028	3
REP 20800N 37100E	QC	0.5	48.3	4.6	25	<0.1	19.0	9.5	164	5.43	2.1	5.3	0.5	10	0.1	0.6	<0.1	215	0.59	0.028	3
20800N 37850E	Soil	0.4	95.1	2.0	48	<0.1	41.6	21.3	402	5.44	5.2	2.7	0.8	18	0.2	0.4	<0.1	226	1.18	0.031	4
REP 20800N 37850E	QC	0.4	94.3	1.9	46	<0.1	41.8	20.8	396	5.48	5.1	4.3	0.8	18	0.1	0.4	<0.1	225	1.17	0.032	4
20800N 38100E	Soil	0.5	139.3	2.2	58	<0.1	49.8	25.0	397	6.13	6.2	4.7	1.0	15	0.1	0.5	<0.1	225	1.11	0.038	3
REP 20800N 38100E	QC	0.5	133.9	2.2	54	<0.1	46.9	23.2	373	5.61	5.5	7.9	0.9	15	<0.1	0.6	<0.1	217	1.07	0.036	3
Reference Materials																					
STD DS8	Standard	13.5	113.7	129.6	315	1.8	38.3	7.6	628	2.54	26.0	118.9	7.6	70	2.4	5.9	6.9	43	0.69	0.078	16
STD DS8	Standard	13.0	101.1	120.7	286	1.7	35.3	7.1	555	2.23	23.2	111.3	7.0	63	2.2	5.8	6.2	41	0.65	0.072	15
STD DS8	Standard	12.6	111.7	127.0	316	1.7	38.2	7.6	596	2.36	24.9	108.5	7.3	69	2.5	6.0	6.9	42	0.71	0.079	15
STD DS8	Standard	13.3	118.2	129.2	328	1.7	41.9	8.4	634	2.55	25.9	123.4	7.5	69	2.2	5.7	6.5	46	0.72	0.083	16
STD DS8	Standard	13.7	108.4	125.0	300	1.7	37.9	7.5	575	2.35	21.6	114.3	6.4	61	2.2	5.0	5.7	40	0.66	0.070	16

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LH-11
Report Date: March 17, 2012

QUALITY CONTROL REPORT VAN12001045.1

	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																	
100N 100E	Soil	64	0.39	25	0.470	3	2.83	0.007	0.02	<0.1	0.09	7.9	<0.1	<0.05	12	<0.5	<0.2
REP 100N 100E	QC	66	0.41	23	0.474	3	2.90	0.007	0.02	<0.1	0.09	8.1	<0.1	<0.05	13	<0.5	<0.2
200N 250E	Soil	95	0.72	34	0.581	4	4.86	0.008	0.02	<0.1	0.11	16.0	<0.1	<0.05	13	<0.5	<0.2
REP 200N 250E	QC	93	0.74	34	0.564	3	4.84	0.008	0.02	<0.1	0.11	15.9	<0.1	<0.05	14	0.5	<0.2
300N 125E	Soil	102	0.43	19	0.536	2	4.83	0.006	0.01	<0.1	0.08	16.1	<0.1	<0.05	13	<0.5	<0.2
REP 300N 125E	QC	102	0.43	19	0.549	2	4.81	0.006	0.01	<0.1	0.10	16.5	<0.1	<0.05	14	<0.5	<0.2
300N 300E	Soil	75	0.38	18	0.454	2	5.26	0.007	0.01	<0.1	0.16	15.7	<0.1	0.05	14	0.8	<0.2
REP 300N 300E	QC	77	0.38	18	0.448	5	5.13	0.007	0.01	<0.1	0.15	15.7	<0.1	0.07	14	0.8	<0.2
400N 075E	Soil	53	0.32	42	0.401	4	2.20	0.007	0.02	<0.1	0.07	5.5	<0.1	0.10	11	0.9	<0.2
REP 400N 075E	QC	54	0.30	43	0.418	4	2.14	0.007	0.02	<0.1	0.07	5.5	<0.1	0.08	11	0.8	<0.2
20500N 37150E	Soil	97	0.90	62	0.489	6	4.35	0.009	0.02	<0.1	0.06	12.3	<0.1	<0.05	13	<0.5	<0.2
REP 20500N 37150E	QC	98	0.88	61	0.507	6	4.46	0.011	0.02	<0.1	0.07	12.7	<0.1	<0.05	13	<0.5	<0.2
20600N 37300E	Soil	63	0.45	25	0.523	4	3.54	0.008	0.02	<0.1	0.09	8.1	<0.1	<0.05	12	<0.5	<0.2
REP 20600N 37300E	QC	67	0.47	26	0.544	4	3.86	0.008	0.02	<0.1	0.11	8.7	<0.1	<0.05	13	<0.5	<0.2
20700N 37000E	Soil	40	0.33	34	0.387	2	1.68	0.008	0.02	<0.1	0.07	4.6	<0.1	<0.05	10	<0.5	<0.2
REP 20700N 37000E	QC	42	0.33	34	0.394	2	1.69	0.008	0.02	<0.1	0.08	4.2	<0.1	<0.05	10	<0.5	<0.2
20800N 37100E	Soil	50	0.28	19	0.436	2	2.77	0.007	0.01	<0.1	0.14	4.4	<0.1	<0.05	13	<0.5	<0.2
REP 20800N 37100E	QC	47	0.27	19	0.425	2	2.62	0.007	0.01	<0.1	0.14	4.1	<0.1	<0.05	12	<0.5	<0.2
20800N 37850E	Soil	81	0.71	39	0.527	4	3.83	0.008	0.01	<0.1	0.07	19.5	<0.1	<0.05	11	<0.5	<0.2
REP 20800N 37850E	QC	81	0.71	40	0.521	4	3.78	0.009	0.01	<0.1	0.05	19.8	<0.1	<0.05	11	<0.5	<0.2
20800N 38100E	Soil	72	0.83	30	0.587	5	4.23	0.009	0.01	<0.1	0.08	13.8	<0.1	<0.05	12	<0.5	<0.2
REP 20800N 38100E	QC	72	0.84	29	0.544	4	4.16	0.008	0.01	<0.1	0.07	13.4	<0.1	<0.05	12	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	123	0.61	274	0.124	3	0.93	0.098	0.42	2.9	0.22	2.6	5.7	0.15	5	5.1	4.4
STD DS8	Standard	111	0.56	267	0.108	4	0.84	0.091	0.37	2.7	0.19	2.6	5.1	0.12	4	4.5	4.7
STD DS8	Standard	117	0.59	282	0.117	3	0.95	0.102	0.43	2.9	0.19	2.3	5.5	0.17	5	5.0	5.2
STD DS8	Standard	124	0.63	284	0.128	2	0.97	0.098	0.41	3.2	0.17	2.6	5.5	0.19	5	5.4	5.1
STD DS8	Standard	120	0.58	253	0.115	2	0.88	0.088	0.37	2.9	0.18	2.4	5.5	0.09	5	4.3	5.5

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

Project: LH-11
Report Date: March 17, 2012

QUALITY CONTROL REPORT VAN12001045.1

		1DX15 Mo ppm 0.1	1DX15 Cu ppm 0.1	1DX15 Pb ppm 0.1	1DX15 Zn ppm 1	1DX15 Ag ppm 0.1	1DX15 Ni ppm 0.1	1DX15 Co ppm 0.1	1DX15 Mn ppm 1	1DX15 Fe % 0.01	1DX15 As ppm 0.5	1DX15 Au ppb 0.5	1DX15 Th ppm 0.1	1DX15 Sr ppm 1	1DX15 Cd ppm 0.1	1DX15 Sb ppm 0.1	1DX15 Bi ppm 0.1	1DX15 V ppm 2	1DX15 Ca % 0.01	1DX15 P % 0.001	1DX15 La ppm 1
STD DS8	Standard	12.9	112.0	124.7	311	1.8	39.7	7.7	597	2.49	23.1	117.9	6.6	63	1.9	5.2	6.2	43	0.65	0.078	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.02	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.3	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.

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

Project: LH-11

Report Date: March 17, 2012

QUALITY CONTROL REPORT VAN12001045.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
STD DS8	Standard	125	0.62	266	0.113	2	0.92	0.106	0.40	2.9	0.20	3.0	5.1	0.16	5	4.6	4.6
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: March 12, 2012
Report Date: March 20, 2012
Page: 1 of 6

CERTIFICATE OF ANALYSIS VAN12001105.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 136

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	128	Dry at 60C			VAN
SS80	128	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	128	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:

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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

Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

		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
20900N 36800E	Soil		0.5	73.8	4.6	42	<0.1	25.7	13.1	268	5.68	4.6	2.7	1.0	8	0.2	0.4	0.1	242	0.77	0.047	3
20900N 36850E	Soil		0.5	362.9	8.1	84	0.1	62.6	23.2	751	4.87	9.2	2.5	0.6	15	0.5	0.4	0.1	172	0.98	0.048	4
20900N 36900E	Soil		0.3	55.2	12.4	50	0.2	13.9	18.4	1334	5.00	3.4	1.3	0.5	10	0.2	0.3	0.1	215	0.96	0.036	3
20900N 36950E	Soil		0.2	77.8	14.9	37	<0.1	7.1	8.0	504	5.21	1.7	2.9	0.4	4	0.2	0.4	0.1	186	0.35	0.031	3
20900N 37000E	Soil		0.9	100.8	9.7	106	0.2	37.1	41.4	5133	7.18	222.8	1.4	0.4	25	0.5	0.5	<0.1	164	0.96	0.081	10
20900N 37050E	Soil		0.5	53.7	4.6	46	0.1	23.2	12.4	225	5.74	5.6	3.5	0.7	9	0.2	0.6	<0.1	223	0.59	0.021	3
20900N 37100E	Soil		0.3	84.0	5.2	49	<0.1	33.8	15.7	332	4.77	7.9	1.8	0.7	13	0.2	1.2	<0.1	196	0.76	0.021	2
20900N 37150E	Soil		0.6	57.6	9.6	64	<0.1	18.8	17.2	682	9.32	53.0	3.0	0.6	8	0.3	0.6	0.2	345	0.99	0.084	3
20900N 37200E	Soil		0.2	23.1	9.8	33	0.1	8.6	13.1	729	3.95	3.5	0.6	0.3	8	0.2	0.2	<0.1	176	0.92	0.032	2
20900N 37250E	Soil		0.3	84.0	10.5	52	0.2	14.0	24.2	1283	3.78	2.1	1.6	0.4	9	0.9	0.3	0.2	160	1.23	0.036	3
20900N 37300E	Soil		0.5	62.4	14.0	53	<0.1	21.2	26.2	1737	4.69	13.5	1.5	0.4	19	0.5	0.4	0.1	194	1.72	0.040	5
20900N 37350E	Soil		0.2	66.1	9.4	35	0.1	6.4	13.2	694	4.13	1.3	3.8	0.5	9	0.3	0.2	0.2	154	0.97	0.036	3
20900N 37400E	Soil		0.4	143.0	7.1	97	<0.1	64.9	39.2	865	8.66	5.3	0.9	0.8	21	0.2	0.2	<0.1	310	0.36	0.062	5
20900N 37450E	Soil		0.6	85.3	13.3	73	0.2	22.7	25.7	1669	8.41	17.6	1.9	0.6	17	0.5	0.5	0.2	314	0.56	0.068	6
20900N 37500E	Soil		0.6	215.9	14.5	94	0.2	48.7	42.0	3890	7.46	144.6	2.9	0.6	26	0.5	0.5	0.1	223	1.35	0.073	9
20900N 37550E	Soil		0.2	60.3	1.3	24	<0.1	17.4	9.9	309	2.63	26.3	1.9	0.6	16	0.1	0.2	<0.1	122	1.20	0.033	4
20900N 37600E	Soil		0.4	66.8	4.6	60	<0.1	33.3	16.2	334	4.99	3.0	1.4	0.6	15	0.1	0.4	<0.1	215	0.85	0.050	3
20900N 37650E	Soil		0.3	30.1	11.4	64	<0.1	19.9	16.5	2204	4.26	3.8	0.5	0.6	15	0.2	0.5	0.1	165	1.09	0.106	3
20900N 37700E	Soil		0.3	8.7	14.9	40	<0.1	18.7	18.3	2804	2.61	1.6	3.7	0.4	13	0.2	0.3	0.2	102	0.70	0.039	2
20900N 37750E	Soil		0.5	56.0	3.4	67	0.2	36.1	19.7	409	5.39	4.0	1.4	0.8	14	0.1	0.6	<0.1	215	0.92	0.052	4
20900N 37800E	Soil		0.2	59.0	4.3	63	<0.1	28.8	18.4	711	4.54	2.3	1.8	0.6	14	0.1	0.4	<0.1	170	0.93	0.087	3
20900N 37850E	Soil		0.5	57.7	7.8	50	<0.1	34.0	17.2	458	4.81	5.0	2.5	0.7	14	0.2	0.5	<0.1	206	0.94	0.040	4
20900N 37900E	Soil		0.5	76.5	3.6	43	<0.1	41.7	20.3	336	4.72	4.7	8.2	0.7	15	0.1	0.4	<0.1	199	1.06	0.029	4
21000N 36800E	Soil		0.6	103.7	3.3	49	<0.1	37.3	21.7	348	5.09	6.8	3.5	0.9	10	0.2	0.5	<0.1	214	0.75	0.061	7
21000N 36850E	Soil		0.3	39.8	8.7	39	<0.1	18.8	9.5	200	5.59	2.9	2.9	0.7	10	0.2	0.6	<0.1	227	0.58	0.035	2
21000N 36900E	Soil		0.3	67.5	10.6	52	<0.1	33.4	14.8	338	5.92	4.4	2.6	0.6	13	0.4	0.5	<0.1	216	0.86	0.037	3
21000N 36950E	Soil		0.3	35.8	9.7	42	<0.1	14.5	7.4	260	6.10	2.7	1.5	0.7	9	0.2	0.6	0.1	223	0.57	0.054	3
21000N 37000E	Soil		0.1	18.5	12.8	24	<0.1	7.5	3.6	147	3.23	1.5	2.5	0.4	8	0.2	0.4	0.1	186	0.53	0.018	2
21000N 37050E	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21000N 37100E	Soil		0.4	59.6	7.3	65	<0.1	28.0	13.8	302	6.87	5.0	2.2	0.7	12	0.2	0.6	<0.1	228	0.66	0.068	2

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

Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

	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
20900N 36800E	Soil	90	0.50	18	0.447	5	3.13	0.007	0.01	<0.1	0.06	8.7	<0.1	<0.05	12	<0.5	<0.2
20900N 36850E	Soil	56	0.68	26	0.444	5	3.04	0.008	0.02	<0.1	0.07	7.0	<0.1	<0.05	9	<0.5	<0.2
20900N 36900E	Soil	52	0.33	21	0.499	5	1.54	0.007	0.01	<0.1	0.08	8.2	<0.1	<0.05	10	<0.5	<0.2
20900N 36950E	Soil	22	0.11	16	0.502	2	0.61	0.011	0.01	<0.1	0.04	2.7	<0.1	<0.05	8	<0.5	<0.2
20900N 37000E	Soil	68	0.53	63	0.211	4	3.94	0.009	0.02	<0.1	0.18	18.1	<0.1	0.06	6	1.4	<0.2
20900N 37050E	Soil	60	0.24	24	0.495	3	2.76	0.007	<0.01	<0.1	0.07	4.5	<0.1	<0.05	12	<0.5	<0.2
20900N 37100E	Soil	60	0.45	36	0.459	4	3.12	0.007	<0.01	<0.1	0.04	5.9	<0.1	<0.05	10	<0.5	<0.2
20900N 37150E	Soil	74	0.40	25	0.530	5	2.40	0.008	0.01	<0.1	0.07	5.2	<0.1	<0.05	19	<0.5	<0.2
20900N 37200E	Soil	26	0.19	15	0.403	6	1.30	0.008	0.01	<0.1	0.04	4.9	<0.1	<0.05	9	<0.5	<0.2
20900N 37250E	Soil	36	0.37	19	0.490	6	1.90	0.006	0.01	<0.1	0.05	6.1	<0.1	0.05	9	<0.5	<0.2
20900N 37300E	Soil	55	0.58	32	0.433	9	2.32	0.008	0.01	<0.1	0.06	8.4	<0.1	<0.05	11	<0.5	<0.2
20900N 37350E	Soil	30	0.13	16	0.437	4	1.09	0.007	0.01	<0.1	0.04	3.2	<0.1	<0.05	9	<0.5	<0.2
20900N 37400E	Soil	61	2.13	68	0.664	2	5.43	0.020	0.03	<0.1	0.07	11.3	<0.1	<0.05	16	<0.5	<0.2
20900N 37450E	Soil	57	0.44	38	0.530	3	2.95	0.007	0.03	<0.1	0.11	5.5	<0.1	<0.05	19	<0.5	<0.2
20900N 37500E	Soil	80	0.87	55	0.319	5	3.78	0.010	0.02	<0.1	0.19	16.7	<0.1	<0.05	10	<0.5	<0.2
20900N 37550E	Soil	23	0.44	16	0.302	5	1.61	0.012	0.01	<0.1	0.03	7.5	<0.1	<0.05	6	<0.5	<0.2
20900N 37600E	Soil	62	0.46	30	0.577	3	2.96	0.006	0.02	<0.1	0.07	4.6	<0.1	<0.05	11	<0.5	<0.2
20900N 37650E	Soil	47	0.28	40	0.445	3	2.03	0.007	0.02	<0.1	0.07	5.4	<0.1	<0.05	10	<0.5	<0.2
20900N 37700E	Soil	74	0.35	33	0.242	3	1.54	0.006	0.02	<0.1	0.03	4.5	<0.1	<0.05	7	<0.5	<0.2
20900N 37750E	Soil	72	0.51	29	0.558	3	3.28	0.008	0.02	<0.1	0.17	9.8	<0.1	<0.05	12	<0.5	<0.2
20900N 37800E	Soil	50	0.36	34	0.468	3	2.30	0.010	0.02	<0.1	0.06	6.5	<0.1	<0.05	10	<0.5	<0.2
20900N 37850E	Soil	72	0.48	32	0.518	4	2.66	0.009	0.01	<0.1	0.08	10.3	<0.1	<0.05	11	<0.5	<0.2
20900N 37900E	Soil	70	0.58	28	0.539	5	3.41	0.007	<0.01	<0.1	0.07	9.9	<0.1	<0.05	10	<0.5	<0.2
21000N 36800E	Soil	71	0.49	20	0.455	4	4.36	0.006	0.01	<0.1	0.16	17.7	<0.1	<0.05	11	<0.5	<0.2
21000N 36850E	Soil	62	0.21	20	0.497	2	2.53	0.007	<0.01	<0.1	0.09	4.4	<0.1	<0.05	12	<0.5	<0.2
21000N 36900E	Soil	63	0.38	23	0.503	4	3.02	0.014	0.01	<0.1	0.05	5.4	<0.1	<0.05	13	<0.5	<0.2
21000N 36950E	Soil	59	0.17	14	0.453	2	2.09	0.009	0.01	<0.1	0.09	4.0	<0.1	<0.05	14	<0.5	<0.2
21000N 37000E	Soil	27	0.14	19	0.424	2	0.95	0.006	0.01	<0.1	0.05	2.3	<0.1	<0.05	9	<0.5	<0.2
21000N 37050E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21000N 37100E	Soil	75	0.36	26	0.540	3	3.10	0.009	0.02	<0.1	0.09	5.8	<0.1	<0.05	14	<0.5	<0.2

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910 - 475 Howe Street
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Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
21000N 37150E	Soil	0.3	56.6	14.3	58	<0.1	21.5	33.3	3493	5.11	4.4	2.5	0.6	16	0.2	0.3	0.2	188	0.58	0.080	5
21000N 37200E	Soil	0.4	114.3	3.3	49	<0.1	52.4	24.2	425	5.23	6.7	2.2	1.0	14	0.2	0.5	<0.1	206	0.93	0.043	3
21000N 37250E	Soil	0.5	101.4	5.9	53	<0.1	53.7	23.1	376	6.55	6.9	2.8	0.9	14	0.2	0.6	<0.1	243	0.83	0.046	4
21000N 37300E	Soil	0.2	43.0	10.4	57	<0.1	20.7	15.6	794	5.25	1.6	1.4	0.6	11	0.2	0.4	<0.1	186	0.56	0.044	3
21000N 37350E	Soil	0.3	34.4	6.4	39	<0.1	17.2	10.0	464	5.64	1.9	1.0	0.6	11	0.2	0.4	0.1	221	0.82	0.048	3
21000N 37400E	Soil	0.4	257.8	11.5	73	0.1	67.1	40.2	1918	6.80	18.7	3.7	0.4	35	0.3	0.3	<0.1	231	1.08	0.063	6
21000N 37450E	Soil	0.4	170.3	12.4	73	0.1	48.0	30.9	2342	5.75	14.1	2.2	0.4	59	0.3	0.3	<0.1	183	1.24	0.111	6
21000N 37500E	Soil	0.5	88.7	18.3	79	0.1	48.7	37.2	2647	6.54	6.1	3.1	0.4	27	0.4	0.3	0.2	228	1.69	0.059	5
21000N 37550E	Soil	0.4	73.5	8.2	68	<0.1	25.9	21.9	2626	5.67	3.5	1.7	0.4	12	0.2	0.3	0.1	188	1.40	0.068	3
21000N 37600E	Soil	0.2	25.3	5.2	40	<0.1	14.3	10.8	296	3.78	1.3	1.9	0.4	9	0.1	0.3	<0.1	141	0.66	0.033	2
21000N 37650E	Soil	0.4	58.5	6.1	53	<0.1	31.5	16.2	432	5.02	3.9	1.0	0.6	13	0.2	0.4	<0.1	190	0.82	0.039	3
21000N 37700E	Soil	0.4	47.6	4.9	65	0.1	29.0	15.9	355	5.95	1.9	0.9	0.6	11	0.2	0.4	<0.1	210	0.75	0.055	3
21000N 37750E	Soil	0.4	65.8	3.6	65	0.1	35.4	18.7	511	5.11	3.6	1.7	0.6	14	0.2	0.4	<0.1	191	0.96	0.054	5
21000N 37800E	Soil	0.4	44.5	5.3	72	<0.1	34.8	19.8	1034	4.88	3.8	1.1	0.5	15	0.1	0.4	<0.1	189	1.02	0.043	5
21100N 36600E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21100N 36650E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21100N 36700E	Soil	0.6	106.4	3.8	54	0.1	35.8	19.4	431	5.70	6.6	2.3	0.7	11	0.1	0.5	<0.1	212	0.76	0.043	6
21100N 36750E	Soil	0.2	12.2	12.1	52	<0.1	8.2	11.7	573	6.11	1.1	<0.5	0.6	6	0.3	0.3	0.3	201	0.74	0.055	3
21100N 36800E	Soil	0.7	104.9	4.3	67	<0.1	47.3	22.2	406	6.88	4.8	2.2	1.0	8	0.2	0.5	<0.1	241	0.70	0.058	3
21100N 36850E	Soil	0.1	7.0	18.4	19	<0.1	3.2	2.8	122	2.16	1.5	1.7	0.2	4	0.2	0.4	0.2	152	0.86	0.019	2
21100N 36900E	Soil	0.4	69.3	3.3	62	<0.1	32.9	18.5	378	6.08	5.3	2.0	0.6	10	0.2	0.5	<0.1	207	0.69	0.042	3
21100N 36950E	Soil	0.3	56.9	22.2	100	0.1	28.7	37.6	3779	7.55	1.3	1.1	0.6	22	0.3	0.4	0.2	221	0.66	0.061	5
21100N 37000E	Soil	0.4	34.0	8.1	60	0.1	17.0	9.4	427	8.28	1.9	2.3	0.7	7	0.2	0.4	0.2	245	0.76	0.104	2
21100N 37050E	Soil	0.4	83.3	3.6	56	<0.1	43.0	20.9	318	7.24	4.3	1.6	0.9	8	0.2	0.5	<0.1	260	0.63	0.051	3
21100N 37100E	Soil	0.4	52.5	3.6	54	0.1	30.6	17.0	382	5.93	2.7	<0.5	0.6	10	0.1	0.4	<0.1	213	0.76	0.038	2
21100N 37150E	Soil	0.4	50.0	5.1	59	<0.1	29.2	17.0	395	5.36	4.0	3.2	0.7	11	0.2	0.4	<0.1	189	0.78	0.053	3
21100N 37200E	Soil	0.4	72.8	3.3	64	<0.1	43.2	19.9	369	6.06	4.7	2.5	0.8	11	0.1	0.4	<0.1	223	0.71	0.050	4
21100N 37250E	Soil	0.2	26.1	4.0	32	<0.1	13.0	8.5	271	4.84	1.9	<0.5	0.5	11	<0.1	0.4	<0.1	201	0.70	0.028	2
21100N 37300E	Soil	0.4	49.5	5.1	62	0.1	25.5	19.8	1190	5.55	2.5	1.1	0.5	17	0.2	0.2	0.1	195	0.86	0.053	3
21100N 37350E	Soil	0.4	147.2	2.2	45	<0.1	40.5	19.8	563	4.35	8.6	2.7	0.5	15	0.1	0.2	<0.1	175	1.14	0.029	4

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	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
21000N 37150E	Soil	36	0.49	61	0.599	3	2.23	0.009	0.02	<0.1	0.12	6.6	<0.1	<0.05	12	<0.5	<0.2
21000N 37200E	Soil	82	0.81	42	0.511	4	4.40	0.009	0.01	<0.1	0.10	13.0	<0.1	<0.05	11	<0.5	<0.2
21000N 37250E	Soil	85	0.72	35	0.631	3	3.84	0.009	0.02	<0.1	0.17	12.0	<0.1	<0.05	13	0.5	<0.2
21000N 37300E	Soil	46	0.20	35	0.472	2	2.30	0.007	0.02	<0.1	0.07	3.9	<0.1	<0.05	11	<0.5	<0.2
21000N 37350E	Soil	42	0.32	19	0.399	3	2.33	0.007	0.02	<0.1	0.08	4.3	<0.1	<0.05	13	<0.5	<0.2
21000N 37400E	Soil	107	2.55	55	0.309	5	4.04	0.011	0.03	<0.1	0.05	15.6	<0.1	<0.05	14	<0.5	<0.2
21000N 37450E	Soil	69	1.41	93	0.249	3	3.44	0.010	0.04	<0.1	0.09	11.5	<0.1	<0.05	12	<0.5	<0.2
21000N 37500E	Soil	83	1.50	35	0.478	5	3.22	0.023	0.03	<0.1	0.12	13.4	<0.1	<0.05	13	<0.5	<0.2
21000N 37550E	Soil	60	0.52	35	0.383	3	2.42	0.006	0.01	<0.1	0.07	6.6	<0.1	<0.05	13	<0.5	<0.2
21000N 37600E	Soil	41	0.18	18	0.386	2	1.53	0.010	0.01	<0.1	0.06	3.1	<0.1	<0.05	8	<0.5	<0.2
21000N 37650E	Soil	59	0.47	32	0.486	3	2.98	0.006	0.02	<0.1	0.06	7.5	<0.1	<0.05	11	<0.5	<0.2
21000N 37700E	Soil	63	0.37	24	0.563	3	2.53	0.007	0.02	<0.1	0.09	7.0	<0.1	<0.05	12	<0.5	<0.2
21000N 37750E	Soil	61	0.54	27	0.500	3	2.96	0.008	0.02	<0.1	0.08	9.7	<0.1	<0.05	11	0.5	<0.2
21000N 37800E	Soil	61	0.54	30	0.443	3	2.63	0.011	0.01	<0.1	0.06	7.1	<0.1	<0.05	10	<0.5	<0.2
21100N 36600E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21100N 36650E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21100N 36700E	Soil	67	0.56	32	0.467	3	3.25	0.007	0.02	<0.1	0.11	11.0	<0.1	<0.05	12	<0.5	<0.2
21100N 36750E	Soil	35	0.13	20	0.516	2	1.25	0.008	0.01	<0.1	0.07	3.8	<0.1	<0.05	12	<0.5	<0.2
21100N 36800E	Soil	94	0.66	25	0.526	3	4.75	0.005	0.02	<0.1	0.14	12.3	<0.1	<0.05	14	0.8	<0.2
21100N 36850E	Soil	12	0.07	12	0.357	3	0.74	0.009	<0.01	<0.1	0.05	1.3	<0.1	<0.05	6	<0.5	<0.2
21100N 36900E	Soil	72	0.49	27	0.491	2	3.46	0.007	0.01	<0.1	0.07	6.4	<0.1	<0.05	12	<0.5	<0.2
21100N 36950E	Soil	40	0.74	67	0.710	2	2.53	0.021	0.03	<0.1	0.13	8.2	<0.1	<0.05	19	<0.5	<0.2
21100N 37000E	Soil	66	0.29	17	0.518	1	2.56	0.007	0.01	<0.1	0.09	5.1	<0.1	<0.05	19	<0.5	<0.2
21100N 37050E	Soil	84	0.63	20	0.544	2	4.39	0.007	0.01	<0.1	0.14	11.8	<0.1	<0.05	14	0.5	<0.2
21100N 37100E	Soil	59	0.40	34	0.604	2	3.13	0.007	0.01	<0.1	0.15	5.6	<0.1	<0.05	12	<0.5	<0.2
21100N 37150E	Soil	64	0.43	23	0.512	2	3.02	0.006	0.02	<0.1	0.09	7.1	<0.1	<0.05	12	<0.5	<0.2
21100N 37200E	Soil	71	0.66	30	0.602	3	4.22	0.007	0.02	<0.1	0.12	10.8	<0.1	<0.05	13	0.5	<0.2
21100N 37250E	Soil	45	0.20	17	0.473	2	1.56	0.008	<0.01	<0.1	0.05	3.7	<0.1	<0.05	11	<0.5	<0.2
21100N 37300E	Soil	38	1.05	69	0.513	2	2.72	0.013	0.02	<0.1	0.04	6.4	<0.1	<0.05	12	<0.5	<0.2
21100N 37350E	Soil	69	0.98	32	0.350	5	3.08	0.007	0.03	<0.1	0.06	12.6	<0.1	<0.05	9	<0.5	<0.2

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

Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

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
21100N 37400E	Soil	0.3	15.4	5.8	57	0.1	23.4	16.3	355	6.03	1.8	1.6	0.4	14	0.2	0.2	<0.1	211	2.14	0.059	2
21100N 37450E	Soil	0.3	106.4	8.1	68	<0.1	82.9	36.8	1503	6.34	36.9	4.2	0.2	32	0.1	0.3	<0.1	198	1.90	0.049	6
21100N 37500E	Soil	0.3	127.8	11.0	58	<0.1	38.9	22.6	1000	4.93	7.7	1.1	0.7	27	0.1	0.5	<0.1	183	1.08	0.041	7
21100N 37550E	Soil	0.4	86.7	3.1	64	<0.1	41.8	21.3	447	5.22	4.6	1.6	0.7	13	0.2	0.4	<0.1	193	0.89	0.058	3
21100N 37600E	Soil	0.3	82.8	2.3	55	<0.1	45.7	22.9	534	5.41	4.9	3.8	0.7	19	0.1	0.4	<0.1	217	0.88	0.046	6
21100N 37650E	Soil	0.3	67.4	3.4	79	<0.1	42.4	20.3	537	5.26	4.2	0.7	0.5	12	0.1	0.4	<0.1	183	0.86	0.098	2
21100N 37700E	Soil	0.4	89.7	2.2	68	<0.1	48.0	22.5	574	5.39	5.9	1.1	0.6	12	0.2	0.4	<0.1	200	0.94	0.053	2
21200N 36500E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21200N 36550E	Soil	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21200N 36600E	Soil	0.5	243.8	5.3	66	0.6	44.1	24.6	549	6.56	88.6	1.0	0.2	11	0.2	1.6	<0.1	186	0.66	0.038	11
21200N 36650E	Soil	0.4	22.7	9.6	39	0.1	11.5	5.5	173	5.11	1.8	2.3	0.3	12	0.1	0.4	0.1	237	0.61	0.024	2
21200N 36700E	Soil	0.3	16.9	17.5	31	0.2	8.8	4.3	290	3.36	2.2	0.8	0.3	12	0.1	0.5	0.2	148	0.57	0.032	2
21200N 36750E	Soil	0.4	82.1	8.3	69	<0.1	30.1	16.2	456	6.25	3.6	2.1	0.6	9	0.2	0.7	<0.1	229	0.83	0.052	2
21200N 36800E	Soil	0.3	98.8	4.2	66	<0.1	48.6	21.8	345	5.96	4.6	0.8	0.8	9	0.2	0.5	<0.1	215	0.68	0.042	3
21200N 36850E	Soil	0.3	28.1	7.6	49	<0.1	17.4	9.0	292	5.17	1.9	0.8	0.4	12	0.2	0.5	<0.1	195	0.73	0.038	2
21200N 36900E	Soil	0.2	46.5	6.3	64	<0.1	24.1	16.2	1502	5.83	1.7	1.6	0.6	13	0.1	0.4	0.1	199	0.75	0.060	4
21200N 36950E	Soil	0.5	84.9	4.6	59	0.1	39.3	19.9	408	6.64	3.4	1.3	1.0	12	0.2	0.3	<0.1	238	0.64	0.050	4
21200N 37000E	Soil	0.2	26.7	14.0	63	<0.1	15.1	19.6	1944	5.38	1.0	4.0	0.5	11	0.2	0.3	0.3	181	0.43	0.055	4
21200N 37050E	Soil	0.5	95.3	5.7	54	0.1	40.0	19.9	442	6.32	4.6	3.6	0.9	12	0.2	0.4	0.1	232	0.78	0.052	5
21200N 37100E	Soil	0.4	36.7	4.4	40	<0.1	27.4	14.5	238	5.94	2.5	3.0	0.5	9	0.1	0.3	<0.1	211	0.70	0.047	2
21200N 37150E	Soil	0.4	78.8	8.2	57	<0.1	29.3	18.7	872	4.92	4.4	2.5	0.5	14	0.2	0.4	<0.1	185	0.76	0.068	4
21200N 37200E	Soil	0.3	56.3	8.1	58	<0.1	31.7	18.8	1092	5.50	5.2	4.1	0.6	10	0.2	0.4	0.1	219	0.82	0.056	3
21200N 37250E	Soil	0.3	20.3	16.1	63	<0.1	31.7	19.4	813	5.17	2.0	7.9	0.4	50	0.3	0.3	0.2	177	1.46	0.058	4
21200N 37300E	Soil	0.2	8.8	14.1	41	<0.1	23.4	13.4	376	4.08	1.5	3.2	0.3	27	0.1	0.3	0.2	161	1.93	0.022	3
21200N 37350E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21200N 37400E	Soil	0.8	409.4	8.8	104	0.2	55.0	54.3	2927	11.80	34.8	3.7	0.5	22	0.2	0.2	<0.1	327	1.91	0.139	10
21200N 37450E	Soil	0.3	108.2	2.7	54	<0.1	37.5	22.3	758	4.97	6.2	4.0	0.8	26	0.1	0.3	<0.1	186	1.28	0.047	7
21200N 37500E	Soil	0.3	78.0	4.3	51	<0.1	33.4	19.6	1342	4.67	4.0	2.3	0.5	19	0.1	0.3	<0.1	185	1.22	0.056	4
21200N 37550E	Soil	0.2	30.4	10.5	43	<0.1	18.1	15.2	1377	4.27	4.5	1.9	0.5	14	0.1	0.4	0.2	161	0.88	0.085	2
21200N 37600E	Soil	0.4	47.9	3.8	71	0.1	30.1	15.6	381	5.09	2.7	2.2	0.6	12	0.1	0.3	<0.1	187	0.85	0.054	3

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910 - 475 Howe Street
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Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

		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
21100N 37400E	Soil		69	0.70	12	0.554	6	2.93	0.008	0.01	<0.1	0.04	6.8	<0.1	<0.05	14	<0.5	<0.2
21100N 37450E	Soil		174	2.89	33	0.274	7	3.87	0.012	0.06	<0.1	0.05	26.8	<0.1	<0.05	13	0.6	<0.2
21100N 37500E	Soil		66	0.89	57	0.365	3	3.58	0.009	0.03	<0.1	0.05	15.7	<0.1	<0.05	11	0.5	<0.2
21100N 37550E	Soil		68	0.60	39	0.499	3	3.93	0.007	0.02	<0.1	0.11	9.1	<0.1	<0.05	11	<0.5	<0.2
21100N 37600E	Soil		85	0.76	58	0.484	3	4.05	0.008	0.02	<0.1	0.09	17.7	<0.1	<0.05	11	<0.5	<0.2
21100N 37650E	Soil		64	0.62	37	0.516	2	3.48	0.007	0.02	<0.1	0.09	6.8	<0.1	<0.05	11	<0.5	<0.2
21100N 37700E	Soil		69	0.79	62	0.505	4	3.87	0.007	0.02	<0.1	0.10	10.7	<0.1	<0.05	11	<0.5	<0.2
21200N 36500E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21200N 36550E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
21200N 36600E	Soil		66	0.30	14	0.064	2	1.91	0.005	0.01	<0.1	0.08	12.4	<0.1	<0.05	8	1.0	<0.2
21200N 36650E	Soil		34	0.20	22	0.531	2	1.34	0.007	0.01	<0.1	0.08	2.4	<0.1	<0.05	13	<0.5	<0.2
21200N 36700E	Soil		28	0.14	22	0.356	1	0.99	0.007	0.02	<0.1	0.06	2.2	<0.1	<0.05	8	<0.5	<0.2
21200N 36750E	Soil		69	0.45	22	0.560	3	3.54	0.006	0.01	<0.1	0.08	6.9	<0.1	<0.05	14	<0.5	<0.2
21200N 36800E	Soil		86	0.63	34	0.479	2	4.73	0.007	0.01	<0.1	0.10	11.8	<0.1	<0.05	12	0.5	<0.2
21200N 36850E	Soil		43	0.26	27	0.409	2	1.88	0.007	0.01	<0.1	0.05	4.1	<0.1	<0.05	11	<0.5	<0.2
21200N 36900E	Soil		49	0.48	36	0.556	3	2.56	0.007	0.01	<0.1	0.06	7.4	<0.1	<0.05	13	<0.5	<0.2
21200N 36950E	Soil		67	0.68	32	0.596	2	4.14	0.007	0.02	<0.1	0.16	12.5	<0.1	<0.05	14	0.5	<0.2
21200N 37000E	Soil		37	0.32	51	0.741	2	1.45	0.008	0.02	<0.1	0.08	4.2	<0.1	<0.05	14	<0.5	<0.2
21200N 37050E	Soil		71	0.72	29	0.604	5	4.01	0.006	0.02	<0.1	0.11	11.4	<0.1	<0.05	13	<0.5	<0.2
21200N 37100E	Soil		64	0.34	19	0.531	2	2.79	0.005	0.01	<0.1	0.08	4.6	<0.1	<0.05	12	<0.5	<0.2
21200N 37150E	Soil		49	0.55	28	0.446	3	2.68	0.006	0.02	<0.1	0.09	6.9	<0.1	<0.05	11	<0.5	<0.2
21200N 37200E	Soil		56	0.52	33	0.544	4	2.60	0.006	0.01	<0.1	0.07	5.0	<0.1	<0.05	12	<0.5	<0.2
21200N 37250E	Soil		60	0.85	21	0.363	5	2.83	0.008	0.02	<0.1	0.05	6.0	<0.1	<0.05	12	<0.5	<0.2
21200N 37300E	Soil		46	0.91	9	0.445	6	2.41	0.008	0.01	<0.1	0.05	6.8	<0.1	<0.05	10	<0.5	<0.2
21200N 37350E	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21200N 37400E	Soil		75	2.51	26	0.457	4	3.92	0.006	0.01	<0.1	0.06	24.3	<0.1	<0.05	18	<0.5	<0.2
21200N 37450E	Soil		62	0.84	50	0.388	4	3.25	0.027	0.03	<0.1	0.07	15.9	<0.1	<0.05	11	<0.5	<0.2
21200N 37500E	Soil		55	0.58	40	0.428	4	3.05	0.017	0.03	<0.1	0.02	10.8	<0.1	<0.05	11	<0.5	<0.2
21200N 37550E	Soil		47	0.23	32	0.395	3	1.88	0.009	0.03	<0.1	0.07	4.4	<0.1	<0.05	10	<0.5	<0.2
21200N 37600E	Soil		56	0.40	30	0.516	3	2.78	0.011	0.01	<0.1	0.07	6.4	<0.1	<0.05	11	<0.5	<0.2

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Project: LL-11
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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
21300N 36400E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21300N 36450E	Soil	0.2	22.1	11.2	58	<0.1	12.8	21.9	1498	5.43	1.3	3.0	0.5	9	0.2	0.2	0.2	155	0.82	0.051	3
21300N 36500E	Soil	0.4	84.1	9.5	76	0.2	19.2	40.1	2749	5.69	1.7	2.1	0.7	8	0.2	0.3	0.2	176	0.51	0.100	5
21300N 36550E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21300N 36600E	Soil	0.3	34.0	5.6	26	0.1	17.2	8.7	180	4.67	1.5	3.4	0.4	11	0.1	0.3	<0.1	191	0.64	0.026	4
21300N 36650E	Soil	0.4	31.0	11.3	40	0.1	20.4	9.3	227	4.99	2.2	2.2	0.5	10	0.2	0.5	0.1	189	0.71	0.027	2
21300N 36700E	Soil	0.4	163.8	2.4	52	<0.1	57.7	24.1	429	5.87	6.7	5.9	0.9	10	0.2	0.4	<0.1	225	0.78	0.040	3
21300N 36750E	Soil	0.6	147.1	2.5	62	<0.1	49.3	24.4	514	6.63	10.6	4.8	1.0	8	0.1	0.3	<0.1	219	0.72	0.118	3
21300N 36800E	Soil	0.2	39.7	6.5	67	<0.1	16.5	17.0	675	4.19	2.4	3.6	0.7	13	0.4	0.2	0.1	140	0.92	0.045	3
21300N 36850E	Soil	0.4	49.0	11.8	62	0.1	20.4	24.9	1265	5.84	1.5	2.1	0.5	27	0.3	0.3	0.2	156	0.66	0.091	5
21300N 36900E	Soil	0.4	38.7	8.0	57	<0.1	19.6	28.9	686	5.25	3.3	2.1	0.5	10	0.2	0.3	0.1	170	0.75	0.102	3
21300N 36950E	Soil	0.4	47.0	4.0	56	<0.1	23.8	23.4	526	5.87	2.6	1.7	0.5	11	0.2	0.2	<0.1	199	0.62	0.088	3
21300N 37000E	Soil	0.4	52.6	4.0	74	0.1	30.9	16.7	617	6.33	10.4	1.8	0.7	16	0.2	0.3	0.1	235	0.90	0.077	3
21300N 37050E	Soil	0.6	82.6	3.7	45	<0.1	33.1	23.7	473	5.82	4.2	3.5	0.6	12	<0.1	0.2	<0.1	264	0.80	0.037	5
21300N 37100E	Soil	0.3	18.1	17.7	56	<0.1	17.3	14.1	956	5.04	2.4	1.6	0.4	10	0.2	0.2	0.2	207	1.83	0.056	2
21300N 37150E	Soil	0.2	11.8	10.7	38	<0.1	12.0	6.5	249	4.24	0.9	1.1	0.3	6	0.2	0.2	0.1	185	0.93	0.023	2
21300N 37200E	Soil	0.6	201.8	4.5	50	<0.1	25.1	13.0	399	5.84	4.8	2.9	0.9	10	0.3	0.3	<0.1	207	0.82	0.107	4
21300N 37250E	Soil	0.6	44.8	4.7	55	0.1	30.4	13.9	310	5.52	3.0	2.4	0.5	11	0.1	0.3	<0.1	204	0.81	0.070	2
21300N 37300E	Soil	0.5	100.0	3.9	61	<0.1	44.4	22.8	530	5.81	3.8	3.5	0.8	14	0.1	0.3	<0.1	216	0.95	0.049	3
21300N 37350E	Soil	0.5	82.4	4.0	60	<0.1	47.1	21.6	474	5.82	4.8	1.7	0.8	13	0.2	0.3	<0.1	216	0.89	0.056	2
21300N 37400E	Soil	0.4	72.3	3.7	84	<0.1	45.1	21.5	599	5.90	3.9	1.1	0.7	13	<0.1	0.4	<0.1	205	0.87	0.095	2
21300N 37450E	Soil	0.5	57.7	2.8	57	<0.1	36.6	23.5	534	4.49	2.7	5.7	0.6	16	<0.1	0.2	<0.1	175	1.03	0.037	6
21300N 37500E	Soil	0.4	62.9	2.7	66	<0.1	39.4	20.6	555	5.37	3.2	1.9	0.6	13	0.1	0.2	<0.1	201	0.89	0.056	5
21400N 36300E	Soil	0.8	108.3	6.3	134	0.3	86.7	53.8	1109	5.62	18.8	2.3	0.3	17	0.2	<0.1	<0.1	152	0.70	0.072	5
21400N 36350E	Soil	0.3	25.6	8.3	46	<0.1	13.5	12.2	410	7.86	2.7	2.4	0.6	8	0.3	0.2	0.2	258	1.34	0.047	3
21400N 36400E	Soil	0.3	52.3	8.9	59	<0.1	23.1	12.2	301	6.14	3.8	5.3	0.6	11	0.2	0.4	<0.1	227	0.70	0.035	2
21400N 36450E	Soil	0.3	96.9	13.3	57	0.1	21.7	11.5	232	6.19	10.7	6.2	0.2	8	<0.1	0.3	<0.1	225	0.42	0.027	2
21400N 36500E	Soil	0.2	55.6	13.8	32	0.1	19.4	9.2	286	3.49	4.6	2.5	0.4	6	0.1	0.4	0.1	134	0.43	0.022	3
21400N 36550E	Soil	0.2	24.9	5.0	49	<0.1	15.6	10.8	451	4.19	4.1	3.5	0.4	7	0.1	0.3	<0.1	164	0.52	0.038	2
21400N 36600E	Soil	0.4	70.6	3.8	82	0.1	39.1	29.2	1132	6.42	4.6	<0.5	0.7	11	0.1	0.4	0.1	204	0.66	0.027	8

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

	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
21300N 36400E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21300N 36450E	Soil	28	0.15	22	0.284	5	1.62	0.008	0.02	<0.1	0.11	3.3	<0.1	<0.05	13	<0.5	<0.2
21300N 36500E	Soil	58	0.15	25	0.420	2	2.74	0.006	0.01	<0.1	0.12	5.5	<0.1	<0.05	13	<0.5	<0.2
21300N 36550E	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
21300N 36600E	Soil	49	0.22	15	0.396	2	2.27	0.008	<0.01	<0.1	0.09	4.8	<0.1	<0.05	12	<0.5	<0.2
21300N 36650E	Soil	40	0.31	23	0.449	2	2.10	0.006	0.01	<0.1	0.07	3.9	<0.1	<0.05	11	<0.5	<0.2
21300N 36700E	Soil	100	0.89	46	0.477	3	4.99	0.007	0.01	<0.1	0.16	18.7	<0.1	<0.05	12	0.6	<0.2
21300N 36750E	Soil	84	0.82	26	0.467	4	5.74	0.006	0.01	<0.1	0.20	16.5	<0.1	<0.05	12	0.7	<0.2
21300N 36800E	Soil	37	0.33	22	0.299	3	1.73	0.005	0.01	<0.1	0.04	4.0	<0.1	<0.05	10	<0.5	<0.2
21300N 36850E	Soil	43	0.35	25	0.335	2	2.24	0.006	0.02	<0.1	0.09	5.3	<0.1	<0.05	14	<0.5	<0.2
21300N 36900E	Soil	40	0.34	21	0.396	2	2.09	0.005	0.02	<0.1	0.11	4.6	<0.1	<0.05	12	<0.5	<0.2
21300N 36950E	Soil	47	0.20	19	0.468	2	3.69	0.010	0.01	<0.1	0.16	5.8	<0.1	<0.05	12	<0.5	<0.2
21300N 37000E	Soil	67	0.60	28	0.578	4	2.60	0.009	0.01	<0.1	0.06	5.8	<0.1	<0.05	12	<0.5	<0.2
21300N 37050E	Soil	52	0.59	18	0.511	3	3.02	0.006	0.01	<0.1	0.05	7.1	<0.1	<0.05	13	<0.5	<0.2
21300N 37100E	Soil	75	0.56	26	0.513	4	2.34	0.011	0.01	<0.1	0.09	6.6	<0.1	<0.05	11	<0.5	<0.2
21300N 37150E	Soil	53	0.18	11	0.384	2	1.40	0.007	<0.01	<0.1	0.05	4.2	<0.1	<0.05	10	<0.5	<0.2
21300N 37200E	Soil	51	0.41	19	0.456	2	3.43	0.006	0.02	<0.1	0.07	9.6	<0.1	<0.05	12	<0.5	<0.2
21300N 37250E	Soil	57	0.40	33	0.520	2	3.05	0.007	0.02	<0.1	0.16	5.1	<0.1	<0.05	13	<0.5	<0.2
21300N 37300E	Soil	80	0.67	39	0.544	3	3.91	0.010	0.02	<0.1	0.09	12.4	<0.1	<0.05	13	<0.5	<0.2
21300N 37350E	Soil	80	0.66	58	0.543	3	4.17	0.006	0.02	<0.1	0.11	9.1	<0.1	<0.05	13	<0.5	<0.2
21300N 37400E	Soil	71	0.60	45	0.557	2	4.40	0.006	0.02	<0.1	0.08	6.3	<0.1	<0.05	14	<0.5	<0.2
21300N 37450E	Soil	53	0.56	41	0.436	3	3.28	0.010	0.01	<0.1	0.10	11.2	<0.1	<0.05	10	<0.5	<0.2
21300N 37500E	Soil	66	0.51	35	0.510	3	3.33	0.008	0.01	<0.1	0.13	9.7	<0.1	<0.05	12	<0.5	<0.2
21400N 36300E	Soil	58	0.96	38	0.236	4	3.45	0.010	0.02	<0.1	0.10	4.9	<0.1	<0.05	14	0.5	<0.2
21400N 36350E	Soil	63	0.33	19	0.599	5	1.81	0.006	0.01	<0.1	0.04	4.6	<0.1	<0.05	13	<0.5	<0.2
21400N 36400E	Soil	53	0.31	27	0.481	2	2.30	0.007	0.01	<0.1	0.08	4.8	<0.1	<0.05	12	<0.5	<0.2
21400N 36450E	Soil	116	0.40	18	0.066	2	1.68	0.004	0.01	<0.1	0.05	6.8	<0.1	<0.05	9	<0.5	<0.2
21400N 36500E	Soil	37	0.20	22	0.266	3	1.74	0.004	0.01	<0.1	0.07	4.1	<0.1	<0.05	7	<0.5	<0.2
21400N 36550E	Soil	45	0.17	19	0.314	3	1.63	0.004	<0.01	<0.1	0.03	3.7	<0.1	<0.05	9	<0.5	<0.2
21400N 36600E	Soil	78	0.47	35	0.424	2	3.94	0.007	0.02	<0.1	0.07	12.2	<0.1	<0.05	12	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
21400N 36650E	Soil	0.3	34.2	11.6	37	<0.1	18.2	7.6	246	5.71	5.6	2.3	0.5	9	0.1	0.6	0.1	234	0.60	0.049	2
21400N 36700E	Soil	0.4	29.9	9.3	35	<0.1	14.7	7.0	216	5.54	12.2	1.9	0.4	10	0.3	0.5	0.1	233	0.67	0.088	2
21400N 36750E	Soil	0.4	93.6	5.2	65	<0.1	42.1	22.9	524	6.30	4.7	2.8	0.8	11	0.2	0.4	<0.1	209	0.73	0.044	4
21400N 36800E	Soil	0.3	40.6	6.9	28	<0.1	17.7	9.0	343	5.06	2.3	2.7	0.5	10	0.1	0.4	<0.1	205	0.68	0.027	2
21400N 36850E	Soil	0.4	163.8	3.2	60	<0.1	38.7	18.9	404	5.74	6.4	2.4	0.8	10	0.3	0.4	<0.1	206	0.86	0.079	3
21400N 36900E	Soil	0.4	66.6	8.2	55	<0.1	28.1	13.9	580	5.49	5.6	1.5	0.6	13	0.2	0.4	0.1	202	0.96	0.062	3
21400N 36950E	Soil	0.4	50.4	9.7	41	<0.1	15.7	18.8	1098	3.87	3.2	1.1	0.4	15	0.1	0.4	0.1	159	0.81	0.026	5
21400N 37000E	Soil	0.3	65.6	3.7	52	<0.1	33.6	17.7	357	5.64	4.0	3.0	0.7	11	0.1	0.5	<0.1	218	0.93	0.037	2
21400N 37050E	Soil	0.4	44.7	5.1	36	<0.1	23.4	12.1	273	6.12	3.3	16.9	0.6	11	0.1	0.3	<0.1	242	0.82	0.032	2
21400N 37100E	Soil	0.4	65.8	2.6	53	<0.1	30.4	16.1	316	5.72	3.8	35.4	0.7	11	0.1	0.3	<0.1	236	0.85	0.053	3
21400N 37150E	Soil	0.4	95.9	5.5	64	0.1	41.1	20.9	520	4.96	7.1	2.8	0.7	16	0.2	0.4	<0.1	186	0.93	0.085	3
21400N 37200E	Soil	0.3	42.0	5.2	50	<0.1	29.9	13.0	329	4.65	5.0	0.9	0.6	15	0.1	0.3	<0.1	170	0.90	0.060	2
21400N 37250E	Soil	0.4	73.2	5.0	64	<0.1	35.9	17.2	501	5.17	5.4	1.8	0.7	12	0.2	0.4	<0.1	194	0.87	0.059	3
21400N 37300E	Soil	0.6	71.0	13.2	84	0.1	45.0	26.5	892	6.29	5.0	1.2	0.7	13	0.2	0.4	0.1	198	0.66	0.115	5
21400N 37350E	Soil	0.4	50.4	6.8	61	<0.1	31.1	18.8	1121	4.52	3.9	2.2	0.5	20	0.2	0.4	<0.1	171	1.09	0.055	6
21400N 37400E	Soil	0.3	29.0	6.8	61	<0.1	19.7	14.4	550	3.82	2.3	2.8	0.4	18	0.1	0.3	<0.1	149	1.03	0.046	4

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Project: LL-11
Report Date: March 20, 2012

CERTIFICATE OF ANALYSIS VAN12001105.1

	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
21400N 36650E	Soil	49	0.24	17	0.446	3	1.79	0.006	0.02	<0.1	0.09	3.9	<0.1	<0.05	12	<0.5	<0.2
21400N 36700E	Soil	46	0.20	22	0.462	2	1.62	0.006	0.01	<0.1	0.08	3.9	<0.1	<0.05	13	<0.5	<0.2
21400N 36750E	Soil	70	0.52	48	0.473	3	3.84	0.006	0.01	<0.1	0.09	8.8	<0.1	<0.05	13	<0.5	<0.2
21400N 36800E	Soil	46	0.23	26	0.466	3	1.91	0.006	<0.01	<0.1	0.06	4.5	<0.1	<0.05	12	<0.5	<0.2
21400N 36850E	Soil	61	0.62	23	0.477	5	3.55	0.005	0.02	<0.1	0.11	8.4	<0.1	<0.05	11	<0.5	<0.2
21400N 36900E	Soil	53	0.47	31	0.513	3	2.66	0.006	0.01	<0.1	0.08	6.4	<0.1	<0.05	11	<0.5	<0.2
21400N 36950E	Soil	34	0.22	25	0.298	2	1.68	0.006	0.01	<0.1	0.06	4.2	<0.1	<0.05	9	<0.5	<0.2
21400N 37000E	Soil	65	0.56	24	0.571	4	3.33	0.007	<0.01	<0.1	0.10	7.8	<0.1	<0.05	13	0.6	<0.2
21400N 37050E	Soil	57	0.36	20	0.585	2	2.70	0.006	0.01	<0.1	0.09	5.6	<0.1	<0.05	12	<0.5	<0.2
21400N 37100E	Soil	51	0.48	24	0.519	4	3.39	0.008	0.01	<0.1	0.11	9.8	<0.1	<0.05	11	<0.5	<0.2
21400N 37150E	Soil	62	0.73	49	0.509	4	3.78	0.007	0.02	<0.1	0.10	9.9	<0.1	<0.05	11	<0.5	<0.2
21400N 37200E	Soil	56	0.45	34	0.467	3	2.73	0.006	0.02	<0.1	0.08	4.9	<0.1	<0.05	11	<0.5	<0.2
21400N 37250E	Soil	62	0.57	31	0.493	3	3.19	0.006	0.01	<0.1	0.09	7.6	<0.1	<0.05	11	<0.5	<0.2
21400N 37300E	Soil	83	0.52	36	0.445	2	3.91	0.006	0.02	<0.1	0.07	9.3	<0.1	<0.05	13	<0.5	<0.2
21400N 37350E	Soil	56	0.52	34	0.365	2	2.63	0.008	0.01	<0.1	0.05	8.6	<0.1	<0.05	10	<0.5	<0.2
21400N 37400E	Soil	44	0.33	20	0.327	2	1.88	0.008	0.01	<0.1	0.06	5.1	<0.1	<0.05	8	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: March 20, 2012

QUALITY CONTROL REPORT VAN12001105.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
21000N 37250E	Soil	0.5	101.4	5.9	53	<0.1	53.7	23.1	376	6.55	6.9	2.8	0.9	14	0.2	0.6	<0.1	243	0.83	0.046	4
REP 21000N 37250E	QC	0.5	102.0	4.4	53	<0.1	51.8	23.0	415	6.54	6.7	11.1	0.9	13	0.1	0.5	<0.1	236	0.81	0.044	4
21000N 37400E	Soil	0.4	257.8	11.5	73	0.1	67.1	40.2	1918	6.80	18.7	3.7	0.4	35	0.3	0.3	<0.1	231	1.08	0.063	6
REP 21000N 37400E	QC	0.5	266.3	11.4	73	0.1	69.8	41.9	1987	7.19	17.9	3.7	0.4	34	0.3	0.3	<0.1	244	1.14	0.069	6
21000N 37550E	Soil	0.4	73.5	8.2	68	<0.1	25.9	21.9	2626	5.67	3.5	1.7	0.4	12	0.2	0.3	0.1	188	1.40	0.068	3
REP 21000N 37550E	QC	0.5	73.3	8.7	66	0.1	26.0	21.9	2599	5.73	3.4	3.5	0.4	13	0.2	0.3	0.1	188	1.42	0.073	3
21100N 37500E	Soil	0.3	127.8	11.0	58	<0.1	38.9	22.6	1000	4.93	7.7	1.1	0.7	27	0.1	0.5	<0.1	183	1.08	0.041	7
REP 21100N 37500E	QC	0.3	129.3	11.5	60	<0.1	38.9	22.9	1004	5.00	7.6	1.9	0.7	28	0.2	0.5	<0.1	187	1.09	0.043	7
21300N 37100E	Soil	0.3	18.1	17.7	56	<0.1	17.3	14.1	956	5.04	2.4	1.6	0.4	10	0.2	0.2	0.2	207	1.83	0.056	2
REP 21300N 37100E	QC	0.3	19.0	18.0	58	<0.1	18.3	14.2	976	5.24	2.7	3.1	0.5	11	0.2	0.2	0.2	214	1.93	0.059	2
21300N 37450E	Soil	0.5	57.7	2.8	57	<0.1	36.6	23.5	534	4.49	2.7	5.7	0.6	16	<0.1	0.2	<0.1	175	1.03	0.037	6
REP 21300N 37450E	QC	0.5	60.1	2.7	57	<0.1	37.8	24.1	540	4.53	3.2	1.7	0.6	16	0.1	0.2	<0.1	177	1.01	0.036	6
21400N 36600E	Soil	0.4	70.6	3.8	82	0.1	39.1	29.2	1132	6.42	4.6	<0.5	0.7	11	0.1	0.4	0.1	204	0.66	0.027	8
REP 21400N 36600E	QC	0.5	72.5	4.1	85	0.1	39.3	29.1	1141	6.47	4.8	1.7	0.7	11	0.2	0.4	<0.1	205	0.70	0.028	8
21400N 37400E	Soil	0.3	29.0	6.8	61	<0.1	19.7	14.4	550	3.82	2.3	2.8	0.4	18	0.1	0.3	<0.1	149	1.03	0.046	4
REP 21400N 37400E	QC	0.3	29.2	7.0	60	<0.1	19.2	14.2	549	3.77	2.7	2.9	0.4	18	0.2	0.3	<0.1	146	1.05	0.046	4
Reference Materials																					
STD DS8	Standard	11.6	100.6	113.6	300	1.7	36.8	7.2	589	2.36	22.8	106.1	5.6	60	2.2	5.1	5.8	37	0.66	0.071	12
STD DS8	Standard	13.4	107.9	111.3	290	1.6	38.2	7.7	585	2.35	23.3	110.4	7.1	65	2.3	5.9	6.2	44	0.65	0.078	16
STD DS8	Standard	12.4	105.5	122.4	306	1.8	35.3	7.1	605	2.42	24.3	120.7	6.7	59	2.3	5.1	6.4	42	0.67	0.076	14
STD DS8	Standard	12.8	109.1	119.7	311	1.8	38.2	7.5	593	2.40	23.9	110.5	6.9	62	2.2	4.7	6.2	41	0.69	0.078	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.2	<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	0.2	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: LL-11
Report Date: March 20, 2012

QUALITY CONTROL REPORT VAN12001105.1

	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																	
21000N 37250E	Soil	85	0.72	35	0.631	3	3.84	0.009	0.02	<0.1	0.17	12.0	<0.1	<0.05	13	0.5	<0.2
REP 21000N 37250E	QC	87	0.73	35	0.581	3	3.93	0.007	0.02	<0.1	0.18	11.7	<0.1	<0.05	13	<0.5	<0.2
21000N 37400E	Soil	107	2.55	55	0.309	5	4.04	0.011	0.03	<0.1	0.05	15.6	<0.1	<0.05	14	<0.5	<0.2
REP 21000N 37400E	QC	109	2.56	56	0.322	6	4.30	0.011	0.03	<0.1	0.05	16.5	<0.1	0.06	14	<0.5	<0.2
21000N 37550E	Soil	60	0.52	35	0.383	3	2.42	0.006	0.01	<0.1	0.07	6.6	<0.1	<0.05	13	<0.5	<0.2
REP 21000N 37550E	QC	61	0.51	38	0.388	3	2.46	0.007	0.01	<0.1	0.07	6.7	<0.1	<0.05	13	<0.5	<0.2
21100N 37500E	Soil	66	0.89	57	0.365	3	3.58	0.009	0.03	<0.1	0.05	15.7	<0.1	<0.05	11	0.5	<0.2
REP 21100N 37500E	QC	67	0.93	59	0.364	3	3.67	0.010	0.03	<0.1	0.06	15.9	<0.1	<0.05	11	<0.5	<0.2
21300N 37100E	Soil	75	0.56	26	0.513	4	2.34	0.011	0.01	<0.1	0.09	6.6	<0.1	<0.05	11	<0.5	<0.2
REP 21300N 37100E	QC	76	0.56	26	0.536	5	2.44	0.008	0.01	<0.1	0.10	6.9	<0.1	<0.05	11	<0.5	<0.2
21300N 37450E	Soil	53	0.56	41	0.436	3	3.28	0.010	0.01	<0.1	0.10	11.2	<0.1	<0.05	10	<0.5	<0.2
REP 21300N 37450E	QC	55	0.56	41	0.454	2	3.22	0.006	0.01	<0.1	0.11	11.4	<0.1	<0.05	10	0.5	<0.2
21400N 36600E	Soil	78	0.47	35	0.424	2	3.94	0.007	0.02	<0.1	0.07	12.2	<0.1	<0.05	12	<0.5	<0.2
REP 21400N 36600E	QC	77	0.47	36	0.442	3	4.01	0.008	0.02	<0.1	0.08	12.2	<0.1	<0.05	12	<0.5	<0.2
21400N 37400E	Soil	44	0.33	20	0.327	2	1.88	0.008	0.01	<0.1	0.06	5.1	<0.1	<0.05	8	<0.5	<0.2
REP 21400N 37400E	QC	43	0.33	20	0.321	3	1.82	0.007	0.01	<0.1	0.05	5.0	<0.1	<0.05	8	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	111	0.57	249	0.101	2	0.86	0.093	0.40	3.0	0.19	3.1	5.2	0.13	5	4.8	4.6
STD DS8	Standard	118	0.60	282	0.124	3	0.88	0.095	0.38	2.9	0.19	2.6	4.9	0.18	5	4.7	4.5
STD DS8	Standard	115	0.58	269	0.098	3	0.87	0.082	0.39	2.8	0.19	2.6	5.5	0.15	5	5.0	5.2
STD DS8	Standard	118	0.59	277	0.102	3	0.92	0.096	0.40	2.9	0.19	3.0	5.4	0.15	5	4.4	5.5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: March 13, 2012
Report Date: March 22, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12001141.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number NA-12327
Number of Samples: 50

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	50	Dry at 60C			VAN
SS80	50	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	50	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:

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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

Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001141.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
21500N 36200E	Soil	0.5	47.1	4.6	81	<0.1	21.7	13.0	319	6.68	8.2	1.0	0.6	10	0.2	0.8	0.1	244	0.52	0.052	3
21500N 36250E	Soil	0.7	82.7	3.5	84	0.2	36.8	29.1	5529	5.37	12.3	4.3	0.4	18	0.5	0.5	<0.1	180	0.95	0.055	9
21500N 36300E	Soil	0.6	114.2	3.7	74	<0.1	44.1	21.7	442	7.06	5.1	1.3	0.7	11	0.1	0.6	<0.1	273	0.72	0.062	4
21500N 36350E	Soil	0.4	114.7	2.0	54	<0.1	49.8	24.6	461	5.89	8.4	4.3	0.8	13	<0.1	0.5	<0.1	252	0.84	0.035	10
21500N 36400E	Soil	0.6	145.8	3.6	71	<0.1	57.4	27.8	449	6.86	8.2	1.5	1.1	13	0.1	0.6	<0.1	250	0.67	0.054	3
21500N 36450E	Soil	0.5	113.7	2.5	55	<0.1	47.4	20.7	318	6.72	7.3	2.7	0.8	15	0.1	0.4	<0.1	275	0.77	0.047	3
21500N 36500E	Soil	0.4	108.6	3.1	72	<0.1	53.2	25.4	589	7.03	6.3	1.5	0.9	10	0.1	0.6	<0.1	265	0.73	0.068	2
21500N 36550E	Soil	0.4	117.3	2.0	54	<0.1	54.4	26.8	441	5.89	6.8	16.3	0.9	12	0.1	0.5	<0.1	231	0.82	0.029	3
21500N 36600E	Soil	0.4	78.9	3.3	71	<0.1	41.7	23.8	873	5.53	7.2	1.7	0.7	11	0.1	0.6	<0.1	215	0.87	0.065	3
21500N 36650E	Soil	0.6	121.3	2.2	64	<0.1	49.9	26.3	416	6.13	6.3	0.8	1.1	15	0.1	0.5	<0.1	255	0.99	0.031	4
21500N 36700E	Soil	0.6	79.5	5.6	68	<0.1	29.3	15.2	304	6.66	7.0	<0.5	0.8	10	0.2	0.5	0.1	229	0.65	0.060	3
21500N 36750E	Soil	0.4	148.8	2.0	56	<0.1	46.4	23.8	457	5.49	9.1	2.8	0.8	12	0.1	0.5	<0.1	226	0.84	0.040	3
21500N 36800E	Soil	0.4	60.2	2.6	59	<0.1	30.2	24.8	1118	6.56	7.0	0.6	0.7	10	0.2	0.4	<0.1	271	0.81	0.109	2
21500N 36850E	Soil	0.5	75.4	2.2	54	<0.1	33.0	17.5	367	5.71	6.6	1.3	0.9	10	0.1	0.4	<0.1	255	0.83	0.042	6
21500N 36900E	Soil	0.5	117.9	2.8	49	0.1	34.4	22.1	625	6.14	6.8	<0.5	0.7	15	<0.1	0.4	<0.1	252	0.95	0.042	7
21500N 36950E	Soil	0.3	64.7	1.4	39	<0.1	25.4	18.0	517	4.35	6.6	1.8	0.6	16	0.1	0.3	<0.1	185	1.18	0.030	3
21500N 37000E	Soil	0.5	91.6	2.6	40	<0.1	26.8	17.1	552	4.41	8.3	1.2	0.7	16	0.1	0.3	<0.1	175	0.95	0.034	3
21500N 37050E	Soil	0.3	66.5	3.1	68	<0.1	33.7	17.5	559	5.05	3.1	<0.5	0.5	14	0.2	0.5	<0.1	208	1.02	0.055	3
21500N 37100E	Soil	0.7	107.3	2.8	73	0.1	52.5	26.8	363	6.17	4.9	1.8	0.9	13	0.2	0.5	<0.1	246	0.88	0.050	3
21500N 37150E	Soil	0.6	94.3	2.6	66	<0.1	45.1	21.5	283	6.26	4.5	2.6	0.7	14	0.1	0.5	<0.1	252	0.91	0.043	2
21500N 37200E	Soil	0.4	47.7	4.8	59	<0.1	30.2	14.9	241	5.72	2.6	1.5	0.6	11	0.1	0.5	<0.1	231	0.83	0.047	2
21500N 37250E	Soil	0.4	54.3	3.6	84	<0.1	38.0	21.1	486	5.20	3.9	1.7	0.6	16	0.2	0.4	<0.1	209	0.98	0.072	4
21500N 37300E	Soil	0.4	151.5	1.8	57	<0.1	54.9	24.9	551	6.47	6.9	2.9	0.8	31	0.1	0.5	<0.1	277	0.88	0.056	7
21500N 37350E	Soil	0.4	100.8	2.2	63	<0.1	45.2	28.3	548	5.20	6.3	<0.5	0.9	15	0.1	0.4	<0.1	237	1.01	0.053	4
21500N 37400E	Soil	0.3	108.3	2.0	54	<0.1	49.5	27.7	573	5.69	7.0	2.4	0.7	39	0.1	0.4	<0.1	247	1.12	0.041	5
21600N 36200E	Soil	0.4	50.4	12.6	56	<0.1	21.5	15.7	559	5.63	5.4	<0.5	0.6	9	0.2	0.7	0.2	221	0.73	0.067	2
21600N 36250E	Soil	0.4	91.4	3.2	88	<0.1	47.2	27.9	820	5.89	8.8	<0.5	0.7	11	0.1	0.4	<0.1	215	0.84	0.093	3
21600N 36300E	Soil	0.6	55.4	5.8	74	0.1	34.6	24.1	354	7.23	2.5	1.2	1.0	7	0.1	0.4	0.1	223	0.58	0.075	3
21600N 36350E	Soil	0.7	64.6	4.0	60	<0.1	36.9	27.9	886	5.48	3.4	1.4	0.7	13	<0.1	0.4	<0.1	226	0.95	0.041	5
21600N 36400E	Soil	0.5	60.2	9.0	47	<0.1	26.4	19.5	1494	3.87	4.2	3.4	0.5	15	0.1	0.4	<0.1	156	0.92	0.038	7

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

Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001141.1

		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
21500N 36200E	Soil		60	0.34	29	0.523	3	2.20	0.007	0.02	<0.1	0.05	4.1	<0.1	<0.05	13	0.6	<0.2
21500N 36250E	Soil		72	0.57	51	0.258	5	3.75	0.010	0.02	<0.1	0.12	17.5	<0.1	<0.05	9	1.7	<0.2
21500N 36300E	Soil		72	0.59	35	0.545	4	4.30	0.016	0.02	<0.1	0.11	10.5	<0.1	<0.05	14	<0.5	<0.2
21500N 36350E	Soil		93	0.91	44	0.514	6	4.20	0.012	0.02	<0.1	0.14	22.7	<0.1	<0.05	12	1.0	<0.2
21500N 36400E	Soil		101	0.79	70	0.521	3	5.88	0.008	0.02	<0.1	0.11	12.1	<0.1	<0.05	13	0.5	<0.2
21500N 36450E	Soil		86	0.67	54	0.562	4	4.29	0.008	0.01	<0.1	0.10	9.4	<0.1	<0.05	13	0.6	<0.2
21500N 36500E	Soil		101	0.78	42	0.515	3	4.97	0.007	0.02	<0.1	0.13	11.4	<0.1	<0.05	13	<0.5	<0.2
21500N 36550E	Soil		88	1.00	42	0.500	4	4.21	0.013	0.02	<0.1	0.10	15.6	<0.1	<0.05	11	0.7	<0.2
21500N 36600E	Soil		69	0.60	29	0.528	4	3.79	0.008	0.02	<0.1	0.07	8.2	<0.1	<0.05	12	0.7	<0.2
21500N 36650E	Soil		97	0.84	47	0.591	4	4.81	0.009	0.02	<0.1	0.17	18.5	<0.1	<0.05	12	0.6	<0.2
21500N 36700E	Soil		66	0.50	26	0.489	2	3.43	0.009	0.02	<0.1	0.08	6.6	<0.1	<0.05	13	<0.5	<0.2
21500N 36750E	Soil		58	0.77	50	0.481	5	4.18	0.008	0.01	<0.1	0.12	10.6	<0.1	<0.05	11	0.8	<0.2
21500N 36800E	Soil		61	0.52	21	0.518	4	3.33	0.009	<0.01	<0.1	0.13	7.4	<0.1	<0.05	12	<0.5	<0.2
21500N 36850E	Soil		61	0.61	23	0.548	5	3.34	0.007	0.02	<0.1	0.19	14.2	<0.1	<0.05	10	0.7	<0.2
21500N 36900E	Soil		61	0.58	31	0.601	4	3.84	0.011	0.01	<0.1	0.13	10.5	<0.1	<0.05	13	0.7	<0.2
21500N 36950E	Soil		34	0.66	25	0.379	4	2.25	0.016	0.01	<0.1	0.05	7.6	<0.1	<0.05	7	<0.5	<0.2
21500N 37000E	Soil		37	0.60	33	0.332	3	2.46	0.013	0.01	<0.1	0.07	8.6	<0.1	<0.05	8	0.6	<0.2
21500N 37050E	Soil		73	0.48	33	0.574	3	3.23	0.010	0.02	<0.1	0.08	8.7	<0.1	<0.05	12	<0.5	<0.2
21500N 37100E	Soil		79	0.79	44	0.589	4	4.30	0.008	0.02	<0.1	0.13	10.5	<0.1	<0.05	12	0.7	<0.2
21500N 37150E	Soil		76	0.69	22	0.620	4	3.83	0.008	0.01	<0.1	0.07	8.4	<0.1	<0.05	13	<0.5	<0.2
21500N 37200E	Soil		65	0.41	20	0.573	3	2.93	0.008	0.01	<0.1	0.07	5.6	<0.1	<0.05	13	<0.5	<0.2
21500N 37250E	Soil		70	0.56	28	0.456	4	3.35	0.009	0.02	<0.1	0.08	7.6	<0.1	<0.05	11	<0.5	<0.2
21500N 37300E	Soil		88	0.77	73	0.518	3	4.83	0.009	0.03	<0.1	0.19	22.4	<0.1	<0.05	13	0.7	<0.2
21500N 37350E	Soil		82	0.82	61	0.478	4	4.11	0.008	0.02	<0.1	0.08	14.1	<0.1	<0.05	12	0.5	<0.2
21500N 37400E	Soil		88	0.85	75	0.543	3	4.41	0.012	0.02	<0.1	0.10	16.9	<0.1	<0.05	12	<0.5	<0.2
21600N 36200E	Soil		51	0.36	21	0.444	2	2.31	0.007	0.02	<0.1	0.13	5.6	<0.1	<0.05	11	<0.5	<0.2
21600N 36250E	Soil		74	0.74	35	0.478	4	3.94	0.008	0.02	<0.1	0.05	8.9	<0.1	<0.05	11	<0.5	<0.2
21600N 36300E	Soil		79	0.42	24	0.484	2	4.21	0.007	0.02	<0.1	0.08	7.9	<0.1	<0.05	14	<0.5	<0.2
21600N 36350E	Soil		70	0.67	30	0.519	3	3.49	0.008	0.01	<0.1	0.07	10.2	<0.1	<0.05	12	<0.5	<0.2
21600N 36400E	Soil		41	0.47	30	0.309	3	2.21	0.010	0.02	<0.1	0.09	6.3	<0.1	<0.05	9	<0.5	<0.2

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910 - 475 Howe Street
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Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001141.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
21600N 36450E	Soil	0.6	95.1	9.3	78	<0.1	38.2	28.1	755	6.30	9.1	1.4	0.7	9	0.2	0.7	<0.1	217	0.76	0.156	3
21600N 36500E	Soil	0.7	86.0	3.7	68	0.1	45.0	24.1	406	6.85	5.9	1.1	0.7	12	0.1	0.5	<0.1	254	0.77	0.052	3
21600N 36550E	Soil	0.4	56.7	5.4	64	<0.1	26.4	15.7	664	5.59	7.6	9.8	0.6	12	<0.1	0.6	<0.1	218	0.82	0.074	2
21600N 36600E	Soil	0.5	65.4	3.9	91	0.2	37.1	19.8	405	6.42	4.4	2.7	0.8	12	0.2	0.5	<0.1	256	0.86	0.044	3
21600N 36650E	Soil	0.5	72.5	3.6	58	<0.1	41.7	19.9	297	6.12	3.7	1.5	0.7	12	0.1	0.4	<0.1	256	0.90	0.037	5
21600N 36700E	Soil	0.5	21.7	18.5	57	0.1	11.2	8.0	371	7.90	0.9	1.8	0.4	7	0.2	0.6	0.3	356	0.98	0.047	2
21600N 36750E	Soil	0.7	99.5	5.3	77	<0.1	38.5	18.3	388	6.21	7.0	3.9	0.9	10	0.2	0.6	<0.1	252	0.74	0.057	3
21600N 36800E	Soil	0.4	59.0	5.6	42	<0.1	26.8	18.2	692	4.52	11.2	10.6	0.6	23	0.1	0.4	<0.1	188	1.15	0.030	4
21600N 36850E	Soil	0.3	92.7	1.7	50	<0.1	38.1	22.0	491	4.83	5.9	4.2	0.6	25	0.1	0.5	<0.1	211	1.40	0.024	7
21600N 36900E	Soil	0.4	75.5	4.2	81	<0.1	40.5	18.8	312	6.13	4.3	2.4	0.7	15	0.2	0.5	<0.1	230	0.86	0.094	2
21600N 36950E	Soil	0.6	102.9	5.4	60	0.6	46.7	17.5	744	4.21	3.2	2.1	1.0	17	0.2	0.4	<0.1	155	0.81	0.066	7
21600N 37000E	Soil	0.6	68.8	3.2	52	0.1	40.3	18.0	244	5.68	4.4	2.0	0.7	13	<0.1	0.4	<0.1	233	0.71	0.042	3
21600N 37050E	Soil	0.4	101.9	3.1	57	<0.1	40.4	21.0	416	5.77	4.3	2.2	0.8	15	0.1	0.4	<0.1	239	0.89	0.047	4
21600N 37100E	Soil	0.5	74.4	4.4	89	<0.1	47.8	20.6	562	5.45	4.9	1.5	0.7	13	0.2	0.5	<0.1	215	0.92	0.084	2
21600N 37150E	Soil	0.5	128.4	3.3	51	<0.1	47.7	23.6	587	5.12	5.5	2.7	0.8	19	0.2	0.4	<0.1	236	1.07	0.044	8
21600N 37200E	Soil	0.2	13.5	18.8	39	<0.1	8.4	8.1	1124	3.12	1.7	1.2	0.4	12	0.2	0.4	0.2	142	1.09	0.035	3
21600N 37250E	Soil	0.3	24.2	7.2	61	<0.1	13.7	17.7	1308	5.60	1.0	3.3	0.5	8	0.2	0.3	0.2	170	1.04	0.086	2
21600N 37300E	Soil	0.3	25.4	6.9	74	<0.1	21.0	12.8	346	5.41	2.8	1.6	0.6	11	0.2	0.4	0.1	194	0.96	0.082	2
21600N 37350E	Soil	0.3	97.9	7.3	77	<0.1	27.5	21.7	1147	5.60	3.3	3.6	0.8	13	0.2	0.6	<0.1	212	0.61	0.166	4
21600N 37400E	Soil	0.4	62.6	7.5	71	<0.1	33.5	20.9	871	6.17	66.0	1.8	0.6	12	0.2	0.7	<0.1	237	0.89	0.085	3

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910 - 475 Howe Street
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Project: LL-11
Report Date: March 22, 2012

CERTIFICATE OF ANALYSIS VAN12001141.1

	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
21600N 36450E	Soil	65	0.53	25	0.438	4	4.05	0.007	0.02	<0.1	0.19	10.8	<0.1	<0.05	13	0.7	<0.2
21600N 36500E	Soil	77	0.60	38	0.540	3	3.84	0.008	0.02	<0.1	0.12	9.0	<0.1	<0.05	13	<0.5	<0.2
21600N 36550E	Soil	58	0.40	29	0.507	3	2.57	0.008	0.02	<0.1	0.08	5.9	<0.1	<0.05	11	<0.5	<0.2
21600N 36600E	Soil	83	0.51	33	0.638	3	3.52	0.008	0.02	<0.1	0.17	12.5	<0.1	<0.05	13	<0.5	<0.2
21600N 36650E	Soil	77	0.54	23	0.571	4	3.24	0.011	0.01	<0.1	0.10	12.5	<0.1	<0.05	12	<0.5	<0.2
21600N 36700E	Soil	48	0.18	11	0.833	1	1.50	0.007	0.02	<0.1	0.05	4.7	<0.1	<0.05	17	<0.5	<0.2
21600N 36750E	Soil	70	0.63	28	0.558	4	4.27	0.008	0.02	<0.1	0.10	10.9	<0.1	<0.05	12	<0.5	<0.2
21600N 36800E	Soil	39	0.63	39	0.353	5	2.12	0.014	0.01	<0.1	0.07	8.4	<0.1	<0.05	8	<0.5	<0.2
21600N 36850E	Soil	57	0.87	34	0.464	4	3.05	0.035	0.02	<0.1	0.08	16.3	<0.1	<0.05	10	<0.5	<0.2
21600N 36900E	Soil	65	0.62	28	0.550	3	3.52	0.014	0.02	<0.1	0.06	7.0	<0.1	<0.05	13	<0.5	<0.2
21600N 36950E	Soil	96	0.59	51	0.443	3	5.22	0.012	0.02	<0.1	0.17	15.2	<0.1	<0.05	13	0.8	<0.2
21600N 37000E	Soil	70	0.53	29	0.579	2	3.91	0.009	0.01	<0.1	0.16	8.2	<0.1	<0.05	11	0.7	<0.2
21600N 37050E	Soil	68	0.63	35	0.549	3	3.75	0.008	0.02	<0.1	0.10	11.8	<0.1	<0.05	11	<0.5	<0.2
21600N 37100E	Soil	65	0.66	38	0.571	5	3.89	0.012	0.02	<0.1	0.11	7.3	<0.1	<0.05	11	<0.5	<0.2
21600N 37150E	Soil	75	0.86	53	0.576	5	4.14	0.013	0.02	<0.1	0.09	19.3	<0.1	<0.05	11	0.6	<0.2
21600N 37200E	Soil	28	0.14	33	0.452	2	1.27	0.007	0.01	<0.1	0.04	3.5	<0.1	<0.05	8	<0.5	<0.2
21600N 37250E	Soil	48	0.16	21	0.366	2	2.01	0.008	<0.01	<0.1	0.07	4.6	<0.1	<0.05	13	<0.5	<0.2
21600N 37300E	Soil	56	0.32	26	0.544	2	2.26	0.007	0.02	<0.1	0.07	5.0	<0.1	<0.05	11	<0.5	<0.2
21600N 37350E	Soil	68	0.20	38	0.431	1	3.78	0.007	0.02	<0.1	0.13	11.6	<0.1	<0.05	13	0.5	<0.2
21600N 37400E	Soil	64	0.38	40	0.542	3	3.47	0.008	0.02	<0.1	0.06	7.8	<0.1	<0.05	13	<0.5	<0.2

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Project: LL-11
Report Date: March 22, 2012

QUALITY CONTROL REPORT VAN12001141.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
21500N 36250E	Soil	0.7	82.7	3.5	84	0.2	36.8	29.1	5529	5.37	12.3	4.3	0.4	18	0.5	0.5	<0.1	180	0.95	0.055	9
REP 21500N 36250E	QC	0.7	85.7	3.7	90	0.2	38.0	29.0	5875	5.47	12.7	1.8	0.4	18	0.4	0.5	<0.1	183	0.91	0.059	10
21600N 36550E	Soil	0.4	56.7	5.4	64	<0.1	26.4	15.7	664	5.59	7.6	9.8	0.6	12	<0.1	0.6	<0.1	218	0.82	0.074	2
REP 21600N 36550E	QC	0.4	57.0	5.4	62	<0.1	26.6	16.6	667	5.72	7.4	1.7	0.6	11	0.1	0.6	<0.1	222	0.75	0.075	2
21600N 36800E	Soil	0.4	59.0	5.6	42	<0.1	26.8	18.2	692	4.52	11.2	10.6	0.6	23	0.1	0.4	<0.1	188	1.15	0.030	4
REP 21600N 36800E	QC	0.4	57.8	5.6	41	<0.1	26.4	17.3	657	4.57	10.4	1.8	0.6	23	0.2	0.4	<0.1	186	1.13	0.029	4
Reference Materials																					
STD DS8	Standard	12.8	107.2	119.3	300	1.7	37.5	7.7	587	2.43	26.0	110.3	6.4	66	2.4	5.3	6.6	44	0.68	0.072	14
STD DS8	Standard	12.8	106.4	117.8	300	1.9	37.1	7.4	574	2.48	25.6	112.5	6.5	64	2.1	5.4	6.5	44	0.66	0.078	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: March 22, 2012

QUALITY CONTROL REPORT VAN12001141.1

	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																	
21500N 36250E	Soil	72	0.57	51	0.258	5	3.75	0.010	0.02	<0.1	0.12	17.5	<0.1	<0.05	9	1.7	<0.2
REP 21500N 36250E	QC	73	0.57	53	0.254	4	3.83	0.010	0.01	<0.1	0.14	17.9	<0.1	<0.05	10	1.6	<0.2
21600N 36550E	Soil	58	0.40	29	0.507	3	2.57	0.008	0.02	<0.1	0.08	5.9	<0.1	<0.05	11	<0.5	<0.2
REP 21600N 36550E	QC	59	0.41	30	0.514	2	2.55	0.007	0.02	<0.1	0.09	5.6	<0.1	<0.05	11	<0.5	<0.2
21600N 36800E	Soil	39	0.63	39	0.353	5	2.12	0.014	0.01	<0.1	0.07	8.4	<0.1	<0.05	8	<0.5	<0.2
REP 21600N 36800E	QC	38	0.62	36	0.355	4	2.08	0.014	0.01	<0.1	0.06	8.4	<0.1	<0.05	7	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	122	0.60	283	0.112	1	0.90	0.108	0.40	3.2	0.22	3.1	5.3	0.09	5	6.5	4.8
STD DS8	Standard	118	0.61	284	0.107	2	0.96	0.104	0.40	3.0	0.20	2.9	5.4	0.10	5	5.8	4.9
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 09, 2012
Report Date: April 23, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN12001632.1

CLIENT JOB INFORMATION

Project: LL-11
Shipment ID:
P.O. Number 11-397
Number of Samples: 27

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	27	Dry at 60C			VAN
SS80	27	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	27	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
Derrick Strickland

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001632.1

		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
L20400N 36900E	Soil		0.5	82.9	3.2	71	<0.1	47.4	21.4	346	6.34	6.4	2.2	0.8	14	0.2	0.4	<0.1	229	0.95	0.038	3
L20400N 36950E	Soil		0.2	76.4	2.6	54	<0.1	43.1	18.7	352	5.39	25.1	5.3	0.6	14	0.2	0.4	<0.1	204	1.00	0.027	3
L20400N 37000E	Soil		0.3	61.3	3.2	59	<0.1	37.3	22.3	573	4.84	6.8	1.9	0.6	16	0.1	0.3	<0.1	183	1.03	0.042	4
L20400N 37050E	Soil		0.4	78.0	4.0	70	<0.1	41.6	18.1	279	6.17	4.8	2.4	0.7	12	0.2	0.4	<0.1	226	0.74	0.039	3
L20400N 37100E	Soil		0.2	51.0	8.0	62	<0.1	31.7	15.1	607	5.12	3.2	3.8	0.6	17	0.2	0.4	<0.1	194	0.90	0.043	3
L20400N 37150E	Soil		0.5	123.3	4.7	61	<0.1	40.2	20.7	561	6.20	6.1	2.6	0.9	12	0.2	0.4	<0.1	213	0.82	0.099	4
L20400N 37200E	Soil		0.2	41.5	4.0	58	<0.1	21.3	14.0	329	4.83	2.7	4.2	0.6	12	0.1	0.4	<0.1	179	0.84	0.049	2
L20400N 37250E	Soil		0.4	52.3	3.9	72	0.1	32.7	15.4	300	5.81	4.0	5.6	0.6	13	0.2	0.3	<0.1	211	0.84	0.050	3
L20400N 37300E	Soil		0.3	51.9	4.3	51	<0.1	22.6	14.9	1368	5.21	2.8	3.8	0.6	11	0.1	0.5	<0.1	202	0.93	0.053	3
L20400N 37350E	Soil		0.3	67.8	3.8	64	<0.1	37.4	19.9	644	5.91	5.8	3.1	0.6	12	0.2	0.4	<0.1	218	0.95	0.062	3
L20400N 37400E	Soil		0.3	52.7	3.6	54	<0.1	25.1	16.4	882	5.27	10.7	3.3	0.6	12	<0.1	0.4	<0.1	194	0.75	0.051	3
L20400N 37450E	Soil		0.5	142.1	2.3	49	<0.1	40.8	20.4	474	5.72	8.3	6.4	0.9	15	0.1	0.4	<0.1	232	1.08	0.047	5
L20400N 37500E	Soil		0.5	70.5	4.9	64	0.1	35.0	23.4	892	4.78	4.7	3.6	0.7	17	0.1	0.4	<0.1	193	1.07	0.042	6
L20400N 37550E	Soil		0.5	148.3	2.4	59	<0.1	55.5	26.8	463	6.72	8.2	5.5	1.1	15	0.1	0.5	<0.1	252	0.94	0.052	11
L20400N 37600E	Soil		0.3	91.2	3.7	60	<0.1	36.3	18.7	459	6.39	5.3	3.2	0.8	14	0.2	0.4	<0.1	233	0.84	0.049	3
L20400N 37650E	Soil		0.5	67.2	3.3	52	<0.1	38.5	20.1	383	6.54	8.0	6.4	0.7	14	0.1	0.5	<0.1	254	0.96	0.059	3
L20400N 37700E	Soil		0.6	127.1	2.7	52	0.1	44.4	22.1	379	6.73	12.6	15.9	0.9	15	0.2	0.5	<0.1	268	0.97	0.053	8
L20400N 37750E	Soil		0.5	97.7	3.4	70	0.1	47.4	20.8	421	7.07	7.2	3.4	0.9	14	<0.1	0.3	0.1	261	0.85	0.064	3
L20400N 37800E	Soil		0.5	74.3	5.3	61	0.1	30.5	21.7	635	5.39	12.4	4.7	0.6	18	0.1	0.4	<0.1	200	0.95	0.047	6
L20400N 37850E	Soil		0.7	116.2	3.8	51	<0.1	44.6	21.8	452	5.85	24.4	3.5	0.8	12	<0.1	0.4	<0.1	233	1.04	0.044	3
L20400N 37900E	Soil		0.4	69.7	5.9	80	<0.1	39.0	20.1	499	6.51	6.4	2.4	0.7	13	0.2	0.4	<0.1	227	0.87	0.104	3
L20400N 37950E	Soil		0.3	33.1	11.1	69	<0.1	22.6	18.1	1364	5.18	12.6	4.2	0.5	19	0.1	0.4	<0.1	198	1.13	0.067	4
L20400N 38000E	Soil		0.8	78.2	5.0	60	<0.1	35.3	26.6	1468	5.92	199.4	2.0	0.6	15	0.1	0.4	<0.1	242	0.92	0.076	5
L20400N 38050E	Soil		0.5	41.6	3.3	62	<0.1	25.1	18.7	664	5.93	21.2	2.1	0.5	14	<0.1	0.4	<0.1	232	0.97	0.070	3
L20400N 38100E	Soil		0.6	94.2	3.9	78	<0.1	38.4	21.6	573	7.05	13.5	4.7	0.7	14	0.1	0.4	<0.1	250	0.97	0.075	3
L21600N 36900E	Soil		0.5	65.8	3.6	72	<0.1	38.3	18.6	363	5.38	5.3	6.0	0.6	16	0.1	0.4	0.1	178	0.76	0.053	4
L21600N 36950E	Soil		0.3	43.2	2.6	38	<0.1	22.0	10.6	193	4.74	2.6	2.8	0.5	11	0.1	0.3	<0.1	177	0.68	0.031	4

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: April 23, 2012

CERTIFICATE OF ANALYSIS VAN12001632.1

		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
L20400N 36900E	Soil		81	0.70	35	0.563	3	3.69	0.009	0.02	<0.1	0.06	8.5	<0.1	<0.05	12	<0.5	<0.2
L20400N 36950E	Soil		71	0.70	41	0.397	4	3.10	0.007	0.02	<0.1	0.05	9.7	<0.1	<0.05	11	<0.5	<0.2
L20400N 37000E	Soil		60	0.61	41	0.374	3	2.88	0.008	0.02	<0.1	0.05	7.9	<0.1	<0.05	10	<0.5	<0.2
L20400N 37050E	Soil		83	0.50	39	0.508	5	3.73	0.007	0.02	<0.1	0.07	8.5	<0.1	<0.05	12	<0.5	<0.2
L20400N 37100E	Soil		60	0.42	35	0.428	3	3.06	0.010	0.02	<0.1	0.04	6.7	<0.1	<0.05	11	<0.5	<0.2
L20400N 37150E	Soil		63	0.61	24	0.464	2	4.37	0.012	0.02	<0.1	0.12	11.7	<0.1	<0.05	12	0.8	<0.2
L20400N 37200E	Soil		51	0.27	25	0.527	3	2.27	0.008	0.01	<0.1	0.05	5.4	<0.1	<0.05	11	<0.5	<0.2
L20400N 37250E	Soil		62	0.45	36	0.495	2	2.84	0.007	0.02	<0.1	0.06	7.7	<0.1	<0.05	12	<0.5	<0.2
L20400N 37300E	Soil		46	0.27	25	0.443	4	2.63	0.008	0.01	<0.1	0.09	5.0	<0.1	<0.05	11	<0.5	<0.2
L20400N 37350E	Soil		61	0.52	36	0.550	3	3.22	0.008	0.01	<0.1	0.11	7.1	<0.1	<0.05	12	<0.5	<0.2
L20400N 37400E	Soil		51	0.35	34	0.416	4	2.62	0.007	0.01	<0.1	0.05	5.1	<0.1	<0.05	10	<0.5	<0.2
L20400N 37450E	Soil		59	0.81	29	0.511	8	3.37	0.008	0.02	<0.1	0.14	15.7	<0.1	<0.05	11	<0.5	<0.2
L20400N 37500E	Soil		53	0.50	30	0.461	3	2.90	0.008	0.02	<0.1	0.06	9.7	<0.1	<0.05	10	<0.5	<0.2
L20400N 37550E	Soil		90	0.87	43	0.547	5	4.77	0.008	0.02	<0.1	0.17	23.1	<0.1	<0.05	13	<0.5	<0.2
L20400N 37600E	Soil		69	0.47	32	0.570	4	3.17	0.009	0.02	<0.1	0.11	8.3	<0.1	<0.05	12	<0.5	<0.2
L20400N 37650E	Soil		72	0.53	30	0.658	4	3.74	0.008	0.02	<0.1	0.11	7.9	<0.1	<0.05	12	0.5	<0.2
L20400N 37700E	Soil		82	0.63	38	0.619	5	4.25	0.008	0.02	<0.1	0.28	17.2	<0.1	<0.05	13	<0.5	<0.2
L20400N 37750E	Soil		85	0.67	48	0.576	3	4.34	0.007	0.02	<0.1	0.09	8.9	<0.1	<0.05	14	<0.5	<0.2
L20400N 37800E	Soil		55	0.43	36	0.517	3	3.02	0.012	0.02	<0.1	0.11	7.9	<0.1	<0.05	11	<0.5	<0.2
L20400N 37850E	Soil		67	0.74	25	0.582	4	3.80	0.008	0.01	<0.1	0.14	11.2	<0.1	<0.05	11	<0.5	<0.2
L20400N 37900E	Soil		69	0.47	55	0.575	3	3.33	0.009	0.02	<0.1	0.13	6.4	<0.1	<0.05	13	<0.5	<0.2
L20400N 37950E	Soil		52	0.40	44	0.482	3	2.07	0.011	0.02	<0.1	0.09	5.2	<0.1	<0.05	10	<0.5	<0.2
L20400N 38000E	Soil		62	0.49	40	0.487	4	2.86	0.010	0.02	0.7	0.07	7.1	<0.1	<0.05	12	<0.5	<0.2
L20400N 38050E	Soil		55	0.37	26	0.535	4	2.32	0.012	0.01	<0.1	0.04	4.8	<0.1	<0.05	11	<0.5	<0.2
L20400N 38100E	Soil		67	0.56	34	0.665	4	3.33	0.010	0.02	<0.1	0.12	8.5	<0.1	<0.05	13	0.6	<0.2
L21600N 36900E	Soil		73	0.42	26	0.458	3	2.79	0.009	<0.01	<0.1	0.05	6.9	<0.1	<0.05	11	<0.5	<0.2
L21600N 36950E	Soil		57	0.30	16	0.411	1	2.04	0.007	<0.01	<0.1	0.07	7.0	<0.1	<0.05	10	<0.5	<0.2

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

Project: LL-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001632.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
L20400N 36900E	Soil	0.5	82.9	3.2	71	<0.1	47.4	21.4	346	6.34	6.4	2.2	0.8	14	0.2	0.4	<0.1	229	0.95	0.038	3
REP L20400N 36900E	QC	0.5	81.0	3.4	72	<0.1	46.1	20.9	341	6.24	6.0	13.6	0.7	13	0.2	0.4	<0.1	226	0.92	0.038	2
L20400N 37300E	Soil	0.3	51.9	4.3	51	<0.1	22.6	14.9	1368	5.21	2.8	3.8	0.6	11	0.1	0.5	<0.1	202	0.93	0.053	3
REP L20400N 37300E	QC	0.2	51.1	4.4	49	<0.1	20.9	14.8	1315	5.09	2.9	2.8	0.5	11	0.1	0.3	<0.1	196	0.92	0.049	3
L21600N 36900E	Soil	0.5	65.8	3.6	72	<0.1	38.3	18.6	363	5.38	5.3	6.0	0.6	16	0.1	0.4	0.1	178	0.76	0.053	4
REP L21600N 36900E	QC	0.5	64.8	3.8	71	<0.1	38.4	18.5	363	5.30	5.3	3.8	0.6	16	0.1	0.3	<0.1	176	0.77	0.054	4
Reference Materials																					
STD DS8	Standard	13.2	112.2	122.1	310	1.7	38.8	7.7	603	2.45	25.4	113.2	6.7	71	2.4	5.6	6.0	41	0.70	0.086	16
STD DS8	Standard	12.9	107.3	119.5	297	1.8	36.7	7.5	594	2.33	24.5	111.9	6.7	68	2.3	5.2	5.9	41	0.66	0.077	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LL-11
Report Date: April 23, 2012

QUALITY CONTROL REPORT VAN12001632.1

	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																	
L20400N 36900E	Soil	81	0.70	35	0.563	3	3.69	0.009	0.02	<0.1	0.06	8.5	<0.1	<0.05	12	<0.5	<0.2
REP L20400N 36900E	QC	78	0.67	33	0.550	3	3.75	0.007	0.02	<0.1	0.05	8.3	<0.1	<0.05	12	<0.5	<0.2
L20400N 37300E	Soil	46	0.27	25	0.443	4	2.63	0.008	0.01	<0.1	0.09	5.0	<0.1	<0.05	11	<0.5	<0.2
REP L20400N 37300E	QC	45	0.27	24	0.435	4	2.54	0.017	0.01	<0.1	0.10	5.2	<0.1	<0.05	11	<0.5	<0.2
L21600N 36900E	Soil	73	0.42	26	0.458	3	2.79	0.009	<0.01	<0.1	0.05	6.9	<0.1	<0.05	11	<0.5	<0.2
REP L21600N 36900E	QC	72	0.42	26	0.450	3	2.84	0.009	<0.01	<0.1	0.06	6.9	<0.1	<0.05	11	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	117	0.59	287	0.117	3	0.98	0.107	0.42	3.0	0.19	2.8	5.2	0.17	5	5.2	4.8
STD DS8	Standard	112	0.57	278	0.124	3	0.86	0.080	0.37	2.8	0.18	2.3	5.3	0.10	4	5.4	4.5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 10, 2012
Report Date: April 20, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12001717.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID:
P.O. Number 11-397
Number of Samples: 47

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	47	Dry at 60C			VAN
SS80	47	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	47	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
Derrick Strickland

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-12
Report Date: April 20, 2012

CERTIFICATE OF ANALYSIS VAN12001717.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
L20300N 36900E	Soil	0.3	60.4	2.9	60	<0.1	38.1	17.5	313	5.55	5.8	3.4	0.6	13	0.2	0.3	<0.1	222	0.92	0.025	3
L20300N 36950E	Soil	0.3	58.5	5.6	71	<0.1	34.9	18.5	398	5.66	6.7	2.8	0.6	13	0.2	0.4	<0.1	205	0.81	0.044	3
L20300N 37000E	Soil	0.4	94.1	2.9	79	<0.1	53.1	27.7	596	6.66	10.9	2.3	0.8	16	0.1	0.3	<0.1	242	0.85	0.054	3
L20300N 37050E	Soil	0.3	87.8	3.4	59	<0.1	44.5	22.8	442	5.90	8.0	1.4	0.7	14	0.1	0.3	<0.1	226	0.99	0.035	3
L20300N 37100E	Soil	0.4	92.8	2.9	70	<0.1	49.8	23.6	407	6.80	8.0	2.1	0.8	15	0.2	0.4	<0.1	255	0.85	0.039	3
L20300N 37150E	Soil	0.3	75.2	3.9	55	<0.1	35.9	18.1	505	5.52	6.6	0.9	0.6	18	0.1	0.4	<0.1	209	1.08	0.026	3
L20300N 37200E	Soil	0.4	152.0	3.1	61	<0.1	65.6	28.9	565	6.88	14.6	7.6	1.0	22	0.2	0.4	<0.1	240	0.97	0.048	5
L20300N 37250E	Soil	0.3	50.8	10.1	57	<0.1	30.3	16.7	444	5.04	5.5	<0.5	0.5	19	0.4	0.3	<0.1	198	1.01	0.042	5
L20300N 37300E	Soil	0.1	42.5	7.6	40	<0.1	20.9	12.5	408	4.79	2.2	<0.5	0.5	14	0.3	0.4	<0.1	196	0.70	0.023	3
L20300N 37350E	Soil	0.2	56.2	4.2	56	<0.1	32.3	16.7	391	5.32	4.9	2.3	0.6	12	0.1	0.4	<0.1	196	0.87	0.048	2
L20300N 37400E	Soil	0.2	31.7	8.4	54	<0.1	18.0	11.9	743	5.78	13.5	2.5	0.5	11	0.2	0.7	<0.1	200	0.79	0.105	2
L20300N 37450E	Soil	0.3	59.3	6.3	119	0.5	30.9	15.6	445	5.41	5.9	3.2	0.5	14	0.4	0.4	<0.1	199	0.90	0.059	2
L20300N 37500E	Soil	0.3	124.9	3.5	51	<0.1	52.4	23.3	547	5.64	19.3	4.5	0.8	20	0.1	0.5	<0.1	225	1.14	0.041	6
L20300N 37550E	Soil	0.3	86.9	5.1	101	0.1	43.3	21.3	390	6.08	6.0	2.8	0.7	14	0.4	0.4	<0.1	206	0.80	0.041	4
L20300N 37600E	Soil	0.6	160.8	3.1	62	<0.1	65.1	28.1	468	7.68	13.7	0.7	0.9	20	0.2	0.5	0.1	290	0.78	0.074	6
L20300N 37650E	Soil	0.6	94.9	5.9	59	<0.1	43.6	22.6	554	6.22	13.2	6.0	0.7	14	0.3	0.5	<0.1	253	1.15	0.087	5
L20300N 37700E	Soil	0.4	116.5	3.4	61	<0.1	41.6	20.5	430	5.81	7.4	1.2	0.9	11	0.2	0.4	<0.1	216	0.93	0.092	2
L20300N 37750E	Soil	0.2	54.1	7.3	60	<0.1	23.6	12.8	390	5.96	5.8	2.6	0.7	10	0.2	0.4	<0.1	208	0.80	0.140	3
L20300N 37800E	Soil	0.6	73.9	5.0	60	<0.1	25.3	15.5	415	6.81	9.2	2.2	0.9	9	0.1	0.4	<0.1	212	0.71	0.297	4
L20300N 37850E	Soil	0.3	25.9	8.0	50	<0.1	13.2	12.6	695	4.32	2.3	1.3	0.5	14	0.2	0.3	<0.1	168	0.82	0.063	3
L20300N 37900E	Soil	0.5	64.9	4.9	47	<0.1	36.6	16.5	545	5.99	4.1	0.8	0.8	12	0.2	0.3	<0.1	219	0.88	0.063	3
L20300N 37950E	Soil	0.4	97.4	4.3	56	<0.1	38.6	18.1	379	5.50	8.8	4.1	0.8	11	0.2	0.4	<0.1	207	0.96	0.094	3
L20300N 38000E	Soil	0.4	84.8	3.6	57	<0.1	42.1	20.5	472	5.79	9.8	1.2	0.7	12	0.1	0.5	<0.1	209	1.05	0.076	3
L20300N 38050E	Soil	0.3	28.6	15.8	42	<0.1	17.1	12.5	817	4.54	18.5	0.9	0.4	16	0.2	0.5	<0.1	181	0.99	0.041	3
L20300N 38100E	Soil	0.4	50.6	3.7	83	<0.1	33.4	20.2	517	6.00	9.6	1.2	0.6	11	0.2	0.3	<0.1	209	0.87	0.103	3
L36600E 18200N	Soil	0.6	60.3	4.8	44	<0.1	22.7	11.5	209	7.11	10.9	5.5	0.6	6	0.1	0.4	<0.1	221	0.33	0.047	3
L36600E 18225N	Soil	0.1	4.7	11.2	10	<0.1	2.7	1.2	55	1.00	2.7	6.7	0.2	6	<0.1	0.2	<0.1	93	0.15	0.025	1
L36600E 18250N	Soil	0.4	30.3	6.6	29	<0.1	10.0	4.5	120	4.66	10.2	2.9	0.4	5	0.1	0.6	<0.1	169	0.30	0.036	2
L36600E 18275N	Soil	0.4	24.9	11.2	29	<0.1	10.3	4.2	130	4.56	6.8	2.5	0.5	6	0.2	0.5	<0.1	178	0.23	0.036	2
L36600E 18300N	Soil	1.1	154.4	4.7	95	0.1	60.3	27.7	418	7.85	22.3	2.4	1.0	7	0.2	0.9	<0.1	224	0.40	0.061	3

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

Project: H-12
Report Date: April 20, 2012

CERTIFICATE OF ANALYSIS VAN12001717.1

		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
L20300N 36900E	Soil		68	0.50	27	0.500	5	3.02	0.007	0.02	<0.1	0.04	6.5	<0.1	0.05	11	<0.5	<0.2
L20300N 36950E	Soil		66	0.49	35	0.468	5	3.02	0.006	0.02	<0.1	0.06	6.8	<0.1	<0.05	11	<0.5	<0.2
L20300N 37000E	Soil		89	0.91	79	0.487	7	4.20	0.007	0.02	<0.1	0.05	10.5	<0.1	0.07	12	<0.5	<0.2
L20300N 37050E	Soil		82	0.75	35	0.487	4	3.74	0.008	0.02	<0.1	0.07	10.5	<0.1	0.06	11	<0.5	<0.2
L20300N 37100E	Soil		93	0.79	43	0.581	5	4.09	0.007	0.02	<0.1	0.07	10.4	<0.1	0.06	13	<0.5	<0.2
L20300N 37150E	Soil		72	0.57	28	0.394	5	2.93	0.010	0.02	<0.1	0.04	9.0	<0.1	<0.05	11	<0.5	<0.2
L20300N 37200E	Soil		104	1.08	87	0.605	7	5.09	0.010	0.02	<0.1	0.09	15.8	<0.1	<0.05	13	0.5	<0.2
L20300N 37250E	Soil		62	0.53	29	0.429	5	2.47	0.014	0.03	<0.1	0.06	7.0	<0.1	0.07	11	<0.5	<0.2
L20300N 37300E	Soil		50	0.23	21	0.419	4	2.07	0.014	0.02	<0.1	0.05	4.7	<0.1	<0.05	10	<0.5	<0.2
L20300N 37350E	Soil		63	0.40	26	0.526	4	3.08	0.007	0.02	<0.1	0.09	5.8	<0.1	<0.05	11	<0.5	<0.2
L20300N 37400E	Soil		58	0.25	22	0.483	4	2.24	0.006	0.02	<0.1	0.06	3.9	<0.1	<0.05	12	<0.5	<0.2
L20300N 37450E	Soil		56	0.42	29	0.545	5	2.75	0.011	0.02	<0.1	0.16	4.9	<0.1	<0.05	11	<0.5	<0.2
L20300N 37500E	Soil		86	0.94	52	0.484	5	3.95	0.015	0.02	<0.1	0.05	15.7	<0.1	<0.05	11	<0.5	<0.2
L20300N 37550E	Soil		77	0.49	30	0.568	4	3.73	0.010	0.02	<0.1	0.10	9.5	<0.1	<0.05	12	<0.5	<0.2
L20300N 37600E	Soil		106	0.78	87	0.710	3	5.72	0.009	0.02	<0.1	0.09	14.6	<0.1	<0.05	13	<0.5	<0.2
L20300N 37650E	Soil		69	0.74	25	0.631	7	3.77	0.016	0.02	<0.1	0.10	11.6	<0.1	0.09	12	<0.5	<0.2
L20300N 37700E	Soil		70	0.59	25	0.549	6	4.69	0.009	0.02	<0.1	0.09	9.8	<0.1	<0.05	11	<0.5	<0.2
L20300N 37750E	Soil		56	0.36	18	0.436	4	3.18	0.008	0.02	<0.1	0.10	6.6	<0.1	<0.05	12	<0.5	<0.2
L20300N 37800E	Soil		81	0.43	22	0.408	4	4.31	0.006	0.02	<0.1	0.19	10.3	<0.1	0.09	12	<0.5	<0.2
L20300N 37850E	Soil		39	0.18	28	0.427	4	1.71	0.007	0.02	<0.1	0.07	3.7	<0.1	<0.05	9	<0.5	<0.2
L20300N 37900E	Soil		75	0.48	41	0.542	4	3.63	0.006	0.02	<0.1	0.10	6.2	<0.1	<0.05	12	<0.5	<0.2
L20300N 37950E	Soil		61	0.59	21	0.500	6	3.83	0.009	0.02	<0.1	0.12	12.2	<0.1	<0.05	10	<0.5	<0.2
L20300N 38000E	Soil		57	0.67	21	0.557	7	3.48	0.007	0.02	<0.1	0.10	9.1	<0.1	<0.05	11	<0.5	<0.2
L20300N 38050E	Soil		44	0.27	39	0.439	4	1.75	0.007	0.02	<0.1	0.05	3.8	<0.1	<0.05	9	<0.5	<0.2
L20300N 38100E	Soil		68	0.44	31	0.446	4	2.87	0.009	0.02	<0.1	0.06	7.5	<0.1	<0.05	11	<0.5	<0.2
L36600E 18200N	Soil		63	0.32	38	0.248	2	3.15	0.006	0.02	<0.1	0.05	5.3	<0.1	<0.05	14	<0.5	<0.2
L36600E 18225N	Soil		10	0.04	11	0.166	2	0.25	0.007	0.02	<0.1	0.06	1.0	<0.1	<0.05	4	<0.5	<0.2
L36600E 18250N	Soil		40	0.16	13	0.230	2	1.47	0.006	0.02	<0.1	0.06	2.9	<0.1	<0.05	9	<0.5	<0.2
L36600E 18275N	Soil		43	0.13	22	0.249	2	1.67	0.008	0.02	<0.1	0.06	2.7	<0.1	<0.05	9	<0.5	<0.2
L36600E 18300N	Soil		84	0.72	54	0.325	3	6.36	0.006	0.03	<0.1	0.10	9.5	<0.1	<0.05	14	<0.5	<0.2

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

Project: H-12
Report Date: April 20, 2012

CERTIFICATE OF ANALYSIS VAN12001717.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
L36600E 18325N	Soil	0.2	14.8	23.0	13	<0.1	4.1	2.3	156	2.76	4.0	2.8	0.3	5	0.1	0.7	<0.1	260	0.20	0.043	2
L36600E 18350N	Soil	1.3	97.0	9.2	71	0.2	39.6	54.5	3306	4.97	20.1	3.0	0.5	13	0.2	1.1	<0.1	150	0.58	0.072	6
L36600E 18375N	Soil	0.6	45.4	5.6	51	<0.1	17.8	9.4	195	6.77	17.3	2.4	0.6	6	<0.1	0.8	<0.1	227	0.44	0.042	2
L36600E 18400N	Soil	0.7	63.0	4.4	51	<0.1	22.7	11.4	192	6.48	15.7	3.8	0.6	6	<0.1	0.5	<0.1	209	0.43	0.041	2
L36600E 18425N	Soil	0.8	67.3	11.7	62	<0.1	28.8	19.9	699	5.44	14.7	48.7	0.5	11	0.1	0.5	<0.1	189	0.60	0.041	4
L36600E 18450N	Soil	0.7	22.6	6.7	51	<0.1	11.8	9.6	281	4.23	2.7	4.2	0.6	9	0.1	0.3	<0.1	132	0.37	0.029	3
L36650E 18200N	Soil	0.4	36.4	8.9	23	0.1	10.2	4.5	136	4.65	7.8	3.9	0.4	5	<0.1	0.7	0.1	173	0.28	0.036	2
L36650E 18225N	Soil	0.6	49.6	5.1	36	0.3	15.7	6.5	147	7.69	10.3	5.5	0.6	4	0.1	0.6	0.1	243	0.24	0.065	2
L36650E 18250N	Soil	0.5	44.0	6.6	35	0.1	13.4	5.8	164	6.74	9.3	18.7	0.5	5	0.1	0.6	<0.1	217	0.29	0.055	2
L36650E 18275N	Soil	1.1	71.7	5.2	43	0.2	19.0	19.0	348	5.16	26.7	4.9	0.4	7	0.5	0.7	<0.1	190	0.40	0.064	6
L36650E 18300N	Soil	0.8	145.3	5.0	56	0.1	41.6	22.8	718	5.92	22.7	5.8	1.0	7	0.2	0.6	<0.1	163	0.46	0.059	4
L36650E 18325N	Soil	0.7	60.4	11.1	45	<0.1	19.3	10.3	352	5.77	11.3	3.6	0.5	7	0.1	0.9	<0.1	210	0.38	0.052	2
L36650E 18350N	Soil	0.5	52.2	7.3	41	<0.1	14.5	6.6	250	5.98	8.8	3.4	0.7	5	0.1	0.7	<0.1	188	0.37	0.086	2
L36650E 18375N	Soil	0.8	118.6	6.0	80	<0.1	48.9	28.3	513	7.08	13.3	6.1	1.0	8	0.1	0.6	<0.1	205	0.52	0.064	4
L36650E 18400N	Soil	0.4	40.8	8.5	31	<0.1	13.7	14.1	355	5.76	5.9	2.4	0.4	7	0.1	0.6	<0.1	221	0.38	0.040	4
L36650E 18425N	Soil	1.2	50.3	33.1	49	0.1	8.1	50.8	2279	4.27	79.8	2.9	0.2	13	0.4	0.9	0.2	172	0.64	0.103	7
L36650E 18450N	Soil	0.6	59.7	16.9	59	0.1	18.1	16.0	1279	5.89	18.1	8.7	0.4	16	0.3	0.6	0.1	208	0.66	0.050	5

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-12
Report Date: April 20, 2012

CERTIFICATE OF ANALYSIS VAN12001717.1

		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
L36600E 18325N	Soil		20	0.05	14	0.719	3	0.42	0.008	0.03	<0.1	0.06	0.9	<0.1	<0.05	8	<0.5	<0.2
L36600E 18350N	Soil		53	0.45	47	0.234	2	3.81	0.007	0.02	<0.1	0.14	8.5	<0.1	<0.05	10	<0.5	<0.2
L36600E 18375N	Soil		57	0.29	25	0.312	2	2.56	0.005	0.02	<0.1	0.08	4.4	<0.1	<0.05	14	<0.5	<0.2
L36600E 18400N	Soil		56	0.30	30	0.324	3	3.41	0.005	0.02	<0.1	0.10	5.1	<0.1	<0.05	13	<0.5	<0.2
L36600E 18425N	Soil		50	0.43	38	0.250	1	2.81	0.006	0.02	<0.1	0.10	6.1	<0.1	<0.05	11	<0.5	<0.2
L36600E 18450N	Soil		31	0.22	28	0.222	1	1.75	0.005	0.02	<0.1	0.04	2.9	<0.1	<0.05	10	<0.5	<0.2
L36650E 18200N	Soil		36	0.16	15	0.216	4	1.66	0.006	0.02	<0.1	0.09	2.8	<0.1	0.06	10	<0.5	<0.2
L36650E 18225N	Soil		69	0.22	15	0.308	3	3.12	0.005	0.02	<0.1	0.19	4.6	<0.1	0.08	17	0.6	<0.2
L36650E 18250N	Soil		57	0.21	14	0.348	3	2.76	0.005	0.02	<0.1	0.11	3.4	<0.1	0.10	14	<0.5	<0.2
L36650E 18275N	Soil		45	0.23	25	0.240	1	3.11	0.006	0.02	<0.1	0.20	7.7	<0.1	0.08	10	1.0	<0.2
L36650E 18300N	Soil		67	0.57	36	0.261	3	5.51	0.007	0.02	<0.1	0.15	12.0	<0.1	0.05	9	1.2	<0.2
L36650E 18325N	Soil		50	0.28	26	0.318	3	2.48	0.006	0.02	<0.1	0.14	5.2	<0.1	<0.05	12	<0.5	<0.2
L36650E 18350N	Soil		52	0.23	18	0.244	3	2.53	0.007	0.02	<0.1	0.13	4.7	<0.1	0.05	11	<0.5	<0.2
L36650E 18375N	Soil		83	0.58	46	0.314	3	5.65	0.006	0.02	<0.1	0.11	9.7	<0.1	0.08	13	0.7	<0.2
L36650E 18400N	Soil		47	0.18	26	0.326	2	2.09	0.005	0.02	<0.1	0.08	4.1	<0.1	0.06	12	<0.5	<0.2
L36650E 18425N	Soil		25	0.12	34	0.302	3	0.98	0.012	0.09	<0.1	0.22	4.9	<0.1	0.09	10	<0.5	<0.2
L36650E 18450N	Soil		40	0.35	34	0.495	3	1.92	0.008	0.02	<0.1	0.08	5.3	<0.1	<0.05	13	<0.5	<0.2

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

Project: H-12
Report Date: April 20, 2012

QUALITY CONTROL REPORT VAN12001717.1

		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																						
L20300N 37450E	Soil		0.3	59.3	6.3	119	0.5	30.9	15.6	445	5.41	5.9	3.2	0.5	14	0.4	0.4	<0.1	199	0.90	0.059	2
REP L20300N 37450E	QC		0.4	60.9	9.0	128	0.5	33.0	16.6	470	5.75	6.4	1.8	0.5	14	0.6	0.5	<0.1	206	0.98	0.067	2
L36600E 18200N	Soil		0.6	60.3	4.8	44	<0.1	22.7	11.5	209	7.11	10.9	5.5	0.6	6	0.1	0.4	<0.1	221	0.33	0.047	3
REP L36600E 18200N	QC		0.6	59.0	4.2	44	<0.1	23.5	11.7	204	6.89	10.5	2.5	0.6	6	<0.1	0.5	<0.1	215	0.30	0.044	3
Reference Materials																						
STD DS8	Standard		12.7	110.9	121.7	310	1.7	37.9	7.5	618	2.45	24.3	114.2	6.4	66	2.4	5.5	6.5	42	0.71	0.082	15
STD DS8	Standard		13.2	112.2	122.1	310	1.7	38.8	7.7	603	2.45	25.4	113.2	6.7	71	2.4	5.6	6.0	41	0.70	0.086	16
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank		<0.1	<0.1	0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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Project: H-12
Report Date: April 20, 2012

QUALITY CONTROL REPORT VAN12001717.1

	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																	
L20300N 37450E	Soil	56	0.42	29	0.545	5	2.75	0.011	0.02	<0.1	0.16	4.9	<0.1	<0.05	11	<0.5	<0.2
REP L20300N 37450E	QC	59	0.43	30	0.590	4	2.96	0.011	0.02	<0.1	0.16	5.3	<0.1	0.10	11	<0.5	<0.2
L36600E 18200N	Soil	63	0.32	38	0.248	2	3.15	0.006	0.02	<0.1	0.05	5.3	<0.1	<0.05	14	<0.5	<0.2
REP L36600E 18200N	QC	63	0.30	40	0.233	2	3.02	0.005	0.02	<0.1	0.06	5.2	<0.1	<0.05	14	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	118	0.59	277	0.120	4	0.92	0.092	0.44	2.8	0.21	2.6	5.4	0.21	4	5.7	5.1
STD DS8	Standard	117	0.59	287	0.117	3	0.98	0.107	0.42	3.0	0.19	2.8	5.2	0.17	5	5.2	4.8
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 24, 2012
Report Date: May 05, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12001946.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID:
P.O. Number 12-327
Number of Samples: 32

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	32	Dry at 60C			VAN
SS80	32	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	32	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
DISP2	32	Heat treatment of Soils and Sediments			VAN

ADDITIONAL COMMENTS

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

CC: Andrew Molnar
Derrick Strickland

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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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: H-12
Report Date: May 05, 2012

CERTIFICATE OF ANALYSIS VAN12001946.1

		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
L36550E 18175N	Soil		1.3	42.7	5.8	39	0.2	14.2	7.5	175	7.09	554.8	7.1	0.6	6	0.1	0.4	0.1	252	0.26	0.051	3
L36550E 18200N	Soil		0.5	71.2	3.3	62	0.1	30.6	15.6	193	4.57	11.3	4.2	0.8	5	0.1	0.4	<0.1	146	0.33	0.036	2
L36550E 18225N	Soil		0.5	69.1	3.6	52	0.2	26.6	11.5	173	6.32	13.3	24.1	0.8	4	0.1	0.4	<0.1	173	0.29	0.040	2
L36550E 18250N	Soil		0.5	31.7	3.7	18	<0.1	7.3	3.2	77	6.00	11.6	5.0	0.4	4	<0.1	0.5	<0.1	260	0.13	0.038	2
L36550E 18275N	Soil		0.5	50.2	4.6	42	0.1	16.7	8.0	155	5.40	16.9	5.0	0.7	4	0.1	0.5	<0.1	194	0.29	0.030	2
L36550E 18300N	Soil		0.7	53.3	5.3	72	0.2	33.6	61.1	1032	5.55	22.4	4.4	0.6	9	<0.1	0.5	<0.1	170	0.45	0.047	4
L36550E 18325N	Soil		0.3	35.9	5.3	44	0.1	13.1	8.6	282	7.04	3.6	6.5	0.6	9	0.1	0.7	<0.1	273	0.38	0.026	2
L36550E 18350N	Soil		0.7	66.7	3.4	44	<0.1	22.1	10.3	170	6.38	14.2	1.7	0.8	5	0.1	0.6	<0.1	204	0.36	0.037	2
L36550E 18375N	Soil		0.4	14.5	5.7	14	<0.1	4.1	2.2	96	4.44	6.2	4.5	0.4	4	<0.1	0.4	<0.1	274	0.08	0.027	2
L36550E 18400N	Soil		1.2	67.6	4.9	59	<0.1	31.2	17.2	381	5.76	54.6	2.2	0.6	9	<0.1	0.6	<0.1	203	0.55	0.034	4
L36550E 18425N	Soil		0.6	44.6	4.6	60	0.1	23.4	11.1	229	6.29	11.8	2.5	0.5	9	<0.1	0.5	<0.1	205	0.50	0.040	3
L36550E 18450N	Soil		0.6	59.3	3.4	55	0.2	22.2	10.2	156	5.99	8.3	3.8	0.6	6	0.2	0.5	<0.1	191	0.41	0.037	2
L36550E 18475N	Soil		0.6	83.8	3.4	58	0.3	38.8	18.4	252	4.68	10.0	5.2	0.9	6	0.2	0.4	<0.1	145	0.53	0.025	2
L36550E 18500N	Soil		1.0	67.2	5.7	113	0.3	26.7	88.9	7299	5.35	14.6	3.2	0.3	11	0.2	0.3	<0.1	154	0.53	0.090	8
L36600E 18425NB	Soil		0.7	48.3	4.9	44	0.1	16.8	8.3	142	6.09	16.0	3.4	0.5	9	<0.1	0.4	<0.1	219	0.42	0.042	3
L36600E 18450NB	Soil		0.8	29.3	5.3	61	0.1	15.3	13.2	448	4.18	3.4	4.3	0.6	9	0.1	0.2	<0.1	142	0.39	0.030	4
L36600E 18475N	Soil		0.7	59.4	5.7	61	0.1	22.1	9.9	182	6.70	13.0	2.3	0.6	5	<0.1	0.6	<0.1	200	0.34	0.047	2
L36600E 18500N	Soil		0.4	87.5	2.7	61	<0.1	34.6	16.0	202	5.48	7.9	3.7	0.7	6	0.1	0.5	<0.1	189	0.49	0.032	2
L36650E 18475N	Soil		0.6	31.1	3.6	36	0.1	13.4	9.1	202	4.48	5.6	2.9	0.4	7	<0.1	0.3	<0.1	178	0.51	0.029	2
L36650E 18500N	Soil		0.7	78.1	3.4	59	<0.1	39.4	25.9	374	4.92	7.1	1.6	0.5	8	0.1	0.4	<0.1	165	0.57	0.042	3
L36700E 18225N	Soil		0.1	8.7	8.0	11	<0.1	2.8	1.2	73	2.12	1.2	12.6	0.4	3	<0.1	0.3	0.1	197	0.06	0.014	2
L36700E 18250N	Soil		0.5	106.9	2.7	64	0.2	47.0	22.4	285	5.39	10.6	6.4	0.8	7	<0.1	0.4	<0.1	182	0.56	0.025	3
L36700E 18275N	Soil		0.6	60.8	3.4	66	0.2	27.3	12.8	196	5.41	10.4	3.2	0.6	9	0.2	0.5	<0.1	165	0.51	0.038	2
L36700E 18300N	Soil		0.3	31.4	9.7	30	0.2	12.2	5.8	161	3.42	9.2	2.7	0.3	10	0.2	0.5	<0.1	136	0.37	0.036	2
L36700E 18325N	Soil		0.9	91.6	4.7	73	0.2	30.5	28.0	578	4.96	53.1	3.6	0.7	7	0.1	0.4	<0.1	151	0.40	0.064	4
L36700E 18350N	Soil		0.5	42.2	8.5	39	0.1	14.2	6.7	235	5.52	5.8	3.6	0.6	5	<0.1	0.5	<0.1	219	0.31	0.055	2
L36700E 18375N	Soil		0.5	56.4	4.5	43	<0.1	18.3	8.8	240	6.08	12.8	2.4	0.7	5	<0.1	0.5	<0.1	190	0.45	0.062	2
L36700E 18400N	Soil		0.7	51.6	3.9	39	<0.1	20.1	10.0	252	7.38	48.1	4.8	0.7	5	<0.1	0.4	<0.1	206	0.28	0.052	2
L36700E 18425N	Soil		1.7	64.8	4.2	53	0.2	10.9	15.3	184	11.01	38.0	2.2	0.6	6	<0.1	0.6	<0.1	212	0.25	0.053	1
L36700E 18450N	Soil		1.6	36.8	3.0	28	0.1	13.4	6.0	107	4.68	452.4	2.6	0.4	7	<0.1	0.5	<0.1	161	0.37	0.024	2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-12
Report Date: May 05, 2012

CERTIFICATE OF ANALYSIS VAN12001946.1

	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
L36550E 18175N	Soil	61	0.19	25	0.397	2	2.66	0.006	0.02	<0.1	0.12	3.6	<0.1	<0.05	16	0.5	<0.2
L36550E 18200N	Soil	60	0.32	31	0.156	2	3.84	0.005	0.01	<0.1	0.11	5.8	<0.1	<0.05	8	0.6	<0.2
L36550E 18225N	Soil	65	0.33	31	0.189	2	3.76	0.005	0.01	<0.1	0.12	6.0	<0.1	<0.05	11	0.6	<0.2
L36550E 18250N	Soil	48	0.08	8	0.278	1	1.08	0.004	<0.01	<0.1	0.04	1.8	<0.1	<0.05	14	<0.5	<0.2
L36550E 18275N	Soil	51	0.25	14	0.289	2	2.58	0.004	0.01	<0.1	0.09	3.5	<0.1	<0.05	10	<0.5	<0.2
L36550E 18300N	Soil	53	0.40	41	0.235	2	2.80	0.007	0.02	<0.1	0.08	5.4	<0.1	<0.05	10	<0.5	<0.2
L36550E 18325N	Soil	55	0.15	16	0.510	2	2.05	0.006	0.01	<0.1	0.07	3.7	<0.1	<0.05	15	<0.5	<0.2
L36550E 18350N	Soil	65	0.25	19	0.323	2	3.73	0.005	0.01	<0.1	0.10	5.3	<0.1	<0.05	11	0.7	<0.2
L36550E 18375N	Soil	27	0.02	6	0.344	2	0.56	0.005	<0.01	<0.1	0.02	1.0	<0.1	<0.05	12	<0.5	<0.2
L36550E 18400N	Soil	58	0.48	36	0.328	3	2.89	0.007	0.02	<0.1	0.06	6.1	<0.1	<0.05	11	<0.5	<0.2
L36550E 18425N	Soil	51	0.32	28	0.303	3	2.46	0.006	0.02	<0.1	0.05	4.3	<0.1	<0.05	12	<0.5	<0.2
L36550E 18450N	Soil	58	0.27	22	0.305	2	2.67	0.006	0.02	<0.1	0.05	4.7	<0.1	<0.05	10	<0.5	<0.2
L36550E 18475N	Soil	61	0.54	33	0.214	3	3.66	0.007	0.01	<0.1	0.07	8.1	<0.1	<0.05	8	<0.5	<0.2
L36550E 18500N	Soil	58	0.17	47	0.162	3	4.11	0.006	0.02	<0.1	0.21	9.3	<0.1	0.05	8	1.0	<0.2
L36600E 18425NB	Soil	55	0.19	31	0.306	2	2.61	0.007	0.02	<0.1	0.10	4.5	<0.1	<0.05	12	0.6	<0.2
L36600E 18450NB	Soil	35	0.26	31	0.228	2	2.10	0.006	0.02	<0.1	0.04	3.3	<0.1	<0.05	10	<0.5	<0.2
L36600E 18475N	Soil	61	0.26	22	0.289	3	3.44	0.005	0.02	<0.1	0.08	4.1	<0.1	<0.05	12	<0.5	<0.2
L36600E 18500N	Soil	56	0.39	21	0.353	3	3.39	0.007	0.01	<0.1	0.06	7.6	<0.1	<0.05	10	<0.5	<0.2
L36650E 18475N	Soil	44	0.24	15	0.290	2	1.58	0.006	<0.01	<0.1	0.03	3.4	<0.1	<0.05	9	<0.5	<0.2
L36650E 18500N	Soil	48	0.54	26	0.321	4	2.73	0.006	0.01	<0.1	0.07	6.2	<0.1	<0.05	10	<0.5	<0.2
L36700E 18225N	Soil	15	0.01	4	0.321	<1	0.23	0.004	<0.01	<0.1	0.02	0.7	<0.1	<0.05	7	<0.5	<0.2
L36700E 18250N	Soil	75	0.64	48	0.291	3	4.24	0.007	0.01	<0.1	0.09	11.6	<0.1	<0.05	10	<0.5	<0.2
L36700E 18275N	Soil	54	0.35	23	0.280	4	3.09	0.008	0.01	<0.1	0.09	5.8	<0.1	<0.05	9	<0.5	<0.2
L36700E 18300N	Soil	31	0.15	26	0.208	3	1.38	0.007	0.02	<0.1	0.08	3.1	<0.1	<0.05	7	<0.5	<0.2
L36700E 18325N	Soil	48	0.35	31	0.249	3	3.76	0.007	0.02	<0.1	0.16	7.6	<0.1	<0.05	10	0.8	<0.2
L36700E 18350N	Soil	53	0.19	17	0.278	2	2.55	0.006	0.01	<0.1	0.15	4.8	<0.1	<0.05	12	<0.5	<0.2
L36700E 18375N	Soil	55	0.28	16	0.277	2	2.80	0.005	0.01	<0.1	0.07	6.0	<0.1	<0.05	12	<0.5	<0.2
L36700E 18400N	Soil	72	0.28	15	0.279	2	3.17	0.005	0.01	<0.1	0.12	4.8	<0.1	<0.05	13	0.7	<0.2
L36700E 18425N	Soil	77	0.13	13	0.293	1	4.03	0.005	0.01	<0.1	0.18	4.2	<0.1	<0.05	14	<0.5	<0.2
L36700E 18450N	Soil	39	0.17	12	0.241	2	1.73	0.006	0.01	0.3	0.04	3.6	<0.1	<0.05	9	<0.5	<0.2

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

Project: H-12
Report Date: May 05, 2012

CERTIFICATE OF ANALYSIS VAN12001946.1

		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
L36700E 18475N	Soil		0.5	34.7	3.6	37	<0.1	14.2	7.8	143	4.97	5.6	1.2	0.5	6	<0.1	0.4	<0.1	182	0.41	0.039	2
L36700E 18500N	Soil		0.9	71.1	3.5	59	<0.1	32.5	17.1	277	5.79	10.0	3.9	0.5	6	<0.1	0.5	<0.1	200	0.57	0.039	2

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CERTIFICATE OF ANALYSIS VAN12001946.1

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
L36700E 18475N	Soil	43	0.18	17	0.336	3	1.94	0.006	0.01	<0.1	0.06	4.0	<0.1	<0.05	10	<0.5	<0.2
L36700E 18500N	Soil	52	0.52	24	0.365	3	2.70	0.006	0.01	<0.1	0.06	5.8	<0.1	<0.05	11	<0.5	<0.2

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910 - 475 Howe Street
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Project: H-12
Report Date: May 05, 2012

QUALITY CONTROL REPORT VAN12001946.1

		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																						
L36550E 18250N	Soil		0.5	31.7	3.7	18	<0.1	7.3	3.2	77	6.00	11.6	5.0	0.4	4	<0.1	0.5	<0.1	260	0.13	0.038	2
REP L36550E 18250N	QC		0.5	30.9	3.7	18	<0.1	7.1	3.0	73	5.59	12.2	31.3	0.4	4	<0.1	0.4	<0.1	255	0.13	0.035	2
L36600E 18475N	Soil		0.7	59.4	5.7	61	0.1	22.1	9.9	182	6.70	13.0	2.3	0.6	5	<0.1	0.6	<0.1	200	0.34	0.047	2
REP L36600E 18475N	QC		0.7	59.7	5.4	59	0.1	22.3	9.9	185	6.70	13.4	2.8	0.6	5	<0.1	0.6	<0.1	196	0.36	0.046	2
Reference Materials																						
STD DS8	Standard		12.6	99.9	113.3	287	1.6	35.3	6.8	554	2.22	23.1	108.6	6.6	70	2.1	5.8	6.0	38	0.63	0.072	14
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: H-12
Report Date: May 05, 2012

QUALITY CONTROL REPORT VAN12001946.1

		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																		
L36550E 18250N	Soil		48	0.08	8	0.278	1	1.08	0.004	<0.01	<0.1	0.04	1.8	<0.1	<0.05	14	<0.5	<0.2
REP L36550E 18250N	QC		46	0.08	8	0.285	2	1.09	0.004	<0.01	<0.1	0.03	2.0	<0.1	<0.05	13	<0.5	<0.2
L36600E 18475N	Soil		61	0.26	22	0.289	3	3.44	0.005	0.02	<0.1	0.08	4.1	<0.1	<0.05	12	<0.5	<0.2
REP L36600E 18475N	QC		58	0.26	21	0.292	2	3.38	0.006	0.02	<0.1	0.08	4.3	<0.1	<0.05	12	<0.5	<0.2
Reference Materials																		
STD DS8	Standard		107	0.55	258	0.122	2	0.83	0.078	0.36	2.6	0.17	2.6	4.8	0.11	4	4.3	4.6
STD DS8 Expected			115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 24, 2012
Report Date: May 03, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12001947.1

CLIENT JOB INFORMATION

Project: LH-12
Shipment ID:
P.O. Number 12-327
Number of Samples: 50

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	48	Dry at 60C			VAN
SS80	48	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	48	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
Derrick Strickland

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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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910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LH-12
Report Date: May 03, 2012

CERTIFICATE OF ANALYSIS VAN12001947.1

		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
L000N 125E	Soil		0.4	63.6	8.8	44	<0.1	32.9	18.5	459	4.87	2.6	2.3	0.7	17	0.2	0.5	0.3	177	0.88	0.034	4
L000N 150E	Soil		0.2	18.6	8.5	33	<0.1	11.3	10.1	458	4.93	1.5	3.5	0.4	13	0.1	0.4	0.3	165	1.40	0.037	3
L000N 175E	Soil		0.2	21.6	12.0	22	<0.1	7.1	4.8	685	2.82	1.9	2.1	0.3	12	0.3	0.4	0.3	131	1.23	0.029	2
L000N 200E	Soil		0.2	24.8	8.3	52	<0.1	11.1	12.9	782	5.55	1.3	0.9	0.6	11	0.3	0.2	0.2	167	1.60	0.091	3
L000N 225E	Soil		0.5	122.6	3.4	76	<0.1	51.0	24.4	489	7.12	4.1	3.0	1.1	13	0.2	0.5	<0.1	246	0.74	0.087	5
L000N 250E	Soil		0.1	6.3	40.8	34	<0.1	6.0	7.3	817	3.41	4.0	<0.5	0.3	18	0.5	0.7	0.4	139	1.21	0.065	2
L000N 275E	Soil		0.4	29.6	8.5	52	<0.1	16.2	9.7	436	7.22	4.2	1.4	0.8	10	0.2	0.5	0.2	219	0.78	0.131	2
L000N 300E	Soil		0.4	52.2	5.5	49	<0.1	22.4	13.4	357	6.92	2.3	3.4	1.1	11	0.2	0.5	<0.1	211	0.81	0.077	4
L000N 325E	Soil		0.4	47.4	8.7	81	<0.1	29.0	15.8	478	6.39	4.1	1.4	1.0	12	0.2	0.5	0.1	185	0.73	0.108	3
L000N 350E	Soil		0.4	80.1	9.5	99	0.1	26.6	48.2	1886	7.30	4.0	<0.5	0.8	15	0.3	0.4	0.2	190	0.81	0.124	3
L000N 375E	Soil		0.4	55.8	8.1	55	<0.1	32.4	17.5	710	4.50	2.9	0.7	0.8	19	0.2	0.5	<0.1	158	0.73	0.041	5
L000N 400E	Soil		0.3	71.1	4.3	61	<0.1	44.7	21.0	431	5.80	3.9	0.7	0.8	20	0.2	0.4	<0.1	201	0.80	0.053	4
L600N 100E	Soil		0.6	148.8	8.1	68	0.1	37.9	29.9	1548	6.12	2.5	0.9	0.5	21	0.2	0.3	<0.1	203	1.14	0.043	5
L600N 125E	Soil		0.3	42.1	27.1	48	<0.1	20.6	14.9	627	5.59	2.8	20.3	0.5	16	0.4	0.5	0.2	188	0.96	0.052	3
L600N 150E	Soil		0.4	86.0	1.7	31	<0.1	35.3	17.3	255	4.54	3.7	2.2	0.8	14	0.2	0.3	<0.1	175	0.86	0.020	3
L600N 175E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
L600N 200E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
L600N 225E	Soil		0.4	71.2	4.1	56	0.1	32.1	15.4	506	5.08	3.7	<0.5	0.7	21	0.2	0.4	<0.1	193	0.73	0.041	4
L600N 250E	Soil		0.3	43.8	5.9	111	<0.1	32.9	16.4	557	4.74	3.0	<0.5	0.6	21	0.3	0.4	<0.1	161	0.82	0.052	3
L600N 275E	Soil		0.4	68.2	11.3	81	0.1	33.5	18.2	1147	4.61	4.5	<0.5	0.7	22	0.5	0.4	<0.1	165	0.81	0.068	4
L600N 300E	Soil		0.5	112.4	2.6	58	<0.1	47.1	22.4	437	5.75	6.8	3.8	1.1	21	0.2	0.4	<0.1	212	0.97	0.037	8
L600N 325E	Soil		0.4	110.5	3.9	75	<0.1	45.0	22.0	711	6.05	4.1	0.7	0.9	18	0.2	0.4	<0.1	215	0.93	0.077	4
L600N 350E	Soil		0.6	47.7	10.0	70	0.1	27.5	15.5	1636	6.39	3.9	1.3	0.7	13	0.3	0.6	<0.1	205	0.63	0.106	5
L600N 375E	Soil		0.5	75.4	19.1	73	<0.1	33.5	16.4	1543	5.74	4.8	2.9	0.8	15	0.4	0.7	0.1	185	0.84	0.088	3
L600N 400E	Soil		0.2	12.4	16.3	35	<0.1	10.2	6.4	349	6.51	3.8	3.1	0.6	12	0.4	0.4	0.2	198	0.92	0.119	3
L21700N 36200E	Soil		0.4	94.4	3.0	53	<0.1	44.2	21.8	345	5.79	6.3	2.2	1.1	13	0.1	0.6	<0.1	215	0.74	0.038	4
L21700N 36250E	Soil		0.4	47.9	13.8	47	<0.1	24.8	13.6	616	5.66	4.9	2.5	0.7	12	0.2	0.7	<0.1	209	0.69	0.057	3
L21700N 36300E	Soil		0.2	22.1	9.5	31	<0.1	9.8	15.1	634	3.49	2.5	<0.5	0.4	15	0.2	0.4	<0.1	137	0.56	0.038	3
L21700N 36350E	Soil		0.2	60.3	4.3	48	<0.1	27.3	14.2	346	5.63	5.6	<0.5	0.6	13	0.2	0.5	0.2	212	0.64	0.057	2
L21700N 36400E	Soil		0.3	60.7	9.2	63	<0.1	18.2	20.4	407	6.57	3.4	17.3	0.7	13	0.3	0.4	0.2	218	0.60	0.054	3

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910 - 475 Howe Street
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Project: LH-12
Report Date: May 03, 2012

CERTIFICATE OF ANALYSIS VAN12001947.1

		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
L000N 125E	Soil		53	0.46	26	0.465	4	2.91	0.009	0.01	<0.1	0.04	7.3	<0.1	<0.05	10	<0.5	<0.2
L000N 150E	Soil		36	0.25	20	0.407	2	1.71	0.008	0.01	<0.1	0.02	4.1	<0.1	<0.05	10	<0.5	<0.2
L000N 175E	Soil		20	0.15	20	0.334	3	1.17	0.010	0.01	<0.1	0.01	4.3	<0.1	<0.05	7	<0.5	<0.2
L000N 200E	Soil		50	0.23	24	0.463	5	2.00	0.024	0.01	<0.1	0.02	5.4	<0.1	<0.05	13	<0.5	<0.2
L000N 225E	Soil		75	0.96	39	0.519	3	5.16	0.012	0.02	<0.1	0.07	16.5	<0.1	<0.05	14	0.9	<0.2
L000N 250E	Soil		11	0.12	18	0.351	2	1.24	0.009	0.01	<0.1	0.02	2.3	<0.1	<0.05	10	<0.5	<0.2
L000N 275E	Soil		45	0.26	18	0.462	1	2.20	0.007	0.01	<0.1	0.06	4.8	<0.1	<0.05	15	<0.5	<0.2
L000N 300E	Soil		59	0.35	28	0.455	2	3.18	0.007	0.01	<0.1	0.10	8.2	<0.1	<0.05	14	<0.5	<0.2
L000N 325E	Soil		52	0.40	32	0.420	2	3.17	0.008	0.02	<0.1	0.10	6.8	<0.1	<0.05	13	<0.5	<0.2
L000N 350E	Soil		47	0.33	41	0.416	2	2.31	0.008	0.02	<0.1	0.06	5.1	<0.1	<0.05	19	<0.5	<0.2
L000N 375E	Soil		49	0.42	57	0.395	2	3.17	0.019	0.02	<0.1	0.06	6.9	<0.1	<0.05	10	<0.5	<0.2
L000N 400E	Soil		70	0.56	55	0.478	3	3.82	0.008	0.02	<0.1	0.07	8.6	<0.1	<0.05	12	<0.5	<0.2
L600N 100E	Soil		74	0.84	33	0.432	4	2.77	0.009	0.01	<0.1	0.04	9.0	<0.1	<0.05	12	<0.5	<0.2
L600N 125E	Soil		55	0.29	25	0.422	2	1.84	0.007	0.01	<0.1	0.06	4.6	<0.1	<0.05	13	<0.5	<0.2
L600N 150E	Soil		55	0.50	20	0.469	3	3.23	0.007	0.01	<0.1	0.08	10.3	<0.1	<0.05	10	<0.5	<0.2
L600N 175E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
L600N 200E	Soil		L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
L600N 225E	Soil		59	0.45	56	0.436	3	2.99	0.008	0.03	<0.1	0.05	6.7	<0.1	<0.05	11	<0.5	<0.2
L600N 250E	Soil		53	0.41	46	0.418	1	2.50	0.007	0.02	<0.1	0.05	5.5	<0.1	<0.05	10	<0.5	<0.2
L600N 275E	Soil		55	0.51	60	0.402	3	2.89	0.009	0.02	<0.1	0.03	8.9	<0.1	<0.05	10	<0.5	<0.2
L600N 300E	Soil		75	0.85	42	0.499	4	4.03	0.009	0.03	<0.1	0.08	17.0	<0.1	<0.05	12	<0.5	<0.2
L600N 325E	Soil		56	0.84	40	0.489	4	3.79	0.009	0.02	<0.1	0.06	9.8	<0.1	<0.05	13	<0.5	<0.2
L600N 350E	Soil		58	0.42	44	0.403	2	3.42	0.010	0.02	<0.1	0.15	7.4	<0.1	<0.05	14	0.9	<0.2
L600N 375E	Soil		55	0.50	49	0.405	2	3.12	0.008	0.01	<0.1	0.11	7.4	<0.1	<0.05	12	<0.5	<0.2
L600N 400E	Soil		45	0.19	30	0.431	1	1.49	0.007	0.01	<0.1	0.07	3.1	<0.1	<0.05	17	<0.5	<0.2
L21700N 36200E	Soil		85	0.61	26	0.488	3	4.55	0.007	0.01	<0.1	0.11	14.5	<0.1	<0.05	12	0.6	<0.2
L21700N 36250E	Soil		56	0.39	21	0.449	3	2.82	0.008	0.01	<0.1	0.13	5.9	<0.1	<0.05	12	<0.5	<0.2
L21700N 36300E	Soil		37	0.14	25	0.349	2	1.42	0.008	0.01	<0.1	0.11	3.5	<0.1	<0.05	8	<0.5	<0.2
L21700N 36350E	Soil		54	0.40	32	0.441	2	2.75	0.009	0.01	<0.1	0.06	5.1	<0.1	<0.05	12	<0.5	<0.2
L21700N 36400E	Soil		46	0.35	29	0.509	2	2.17	0.010	0.01	<0.1	0.07	5.1	<0.1	<0.05	14	<0.5	<0.2

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Project: LH-12
Report Date: May 03, 2012

CERTIFICATE OF ANALYSIS VAN12001947.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
L21700N 36450E	Soil	0.4	36.9	15.5	37	<0.1	18.9	16.5	370	4.33	5.2	1.2	0.4	12	0.3	0.4	0.2	161	0.63	0.067	4
L21700N 36500E	Soil	0.5	47.3	5.3	51	<0.1	23.7	14.2	333	6.81	4.3	6.0	1.0	23	0.2	0.4	<0.1	247	0.87	0.062	4
L21700N 36550E	Soil	0.4	48.8	7.6	39	<0.1	23.0	12.8	378	5.29	4.0	5.3	0.7	18	0.2	0.5	<0.1	207	0.87	0.036	3
L21700N 36600E	Soil	0.4	62.3	10.4	72	<0.1	23.4	27.2	1273	5.26	6.5	2.5	0.6	20	0.2	0.5	<0.1	174	0.76	0.042	7
L21700N 36650E	Soil	0.4	87.0	4.6	51	<0.1	36.7	20.3	745	4.74	5.9	3.0	0.6	29	0.1	0.6	<0.1	179	1.27	0.048	6
L21700N 36700E	Soil	0.3	86.1	2.5	55	<0.1	42.4	21.2	414	4.83	5.5	2.2	0.8	28	0.2	0.4	<0.1	186	1.02	0.036	4
L21700N 36750E	Soil	0.5	51.8	4.5	61	<0.1	34.6	17.1	470	5.90	3.4	5.2	0.8	17	0.1	0.5	<0.1	209	0.78	0.063	3
L21700N 36800E	Soil	0.5	79.9	3.8	61	<0.1	42.0	20.8	309	5.39	4.2	2.2	1.0	17	0.2	0.5	<0.1	210	0.88	0.044	4
L21700N 36850E	Soil	0.5	61.3	3.3	55	<0.1	36.1	18.2	464	5.45	3.6	6.6	0.7	15	<0.1	0.5	0.2	214	0.85	0.044	3
L21700N 36900E	Soil	0.4	84.9	3.2	65	<0.1	40.3	21.0	549	5.39	3.9	5.8	0.7	15	0.1	0.5	<0.1	193	0.86	0.059	4
L21700N 36950E	Soil	0.3	66.0	9.2	52	<0.1	27.8	15.0	528	4.91	3.0	3.1	0.7	15	0.2	0.6	<0.1	188	0.80	0.067	4
L21700N 37000E	Soil	0.3	98.2	2.7	49	<0.1	37.2	18.2	318	5.72	1.2	7.4	1.0	11	0.1	0.4	<0.1	183	0.62	0.058	6
L21700N 37050E	Soil	0.4	102.4	4.5	55	<0.1	43.2	21.2	438	5.37	3.8	2.6	0.8	14	0.2	0.6	<0.1	202	0.85	0.052	4
L21700N 37100E	Soil	0.5	105.6	3.1	58	<0.1	54.2	23.9	325	6.07	4.2	<0.5	0.9	13	0.2	0.5	<0.1	223	0.79	0.043	3
L21700N 37150E	Soil	0.3	97.9	2.5	44	<0.1	38.2	19.9	322	5.02	3.5	2.3	0.8	14	0.2	0.4	<0.1	207	0.92	0.044	4
L21700N 37200E	Soil	0.4	69.9	6.1	77	<0.1	35.4	20.2	579	5.89	3.2	<0.5	0.7	12	0.3	0.6	<0.1	206	0.76	0.087	3
L21700N 37250E	Soil	0.4	82.7	3.5	38	<0.1	29.1	35.8	486	4.24	1.9	3.0	0.7	13	0.1	0.3	<0.1	168	0.83	0.047	8
L21700N 37300E	Soil	0.4	95.8	4.6	51	<0.1	40.9	19.8	542	5.33	3.3	9.1	0.8	15	0.1	0.6	<0.1	205	0.94	0.048	3
L21700N 37350E	Soil	0.3	45.4	8.0	61	<0.1	29.2	17.1	756	5.24	5.2	3.0	0.6	15	0.2	0.5	<0.1	189	1.02	0.065	3
L21700N 37400E	Soil	0.5	54.6	10.3	51	<0.1	29.2	17.0	616	5.72	3.4	3.9	0.7	17	0.2	0.7	0.3	226	0.94	0.069	3

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Project: LH-12
Report Date: May 03, 2012

CERTIFICATE OF ANALYSIS VAN12001947.1

		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
L21700N 36450E	Soil		39	0.26	18	0.326	2	2.37	0.008	0.01	<0.1	0.13	4.9	<0.1	<0.05	10	<0.5	<0.2
L21700N 36500E	Soil		63	0.45	21	0.578	3	2.89	0.013	0.01	<0.1	0.09	10.0	<0.1	<0.05	15	<0.5	<0.2
L21700N 36550E	Soil		51	0.38	26	0.507	3	2.46	0.010	0.01	<0.1	0.08	6.4	<0.1	<0.05	11	<0.5	<0.2
L21700N 36600E	Soil		47	0.34	32	0.461	2	2.34	0.010	0.01	<0.1	0.08	7.1	<0.1	<0.05	11	<0.5	<0.2
L21700N 36650E	Soil		53	0.72	30	0.441	4	2.95	0.018	0.02	<0.1	0.08	11.5	<0.1	<0.05	10	<0.5	<0.2
L21700N 36700E	Soil		73	0.68	71	0.442	4	3.65	0.013	0.01	<0.1	0.06	11.4	<0.1	<0.05	10	<0.5	<0.2
L21700N 36750E	Soil		69	0.44	30	0.535	2	3.23	0.014	0.02	<0.1	0.08	6.5	<0.1	<0.05	14	<0.5	<0.2
L21700N 36800E	Soil		75	0.59	25	0.522	3	3.80	0.011	0.02	<0.1	0.14	13.4	<0.1	<0.05	11	0.7	<0.2
L21700N 36850E	Soil		68	0.50	33	0.579	3	3.31	0.010	0.01	<0.1	0.06	7.5	<0.1	<0.05	12	0.7	<0.2
L21700N 36900E	Soil		63	0.54	32	0.532	3	3.25	0.009	0.01	<0.1	0.09	10.1	<0.1	<0.05	11	<0.5	<0.2
L21700N 36950E	Soil		56	0.39	30	0.458	3	2.78	0.009	0.01	<0.1	0.04	8.9	<0.1	<0.05	11	0.6	<0.2
L21700N 37000E	Soil		61	0.41	17	0.436	3	3.44	0.010	0.01	<0.1	0.06	14.5	<0.1	<0.05	13	<0.5	<0.2
L21700N 37050E	Soil		72	0.62	32	0.534	3	4.10	0.009	0.01	<0.1	0.09	10.5	<0.1	<0.05	11	<0.5	<0.2
L21700N 37100E	Soil		83	0.63	35	0.573	4	5.05	0.008	0.01	<0.1	0.12	9.8	<0.1	<0.05	13	<0.5	<0.2
L21700N 37150E	Soil		57	0.59	18	0.541	4	3.56	0.009	0.01	<0.1	0.12	10.4	<0.1	<0.05	11	0.6	<0.2
L21700N 37200E	Soil		64	0.44	26	0.536	2	3.51	0.008	0.01	<0.1	0.09	7.0	<0.1	<0.05	13	<0.5	<0.2
L21700N 37250E	Soil		54	0.46	21	0.465	3	3.26	0.012	<0.01	<0.1	0.10	11.2	<0.1	<0.05	11	<0.5	<0.2
L21700N 37300E	Soil		69	0.59	34	0.548	4	3.89	0.009	0.01	<0.1	0.13	11.5	<0.1	<0.05	12	<0.5	<0.2
L21700N 37350E	Soil		54	0.53	26	0.543	3	2.52	0.009	0.01	<0.1	0.10	6.3	<0.1	<0.05	12	<0.5	<0.2
L21700N 37400E	Soil		58	0.39	30	0.532	4	3.00	0.009	0.01	<0.1	0.07	6.5	0.1	<0.05	13	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: LH-12
Report Date: May 03, 2012

QUALITY CONTROL REPORT VAN12001947.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
L000N 250E	Soil	0.1	6.3	40.8	34	<0.1	6.0	7.3	817	3.41	4.0	<0.5	0.3	18	0.5	0.7	0.4	139	1.21	0.065	2
REP L000N 250E	QC	0.3	5.7	39.0	36	<0.1	6.6	7.7	858	3.57	4.2	3.0	0.4	19	0.5	0.8	0.4	144	1.23	0.065	2
L600N 225E	Soil	0.4	71.2	4.1	56	0.1	32.1	15.4	506	5.08	3.7	<0.5	0.7	21	0.2	0.4	<0.1	193	0.73	0.041	4
REP L600N 225E	QC	0.5	67.9	4.1	55	<0.1	33.0	15.6	496	4.91	3.6	<0.5	0.7	20	0.2	0.4	<0.1	188	0.70	0.041	4
L21700N 36850E	Soil	0.5	61.3	3.3	55	<0.1	36.1	18.2	464	5.45	3.6	6.6	0.7	15	<0.1	0.5	0.2	214	0.85	0.044	3
REP L21700N 36850E	QC	0.5	60.6	3.3	54	<0.1	36.3	18.4	462	5.53	3.9	5.2	0.7	16	<0.1	0.5	<0.1	209	0.83	0.046	3
L21700N 37200E	Soil	0.4	69.9	6.1	77	<0.1	35.4	20.2	579	5.89	3.2	<0.5	0.7	12	0.3	0.6	<0.1	206	0.76	0.087	3
REP L21700N 37200E	QC	0.4	67.8	5.9	73	<0.1	36.0	19.2	573	5.70	2.9	0.6	0.7	12	0.3	0.5	<0.1	202	0.74	0.081	3
Reference Materials																					
STD DS8	Standard	13.0	101.1	120.2	295	1.6	36.1	6.9	581	2.35	24.4	108.3	7.6	77	2.1	6.2	6.2	40	0.67	0.075	17
STD DS8	Standard	12.6	102.9	119.8	294	1.6	36.3	7.2	566	2.42	23.6	112.1	6.6	72	2.2	6.2	6.1	41	0.64	0.075	15
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	0.3	0.4	<1	<0.1	<0.1	<0.1	<1	0.04	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.4	<0.1	<1	<0.1	<0.1	<0.1	1	0.05	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: LH-12
Report Date: May 03, 2012

QUALITY CONTROL REPORT VAN12001947.1

	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																	
L000N 250E	Soil	11	0.12	18	0.351	2	1.24	0.009	0.01	<0.1	0.02	2.3	<0.1	<0.05	10	<0.5	<0.2
REP L000N 250E	QC	12	0.13	20	0.367	3	1.29	0.009	0.01	<0.1	0.03	2.7	<0.1	<0.05	11	<0.5	<0.2
L600N 225E	Soil	59	0.45	56	0.436	3	2.99	0.008	0.03	<0.1	0.05	6.7	<0.1	<0.05	11	<0.5	<0.2
REP L600N 225E	QC	56	0.45	53	0.425	2	2.94	0.008	0.02	<0.1	0.05	6.4	<0.1	<0.05	10	<0.5	<0.2
L21700N 36850E	Soil	68	0.50	33	0.579	3	3.31	0.010	0.01	<0.1	0.06	7.5	<0.1	<0.05	12	0.7	<0.2
REP L21700N 36850E	QC	68	0.51	33	0.577	4	3.31	0.009	0.01	<0.1	0.06	7.7	<0.1	<0.05	12	<0.5	<0.2
L21700N 37200E	Soil	64	0.44	26	0.536	2	3.51	0.008	0.01	<0.1	0.09	7.0	<0.1	<0.05	13	<0.5	<0.2
REP L21700N 37200E	QC	63	0.43	25	0.520	3	3.47	0.007	0.01	<0.1	0.13	6.9	<0.1	<0.05	13	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	112	0.56	279	0.128	2	0.90	0.104	0.39	3.1	0.17	3.9	5.6	0.08	5	3.9	5.2
STD DS8	Standard	112	0.57	275	0.122	3	0.87	0.088	0.38	3.0	0.17	2.7	5.5	<0.05	5	5.5	4.7
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 27, 2012
Report Date: May 08, 2012
Page: 1 of 4

CERTIFICATE OF ANALYSIS VAN12002000.1

CLIENT JOB INFORMATION

Project: H-11
Shipment ID: Bag 1, sent 26/04/12
P.O. Number 12-327
Number of Samples: 86

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
STOR-RJT-SOIL Store Soil Reject - RJSV Charges Apply

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	85	Dry at 60C			VAN
SS80	85	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	85	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:

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

Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002000.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
H-12 L37050E 18300N	Soil	0.3	15.4	6.4	16	<0.1	5.6	2.7	93	5.72	2.4	4.9	0.4	7	<0.1	0.6	<0.1	292	0.27	0.019	2
H-12 L37050E 18325N	Soil	0.4	36.3	4.9	38	0.2	15.0	7.0	178	4.89	8.5	2.2	0.4	7	<0.1	1.1	0.2	186	0.47	0.022	2
H-12 L37050E 18350N	Soil	0.5	66.2	5.1	43	0.1	18.5	7.5	158	7.32	11.9	3.2	0.7	6	0.2	0.7	0.1	260	0.34	0.032	2
H-12 L37050E 18375N	Soil	0.4	109.3	3.4	46	0.1	26.9	11.7	221	5.77	8.2	6.1	0.7	7	0.1	0.6	<0.1	220	0.57	0.020	2
H-12 L37050E 18400N	Soil	0.3	42.0	4.9	29	0.1	11.1	4.9	155	5.94	12.6	1.9	0.5	8	0.1	0.7	<0.1	229	0.44	0.035	2
H-12 L37050E 18425N	Soil	0.1	7.2	15.0	18	0.2	3.1	1.7	237	0.75	3.0	0.7	<0.1	7	0.2	0.1	0.1	65	0.36	0.029	<1
H-12 L37050E 18450N	Soil	0.5	99.8	3.4	61	0.1	27.3	13.6	259	6.56	12.0	4.0	0.8	7	0.4	0.6	<0.1	238	0.57	0.042	3
H-12 L37050E 18475N	Soil	0.3	21.7	4.1	17	<0.1	7.1	4.0	74	2.53	5.7	2.3	0.2	13	0.2	0.3	<0.1	116	0.35	0.022	4
H-12 L37050E 18500N	Soil	0.4	95.7	3.8	47	<0.1	27.6	11.9	212	6.55	7.3	4.0	0.6	9	0.2	0.6	<0.1	247	0.59	0.040	2
H-12 L37050E 18525N	Soil	0.4	95.7	3.7	49	<0.1	33.9	15.8	313	6.02	13.0	3.2	0.8	11	0.2	0.6	<0.1	209	0.78	0.078	4
H-12 L37050E 18550N	Soil	0.5	81.0	5.3	59	<0.1	31.4	18.5	390	6.65	15.4	3.7	0.8	9	0.1	0.6	<0.1	263	0.71	0.058	3
H-12 L37050E 18575N	Soil	0.6	108.4	3.5	64	<0.1	40.2	20.6	320	6.96	10.0	4.5	0.9	9	0.1	0.6	0.1	279	0.75	0.048	4
H-12 L37050E 18600N	Soil	0.6	47.6	5.1	42	<0.1	18.0	9.3	211	7.44	10.9	1.6	0.7	7	0.1	0.7	<0.1	274	0.49	0.045	2
H-12 L37050E 18625N	Soil	1.8	37.3	6.4	34	<0.1	11.1	16.0	170	4.43	142.6	5.2	0.5	10	<0.1	0.3	0.1	232	0.46	0.021	7
H-12 L37050E 18650N	Soil	5.1	41.5	4.1	43	<0.1	16.6	13.4	588	6.19	648.0	2.7	0.3	16	<0.1	0.5	<0.1	341	1.01	0.036	5
H-12 L37050E 18675N	Soil	2.0	15.8	5.6	30	<0.1	5.7	9.8	225	2.83	31.0	61.1	0.2	7	0.1	0.4	<0.1	184	0.40	0.017	2
H-12 L37050E 18700N	Soil	0.8	19.2	5.8	21	<0.1	5.4	2.5	71	5.89	1.4	3.5	0.3	3	<0.1	0.5	0.1	322	0.31	0.009	1
H-12 L37000E 18300N	Soil	0.4	29.1	3.5	25	<0.1	9.6	4.3	106	4.61	8.1	4.9	0.5	3	<0.1	0.4	<0.1	183	0.18	0.026	2
H-12 L37000E 18325N	Soil	0.4	67.8	3.4	49	0.3	26.1	11.4	226	4.69	8.1	996.5	0.6	4	<0.1	0.4	<0.1	179	0.35	0.036	2
H-12 L37000E 18350N	Soil	0.6	70.1	4.2	39	0.1	21.7	9.3	198	5.57	11.3	111.2	0.8	5	0.1	0.5	0.1	190	0.41	0.042	2
H-12 L37000E 18375N	Soil	0.3	18.2	12.0	24	0.2	6.5	2.6	110	7.07	1.2	220.9	0.3	3	<0.1	0.4	0.2	413	0.13	0.017	2
H-12 L37000E 18400N	Soil	1.0	97.0	3.4	58	0.1	39.2	28.9	1085	5.01	193.9	14.3	0.6	5	0.1	0.9	<0.1	161	0.44	0.020	6
H-12 L37000E 18425N	Soil	0.9	56.4	2.7	37	0.1	18.0	7.7	159	5.72	71.3	2.2	0.6	5	0.1	0.6	<0.1	174	0.20	0.032	3
H-12 L37000E 18450N	Soil	0.7	27.7	4.1	22	<0.1	6.8	3.4	74	5.04	71.2	4.9	0.3	4	<0.1	1.1	<0.1	237	0.16	0.012	2
H-12 L37000E 18475N	Soil	0.5	86.7	4.2	52	0.1	33.3	13.0	231	5.64	13.4	4.7	0.8	6	0.2	0.4	<0.1	197	0.54	0.030	2
H-12 L37000E 18500N	Soil	0.3	79.8	2.8	49	0.1	34.0	15.9	254	5.70	8.1	4.6	0.7	6	0.1	0.5	<0.1	212	0.49	0.035	4
H-12 L37000E 18525N	Soil	0.4	53.2	4.0	40	<0.1	24.6	12.0	176	5.50	3.6	3.4	0.7	5	<0.1	0.4	<0.1	221	0.41	0.035	3
H-12 L37000E 18550N	Soil	0.6	23.7	8.0	28	<0.1	8.9	3.7	131	7.81	2.8	4.3	0.6	5	<0.1	0.6	0.1	338	0.30	0.039	2
H-12 L37000E 18575N	Soil	0.4	109.7	2.6	44	<0.1	31.4	13.1	224	5.43	8.3	5.6	0.9	6	<0.1	0.4	<0.1	204	0.53	0.033	3
H-12 L37000E 18600N	Soil	0.3	55.2	4.0	34	<0.1	16.3	7.0	187	5.26	2.9	2.9	0.5	5	<0.1	0.5	<0.1	217	0.39	0.021	2

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

Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002000.1

		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
H-12 L37050E 18300N	Soil		42	0.07	12	0.467	<1	0.78	0.005	<0.01	<0.1	0.01	1.3	<0.1	<0.05	14	<0.5	<0.2
H-12 L37050E 18325N	Soil		44	0.22	15	0.323	2	1.73	0.005	0.01	<0.1	0.06	3.5	<0.1	<0.05	10	<0.5	<0.2
H-12 L37050E 18350N	Soil		75	0.22	15	0.454	2	2.62	0.005	0.01	<0.1	0.07	4.2	<0.1	<0.05	15	0.5	<0.2
H-12 L37050E 18375N	Soil		58	0.46	26	0.415	3	2.91	0.006	0.01	<0.1	0.06	6.3	<0.1	<0.05	12	<0.5	<0.2
H-12 L37050E 18400N	Soil		54	0.17	14	0.456	3	1.72	0.006	0.01	<0.1	0.06	3.2	<0.1	<0.05	12	<0.5	<0.2
H-12 L37050E 18425N	Soil		7	0.09	7	0.172	2	0.26	0.006	0.02	<0.1	0.06	0.9	<0.1	0.06	2	<0.5	<0.2
H-12 L37050E 18450N	Soil		73	0.41	19	0.464	2	3.60	0.006	0.01	<0.1	0.12	10.2	<0.1	<0.05	13	<0.5	<0.2
H-12 L37050E 18475N	Soil		25	0.09	23	0.216	1	0.90	0.007	<0.01	<0.1	0.08	2.2	<0.1	<0.05	6	0.8	<0.2
H-12 L37050E 18500N	Soil		77	0.37	22	0.509	2	3.57	0.006	0.01	<0.1	0.06	6.6	<0.1	<0.05	13	<0.5	<0.2
H-12 L37050E 18525N	Soil		73	0.57	36	0.511	4	4.01	0.007	0.01	<0.1	0.14	10.8	<0.1	<0.05	13	<0.5	<0.2
H-12 L37050E 18550N	Soil		75	0.50	27	0.528	4	3.77	0.007	0.01	<0.1	0.11	9.0	<0.1	<0.05	14	<0.5	<0.2
H-12 L37050E 18575N	Soil		96	0.59	29	0.586	4	4.21	0.007	0.01	<0.1	0.12	15.9	<0.1	<0.05	13	0.7	<0.2
H-12 L37050E 18600N	Soil		78	0.28	15	0.523	3	3.11	0.006	0.01	<0.1	0.08	4.6	<0.1	<0.05	15	<0.5	<0.2
H-12 L37050E 18625N	Soil		47	0.11	18	0.498	1	1.72	0.006	<0.01	<0.1	0.06	4.8	<0.1	<0.05	15	<0.5	<0.2
H-12 L37050E 18650N	Soil		59	0.30	18	0.283	3	1.90	0.006	<0.01	<0.1	0.10	7.1	<0.1	<0.05	9	0.7	<0.2
H-12 L37050E 18675N	Soil		26	0.10	9	0.323	1	0.71	0.005	0.01	<0.1	0.04	1.9	<0.1	<0.05	9	<0.5	<0.2
H-12 L37050E 18700N	Soil		43	0.07	5	0.551	2	0.88	0.004	<0.01	<0.1	0.03	1.8	<0.1	<0.05	15	<0.5	<0.2
H-12 L37000E 18300N	Soil		48	0.11	11	0.248	1	1.60	0.004	<0.01	<0.1	0.07	2.5	<0.1	<0.05	10	<0.5	<0.2
H-12 L37000E 18325N	Soil		59	0.35	17	0.302	2	2.63	0.005	<0.01	<0.1	0.12	6.9	<0.1	<0.05	9	0.6	<0.2
H-12 L37000E 18350N	Soil		65	0.34	16	0.308	3	3.46	0.006	0.01	<0.1	0.14	5.2	<0.1	<0.05	9	<0.5	<0.2
H-12 L37000E 18375N	Soil		38	0.06	9	0.664	1	0.76	0.005	<0.01	<0.1	0.06	1.4	<0.1	<0.05	18	<0.5	<0.2
H-12 L37000E 18400N	Soil		67	0.44	36	0.182	2	3.08	0.006	0.01	<0.1	0.07	8.0	<0.1	<0.05	9	0.5	<0.2
H-12 L37000E 18425N	Soil		66	0.23	21	0.299	2	3.03	0.005	0.01	<0.1	0.13	5.1	<0.1	<0.05	10	0.6	<0.2
H-12 L37000E 18450N	Soil		40	0.08	13	0.321	<1	1.00	0.004	<0.01	<0.1	0.03	2.0	<0.1	<0.05	12	<0.5	<0.2
H-12 L37000E 18475N	Soil		87	0.46	17	0.430	2	4.04	0.005	<0.01	<0.1	0.14	8.2	<0.1	<0.05	11	<0.5	<0.2
H-12 L37000E 18500N	Soil		82	0.42	24	0.445	2	3.49	0.007	<0.01	<0.1	0.10	10.8	<0.1	<0.05	11	<0.5	<0.2
H-12 L37000E 18525N	Soil		73	0.28	22	0.422	2	3.05	0.006	<0.01	<0.1	0.08	9.3	<0.1	<0.05	11	<0.5	<0.2
H-12 L37000E 18550N	Soil		72	0.14	10	0.531	1	1.80	0.005	<0.01	<0.1	0.03	2.3	<0.1	<0.05	18	<0.5	<0.2
H-12 L37000E 18575N	Soil		71	0.43	16	0.449	3	3.81	0.007	0.01	<0.1	0.12	9.5	<0.1	<0.05	10	<0.5	<0.2
H-12 L37000E 18600N	Soil		57	0.25	13	0.424	2	2.18	0.007	<0.01	<0.1	0.09	5.5	<0.1	<0.05	11	<0.5	<0.2

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910 - 475 Howe Street
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Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002000.1

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
H-12 L37000E 18625N	Soil	0.5	33.7	4.5	28	<0.1	8.8	4.5	120	5.52	4.3	6.7	0.5	5	<0.1	0.5	<0.1	249	0.29	0.019	2
H-12 L37000E 18650N	Soil	1.1	32.9	5.4	37	<0.1	10.7	10.7	146	7.86	4.0	32.1	0.3	5	<0.1	0.4	<0.1	349	0.35	0.026	2
H-12 L36950E 18300N	Soil	0.6	48.7	4.0	34	0.1	13.8	8.2	153	5.75	46.3	4.7	0.5	4	<0.1	1.1	<0.1	217	0.22	0.023	2
H-12 L36950E 18325N	Soil	0.6	64.4	5.7	33	0.1	18.0	8.5	177	6.09	81.9	3.5	0.5	5	<0.1	1.0	<0.1	222	0.33	0.023	2
H-12 L36950E 18350N	Soil	0.4	89.4	3.3	71	<0.1	41.2	23.9	339	5.16	100.1	5.7	0.6	6	<0.1	0.8	<0.1	167	0.47	0.016	4
H-12 L36950E 18375N	Soil	0.6	105.8	4.4	67	<0.1	38.1	26.6	659	4.42	85.9	6.0	0.5	10	0.1	0.7	<0.1	140	0.61	0.026	4
H-12 L36950E 18400N	Soil	0.4	23.8	3.4	22	0.1	7.8	4.0	95	3.67	74.0	8.5	0.3	5	<0.1	0.7	<0.1	199	0.32	0.014	2
H-12 L36950E 18425N	Soil	0.2	38.9	4.9	27	0.1	11.0	5.1	114	5.41	51.9	1.2	0.3	4	0.1	0.8	<0.1	220	0.22	0.022	2
H-12 L36950E 18450N	Soil	0.8	134.9	3.7	61	<0.1	37.6	19.4	293	6.04	31.5	21.1	0.7	5	0.2	0.5	<0.1	216	0.39	0.038	3
H-12 L36950E 18475N	Soil	0.7	89.5	3.2	65	<0.1	35.3	17.2	284	5.64	13.1	5.7	0.8	5	0.1	0.5	<0.1	211	0.48	0.035	3
H-12 L36950E 18500N	Soil	0.2	27.6	7.6	27	<0.1	6.5	3.4	145	4.25	1.1	5.6	0.3	5	0.1	0.2	0.1	308	0.28	0.014	2
H-12 L36950E 18525N	Soil	0.3	26.9	4.0	18	<0.1	8.6	3.9	80	5.61	21.6	14.7	0.5	3	<0.1	0.7	<0.1	212	0.18	0.017	2
H-12 L36950E 18550N	Soil	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
H-12 L36950E 18575N	Soil	0.6	69.3	4.4	45	0.1	25.7	11.6	193	6.22	9.3	5.1	0.6	5	<0.1	0.3	<0.1	226	0.32	0.034	3
H-12 L36950E 18600N	Soil	0.4	38.0	3.9	36	<0.1	16.2	7.3	132	5.43	4.4	1.5	0.5	6	0.1	0.5	<0.1	201	0.38	0.025	6
H-12 L36950E 18625N	Soil	0.5	115.8	14.0	35	0.1	20.3	10.8	728	2.70	11.0	1.6	0.3	16	0.2	0.6	<0.1	112	0.90	0.036	4
H-12 L36950E 18650N	Soil	0.9	99.9	4.2	67	<0.1	37.8	26.4	850	4.37	155.8	3.9	0.4	11	0.2	1.0	<0.1	140	0.73	0.023	3
H-12 L36950E 18675N	Soil	1.1	73.9	4.8	60	0.2	29.0	22.8	6054	3.35	154.7	2.7	0.4	10	0.2	0.3	<0.1	103	0.61	0.037	7
H-12 L36950E 18700N	Soil	0.5	95.6	3.2	55	<0.1	37.8	18.4	294	5.92	6.8	0.6	0.8	7	<0.1	0.4	0.1	263	0.68	0.027	4
H-12 L36750E 18200N	Soil	0.5	30.0	16.0	21	<0.1	9.5	4.6	150	3.68	6.5	0.7	0.2	4	0.1	0.5	0.2	158	0.34	0.046	2
H-12 L36750E 18225N	Soil	0.5	51.7	3.2	55	<0.1	21.5	10.1	165	5.23	7.1	3.3	0.7	5	<0.1	0.4	<0.1	193	0.36	0.031	2
H-12 L36750E 18250N	Soil	0.5	54.1	4.6	28	<0.1	12.1	5.8	139	6.82	8.0	6.4	0.6	4	0.1	0.7	0.1	259	0.23	0.034	2
H-12 L36750E 18275N	Soil	0.6	83.3	4.9	89	0.1	50.9	21.5	394	6.60	23.8	2.3	0.7	11	0.2	0.7	0.1	216	0.58	0.050	5
H-12 L36750E 18300N	Soil	0.5	69.0	7.9	59	<0.1	23.1	10.9	296	6.32	10.5	3.4	0.7	7	0.2	0.8	0.1	235	0.44	0.048	3
H-12 L36750E 18325N	Soil	0.6	99.9	3.1	49	<0.1	30.2	14.4	268	6.21	11.1	13.9	0.9	6	0.1	0.6	<0.1	195	0.61	0.069	3
H-12 L36750E 18350N	Soil	0.8	68.7	5.7	46	<0.1	16.2	10.1	514	6.60	8.7	4.6	0.8	5	0.1	0.6	0.1	219	0.34	0.047	2
H-12 L36750E 18375N	Soil	0.8	70.2	6.7	62	<0.1	26.7	13.8	356	8.18	13.6	2.3	0.7	7	<0.1	0.7	0.1	221	0.42	0.082	3
H-12 L36750E 18400N	Soil	0.3	22.0	19.8	60	<0.1	10.3	5.6	1380	5.17	5.1	2.6	0.5	7	0.3	0.6	0.3	208	0.36	0.075	3
H-12 L36750E 18425N	Soil	0.7	105.2	3.9	58	<0.1	38.2	19.2	378	5.23	12.9	19.9	0.9	6	<0.1	0.7	0.1	174	0.50	0.039	2
H-12 L36750E 18450N	Soil	0.5	37.5	5.1	33	<0.1	11.8	6.8	159	6.18	8.0	6.0	0.6	8	<0.1	0.6	0.1	265	0.25	0.040	3

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Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002000.1

		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
H-12 L37000E 18625N	Soil		51	0.11	10	0.475	<1	1.47	0.006	<0.01	<0.1	0.05	2.5	<0.1	<0.05	14	<0.5	<0.2
H-12 L37000E 18650N	Soil		63	0.13	13	0.567	<1	1.65	0.004	<0.01	<0.1	0.04	2.9	<0.1	<0.05	20	<0.5	<0.2
H-12 L36950E 18300N	Soil		58	0.16	16	0.285	<1	2.17	0.006	0.01	<0.1	0.07	3.8	<0.1	<0.05	12	<0.5	<0.2
H-12 L36950E 18325N	Soil		51	0.32	27	0.373	1	1.77	0.006	0.02	<0.1	0.10	5.5	<0.1	<0.05	10	<0.5	<0.2
H-12 L36950E 18350N	Soil		64	0.53	41	0.188	2	2.95	0.006	0.02	<0.1	0.08	11.3	<0.1	<0.05	9	<0.5	<0.2
H-12 L36950E 18375N	Soil		51	0.63	42	0.184	2	2.39	0.008	0.02	<0.1	0.06	8.3	<0.1	<0.05	8	<0.5	<0.2
H-12 L36950E 18400N	Soil		35	0.13	12	0.261	2	0.99	0.005	<0.01	<0.1	0.03	3.1	<0.1	<0.05	10	<0.5	<0.2
H-12 L36950E 18425N	Soil		49	0.14	15	0.266	1	1.47	0.005	<0.01	<0.1	0.04	3.2	<0.1	<0.05	11	<0.5	<0.2
H-12 L36950E 18450N	Soil		71	0.46	24	0.409	2	3.79	0.006	0.02	<0.1	0.12	9.5	<0.1	<0.05	10	0.8	<0.2
H-12 L36950E 18475N	Soil		71	0.51	25	0.414	2	3.66	0.006	0.01	<0.1	0.14	7.9	<0.1	<0.05	10	<0.5	<0.2
H-12 L36950E 18500N	Soil		36	0.07	8	0.565	<1	0.62	0.005	<0.01	<0.1	0.03	1.7	<0.1	<0.05	11	<0.5	<0.2
H-12 L36950E 18525N	Soil		53	0.10	8	0.227	<1	1.76	0.004	<0.01	<0.1	0.09	2.4	<0.1	<0.05	12	<0.5	<0.2
H-12 L36950E 18550N	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
H-12 L36950E 18575N	Soil		70	0.34	23	0.346	<1	3.05	0.005	0.01	<0.1	0.18	7.3	<0.1	<0.05	13	<0.5	<0.2
H-12 L36950E 18600N	Soil		57	0.22	16	0.424	<1	2.20	0.005	0.01	<0.1	0.11	3.9	<0.1	<0.05	10	<0.5	<0.2
H-12 L36950E 18625N	Soil		35	0.34	25	0.216	2	1.96	0.010	0.02	<0.1	0.11	6.3	<0.1	<0.05	6	<0.5	<0.2
H-12 L36950E 18650N	Soil		49	0.67	35	0.167	3	2.43	0.009	0.02	<0.1	0.05	7.7	<0.1	<0.05	8	<0.5	<0.2
H-12 L36950E 18675N	Soil		53	0.26	35	0.211	3	3.13	0.007	0.02	<0.1	0.16	9.7	0.1	<0.05	6	0.6	<0.2
H-12 L36950E 18700N	Soil		84	0.56	25	0.552	2	3.63	0.009	0.01	<0.1	0.10	12.5	<0.1	<0.05	12	<0.5	<0.2
H-12 L36750E 18200N	Soil		30	0.14	10	0.210	<1	1.30	0.005	0.01	<0.1	0.08	2.7	<0.1	<0.05	8	<0.5	<0.2
H-12 L36750E 18225N	Soil		63	0.28	21	0.278	1	3.05	0.007	0.01	<0.1	0.07	4.8	<0.1	<0.05	11	<0.5	<0.2
H-12 L36750E 18250N	Soil		58	0.16	12	0.351	4	2.59	0.006	<0.01	<0.1	0.11	4.8	<0.1	<0.05	17	0.8	<0.2
H-12 L36750E 18275N	Soil		71	0.61	66	0.333	3	3.53	0.008	0.03	<0.1	0.05	7.4	<0.1	<0.05	13	0.8	<0.2
H-12 L36750E 18300N	Soil		63	0.30	27	0.427	4	2.83	0.009	0.01	<0.1	0.15	6.0	<0.1	<0.05	14	0.6	<0.2
H-12 L36750E 18325N	Soil		68	0.56	19	0.390	3	3.83	0.006	0.01	<0.1	0.14	8.5	<0.1	<0.05	11	1.1	<0.2
H-12 L36750E 18350N	Soil		62	0.26	20	0.252	4	3.16	0.006	0.01	<0.1	0.14	5.6	<0.1	<0.05	13	<0.5	<0.2
H-12 L36750E 18375N	Soil		70	0.36	25	0.296	4	3.76	0.006	0.02	<0.1	0.12	5.1	<0.1	<0.05	16	0.7	<0.2
H-12 L36750E 18400N	Soil		39	0.09	34	0.292	3	1.28	0.006	0.02	<0.1	0.03	2.7	<0.1	<0.05	13	<0.5	<0.2
H-12 L36750E 18425N	Soil		63	0.57	23	0.346	3	4.01	0.006	0.02	<0.1	0.15	9.1	<0.1	<0.05	10	0.9	<0.2
H-12 L36750E 18450N	Soil		51	0.11	22	0.406	2	1.83	0.006	<0.01	<0.1	0.08	3.7	<0.1	<0.05	14	0.7	<0.2

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Project: H-11
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CERTIFICATE OF ANALYSIS VAN12002000.1

		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
H-12 L36750E 18475N	Soil		0.4	21.0	6.5	32	<0.1	8.3	3.9	195	5.86	5.8	4.2	0.4	6	<0.1	0.6	<0.1	226	0.29	0.032	2
H-12 L36750E 18500N	Soil		0.5	34.6	5.5	51	<0.1	16.2	7.5	219	5.75	6.6	5.5	0.6	7	0.1	0.6	0.1	219	0.44	0.046	3
H-12 L36800E 18200N	Soil		0.4	86.7	7.5	72	<0.1	40.0	26.1	1082	5.26	76.8	9.4	0.6	10	0.1	1.1	<0.1	163	0.84	0.033	4
H-12 L36800E 18225N	Soil		0.7	59.5	6.7	41	0.1	19.4	9.7	180	5.51	33.5	30.0	0.7	6	<0.1	0.5	0.1	174	0.29	0.032	2
H-12 L36800E 18250N	Soil		0.4	106.4	3.1	75	<0.1	39.7	16.4	295	5.28	10.3	4.0	0.8	8	0.1	0.6	<0.1	188	0.59	0.029	3
H-12 L36800E 18275N	Soil		0.5	87.5	3.0	62	0.2	33.4	13.1	221	6.03	14.2	1.3	0.7	6	0.2	0.7	<0.1	204	0.47	0.033	2
H-12 L36800E 18300N	Soil		0.4	138.4	2.8	59	<0.1	46.0	22.2	341	5.07	12.5	5.9	0.8	10	0.2	0.7	<0.1	170	0.66	0.017	4
H-12 L36800E 18325N	Soil		0.5	102.9	3.8	65	0.1	38.7	17.4	432	6.57	10.7	2.3	0.9	9	<0.1	0.7	<0.1	228	0.66	0.048	3
H-12 L36800E 18350N	Soil		0.4	109.8	3.1	67	<0.1	45.7	23.9	388	5.68	10.5	17.5	0.9	9	<0.1	0.7	<0.1	190	0.71	0.040	2
H-12 L36800E 18375N	Soil		0.4	103.6	2.7	50	<0.1	36.8	18.1	341	4.61	12.5	3.9	0.9	8	<0.1	0.6	<0.1	150	0.65	0.023	4
H-12 L36800E 18400N	Soil		0.6	65.4	3.7	46	<0.1	27.2	13.7	266	4.70	13.2	4.0	0.7	7	0.1	0.6	<0.1	153	0.47	0.032	3
H-12 L36800E 18425N	Soil		0.5	43.4	20.1	58	<0.1	14.0	13.2	909	4.91	11.3	5.0	0.7	8	0.3	0.8	0.2	189	0.32	0.071	3
H-12 L36800E 18450N	Soil		0.6	82.7	4.3	63	<0.1	26.3	15.6	367	4.99	12.6	2.3	0.7	7	<0.1	0.6	<0.1	167	0.44	0.033	3
H-12 L36800E 18475N	Soil		0.6	81.4	5.3	47	<0.1	21.2	12.7	277	5.38	10.6	6.0	0.7	5	0.1	0.6	0.1	173	0.35	0.042	3
H-12 L36800E 18500N	Soil		1.7	79.4	17.7	92	0.3	26.5	142.9	9283	4.14	94.0	<0.5	0.3	18	0.5	1.6	0.2	112	0.45	0.093	8
H-12 L36850E 18250N	Soil		0.3	24.7	5.1	24	<0.1	9.3	4.6	137	5.59	3.7	3.3	0.5	6	0.1	0.6	0.1	218	0.31	0.026	2
H-12 L36850E 18275N	Soil		0.4	33.2	4.0	44	<0.1	17.2	8.2	162	4.88	5.3	7.4	0.4	8	<0.1	0.6	<0.1	183	0.45	0.024	2
H-12 L36850E 18300N	Soil		0.7	126.3	3.3	64	<0.1	48.3	20.3	301	5.92	18.5	4.1	0.9	8	0.1	0.7	<0.1	192	0.50	0.035	3
H-12 L36850E 18325N	Soil		0.6	80.4	4.1	35	0.1	19.3	8.2	193	6.08	11.6	4.0	0.6	7	0.1	0.9	<0.1	210	0.48	0.047	3
H-12 L36850E 18350N	Soil		0.3	43.6	3.9	42	0.1	14.3	8.1	186	4.96	5.7	2.2	0.6	7	<0.1	0.5	<0.1	177	0.34	0.026	3
H-12 L36850E 18375N	Soil		0.5	60.8	4.6	61	0.1	25.3	13.3	369	5.62	13.0	1.7	0.7	7	0.2	0.6	<0.1	183	0.40	0.042	3
H-12 L36850E 18400N	Soil		0.6	23.5	7.1	19	<0.1	8.6	4.5	230	4.01	13.7	2.5	0.6	5	0.1	0.4	<0.1	158	0.30	0.016	3
H-12 L36850E 18425N	Soil		0.6	76.5	4.7	48	0.2	29.6	16.8	283	5.45	18.0	1.6	0.7	8	<0.1	0.6	<0.1	177	0.42	0.036	10
H-12 L36850E 18450N	Soil		0.5	55.9	4.5	80	0.2	25.4	12.9	243	6.03	16.2	1.5	0.8	6	0.1	0.6	<0.1	185	0.33	0.045	3
H-12 L36850E 18475N	Soil		0.4	26.7	5.3	35	0.2	10.7	7.4	309	4.10	25.9	6.2	0.4	13	0.2	0.6	<0.1	151	0.60	0.027	3
H-12 L36850E 18500N	Soil		0.3	11.9	9.0	25	<0.1	10.2	4.4	238	5.01	2.6	2.6	0.3	12	0.2	0.4	<0.1	295	0.70	0.039	2

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

Project: H-11
Report Date: May 08, 2012

CERTIFICATE OF ANALYSIS VAN12002000.1

	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
H-12 L36750E 18475N	Soil	46	0.09	14	0.360	1	1.25	0.005	<0.01	<0.1	0.02	2.5	<0.1	<0.05	12	<0.5	<0.2
H-12 L36750E 18500N	Soil	45	0.23	23	0.343	3	2.23	0.006	0.01	<0.1	0.07	3.3	<0.1	<0.05	14	0.6	<0.2
H-12 L36800E 18200N	Soil	54	0.88	37	0.241	4	2.64	0.012	0.02	<0.1	0.04	10.1	<0.1	<0.05	9	0.8	<0.2
H-12 L36800E 18225N	Soil	48	0.31	32	0.118	3	3.13	0.007	0.02	<0.1	0.10	5.1	<0.1	<0.05	12	0.6	<0.2
H-12 L36800E 18250N	Soil	62	0.62	38	0.385	3	3.76	0.008	0.02	<0.1	0.07	7.4	<0.1	<0.05	11	<0.5	<0.2
H-12 L36800E 18275N	Soil	73	0.43	29	0.389	3	3.80	0.007	0.01	<0.1	0.11	7.6	<0.1	<0.05	12	<0.5	<0.2
H-12 L36800E 18300N	Soil	60	0.74	66	0.322	5	3.62	0.007	0.02	<0.1	0.09	10.4	<0.1	<0.05	10	<0.5	<0.2
H-12 L36800E 18325N	Soil	74	0.66	44	0.471	3	4.10	0.009	0.02	<0.1	0.09	10.4	<0.1	<0.05	13	0.6	<0.2
H-12 L36800E 18350N	Soil	75	0.77	39	0.432	4	4.89	0.007	0.02	<0.1	0.09	8.5	<0.1	<0.05	12	0.9	<0.2
H-12 L36800E 18375N	Soil	53	0.66	40	0.292	1	3.14	0.007	0.02	<0.1	0.12	11.8	<0.1	<0.05	8	0.7	<0.2
H-12 L36800E 18400N	Soil	58	0.34	35	0.221	2	2.54	0.007	0.01	<0.1	0.09	7.9	<0.1	<0.05	9	1.0	<0.2
H-12 L36800E 18425N	Soil	50	0.16	35	0.252	3	2.11	0.009	0.02	<0.1	0.07	4.8	<0.1	<0.05	11	<0.5	<0.2
H-12 L36800E 18450N	Soil	52	0.37	25	0.256	3	2.49	0.006	0.01	<0.1	0.12	6.3	<0.1	<0.05	10	0.6	<0.2
H-12 L36800E 18475N	Soil	56	0.32	20	0.269	3	2.53	0.005	0.01	<0.1	0.13	5.4	<0.1	<0.05	11	0.7	<0.2
H-12 L36800E 18500N	Soil	42	0.22	86	0.154	4	2.71	0.008	0.04	<0.1	0.20	7.7	<0.1	0.08	8	1.7	<0.2
H-12 L36850E 18250N	Soil	45	0.14	12	0.343	1	1.78	0.006	<0.01	<0.1	0.05	3.0	<0.1	<0.05	14	<0.5	<0.2
H-12 L36850E 18275N	Soil	42	0.23	15	0.302	3	1.97	0.008	<0.01	<0.1	0.03	3.6	<0.1	<0.05	10	0.5	<0.2
H-12 L36850E 18300N	Soil	72	0.63	40	0.385	2	4.70	0.007	0.02	<0.1	0.09	8.1	<0.1	<0.05	11	1.1	<0.2
H-12 L36850E 18325N	Soil	60	0.32	21	0.444	3	2.86	0.006	0.01	<0.1	0.11	6.3	<0.1	<0.05	12	<0.5	<0.2
H-12 L36850E 18350N	Soil	49	0.14	19	0.268	2	2.30	0.006	<0.01	<0.1	0.08	4.4	<0.1	<0.05	10	<0.5	<0.2
H-12 L36850E 18375N	Soil	58	0.31	31	0.277	2	2.72	0.007	0.01	<0.1	0.09	8.1	<0.1	<0.05	11	0.7	<0.2
H-12 L36850E 18400N	Soil	37	0.15	19	0.262	2	1.36	0.005	<0.01	<0.1	0.08	2.7	<0.1	<0.05	10	<0.5	<0.2
H-12 L36850E 18425N	Soil	62	0.32	37	0.227	2	3.02	0.008	0.01	<0.1	0.13	6.9	<0.1	<0.05	10	0.8	<0.2
H-12 L36850E 18450N	Soil	64	0.27	35	0.284	1	3.08	0.009	0.01	<0.1	0.13	5.5	<0.1	<0.05	11	<0.5	<0.2
H-12 L36850E 18475N	Soil	34	0.15	21	0.289	2	1.18	0.006	0.01	<0.1	0.04	2.9	<0.1	<0.05	9	<0.5	<0.2
H-12 L36850E 18500N	Soil	49	0.16	11	0.618	4	1.20	0.010	<0.01	<0.1	0.03	3.3	<0.1	<0.05	13	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
910 - 475 Howe Street
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Project: H-11
Report Date: May 08, 2012

QUALITY CONTROL REPORT VAN12002000.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
H-12 L37050E 18500N	Soil	0.4	95.7	3.8	47	<0.1	27.6	11.9	212	6.55	7.3	4.0	0.6	9	0.2	0.6	<0.1	247	0.59	0.040	2
REP H-12 L37050E 18500N	QC	0.4	97.2	3.8	49	<0.1	29.2	12.0	216	6.62	6.9	4.0	0.6	9	0.1	0.5	<0.1	253	0.58	0.039	2
H-12 L36950E 18625N	Soil	0.5	115.8	14.0	35	0.1	20.3	10.8	728	2.70	11.0	1.6	0.3	16	0.2	0.6	<0.1	112	0.90	0.036	4
REP H-12 L36950E 18625N	QC	0.4	126.4	13.3	36	0.1	21.7	11.3	784	2.91	12.7	2.8	0.3	16	0.2	0.6	<0.1	119	0.98	0.037	4
H-12 L36750E 18425N	Soil	0.7	105.2	3.9	58	<0.1	38.2	19.2	378	5.23	12.9	19.9	0.9	6	<0.1	0.7	0.1	174	0.50	0.039	2
REP H-12 L36750E 18425N	QC	0.6	103.4	4.0	59	<0.1	37.2	19.7	373	5.25	12.3	11.5	0.9	6	0.1	0.6	<0.1	169	0.49	0.038	2
H-12 L36850E 18375N	Soil	0.5	60.8	4.6	61	0.1	25.3	13.3	369	5.62	13.0	1.7	0.7	7	0.2	0.6	<0.1	183	0.40	0.042	3
REP H-12 L36850E 18375N	QC	0.5	63.0	4.7	62	0.1	25.8	14.2	361	5.86	13.8	5.0	0.8	6	0.1	0.6	<0.1	192	0.41	0.043	3
Reference Materials																					
STD DS8	Standard	13.4	109.4	127.7	311	1.8	38.0	7.5	590	2.39	25.6	100.3	7.0	74	2.3	6.3	7.3	41	0.70	0.078	17
STD DS8	Standard	12.8	107.2	121.7	319	1.7	38.0	7.4	588	2.37	24.5	121.7	6.4	71	2.2	5.7	6.1	42	0.65	0.080	14
STD DS8	Standard	12.6	105.6	118.8	302	1.8	36.4	7.3	597	2.41	25.0	111.2	7.0	70	2.2	5.4	5.7	42	0.69	0.076	17
STD DS8	Standard	13.0	106.3	112.0	283	1.7	38.3	7.1	542	2.15	21.5	99.0	6.2	60	1.8	4.7	5.6	43	0.63	0.070	16
STD DS9	Standard	12.1	106.1	131.5	306	1.8	38.9	7.1	561	2.18	24.0	106.4	6.9	77	2.2	6.0	7.4	38	0.69	0.078	14
STD DS9	Standard	12.0	106.6	122.4	307	1.8	39.1	7.3	544	2.23	24.6	123.2	6.3	75	2.1	6.0	6.5	40	0.69	0.080	13
STD DS9	Standard	12.5	105.5	123.9	302	1.7	36.7	7.1	571	2.21	24.8	108.3	6.6	73	2.4	5.3	5.7	41	0.68	0.080	15
STD DS9	Standard	11.4	106.8	119.8	288	1.7	41.1	7.2	525	2.13	21.2	102.5	5.7	61	2.1	4.7	5.8	39	0.65	0.067	13
STD DS9 Expected		12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844	15.7
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	0.4	<0.1	<1	<0.1	<0.1	<0.1	<1	0.03	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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Project: H-11
Report Date: May 08, 2012

QUALITY CONTROL REPORT VAN12002000.1

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																	
H-12 L37050E 18500N	Soil	77	0.37	22	0.509	2	3.57	0.006	0.01	<0.1	0.06	6.6	<0.1	<0.05	13	<0.5	<0.2
REP H-12 L37050E 18500N	QC	78	0.35	22	0.504	3	3.51	0.006	0.01	<0.1	0.08	6.7	<0.1	<0.05	13	<0.5	<0.2
H-12 L36950E 18625N	Soil	35	0.34	25	0.216	2	1.96	0.010	0.02	<0.1	0.11	6.3	<0.1	<0.05	6	<0.5	<0.2
REP H-12 L36950E 18625N	QC	39	0.35	24	0.242	3	2.09	0.012	0.02	<0.1	0.12	6.3	<0.1	<0.05	6	<0.5	<0.2
H-12 L36750E 18425N	Soil	63	0.57	23	0.346	3	4.01	0.006	0.02	<0.1	0.15	9.1	<0.1	<0.05	10	0.9	<0.2
REP H-12 L36750E 18425N	QC	64	0.58	23	0.358	4	3.92	0.006	0.01	<0.1	0.13	8.9	<0.1	<0.05	9	0.8	<0.2
H-12 L36850E 18375N	Soil	58	0.31	31	0.277	2	2.72	0.007	0.01	<0.1	0.09	8.1	<0.1	<0.05	11	0.7	<0.2
REP H-12 L36850E 18375N	QC	60	0.32	32	0.279	3	2.88	0.010	0.01	<0.1	0.08	8.2	<0.1	<0.05	11	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	119	0.60	296	0.118	2	0.93	0.097	0.39	2.9	0.20	2.8	5.4	0.14	5	5.4	5.3
STD DS8	Standard	117	0.58	266	0.121	3	0.89	0.101	0.42	2.7	0.20	2.9	5.6	0.10	4	5.3	4.7
STD DS8	Standard	116	0.58	293	0.115	3	0.93	0.104	0.42	3.0	0.21	2.7	5.2	0.13	5	4.6	4.7
STD DS8	Standard	115	0.57	258	0.111	2	0.90	0.100	0.39	2.8	0.18	2.8	4.9	<0.05	4	4.1	4.3
STD DS9	Standard	113	0.60	303	0.114	2	0.93	0.080	0.36	3.0	0.17	2.3	5.4	0.12	5	4.4	5.0
STD DS9	Standard	116	0.60	296	0.116	3	0.92	0.090	0.38	2.8	0.19	2.6	5.4	0.09	4	5.7	4.8
STD DS9	Standard	119	0.60	310	0.115	3	0.97	0.094	0.37	2.8	0.21	2.5	5.2	0.14	5	4.8	4.8
STD DS9	Standard	115	0.54	259	0.102	3	0.83	0.077	0.33	2.7	0.18	2.4	5.2	<0.05	4	4.7	4.6
STD DS9 Expected		119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 27, 2012
Report Date: May 07, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12002002.1

CLIENT JOB INFORMATION

Project: H-11-LL-12
Shipment ID: Bag 3, sent 26/04/12
P.O. Number 12-327
Number of Samples: 33

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	33	Dry at 60C			VAN
SS80	33	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	33	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:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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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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910 - 475 Howe Street
Vancouver BC V6C 2B3 Canada

Project: H-11-LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002002.1

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
H-12 L36900E 18325N	Soil	0.6	72.4	12.8	43	<0.1	14.0	7.6	353	7.13	26.1	5.1	0.5	6	0.1	0.9	0.2	247	0.42	0.068	2
H-12 L36900E 18350N	Soil	0.5	66.4	4.6	61	0.1	17.4	8.6	206	6.17	13.1	3.2	0.6	7	0.2	0.7	<0.1	190	0.48	0.059	2
H-12 L36900E 18375N	Soil	0.6	77.4	3.9	80	0.1	32.0	16.9	226	5.60	12.5	1.9	0.8	5	0.1	0.5	<0.1	201	0.34	0.043	3
H-12 L36900E 18400N	Soil	0.4	68.1	3.9	45	0.1	24.8	12.1	171	5.73	6.7	5.8	0.7	6	0.1	0.7	<0.1	201	0.39	0.018	3
H-12 L36900E 18425N	Soil	0.9	119.4	9.8	73	0.4	39.4	52.6	2229	4.82	12.3	<0.5	0.4	11	0.2	0.4	0.1	151	0.49	0.046	7
H-12 L36900E 18450N	Soil	0.8	84.0	4.9	50	0.1	19.7	10.4	228	6.49	16.4	3.5	0.4	7	0.3	0.7	<0.1	213	0.45	0.038	3
H-12 L36900E 18475N	Soil	0.3	36.3	5.5	27	<0.1	10.3	4.6	127	6.70	3.6	1.4	0.5	4	<0.1	0.7	0.1	245	0.30	0.045	2
H-12 L36900E 18500N	Soil	0.3	13.4	6.7	17	<0.1	5.8	2.8	116	5.56	1.6	10.5	0.4	4	<0.1	0.4	0.1	276	0.29	0.031	2
LL-12 L21800N 36200E	Soil	0.6	42.0	7.5	63	<0.1	21.7	16.5	521	6.47	6.5	2.5	0.7	8	0.2	0.6	0.1	218	0.65	0.158	2
LL-12 L21800N 36250E	Soil	0.4	62.9	5.1	62	<0.1	39.2	20.0	439	6.41	4.6	1.6	0.8	10	0.2	0.6	<0.1	221	0.64	0.072	2
LL-12 L21800N 36300E	Soil	0.3	27.8	4.9	45	<0.1	21.0	10.3	220	5.95	2.4	0.9	0.5	10	<0.1	0.4	<0.1	218	0.60	0.042	3
LL-12 L21800N 36350E	Soil	0.5	59.9	6.7	76	<0.1	31.7	16.1	318	6.10	5.4	2.0	0.6	11	0.1	0.5	0.1	213	0.59	0.058	2
LL-12 L21800N 36400E	Soil	0.4	93.1	9.0	52	<0.1	40.7	20.2	826	4.95	8.7	2.4	0.7	21	0.2	0.5	<0.1	187	1.10	0.057	6
LL-12 L21800N 36450E	Soil	0.4	90.1	4.0	46	<0.1	31.1	17.2	366	5.00	6.2	0.5	2.3	11	0.2	0.5	<0.1	201	0.77	0.032	5
LL-12 L21800N 36500E	Soil	0.4	65.4	46.4	61	0.1	27.1	21.6	1539	4.12	18.5	2.5	0.3	24	0.4	0.6	0.3	137	1.08	0.070	4
LL-12 L21800N 36550E	Soil	0.2	126.7	1.2	57	<0.1	44.1	24.2	758	4.88	13.3	3.1	0.6	40	0.1	0.8	<0.1	164	2.03	0.050	6
LL-12 L21800N 36600E	Soil	0.3	70.3	1.7	42	<0.1	41.2	19.2	846	4.31	4.2	1.5	0.6	25	0.1	0.3	<0.1	173	1.25	0.025	4
LL-12 L21800N 36650E	Soil	0.4	93.5	5.2	44	<0.1	40.5	20.5	577	4.07	4.6	1.9	0.6	21	0.1	0.3	<0.1	161	1.13	0.038	6
LL-12 L21800N 36700E	Soil	0.4	79.8	4.0	67	<0.1	41.3	22.0	544	5.58	3.9	23.2	0.7	13	0.2	0.4	<0.1	223	0.77	0.044	4
LL-12 L21800N 36750E	Soil	0.4	124.8	4.5	60	<0.1	46.0	21.8	604	5.47	5.9	1.2	0.8	16	0.3	0.4	<0.1	211	0.92	0.048	4
LL-12 L21800N 36800E	Soil	0.3	104.0	4.2	53	<0.1	45.4	21.3	520	5.18	4.9	1.0	0.7	17	<0.1	0.5	<0.1	208	0.86	0.055	4
LL-12 L21800N 36850E	Soil	0.5	37.1	7.2	88	<0.1	29.2	16.0	2894	2.98	1.8	2.9	0.6	18	0.1	0.3	<0.1	123	1.05	0.043	5
LL-12 L21800N 36900E	Soil	0.4	96.6	3.7	50	<0.1	37.9	20.8	639	4.92	2.8	2.5	0.6	16	0.1	0.4	<0.1	198	0.81	0.040	5
LL-12 L21800N 36950E	Soil	0.3	58.5	9.7	66	<0.1	29.7	18.0	525	5.45	4.6	0.7	0.7	13	0.2	0.5	<0.1	201	0.77	0.065	3
LL-12 L21800N 37000E	Soil	0.5	80.6	7.9	55	<0.1	34.3	17.4	590	4.87	3.9	2.2	0.7	11	0.2	0.5	<0.1	184	0.87	0.069	3
LL-12 L21800N 37050E	Soil	0.5	62.8	4.3	60	<0.1	40.6	20.3	420	5.37	58.3	0.9	0.8	12	0.1	0.6	<0.1	207	0.78	0.083	2
LL-12 L21800N 37100E	Soil	0.3	73.4	3.9	58	<0.1	31.1	18.1	310	5.61	1.8	2.3	0.6	13	<0.1	0.5	<0.1	216	0.84	0.033	3
LL-12 L21800N 37150E	Soil	0.4	76.2	4.4	57	<0.1	40.8	25.8	990	5.32	4.2	0.9	0.6	19	0.1	0.4	<0.1	211	1.05	0.040	6
LL-12 L21800N 37200E	Soil	0.6	103.4	3.5	39	0.3	39.2	21.4	441	5.23	4.0	9.6	0.9	13	0.1	0.4	<0.1	200	0.77	0.034	6
LL-12 L21800N 37250E	Soil	0.4	72.1	4.4	74	<0.1	30.5	14.7	350	6.00	4.7	0.5	0.7	12	0.2	0.5	<0.1	219	0.80	0.071	2

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

Project: H-11-LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002002.1

	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
H-12 L36900E 18325N	Soil	48	0.28	21	0.425	2	1.90	0.006	0.02	<0.1	0.07	4.5	<0.1	<0.05	14	<0.5	<0.2
H-12 L36900E 18350N	Soil	54	0.28	22	0.354	2	2.77	0.007	0.01	<0.1	0.10	5.2	<0.1	<0.05	11	0.6	<0.2
H-12 L36900E 18375N	Soil	72	0.36	45	0.308	2	4.36	0.006	0.01	<0.1	0.18	8.1	<0.1	<0.05	12	<0.5	<0.2
H-12 L36900E 18400N	Soil	63	0.31	30	0.329	2	2.53	0.007	0.01	<0.1	0.09	7.6	<0.1	<0.05	11	<0.5	<0.2
H-12 L36900E 18425N	Soil	64	0.38	44	0.212	2	2.84	0.007	0.02	<0.1	0.08	6.0	<0.1	<0.05	9	<0.5	<0.2
H-12 L36900E 18450N	Soil	61	0.28	22	0.371	2	2.20	0.005	0.01	<0.1	0.07	4.9	<0.1	<0.05	13	<0.5	<0.2
H-12 L36900E 18475N	Soil	58	0.14	11	0.367	1	1.73	0.007	<0.01	<0.1	0.09	3.4	<0.1	<0.05	14	<0.5	<0.2
H-12 L36900E 18500N	Soil	43	0.07	10	0.537	1	0.80	0.005	<0.01	<0.1	0.04	1.8	<0.1	<0.05	16	<0.5	<0.2
LL-12 L21800N 36200E	Soil	64	0.38	24	0.454	2	3.29	0.007	0.01	<0.1	0.11	5.4	<0.1	<0.05	15	<0.5	<0.2
LL-12 L21800N 36250E	Soil	81	0.47	27	0.533	2	3.81	0.013	0.01	<0.1	0.06	7.5	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 36300E	Soil	63	0.28	29	0.533	1	2.29	0.008	0.01	<0.1	0.08	4.1	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 36350E	Soil	63	0.38	47	0.534	2	3.42	0.009	0.02	<0.1	0.11	5.1	<0.1	<0.05	13	<0.5	<0.2
LL-12 L21800N 36400E	Soil	54	0.68	39	0.460	6	3.04	0.008	0.02	<0.1	0.11	10.0	<0.1	<0.05	10	<0.5	<0.2
LL-12 L21800N 36450E	Soil	59	0.50	33	0.518	3	3.08	0.009	0.01	<0.1	0.07	8.9	<0.1	<0.05	10	<0.5	<0.2
LL-12 L21800N 36500E	Soil	37	0.57	36	0.259	4	1.85	0.022	0.02	<0.1	0.11	7.7	<0.1	0.06	7	0.5	<0.2
LL-12 L21800N 36550E	Soil	47	1.32	31	0.381	7	2.69	0.047	0.04	<0.1	0.14	14.7	<0.1	<0.05	10	<0.5	<0.2
LL-12 L21800N 36600E	Soil	63	0.76	59	0.446	4	3.02	0.013	0.02	<0.1	0.04	10.1	<0.1	<0.05	10	0.5	<0.2
LL-12 L21800N 36650E	Soil	63	0.76	38	0.440	3	3.12	0.011	0.02	<0.1	0.06	10.7	<0.1	<0.05	11	<0.5	<0.2
LL-12 L21800N 36700E	Soil	77	0.50	37	0.540	3	3.44	0.009	0.01	<0.1	0.06	8.1	<0.1	<0.05	13	<0.5	<0.2
LL-12 L21800N 36750E	Soil	73	0.79	46	0.562	4	3.94	0.008	0.02	<0.1	0.12	12.3	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 36800E	Soil	76	0.68	57	0.540	3	3.88	0.009	0.02	<0.1	0.13	16.0	<0.1	<0.05	11	<0.5	<0.2
LL-12 L21800N 36850E	Soil	58	0.46	52	0.406	3	2.59	0.010	0.01	<0.1	0.07	10.1	<0.1	<0.05	10	<0.5	<0.2
LL-12 L21800N 36900E	Soil	64	0.58	37	0.472	3	3.42	0.017	0.03	<0.1	0.06	12.9	<0.1	<0.05	11	<0.5	<0.2
LL-12 L21800N 36950E	Soil	65	0.41	37	0.532	3	3.04	0.007	0.02	<0.1	0.06	7.2	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 37000E	Soil	61	0.52	27	0.501	3	3.18	0.009	0.02	<0.1	0.08	10.7	<0.1	<0.05	11	<0.5	<0.2
LL-12 L21800N 37050E	Soil	82	0.51	30	0.580	3	4.52	0.007	0.02	<0.1	0.06	7.5	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 37100E	Soil	63	0.34	26	0.610	3	2.81	0.009	0.01	<0.1	0.06	7.3	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 37150E	Soil	61	0.66	35	0.536	3	3.10	0.017	0.02	<0.1	0.05	9.4	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 37200E	Soil	92	0.52	30	0.489	2	4.49	0.011	0.02	<0.1	0.11	13.7	<0.1	<0.05	13	0.6	<0.2
LL-12 L21800N 37250E	Soil	60	0.44	26	0.557	3	2.95	0.007	0.02	<0.1	0.07	5.9	<0.1	<0.05	12	<0.5	<0.2

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Project: H-11-LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002002.1

		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
LL-12 L21800N 37300E	Soil		0.6	105.5	3.0	51	<0.1	43.5	21.3	375	5.64	3.9	1.6	0.8	14	0.1	0.4	<0.1	215	0.87	0.044	3
LL-12 L21800N 37350E	Soil		0.5	107.0	3.2	54	<0.1	43.7	20.7	445	5.31	4.1	4.1	0.8	17	0.2	0.4	<0.1	214	1.08	0.036	4
LL-12 L21800N 37400E	Soil		0.3	132.2	1.7	40	<0.1	41.0	20.4	487	5.17	5.0	5.4	0.7	45	0.1	0.4	<0.1	217	1.11	0.021	5

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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
LL-12 L21800N 37300E	Soil	71	0.58	38	0.558	3	4.24	0.009	0.01	<0.1	0.09	9.1	<0.1	<0.05	12	<0.5	<0.2
LL-12 L21800N 37350E	Soil	70	0.74	37	0.598	3	3.76	0.009	0.02	<0.1	0.09	11.5	<0.1	<0.05	11	<0.5	<0.2
LL-12 L21800N 37400E	Soil	66	0.74	49	0.488	4	3.89	0.010	0.03	<0.1	0.12	17.2	<0.1	<0.05	11	<0.5	<0.2

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1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

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

Project: H-11-LL-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002002.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
LL-12 L21800N 36850E	Soil	0.5	37.1	7.2	88	<0.1	29.2	16.0	2894	2.98	1.8	2.9	0.6	18	0.1	0.3	<0.1	123	1.05	0.043	5
REP LL-12 L21800N 36850E	QC	0.5	37.1	7.0	87	<0.1	28.8	16.4	2937	3.06	1.8	0.8	0.6	17	0.2	0.2	<0.1	126	1.07	0.044	6
Reference Materials																					
STD DS8	Standard	12.0	109.6	115.3	300	1.7	36.7	7.0	588	2.31	23.9	120.6	6.1	63	2.2	5.7	6.2	42	0.65	0.077	15
STD DS9	Standard	11.7	103.2	113.5	290	1.8	37.1	6.9	546	2.21	24.3	110.3	6.0	69	2.4	5.3	6.1	39	0.66	0.078	13
STD DS9 Expected		12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844	15.7
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: H-11-LL-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002002.1

	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																	
LL-12 L21800N 36850E	Soil	58	0.46	52	0.406	3	2.59	0.010	0.01	<0.1	0.07	10.1	<0.1	<0.05	10	<0.5	<0.2
REP LL-12 L21800N 36850E	QC	58	0.46	52	0.416	3	2.61	0.013	0.01	<0.1	0.09	10.5	<0.1	<0.05	11	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	118	0.57	281	0.117	2	0.86	0.086	0.41	3.0	0.17	2.8	5.7	0.12	4	4.1	5.1
STD DS9	Standard	113	0.57	296	0.112	3	0.88	0.079	0.39	3.1	0.20	2.7	5.3	0.12	4	3.9	4.5
STD DS9 Expected		119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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

Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 30, 2012
Report Date: May 07, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12002007.1

CLIENT JOB INFORMATION

Project: LL-12
Shipment ID: Bag 1, 29/04/12
P.O. Number 12-327
Number of Samples: 54

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	54	Dry at 60C			VAN
SS80	54	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	54	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:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002007.1

		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
L21900N 36000E	Soil		0.4	97.7	6.1	59	0.1	38.0	17.3	336	6.70	5.2	6.1	0.7	16	0.2	0.5	0.1	264	0.79	0.045	3
L21900N 36050E	Soil		0.4	89.7	3.4	58	<0.1	44.3	23.1	396	5.94	5.5	1.5	0.9	11	0.1	0.4	<0.1	233	0.78	0.059	4
L21900N 36100E	Soil		0.4	95.7	2.8	57	<0.1	56.7	25.4	557	5.89	6.3	3.6	0.9	15	0.1	0.4	<0.1	234	0.93	0.034	4
L21900N 36150E	Soil		0.3	67.4	2.8	54	<0.1	32.8	19.2	732	5.81	5.1	1.3	0.7	13	0.1	0.4	<0.1	231	0.83	0.165	4
L21900N 36200E	Soil		0.4	78.0	3.8	74	<0.1	40.6	21.1	417	6.71	5.8	2.1	0.8	13	0.2	0.5	<0.1	251	0.83	0.055	3
L21900N 36250E	Soil		0.3	159.5	1.7	46	<0.1	47.1	23.8	639	5.01	8.1	3.7	0.8	27	0.1	0.4	<0.1	220	1.30	0.050	6
L21900N 36300E	Soil		0.4	105.1	4.4	49	<0.1	33.6	19.3	409	4.67	5.3	2.5	0.7	19	0.1	0.5	<0.1	191	0.95	0.037	8
L21900N 36350E	Soil		0.3	64.6	2.4	50	<0.1	34.5	19.7	535	4.81	12.5	<0.5	0.7	17	0.1	0.4	<0.1	193	1.01	0.025	4
L21900N 36400E	Soil		0.2	63.8	1.9	39	<0.1	27.8	16.0	546	3.99	7.1	1.4	0.7	24	0.1	0.2	<0.1	176	1.37	0.039	5
L21900N 36450E	Soil		0.3	111.8	2.0	56	<0.1	46.3	25.2	531	5.52	6.7	1.1	0.7	20	<0.1	0.6	<0.1	221	1.24	0.038	5
L21900N 36500E	Soil		0.5	103.5	2.6	66	<0.1	49.6	24.2	378	5.67	4.0	1.9	0.8	17	0.1	0.3	<0.1	224	0.97	0.052	4
L21900N 36550E	Soil		0.4	99.4	2.6	79	<0.1	46.3	24.6	384	5.65	4.5	1.0	0.8	15	0.1	0.4	<0.1	229	0.95	0.044	4
L21900N 36600E	Soil		0.5	43.7	4.8	64	0.1	29.2	14.1	194	5.64	2.3	1.6	0.6	15	0.1	0.4	<0.1	223	0.66	0.044	3
L21900N 36650E	Soil		0.4	56.3	5.9	59	<0.1	32.9	16.8	468	5.06	4.1	3.7	0.6	20	0.2	0.5	<0.1	209	1.01	0.058	3
L21900N 36700E	Soil		0.2	40.1	3.5	65	<0.1	31.1	16.7	318	4.65	2.2	1.5	0.6	19	0.1	0.4	<0.1	194	0.99	0.043	3
L21900N 36750E	Soil		0.3	91.9	8.7	66	<0.1	36.0	20.1	802	5.41	4.0	1.6	0.8	18	0.1	0.5	<0.1	213	0.98	0.076	4
L21900N 36800E	Soil		0.6	130.8	2.5	57	<0.1	52.1	24.8	406	5.73	6.4	0.9	0.9	14	0.1	0.4	<0.1	238	0.91	0.053	4
L21900N 36850E	Soil		0.4	45.9	5.6	71	<0.1	36.3	19.4	432	5.41	3.3	<0.5	0.7	14	0.1	0.4	<0.1	204	0.79	0.048	3
L21900N 36900E	Soil		0.4	100.3	3.0	59	<0.1	49.0	23.0	434	5.41	28.0	0.8	1.0	17	<0.1	0.4	<0.1	215	0.98	0.042	4
L21900N 36950E	Soil		0.4	65.0	2.7	68	0.1	39.1	21.4	419	5.36	3.8	2.1	0.6	17	0.1	0.5	<0.1	219	1.09	0.043	5
L21900N 37000E	Soil		0.4	65.5	3.8	63	<0.1	39.5	19.8	477	5.92	4.0	2.5	0.7	17	0.1	0.5	<0.1	235	1.03	0.057	3
L21900N 37050E	Soil		0.5	91.0	4.4	56	<0.1	32.3	16.1	339	5.52	3.4	1.5	0.6	17	0.1	0.5	<0.1	230	0.94	0.038	3
L21900N 37100E	Soil		0.4	58.1	10.8	54	<0.1	28.1	15.4	1179	5.26	3.5	2.8	0.6	16	0.3	0.6	<0.1	210	1.03	0.068	3
L21900N 37150E	Soil		0.6	148.0	3.8	65	<0.1	46.9	24.0	491	5.42	5.3	7.8	1.1	14	0.2	0.4	<0.1	220	0.87	0.080	4
L21900N 37200E	Soil		0.2	27.9	7.2	35	<0.1	10.1	8.9	349	3.81	1.3	7.0	0.5	15	0.2	0.3	0.1	153	1.43	0.035	3
L21900N 37250E	Soil		0.3	33.6	10.0	81	<0.1	20.2	32.7	2149	5.30	1.4	0.7	0.6	14	0.2	0.3	0.1	170	0.85	0.092	4
L21900N 37300E	Soil		0.3	56.5	5.9	62	<0.1	29.4	17.7	1249	4.42	2.9	2.5	0.7	18	0.1	0.4	<0.1	172	1.06	0.073	3
L22000N 35900E	Soil		0.4	93.8	3.9	67	0.1	39.2	21.6	1460	5.82	5.3	<0.5	0.7	15	0.1	0.6	<0.1	228	0.99	0.064	4
L22000N 35950E	Soil		0.5	136.8	2.0	72	<0.1	59.9	34.0	481	6.55	8.5	4.4	0.9	15	0.2	0.5	<0.1	249	1.02	0.049	4
L22000N 36000E	Soil		0.4	81.5	5.4	62	<0.1	39.2	19.5	447	5.58	5.8	2.2	0.8	15	0.1	0.4	<0.1	215	0.85	0.060	4

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910 - 475 Howe Street
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Project: LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002007.1

	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
L21900N 36000E	Soil	79	0.45	23	0.490	3	3.26	0.006	0.03	<0.1	0.09	8.2	<0.1	<0.05	14	<0.5	<0.2
L21900N 36050E	Soil	82	0.54	31	0.522	4	3.90	0.008	0.02	<0.1	0.12	13.7	<0.1	<0.05	12	<0.5	<0.2
L21900N 36100E	Soil	89	0.80	50	0.574	4	3.99	0.009	0.03	<0.1	0.17	12.9	<0.1	<0.05	12	<0.5	<0.2
L21900N 36150E	Soil	70	0.36	30	0.494	4	2.96	0.008	0.01	<0.1	0.07	9.1	<0.1	<0.05	12	<0.5	<0.2
L21900N 36200E	Soil	84	0.46	36	0.605	4	3.77	0.013	0.02	<0.1	0.14	7.7	<0.1	<0.05	13	<0.5	<0.2
L21900N 36250E	Soil	69	0.91	43	0.521	6	3.78	0.013	0.02	<0.1	0.10	18.4	<0.1	<0.05	11	<0.5	<0.2
L21900N 36300E	Soil	54	0.47	58	0.491	4	3.28	0.010	0.02	<0.1	0.14	13.4	<0.1	<0.05	10	<0.5	<0.2
L21900N 36350E	Soil	46	0.54	37	0.411	4	2.65	0.012	0.01	<0.1	0.05	7.8	<0.1	<0.05	8	<0.5	<0.2
L21900N 36400E	Soil	33	0.59	29	0.360	4	1.93	0.019	0.02	<0.1	0.04	8.5	<0.1	<0.05	7	<0.5	<0.2
L21900N 36450E	Soil	72	0.88	33	0.529	5	3.78	0.012	0.02	<0.1	0.09	14.2	<0.1	<0.05	11	<0.5	<0.2
L21900N 36500E	Soil	75	0.60	36	0.569	4	3.99	0.009	0.02	<0.1	0.09	12.8	<0.1	<0.05	12	<0.5	<0.2
L21900N 36550E	Soil	73	0.60	35	0.584	4	3.73	0.009	0.02	<0.1	0.10	12.5	<0.1	<0.05	12	<0.5	<0.2
L21900N 36600E	Soil	64	0.23	20	0.551	2	2.58	0.008	0.01	<0.1	0.07	4.2	<0.1	<0.05	12	<0.5	<0.2
L21900N 36650E	Soil	63	0.38	37	0.505	3	2.83	0.008	0.01	<0.1	0.06	5.9	<0.1	<0.05	12	<0.5	<0.2
L21900N 36700E	Soil	61	0.32	33	0.524	4	2.75	0.010	0.01	<0.1	0.07	5.5	<0.1	<0.05	11	<0.5	<0.2
L21900N 36750E	Soil	58	0.43	35	0.534	4	3.35	0.008	0.03	<0.1	0.08	8.8	<0.1	<0.05	12	<0.5	<0.2
L21900N 36800E	Soil	84	0.81	37	0.544	3	4.56	0.008	0.02	<0.1	0.08	19.6	<0.1	<0.05	12	<0.5	<0.2
L21900N 36850E	Soil	62	0.38	33	0.556	3	3.13	0.007	0.01	<0.1	0.07	5.6	<0.1	<0.05	12	<0.5	<0.2
L21900N 36900E	Soil	72	0.62	37	0.580	4	3.76	0.009	0.02	<0.1	0.16	12.5	<0.1	<0.05	12	<0.5	<0.2
L21900N 36950E	Soil	68	0.48	31	0.595	3	3.36	0.010	0.02	<0.1	0.22	11.7	<0.1	<0.05	12	<0.5	<0.2
L21900N 37000E	Soil	70	0.44	29	0.610	3	3.39	0.010	0.02	<0.1	0.12	7.1	<0.1	<0.05	13	<0.5	<0.2
L21900N 37050E	Soil	61	0.43	29	0.557	3	2.81	0.009	0.02	<0.1	0.06	6.5	<0.1	<0.05	11	<0.5	<0.2
L21900N 37100E	Soil	54	0.41	28	0.514	3	2.79	0.008	0.01	<0.1	0.09	7.3	<0.1	<0.05	12	<0.5	<0.2
L21900N 37150E	Soil	74	0.60	27	0.504	3	4.53	0.007	0.02	<0.1	0.23	12.4	<0.1	<0.05	12	<0.5	<0.2
L21900N 37200E	Soil	29	0.21	13	0.452	5	1.76	0.009	<0.01	<0.1	0.03	4.6	<0.1	<0.05	11	<0.5	<0.2
L21900N 37250E	Soil	47	0.18	41	0.480	2	2.20	0.009	0.02	<0.1	0.08	5.2	<0.1	<0.05	12	<0.5	<0.2
L21900N 37300E	Soil	52	0.36	37	0.494	3	2.71	0.009	0.02	<0.1	0.08	6.4	<0.1	<0.05	11	<0.5	<0.2
L22000N 35900E	Soil	74	0.51	32	0.579	4	3.21	0.008	0.02	<0.1	0.11	9.3	<0.1	<0.05	12	<0.5	<0.2
L22000N 35950E	Soil	90	0.89	42	0.566	5	4.67	0.009	0.01	<0.1	0.13	17.1	<0.1	<0.05	12	<0.5	<0.2
L22000N 36000E	Soil	70	0.54	46	0.508	3	3.39	0.008	0.02	<0.1	0.09	10.3	<0.1	<0.05	12	<0.5	<0.2

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Project: LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002007.1

Method		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
Analyte		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
L22000N 36050E	Soil	0.4	48.3	4.3	60	<0.1	28.2	15.0	279	5.77	4.3	6.4	0.9	12	0.1	0.4	<0.1	221	0.69	0.057	3
L22000N 36100E	Soil	0.4	83.2	2.7	68	<0.1	37.8	20.0	533	5.25	6.3	2.5	0.9	13	<0.1	0.4	<0.1	208	0.86	0.052	3
L22000N 36150E	Soil	0.5	79.9	3.6	51	<0.1	36.1	18.2	354	6.23	5.2	1.9	0.8	13	<0.1	0.5	<0.1	239	0.74	0.046	3
L22000N 36200E	Soil	0.4	67.3	3.5	56	<0.1	33.7	19.3	572	5.19	3.8	2.4	0.7	15	0.1	0.4	<0.1	202	0.85	0.044	3
L22000N 36250E	Soil	0.4	59.2	10.9	44	<0.1	26.4	15.9	558	5.15	4.7	15.2	0.5	18	0.2	0.5	0.1	216	0.92	0.028	4
L22000N 36300E	Soil	0.3	64.3	2.9	64	0.1	31.8	22.7	1401	4.73	16.6	2.0	0.8	20	0.2	0.3	<0.1	158	0.98	0.076	6
L22000N 36350E	Soil	0.3	106.4	2.7	48	<0.1	37.9	21.9	583	4.65	6.4	2.3	0.6	29	<0.1	0.5	<0.1	172	1.40	0.041	5
L22000N 36400E	Soil	0.4	123.3	5.2	56	<0.1	41.9	20.5	439	5.24	6.0	3.8	0.8	14	0.1	0.5	<0.1	204	0.86	0.046	4
L22000N 36450E	Soil	0.3	88.0	2.7	53	<0.1	39.4	19.8	304	5.13	4.6	3.1	0.6	19	0.2	0.5	<0.1	201	0.89	0.028	3
L22000N 36500E	Soil	0.4	94.1	4.9	59	<0.1	41.1	21.6	502	5.32	6.0	4.0	0.8	17	0.1	0.6	<0.1	225	1.01	0.071	4
L22000N 36550E	Soil	0.4	51.4	34.3	70	<0.1	24.5	20.4	2304	4.86	4.4	20.9	0.4	18	0.3	0.6	0.3	188	0.91	0.074	4
L22000N 36600E	Soil	0.5	113.4	2.5	61	<0.1	56.7	25.9	397	5.91	6.5	2.8	0.9	16	0.1	0.5	<0.1	236	0.85	0.048	3
L22000N 36650E	Soil	0.4	92.9	3.2	78	<0.1	46.2	24.2	471	5.72	4.8	3.5	0.8	16	0.1	0.4	<0.1	222	0.90	0.051	5
L22000N 36700E	Soil	0.2	33.4	24.2	61	<0.1	16.4	14.6	2705	4.56	2.1	1.7	0.6	13	0.4	0.4	0.3	175	1.06	0.073	3
L22000N 36750E	Soil	0.5	100.9	2.7	54	<0.1	43.5	20.4	409	5.57	4.8	1.4	0.9	15	<0.1	0.5	<0.1	227	0.91	0.048	5
L22000N 36800E	Soil	0.5	257.8	3.6	79	<0.1	50.8	25.6	504	6.15	5.9	1.7	0.8	18	<0.1	0.6	<0.1	240	0.88	0.069	4
L22000N 36850E	Soil	0.4	103.6	2.9	58	<0.1	52.1	23.9	468	6.00	6.0	4.6	0.9	14	<0.1	0.4	<0.1	236	0.93	0.046	5
L22000N 36900E	Soil	0.2	30.7	36.0	83	<0.1	22.8	25.1	4328	4.95	2.3	<0.5	0.4	17	0.4	0.5	0.4	165	1.34	0.066	4
L22000N 36950E	Soil	0.2	11.9	19.1	62	<0.1	13.8	16.1	4329	3.70	3.5	2.0	0.4	18	0.2	0.4	0.3	130	1.63	0.080	2
L22000N 37000E	Soil	0.5	95.8	3.4	68	<0.1	46.9	21.6	403	5.94	3.6	4.8	0.9	12	0.2	0.5	<0.1	229	0.80	0.069	4
L22000N 37050E	Soil	0.4	97.0	6.4	51	<0.1	37.6	19.6	750	5.37	4.2	3.2	0.7	16	0.1	0.5	<0.1	209	0.90	0.063	4
L22000N 37100E	Soil	0.1	17.1	7.0	31	<0.1	14.8	9.2	288	4.12	1.5	2.0	0.5	14	<0.1	0.4	0.2	161	0.81	0.034	2
L22000N 37150E	Soil	0.3	29.6	13.7	83	<0.1	27.7	28.7	1942	4.82	1.9	1.8	0.6	15	0.3	0.4	0.2	148	0.79	0.055	7
L22000N 37200E	Soil	0.5	63.1	2.3	46	<0.1	32.2	19.0	325	5.46	3.7	60.4	0.6	14	0.1	0.3	<0.1	219	1.02	0.063	5

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

Project: LL-12
Report Date: May 07, 2012

CERTIFICATE OF ANALYSIS VAN12002007.1

	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
L22000N 36050E	Soil	70	0.31	33	0.526	3	3.54	0.008	0.01	<0.1	0.12	6.7	<0.1	<0.05	12	<0.5	<0.2
L22000N 36100E	Soil	69	0.49	33	0.498	4	3.65	0.007	0.02	<0.1	0.11	10.7	<0.1	<0.05	11	<0.5	<0.2
L22000N 36150E	Soil	71	0.42	26	0.536	4	3.36	0.011	0.01	<0.1	0.11	8.1	<0.1	<0.05	12	<0.5	<0.2
L22000N 36200E	Soil	59	0.41	26	0.526	3	3.16	0.009	0.01	<0.1	0.08	7.0	<0.1	<0.05	12	<0.5	<0.2
L22000N 36250E	Soil	52	0.37	28	0.502	3	2.48	0.010	0.01	<0.1	0.10	6.4	<0.1	<0.05	11	<0.5	<0.2
L22000N 36300E	Soil	54	0.53	51	0.334	4	2.73	0.017	0.02	<0.1	0.06	12.0	<0.1	<0.05	9	<0.5	<0.2
L22000N 36350E	Soil	48	0.91	32	0.400	3	2.56	0.021	0.03	<0.1	0.05	12.1	<0.1	<0.05	9	0.6	<0.2
L22000N 36400E	Soil	63	0.66	31	0.519	4	3.52	0.008	0.02	<0.1	0.14	12.8	<0.1	<0.05	11	<0.5	<0.2
L22000N 36450E	Soil	62	0.58	59	0.511	2	3.32	0.010	0.01	<0.1	0.07	8.6	<0.1	<0.05	11	0.6	<0.2
L22000N 36500E	Soil	63	0.73	41	0.562	2	3.44	0.010	0.02	<0.1	0.09	13.8	<0.1	<0.05	11	1.0	<0.2
L22000N 36550E	Soil	43	0.35	28	0.407	3	2.24	0.010	0.02	<0.1	0.09	5.2	<0.1	<0.05	11	0.6	<0.2
L22000N 36600E	Soil	91	0.84	41	0.586	3	4.59	0.009	0.02	<0.1	0.10	12.5	<0.1	<0.05	13	<0.5	<0.2
L22000N 36650E	Soil	70	0.66	49	0.585	1	3.49	0.008	0.02	<0.1	0.17	11.7	<0.1	<0.05	12	1.0	<0.2
L22000N 36700E	Soil	41	0.22	45	0.475	<1	1.97	0.010	0.01	<0.1	0.07	4.8	<0.1	<0.05	11	<0.5	<0.2
L22000N 36750E	Soil	79	0.67	39	0.571	2	3.95	0.010	0.01	<0.1	0.15	15.8	<0.1	<0.05	11	<0.5	<0.2
L22000N 36800E	Soil	75	0.70	35	0.626	3	3.82	0.008	0.02	<0.1	0.20	10.2	<0.1	<0.05	13	0.6	<0.2
L22000N 36850E	Soil	87	0.80	44	0.595	4	4.01	0.008	0.01	<0.1	0.17	15.8	<0.1	<0.05	11	<0.5	<0.2
L22000N 36900E	Soil	38	0.31	54	0.391	<1	1.94	0.009	0.02	<0.1	0.09	5.4	<0.1	<0.05	11	0.8	<0.2
L22000N 36950E	Soil	40	0.28	68	0.360	2	1.67	0.010	0.02	<0.1	0.64	5.5	<0.1	<0.05	10	<0.5	<0.2
L22000N 37000E	Soil	82	0.59	24	0.604	5	4.38	0.008	0.01	<0.1	0.19	11.2	<0.1	<0.05	13	0.9	<0.2
L22000N 37050E	Soil	65	0.59	36	0.547	1	3.44	0.009	0.02	<0.1	0.08	10.4	<0.1	<0.05	11	0.5	<0.2
L22000N 37100E	Soil	41	0.21	19	0.454	<1	1.77	0.009	0.01	<0.1	0.05	2.6	<0.1	<0.05	10	<0.5	<0.2
L22000N 37150E	Soil	42	0.25	37	0.475	1	2.18	0.009	0.02	<0.1	0.08	5.3	<0.1	<0.05	10	<0.5	<0.2
L22000N 37200E	Soil	56	0.51	12	0.611	3	2.81	0.009	0.01	<0.1	0.09	8.1	<0.1	<0.05	11	0.5	<0.2

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

Project: LL-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002007.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
L21900N 36700E	Soil	0.2	40.1	3.5	65	<0.1	31.1	16.7	318	4.65	2.2	1.5	0.6	19	0.1	0.4	<0.1	194	0.99	0.043	3
REP L21900N 36700E	QC	0.4	40.6	3.4	66	<0.1	31.0	16.6	309	4.67	2.2	2.5	0.6	17	0.1	0.4	<0.1	193	0.99	0.042	3
Reference Materials																					
STD DS8	Standard	12.3	112.3	126.0	303	1.7	38.4	7.3	610	2.42	25.6	106.5	6.7	71	2.3	5.9	7.4	40	0.65	0.074	15
STD DS8	Standard	13.2	107.7	115.9	303	1.6	39.2	7.4	581	2.32	24.1	105.8	7.0	69	2.3	5.2	6.1	43	0.69	0.077	16
STD DS9	Standard	12.3	105.7	126.1	307	1.8	38.8	7.4	566	2.28	25.2	123.2	6.3	74	2.3	5.8	7.1	41	0.66	0.085	14
STD DS9	Standard	13.9	106.0	122.0	310	1.8	38.6	7.5	559	2.26	24.3	116.2	6.8	74	2.3	5.7	6.4	43	0.71	0.074	15
STD DS9 Expected		12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844	15.7
STD DS8 Expected		13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	0.2	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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

Project: LL-12
Report Date: May 07, 2012

QUALITY CONTROL REPORT VAN12002007.1

	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																	
L21900N 36700E	Soil	61	0.32	33	0.524	4	2.75	0.010	0.01	<0.1	0.07	5.5	<0.1	<0.05	11	<0.5	<0.2
REP L21900N 36700E	QC	61	0.32	33	0.518	3	2.77	0.009	0.01	<0.1	0.08	5.6	<0.1	<0.05	11	<0.5	<0.2
Reference Materials																	
STD DS8	Standard	115	0.58	267	0.112	<1	0.83	0.083	0.38	3.1	0.20	2.1	5.2	0.13	5	4.2	5.0
STD DS8	Standard	116	0.52	279	0.116	3	0.91	0.104	0.40	2.9	0.18	3.0	5.3	0.06	5	4.8	4.9
STD DS9	Standard	116	0.61	295	0.112	1	0.89	0.075	0.35	2.7	0.19	2.1	5.2	0.15	5	5.4	4.4
STD DS9	Standard	123	0.53	306	0.122	4	0.99	0.103	0.38	2.8	0.19	3.0	5.4	0.10	4	6.5	5.0
STD DS9 Expected		119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected		115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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Client: **Rio Minerals Ltd.**
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Submitted By: Andris Kikauka
Receiving Lab: Canada-Vancouver
Received: April 30, 2012
Report Date: May 09, 2012
Page: 1 of 3

CERTIFICATE OF ANALYSIS VAN12002020.1

CLIENT JOB INFORMATION

Project: H-12
Shipment ID: BAG 2, 29/04/2012
P.O. Number 12-327
Number of Samples: 37

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	36	Dry at 60C			VAN
SS80	36	Dry at 60C sieve 100g to -80 mesh			VAN
1DX2	36	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:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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

Project: H-12
Report Date: May 09, 2012

CERTIFICATE OF ANALYSIS VAN12002020.1

		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
L36500E 18100N	Soil		0.5	27.1	9.8	54	<0.1	11.8	50.8	2358	4.57	7.2	4.4	0.3	13	0.1	0.4	0.2	157	0.46	0.040	5
L36500E 18125N	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
L36500E 18150N	Soil		0.6	25.3	12.9	26	0.1	8.2	55.3	1309	4.24	7.6	2.8	0.4	17	0.1	0.6	0.1	181	0.40	0.050	4
L36500E 18175N	Soil		0.2	98.7	4.4	62	<0.1	34.4	17.0	389	6.78	7.5	3.4	0.8	12	0.2	0.6	<0.1	253	0.86	0.055	3
L36500E 18200N	Soil		0.4	36.8	3.6	28	<0.1	12.3	5.6	136	5.33	12.2	7.9	0.5	5	0.1	0.5	<0.1	177	0.18	0.043	2
L36500E 18225N	Soil		0.4	32.6	4.3	33	<0.1	11.5	5.4	168	4.84	9.6	3.8	0.5	6	0.1	0.4	<0.1	161	0.33	0.039	2
L36500E 18250N	Soil		0.5	34.5	4.5	31	<0.1	10.3	5.2	129	4.49	11.9	2.6	0.5	5	<0.1	0.4	<0.1	155	0.23	0.050	2
L36500E 18275N	Soil		0.3	29.8	11.0	24	<0.1	7.9	3.6	104	3.39	3.6	3.3	0.4	6	<0.1	0.5	0.1	176	0.17	0.038	2
L36500E 18300N	Soil		0.7	61.9	4.6	43	<0.1	21.5	10.2	201	7.09	12.7	7.2	0.7	6	0.1	0.6	<0.1	203	0.31	0.054	2
L36500E 18325N	Soil		0.6	82.0	4.1	48	<0.1	27.8	14.6	221	5.92	10.4	12.5	0.8	6	<0.1	0.5	<0.1	183	0.28	0.027	3
L36500E 18350N	Soil		0.4	53.4	4.8	38	<0.1	19.4	22.8	305	4.34	7.2	3.0	0.5	10	0.1	0.5	<0.1	143	0.50	0.034	5
L36500E 18375N	Soil		0.6	104.5	3.2	52	<0.1	37.8	20.2	266	5.00	17.3	3.6	0.8	6	<0.1	0.6	<0.1	162	0.40	0.025	3
L36500E 18400N	Soil		0.7	65.3	4.2	54	<0.1	30.5	15.0	280	5.63	13.6	2.5	0.6	9	<0.1	0.6	<0.1	182	0.62	0.035	3
L36500E 18425N	Soil		0.4	40.0	4.1	35	<0.1	17.8	8.1	164	5.75	9.7	2.1	0.6	7	<0.1	0.5	<0.1	216	0.40	0.025	2
L36500E 18450N	Soil		0.4	18.3	6.7	16	<0.1	6.5	3.0	107	3.19	4.2	93.4	0.3	5	<0.1	0.5	<0.1	159	0.20	0.016	2
L36500E 18475N	Soil		0.4	38.7	10.5	40	<0.1	16.1	8.0	168	4.79	9.7	12.8	0.6	7	0.2	0.6	<0.1	164	0.36	0.045	2
L36500E 18500N	Soil		0.4	36.1	4.4	59	<0.1	18.0	17.6	464	5.19	3.5	3.3	0.5	11	0.1	0.4	<0.1	192	0.66	0.033	4
L36550E 18100N	Soil		0.5	40.7	11.1	50	<0.1	19.2	8.4	481	4.70	16.4	2.8	0.6	9	<0.1	0.5	<0.1	167	0.33	0.030	3
L36550E 18125N	Soil		0.5	37.4	5.1	51	<0.1	21.9	10.1	251	4.21	19.4	3.0	0.4	9	0.1	0.4	<0.1	152	0.30	0.030	3
L36600E 18100N	Soil		0.5	77.0	4.5	53	<0.1	28.3	12.8	241	5.95	17.9	2.3	0.8	5	0.1	0.7	<0.1	168	0.34	0.023	2
L36600E 18125N	Soil		0.2	9.8	4.6	12	<0.1	4.3	2.4	115	3.66	2.9	4.8	0.4	5	<0.1	0.4	<0.1	215	0.11	0.012	2
L36650E 18100N	Soil		0.3	22.0	5.8	15	<0.1	4.8	2.6	91	4.54	2.7	4.1	0.4	6	<0.1	0.4	<0.1	216	0.20	0.021	2
L36650E 18125N	Soil		0.8	95.0	4.1	60	<0.1	27.5	12.4	197	6.04	20.4	4.0	0.9	5	<0.1	0.5	<0.1	169	0.22	0.036	2
L36700E 18150N	Soil		0.4	20.4	4.6	24	<0.1	7.6	4.4	127	5.60	7.3	12.8	0.5	4	<0.1	0.4	<0.1	187	0.20	0.020	3
L36700E 18175N	Soil		0.3	14.4	35.3	12	0.1	4.2	2.3	92	2.26	3.8	2.4	0.2	4	<0.1	0.9	0.2	135	0.23	0.034	2
L36750E 18150N	Soil		0.5	32.2	4.5	37	<0.1	10.9	6.7	155	4.97	10.0	2.5	0.6	5	<0.1	0.3	<0.1	157	0.29	0.032	3
L36750E 18175N	Soil		0.3	17.8	7.3	24	<0.1	6.6	3.5	129	4.08	4.2	1.4	0.4	4	<0.1	0.4	<0.1	159	0.22	0.023	2
L36800E 18150N	Soil		0.5	25.5	5.6	19	0.1	8.0	4.8	126	4.85	8.9	4.5	0.4	6	0.1	0.5	0.2	189	0.24	0.031	3
L36800E 18175N	Soil		0.4	31.9	5.4	32	<0.1	13.1	6.5	177	5.04	10.1	3.2	0.4	6	<0.1	0.4	<0.1	165	0.33	0.030	2
L36850E 18150N	Soil		0.2	50.9	27.2	19	0.1	7.2	8.5	992	1.73	10.0	<0.5	0.1	18	0.2	0.8	0.1	96	0.50	0.037	3

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910 - 475 Howe Street
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Project: H-12
Report Date: May 09, 2012

CERTIFICATE OF ANALYSIS VAN12002020.1

		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
L36500E 18100N	Soil		37	0.21	51	0.180	<1	1.57	0.009	0.02	<0.1	0.06	4.7	<0.1	<0.05	10	<0.5	<0.2
L36500E 18125N	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
L36500E 18150N	Soil		28	0.12	39	0.336	<1	1.08	0.010	0.02	<0.1	0.08	3.9	<0.1	<0.05	10	<0.5	<0.2
L36500E 18175N	Soil		78	0.50	23	0.578	3	3.45	0.010	0.02	<0.1	0.05	9.2	<0.1	<0.05	14	<0.5	<0.2
L36500E 18200N	Soil		46	0.19	19	0.182	<1	1.86	0.008	0.01	<0.1	0.11	3.5	<0.1	<0.05	11	<0.5	<0.2
L36500E 18225N	Soil		40	0.22	13	0.238	<1	1.66	0.008	0.02	<0.1	0.03	3.4	<0.1	<0.05	11	<0.5	<0.2
L36500E 18250N	Soil		38	0.16	12	0.147	<1	1.92	0.005	0.02	<0.1	0.05	3.3	<0.1	<0.05	10	<0.5	<0.2
L36500E 18275N	Soil		29	0.11	12	0.350	<1	1.41	0.006	0.02	<0.1	0.10	2.5	<0.1	<0.05	8	<0.5	<0.2
L36500E 18300N	Soil		67	0.36	23	0.317	<1	3.19	0.009	0.02	<0.1	0.09	5.5	<0.1	<0.05	13	<0.5	<0.2
L36500E 18325N	Soil		61	0.40	33	0.227	<1	3.38	0.006	0.02	<0.1	0.08	6.8	<0.1	<0.05	12	<0.5	<0.2
L36500E 18350N	Soil		35	0.39	33	0.269	<1	1.91	0.009	0.02	<0.1	0.07	5.7	<0.1	<0.05	9	<0.5	<0.2
L36500E 18375N	Soil		59	0.48	40	0.238	<1	3.38	0.007	0.01	<0.1	0.08	7.4	<0.1	<0.05	9	<0.5	<0.2
L36500E 18400N	Soil		61	0.53	26	0.404	1	2.82	0.007	0.02	<0.1	0.08	6.1	<0.1	<0.05	10	<0.5	<0.2
L36500E 18425N	Soil		55	0.28	19	0.403	<1	2.32	0.007	0.01	<0.1	0.06	4.1	<0.1	<0.05	11	<0.5	<0.2
L36500E 18450N	Soil		24	0.09	14	0.286	<1	0.72	0.005	0.01	<0.1	0.02	1.6	<0.1	<0.05	6	<0.5	<0.2
L36500E 18475N	Soil		49	0.26	20	0.278	<1	2.16	0.008	0.02	<0.1	0.11	4.3	<0.1	<0.05	10	<0.5	<0.2
L36500E 18500N	Soil		48	0.32	27	0.358	1	1.94	0.008	0.01	<0.1	0.04	4.5	<0.1	<0.05	12	<0.5	<0.2
L36550E 18100N	Soil		40	0.24	39	0.180	<1	2.11	0.008	0.03	<0.1	0.08	4.3	<0.1	<0.05	10	<0.5	<0.2
L36550E 18125N	Soil		39	0.34	39	0.165	<1	1.92	0.009	0.02	<0.1	0.06	4.4	<0.1	<0.05	9	<0.5	<0.2
L36600E 18100N	Soil		60	0.47	24	0.243	<1	3.10	0.006	0.02	<0.1	0.08	5.3	<0.1	<0.05	11	<0.5	<0.2
L36600E 18125N	Soil		26	0.04	7	0.344	<1	0.39	0.004	<0.01	<0.1	0.03	1.1	<0.1	<0.05	9	<0.5	<0.2
L36650E 18100N	Soil		32	0.08	10	0.397	<1	0.83	0.005	<0.01	<0.1	0.05	1.6	<0.1	<0.05	12	<0.5	<0.2
L36650E 18125N	Soil		66	0.38	32	0.213	<1	4.52	0.006	0.02	<0.1	0.12	6.3	<0.1	<0.05	11	<0.5	<0.2
L36700E 18150N	Soil		43	0.13	13	0.223	<1	1.33	0.006	<0.01	<0.1	0.04	2.3	<0.1	<0.05	12	<0.5	<0.2
L36700E 18175N	Soil		15	0.05	12	0.341	<1	0.42	0.008	0.03	<0.1	0.07	1.8	<0.1	<0.05	5	<0.5	<0.2
L36750E 18150N	Soil		39	0.19	20	0.224	<1	2.10	0.005	0.01	<0.1	0.08	3.6	<0.1	<0.05	11	<0.5	<0.2
L36750E 18175N	Soil		31	0.13	16	0.237	<1	1.04	0.005	0.02	<0.1	0.06	1.9	<0.1	<0.05	10	<0.5	<0.2
L36800E 18150N	Soil		35	0.11	19	0.323	<1	1.34	0.007	0.02	<0.1	0.09	2.9	<0.1	<0.05	11	<0.5	<0.2
L36800E 18175N	Soil		41	0.25	23	0.240	<1	1.68	0.005	0.02	<0.1	0.04	3.3	<0.1	<0.05	10	<0.5	<0.2
L36850E 18150N	Soil		12	0.12	30	0.259	<1	0.66	0.010	0.01	<0.1	0.18	2.7	<0.1	<0.05	5	<0.5	<0.2

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

Project: H-12
Report Date: May 09, 2012

CERTIFICATE OF ANALYSIS VAN12002020.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
L36850E 18175N	Soil	0.4	54.8	3.4	46	<0.1	18.3	8.5	164	4.46	15.4	3.8	0.6	5	0.2	0.5	<0.1	130	0.29	0.024	2
L36850E 18200N	Soil	0.5	40.4	9.8	33	0.1	17.3	10.8	237	4.04	65.8	4.0	0.4	7	0.2	1.1	<0.1	133	0.46	0.017	3
L36900E 18200N	Soil	0.3	15.8	6.9	12	<0.1	4.6	2.3	77	3.53	7.5	569.6	0.4	4	<0.1	0.5	<0.1	200	0.08	0.020	2
L36900E 18225N	Soil	0.4	47.3	5.6	23	<0.1	8.0	5.9	170	6.47	22.9	4.7	0.6	5	<0.1	1.3	<0.1	236	0.20	0.027	2
L36900E 18250N	Soil	0.4	21.8	7.2	20	<0.1	8.1	3.7	112	6.11	25.4	3.6	0.3	6	0.1	1.1	<0.1	234	0.30	0.029	2
L36900E 18275N	Soil	0.4	67.0	6.8	61	0.1	30.9	20.4	478	4.62	146.5	3.2	0.5	10	<0.1	2.3	<0.1	125	0.57	0.027	3
L36900E 18300N	Soil	0.4	28.2	5.9	30	0.3	7.9	3.8	114	6.21	25.2	6.0	0.5	5	0.1	1.2	0.2	253	0.26	0.028	2

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Project: H-12
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CERTIFICATE OF ANALYSIS VAN12002020.1

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
L36850E 18175N	Soil	41	0.29	23	0.142	<1	2.49	0.005	0.01	<0.1	0.07	4.5	<0.1	<0.05	8	<0.5	<0.2
L36850E 18200N	Soil	37	0.45	25	0.181	2	1.66	0.009	0.02	<0.1	0.10	5.8	<0.1	<0.05	9	<0.5	<0.2
L36900E 18200N	Soil	23	0.03	9	0.255	<1	0.53	0.004	0.01	<0.1	0.03	1.0	<0.1	<0.05	9	<0.5	<0.2
L36900E 18225N	Soil	50	0.12	11	0.334	<1	2.10	0.005	<0.01	<0.1	0.13	4.1	<0.1	<0.05	15	<0.5	<0.2
L36900E 18250N	Soil	43	0.16	9	0.417	<1	1.23	0.006	0.01	<0.1	0.07	2.5	<0.1	<0.05	15	<0.5	<0.2
L36900E 18275N	Soil	45	0.75	30	0.166	2	2.07	0.012	0.02	<0.1	0.09	7.7	<0.1	<0.05	7	<0.5	<0.2
L36900E 18300N	Soil	49	0.14	15	0.417	<1	1.97	0.006	<0.01	<0.1	0.08	3.5	<0.1	<0.05	15	<0.5	<0.2

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Project: H-12
Report Date: May 09, 2012

QUALITY CONTROL REPORT VAN12002020.1

		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																						
L36900E 18225N	Soil		0.4	47.3	5.6	23	<0.1	8.0	5.9	170	6.47	22.9	4.7	0.6	5	<0.1	1.3	<0.1	236	0.20	0.027	2
REP L36900E 18225N	QC		0.4	45.3	5.7	23	<0.1	7.9	5.7	162	6.33	22.1	1.8	0.5	4	0.1	1.2	<0.1	227	0.19	0.028	2
Reference Materials																						
STD DS8	Standard		12.6	95.8	125.1	286	1.7	33.3	6.6	558	2.20	24.7	109.2	7.3	69	2.2	5.4	5.8	38	0.61	0.073	16
STD DS9	Standard		12.3	95.7	126.0	291	1.8	35.7	6.9	520	2.11	23.3	117.4	7.1	76	2.2	5.4	6.2	37	0.65	0.074	14
STD DS9 Expected			12.74	104	126	322	1.69	39.5	7.6	586	2.37	27	102	7.15	76.1	2.3	4.84	6.78	40	0.776	0.0844	15.7
STD DS8 Expected			13.44	110	123	312	1.69	38.1	7.5	615	2.46	26	107	6.89	67.7	2.38	5.7	6.67	41.1	0.7	0.08	14.6
BLK	Blank		<0.1	<0.1	0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1

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QUALITY CONTROL REPORT VAN12002020.1

		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																		
L36900E 18225N	Soil		50	0.12	11	0.334	<1	2.10	0.005	<0.01	<0.1	0.13	4.1	<0.1	<0.05	15	<0.5	<0.2
REP L36900E 18225N	QC		48	0.11	11	0.326	<1	2.04	0.005	<0.01	<0.1	0.11	3.8	<0.1	<0.05	15	<0.5	<0.2
Reference Materials																		
STD DS8	Standard		105	0.57	262	0.116	<1	0.83	0.087	0.37	2.8	0.17	2.9	5.0	<0.05	4	4.3	3.9
STD DS9	Standard		107	0.58	294	0.117	<1	0.88	0.081	0.36	3.0	0.20	3.0	5.4	0.05	4	4.8	4.4
STD DS9 Expected			119	0.6437	308	0.1239		0.9915	0.0905	0.3874	3	0.225	2.8	5.48	0.1737	4.84	5.4	5
STD DS8 Expected			115	0.6045	279	0.113	2.6	0.93	0.0883	0.41	3	0.192	2.3	5.4	0.1679	4.7	5.23	5
BLK	Blank		<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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.