

GEOCHEMICAL, GEOPHYSICAL AND GEOLOGICAL ASSESSMENT REPORT
on the
WALHALLA PROJECT

Yukon Territory, Canada

BAR 1 – 1983 YF21001 – YF22983
BAR 1984 – 1988 YF20993 – YF20997

Dawson Mining District

N.T.S. 115I/13, 115J/16, 115O/01 and 115P/04

62° 59' to 63° 07' North
137° 45' to 137° 55' West

prepared for:
Comstock Metals Ltd.

Field Work Performed:
September 6- 15, 2011, October 22- November 22, 2011, March 13- 21, 2012 and June 19, 2012

report prepared by:
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TABLE OF CONTENTS

1.0	Introduction.....	4
2.0	Property Description and Location.....	4
2.1	Location.....	4
2.2	Land Tenure.....	4
3.0	Accessibility, Climate, Local Resources, Infrastructure and Physiography	8
4.0	History	10
5.0	Geological Setting and Mineralization	10
5.1	Regional and Property Geology.....	10
5.3	Structural Geology	12
5.4	Quaternary Geology	12
6.0	Deposit Types.....	13
7.0	Exploration.....	13
7.1	September 2011 Field Program	13
7.2	November 2011 Airborne Magnetism Survey	13
7.3	March 2012 Power Auger Soil Survey	14
7.4	June 2012 Hand Auger Soil Survey	16
8.0	Sample Preparation, Analyses and Security	22
9.0	Interpretation and Conclusions	22
10.0	Recommendations.....	25
11.0	References	26

List of Figures

	Page
Figure 1. Location Map	6
Figure 2. Regional Land Tenures Map	7
Figure 3 (a & b). Property physiography photos	9
Figure 4 (a & b). March power auger soil survey photos	16
Figure 5. 2012 Gold Geochemistry – Southeast Grid Map	18

Figure 6.	2012 Silver Geochemistry – Southeast Grid Map	19
Figure 7.	2012 Copper Geochemistry – Southeast Grid Map	20
Figure 8.	2012 Sample Locations – Southeast Grid Map	21
Figure 9.	Northeasterly Trending Lineaments Near Southeast Grid	24

List of Tables

Table 1.	CLAIM DATA	5
Table 2.	WALHALLA PROJECT PROPOSED BUDGET	25

List of Appendices

APPENDIX 1.	STATEMENT OF QUALIFICATIONS
APPENDIX 2.	STATEMENT OF EXPENDITURES
APPENDIX 3.	SOIL SAMPLE DESCRIPTIONS
APPENDIX 4.	CERTIFICATES OF ANALYSIS
APPENDIX 5.	TECHNICAL REPORT on the WALHALLA PROJECT

1.0 Executive Summary	5
2.0 Introduction	6
2.1 Qualified Person and Participating Personnel	6
2.2 Terms, Definitions and Units	6
2.3 Source Documents.....	6
2.4 Limitations, Restrictions and Assumptions	7
2.5 Scope	7
3.0 Reliance on Other Experts	7
4.0 Property Description and Location	8
4.1 Location	8
4.2 Land Tenure	8
5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography	14
5.1 Access, Local Resources and Infrastructure	14
5.2 Climate and Physiography	14
6.0 History.....	15
7.0 Geological Setting and Mineralization	16
7.1 Regional Geology	16
7.2 Property Geology	18
7.3 Structural Geology	19
7.4 Quaternary Geology	20
8.0 Deposit Types	23

9.0 Exploration	23
10.0 Drilling	31
11.0 Sample Preparation, Analyses and Security	31
12.0 Data Verification	31
13.0 Mineral Processing and Metallurgical Testing.....	32
14.0 Mineral Resource Estimates	32
15.0 Adjacent Properties	32
16.0 Other Relevant Data and Information	33
17.0 Interpretation and Conclusions	33
18.0 Recommendations	33
19.0 References	37
20.0 Certificate, Date and Signature	40

APPENDIX 6. AIRBORNE GEOPHYSICAL INTERPRETATION MEMO: BAR BLOCK

1.0 Introduction.....	1
2.0 Interpretation Procedures.....	1
3.0 Target Response.....	2
4.0 Targets.....	2
4.1 Bar Block.....	2
5.0 Recommendations.....	3
Appendix A: References.....	4
Appendix B: Maps.....	5

1.0 INTRODUCTION

This assessment report is prepared for Comstock Metals Ltd. (Comstock) to fulfill Yukon reporting requirements for assessment credit at the Walhalla project in central Yukon. The report will describe and review the four phases of exploration work that have been conducted in the first year after staking of the claims. The first two phases of work are covered by separate reports that are included as appendices to this report.

The first phase of work in September, 2011 was a reconnaissance geochemical survey conducted by the author and a field crew, and this work formed the basis for a National Instrument 43-101 technical report on the property (Appendix 5). This was followed by an airborne magnetics survey in October and November, 2011 conducted by Precision Geosurveys Inc. (Appendix 6). In March, 2012 a detailed soil grid was sampled by Ground Truth Exploration using power augers in the Black creek area in the southeast part of the claims around a soil sample which returned 3410ppb gold. Ground Truth returned for one day in June to conduct further infill hand auger sampling in this area. Reporting on the work at Black creek forms the main part of the body of this report, with most of the background information provided in the technical report in Appendix 5.

The Walhalla Property is located some 120 kilometers southeast of Dawson City, Yukon and lies some 275 kilometers N-NW of the city of Whitehorse, Yukon. The property lies within the Dawson Mining District, and comprises 1988 mineral claims which lie adjacent to the eastern border of Pacific Ridge's Mariposa Property.

2.0 PROPERTY DESCRIPTION AND LOCATION

2.1 Location

The Walhalla property is located on NTS map sheets 115I/13, 115J/16, 115O/01 and 115P/04 in the Yukon Territory, Canada. The property covers low hills within the Rosebud creek and Scroggie Creek drainages into the Stewart River to the north and the Black Creek drainage into the Yukon River to the south. The property is geographically centered at 63°00' N and 138°00' W or UTM 6990000 N and 350000 E (NAD 83, Zone 8V)(Fig. 1). It is important for exploration and mapping purposes to note that the property straddles NAD 83 zones 7 & 8.

The Walhalla property is located roughly 120 km southeast of Dawson City, 60 km northwest of Pelly Crossing and 60 km southwest of Stewart Crossing.

2.2 Land Tenure

The Walhalla property consists of 1988 Yukon Quartz Mining claims covering an area of approximately 41,800 hectares in the Dawson Mining District. The mineral claims were located

by GPS and compass and staked in accordance with the Yukon Quartz Mining Act on claim sheets 115I/13, 115J/16, 115O/1 and 115P/4, available for viewing in the Dawson Mining Recorder's Office. A table summarizing pertinent claim data follows. and a detailed statement of claims is shown in Appendix 5.

TABLE 1: CLAIM DATA

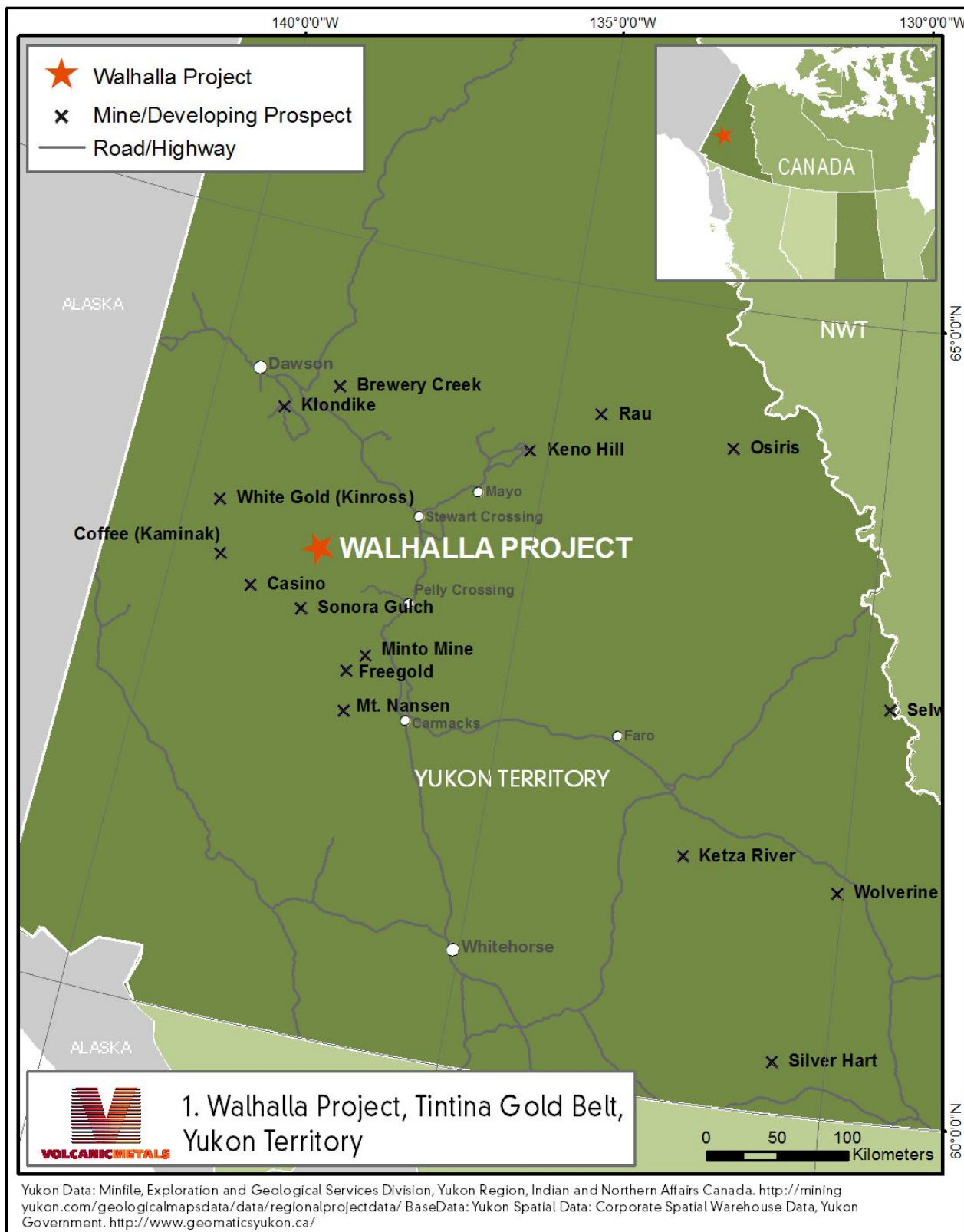
Claim Name	Grant No.	No. of Claims	Record Date	Expiry Date
BAR 1 - 1983	YF21001 - YF22983	1983	2011-08-26	2012-08-26
BAR 1984 - 1988	YF20993 - YF20997	5	2011-08-26	2012-08-26
Total		1988		

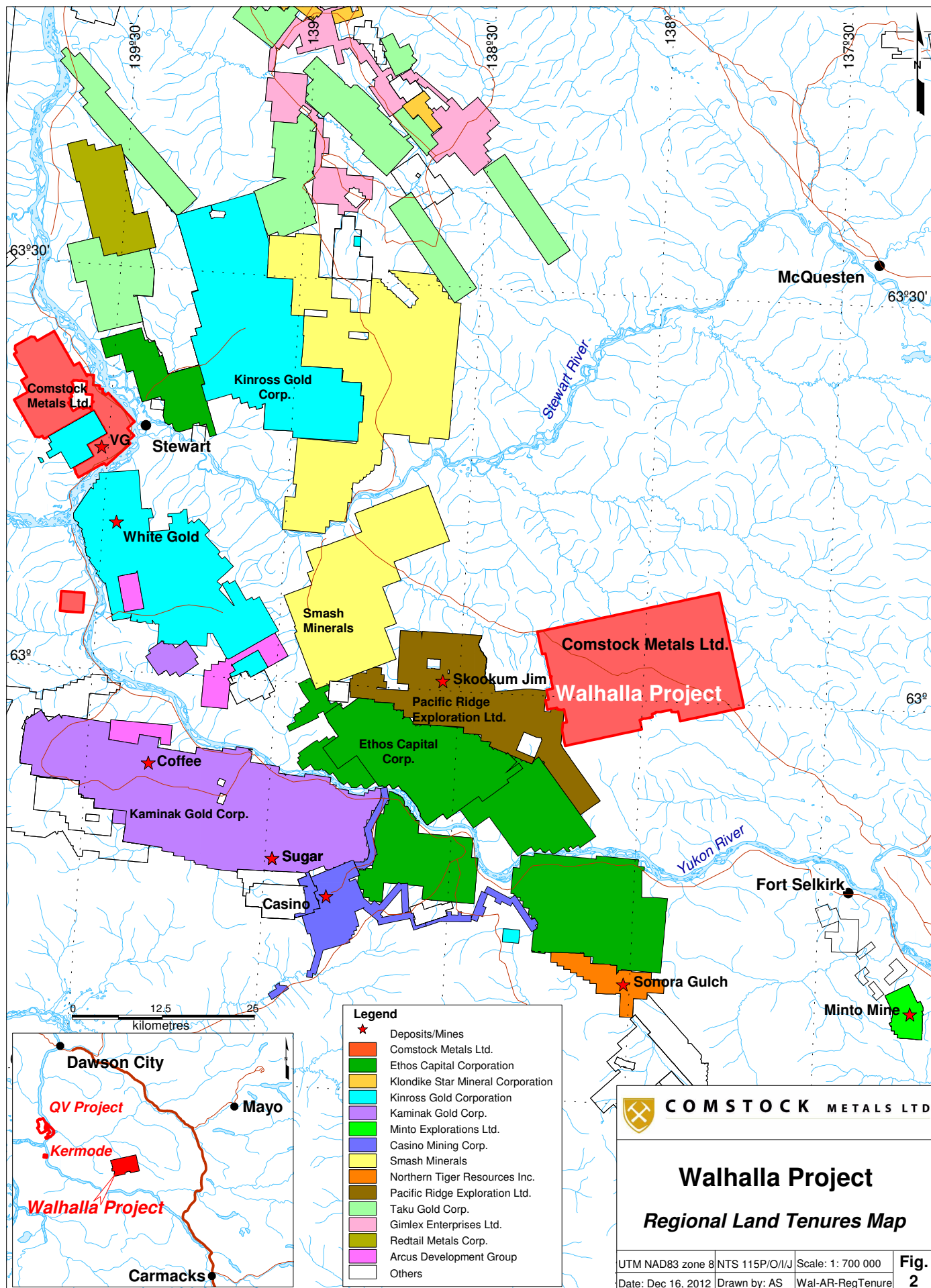
The claims were staked in August, 2011, and are currently registered in the name of Seafield Explorations Ltd. Comstock Metals Ltd. has entered into a letter of intent to acquire Seafield's 75% interest in the claims, subject to approval.

Volcanic Metals Corp. acquired a 25% interest in the Property by, among other things, incurring expenditures to complete initial field work including ridge and spur soil sampling, rock sampling and ground prospecting, a high-resolution airborne magnetic survey flown in November, 2011, and a power auger soil sampling program conducted in March, 2012.

The Walhalla property is subject to a 2% NSR royalty, one-half of which (1% NSR) can be purchased for \$1m.

The claim anniversary date will be extended to February 26, 2015, subject to the acceptance of this report. Some claims in the southeast part of the claim block in the area of the Black creek anomaly will be extended to February 26, 2016.





3.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The information in this section is summarized from the corresponding section in the technical report in Appendix 5, where more detail is presented. The property can be accessed by helicopter from Dawson City, located about 120km to the northwest, or from Carmacks, located about 130km to the southeast. A winter trail from Pelly Farm to Scroggie Creek cuts across the property from the southeast to the northwest (fig. 3a). In winter this trail is passable by snow machine or truck if the trail has been bulldozed. In summer it may be passable by ATV.

Dawson City, some 120km to the northwest, can provide personnel and services for re-supply of a camp in this area. Most major supplies are obtained from Whitehorse. Pelly Landing, on the Pelly River, can be used to helicopter in supplies and is the easiest point of access from the Klondike Highway (Hwy #2) connecting Whitehorse and Dawson City.

The area lies within the Central Yukon Basin climatic zone characterized by a wide temperature range with warm summers, long cold winters and light precipitation. The mean annual temperature is about -5°C. Annual precipitation averages about 300 millimetres.

The largest part of the property is drained by Grand Valley creek and Jane creek, tributaries of Rosebud creek which drains northward into the Stewart river. The southwestern part of the claims are drained by Alberta and Walhalla creeks, tributaries of Scroggie creek which drains northwestward into the Stewart river. The southeastern part of the property is drained by Black creek, which drains southward into the Yukon river.

The Walhalla property lies within the Boreal Cordillera Ecozone, and straddles the boundary between the Klondike Plateau and Yukon Plateau Central ecoregions (Smith et.al., 2004). The area is partly unglaciated, and some of the Rosebud creek tributary valleys on the property were flooded when blocked downstream by glaciers. The claims are characterized by forested, smooth topped ridges dissected by deep, narrow creeks in the southwestern part and by broad swampy valleys in the northeastern part.

The property is underlain by extensive discontinuous permafrost. The highest point on the property is about 1100m, and the lowest part of the property is at Grand Valley creek at 520m elevation. The claims are entirely below treeline and well forested (fig. 3a). Much of the property has been burned by wildfires within the past few decades, notably in 2009 much of the eastern side of the property was burnt (fig. 3b).



3a



3b

Figures 3a & b Property physiography photos. a) southwest showing trail b) NE burnt

4.0 HISTORY

The information in this section is summarized from the corresponding section in the technical report in Appendix 5, where more detail is presented.

The property lies along the overland route between Whitehorse and Dawson City that was used during winter, when the river was not passable by steamships during the period between the 1898 Gold Rush until the building of highways (1950s). The trail between Scroggie creek and Pelly Farm which crosses the property is still used as a winter road for mobilization of heavy equipment to placer mines, and by the annual Yukon Quest sled dog race.

There are no Yukon Minfile occurrences recorded on the property, however there are some located within a few kilometers of the property. Outcrop is very sparse on the property, limiting the effectiveness of prospecting.

Placer mining exploration has been conducted intermittently in the area, with surveying of placer base lines along Walhalla and Alberta creeks completed in 1912. There is no evidence of successful placer operations on the claims, however placer leases in good standing are present on Alberta creek which forms part of the western property boundary.

5.0 GEOLOGICAL SETTING AND MINERALIZATION

The information in this section is summarized from the corresponding section in the technical report in Appendix 5, where more detail is presented. Additional discussion is presented in this section regarding property geology in the Black creek area, geophysical expressions of structures and surficial geology.

The Walhalla property overlies parts of four map sheets that have been mapped geologically by various parties. A mapping program in progress (Colpron & Ryan, 2010) should have a final map published early in 2013.

5.1 Regional and Property Geology

The Walhalla project area is situated southwest of the Tintina fault and is predominantly underlain by metamorphic rocks of the Yukon-Tanana terrane. The Yukon-Tanana terrane comprises a basement complex of metasedimentary origin (Snowcap assemblage) overlain by three unconformity-bounded, volcano-sedimentary sequences of predominantly arc affinity: the Finlayson (Upper Devonian to Lower Mississippian), Klinkit (Upper Mississippian to Lower Permian) and Klondike (Middle to Upper Permian) assemblages. Plutonic suites associated with these arc sequences include the Grass Lakes suite (ca. 365-357 Ma), the Simpson Range suite (ca. 355-345 Ma), the Tatlain suite (ca. 342-336 Ma) and the Sulphur Creek suite (ca. 264-252 Ma)(Colpron & Ryan, 2010).

The property is underlain primarily by Devonian to Mississippian rocks of the Snowcap assemblage of the Yukon Tanana terrane, consisting of quartzite and quartz-mica schist. This terrane also includes lenses of marble that are a volumetrically minor part of the metasediments, but are resistant to weathering and support less vegetation and are therefore one of the most prominently outcropping units on the property. The marble might also be a favourable host for skarn or replacement mineralization.

Minor but potentially significant graphitic schist was noted in the road cut near Black creek (and camp 4). The graphitic band is roughly 10 to 15m wide at this point. Soils overlying the graphitic schist host two multi-gram gold in soil anomalies that were tested by a soil grid in 2012, and are described in the Exploration section below. Metabasite consisting of amphibolite or greenstone is present in the northeast part of the property, and is thought to be of volcanic origin. It is spatially associated with serpentinite, however these two units should be differentiated. The serpentinitized peridotite is considered to be younger, and structurally interleaved with Yukon-Tanana terrane rocks.

The western part of the property is intruded by a large body of the Early Mississippian Simpson Range suite orthogneiss. This suite encompasses rocks of widely varying composition, from monzogranite to diorite. Locally, monzogranite and granodiorite are porphyritic with K-feldspar phenocrysts (or augens) up to 1 cm long. Narrow veins or dykes of quartz-feldspar pegmatite were noted on the property.

Metaplutonic rocks assigned to the Sulphur Creek suite are exposed in the northeastern part of the property. They consist of monzogranites that are variably deformed, fine to medium grained, biotite bearing, and quartz and K-feldspar porphyritic to augen bearing. This suite is considered to be related to the Permian Klondike Schist.

The southern part of the project area is underlain by rocks assigned to Quesnellia and Stikinia, two major mid-Paleozoic to early Mesozoic arc terranes that reach their northern apex in this area. Triassic augite-phyric andesitic to dacitic volcanic flows and volcanoclastic rocks that could be part of either Stikinia or Quesnellia occur along the southern margin of the property. These rocks are intruded by the Early Jurassic Aishihik Suite biotite $\pm$ hornblende granodiorite to monzogranite in the southwestern part of the property.

The local area is locally underlain by younger, post-accretion, mid-Cretaceous plutonic rocks; volcanic rocks of the Upper Cretaceous Carmacks Group; and Tertiary to recent lavas of the Selkirk volcanics. Many of the intrusive bodies in the area have similar compositions and textures, and recent age dating has changed the ages assigned to various intrusions, a process that is not yet complete. Some intrusions on the property that were previously mapped as mid Cretaceous are now considered to be either Permian or Jurassic.

Rocks of the Upper Cretaceous Carmacks Group occur along the southeastern edge of the property. They generally form topographic highs and are well defined by patchy high magnetic

anomalies in the aeromagnetic data. The Carmacks Group largely comprises dacite and rhyodacite, and minor brown to black basalt and basaltic andesite.

5.3 Structural Geology

The Yukon-Tanana terrane on the Walhalla property is characterized by at least two phases of isoclinal folding and development of transposition foliations. The presence of ultramafic rocks in the northeast part of the property is considered to be evidence of thrust faulting. Thrust faulting can be favourable structural preparation for gold mineralization.

A dextral strike-slip fault has been mapped crossing the Walhalla property northwesterly beyond Grand Valley Creek where it splays out into a number of smaller faults. This fault could be the northern extension of the Teslin fault system or one of its many splays.

Most faults in the area are interpreted by offset of geological units, and by interpretation of airborne magnetics, as they tend to form topographic lows. However in the northeastern part of the property considerable fault breccia was observed in widely distributed float rock, with minor slickensides. These fault rocks are likely related to the major regional fault system.

The presence of minor northeasterly trending faults cutting the dominant northwesterly structural trend has been postulated to be a significant control on gold mineralization at the White Gold deposit and other significant mineralized targets in the region (Bennett et al, 2010). The Skookum Jim zone on the Mariposa property, located adjacent to the Walhalla property is similarly reported to be hosted in a 75m wide northeasterly trending structural corridor near the contact between granodiorite and quartz-biotite gneiss (Pacific Ridge Exploration Ltd. website, 2012).

Northeasterly trending and other subtle cross-structures are visible in the magnetics on the Walhalla property, especially in the detailed airborne magnetic survey presented in Appendix 6.

5.4 Quaternary Geology

The Walhalla project area lies between the area affected by Reid age glaciation (ca. 200ka) to the east and unglaciated terrane to the west. Recent detailed investigation (Bond & Lipovsky, 2010) indicates that the project area was subjected to localized Pre-Reid glaciation (ca. 1- 2.6ma) in the valleys in the southeast part of the claims, and that Grand Valley and Jane creeks in the northern part of the claims were flooded by glacial lake Rosebud at this time, with deposition of glaciolacustrine sediments.

The west side of White mountains (about 15km to the east of the project) had ice to only 1000m a.s.l., tapering to the west so that glaciers only covered valleys in the project area. Unglaciated uplands are more extensive than previously interpreted.

“... upland glaciated slopes have been so heavily weathered and eroded since the early to middle Pleistocene that virtually no glacial deposits remain; these surfaces can essentially be considered unglaciated for surficial geochemical sampling purposes” (Bond & Lipovsky, 2010).

6.0 DEPOSIT TYPES

Exploration on the Walhalla Property is not sufficiently advanced to assign specific deposit types to the property. Potential is thought to exist on the property for several types of deposit, with gold the primary target. The high copper and silver values located near high gold values in the Black creek area in the southeast of the claims suggests potential for Minto type deposits, which are mined for these metals. Deposit types are described in more detail in Appendix 5.

7.0 EXPLORATION

Exploration undertaken since the staking of the Walhalla project in 2011 consists of the geological and geochemical survey conducted under the supervision of the author in September, 2011 (Appendix 5), a detailed airborne magnetic geophysical survey conducted by Precision Geosurveys Inc. (Appendix 6), and a winter power auger and summer hand auger soil sampling program conducted by Ground Truth Exploration Inc., described in this section.

7.1 September 2011 Field Program

The September 2011 field program is described in a National Instrument 43-101 report entitled Technical Report on the Walhalla Project, Yukon Territory, Canada, that is presented in Appendix 5 of this report. The report is also available in digital form at SEDAR (www.sedar.com) in the database for Volcanic Metals Corp.

7.2 November 2011 Airborne Magnetism Survey

The 2011 airborne geophysical survey is described in Appendix 6 of this report. This survey was flown at a tighter line spacing, lower altitude, slower speed and different orientation (E-W vs. NE-SW) compared to the 2009 government survey (Kiss, 2009). As a consequence, the newer survey returned more detailed results and better identifies subtle cross structures with northeasterly orientation that are considered to be favourable for mineralization in many parts of the Yukon (Bennett et al, 2010).

The 2009 GSC survey was conducted with the sensor mounted in a Piper Navajo aircraft, with survey lines flown at 400m spacing with 2400m control lines, and 150m terrain clearance. Lines were flown at N42°E orientation, an orientation orthogonal to the dominant geological trend but least likely to identify northeasterly trending structures.

The 2011 Precision survey was conducted with the sensor mounted on a Bell 206 BIII Jet Ranger, with survey lines flown at 100m spacing at 090°/270° heading, with 1000m control lines at 000°/180°, and 35m terrain clearance.

The geophysical report in Appendix 6 identifies eight primary anomalies in three areas, labeled A to C. Many of these anomalies are oriented northwesterly, parallel to the dominant geological trend, and probably just map out various lithological units and the major structural trends.

Anomaly A1 consists of six northeasterly trending magnetic high structures in the southwest part of the claims. These structures cut across a large body of orthogneiss. In some places they are spatially associated with gold in soil anomalies identified in the September 2011 reconnaissance survey, and these targets should be followed up. Northeasterly trending magnetic lows and other parallel structures in this area should also be followed up. Northeasterly trending magnetic low anomalies are generally more attractive as exploration targets than magnetic highs, as magnetic-destructive hydrothermal alteration often accompanies gold mineralization.

The magnetic high anomalies in the B1 area also coincide with gold in soil anomalies, and are thought to be associated with mafic rocks. However, some of the ultramafic rocks here are totally serpentinized, and non-magnetic. A subtle northeasterly trending anomaly (not marked) is present in the northeast corner of the survey, extending off of the claim block.

95% of the data from the WAL lies within a rather narrow 310 nT range, reflecting the generally low magnetic signature of most lithologies on the property. As a result, some apparent magnetic highs only reflect topographic highs (anomalies labeled “c” in Appendix 6). Ultramafic and metabasite rocks present in the northeast part of the property and a few other mafic-rich units are indicated in the highest 5% of the magnetic data.

Anomaly C3, on the south side of the claim block is intriguing, as a northeasterly trending structure terminated the magnetic high, and coincides with the northerly edge of a Jurassic intrusive body. This area has not been examined.

The southeastern gold geochemical anomaly in the Black creek area that was tested by grid soils (described below) has numerous subtle northeasterly trending structures nearby, as interpreted by the author (figure 9).

7.3 March 2012 Power Auger Soil Survey

2012 field work was conducted at Black creek, in the area of the highest gold in soil anomaly returned from the 2011 survey (3410ppb Au). A power auger soil geochemical sampling program was undertaken on a grid in this area in March (Figs. 5- 8). This work was conducted by a crew of 4 workers based in a winter camp over a 14 day period, with 8 days of actual sampling. Workers and equipment were mobilized by truck from the Pelly Farm area, as the trail had been

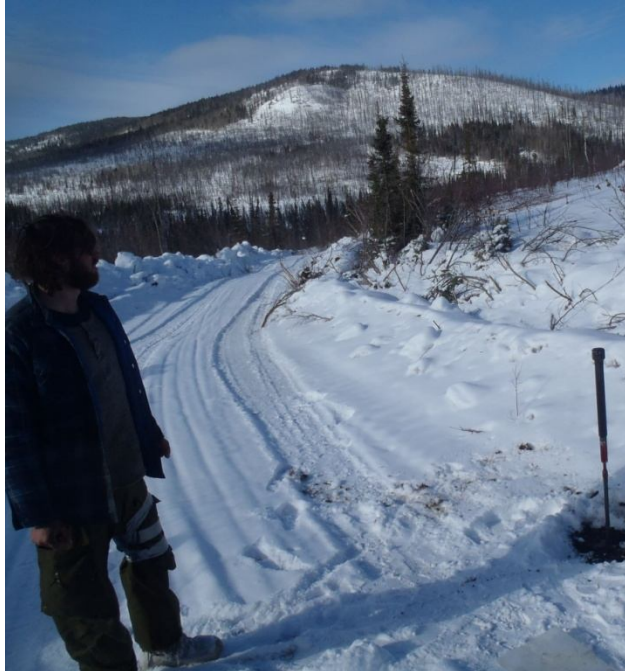
bulldozed clear of snow by a placer miner mobilizing equipment along the trail. Samples were generally collected on a 25m by 50m spaced grid, or at 25m intervals along the trail using the deep power auger technique. Samples were collected between 80 and 170cm depth, with an average depth of 94cm. 358 samples were collected in total, including 12 field duplicates. Two power augers were used, with a two worker crew to operate each machine and record data. Sample lines and stations were first established on snowshoes, with snow dug from sample sites.

All samples were located and recorded by GPS in the field using UTM coordinates, NAD 83 datum, placed into kraft paper sample bags with a unique sample tag, numbered and secured in the field. Sample descriptions were recorded for each station, and input into a spreadsheet (Appendix 3). Sample locations were marked in the field with flagging tape.

The 3410ppb anomaly is located on the main trail that crosses the property, and loess is deep in this area. It was expected that the power augers would be able to penetrate to the C horizon soils, however extension steels were not available at the time of the survey. Sample depths ranged from 80 to 170cm, with an average of 94cm depth. Due to the depth limitations of the equipment the sample grid was moved higher up the slope where loess is shallower.

The 3410ppb anomaly was collected in soil derived from a graphitic schist unit that was obvious in the road bed. Black graphitic soil is also obvious in the field descriptions from the soil grid (Appendix 3), and it should be possible to map the presence of this unit using soil descriptions. This soil type is not consistently anomalous in gold, however two of the three highest gold values in the area were returned from it, 3410ppb and 2155ppb. These samples are located about 250m apart. Four samples were collected within a few meters of the 3410ppb sample, however they did not return anomalous gold values. This suggests that the very high gold values are rare coarse gold grains, and not a broad and consistent anomaly. The highest gold in soil value from the March sampling program was 6261ppb, from brown C horizon soil. The presence of three multigram gold samples in a small area is very encouraging, however the high gold values don't appear to correlate strongly with any other elements, which makes exploration more challenging.

In addition to gold, the survey grid identified highly anomalous silver, with numerous samples above 1ppm and up to 7.9ppm. Copper values are also locally elevated, with values above 100ppm common, and a maximum value of 266ppm. Local zinc values up to 365ppm are also present. The highest silver and copper results do not consistently coincide with the highest gold samples.



Figures 4a & 4b. March power auger soil survey: a) showing winter road and terrain; b) showing backpack auger in action.

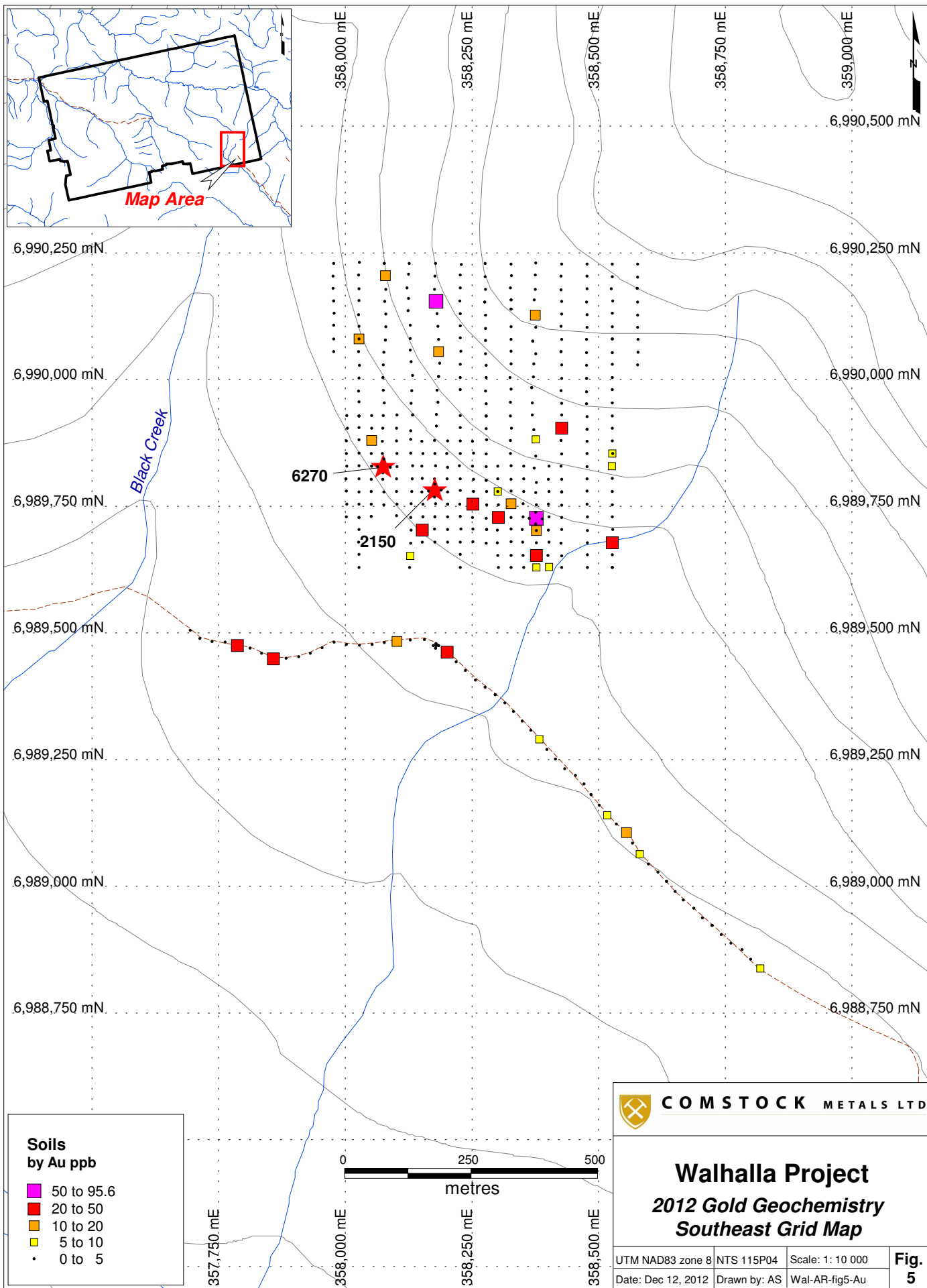
7.4 June 2012 Hand Auger Soil Survey

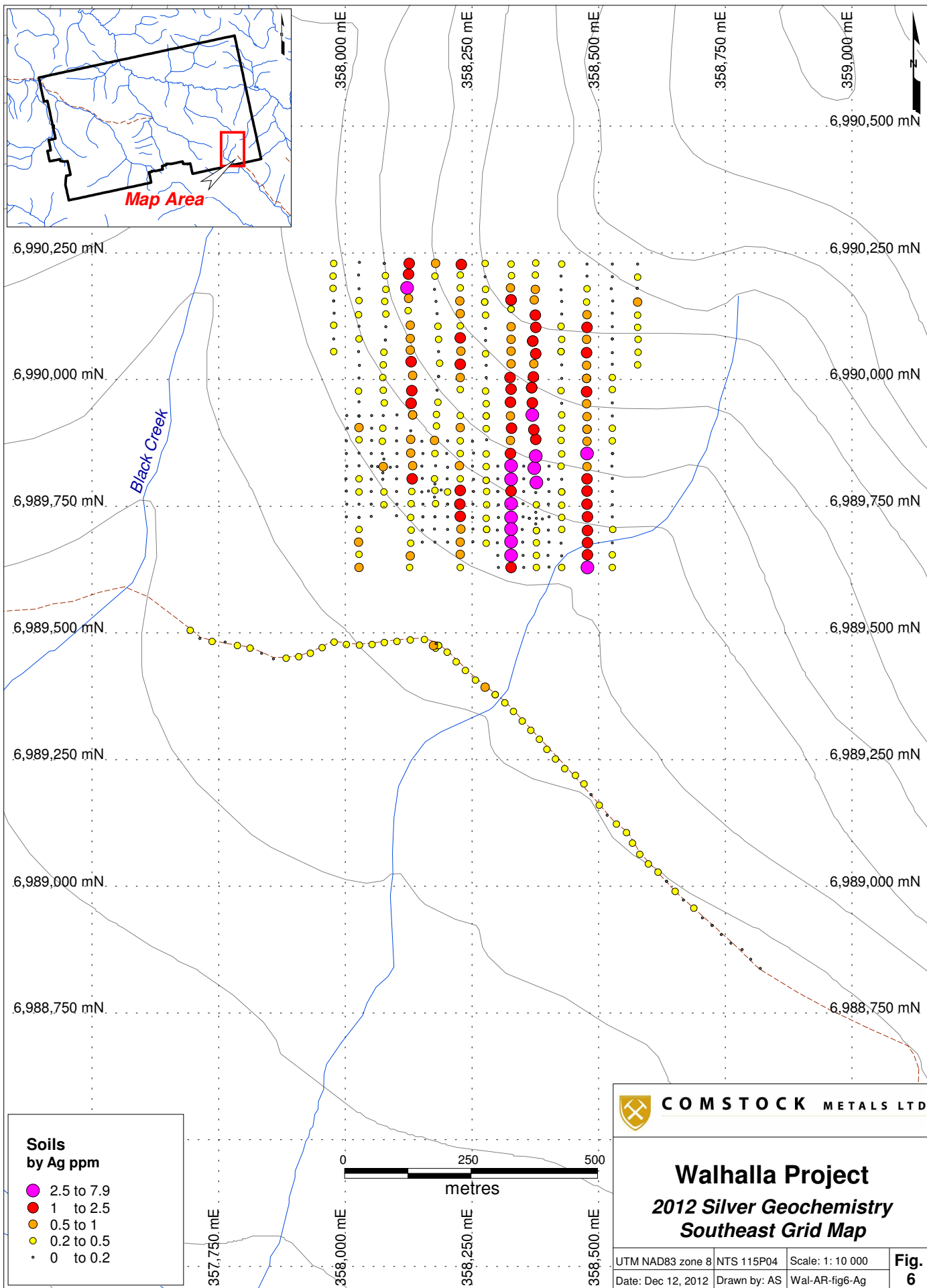
A short program of manual auger soil sampling was conducted on June 19 as infill in the winter grid, but this work was not filed for assessment credit. However, the results are included in this report. Samples were collected between 40 and 150cm depth, with an average depth of 73cm (compared to 94cm with power auger). 103 samples were collected in total, including 1 field duplicate.

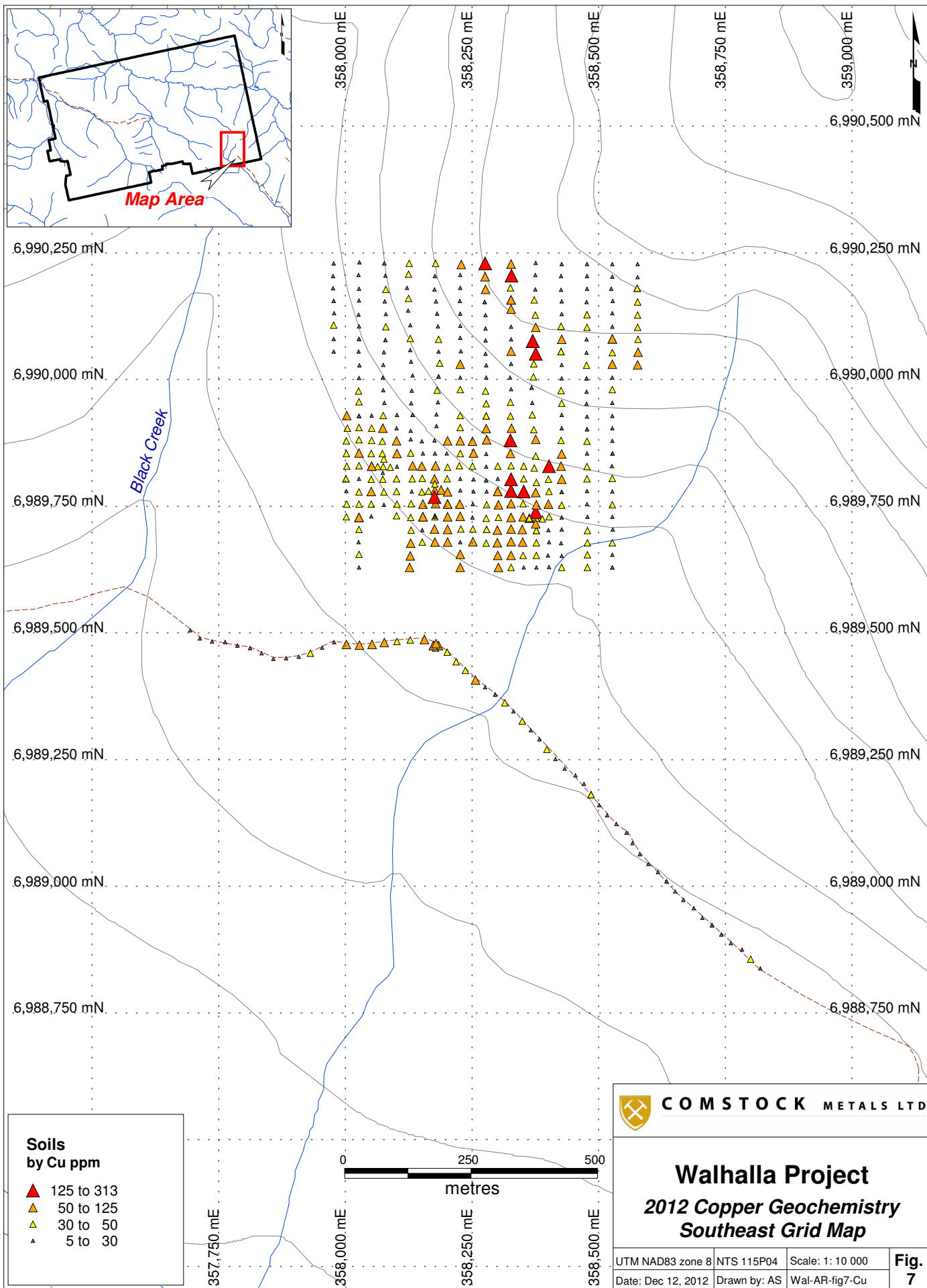
Results from this work confirmed the results in March, but without any spectacular gold values. The gold anomalies from the June survey are generally lower, and the silver values are much lower, with the maximum value 0.2ppm. The low silver values are problematic, as the March survey returned dozens of samples above 1.0ppm Ag. Also, the 2011 soils collected in the area are low in silver. Copper results are similar to the March survey, and include the highest value from the Black creek area.

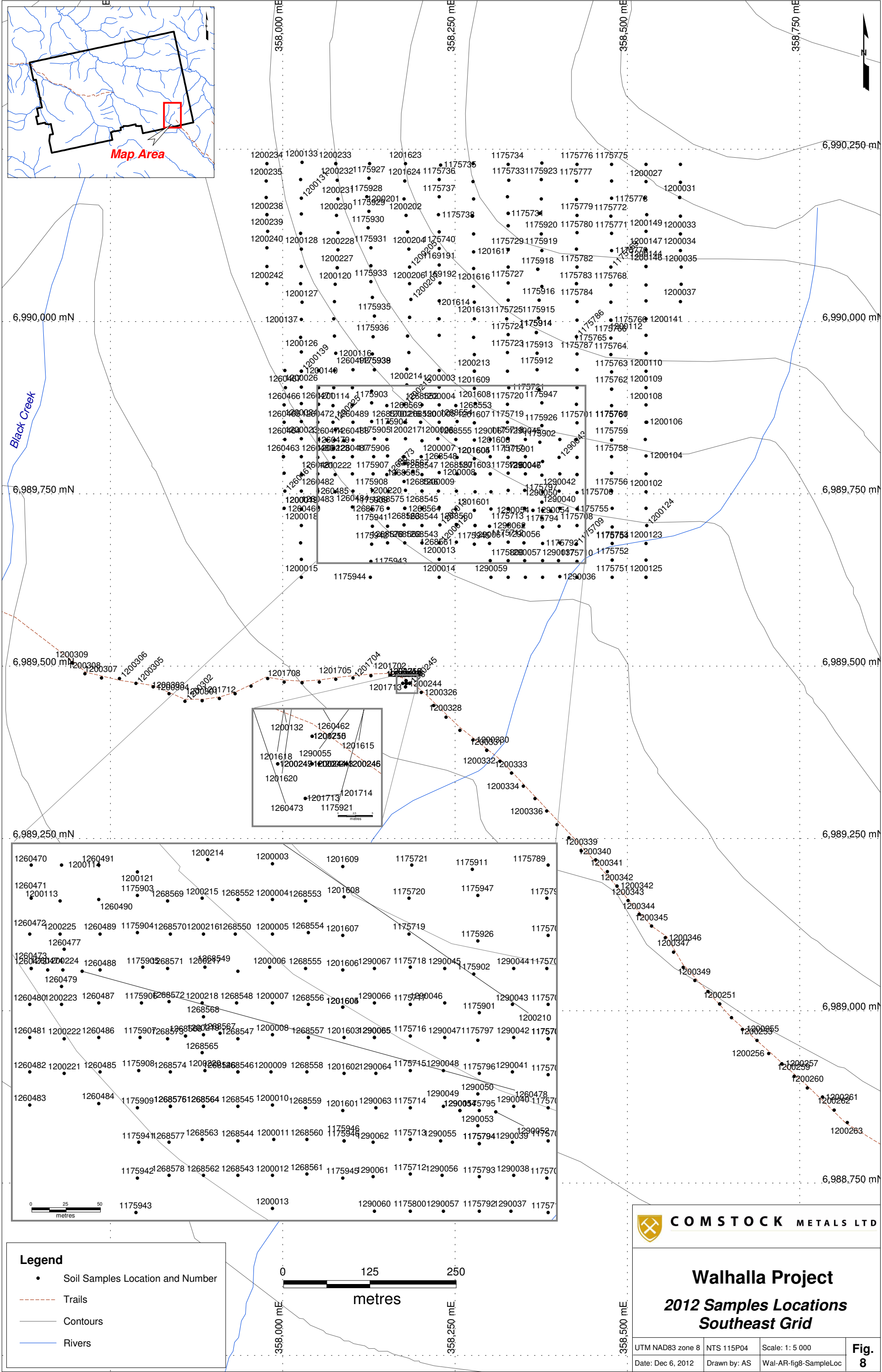
The main focus of this program was to collect four samples around each of the multi-gram gold samples identified earlier. This effort failed to reproduce high values. The multi-gram gold results are interpreted to be due to sporadic free gold grains in soil, and this is confirmed by the absence of strong pathfinder element associations with the high gold values or elsewhere nearby.

The June samples have been examined and compared to the March samples based on sample depth and reported sample quality in an effort to determine if these factors resulted in lower silver values. It is possible that shallower sample depth contributed to lower values due to dilution by loess. The sample collectors report almost all samples as being of good or excellent quality. The high silver value samples should be re-analyzed for silver to check these results.









8.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The 2012 samples were placed into rice bags in the field by the workers, sealed and secured. The samples were delivered directly to the Dawson preparation facility of AcmeLabs by Ground Truth personnel. Samples were dried in a 60°C oven, then sieved to 100g of -80 mesh. Prepared samples were then shipped to Acme Analytical Laboratories (Vancouver) Ltd. for analysis.

A 15g subsample was leached in aqua regia at 95°C. Analysis was by ICP-MS for 36 elements (method 1DX15). Gold was analyzed with a 0.5ppb detection limit. Some field duplicates were submitted.

Quality control procedures were implemented at the laboratory, involving the regular insertion of blanks and standards and repeat analyses on the samples. Quality Assurance data is provided for each batch of samples and included with each analytical certificate (Appendix 4).

It is important to note that the 2012 analyses conducted by AcmeLabs give much lower detection limits for pathfinder elements such as Hg, Bi, Sb and Tl than the analyses from AGAT laboratory in 2011. The lower limits might provide very useful information for detecting less obvious gold mineralization.

There was no evidence of any tampering with the samples during collection or shipping. All sample preparation was conducted by the laboratory.

9.0 INTERPRETATION AND CONCLUSIONS

The gold-copper-silver anomaly identified by the winter power auger program is intriguing, and possibly reflects mineralization similar to the Minto mine to the southeast, which produces all three of these metals. There are early Jurassic intrusive rocks mapped on the ridge nearby, which is the same host rock as Minto, however this interpretation is very tentative until geological work has been conducted in the area of the anomalies.

The presence of two multi-gram gold analyses in soil derived from graphitic schist might be significant, with carbon possibly acting as a reducing agent. Alternately, the schist might be a favourable host due to ductility contrast within harder metamorphic rocks. Or it could just be a coincidence.

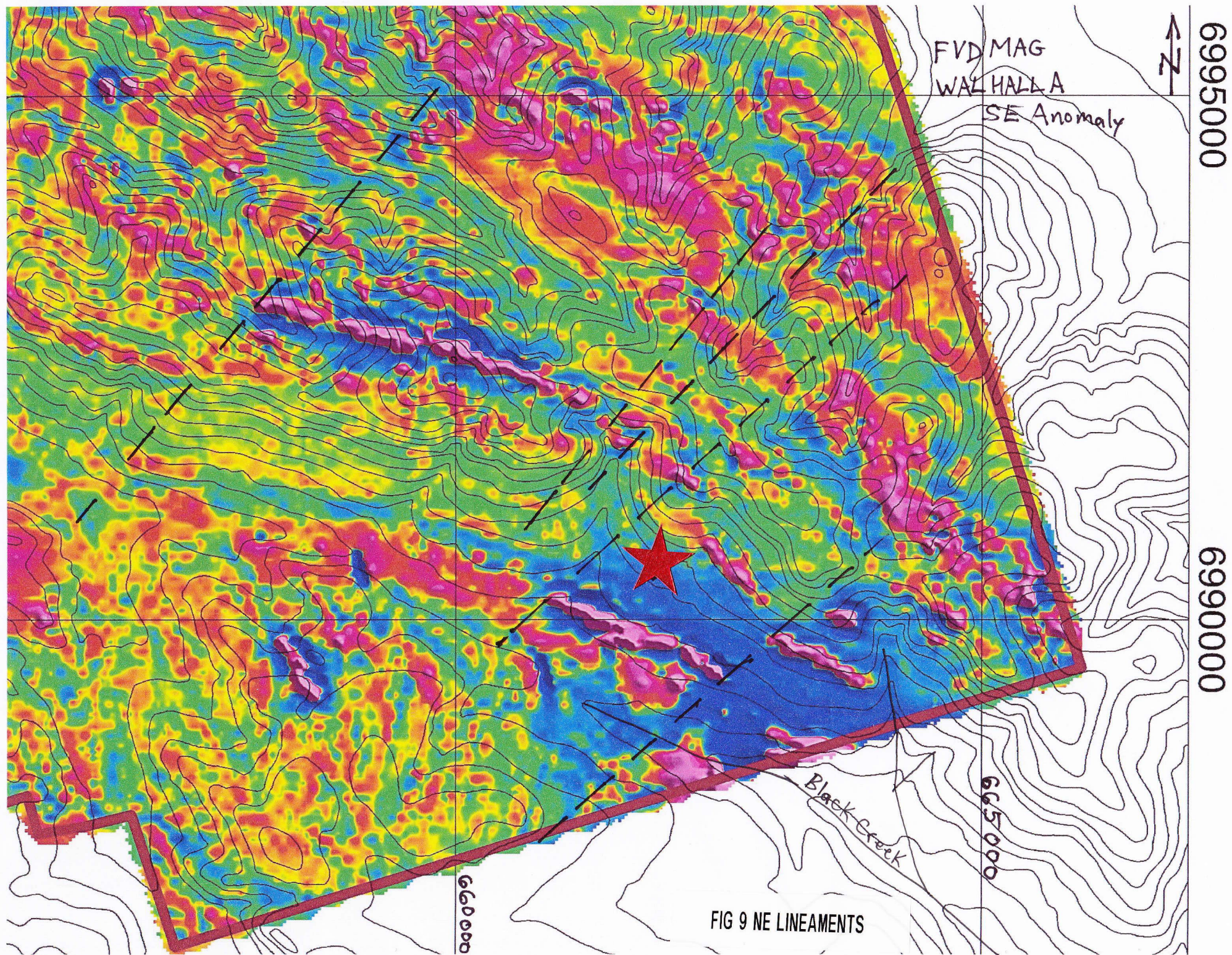
The Walhalla Project constitutes a property of merit based on favourable geological setting, geology, geochemistry, magnetic geophysical signature and similarities and proximity to the White Gold project of Kinross Gold Corp. which lies 65 kilometres to the west and the Minto mine of Capstone Mining Corp. which lies 50 kilometres to the southeast.

The property is underlain by rocks of the Devono-Mississippian Yukon Tanana terrane and Stikinia/ Quesnellia terrane that host important deposits of gold and copper-gold in the region.

The Walhalla Project has sparse outcrop and is considered to be under-explored, and therefore is considered to have significant potential as an early stage exploration property.

The major faults and their splays present on the property are considered to be favourable for hosting structurally controlled gold mineralization. The subtle cross structures to the main northwesterly structural trend might be significant, and these should be examined. An example of these structures is presented in figure 9, below.

The large area of breccia identified in the northeast has substantial potential to be mineralized. The presence of northeasterly trending cross structures and thrust faults with ultramafic lenses is also considered to be favourable. Anomalous to highly anomalous gold in soils present in numerous parts of the property confirm the exploration potential.



10.0 RECOMMENDATIONS

Based on the favourable geological setting, geology, geochemistry, magnetic geophysical signature and similarities and proximity to the White Gold project of Kinross Gold Corp. and the Minto mine of Capstone Mining Corp., further work is recommended on the Walhalla Project.

An exploration budget totalling \$200,000 is recommended for the Walhalla property (Table 2, below).

One part of the program would consist of further soil geochemical surveys, with ridge and spur geochemical surveying completed in those parts of the property not yet covered, totalling roughly 100 line-kilometres (as shown in Appendix 5, Fig. 12). The lines might be re-oriented to test geophysical anomalies and based on the geological and geophysical trends.

Mapping and prospecting in the area of the detailed soil geochemical grid in the southeastern part of the claims with the high gold-silver-copper in soil results should be undertaken before trenching. Mapping and prospecting should also be done in areas of other geochemical and geophysical anomalies. New government geological mapping in the area has been completed, and the map is expected to be published in early 2013. The new map may provide insight into exploration of the property.

A helicopter portable excavator should be mobilized to the property to conduct trenching near the best gold, silver and copper anomalies. A power auger capable of reaching depths of 2 or 3 meters should be sought to test the Black creek area beneath thick loess.

The complete soil geochemical database should be examined in a GIS platform to seek more subtle geochemical trends. This work might reveal additional targets. The presence of black soils in the Black creek area might also be used to map the location of graphitic schist below cover.

TABLE 2. WALHALLA PROJECT PROPOSED BUDGET

-			
RIDGE AND SPUR GEOCHEMICAL SURVEY			
100 line-km = 2000 samples	\$20 all-in collection cost		\$40,000
Additional grid soils - 750 samples	\$20 all-in collection cost		\$15,000
Soil Analytical cost	\$24 per sample		\$66,000
Helicopter support			\$40,000
Trenching - helicopter portable excavator	7 days @ \$1000		\$7,000
Geological mapping, sampling			\$9,000
Rock analytical cost	100 @ \$30 per sample		\$3,000
Report writing, drafting			\$10,000
Miscellaneous and contingency			\$10,000
TOTAL:			\$200,000

11.0 REFERENCES

Bennett, V., Colpron, M., and Burke, M., 2010. Current thinking on Dawson Range Tectonics and Metallogeny. Yukon Geological Survey Miscellaneous Report 2.

Bond, J.D. and Lipovsky, P.S., 2011. Surficial geology, soils and permafrost of the northern Dawson Range. *In:* Yukon Exploration and Geology 2010, K.E. MacFarlane, L.H. Weston and C. Relf (eds.), Yukon Geological Survey, p. 19-32.

Colpron, M. & Ryan, J.J. 2010. Bedrock geology of southwest McQuesten (NTS 115P) and part of northern Carmacks (NTS 115I) map area. *In:* Yukon Exploration and Geology 2009, K.E. MacFarlane, L.H. Weston and L.R. Blackburn (eds.), Yukon Geological Survey, p. 159-184.

Kiss, F., and Coyle, M., 2009a. Residual total magnetic field, McQuesten Aeromagnetic Survey, NTS 115I/13 and 115I/14, Yukon; Yukon Geological Survey Open File 2009-4, scale 1:50,000.

Kiss, F., and Coyle, M., 2009b. First vertical derivative of the magnetic field, McQuesten Aeromagnetic Survey, NTS 115I/13 and 115I/14, Yukon; Yukon Geological Survey Open File 2009-5, scale 1:50,000.

Kiss, F., and Coyle, M., 2009c. Residual total magnetic field, McQuesten Aeromagnetic Survey, NTS 115J/16 and part of 115J/15, Yukon; Yukon Geological Survey Open File 2009-8, scale 1:50,000.

Kiss, F., and Coyle, M., 2009d. First vertical derivative of the magnetic field, McQuesten Aeromagnetic Survey, NTS 115O and 115O/, Yukon; Yukon Geological Survey Open File 2009-9, scale 1:50,000.

Kiss, F., and Coyle, M., 2009e. Residual total magnetic field, McQuesten Aeromagnetic Survey, NTS 115O/1 and 115O/2, Yukon; Yukon Geological Survey Open File 2009-10, scale 1:50,000.

Kiss, F., and Coyle, M., 2009f. First vertical derivative of the magnetic field, McQuesten Aeromagnetic Survey, NTS 115O/1 and 115O/2, Yukon; Yukon Geological Survey Open File 2009-11, scale 1:50,000.

Kiss, F., and Coyle, M., 2009g. Residual total magnetic field, McQuesten Aeromagnetic Survey, NTS 115P/3 and 115P/4, Yukon; Yukon Geological Survey Open File 2009-16, scale 1:50,000.

Kiss, F., and Coyle, M., 2009h. First vertical derivative of the magnetic field, McQuesten Aeromagnetic Survey, NTS 115P/3 and 115P/4, Yukon; Yukon Geological Survey Open File 2009-17, scale 1:50,000.

Pacific Ridge Exploration Ltd., 2012. Mariposa project information available in website available at: <http://www.pacificridgeexploration.com/s/Home.asp>

Smith, C.A.S., Meikle, J.C. & Roots, C.F. (editors), 2004. Ecoregions of the Yukon Territory: Biophysical properties of Yukon landscapes.

APPENDIX I

STATEMENT OF QUALIFICATIONS

WILLIAM D. MANN, M.Sc., P.Geo.

19 HAYES CRESCENT, WHITEHORSE, YUKON Y1A 0E1

1. I am a member in good standing of the Association of Professional Engineers and Geoscientists of BC, Licence #31907.
2. I am a Graduate of Queen's University, 1986, with a Master of Science Degree in Mineral Exploration Geology.
3. I am a Graduate of the University of British Columbia, 1983, with a Bachelor of Science Degree in Geology.
4. I have worked in mineral exploration and mining continuously since 1979.
5. I designed, supervised and participated in the initial work program on the WALHALLA Project in 2011, and oversaw the airborne geophysical and power auger sampling programs.
6. I am a consulting geologist for Comstock Metals Ltd., Volcanic Metals Corp., and Seafeld Explorations Ltd. owners of the claims. I hold no interest in the WALHALLA property. I do not hold shares or options in Comstock Metals Ltd., Volcanic Metals Corp., or Seafeld Explorations Ltd.

December 15, 2012

William D. Mann, M.Sc., P.Geo.

APPENDIX 2**2011- 2012 Walhalla (Bar) Project Statement of Expenditures - Seafield Explorations Ltd.**

DATE	INVOICE #	SUPPLIER	ITEM	COST	TOTALS
<u>Phase 1 Geochemistry & Prospecting</u>					
<u>September 6- 15, 2011</u>					
<u>Expenses incurred by contractors on behalf of Seafield (Volcanic)</u>					
2011-09-21	11-107E	William Mann	Groceries, hardware, travel costs	\$3,842.99	
				3,842.99	\$3,843
<u>Travel and Accommodation</u>					
		Hotels	est.	1,000.00	
		Restaurants	est.	1,000.00	
		Flights to & from Whitehorse	est.	400.00	
				2,400.00	\$2,400
<u>Employee Wages</u>					
	est.	John La Gorgue, COO	Yukon field work September 5- 17 (13 days @ \$600)	7,800.00	\$7,800
<u>Contractors and Consultant Fees</u>					
2011-11-16	WH111611	Coast Mountain Geological Ltd.	Map preparation	5,662.50	
2011-10-31	11-159-01	Luminai Drafting Ltd.	drafting	841.00	
2011-09-20	3291	Fireweed Helicopters	flights to & from property	26,008.40	
2011-09-13	3148	Great River Aviation Ltd.	medivac flight	620.25	
2011-09-22	11-108	William Mann	QP project manager, geologist, truck	15,015.00	
2011-11-17	11-112	William Mann	preparation of 43-101 report	10,080.00	
2011-09-17	123	Sandro Frizzi	Prospecting and sampling	5,817.00	
2011-09-19	101	Matt Little	Prospecting and sampling	4,689.00	
2011-09-22	1109	Max Mikhailytchev	Prospecting and sampling	6,735.00	
				75,468.15	\$75,468
<u>Geochemical Analysis - Phase 1</u>					
2011-10-07	11K42980M	AGAT Lab	Soil/ Rock geochemistry	5,471.43	
2011-10-07	11K42982M	AGAT Lab	Soil/ Rock geochemistry	768.80	
2011-10-07	11K43287M	AGAT Lab	Soil/ Rock geochemistry	3,224.00	
2011-10-07	11K43289M	AGAT Lab	Soil/ Rock geochemistry	6,164.84	
2011-10-14	11K44606M	AGAT Lab	Soil/ Rock geochemistry	5,228.64	
				20,857.71	\$20,858
<u>Phase 2 Airborne Geophysical Survey</u>					
<u>October 22- November 22, 2011</u>					
2011-11-30	11-159-02	Luminai Drafting Ltd.	drafting	435.00	
2011-12-31	11-115	William Mann	review geophysics and backpack soils	2,205.00	
2011-11-29	1161	Precision GeoSurveys	4756 line-km magnetic survey	356,296.00	
2011-12-14	1164	Precision GeoSurveys	magnetic survey report	20,000.00	
				378,936.00	\$378,936
<u>Phase 3 Backpack Drill Soil Survey</u>					
<u>March 13- 21, 2012</u>					
2012-03-24	VOL 2012-01	Ground Truth Exploration Inc.	Backpack drill soil sampling program	26,551.88	
2012-02-29	12-159-01	Luminai Drafting Ltd.	drafting	203.00	
		William Mann	report writing	1,800.00	
2012-04-12	VANI123675	Acme Analytical	357 soil analyses	851.20	
2012-04-13	VANI123810	Acme Analytical	357 soil analyses	7,168.00	
				36,574.08	\$36,574
TOTAL EXPENDITURES:					\$525,879

Signed:**Date:**

agent for Seafield Explorations Ltd. and Volcanic Metals

APPENDIX 3 UTM Zone 08V Walhalla Project - March 2012 SOIL DESCRIPTIONS

sample_id	easting	northing	colour_primary	site_slope	depth	quality	horizon	vegetation	site_cover	sample_note1	soil_sample_freehand_notes	texture	moisture
1175711	358427	6989629	Chocolate Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover	Possible Creek Contamination	Coarse	Sand	Damp
1175710	358427	6989652	Chocolate Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover			Sand	Damp
1175709	358426	6989677	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175708	358427	6989704	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175707	358427	6989728	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175706	358427	6989752	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175705	358427	6989778	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover		Duplicate 1175704 Auger Bit Sample	Sand	Dry
1175704	358427	6989778	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175703	358427	6989803	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175702	358426	6989829	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Damp
1175701	358427	6989853	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175790	358426	6989880	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175789	358427	6989904	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175788	358427	6989930	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Damp
1175787	358427	6989953	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover		Drilled through rock.	Sand	Dry
1175786	358426	6989978	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175785	358427	6990002	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175784	358427	6990029	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover		Drilled through rock, possibly quartz	Sand	Dry
1175783	358426	6990055	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175782	358427	6990079	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175781	358426	6990105	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175780	358427	6990129	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175779	358427	6990154	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175778	358426	6990177	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175777	358426	6990204	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175776	358427	6990228	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175775	358477	6990228	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175774	358477	6990204	Dark Blue Black	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175772	358476	6990153	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175773	358477	6990179	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Damp
1175771	358477	6990128	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175770	358477	6990103	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175797	358376	6989777	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175796	358377	6989753	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175795	358377	6989726	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175794	358377	6989702	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175793	358377	6989678	Chocolate Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175792	358377	6989653	Dark Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover			Sand	Dry
1175791	358377	6989629	Dark Brown	Subtle Slope	90	Good	C	Old Burn	Leaf Cover			Sand	Dry
1169196	358227	6989929	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1169195	358227	6989955	Light Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1169194	358227	6990004	Light Brown	Steep	90	Excellent	O	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1169193	358227	6990030	Chocolate Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1169192	358228	6990056	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1169191	358227	6990082	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175740	358227	6990106	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175739	358227	6990130	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175738	358226	6990155	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175737	358227	6990181	Light Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175736	358227	6990206	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover		Drilled through rock	Sand	Dry
1175735	358229	6990227	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover		Drilled through rock	Sand	Dry
1175734	358327	6990228	Light Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175733	358328	6990205	Light Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175732	358326	6990181	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175731	358328	6990155	Light Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175730	358327	6990129	Light Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock	Sand	Dry
1175729	358327	6990104	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine	Drilled through rock, small sample	Sand	Dry
1175728	358327	6990079	Chocolate Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover		Drilled through rock	Sand	Dry
1175727	358327	6990056	Chocolate Brown	Subtle Slope	100	Excellent	C	Old Burn	Grass Cover		Drilled through rock	Sand	Dry
1175726	358327	6990031	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175725	358325	6990004	Chocolate Brown	Pronounced	120	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175724	358327	6989981	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175723	358326	6989955	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175722	358326	6989928	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175721	358328	6989904	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175720	358326	6989880	Reddish Yellow	Pronounced	120	Excellent	B	Old Burn	Grass Cover			Sand	Dry
1175719	358326	6989854	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175718	358327	6989830	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175717	358327	6989803	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover	Small Sample	Bottom out on rock	Sand	Dry
1175716	358327	6989780	Chocolate Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175715	358327	6989755	Chocolate Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175714	358327	6989728	Chocolate Brown	Pronounced	130	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175713	358327	6989705	Dark Brown	Pronounced	120	Good	C	Old Burn	Grass Cover			Sand	Wet
1175712	358327	6989680	Dark Brown	Subtle Slope	120	Good	C	Old Burn	Grass Cover			Sand	Damp
1175800	358327	6989653	Dark Brown	Subtle Slope	120	Good	C	Old Burn	Grass Cover	Coarse		Sand	Dry
1175799	358327	6989629	Chocolate Brown	Subtle Slope	120	Good	C	Old Burn	Grass Cover			Sand	Wet
1175939	358133	6989930	Chocolate Brown	Pronounced	90	Good	C	Poplar	Leaf Cover	Coarse	Duplicate 1175938	Sand	Damp
1175938	358133	6989930	Chocolate Brown	Pronounced	90	Excellent	C	Poplar	Leaf Cover	Coarse		Sand	Damp
1175937	358130	6989953	Reddish Yellow	Pronounced	90	Good	C	Poplar	Leaf Cover	Coarse	Shiny grit	Sand	Dry
1175936	358131	6989978	Reddish Yellow	Pronounced	90	Excellent	C	Poplar	Leaf Cover	Coarse		Sand	Dry
1175935	358133	6990008	Chocolate Brown	Pronounced	90	Good	B	Old Burn	Leaf Cover	Clay		Sand	Damp
1175934	358130	6990035	Chocolate Brown	Pronounced	90	Good	C	Poplar	Leaf Cover	Coarse		Sand	Dry
1175933	358128	6990058	Reddish Yellow	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175932	358128	6990081	Chocolate Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Clay	Some clay	Sand	Damp
1175931	358128	6990107	Reddish Yellow	Pronounced	90	Excellent	C	Old Burn	Leaf Cover	Coarse	Quartz chips	Sand	Dry
1175930	358124	6990136	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Sand	Dry
1175929	358125	6990160	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Sand	Dry
1175769	358476	6990079	Reddish Yellow	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175768	358476	6990053	Chocolate Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175767	358476	6990028	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175766	358476	6990002	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175765	358476	6989976	Reddish Yellow	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175764	358476	6989952	Chocolate Brown	Pronounced	120	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175763	358477	6989927	Chocolate Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175762	358477	6989902	Chocolate Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover			Sand	Dry
1175761	358477	6989878	Dark Blue Black	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Sand	Dry

sample_id	easting	northing	colour	primary	site_slope	depth	quality	horizon	vegetation	site_cover	sample_note1	soil_sample	freehand_notes	texture	moisture
1175760	358477	6989854	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1175759	358477	6989828	Chocolate	Brown	Pronounced	170	Excellent	C	Old Burn	Grass Cover				Clay	Damp
1175758	358477	6989804	Chocolate	Brown	Pronounced	110	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1175757	358477	6989780	Chocolate	Brown	Pronounced	130	Excellent	C	Old Burn	Grass Cover				Sand	Damp
1175756	358477	6989754	Chocolate	Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1175755	358478	6989729	Chocolate	Brown	Pronounced	130	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Damp
1175754	358478	6989702	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Small sample	Sand	Damp
1175753	358478	6989678	Chocolate	Brown	Pronounced	120	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Damp
1175752	358478	6989654	Chocolate	Brown	Subtle Slope	130	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Damp
1175751	358478	6989629	Chocolate	Brown	Subtle Slope	100	Excellent	C	Old Burn	Burnt Moss				Sand	Wet
1175928	358122	6990181	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Damp
1175927	358125	6990208	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover	Fine		Some grit	Silt	Wet
1175925	358126	6990229	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover	Fine		Some grit	Sand	Damp
1175924	358376	6990230	Light Brown		Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1175923	358375	6990206	Grey		Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1175922	358375	6990178	Reddish Brown		Subtle Slope	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1175921	358373	6990157	Reddish Yellow		Subtle Slope	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1175920	358375	6990121	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Quartz Chips	Sand	Dry
1175919	358376	6990103	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Some b	Sand	Damp
1175918	358370	6990076	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1175917	358376	6990051	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Quartz Chips	Sand	Dry
1175916	358372	6990031	Reddish Yellow		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Quartz Chips	Sand	Dry
1175915	358371	6990005	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Quartz Chips			Sand	Dry
1175914	358368	6989984	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1175913	358369	6989954	Chocolate	Brown	Pronounced	80	Good	C	Old Burn	Grass Cover	Coarse		Some chips	Sand	Dry
1175912	358369	6989930	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1175911	358372	6989901	Grey		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Good grit	Sand	Dry
1175947	358376	6989882	Reddish Yellow		Pronounced	80	Good	C	Old Burn	Grass Cover	Fine		Mica and silist	Sand	Dry
1175926	358376	6989849	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1175902	358373	6989825	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1175901	358377	6989797	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1201622	358276	6990229	Light Brown		Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine			Gravel	Dry
1201621	358276	6990203	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1201620	358277	6990178	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Damp
1201619	358275	6990153	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1201618	358277	6990127	Chocolate	Brown	Subtle Slope	90	Excellent	C	No Trees	Grass Cover				Gravel	Dry
1201617	358277	6990101	Light Brown		Pronounced	90	Excellent	C	Old Burn	Burnt Moss	Fine		Bedrock	Sand	Dry
1201616	358277	6990077	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Damp
1201615	358277	6990051	Light Brown		Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1201614	358278	6990028	Reddish Yellow		Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1201613	358278	6990004	Light Brown		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1201612	358277	6989977	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1201611	358278	6989952	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1201609	358278	6989903	Reddish Yellow		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1201608	358279	6989881	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Some mica	Sand	Damp
1201607	358278	6989853	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Damp
1201606	358278	6989828	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1201605	358278	6989801	Reddish Yellow		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Duplicate 1201604	Sand	Dry
1201604	358278	6989801	Reddish Yellow		Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1201603	358279	6989779	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse		Rusty Rocks	Sand	Dry
1201602	358279	6989753	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Some clay content	Sand	Damp
1201601	358278	6989726	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Coarse		Lots of little white rock chips	Sand	Damp
1175946	358279	6989704	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Coarse			Sand	Damp
1175945	358278	6989677	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover	Coarse		Rusty Rocks	Sand	Dry
1175944	358127	6989629	Dark Grey Black		Subtle Slope	90	Good	C	Old Burn	Grass Cover	Clay			Sand	Damp
1175943	358128	6989652	Dark Grey Black		Subtle Slope	140	Good	C	Old Burn	Leaf Cover	Fine		Some grit	Sand	Damp
1175942	358129	6989677	Chocolate	Brown	Subtle Slope	110	Good	C	Old Burn	Leaf Cover	Rusty Rock Chip		Some clay	Sand	Damp
1175941	358130	6989703	Chocolate	Brown	Subtle Slope	100	Good	C	Old Burn	Grass Cover	Rusty Rock Chip		Some clay	Sand	Damp
1175909	358129	6989728	Dark Brown		Pronounced	90	Good	C	Old Burn	Leaf Cover	Fine		Some clay	Sand	Damp
1175908	358130	6989755	Dark Brown		Subtle Slope	90	Good	B	Old Burn	Leaf Cover	Fine		Some grit	Clay	Damp
1175907	358131	6989779	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Coarse			Sand	Dry
1175906	358132	6989804	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover	Fine		Some grit. Hit bedrock but no good c	Clay	Damp
1175905	358133	6989830	Chocolate	Brown	Pronounced	90	Good	C	Poplar	Leaf Cover	Fine			Sand	Dry
1175904	358129	6989855	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1175903	358129	6989882	Chocolate	Brown	Pronounced	90	Good	C	Poplar	Grass Cover	Coarse			Gravel	Dry
1200026	358027	6989905	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200025	358027	6989881	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1200024	358027	6989855	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Burnt Moss			Drilled through rock	Sand	Dry
1200023	358027	6989830	Dark Brown		Pronounced	90	Excellent	C	Old Burn	Burnt Moss	Fine		Drilled through rock	Sand	Dry
1200022	358027	6989804	Chocolate	Brown	Pronounced	120	Good	C	Old Burn	Burnt Moss	Fine			Sand	Wet
1200021	358027	6989778	Chocolate	Brown	Subtle Slope	100	Good	C	Old Burn	Burnt Moss	Fine			Sand	Wet
1200020	358027	6989754	Chocolate	Brown	Subtle Slope	120	Poor	C	Old Burn	Grass Cover	Fine			Sand	Wet
1200019	358027	6989728	Greyish Green		Subtle Slope	90	Excellent	C	Old Burn	Burnt Moss	Fine		Drilled through rock	Sand	Dry
1200018	358027	6989704	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200017	358026	6989679	Dark Brown		Subtle Slope	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200016	358027	6989655	Chocolate	Brown	Pronounced	120	Poor	C	Old Burn	Burnt Moss	Fine			Sand	Wet
1200015	358027	6989629	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200014	358227	6989629	Dark Grey Black		Subtle Slope	110	Excellent	C	Old Burn	Grass Cover			Greasy feel	Sand	Damp
1200013	358227	6989655	Dark Brown		Subtle Slope	120	Poor	C	Old Burn	Grass Cover				Sand	Wet
1200012	358227	6989679	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200011	358228	6989705	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200010	358227	6989730	Dark Grey Black		Pronounced	90	Poor	C	Old Burn	Grass Cover	Clay			Sand	Damp
1200009	358226	6989754	Dark Brown		Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Damp
1200008	358227	6989781	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200007	358227	6989804	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200006	358225	6989830	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200005	358227	6989854	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200004	358227	6989879	Chocolate	Brown	Pronounced	100	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200003	358227	6989905	Light Brown		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200002	358227	6989980	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200140	358027	6989928	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			duplicate 1200139	Sand	Dry
1200139	358027	6989928	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200138	358026	6989977	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200137	358027	6990003	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200136	358026	6990055	Light Brown		Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200135	358027	6990080	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Duplicate 1200134	Sand	Dry
1200134	358027	6990080	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200133	358028	6990231	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry

sample_id	easting	northing	colour	primary	site_slope	depth	quality	horizon	vegetation	site_cover	sample_note1	soil_sample	freehand_notes	texture	moisture
1200132	358026	6990206	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200131	358027	6990179	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200130	358027	6990156	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200129	358026	6990128	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200128	358027	6990105	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover	Fine			Sand	Dry
1200127	358028	6990028	Light	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200126	358027	6989956	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover	Coarse			Sand	Dry
1200122	358129	6989899	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Coarse		replacing lost samp from mar 17. No photo	Sand	Damp
1200120	358076	6990054	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Partially Frozen	Some b		Sand	Damp
1200119	358075	6990029	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Coarse			Sand	Dry
1200118	358074	6990004	Chocolate	Brown	Pronounced	90	Poor	B	Old Burn	Leaf Cover	Fine		Frozen	Sand	Wet
1200117	358075	6989979	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover	Frozen		Tried 2 holes but no good stuff around	Sand	Damp
1200116	358077	6989954	Chocolate	Brown	Pronounced	80	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200115	358075	6989929	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover			Some grit	Sand	Damp
1200114	358074	6989904	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Coarse			Sand	Dry
1200113	358073	6989878	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover			Some b horizon	Sand	Damp
1200225	358073	6989854	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200224	358075	6989828	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover			Some b horizon, 6261ppb Au	Sand	Damp
1200223	358074	6989803	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200222	358076	6989778	Dark	Brown	Subtle Slope	90	Good	B	Old Burn	Leaf Cover			Some clay	Sand	Damp
1200221	358076	6989753	Dark	Brown	Subtle Slope	90	Good	B	Old Burn	Leaf Cover			Some grit	Sand	Damp
1200220	358178	6989755	Dark	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200219	358177	6989781	Dark	Grey Black	Pronounced	90	Good	C	Old Burn	Leaf Cover			2155ppb Au	Sand	Damp
1200218	358176	6989804	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Dry
1200217	358178	6989830	Light	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200216	358177	6989854	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200215	358176	6989880	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Some light grey @60cm	Sand	Dry
1200214	358180	6989908	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200213	358278	6989928	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200211	358180	6989931	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200210	358183	6989955	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Fine			Sand	Damp
1200209	358181	6989979	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover	Coarse			Sand	Damp
1200208	358184	6990006	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Damp
1200207	358186	6990032	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Damp
1200206	358185	6990055	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Leaf Cover				Sand	Dry
1200205	358184	6990079	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200204	358183	6990105	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Some b	Sand	Damp
1200203	358181	6990130	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200202	358179	6990154	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200201	358176	6990178	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover	Fine			Sand	Dry
1201624	358177	6990204	Chocolate	Brown	Subtle Slope	90	Good	B	Old Burn	Grass Cover			Shiny clay	Sand	Damp
1201623	358178	6990229	Chocolate	Brown	Pronounced	90	Good	B	Old Burn	Grass Cover			Some clay	Sand	Damp
1200037	358577	6990029	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200036	358578	6990054	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200035	358578	6990079	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200034	358577	6990103	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200033	358579	6990127	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200032	358577	6990153	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200031	358576	6990180	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200030	358577	6990202	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200029	358577	6990228	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200028	358527	6990228	Light	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200027	358527	6990203	Reddish	Yellow	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200150	358525	6990179	Reddish	Yellow	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200149	358528	6990155	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200148	358526	6990131	Light	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200147	358527	6990104	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200146	358527	6990080	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Duplicate 1200144	Sand	Dry
1200144	358527	6990080	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200143	358527	6990053	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200142	358527	6990030	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Damp
1200141	358527	6990005	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200112	358527	6989980	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200111	358527	6989954	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200110	358527	6989928	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine			Sand	Dry
1200109	358526	6989904	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200108	358527	6989878	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200107	358528	6989854	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover			Duplicate 1200106	Sand	Dry
1200106	358528	6989854	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200105	358527	6989829	Chocolate	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200104	358527	6989805	Reddish	Yellow	Pronounced	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200103	358527	6989779	Light	Brown	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Dry
1200102	358527	6989753	Reddish	Yellow	Pronounced	90	Excellent	C	Old Burn	Grass Cover	Fine		Drilled through rock	Sand	Damp
1200101	358527	6989729	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover				Sand	Wet
1200124	358527	6989704	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Damp
1200123	358527	6989678	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1200122	358527	6989654	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover			Duplicate 1200121	Sand	Dry
1200125	358527	6989629	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200121	358527	6989654	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Grass Cover				Sand	Dry
1201715	358179	6989479	Dark	Brown	Pronounced	150	Excellent	C	Willows	Leaf Cover	Coarse		Rusty rock chips, Quartz chips	Sand	Damp
1200250	358179	6989479	Dark	Brown	Pronounced	90	Poor	B	Willows	Leaf Cover	Fine			Clay	Damp
1200249	358174	6989475	Dark	Grey Black	Pronounced	80	Excellent	C	Willows	Leaf Cover	Fine		Waxy graphite. slide hammer maxed on rock	Sand	Dry
1200247	358174	6989475	Dark	Grey Black	Pronounced	90	Good	C	Willows	Leaf Cover			Waxy graphite. hit black @60cm	Sand	Damp
1200246	358184	6989475	Dark	Grey Black	Pronounced	100	Good	C	Willows	Leaf Cover			Good grit	Sand	Damp
1200245	358184	6989475	Dark	Brown	Pronounced	90	Good	B	Willows	Leaf Cover			Dark grey black @90cm	Clay	Damp
1200244	358179	6989475	Dark	Grey Black	Pronounced	140	Excellent	C	Willows	Leaf Cover	Quartz Chips		Coarse sand at bottom, Rusty rocks	Sand	Damp
1200243	358179	6989475	Dark	Grey Black	Pronounced	90	Good	B	Willows	Leaf Cover			Waxy. Hit dark grey @80cm	Sand	Damp
1200242	357977	6990055	Chocolate	Brown	Subtle Slope	90	Good	B	Willows	Leaf Cover	Clay		Some grit	Sand	Damp
1200241	357977	6990080	Chocolate	Brown	Subtle Slope	90	Poor	B	Poplar	Leaf Cover	Fine		Some grit.	Sand	Damp
1200240	357977	6990107	Chocolate	Brown	Pronounced	90	Good	C	Willows	Leaf Cover			Some b	Sand	Damp
1200239	357978	6990131	Chocolate	Brown	Pronounced	90	Good	C	Poplar	Leaf Cover				Sand	Damp
1200238	357977	6990155	Chocolate	Brown	Pronounced	90	Excellent	C	Poplar	Leaf Cover			Duplicate 1200237	Sand	Dry
1200237	357977	6990155	Chocolate	Brown	Pronounced	90	Excellent	C	Poplar	Leaf Cover	Coarse			Sand	Dry
1200236	357976	6990180	Chocolate	Brown	Pronounced	90	Excellent	C	Willows	Leaf Cover				Sand	Dry
1200235	357976	6990204	Chocolate	Brown	Pronounced	90	Good	C	Willows	Leaf Cover	Quartz Chips			Sand	Damp
1200234	357977	6990229	Chocolate	Brown	Pronounced	90	Good	C	Willows	Leaf Cover	Coarse		Quartz Chips	Sand	Damp
1200233	358079	6990229	Chocolate	Brown	Pronounced	90	Good	B	Willows	Leaf Cover			Some grit	Gravel	Damp
1200232	358079	6990205	Chocolate	Brown	Pronounced	90	Good	C	Willows	Leaf Cover				Sand	Dry

sample_id	easting	northing	colour	primary	site_slope	depth	quality	horizon	vegetation	site_cover	sample_note1	soil_sample	freehand_notes	texture	moisture
1200231	358080	6990178	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Dry
1200230	358078	6990154	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200229	358082	6990129	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Damp
1200228	358080	6990104	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Leaf Cover				Sand	Damp
1200227	358079	6990078	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover			Duplicate 1120226	Sand	Dry
1200226	358079	6990078	Chocolate	Brown	Pronounced	90	Good	C	Old Burn	Grass Cover				Sand	Dry
1200263	358819	6988838	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200262	358800	6988856	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Bare Soil				Sand	Damp
1200261	358783	6988875	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200260	358761	6988888	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200259	358742	6988905	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200258	358724	6988923	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil			Duplicate 1200257	Sand	Dry
1200257	358724	6988923	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200256	358705	6988938	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200255	358667	6988973	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Bare Soil				Sand	Damp
1200254	358651	6988990	Chocolate	Brown	Subtle Slope	90	Good	C	Old Burn	Bare Soil				Sand	Damp
1200253	358688	6988957	Dark Blue	Black	Subtle Slope	90	Good	C	Old Burn	Bare Soil				Sand	Damp
1200252	358634	6989010	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil			Duplicate 1200251	Sand	Dry
1200251	358634	6989010	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200350	358617	6989028	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200349	358598	6989044	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200348	358581	6989063	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Damp
1200347	358568	6989084	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200346	358555	6989106	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Damp
1200345	358535	6989123	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200344	358517	6989140	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200343	358501	6989160	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200342	358485	6989181	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Damp
1200341	358472	6989202	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200340	358454	6989219	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200339	358433	6989232	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200338	358416	6989251	Light	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200337	358398	6989270	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200336	358383	6989290	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200335	358365	6989308	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200334	358349	6989326	Chocolate	Brown	Subtle Slope	90	Excellent	O	Old Burn	Bare Soil				Sand	Dry
1200333	358332	6989345	Light	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200332	358315	6989362	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200331	358296	6989378	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil	Fine			Sand	Dry
1200330	358276	6989393	Chocolate	Brown	Subtle Slope	130	Poor	C	Old Burn	Bare Soil	Fine		Some B, Organics 10%	Sand	Dry
1200329	358257	6989407	Dark	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200328	358237	6989426	Dark	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200327	358219	6989443	Chocolate	Brown	Subtle Slope	90	Excellent	C	Old Burn	Bare Soil				Sand	Dry
1200326	358202	6989462	Dark	Grey Black	Subtle Slope	90	Good	C	Old Burn	Bare Soil	Fine			Sand	Damp
1200309	357694	6989505	Chocolate	Brown	Subtle Slope	130	Poor	B	Willows	Leaf Cover	Fine		Mud	Sand	Wet
1200308	357713	6989489	Chocolate	Brown	Subtle Slope	130	Good	C	Willows	Leaf Cover	Fine		Transported river sand	Sand	Damp
1200307	357737	6989483	Chocolate	Brown	Subtle Slope	150	Good	C	Willows	Leaf Cover	Rusty Rock Chip			Sand	Wet
1200306	357763	6989482	Chocolate	Brown	Subtle Slope	90	Good	C	Willows	Leaf Cover	Coarse		Quartz Chips	Sand	Damp
1200305	357787	6989475	Chocolate	Brown	Subtle Slope	90	Good	B	Willows	Leaf Cover	Quartz Chips			Sand	Wet
1200304	357813	6989470	Chocolate	Brown	Subtle Slope	130	Good	B	Willows	Leaf Cover	Rusty Rock Chip			Sand	Wet
1200303	357835	6989460	Chocolate	Brown	Subtle Slope	120	Good	C	Willows	Leaf Cover	Fine			Sand	Damp
1200302	357858	6989449	Chocolate	Brown	Subtle Slope	120	Good	C	White Spruce	Leaf Cover	Fine			Sand	Damp
1200301	357883	6989450	Chocolate	Brown	Subtle Slope	120	Poor	B	White Spruce	Leaf Cover	Fine			Sand	Wet
1201712	357908	6989453	Chocolate	Brown	Subtle Slope	100	Good	B	Willows	Leaf Cover			Shiny	Sand	Wet
1201711	357931	6989460	Chocolate	Brown	Subtle Slope	90	Good	B	Willows	Leaf Cover	Quartz Chips			Sand	Damp
1201710	357954	6989471	Dark	Grey Black	Subtle Slope	130	Good	B	Willows	Leaf Cover	Fine		Dry fine sand @120. Possible transport	Sand	Damp
1201709	357977	6989482	Dark	Brown	Subtle Slope	110	Poor	B	Willows	Leaf Cover	Frozen			Clay	Wet
1201708	358002	6989477	Dark	Grey Black	Subtle Slope	100	Poor	B	White Spruce	Leaf Cover	Frozen			Clay	Damp
1201707	358028	6989476	Dark	Grey Black	Subtle Slope	140	Good	B	White Spruce	Grass Cover	Rusty Rock Chip			Sand	Damp
1201706	358053	6989477	Dark	Grey Black	Subtle Slope	130	Poor	B	Willows	Leaf Cover				Clay	Wet
1201705	358076	6989481	Dark	Grey Black	Pronounced	90	Good	C	Willows	Leaf Cover			Some b horizon. Some grit	Sand	Damp
1201704	358102	6989483	Dark	Brown	Pronounced	90	Poor	B	Willows	Leaf Cover	Clay		No good grit	Sand	Damp
1201703	358128	6989486	Dark	Grey Black	Pronounced	130	Excellent	C	Willows	Leaf Cover	Coarse		rusty rocks	Sand	Dry
1201702	358156	6989487	Dark	Grey Black	Pronounced	90	Good	C	Willows	Leaf Cover	Rusty Rock Chip			Sand	Dry
1201714	358178	6989470	Dark	Grey Black	Pronounced	90	Good	C	Willows	Leaf Cover			Gritty @ very bottom	Sand	Damp
1201713	358178	6989470	Dark	Brown	Pronounced	90	Good	B	Willows	Leaf Cover	Fine			Clay	Damp
June															
1268558	358252	6989754	Light	Brown	Subtle Slope	110	Excellent	C	Poplar	Leaf Cover	Coarse			Gravel	Damp
1268577	358152	6989703	Chocolate	Brown	Subtle Slope	50	Excellent	C	Poplar	Leaf Cover	Bright Orange		Rocky	Gravel	Damp
1290063	358302	6989728	Dark	Brown	Pronounced	80	Good	C	Old Burn	Grass Cover	Bright Orange			Sand	Damp
1260471	358052	6989880	Chocolate	Brown	Subtle Slope	50	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1290036	358402	6989630	Dark	Brown	Subtle Slope	80	Excellent	C	Old Burn	Grass Cover				Sand	Damp
1290065	358301	6989779	Reddish	Brown	Pronounced	50	Good	C	Willows	Thin Moss	Rocky			Sand	Dry
1290037	358400	6989653	Dark	Brown	Subtle Slope	70	Excellent	C	Old Burn	Grass Cover	Rocky			Sand	Damp
1260469	358052	6989929	Reddish	Yellow	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1260480	358051	6989803	Chocolate	Brown	Subtle Slope	70	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1260460	358002	6989729	Chocolate	Brown	Subtle Slope	150	Good	B	Old Burn	Burnt Moss	Fine			Silt	Damp
1260491	358101	6989904	Reddish	Brown	Pronounced	60	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1290065	358301	6989779	Reddish	Brown	Pronounced	50	Good	C	Willows	Thin Moss	Rocky			Sand	Dry
1268567	358189	6989782	Light	Brown	Subtle Slope	70	Excellent	C	Poplar	Thin Moss	Sandy			Gravel	Damp
1290038	358402	6989679	Dark	Brown	Subtle Slope	60	Excellent	C	Old Burn	Grass Cover	Rocky			Sand	Damp
1290056	358350	6989679	Dark	Grey Black	Subtle Slope	70	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Dry
1268573	358151	6989778	Dark	Brown	Subtle Slope	100	Excellent	C	Poplar	Thin Moss	Coarse			Sand	Damp
1268549	358202	6989827	Chocolate	Brown	Subtle Slope	70	Excellent	C	Poplar	Sphagnum Mo	Rocky			Gravel	Damp
1290059	358302	6989629	Dark	Grey Black	Subtle Slope	80	Good	C	Old Burn	Leaf Cover	Coarse			Sand	Damp
1290044	358402	6989829	Reddish	Brown	Pronounced	50	Excellent	C	Old Burn	Grass Cover	Quartz Chips			Sand	Damp
1268557	358253	6989779	Light	Brown	Subtle Slope	90	Excellent	C	Poplar	Grass Cover	Sandy			Gravel	Damp
1260463	358001	6989804	Chocolate	Brown	Subtle Slope	120	Good	C	Old Burn	Burnt Moss	Coarse			Silt	Damp
1290060	358301	6989653	Dark	Grey Black	Subtle Slope	60	Good	C	Willows	Grass Cover	Rocky			Sand	Damp
1260473	358052	6989829	Reddish	Yellow	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1268559	358251	6989728	Reddish	Yellow	Subtle Slope	50	Excellent	C	Poplar	Grass Cover	Rocky			Gravel	Damp
1290049	358351	6989729	Reddish	Brown	Pronounced	70	Excellent	C	Old Burn	Grass Cover	Rocky			Sand	Damp
1290050	358376	6989738	Reddish	Brown	Subtle Slope	50	Good	C	Old Burn	Grass Cover	Bright Orange		Rocky	Sand	Damp
1290054	358363	6989726	Reddish	Brown	Subtle Slope	40	Good	C	Old Burn	Grass Cover	Bright Orange		Rocky	Sand	Damp
1260461	358003	6989754	Chocolate	Brown	Subtle Slope	70	Good	C	Old Burn	Burnt Moss	Fine		mixed c horizon and b	Silt	Damp
1260464	358003	6989829	Chocolate	Brown	Subtle Slope	60	Good	B	Old Burn	Burnt Moss	Coarse		Bright Orange Rust	Silt	Damp
1290064	358302	6989753	Chocolate	Brown	Pronounced	100	Excellent	C	Willows	Grass Cover	Rocky			Sand	Damp
1290042	358402	6989779	Reddish	Brown	Pronounced	40	Good	C	Old Burn	Grass Cover	Rocky			Sand	Damp

sample_id	easting	northing	colour	primary	site_slope	depth	quality	horizon	vegetation	site_cover	sample_note1	soil_sample	freehand_notes	texture	moisture
1260463	358001	6989804	Chocolate	Brown	Subtle Slope	120	Good	C	Old Burn	Burnt Moss	Coarse			Silt	Damp
1260465	358002	6989854	Chocolate	Brown	Subtle Slope	80	Good	B	Old Burn	Burnt Moss	Coarse			Silt	Damp
1290054	358363	6989726	Reddish	Brown	Subtle Slope	40	Good	C	Old Burn	Grass Cover	Bright Orange			Sand	Damp
1268569	358151	6989878	Light	Brown	Subtle Slope	70	Excellent	C	Poplar	Leaf Cover	Rocky			Gravel	Damp
1260467	358004	6989904	Reddish	Yellow	Subtle Slope	100	Good	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1260472	358051	6989854	Reddish	Yellow	Subtle Slope	80	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1260474	358064	6989828	Chocolate	Brown	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1290043	358401	6989803	Reddish	Brown	Pronounced	50	Excellent	C	Old Burn	Grass Cover	Rocky	Quartz Chips		Sand	Damp
1260462	358002	6989780	Chocolate	Brown	Subtle Slope	150	Good	C	Old Burn	Burnt Moss	Coarse			Silt	Damp
1260473	358052	6989829	Reddish	Yellow	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1260490	358101	6989879	Reddish	Yellow	Subtle Slope	60	Good	C	Old Burn	Burnt Moss	Fine	Rocky		Sand	Wet
1290058	358352	6989629	Dark Grey	Black	Subtle Slope	70	Good	C	Old Burn	Grass Cover				Sand	Damp
1290039	358401	6989703	Dark	Brown	Subtle Slope	110	Excellent	C	Old Burn	Grass Cover	Bright Orange	Rocky		Sand	Damp
1290041	358401	6989754	Reddish	Brown	Subtle Slope	50	Excellent	C	Old Burn	Grass Cover	Coarse	Rocky		Sand	Damp
1260485	358102	6989754	Dark Grey	Black	Subtle Slope	80	Excellent	C	Old Burn	Burnt Moss	Coarse	Bright Orange Rust		Sand	Damp
1268576	358153	6989729	Light	Brown	Subtle Slope	50	Excellent	C	Poplar	Leaf Cover	Coarse	duplicate of 1268575		Sand	Damp
1260466	358002	6989879	Reddish	Yellow	Subtle Slope	80	Excellent	C	Old Burn	Burnt Moss	Fine	Bright Orange Rust		Sand	Damp
1260468	358003	6989929	Reddish	Yellow	Subtle Slope	50	Excellent	C	Old Burn	Burnt Moss	Quartz Chips	Bright Orange Rust		Sand	Damp
1268575	358153	6989729	Light	Brown	Subtle Slope	70	Excellent	C	Poplar	Leaf Cover	Coarse			Sand	Damp
1290053	358376	6989715	Reddish	Brown	Subtle Slope	60	Excellent	C	Old Burn	Grass Cover	Dull Red Rust			Sand	Damp
1290066	358301	6989804	Chocolate	Brown	Pronounced	70	Good	C	Old Burn	Grass Cover	Rocky	Quartz Chips		Sand	Dry
1268556	358253	6989803	Chocolate	Brown	Subtle Slope	150	Excellent	C	Old Burn	Grass Cover	Coarse			Gravel	Damp
1260486	358101	6989779	Chocolate	Brown	Subtle Slope	60	Good	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1260489	358102	6989854	Reddish	Yellow	Subtle Slope	50	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1268552	358202	6989879	Dark Blue	Black	Subtle Slope	70	Excellent	C	Old Burn	Thin Moss	Sandy			Gravel	Damp
1268560	358252	6989705	Reddish	Orange	Subtle Slope	60	Excellent	C	Poplar	Thin Moss	Bright Orange	Rocky		Gravel	Damp
1268566	358164	6989780	Chocolate	Brown	Subtle Slope	70	Excellent	C	Poplar	Thin Moss	Sandy			Gravel	Damp
1268568	358177	6989794	Chocolate	Brown	Pronounced	100	Excellent	B	Poplar	Thin Moss	Coarse	Rocky		Sand	Damp
1260487	358101	6989804	Reddish	Yellow	Subtle Slope	70	Excellent	C	Old Burn	Burnt Moss	Quartz Chips			Sand	Damp
1290055	358349	6989704	Dark Grey	Black	Subtle Slope	80	Excellent	C	Old Burn	Grass Cover	Coarse	Rocky		Sand	Damp
1268548	358201	6989804	Chocolate	Brown	Subtle Slope	50	Excellent	C	Poplar	Thin Moss	Coarse			Sand	Damp
1290062	358300	6989703	Chocolate	Brown	Subtle Slope	90	Good	C	Willows	Leaf Cover	Bright Orange	Quartz Chips		Sand	Dry
1268553	358251	6989878	Chocolate	Brown	Subtle Slope	120	Excellent	C	Poplar	Leaf Cover	Coarse			Gravel	Damp
1268564	358177	6989729	Grey		Subtle Slope	60	Excellent	C	Alders	Sphagnum Mo	Fine			Gravel	Damp
1268571	358151	6989829	Light	Brown	Subtle Slope	60	Excellent	C	Poplar	Thin Moss	Rocky			Gravel	Damp
1268574	358153	6989754	Dark Blue	Black	Pronounced	50	Excellent	C	Poplar	Sphagnum Mo	Fine	Rocky		Gravel	Damp
1290047	358352	6989779	Chocolate	Brown	Pronounced	70	Good	C	Old Burn	Grass Cover	Rocky			Sand	Dry
1268555	358251	6989829	Chocolate	Brown	Pronounced	50	Excellent	C	Poplar	Grass Cover	Fine			Gravel	Damp
1268561	358252	6989680	Dark Blue	Black	Subtle Slope	40	Excellent	C	Poplar	Thin Moss	Fine	Bright Orange Rust		Gravel	Damp
1260477	358076	6989843	Reddish	Yellow	Subtle Slope	70	Good	C	Old Burn	Burnt Moss	Bright Orange	Quartz Chips		Sand	Damp
1290045	358352	6989829	Chocolate	Brown	Pronounced	60	Excellent	C	Old Burn	Grass Cover	Rocky			Sand	Dry
1290048	358351	6989755	Chocolate	Brown	Pronounced	100	Good	C	Old Burn	Grass Cover	Rocky			Sand	Dry
1268570	358153	6989854	Chocolate	Brown	Pronounced	40	Excellent	C	Poplar	Thin Moss	Rocky			Gravel	Damp
1260479	358074	6989816	Chocolate	Brown	Subtle Slope	120	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1260482	358051	6989754	Dark	Brown	Subtle Slope	80	Good	B	Old Burn	Burnt Moss	Coarse			Silt	Damp
1268564	358177	6989729	Grey		Subtle Slope	40	Excellent	C	Alders	Sphagnum Mo	Fine			Gravel	Damp
1268572	358152	6989805	Light	Brown	Pronounced	70	Excellent	C	Poplar	Grass Cover	Sandy			Gravel	Damp
1260483	358051	6989730	Dark	Brown	Subtle Slope	100	Excellent	C	Old Burn	Burnt Moss	Fine	Bright Orange Rust		Sand	Damp
1290046	358352	6989804	Chocolate	Brown	Pronounced	80	Good	C	Old Burn	Grass Cover	Rocky			Sand	Damp
1290057	358351	6989653	Greyish	Green	Subtle Slope	60	Good	C	Willows	Thin Moss				Sand	Damp
1268544	358202	6989704	Dark Blue	Black	Subtle Slope	50	Excellent	C	Poplar	Leaf Cover	Fine	Bright Orange Rust		Gravel	Damp
1260470	358052	6989904	Reddish	Yellow	Subtle Slope	150	Excellent	C	Old Burn	Burnt Moss	Fine			Sand	Damp
1290040	358402	6989729	Reddish	Yellow	Subtle Slope	60	Excellent	C	Old Burn	Grass Cover	Coarse			Sand	Damp
1260484	358101	6989731	Dark Grey	Black	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1290061	358300	6989678	Dark Grey	Black	Subtle Slope	70	Good	C	Willows	Grass Cover	Coarse			Sand	Damp
1260478	358089	6989827	Reddish	Yellow	Subtle Slope	110	Excellent	C	Old Burn	Burnt Moss	Coarse	Quartz Chips		Sand	Damp
1290052	358389	6989725	Reddish	Brown	Subtle Slope	50	Excellent	C	Old Burn	Grass Cover	Bright Orange	Quartz Chips		Sand	Damp
1268546	358202	6989754	Chocolate	Brown	Subtle Slope	80	Excellent	C	Poplar	Thin Moss	Sandy			Gravel	Damp
1268563	358176	6989705	Dark Blue	Black	Subtle Slope	50	Excellent	C	Alders	Thin Moss	Coarse			Sand	Damp
1268578	358152	6989679	Dark Blue	Black	Subtle Slope	80	Excellent	C	Poplar	Thin Moss	Coarse			Sand	Damp
1260481	358051	6989779	Dark Grey	Black	Subtle Slope	50	Excellent	C	Old Burn	Burnt Moss	Bright Orange			Sand	Damp
1260488	358102	6989828	Reddish	Yellow	Subtle Slope	70	Good	C	Old Burn	Burnt Moss	Fine	some b horizon		Sand	Damp
1260492	358102	6989930	Reddish	Brown	Subtle Slope	60	Excellent	C	Old Burn	Burnt Moss	Coarse			Sand	Damp
1290067	358301	6989829	Chocolate	Brown	Pronounced	70	Excellent	C	Old Burn	Grass Cover	Rocky	schist		Sand	Dry
1268543	358202	6989679	Dark Grey	Black	Subtle Slope	150	Excellent	C	Poplar	Sphagnum Mo	Fine			Gravel	Damp
1268545	358202	6989729	Light	Brown	Subtle Slope	60	Excellent	C	Poplar	Leaf Cover	Fine			Gravel	Damp
1268546	358202	6989754	Chocolate	Brown	Subtle Slope	50	Excellent	C	Poplar	Thin Moss	Sandy			Gravel	Damp
1268547	358202	6989778	Dark Blue	Black	Subtle Slope	70	Excellent	C	Poplar	Thin Moss	Fine	Bright Orange Rust		Gravel	Damp
1268550	358200	6989854	Chocolate	Brown	Pronounced	60	Excellent	C	Poplar	Sphagnum Mo	Rocky			Gravel	Damp
1268554	358253	6989855	Chocolate	Brown	Pronounced	70	Excellent	C	Old Burn	Grass Cover	Sandy			Gravel	Damp
1268562	358177	6989679	Dark Blue	Black	Subtle Slope	100	Excellent	C	Poplar	Leaf Cover	Fine			Gravel	Damp
1268565	358176	6989768	Dark Blue	Black	Subtle Slope	70	Excellent	C	Poplar	Thin Moss	Rocky			Gravel	Damp



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

www.acmelab.com

Client:

Volcanic Metals Corp.
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8 Canada

Submitted By: John LaGourque
Receiving Lab: Canada-Whitehorse
Received: March 27, 2012
Report Date: April 16, 2012
Page: 1 of 12

CERTIFICATE OF ANALYSIS

WHI12000020.1

CLIENT JOB INFORMATION

Project: VOL
Shipment ID: VOL-2012-001
P.O. Number: 320
Number of Samples: 320

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.

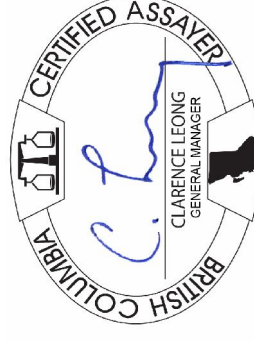
SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	320	Dry at 60C			WHI
SS80	320	Dry at 60C sieve 100g to -80 mesh			WHI
1DX2	320	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Volcanic Metals Corp.
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8
Canada

CC: Bill Mann



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.



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

Acme Analytical Laboratories (Vancouver) Ltd.

Client: Volcanic Metals Corp.
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8 Canada

Project: VOL
Report Date: April 16, 2012

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Page: 2 of 12 **Part** 1

CERTIFICATE OF ANALYSIS

WH112000020.1

Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
1200227	0.3	21.7	7.5	52	0.1	10.9	5.3	475	1.86	1.5	<0.5	4.3	26	<0.1	0.1	0.1	33	0.24	0.029	14
1200229	0.5	26.4	6.9	61	0.2	16.8	9.1	929	2.64	4.0	0.7	3.6	25	0.1	0.3	0.1	46	0.23	0.027	15
1200226	0.3	22.3	7.4	51	0.1	11.9	5.1	425	1.92	1.5	0.6	4.6	26	<0.1	0.1	<0.1	35	0.20	0.025	14
1200235	0.6	17.0	5.8	41	0.2	16.0	6.8	292	1.80	6.2	1.9	3.1	27	0.1	0.3	0.1	40	0.30	0.059	12
1200228	0.5	33.4	7.4	67	0.1	14.7	8.0	636	2.56	2.6	0.8	4.3	19	<0.1	0.2	<0.1	40	0.14	0.016	17
1200232	0.6	17.1	6.5	41	0.2	14.6	7.5	379	1.88	5.9	10.3	3.1	21	<0.1	0.4	<0.1	41	0.26	0.051	13
1200230	0.5	23.0	9.0	70	0.2	12.6	7.7	538	2.64	4.1	<0.5	3.2	19	<0.1	0.3	<0.1	48	0.25	0.029	15
1200231	0.9	34.6	10.6	84	0.2	18.2	8.7	781	2.42	5.3	1.8	3.5	20	0.2	0.4	<0.1	44	0.17	0.019	12
1200239	0.6	22.1	10.3	54	0.1	16.0	7.6	473	2.22	4.4	1.2	3.7	21	<0.1	0.3	0.4	45	0.25	0.020	13
1200236	0.4	21.1	10.5	71	0.2	13.2	8.4	548	2.38	2.3	1.1	4.6	26	<0.1	0.2	0.2	41	0.23	0.025	13
1200240	0.7	34.0	10.6	63	0.2	17.1	9.0	683	2.49	3.8	1.8	3.4	21	0.1	0.3	0.1	45	0.23	0.025	12
1200238	0.4	16.5	10.6	43	0.1	12.2	6.3	493	1.78	3.2	<0.5	3.4	14	<0.1	0.2	<0.1	35	0.13	0.018	9
1200233	0.6	21.5	7.2	58	0.1	11.5	6.2	263	1.75	4.5	3.7	2.9	20	0.1	0.2	<0.1	38	0.22	0.035	12
1200250	1.7	37.0	12.3	49	0.1	40.5	11.5	463	2.57	6.8	2.1	4.4	28	0.1	0.6	0.1	56	0.28	0.025	16
1200246	13.0	81.7	27.6	96	0.2	171.2	22.3	1198	3.29	4.5	<0.5	7.0	36	0.6	0.4	0.5	27	0.12	0.047	18
1200243	6.6	72.6	12.6	89	0.3	69.3	12.0	437	2.74	13.5	1.8	5.4	29	0.3	0.4	0.2	29	0.15	0.034	14
1200244	10.9	49.9	13.6	77	0.2	132.5	13.1	788	2.63	4.3	1.5	7.5	37	0.5	0.3	0.2	19	0.10	0.048	14
1200247	4.8	64.7	14.5	89	0.2	47.5	11.0	683	2.62	7.2	1.8	5.5	29	0.3	0.4	0.2	30	0.16	0.024	14
1200249	7.6	64.8	13.4	84	0.8	100.6	15.0	895	2.60	4.3	<0.5	6.8	29	0.6	0.3	0.2	24	0.14	0.040	16
1201715	10.8	91.5	20.4	96	0.1	141.4	17.0	1449	3.07	6.1	<0.5	5.7	35	0.4	0.4	0.2	26	0.13	0.039	14
1200241	0.8	26.6	9.6	69	0.1	19.1	9.3	587	2.52	5.0	0.9	4.1	26	0.1	0.4	<0.1	51	0.33	0.038	13
1200234	0.6	14.3	5.9	35	0.2	14.1	5.9	244	1.64	4.8	<0.5	3.0	21	<0.1	0.3	<0.1	38	0.23	0.050	10
1200237	0.5	16.8	10.9	45	0.1	13.1	6.5	529	1.85	3.2	1.1	3.5	14	<0.1	0.2	<0.1	36	0.14	0.018	9
1200245	2.0	38.7	12.3	51	0.2	43.9	11.2	474	2.44	5.8	2.0	4.1	29	0.1	0.5	<0.1	51	0.28	0.032	14
1200242	0.6	25.1	10.9	57	0.2	19.5	9.0	518	2.26	4.9	1.1	3.8	27	0.2	0.4	<0.1	50	0.30	0.035	12
1201714	4.2	46.5	10.1	65	0.2	81.9	12.1	471	2.58	10.6	2.1	4.9	28	0.2	0.5	0.1	43	0.22	0.033	13
1201710	1.7	27.3	6.2	51	0.2	51.7	8.4	300	2.05	6.6	1.7	3.5	27	<0.1	0.4	<0.1	41	0.31	0.049	12
1201711	3.0	36.1	8.4	57	0.3	72.6	11.7	451	2.36	7.1	3.5	4.0	29	0.1	0.4	<0.1	45	0.29	0.043	13
1201712	0.6	27.3	7.9	45	0.2	34.1	8.6	357	2.15	7.9	0.8	2.9	40	0.2	0.6	0.1	44	0.54	0.056	13
1201706	6.8	54.5	9.9	77	0.2	119.0	15.2	612	3.00	6.7	1.9	5.5	26	0.4	0.4	0.1	43	0.24	0.054	15



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Page: 2 of 12 Part 2

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Report Date: April 16, 2012

Page: 3 of 12 Part 1

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Page: 4 of 12 Part 1

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4 of 12 Part 2

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Page: 5 of 12 Part 1

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Page: 5 of 12 Part 2

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Project: VOL
Report Date: April 16, 2012

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Page: 6 of 12 **Part** 1

CERTIFICATE OF ANALYSIS

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Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
1175793	Soil	1.0	30.7	8.7	50	0.2	35.6	8.0	435	2.12	5.4	2.6	3.6	25	0.1	0.3	<0.1	39	0.24	0.027
1175794	Soil	0.8	31.4	9.8	55	0.2	20.1	9.2	600	2.41	6.7	4.2	3.3	30	0.2	0.5	0.1	48	0.34	0.043
1175796	Soil	0.8	84.8	10.5	51	0.2	19.8	7.9	732	2.43	5.1	2.2	2.5	32	<0.1	0.3	0.1	37	0.26	0.028
1175771	Soil	0.8	40.0	5.6	118	0.5	36.7	11.9	1546	5.44	1.1	1.0	2.3	14	0.1	0.2	<0.1	53	0.43	0.153
1175770	Soil	0.9	32.7	5.4	108	1.2	30.6	12.7	972	5.20	3.6	3.2	2.7	16	<0.1	0.3	<0.1	58	0.48	0.159
1175788	Soil	0.7	21.6	8.9	56	0.2	17.8	8.4	390	2.17	6.8	2.8	3.7	24	0.1	0.4	0.1	47	0.25	0.024
1175782	Soil	0.6	77.6	15.2	217	0.2	8.9	5.5	387	3.02	1.7	1.2	4.9	15	0.3	0.1	0.1	27	0.09	0.019
1175783	Soil	0.9	38.3	10.0	82	0.2	18.8	6.7	352	2.12	7.0	3.1	3.9	19	<0.1	0.4	0.1	41	0.22	0.020
1175785	Soil	0.6	28.4	6.3	79	<0.1	13.2	4.9	287	1.67	4.0	1.2	4.3	17	0.1	0.3	<0.1	33	0.15	0.022
1175772	Soil	0.5	12.4	7.5	37	0.3	10.4	4.5	378	1.77	1.5	<0.5	2.2	11	<0.1	0.2	<0.1	31	0.11	0.028
1175786	Soil	0.4	38.1	6.0	104	0.2	7.5	3.7	310	1.78	1.7	0.8	4.2	20	0.2	0.1	<0.1	26	0.13	0.014
1175777	Soil	0.7	12.6	4.5	37	0.1	8.8	6.0	425	3.28	3.1	0.7	5.4	15	<0.1	0.2	<0.1	24	0.18	0.026
1175784	Soil	0.5	27.8	10.2	50	0.1	14.3	5.3	214	1.48	3.9	2.6	3.3	20	<0.1	0.3	0.1	29	0.13	0.017
1175778	Soil	1.0	21.5	3.7	32	<0.1	7.5	5.4	262	3.30	1.8	1.8	5.3	12	<0.1	0.1	0.1	21	0.14	0.025
1175787	Soil	0.6	41.1	7.7	127	0.1	10.4	4.5	221	1.70	2.6	1.1	4.0	33	<0.1	0.2	<0.1	28	0.13	0.015
1175776	Soil	0.9	21.4	7.0	46	0.2	16.6	8.7	322	2.88	6.4	1.8	4.5	21	0.1	0.4	0.1	45	0.21	0.027
1175775	Soil	0.5	17.6	10.3	42	0.1	8.8	5.4	284	1.66	2.0	1.1	3.7	11	<0.1	0.2	<0.1	25	0.06	0.019
1175774	Soil	0.4	23.5	8.4	65	<0.1	6.9	7.8	639	3.21	0.6	1.9	4.0	19	<0.1	0.1	<0.1	35	0.09	0.017
1175773	Soil	0.5	12.9	6.1	44	0.2	8.8	6.2	459	2.47	1.4	0.8	4.5	17	<0.1	0.2	<0.1	34	0.12	0.020
1175706	Soil	1.3	36.7	12.4	74	0.2	21.7	9.4	849	2.52	3.5	4.5	3.1	19	0.2	0.3	<0.1	38	0.09	0.019
1175780	Soil	0.6	14.8	6.8	56	0.1	13.4	7.7	345	3.36	0.9	1.0	4.0	17	<0.1	<0.1	<0.1	41	0.17	0.013
1175789	Soil	0.8	24.1	7.7	47	0.2	22.7	8.6	423	2.32	5.7	20.1	3.5	23	<0.1	0.5	<0.1	53	0.31	0.041
1175790	Soil	0.5	30.9	7.5	69	0.2	20.2	11.3	642	3.35	3.6	2.5	3.7	21	<0.1	0.3	0.1	72	0.30	0.035
1175781	Soil	1.3	35.1	13.0	112	0.2	7.4	8.3	444	3.21	1.2	1.7	5.1	13	0.1	0.1	<0.1	22	0.11	0.013
1175703	Soil	1.0	54.4	7.2	124	<0.1	20.7	12.7	766	3.36	3.1	<0.5	2.7	29	0.1	0.3	0.2	64	0.22	0.022
1175702	Soil	1.8	83.4	9.1	148	0.2	30.9	17.7	1415	5.18	2.6	<0.5	2.6	27	<0.1	0.2	0.3	85	0.26	0.025
1175701	Soil	1.3	105.0	9.8	105	0.3	18.6	11.3	1234	2.73	4.4	<0.5	2.1	19	0.2	0.3	0.1	49	0.15	0.034
1175704	Soil	0.7	24.5	8.5	53	0.2	12.0	8.3	568	2.39	4.2	<0.5	2.6	24	0.2	0.3	<0.1	44	0.23	0.033
1175779	Soil	0.2	7.3	6.5	37	<0.1	5.5	4.7	210	1.93	0.5	<0.5	3.2	21	<0.1	0.1	<0.1	21	0.17	0.013
1175707	Soil	1.0	19.5	8.5	46	0.2	18.4	7.7	325	2.08	7.0	<0.5	3.5	20	0.1	0.4	0.2	44	0.25	0.033



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Page: 6 of 12 Part 2

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Project: VOL
Report Date: April 16, 2012

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Page: 7 of 12 **Part** 1

CERTIFICATE OF ANALYSIS

WHI12000020.1

Method Analyte Unit	1DX15 1DX15																				
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	
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	
1175708	Soil	1.0	20.6	9.9	46	0.2	22.1	8.0	426	2.10	5.6	<0.5	2.4	23	0.1	0.4	0.1	41	0.29	0.040	8
1175705	Soil	0.6	24.7	12.2	55	0.2	12.1	8.2	632	2.38	3.9	<0.5	2.5	28	0.2	0.3	<0.1	43	0.23	0.036	7
1175709	Soil	0.7	12.8	5.4	37	<0.1	18.0	5.5	239	1.68	4.8	3.3	2.9	22	<0.1	0.4	<0.1	37	0.32	0.074	9
1175711	Soil	0.6	32.8	7.4	45	0.2	29.9	8.6	287	2.10	8.0	0.8	2.7	29	0.1	0.5	0.1	45	0.43	0.067	14
1175710	Soil	0.6	21.6	6.3	41	<0.1	22.2	7.0	258	1.88	5.5	<0.5	2.9	23	<0.1	0.5	<0.1	41	0.32	0.054	11
1200117	Soil	0.6	20.0	10.8	50	0.2	15.6	6.1	387	2.03	5.1	<0.5	3.8	19	<0.1	0.3	<0.1	37	0.15	0.021	13
1200218	Soil	4.4	64.6	13.6	110	0.2	37.5	11.1	720	3.34	1.9	<0.5	3.0	29	0.2	0.2	<0.1	58	0.25	0.031	15
1200208	Soil	0.4	24.0	5.3	77	<0.1	8.8	7.8	704	2.59	1.2	1.0	3.0	11	<0.1	<0.1	<0.1	42	0.16	0.041	11
1200205	Soil	0.2	37.1	7.7	128	0.2	22.6	10.5	981	2.67	1.0	<0.5	2.8	20	0.2	0.1	<0.1	53	0.30	0.044	13
1200214	Soil	0.4	18.0	8.9	70	0.2	10.9	6.6	688	2.39	1.4	<0.5	4.5	18	0.1	0.2	<0.1	38	0.13	0.031	12
1200202	Soil	0.3	19.2	7.8	73	<0.1	17.4	9.1	682	2.96	1.8	95.6	2.1	31	0.1	0.2	<0.1	68	0.36	0.029	10
1200207	Soil	0.4	39.2	7.8	84	0.2	12.9	10.2	865	3.57	1.3	<0.5	3.4	18	<0.1	0.1	<0.1	72	0.32	0.058	22
1200219	Soil	4.8	67.6	14.4	90	0.3	108.6	17.8	754	3.18	1.2	2155	4.1	41	0.3	0.2	0.1	59	0.18	0.037	11
1200213	Soil	1.7	36.5	6.8	101	0.2	9.5	9.1	743	3.99	1.4	1.9	2.6	12	<0.1	<0.1	0.2	52	0.10	0.035	9
1200201	Soil	0.2	12.5	7.4	55	0.1	18.1	8.9	588	2.68	0.9	1.8	3.2	27	<0.1	0.2	<0.1	50	0.26	0.039	19
1200221	Soil	1.1	28.5	9.7	46	0.2	22.8	8.7	342	2.18	5.9	1.0	3.7	22	<0.1	0.5	0.1	49	0.24	0.022	13
1200203	Soil	0.3	15.4	7.1	52	0.1	10.2	6.3	408	2.32	2.2	0.7	3.0	15	<0.1	0.2	<0.1	41	0.17	0.025	11
1200212	Soil	0.8	20.6	7.2	44	0.1	19.8	6.9	438	1.85	6.9	<0.5	3.8	23	0.1	0.4	<0.1	40	0.28	0.042	13
1200224	Soil	1.9	42.6	14.6	62	0.5	36.8	10.9	839	2.50	4.2	6261	3.5	27	0.1	0.3	<0.1	42	0.20	0.020	12
1200113	Soil	2.7	48.6	13.9	75	0.2	36.1	10.6	935	2.79	6.2	4.6	3.3	27	0.1	0.4	0.1	47	0.18	0.028	10
1200223	Soil	1.5	42.6	16.0	57	<0.1	34.4	8.8	637	1.99	2.0	2.4	3.3	20	0.2	0.2	<0.1	30	0.11	0.012	8
1200119	Soil	0.4	14.3	8.6	45	0.2	7.3	3.7	399	1.63	1.7	0.8	2.5	17	<0.1	0.1	<0.1	29	0.05	0.020	5
1200225	Soil	1.3	35.9	11.9	58	0.1	21.9	8.4	507	2.38	3.5	0.8	3.3	19	<0.1	0.3	<0.1	47	0.19	0.019	12
1200116	Soil	0.4	29.3	12.0	75	0.2	16.1	5.5	435	2.31	2.6	2.4	4.7	19	<0.1	0.2	<0.1	40	0.15	0.018	16
1200206	Soil	0.3	29.1	6.4	66	0.1	22.3	9.6	481	2.46	3.1	15.4	2.4	22	<0.1	0.2	<0.1	49	0.32	0.050	11
1201624	Soil	0.6	28.5	8.4	77	0.3	19.4	8.4	403	2.58	4.7	1.3	3.9	20	0.1	0.4	<0.1	49	0.26	0.043	16
1200115	Soil	0.5	40.7	9.0	75	0.1	18.2	7.7	651	2.67	2.1	1.8	3.8	32	<0.1	0.3	<0.1	52	0.35	0.027	14
1200222	Soil	1.9	39.0	14.5	61	0.3	44.0	11.0	787	2.47	5.6	1.6	3.3	30	0.2	0.4	0.1	49	0.29	0.028	12
1200120	Soil	0.4	20.2	7.8	63	0.2	14.8	7.9	405	2.51	4.0	1.3	4.1	25	<0.1	0.3	<0.1	47	0.20	0.019	15
1200220	Soil	4.2	62.2	45.6	97	0.3	109.4	19.6	1211	3.22	2.5	1.2	4.5	47	0.3	0.3	0.4	47	0.20	0.041	13



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Page: 7 of 12 Part 2

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Page: 8 of 12 Part 1

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VOL

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Page: 9 of 12 Part 1

CERTIFICATE OF ANALYSIS

WH112000020.1

Method Analyte Unit	MDL	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																1DX15 1DX15 1DX15 1DX15			
		Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm
1200110	Soil	1.1	29.6	9.0	75	0.1	23.4	11.1	859	3.49	4.9	1.6	3.0	18	0.1	0.4	<0.1	54	0.26	0.032	10
1200143	Soil	0.9	47.5	6.0	44	0.1	31.6	13.0	370	2.65	5.7	0.7	2.4	19	<0.1	0.3	<0.1	66	0.35	0.040	9
1200142	Soil	1.3	61.2	7.6	62	0.1	91.3	18.2	425	3.40	6.4	1.7	3.5	20	0.1	0.3	<0.1	79	0.42	0.042	13
1200147	Soil	0.8	25.4	5.1	65	0.1	24.3	15.3	881	3.73	3.1	1.2	2.8	34	0.1	0.3	<0.1	75	0.61	0.049	13
1200108	Soil	1.2	21.7	6.7	48	0.2	19.9	8.1	393	2.84	4.0	1.4	3.4	17	0.1	0.3	<0.1	41	0.25	0.028	10
1200112	Soil	1.0	31.1	8.1	65	0.2	43.6	10.3	575	3.05	7.7	1.6	3.5	15	<0.1	0.5	<0.1	49	0.23	0.035	13
1200036	Soil	1.0	63.4	11.0	71	0.3	43.2	16.7	653	3.12	2.7	1.3	3.7	17	<0.1	0.3	0.1	66	0.35	0.053	8
1200146	Soil	0.7	61.9	4.4	50	0.1	37.2	18.2	550	2.88	3.6	1.7	1.8	17	<0.1	0.2	<0.1	76	0.32	0.048	11
1200111	Soil	0.8	22.2	7.1	41	0.1	29.4	8.1	384	2.06	7.4	2.1	3.0	18	<0.1	0.4	0.1	40	0.25	0.037	9
1200109	Soil	0.8	18.0	7.7	41	0.2	22.8	9.0	550	2.10	5.7	1.5	2.9	20	<0.1	0.4	0.1	45	0.29	0.032	11
1200124	Soil	0.9	22.7	6.6	57	0.2	17.8	9.5	546	3.02	4.6	2.0	2.6	16	<0.1	0.4	0.1	47	0.21	0.039	12
1200101	Soil	1.0	29.9	9.7	59	0.1	27.5	12.0	730	2.92	6.2	2.2	3.3	23	0.1	0.6	0.1	55	0.31	0.042	13
1200105	Soil	1.1	21.6	7.3	60	0.1	20.4	7.9	431	2.99	5.3	8.9	2.9	16	<0.1	0.4	0.1	45	0.23	0.030	11
1200149	Soil	0.9	12.5	7.7	43	<0.1	15.6	6.4	291	2.19	4.1	1.2	2.3	13	<0.1	0.3	<0.1	38	0.12	0.031	8
1200106	Soil	0.8	19.9	11.8	39	0.1	20.6	7.1	379	1.99	5.8	6.5	3.1	19	<0.1	0.5	<0.1	39	0.26	0.045	11
1200103	Soil	0.7	24.0	8.2	45	<0.1	24.6	8.3	353	2.35	4.7	1.5	2.6	17	<0.1	0.4	<0.1	41	0.19	0.020	9
1200122	Soil	0.7	16.1	5.8	45	0.2	18.9	7.6	318	1.74	5.8	4.5	2.5	22	0.2	0.4	<0.1	41	0.28	0.061	11
1200107	Soil	0.8	20.7	7.1	39	0.1	21.8	7.5	385	2.04	5.9	1.8	3.3	19	0.1	0.5	<0.1	40	0.27	0.045	12
1200102	Soil	1.0	36.5	8.6	69	<0.1	31.8	11.7	482	3.63	4.3	1.6	3.3	20	<0.1	0.4	<0.1	58	0.26	0.021	14
1200125	Soil	0.6	19.0	5.9	44	0.1	20.1	8.0	495	1.82	5.9	3.6	2.8	26	0.2	0.4	<0.1	43	0.31	0.066	12
1200104	Soil	1.0	31.8	8.6	85	<0.1	30.8	10.7	602	3.48	5.1	2.4	3.3	25	<0.1	0.5	<0.1	54	0.26	0.028	13
1200029	Soil	0.4	18.6	5.0	45	<0.1	14.9	8.2	431	2.87	3.4	<0.5	3.3	17	<0.1	0.2	<0.1	56	0.22	0.043	19
1200028	Soil	2.2	6.3	1.9	33	<0.1	2.2	5.5	334	3.18	1.2	<0.5	3.7	13	<0.1	<0.1	<0.1	13	0.09	0.036	17
1200037	Soil	1.1	53.2	15.8	75	0.2	71.7	18.8	803	3.19	3.5	<0.5	3.5	25	0.2	0.3	0.2	71	0.53	0.097	12
1200150	Soil	0.5	8.3	10.7	35	<0.1	7.9	4.9	310	1.70	2.3	<0.5	3.4	11	<0.1	0.2	<0.1	27	0.08	0.028	7
1200031	Soil	0.5	35.6	10.5	60	0.1	52.4	13.5	518	2.49	3.4	0.5	3.1	15	<0.1	0.4	0.1	47	0.19	0.027	8
1200027	Soil	0.7	7.2	4.1	34	0.1	6.4	6.8	351	2.40	3.3	0.5	3.5	10	<0.1	0.2	<0.1	23	0.08	0.025	11
1200148	Soil	0.4	7.5	9.4	29	<0.1	6.7	4.4	301	1.31	1.8	<0.5	3.1	9	<0.1	0.1	<0.1	21	0.05	0.014	5
1200121	Soil	0.6	15.0	9.9	42	0.1	17.7	7.1	301	1.68	5.4	3.8	2.6	21	0.1	0.4	<0.1	39	0.26	0.058	10
1200032	Soil	0.8	35.2	6.2	69	0.5	50.6	17.9	943	2.95	4.7	<0.5	2.5	35	0.3	0.5	<0.1	82	0.67	0.129	5



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Page: 9 of 12 **Part** 2

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WHI12000020.1

Method Analyte Unit	MDL	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15															
		Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm
1200110	Soil	23	0.22	307	0.029	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.1	0.05	1	0.5
1200143	Soil	39	0.68	296	0.069	<1	1.22	0.017	0.10	1.1	0.01	5.9	0.1	<0.05	4	<0.5	<0.2
1200142	Soil	103	1.18	353	0.101	1	1.72	0.015	0.33	0.9	0.05	7.2	0.3	<0.05	6	0.7	<0.2
1200147	Soil	31	0.62	353	0.050	1	1.20	0.008	0.18	1.3	0.02	12.1	0.1	<0.05	5	<0.5	<0.2
1200108	Soil	25	0.40	241	0.040	<1	0.99	0.009	0.09	1.2	0.04	5.2	0.1	<0.05	4	0.6	<0.2
1200112	Soil	41	0.34	250	0.030	<1	0.99	0.008	0.07	1.2	0.07	6.7	0.1	<0.05	4	<0.5	<0.2
1200036	Soil	51	0.77	272	0.068	1	1.17	0.017	0.32	1.7	0.05	7.4	0.4	<0.05	5	<0.5	<0.2
1200146	Soil	51	0.94	402	0.101	1	1.39	0.026	0.29	1.1	<0.01	6.7	0.2	<0.05	5	<0.5	<0.2
1200111	Soil	30	0.33	221	0.039	2	0.87	0.011	0.06	1.4	0.03	4.0	<0.1	<0.05	3	<0.5	<0.2
1200109	Soil	30	0.36	342	0.055	1	1.06	0.012	0.06	1.0	0.03	4.3	<0.1	<0.05	4	<0.5	<0.2
1200124	Soil	25	0.30	227	0.036	<1	1.01	0.008	0.04	1.5	0.03	6.3	0.1	<0.05	5	<0.5	<0.2
1200101	Soil	36	0.41	288	0.059	<1	1.33	0.015	0.05	0.7	0.04	6.6	<0.1	<0.05	5	<0.5	<0.2
1200105	Soil	26	0.32	200	0.046	1	1.02	0.011	0.09	1.2	0.06	6.1	0.1	<0.05	4	<0.5	<0.2
1200149	Soil	24	0.47	135	0.040	1	1.05	0.011	0.12	1.7	<0.01	3.5	<0.1	<0.05	4	<0.5	<0.2
1200106	Soil	24	0.32	189	0.043	1	0.78	0.014	0.06	1.3	0.03	4.4	<0.1	<0.05	3	<0.5	<0.2
1200103	Soil	31	0.31	184	0.047	1	0.95	0.019	0.05	1.1	0.04	5.2	<0.1	<0.05	4	<0.5	<0.2
1200122	Soil	27	0.33	237	0.044	2	0.95	0.012	0.06	1.4	0.03	3.2	<0.1	<0.05	3	<0.5	<0.2
1200107	Soil	25	0.33	199	0.044	2	0.80	0.013	0.06	1.5	0.03	4.5	<0.1	<0.05	3	<0.5	<0.2
1200102	Soil	39	0.35	216	0.058	<1	1.29	0.010	0.07	0.7	0.05	8.9	0.1	<0.05	5	<0.5	<0.2
1200125	Soil	28	0.36	314	0.045	1	1.01	0.013	0.04	0.6	0.04	3.6	<0.1	<0.05	3	<0.5	<0.2
1200104	Soil	36	0.37	242	0.046	1	1.10	0.010	0.08	1.2	0.10	8.6	0.1	<0.05	4	<0.5	<0.2
1200029	Soil	21	0.86	157	0.069	1	1.47	0.015	0.19	0.9	0.02	5.9	0.1	<0.05	7	<0.5	<0.2
1200028	Soil	4	1.00	169	0.058	<1	1.54	0.012	0.25	2.3	<0.01	5.8	<0.1	<0.05	7	<0.5	<0.2
1200037	Soil	68	0.89	324	0.087	1	1.30	0.016	0.27	1.7	0.07	6.6	0.3	<0.05	6	<0.5	<0.2
1200150	Soil	13	0.28	110	0.029	<1	0.73	0.011	0.12	1.3	<0.01	3.0	<0.1	<0.05	3	<0.5	<0.2
1200031	Soil	53	0.50	175	0.037	<1	1.11	0.009	0.07	0.8	0.06	5.8	0.2	<0.05	4	<0.5	<0.2
1200027	Soil	12	0.45	106	0.041	<1	1.08	0.012	0.14	1.2	<0.01	5.5	0.1	<0.05	4	<0.5	<0.2
1200148	Soil	11	0.15	87	0.011	<1	0.54	0.013	0.05	1.4	<0.01	2.4	<0.1	<0.05	2	<0.5	<0.2
1200121	Soil	26	0.31	214	0.041	1	0.89	0.013	0.06	1.2	0.03	3.0	<0.1	<0.05	3	<0.5	<0.2
1200032	Soil	74	1.07	393	0.053	3	1.47	0.017	0.39	1.0	0.04	6.0	0.2	<0.05	6	<0.5	<0.2



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Page: 10 of 12 **Part** 1

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Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
1200123	Soil	1.1	35.0	8.8	60	0.1	38.7	10.6	447	2.53	6.4	21.3	3.3	25	0.2	0.7	0.1	49	0.35	0.062
1200034	Soil	0.7	45.2	11.4	66	0.2	55.4	17.6	824	3.22	4.7	<0.5	1.9	31	0.2	0.4	<0.1	92	0.56	0.049
1200033	Soil	0.8	38.5	7.4	58	0.2	63.2	18.7	818	3.05	5.6	<0.5	3.3	21	0.1	0.4	<0.1	80	0.30	0.040
1200030	Soil	0.6	22.1	11.2	50	0.2	19.2	9.1	424	2.67	5.0	<0.5	3.5	23	0.2	0.3	<0.1	64	0.26	0.036
1200035	Soil	1.0	39.8	6.9	60	0.2	59.8	19.2	996	2.89	4.7	<0.5	2.3	26	0.1	0.3	<0.1	74	0.43	0.052
1200010	Soil	4.2	55.0	12.4	80	1.2	120.0	17.9	514	3.37	2.5	0.8	4.7	31	0.1	0.2	0.1	59	0.38	0.058
1200013	Soil	6.4	68.9	13.7	100	0.6	196.4	22.1	809	3.47	3.2	0.5	4.5	52	0.3	0.3	0.2	68	0.23	0.028
1200002	Soil	3.7	43.6	14.6	71	0.3	5.9	4.7	589	4.22	1.2	2.9	2.2	63	<0.1	0.2	0.7	31	0.10	0.042
1200007	Soil	0.3	19.8	14.5	63	0.3	12.9	5.1	314	1.69	2.3	<0.5	4.8	19	<0.1	0.2	<0.1	29	0.18	0.026
1200009	Soil	4.5	60.4	11.7	76	1.1	73.4	12.6	526	2.86	2.1	<0.5	4.3	26	0.2	0.2	0.1	48	0.27	0.066
1200006	Soil	0.6	30.1	6.7	51	0.6	40.9	9.0	342	2.24	5.0	<0.5	3.3	17	<0.1	0.3	<0.1	50	0.21	0.021
1200012	Soil	0.9	22.5	8.1	42	0.6	27.7	7.4	293	1.98	6.2	1.6	3.7	21	<0.1	0.5	<0.1	44	0.24	0.030
1200008	Soil	0.5	28.3	7.3	65	1.5	28.1	8.4	446	2.40	2.6	1.6	3.9	23	<0.1	0.3	0.1	47	0.28	0.026
1200005	Soil	0.3	36.0	8.0	79	0.3	19.1	7.7	797	2.55	2.0	0.5	3.9	23	<0.1	0.2	<0.1	45	0.23	0.030
1200015	Soil	0.9	22.8	7.2	39	0.5	29.3	6.9	247	1.93	6.3	3.5	3.5	21	<0.1	0.4	0.1	43	0.26	0.039
1200011	Soil	2.0	39.7	11.3	57	0.7	59.5	11.0	562	2.44	4.5	1.0	4.1	26	<0.1	0.4	0.1	45	0.22	0.031
1200014	Soil	9.3	66.3	16.4	92	0.4	163.4	18.3	1051	2.87	2.5	<0.5	5.8	35	0.4	0.3	0.3	39	0.10	0.013
1200016	Soil	2.0	35.4	11.6	57	0.4	48.4	10.8	396	2.44	5.9	1.5	4.2	27	<0.1	0.6	0.1	52	0.30	0.035
1200017	Soil	1.6	29.3	8.8	45	0.7	42.4	8.7	304	2.06	4.6	0.8	3.6	26	<0.1	0.4	<0.1	44	0.24	0.040
1200003	Soil	0.8	37.8	5.8	121	0.5	16.6	8.6	500	2.61	1.7	<0.5	3.4	16	<0.1	<0.1	0.1	45	0.10	0.024
1200004	Soil	0.8	52.8	4.4	94	0.2	16.3	9.8	777	2.61	2.0	<0.5	2.8	15	<0.1	0.1	<0.1	50	0.10	0.023
1200018	Soil	1.9	34.3	12.9	54	0.4	42.8	10.3	428	2.38	6.2	2.2	3.8	29	<0.1	0.5	0.1	48	0.28	0.032
1200025	Soil	1.9	38.0	13.4	58	0.2	28.1	10.8	693	2.66	4.4	1.7	3.6	26	<0.1	0.5	0.1	53	0.21	0.023
1200026	Soil	0.9	30.5	9.8	57	0.6	21.4	9.1	449	2.45	4.5	1.5	3.9	24	<0.1	0.3	0.1	50	0.21	0.020
1200024	Soil	2.4	57.5	16.3	97	0.1	123.8	27.9	823	5.50	2.0	1.9	4.9	26	0.1	0.3	0.2	67	0.15	0.022
1200019	Soil	0.7	80.7	2.7	35	<0.1	33.0	12.1	393	2.61	2.2	1.1	0.8	29	0.1	0.2	<0.1	55	0.62	0.030
1200023	Soil	5.9	49.1	14.0	78	0.1	77.0	13.9	1029	2.61	1.5	<0.5	3.1	45	0.2	0.2	0.2	38	0.09	0.015
1200021	Soil	1.1	30.6	10.9	59	0.2	32.8	10.7	474	2.48	6.6	1.5	4.1	28	<0.1	0.5	0.1	53	0.39	0.045
1200020	Soil	0.8	33.6	11.3	57	0.1	32.3	10.5	425	2.68	6.5	1.3	4.3	30	0.1	0.5	0.2	58	0.41	0.039
1200022	Soil	0.9	29.1	11.4	55	0.3	30.0	9.6	312	2.40	5.6	1.6	4.0	26	<0.1	0.5	0.1	49	0.31	0.028



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Project: VOL

Report Date: April 16, 2012

Page: 10 of 12 Part 2

Client: **Volcanic Metals Corp.**
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8 Canada

Project: VOL

Report Date: April 16, 2012

Page: 10 of 12 Part 2

WHI12000020.1

Method	Analyte	Unit	1DX15															1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
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Suite 700 - 510 West Hastings Street
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Project: VOL
Report Date: April 16, 2012

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Page: 11 of 12 **Part** 1

CERTIFICATE OF ANALYSIS

WHI12000020.1

Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
1200139	0.8	27.0	9.1	56	0.1	19.3	8.0	524	2.37	5.0	0.6	3.5	21	<0.1	0.4	0.1	49	0.21	0.019	12
1200126	0.7	33.1	11.1	65	0.1	20.6	9.3	516	2.67	4.7	1.2	3.9	24	<0.1	0.4	0.1	55	0.25	0.019	13
1200128	0.5	24.1	9.9	79	<0.1	18.9	8.1	672	3.01	3.4	1.3	4.8	26	<0.1	0.3	0.1	55	0.30	0.033	21
1200132	0.7	17.9	6.6	44	<0.1	16.1	6.6	238	1.93	6.6	<0.5	3.2	23	<0.1	0.4	<0.1	44	0.26	0.045	13
1200133	0.7	17.6	6.8	45	0.1	14.4	6.6	272	1.94	6.9	2.4	2.8	20	<0.1	0.4	<0.1	45	0.24	0.049	10
1200130	0.7	28.5	11.6	62	0.2	20.2	8.4	769	2.82	5.1	1.5	3.8	23	<0.1	0.3	<0.1	48	0.36	0.030	14
1200131	0.6	22.3	9.2	57	0.1	17.7	7.5	355	2.37	5.7	1.1	3.4	22	<0.1	0.4	0.1	49	0.22	0.020	12
1200127	0.5	20.6	32.1	55	0.1	15.1	6.4	587	1.87	2.3	3.0	3.4	28	<0.1	0.2	<0.1	34	0.21	0.022	11
1200129	0.7	25.8	10.6	55	0.2	21.2	7.5	600	2.36	6.4	2.7	4.2	22	<0.1	0.4	<0.1	45	0.25	0.023	14
1200136	0.4	18.7	36.2	54	0.1	14.0	6.6	388	1.96	2.9	1.1	3.2	28	<0.1	0.3	<0.1	40	0.22	0.022	11
1200134	0.6	16.8	9.0	57	0.2	17.9	8.6	498	2.37	4.7	1.1	3.3	21	0.1	0.3	<0.1	51	0.21	0.023	9
1200137	0.6	28.7	30.9	58	0.1	20.2	9.2	628	2.46	3.5	3.3	3.5	24	<0.1	0.2	<0.1	49	0.24	0.027	12
1200135	0.5	16.5	9.2	58	0.1	17.2	8.9	544	2.41	4.8	11.8	3.1	21	<0.1	0.3	0.1	51	0.20	0.023	9
1200138	0.7	31.4	9.9	62	0.2	23.2	9.3	649	2.57	4.6	2.3	3.8	26	0.1	0.3	<0.1	54	0.27	0.023	14
1200140	0.6	26.8	8.3	53	0.1	18.1	8.0	484	2.31	4.7	1.8	3.5	21	<0.1	0.3	<0.1	50	0.22	0.018	12
1201606	1.1	22.9	6.7	41	0.3	16.2	7.1	430	2.15	4.8	0.8	4.0	27	<0.1	0.3	0.1	39	0.32	0.022	12
1201605	0.4	21.1	7.5	52	0.2	12.8	5.6	363	2.09	3.0	<0.5	3.0	22	<0.1	0.2	<0.1	38	0.19	0.021	10
1201607	0.7	27.2	6.2	38	0.2	16.9	5.6	337	1.73	5.3	1.3	3.5	19	<0.1	0.4	0.1	37	0.21	0.033	12
1201617	0.1	9.0	5.1	27	0.1	6.7	5.3	338	1.29	0.9	0.8	1.8	30	<0.1	<0.1	<0.1	27	0.19	0.038	3
1201612	0.3	42.2	6.2	58	0.2	16.9	9.7	878	2.53	1.2	1.8	3.0	21	<0.1	<0.1	<0.1	51	0.27	0.037	11
1201611	0.4	48.5	4.4	94	0.3	8.1	8.1	839	3.43	0.8	0.9	4.4	8	<0.1	<0.1	0.1	48	0.10	0.036	16
1201613	0.2	24.4	7.9	120	0.1	10.3	5.4	538	1.72	1.4	<0.5	3.0	32	<0.1	<0.1	<0.1	31	0.17	0.023	10
1201608	1.6	77.8	7.1	100	0.1	19.4	8.9	582	3.47	2.7	1.2	4.0	19	<0.1	0.1	0.3	57	0.10	0.031	13
1201609	4.6	97.6	8.5	100	0.2	10.6	7.0	549	3.28	2.9	0.7	3.3	14	<0.1	0.1	0.6	35	0.10	0.028	11
1201615	0.2	14.0	6.7	43	0.2	8.1	6.2	297	2.21	1.3	<0.5	3.0	18	<0.1	<0.1	0.5	30	0.14	0.020	6
1201622	0.6	265.5	10.7	283	0.2	14.2	6.7	308	1.70	4.7	1.6	4.2	23	0.2	0.2	<0.1	35	0.15	0.015	10
1201616	0.3	9.3	3.7	61	0.1	16.7	13.6	722	4.43	0.5	0.5	1.4	18	<0.1	<0.1	<0.1	99	0.26	0.045	5
1201619	0.7	28.1	4.3	280	0.2	5.0	3.3	545	2.98	1.2	0.6	5.0	12	0.5	0.1	<0.1	17	0.11	0.017	21
1201620	0.6	95.9	6.6	129	0.3	16.1	5.9	304	1.85	5.4	1.8	3.5	20	0.4	0.3	<0.1	38	0.21	0.039	13
1201621	0.3	85.6	7.8	224	<0.1	14.7	8.2	439	2.31	1.7	0.6	3.4	25	0.2	0.1	<0.1	43	0.22	0.019	15



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Project:

VOL

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Page: 12 of 12 Part 1

CERTIFICATE OF ANALYSIS

WHI120000020.1

Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
MDL	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
1201618	0.3	17.2	8.0	81	0.2	6.2	6.2	806	2.09	1.3	<0.5	4.6	14	0.3	<0.1	<0.1	25	0.14	0.029	8
1201614	0.3	20.6	4.9	64	0.1	12.2	7.3	417	2.53	1.1	<0.5	3.7	18	<0.1	0.1	<0.1	44	0.14	0.017	9
1175904	0.5	35.0	21.4	83	0.5	22.6	7.6	488	2.47	3.8	3.4	5.1	21	<0.1	0.2	<0.1	47	0.22	0.023	17
1175905	1.1	62.2	8.1	69	0.7	27.8	11.7	429	2.51	2.9	0.8	3.4	29	<0.1	0.2	<0.1	59	0.28	0.022	9
1175906	1.6	40.0	10.8	56	1.0	37.8	10.8	656	2.31	5.0	2.1	3.8	25	0.1	0.3	0.1	46	0.24	0.028	12
1175907	1.5	28.6	14.3	38	0.4	20.3	6.5	406	1.63	4.3	0.5	1.8	15	<0.1	0.2	<0.1	19	0.10	0.022	3
1175942	7.4	86.7	15.7	197	0.4	413.0	39.7	1677	5.15	0.6	<0.5	4.0	48	0.6	0.2	0.2	87	0.32	0.046	15
1201601	1.5	42.5	14.8	71	0.4	65.3	10.9	802	2.48	2.5	1.2	3.4	23	0.1	0.2	0.1	38	0.19	0.022	11
1175941	2.2	40.6	9.8	59	0.4	82.5	10.6	422	2.57	6.2	1.7	4.0	27	<0.1	0.5	0.1	50	0.24	0.028	13
1201602	0.7	34.1	9.1	51	0.3	17.6	7.4	465	2.17	4.6	1.1	3.0	20	<0.1	0.4	0.1	42	0.19	0.027	12
1175909	3.3	49.7	12.8	76	0.4	90.1	14.5	593	2.71	4.4	0.7	3.0	28	0.2	0.3	0.1	48	0.15	0.019	8
1175903	0.5	29.1	13.5	64	0.7	18.3	8.5	605	2.27	3.0	0.8	4.3	22	<0.1	0.3	<0.1	44	0.22	0.028	16
1175943	7.4	58.4	11.8	118	0.5	157.8	20.7	1037	2.95	2.1	8.3	5.7	28	0.5	0.2	0.2	35	0.17	0.035	13
1201603	0.4	24.8	10.0	50	0.3	13.2	6.0	385	1.87	3.3	0.8	4.5	23	<0.1	0.2	<0.1	33	0.24	0.030	14
1175908	1.2	34.3	9.1	51	0.4	36.2	8.7	384	2.14	5.9	1.8	3.7	22	<0.1	0.4	0.1	44	0.26	0.042	16
1175946	1.0	35.3	12.2	53	0.2	24.2	7.4	482	2.21	4.8	1.2	4.0	22	<0.1	0.4	0.1	41	0.21	0.030	15
1201604	0.4	20.3	7.7	51	0.2	11.3	5.2	342	1.93	2.5	1.3	2.9	20	<0.1	0.2	<0.1	34	0.17	0.019	10
1175944	6.6	52.8	29.0	84	0.2	78.8	14.8	526	2.45	2.4	<0.5	5.0	33	0.4	0.2	0.3	29	0.12	0.031	10
1175945	1.6	37.6	16.4	53	0.3	31.7	8.5	393	2.30	4.4	1.3	3.9	24	<0.1	0.4	0.1	43	0.18	0.018	10
1200327	1.9	32.4	7.1	54	0.3	48.7	9.5	489	2.60	4.7	1.4	3.1	29	0.2	0.4	0.1	35	0.25	0.059	10



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Page: 1 of 3 Part 1

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Page: 1 of 3 **Part** 2

QUALITY CONTROL REPORT

WHI12000020.1

Method Analyte Unit	MDL	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15															
		Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Ti ppm	S %	Ga ppm	Se ppm	Te ppm
Pulp Duplicates		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
1200233	Soil	23	0.39	206	0.048	1	1.01	0.014	0.04	1.1	0.02	3.1	<0.1	<0.05	4	<0.5	<0.2
REP 1200233	QC	23	0.40	214	0.055	1	1.09	0.020	0.05	1.1	<0.01	3.4	<0.1	<0.05	3	<0.5	<0.2
1200244	Soil	15	0.07	230	0.002	<1	0.32	0.003	0.07	0.7	0.05	3.0	0.2	<0.05	1	1.0	<0.2
REP 1200244	QC	15	0.07	229	0.003	1	0.32	0.003	0.07	0.8	0.05	2.9	0.2	<0.05	2	1.5	<0.2
1175730	Soil	13	0.19	134	0.031	<1	0.50	0.026	0.07	1.8	0.02	1.9	<0.1	<0.05	2	<0.5	<0.2
REP 1175730	QC	13	0.19	130	0.031	<1	0.50	0.026	0.07	1.7	0.01	2.1	<0.1	<0.05	2	<0.5	<0.2
1175731	Soil	20	0.36	248	0.035	<1	0.98	0.010	0.04	1.2	0.02	3.5	<0.1	<0.05	4	<0.5	<0.2
REP 1175731	QC	20	0.35	242	0.033	<1	0.93	0.010	0.04	1.3	<0.01	3.1	<0.1	<0.05	3	<0.5	<0.2
1175914	Soil	25	0.66	324	0.047	1	1.00	0.017	0.27	1.1	0.01	4.9	0.2	<0.05	4	<0.5	<0.2
REP 1175914	QC	26	0.68	318	0.052	<1	1.03	0.020	0.25	0.9	0.02	5.3	0.2	<0.05	5	<0.5	<0.2
1175918	Soil	24	1.49	401	0.089	<1	1.98	0.015	0.49	0.9	0.02	8.3	0.4	<0.05	8	<0.5	<0.2
REP 1175918	QC	22	1.41	387	0.085	<1	1.89	0.014	0.49	0.9	0.02	7.9	0.4	<0.05	8	<0.5	<0.2
1175794	Soil	29	0.35	374	0.046	1	1.18	0.012	0.07	1.1	0.03	5.1	<0.1	<0.05	4	<0.5	<0.2
REP 1175794	QC	29	0.34	400	0.044	2	1.18	0.013	0.07	1.1	0.03	5.0	<0.1	<0.05	4	<0.5	<0.2
1175783	Soil	27	0.41	293	0.050	1	1.16	0.011	0.07	0.8	0.03	4.1	<0.1	<0.05	4	<0.5	<0.2
REP 1175783	QC	28	0.43	305	0.052	<1	1.26	0.012	0.08	0.9	0.02	4.3	<0.1	<0.05	4	<0.5	<0.2
1200208	Soil	16	0.76	468	0.081	<1	1.15	0.014	0.54	1.7	<0.01	6.1	0.2	<0.05	5	<0.5	<0.2
REP 1200208	QC	15	0.74	450	0.080	<1	1.11	0.014	0.52	1.9	<0.01	6.1	0.2	<0.05	4	<0.5	<0.2
1200213	Soil	18	0.80	310	0.076	<1	1.26	0.016	0.48	1.5	0.02	7.1	0.2	0.09	6	0.8	<0.2
REP 1200213	QC	19	0.81	324	0.080	<1	1.28	0.017	0.49	1.4	0.04	7.6	0.2	0.11	6	1.2	<0.2
1175762	Soil	29	0.25	206	0.022	<1	0.79	0.005	0.06	0.8	0.12	9.2	0.1	<0.05	4	<0.5	<0.2
REP 1175762	QC	29	0.25	205	0.023	<1	0.81	0.005	0.06	0.8	0.12	9.0	0.1	<0.05	4	<0.5	<0.2
1175766	Soil	23	0.50	334	0.040	<1	1.12	0.009	0.13	0.6	0.04	7.3	0.1	<0.05	5	<0.5	<0.2
REP 1175766	QC	23	0.50	330	0.040	1	1.07	0.009	0.13	0.7	0.05	7.4	0.1	<0.05	5	<0.5	<0.2
1200125	Soil	28	0.36	314	0.045	1	1.01	0.013	0.04	0.6	0.04	3.6	<0.1	<0.05	3	<0.5	<0.2
REP 1200125	QC	28	0.35	300	0.042	1	0.97	0.014	0.04	0.7	0.04	3.4	<0.1	<0.05	3	<0.5	<0.2
1200031	Soil	53	0.50	175	0.037	<1	1.11	0.009	0.07	0.8	0.06	5.8	0.2	<0.05	4	<0.5	<0.2
REP 1200031	QC	50	0.48	168	0.033	<1	1.08	0.010	0.07	0.8	0.06	5.6	0.2	<0.05	4	<0.5	<0.2



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Phone (604) 253-3158 Fax (604) 253-1716

Client: **Volcanic Metals Corp.**
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8 Canada

Project: VOL
Report Date: April 16, 2012

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Page: 2 of 3 Part 1

WHI12000020.

	1DX15																											
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	1DX15	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	1DX15	Au ppb	Th ppm	Sr ppm	1DX15	Cd ppm	Sb ppm	Bi ppm	1DX15	V ppm	Ca %	P %	La ppm	1DX15			
1200019	0.7	80.7	2.7	35	<0.1	33.0	12.1	393	2.61	2.2	1.1	0.8	29	0.1	0.2	<0.1	55	0.62	0.030	4								
REP 1200019	0.8	79.5	2.8	35	<0.1	31.7	11.7	379	2.55	1.7	0.6	0.8	26	0.1	0.2	<0.1	53	0.59	0.030	3								
1200139	0.8	27.0	9.1	56	0.1	19.3	8.0	524	2.37	5.0	0.6	3.5	21	<0.1	0.4	0.1	49	0.21	0.019	12								
REP 1200139	0.8	27.0	9.0	54	0.1	18.5	8.0	518	2.36	5.0	<0.5	3.5	22	<0.1	0.3	<0.1	50	0.21	0.020	12								
1201619	0.7	28.1	4.3	280	0.2	5.0	3.3	545	2.98	1.2	0.6	5.0	12	0.5	0.1	<0.1	17	0.11	0.017	21								
REP 1201619	0.6	28.4	4.3	284	0.3	5.1	3.4	539	3.03	1.3	1.2	5.1	12	0.6	<0.1	<0.1	19	0.11	0.017	21								
1175946	1.0	35.3	12.2	53	0.2	24.2	7.4	482	2.21	4.8	1.2	4.0	22	<0.1	0.4	0.1	41	0.21	0.030	15								
REP 1175946	1.0	34.9	11.7	52	0.3	23.7	7.1	463	2.16	4.6	0.9	3.9	23	0.1	0.4	<0.1	39	0.20	0.029	15								
Reference Materials																												
STD DS8	13.1	106.5	117.0	301	1.7	37.9	7.5	617	2.44	23.7	101.2	6.5	63	2.2	4.8	6.2	40	0.67	0.077	15								
STD DS8	13.1	110.6	123.4	312	1.8	37.7	7.5	609	2.37	25.2	115.6	6.3	61	2.3	5.0	6.3	42	0.67	0.078	15								
STD DS8	11.9	97.2	109.1	281	1.6	34.4	6.8	540	2.21	23.3	94.0	6.1	61	2.0	5.1	6.1	39	0.63	0.076	14								
STD DS8	12.5	104.9	122.8	303	1.7	36.8	7.3	593	2.35	24.4	117.6	6.4	63	2.3	5.2	6.3	40	0.66	0.079	14								
STD DS8	12.7	105.2	117.9	303	1.7	36.4	7.2	588	2.35	24.1	105.5	6.5	60	2.2	5.4	6.0	41	0.66	0.076	14								
STD DS8	11.8	96.4	116.7	282	1.7	33.0	6.6	542	2.18	22.6	97.4	6.3	61	2.0	5.2	6.4	38	0.61	0.076	13								
STD DS8	13.0	102.3	117.5	294	1.8	36.1	7.0	583	2.29	23.9	114.1	6.5	65	2.2	5.2	6.1	41	0.66	0.077	16								
STD DS8	12.8	100.2	114.7	294	1.8	36.1	7.0	570	2.26	22.5	115.5	6.5	61	2.1	4.8	4.3	40	0.66	0.072	16								
STD DS8	12.3	102.4	120.9	299	1.7	36.4	7.3	590	2.34	23.8	113.3	6.6	63	1.9	5.1	5.5	40	0.67	0.074	16								
STD DS8	12.7	104.5	122.3	313	1.8	37.3	7.3	609	2.40	24.8	131.6	6.5	66	2.4	5.4	5.5	41	0.66	0.082	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	<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	<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	<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	<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	<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	<0.1	0.2	0.3	2	<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	<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	<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	<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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Page: 2 of 3 Part 2

WHI12000020.1

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Acme Analytical Laboratories (Vancouver) Ltd.

Project:

Part 1

WHI12000020.1

[illegible]



Acme Analytical Laboratories (Vancouver) Ltd.

Acme Analytical Laboratories (Vancouver) Ltd.

Client: **Volcanic Metals Corp.**
Suite 700 - 510 West Hastings Street
Vancouver BC V6B1L8 Canada

Project: VOL

Report Date: April 16, 2012

Page: 3 of 3 Part 2

QUALITY CONTROL REPORT

WHI12000020.1

[illegible]



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

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Client: Comstock Metals Ltd.
701 - 675 West Hastings St.
Vancouver BC V6B 1N2 Canada

Submitted By: Rasool Mohammad
Receiving Lab: Canada-Dawson City
Received: June 22, 2012
Report Date: July 24, 2012
Page: 1 of 5

CERTIFICATE OF ANALYSIS

DAW120000049.1

CLIENT JOB INFORMATION

Project: WAL
Shipment ID:
P.O. Number
Number of Samples: 100

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.

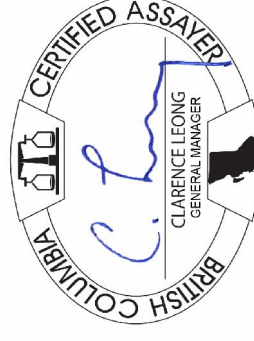
SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

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

ADDITIONAL COMMENTS

Invoice To: Comstock Metals Ltd.
701 - 675 West Hastings St.
Vancouver BC V6B 1N2
Canada

CC: Larry Johnson



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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.

Page: 2 of 5

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Acme Analytical Laboratories (Vancouver) Ltd.

Client:

Project: WAL

Page: 2 of 5

Page: 2 of 5

DAW12000049.1

Method	Analyte	Unit	1DX15																	
			La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se		
			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		
Soil	1290058	11	33	0.27	193	0.033	<1	0.67	0.007	0.04	0.1	0.02	3.7	<0.1	<0.05	2	<0.5	<0.2		
	1290060	21	128	0.67	266	0.040	<1	1.25	0.005	0.07	<0.1	0.04	9.6	0.3	<0.05	5	0.6	<0.2		
	1290049	17	42	0.62	292	0.062	<1	1.22	0.007	0.13	0.1	0.05	8.4	0.2	<0.05	5	<0.5	<0.2		
	1290059	15	66	0.55	223	0.061	<1	1.20	0.007	0.05	<0.1	0.04	6.9	0.1	<0.05	4	<0.5	<0.2		
	1290048	9	36	0.57	179	0.064	1	0.95	0.007	0.25	0.1	0.01	4.2	0.2	<0.05	4	<0.5	<0.2		
	1290061	17	113	0.63	289	0.044	<1	1.20	0.006	0.06	<0.1	0.07	9.1	0.2	<0.05	5	<0.5	<0.2		
	1290062	16	30	0.26	235	0.018	<1	0.73	0.004	0.06	<0.1	0.05	6.2	0.2	<0.05	3	<0.5	<0.2		
	1290064	13	31	0.58	243	0.045	<1	1.08	0.011	0.08	<0.1	0.06	6.6	0.1	<0.05	5	<0.5	<0.2		
	1290063	15	30	0.35	215	0.036	<1	0.80	0.007	0.06	0.2	0.05	6.5	0.1	<0.05	3	<0.5	<0.2		
	1290065	14	36	0.54	246	0.061	<1	1.12	0.008	0.08	0.1	0.04	6.5	0.1	<0.05	5	<0.5	<0.2		
Soil	1290066	7	28	0.42	244	0.054	<1	1.00	0.006	0.12	0.2	0.01	3.7	<0.1	<0.05	4	<0.5	<0.2		
	1290050	12	24	0.30	285	0.023	1	0.85	0.006	0.08	<0.1	0.06	7.9	<0.1	<0.05	4	<0.5	<0.2		
	1290052	14	21	0.40	298	0.024	1	0.92	0.006	0.10	<0.1	0.05	8.3	0.2	<0.05	5	<0.5	<0.2		
	1290037	12	26	0.31	211	0.042	<1	0.72	0.009	0.05	0.2	0.03	3.2	<0.1	<0.05	3	<0.5	<0.2		
	1290036	10	26	0.38	236	0.052	1	0.86	0.013	0.04	0.2	0.04	3.2	<0.1	<0.05	3	<0.5	<0.2		
	1290067	15	22	1.62	517	0.151	<1	2.05	0.006	1.07	<0.1	0.01	5.5	0.5	<0.05	9	<0.5	<0.2		
	1290038	13	27	0.35	219	0.042	1	0.72	0.009	0.04	0.4	0.02	3.3	<0.1	<0.05	3	<0.5	<0.2		
	1290054	10	25	0.28	178	0.033	<1	0.80	0.006	0.06	0.1	0.02	4.5	<0.1	<0.05	3	<0.5	<0.2		
	1290053	12	23	0.29	306	0.010	1	0.99	0.006	0.07	<0.1	0.07	8.0	<0.1	<0.05	4	<0.5	<0.2		
	1290042	9	29	0.36	201	0.042	<1	0.97	0.006	0.06	0.2	0.02	4.2	<0.1	<0.05	3	<0.5	<0.2		
Soil	1290056	20	40	0.31	213	0.029	<1	0.77	0.007	0.04	<0.1	0.03	7.6	0.2	<0.05	3	0.7	<0.2		
	1290057	13	37	0.42	226	0.048	<1	0.88	0.013	0.05	0.2	0.03	4.1	<0.1	<0.05	3	<0.5	<0.2		
	1290039	11	27	0.33	226	0.044	<1	0.82	0.009	0.05	0.2	0.04	4.1	<0.1	<0.05	3	<0.5	<0.2		
	1290055	24	94	0.54	277	0.034	<1	1.15	0.007	0.08	<0.1	0.07	11.6	0.3	<0.05	5	0.5	<0.2		
	1268575	11	42	0.32	186	0.013	1	0.91	0.006	0.05	<0.1	0.04	9.7	0.1	<0.05	4	<0.5	<0.2		
	1290051	4	33	0.78	90	0.104	2	1.47	0.072	0.11	14.1	<0.1	4.1	<0.1	0.12	5	<0.5	<0.2		
	1290040	16	40	0.68	379	0.028	<1	1.17	0.007	0.10	<0.1	0.03	8.2	0.3	<0.05	5	<0.5	<0.2		
	1290041	11	26	0.45	360	0.031	<1	1.15	0.007	0.12	0.1	0.04	6.5	0.1	<0.05	5	<0.5	<0.2		
	1268570	13	27	0.52	279	0.063	<1	1.10	0.007	0.23	0.1	0.01	5.0	0.2	<0.05	5	<0.5	<0.2		
	1290047	26	36	1.15	462	0.121	<1	1.59	0.006	0.91	<0.1	0.07	14.1	0.5	<0.05	11	<0.5	<0.2		

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Acme Analytical Laboratories (Vancouver) Ltd.

Project: WAL
Report Date: July 24, 2012

Part: 1 of 2

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Acme Analytical Laboratories (Vancouver) Ltd.

Client: **Comstock Metals Ltd.**
701 - 675 West Hastings St.
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Project: WAL
Report Date: July 24, 2012

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Part: 2 of 2

Page: 3 of 5

CERTIFICATE OF ANALYSIS

DAW12000049.1

Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																	
	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm	Te ppm	
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	
Soil	18	84	0.28	299	0.014	<1	0.75	0.004	0.05	<0.1	0.08	11.9	0.3	<0.05	3	0.9	<0.2	
Soil	9	29	0.18	202	0.003	<1	0.59	0.003	0.06	<0.1	0.06	12.0	0.1	<0.05	4	<0.5	<0.2	
Soil	9	27	0.52	174	0.051	<1	1.03	0.007	0.13	<0.1	0.03	6.0	0.2	<0.05	4	<0.5	<0.2	
Soil	17	17	0.41	331	0.023	<1	1.25	0.004	0.17	<0.1	0.07	4.9	0.2	<0.05	5	0.7	<0.2	
Soil	12	41	0.40	239	0.034	1	0.81	0.012	0.04	0.2	0.06	4.7	<0.1	<0.05	3	<0.5	<0.2	
Soil	10	34	0.31	199	0.036	<1	0.92	0.006	0.05	0.1	0.01	4.5	0.1	<0.05	3	<0.5	<0.2	
Soil	10	28	0.10	263	0.002	1	0.43	0.003	0.06	0.2	0.10	5.6	0.2	<0.05	2	0.7	<0.2	
Soil	15	52	1.12	355	0.113	<1	1.70	0.012	0.29	<0.1	0.03	9.5	0.5	<0.05	7	<0.5	<0.2	
Soil	17	30	1.18	395	0.086	1	1.63	0.011	0.41	<0.1	0.02	9.6	0.3	<0.05	8	<0.5	<0.2	
Soil	14	29	1.29	608	0.118	1	1.80	0.009	0.81	<0.1	0.01	6.6	0.4	<0.05	8	<0.5	<0.2	
Soil	16	49	1.81	466	0.135	<1	2.36	0.009	1.02	<0.1	0.02	10.3	0.5	<0.05	10	<0.5	<0.2	
Soil	14	45	0.14	190	0.004	<1	0.43	0.004	0.06	<0.1	0.06	9.4	0.2	<0.05	2	0.6	<0.2	
Soil	14	30	0.37	207	0.037	<1	0.94	0.009	0.06	0.1	0.05	6.2	0.1	<0.05	4	<0.5	<0.2	
Soil	13	29	0.54	168	0.048	<1	1.19	0.006	0.16	<0.1	0.02	6.8	0.2	<0.05	5	<0.5	<0.2	
Soil	16	33	0.61	283	0.057	<1	1.13	0.006	0.15	<0.1	0.03	8.1	0.4	<0.05	5	<0.5	<0.2	
Soil	11	38	0.33	154	0.030	1	0.71	0.011	0.05	0.1	0.03	5.5	<0.1	<0.05	3	<0.5	<0.2	
Soil	8	37	0.13	196	0.001	<1	0.20	0.002	0.04	<0.1	0.05	7.6	0.3	<0.05	1	<0.5	<0.2	
Soil	12	22	0.44	204	0.030	1	1.11	0.005	0.13	<0.1	0.04	7.8	0.1	<0.05	5	<0.5	<0.2	
Soil	13	35	0.60	313	0.079	1	1.43	0.021	0.07	0.2	0.04	5.8	0.1	<0.05	5	<0.5	<0.2	
Soil	16	150	0.47	313	0.010	<1	0.89	0.004	0.07	<0.1	0.10	11.0	0.5	<0.05	5	0.7	<0.2	
Soil	22	28	1.02	190	0.098	<1	1.44	0.006	0.60	<0.1	0.03	9.2	0.4	<0.05	8	<0.5	<0.2	
Soil	3	29	0.77	80	0.107	2	1.44	0.078	0.11	13.6	0.01	4.4	<0.1	0.06	5	<0.5	<0.2	
Soil	15	23	0.71	363	0.046	1	1.41	0.007	0.34	<0.1	0.06	8.1	0.3	<0.05	6	<0.5	<0.2	
Soil	15	66	0.48	263	0.027	<1	0.88	0.006	0.10	<0.1	0.03	9.9	0.3	<0.05	4	1.1	<0.2	
Soil	19	23	1.77	573	0.141	<1	2.05	0.009	1.17	<0.1	0.02	7.1	0.5	0.10	9	<0.5	<0.2	
Soil	16	22	0.78	272	0.067	<1	1.37	0.008	0.44	<0.1	0.02	8.5	0.2	<0.05	7	<0.5	<0.2	
Soil	14	27	0.48	191	0.053	<1	1.06	0.009	0.15	0.1	0.02	5.9	0.1	<0.05	4	<0.5	<0.2	
Soil	9	77	0.29	334	0.013	<1	0.63	0.004	0.06	<0.1	0.07	7.9	0.3	<0.05	3	0.8	<0.2	
Soil	10	29	0.48	193	0.043	1	1.15	0.006	0.27	0.1	0.05	10.0	0.2	<0.05	6	<0.5	<0.2	
Soil	31	99	0.18	298	0.003	<1	0.53	0.003	0.05	<0.1	0.06	15.4	0.5	<0.05	3	1.1	<0.2	



Acme Analytical Laboratories (Vancouver) Ltd.

Page: 4 of 5

DAW12000049.1

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Acme Analytical Laboratories (Vancouver) Ltd.

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Project: WAL
Report Date: July 24, 2012

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Part: 2 of 2

CERTIFICATE OF ANALYSIS

DAW12000049.1

Method	Analyte	Unit	1DX15															
			La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm	Se ppm
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
	Soil		12	32	0.57	200	0.049	<1	1.14	0.008	0.14	<0.1	0.04	8.6	0.2	<0.05	5	<0.5
	Soil		10	72	0.12	320	0.001	<1	0.32	0.002	0.05	<0.1	0.07	9.7	0.5	<0.05	2	0.7
	Soil		15	41	0.94	295	0.077	<1	1.41	0.006	0.66	<0.1	0.02	8.9	0.4	<0.05	10	<0.5
	Soil		10	46	0.25	251	0.013	<1	0.64	0.006	0.05	<0.1	0.08	7.7	0.3	<0.05	3	<0.5
	Soil		14	28	0.46	286	0.047	<1	1.11	0.008	0.06	<0.1	0.05	7.8	0.1	<0.05	4	<0.5
	Soil		14	34	0.57	293	0.078	<1	1.51	0.017	0.06	0.1	0.04	6.8	0.1	<0.05	5	<0.5
	Soil		13	68	0.48	274	0.031	<1	0.97	0.008	0.06	<0.1	0.07	9.4	0.3	<0.05	4	<0.5
	Soil		12	29	0.54	277	0.075	<1	1.40	0.018	0.08	0.1	0.03	5.2	0.1	<0.05	5	<0.5
	Soil		13	22	0.64	255	0.063	<1	1.03	0.009	0.24	0.1	0.01	5.3	0.2	<0.05	5	<0.5
	Soil		14	36	0.65	333	0.092	<1	1.69	0.016	0.08	0.1	0.04	7.2	0.2	<0.05	7	<0.5
	Soil		15	28	1.29	405	0.109	<1	1.68	0.009	0.64	<0.1	0.04	10.7	0.5	<0.05	8	<0.5
	Soil		10	27	0.39	158	0.047	<1	1.03	0.009	0.07	0.1	0.02	3.8	<0.1	<0.05	3	<0.5
	Soil		18	33	0.43	268	0.033	1	1.09	0.004	0.10	<0.1	0.05	9.7	0.2	<0.05	5	0.6
	Soil		8	21	0.25	285	0.010	2	0.85	0.004	0.08	<0.1	0.10	7.9	<0.1	<0.05	3	0.6
	Soil		14	33	0.68	274	0.067	<1	1.29	0.006	0.14	0.1	0.03	5.8	0.1	<0.05	5	<0.5
	Soil		16	36	0.56	307	0.063	1	1.28	0.008	0.08	0.2	0.03	5.5	<0.1	<0.05	5	<0.5
	Soil		15	37	0.53	350	0.062	<1	1.42	0.014	0.08	0.1	0.05	7.2	0.2	<0.05	7	<0.5
	Soil		15	38	0.55	280	0.076	<1	1.60	0.008	0.07	0.1	0.02	6.2	0.1	<0.05	6	<0.5
	Soil		16	39	0.63	322	0.084	<1	1.67	0.019	0.09	0.2	0.06	6.7	0.2	0.08	6	<0.5
	Soil		14	33	0.52	353	0.056	1	1.21	0.021	0.06	0.2	0.04	4.1	<0.1	<0.05	4	<0.5
	Soil		12	34	0.43	224	0.043	<1	1.04	0.007	0.07	0.1	0.05	6.7	0.1	<0.05	4	<0.5
	Soil		17	45	0.79	318	0.075	<1	1.64	0.010	0.10	<0.1	0.05	9.0	0.2	<0.05	7	<0.5
	Soil		14	32	0.50	210	0.055	1	1.14	0.008	0.06	0.1	0.03	6.5	0.1	<0.05	4	<0.5
	Soil		11	38	0.38	224	0.061	<1	1.07	0.009	0.04	<0.1	0.03	4.8	0.1	<0.05	4	<0.5
	Soil		17	35	0.64	206	0.053	1	1.13	0.007	0.12	<0.1	0.04	6.7	0.3	<0.05	4	<0.5
	Soil		15	34	0.52	220	0.045	<1	1.21	0.006	0.06	0.1	0.02	5.9	0.1	<0.05	5	<0.5
	Soil		9	30	0.43	175	0.052	<1	1.09	0.006	0.06	0.1	0.01	3.9	0.1	<0.05	4	<0.5
	Soil		16	43	0.49	240	0.080	<1	1.48	0.015	0.06	0.1	0.04	6.1	0.1	<0.05	5	<0.5
	Soil		9	34	0.41	211	0.052	<1	1.14	0.007	0.09	0.1	0.01	4.7	0.1	<0.05	4	<0.5
	Soil		11	34	0.53	198	0.057	<1	1.23	0.006	0.16	<0.1	0.02	5.9	0.2	<0.05	5	<0.5

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



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Project:

WAL

Report Date:

July 24, 2012

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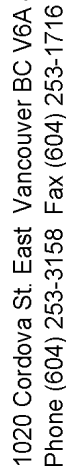
Page: 5 of 5

Part: 1 of 2

CERTIFICATE OF ANALYSIS

DAW12000049.1

Method Analyte Unit	1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15 1DX15																			
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
1260480	Soil	2.0	40.8	15.7	66	<0.1	39.3	10.3	415	2.84	5.9	4.4	3.8	25	<0.1	0.5	<0.1	62	0.25	0.014
1260484	Soil	6.0	43.9	13.8	77	<0.1	110.0	13.8	628	2.57	2.7	0.8	4.7	42	0.1	0.3	0.1	41	0.17	0.028
1260490	Soil	0.7	57.3	13.6	70	<0.1	28.6	10.6	429	3.29	2.5	2.2	3.5	24	<0.1	0.3	<0.1	79	0.36	0.026
1260481	Soil	6.6	85.8	35.7	111	<0.1	134.6	20.8	995	3.60	3.2	<0.5	4.0	51	0.2	0.4	0.3	67	0.13	0.015
1260487	Soil	2.1	47.5	15.0	65	<0.1	36.4	7.9	561	2.54	4.1	1.6	3.6	19	<0.1	0.4	<0.1	44	0.16	0.019
1260485	Soil	2.7	49.6	12.5	68	<0.1	60.0	11.6	541	2.63	5.4	2.0	3.7	30	<0.1	0.5	0.1	54	0.22	0.020
1260491	Soil	0.6	24.4	6.1	50	<0.1	21.7	6.2	271	2.06	5.2	4.1	3.9	18	<0.1	0.5	<0.1	49	0.21	0.027
1260492	Soil	0.6	20.5	8.3	57	<0.1	21.5	7.7	291	2.40	4.4	<0.5	3.2	18	<0.1	0.3	<0.1	53	0.17	0.017
1260472	Soil	1.4	45.4	12.1	78	<0.1	28.7	11.4	552	3.47	5.1	0.8	4.2	26	<0.1	0.5	<0.1	76	0.28	0.016
1353875	Soil	1.4	33.9	9.7	56	<0.1	24.3	9.1	458	2.45	2.9	1.4	2.8	19	<0.1	0.3	<0.1	51	0.22	0.017



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Page: 5 of 5

Page: 5 of 5

DAW12000049.1

Method	Analyte	Unit	1DX15																		
			La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	Te		
		MDL	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm		
1260480	Soil		13	39	0.51	265	0.065	1	1.28	0.009	0.06	0.1	0.04	6.6	0.1	<0.05	5	<0.5	<0.2		
1260484	Soil		12	41	0.26	216	0.023	<1	0.64	0.006	0.05	<0.1	0.07	5.5	0.3	<0.05	3	<0.5	<0.2		
1260490	Soil		18	42	0.89	242	0.058	<1	1.42	0.007	0.11	<0.1	0.05	10.0	0.2	<0.05	7	<0.5	<0.2		
1260481	Soil		9	72	0.17	312	0.011	<1	0.67	0.003	0.05	<0.1	0.06	10.4	0.3	<0.05	3	0.5	<0.2		
1260487	Soil		14	33	0.33	201	0.032	<1	0.92	0.004	0.09	<0.1	0.03	6.6	0.2	<0.05	4	0.5	<0.2		
1260485	Soil		12	37	0.43	260	0.043	<1	1.00	0.009	0.06	0.1	0.07	6.2	0.2	<0.05	4	<0.5	<0.2		
1260491	Soil		14	28	0.44	207	0.053	<1	1.00	0.007	0.11	0.1	0.02	4.5	0.1	<0.05	4	<0.5	<0.2		
1260492	Soil		7	29	0.69	205	0.067	<1	1.23	0.005	0.28	<0.1	<0.01	4.4	0.2	<0.05	5	<0.5	<0.2		
1260472	Soil		16	39	0.81	364	0.082	<1	1.64	0.009	0.10	<0.1	0.04	9.0	0.2	<0.05	7	<0.5	<0.2		
1353875	Soil		12	29	0.51	236	0.049	<1	1.03	0.005	0.10	<0.1	0.03	5.3	0.2	<0.05	4	<0.5	<0.2		



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Project: WAL
Report Date: July 24, 2012

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Page: 1 of 1 Part: 1 of 2

QUALITY CONTROL REPORT

DAW12000049.1

Method Analyte Unit	1DX15 1DX15																							
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	%	%	%	%
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	2	0.01	0.001			
Pulp Duplicates																								
1290065	Soil	0.7	53.5	6.7	50	<0.1	28.4	7.4	400	2.55	5.3	0.7	4.1	4.0	18	<0.1	0.4	<0.1	54	0.19	0.016			
REP 1290065	QC	0.7	54.0	7.0	52	<0.1	28.8	7.5	410	2.54	5.3	0.7	5.3	4.2	18	<0.1	0.4	<0.1	55	0.20	0.016			
1290054	Soil	0.8	50.9	9.9	47	<0.1	18.5	6.5	316	2.27	5.0	0.7	2.9	3.3	22	<0.1	0.4	<0.1	45	0.20	0.028			
REP 1290054	QC	0.7	49.5	9.4	46	<0.1	18.8	6.5	295	2.22	5.7	0.7	2.5	3.2	22	<0.1	0.4	<0.1	44	0.19	0.030			
1268564	Soil	1.7	29.9	6.8	49	<0.1	55.9	8.8	348	2.30	4.5	0.6	1.2	3.0	25	<0.1	0.4	<0.1	43	0.29	0.053			
REP 1268564	QC	1.8	31.3	7.0	51	<0.1	57.3	9.3	368	2.37	4.6	0.6	1.5	3.0	26	<0.1	0.4	<0.1	43	0.29	0.054			
1268546	Soil	5.7	97.8	14.2	127	<0.1	113.0	23.8	1051	4.89	2.5	0.9	<0.5	5.6	22	0.2	0.2	0.2	87	0.38	0.095			
REP 1268546	QC	5.5	100.6	14.1	130	<0.1	111.6	24.2	1125	5.01	2.3	0.8	0.6	5.6	22	0.2	0.2	0.2	91	0.38	0.099			
1260463	Soil	1.2	42.1	11.1	64	<0.1	31.7	14.3	594	3.05	7.0	0.4	3.2	4.2	25	<0.1	0.8	0.2	76	0.44	0.035			
REP 1260463	QC	1.4	41.4	11.0	64	0.1	33.4	14.3	625	3.18	8.1	0.4	2.5	4.1	26	<0.1	0.7	0.2	76	0.45	0.034			
1260473	Soil	1.0	54.1	11.7	84	<0.1	33.8	12.5	627	3.30	4.2	0.8	3.1	4.0	26	<0.1	0.4	0.1	76	0.31	0.018			
REP 1260473	QC	1.0	52.8	12.0	83	<0.1	32.8	12.0	586	3.21	3.8	0.8	2.2	3.9	27	<0.1	0.4	<0.1	74	0.30	0.018			
Reference Materials																								
STD DS9	Standard	13.6	100.0	124.5	297	1.8	41.5	7.3	588	2.36	22.5	2.4	111.0	5.8	67	2.0	5.1	5.9	37	0.72	0.082			
STD DS9	Standard	14.0	113.4	129.2	306	1.8	45.3	8.4	600	2.46	24.8	2.7	120.2	6.5	65	2.0	5.3	6.3	51	0.73	0.083			
STD DS9	Standard	13.6	116.5	128.9	316	1.7	47.6	8.8	593	2.40	24.6	2.7	111.5	6.2	62	2.0	5.3	6.2	48	0.69	0.078			
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	2.69	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819			
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<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	<0.1	<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	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001			



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Precision
GeoSurveys Inc.

Bar Block

Prepared for:
Volcanic Metals Corp.

November 2011
Jenny Poon, B.Sc., GIT

Table of Contents

1.0	Introduction.....	1
1.1	Survey Specifications.....	4
2.0	Geophysical Data.....	5
2.1	Magnetic Data.....	5
3.0	Survey Operations.....	5
4.0	Equipment.....	6
4.1	AGIS.....	6
4.2	Magnetometer.....	7
4.3	Base Station.....	8
4.4	Laser Altimeter.....	9
5.0	Data Processing.....	10
5.1	Magnetic Processing.....	10
5.2	Final Data Format.....	11
Appendix A: Equipment Specifications		12
Appendix B: Maps.....		17

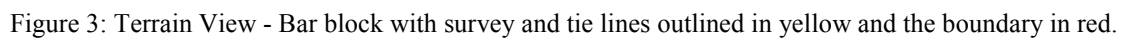
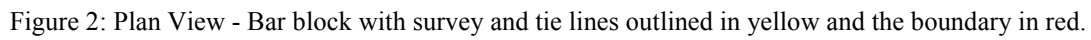
Introduction:

This report outlines the survey operations and data processing actions taken during the airborne geophysical survey flown at the Bar block, located northwest of the Yukon Territory (Figure 1). The airborne geophysical survey was flown by Precision GeoSurveys Inc. for Volcanic Metals Corp. The geophysical survey, carried out between October 22, 2011 and November 22, 2011, saw the acquisition of high resolution magnetic data.



Figure 1: Bar block area location relative to Dawson, YT.

The Bar block is located approximately 130 kilometers south east of Dawson, YT and is found east of Thistle Creek, YT. The survey area of Bar block is approximately 26 km by 20 km (Figures 2 and 3). A total of 4756 line kilometers of magnetic data were flown for this survey; this total includes tie lines and survey lines. The survey lines were flown at 100 meter spacings at a 090°/270° heading; the tie lines were flown at 1 km spacings at a heading of 000°/180° (Figure 4).



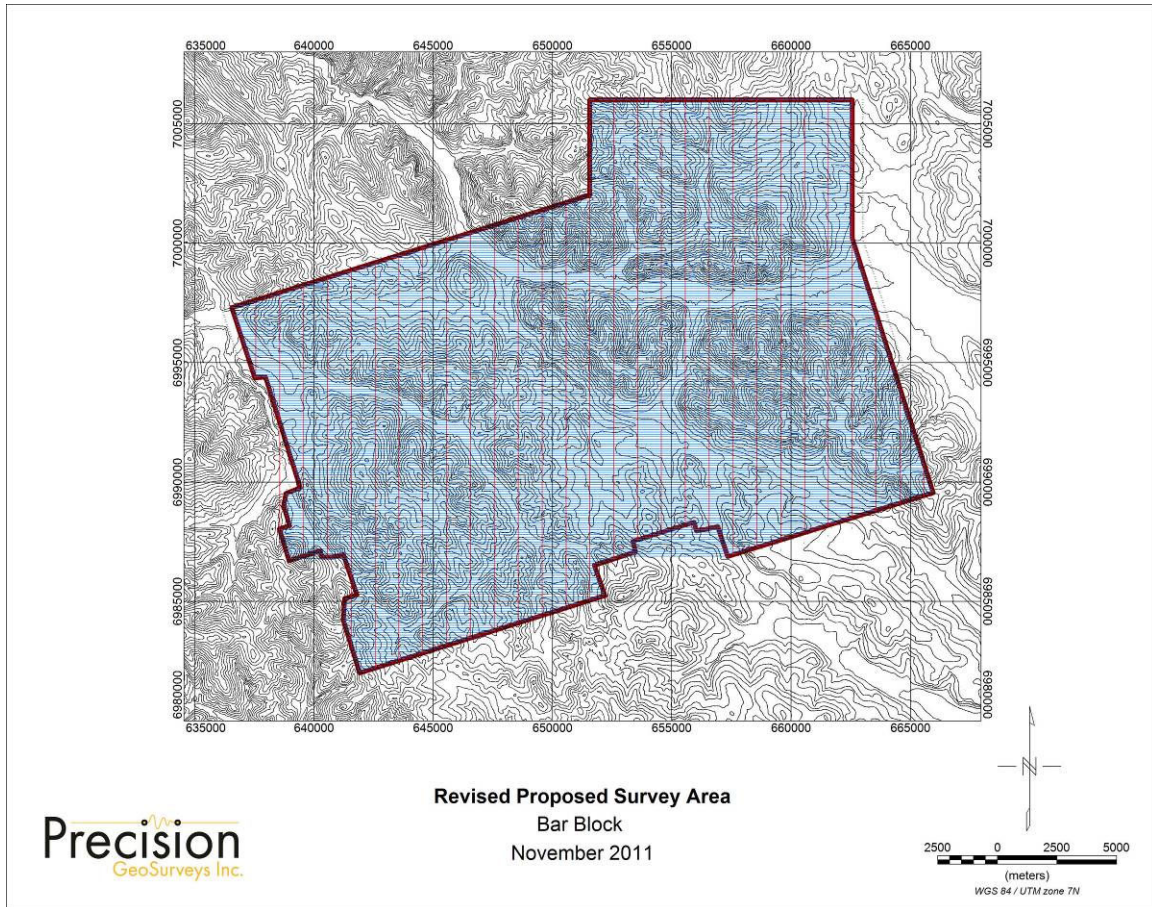


Figure 4: Proposed survey basemap of Bar block showing survey and tie lines and the boundary in red.

Survey Specifications:

The geodetic system used for this survey is WGS 84 and the area is contained in zone 7N. The survey data acquisition specifications and coordinates for Bar block are specified as followed (Tables 1 and 2).

Survey block	Line Spacing m	Survey Line km	Tie Line km	Total Line km	Survey Line Orientation	Nominal Survey Height m
Bar	100	4319	437	4756	090°/270°	35
Total				4756		

Table 1: Bar block survey acquisition specifications.

Longitude	Latitude	Easting	Northing
138.2959012	63.07928338	636568	6997297
137.9949934	63.11559675	651568	7002015
137.9912951	63.15131332	651568	7006000
137.7733398	63.14652283	662568	7006000
137.7791042	63.09457635	662568	7000203
137.7229428	62.99755576	665952	6989547
137.8952330	62.97753366	657340	6986885
137.9022572	62.98894363	656923	6988138
137.9105929	62.98819194	656505	6988034
137.9199096	62.98768573	656036	6987955
137.9216331	62.99101105	655931	6988321
137.9727793	62.98484922	653374	6987512
137.9711424	62.98082582	653478	6987068
138.0055731	62.97663752	651756	6986520
137.9980035	62.96498813	652200	6985241
138.2032786	62.94014742	641918	6982006
138.2147518	62.96006193	641240	6984198
138.2129482	62.96822651	641292	6985111
138.2025315	62.96943067	641814	6985268
138.2123893	62.98485831	641240	6986964
138.2212295	62.98408940	640796	6986859
138.2304925	62.98427129	640326	6986859
138.2312957	62.98663119	640274	6987120

138.2573689	62.98339449	638969	6986703
138.2644708	62.99548631	638552	6988034
138.2556268	62.99648242	638995	6988164
138.2600710	63.00406805	638734	6988999
138.2575607	63.00870762	638839	6989521
138.2455267	63.01058429	639439	6989756
138.2704544	63.05278564	637978	6994401
138.2792694	63.05248835	637534	6994349

Table 2: Bar block survey polygon coordinates using WGS 84 in zone 7N.

2.0 Geophysical Data:

Geophysical data are collected in a variety of ways and are used to aid in the exploration and determination of geology, mineral deposits, oil and gas deposits, contaminated land sites and UXO detection.

For the purposes of this survey, airborne magnetic data were collected to serve in the exploration of Bar block which contains rocks that are prospective for gold mineralization.

2.1 Magnetic Data:

Magnetic surveying is probably the most common airborne survey type to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

1. Geological Mapping to aid in mapping lithology, structure and alteration in both hard rock environments and for mapping basement lithology, structure and alteration in sedimentary basins or for regional tectonic studies.
2. Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

3.0 Survey Operations:

Precision GeoSurveys flew the Bar block using a Bell 206 BIII Jet Ranger (Figure 5). The survey lines were flown at a nominal line spacing of one hundred (100) meters and the tie lines were flown at 1 km spacing for the magnetometer. The average survey elevation was 35 meters vertically above ground for the Bar block. The experience of the pilot helped to ensure that the data quality objectives were met and that the safety of the

flight crew was never compromised given the potential risks involved in airborne surveying.



Figure 5: Bell 206 Jet Ranger equipped with mag stinger for magnetic data acquisition.

The base of operations for this survey was in Dawson, YT. The Precision crew consisted of three members:

John Witham - Pilot
Christina Larocque - Operator
Shawn Walker - On-site Geophysicist

The survey was started on October 22, 2011 and completed November 22, 2011. The survey encountered several delays due to poor weather conditions and magnetic solar storms.

4.0 Equipment:

For this survey, a magnetometer, base station, laser altimeter, and a data acquisition system were required to carry out the survey and collect quality, high resolution data. The survey magnetometer is carried in an approved “stinger” configuration to enhance flight safety and improve data quality in this mountainous terrain.

4.1 AGIS:

The Airborne Geophysical Information System, AGIS, (Figure 6), is the main computer used in data recording, data synchronizing, displaying real-time QC data for the

geophysical operator, and generation of navigation information for the pilot display system.



Figure 6: AGIS installed in the Bell 206.

The AGIS was manufactured by Pico Envirotec; therefore the system uses standardized Pico software and external sensors are connected to the system via RS-232 serial communication cables. The AGIS data format is easily converted into Geosoft or ASCII file formats by a supplied conversion program called PEIView. Additional Pico software allows for post real time magnetic compensation and survey quality control procedures.

4.3 Magnetometer:

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted “stinger” (Figure 7). The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is ± 0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference and the survey altitude for immediate QC of the magnetic data. The magnetic data are recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth’s geomagnetic field.



Figure 7: View of the mag stinger.

4.4 Base Station:

For monitoring and recording of the Earth's diurnal magnetic field variation, Precision GeoSurveys uses two base stations: Scintrex proton precession Envi Pro magnetometer and GEM GSM-19T magnetometer. Both base stations are mounted as close to the survey blocks as possible to give accurate magnetic field data. The Envi Pro base station (Figure 8), uses the well proven precession technology to sample at a rate of 0.5 Hz. A GPS is integrated with the system to record real GPS time that is used to correlate with the GPS time collected by the airborne CS-3 magnetometer.



Figure 8: Scintrex Envi Pro proton precession magnetometer.

The GEM GSM-19T magnetometer (Figure 9) also uses the proton precession technology sampling at a rate of 0.5 Hz. The GSM-19T has an accuracy of +/- 0.2 nT at 1 Hz.



Figure 9: GEM GSM-19T proton precession magnetometer.

4.5 Laser Altimeter:

The pilot is provided with terrain guidance and clearance with an Acuity AccuRange AR3000 laser altimeter (Figure 10). This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly-modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off special reflectors. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and analog outputs, the distance data are transmitted and collected by the AGIS at 10 Hz.



Figure 10: Acuity AccuRange AR3000 laser altimeter.

5.0 Data Processing:

After all the data are collected after a survey flight several procedures are undertaken to ensure that the data meet a high standard of quality. All data were processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

5.1 Magnetic Processing:

During aeromagnetic surveying noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey where the aircraft flies in the four orthogonal headings required for the survey ($090^{\circ}/270^{\circ}$ and $180^{\circ}/360^{\circ}$ in the case of this survey) at an altitude where there is no ground effect in the magnetic data. In each heading, three specified roll, pitch, and yaw maneuvers are performed by the pilot; these maneuvers provide the data that are required to calculate the necessary parameters for compensating the magnetic data. A computer program called PEIComp is used to create a model for each survey to remove the noise induced by aircraft movement; this model is applied to each survey flight so the data can be further processed.

Followed by the compensation flight, a lag test is conducted. A lag correction of 1.0 seconds was applied to the total magnetic field data to compensate for the lag in the recording system as the magnetometer sensor flies 5.70 m ahead of the GPS antenna.

A magnetic base station is set up before every flight to ensure that diurnal activity is recorded during the survey flights. In this case, the base station was located in the bushes close to the Bar block. Base station readings were reviewed at regular intervals to ensure that no data were collected during periods with high diurnal activity (greater than 5 nT

per minute). The base station was installed within the survey block at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines. The magnetic variations recorded from the stationary base station are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

Filtering is applied to the laser altimeter data as to remove vegetation clutter and to show the actual ground clearance. To remove vegetation clutter a Rolling Statistic filter was applied to the laser altimeter data and a low pass filter was used to smooth out the laser altimeter profile to remove isolated noise. As a result, filtering the data will yield a more uniform surface in close conformance with the actual terrain.

Some filtering of the magnetic data is also required. A Non Linear filter was used for spike removal. The 1D Non-Linear Filter is ideal for removing very short wavelength, but high amplitude features from data. It is often thought of as a noise spike-rejection filter, but it can also be effective for removing short wavelength geological features, such as signals from surficial features. The 1D Non-Linear Filter is used to locate and remove data that are recognized as noise. The algorithm is 'non- linear' because it looks at each data point and decides if that datum is noise or a valid signal. If the point is noise, it is simply removed and replaced by an estimate based on surrounding data points. Parts of the data that are not considered noise are not modified. The combination of a Non-Linear filter for noise removal and a low pass trend enhancement filter resulted in level data as indicated in the results section of this report. The low pass filters simply smoothes out the magnetic profile to remove isolated noise.

5.3 Final Data Format

Abbreviations used in the GDB files are listed in the following table:

Channel	Units	Description
X	m	UTM Easting - WGS84 Zone 7 North
Y	m	UTM Northing - WGS84 Zone 7 North
Galt	m	GPS height - WGS84 Zone 7 North
DTM	m	Digital Terrain Model
Lalt	m	Laser Altimeter readings
GPStime	Hours:min:secs	GPStime
basemag	nT	Base station diurnal data
mag	nT	Total Magnetic Intensity

Table 3: Bar block survey channel abbreviations.

The file format will be provided in two (2) formats, the first will be a .GDB file for use in Geosoft Oasis Montaj, the second format will be a .XYZ file, this is text file. A complete file provided in each format will contain only magnetic data.

Appendix A

Equipment Specifications

Scintrex Envi Pro Proton Magnetometer with Integrated GPS (Base Station)

Total Field Operating Range	23,000 to 100,000 nT (gamma)
Total Field Absolute Accuracy	±1 nT (gamma)
Sensitivity	0.1 nT (gamma) at 2 second sampling rate
Tuning/ Sampling	Fully solid state. Manual or automatic, keyboard selectable Cycling (Reading) Rates 0.5, 1, 2, or 3 seconds
Gradiometer Option	Includes a second sensor, 0.5m (20 inch) staff extender and processor module
Gradient Tolerance	> 7000 nT (gamma)/m
‘Walking’ Mode	Continuous reading, cycling as fast as 0.5 seconds
Supplied GPS Accuracy	+/- 1m (Autonomous), < 1m WAAS Connects to most external GPS receivers with NMEA & PPS output
Standard Memory	Total Field Measurements: 84,000 readings Gradiometer Measurements: 67,000 readings Base Station Measurements: 500,000 readings
Real-Time Clock	1 second resolution, ± 1 second stability over 24 hours or GPS time
Digital Data Output	RS-232C, USB Adapter
Power Supply	Rechargeable, 2.9 Ah, lead-acid dry cell battery 12 Volts External 12 Volt input for base station operations
Operating Temperature	40°C to +60°C (-40°F to 140°F)
Kodiaknsions and Weight	Console: 250mm x 152mm x 55mm (10" x 6" x 2.25") 2.45 kg (5.4 lbs) with rechargeable battery Magnetic 70mm d x 175mm (2.75"d x 7") Sensor: 1 kg (2.2 lbs) Gradiometer 70mm d x 675mm (2.75"d x 26.5") Sensor: (with staff extender) 1.15 kg (2.5 lbs) Sensor Staff: 25mm d x 2m (1"d x 76") 0.8 kg (1.75 lbs)

GEM GSM-19T Proton Precession Magnetometer (Base Station)

Configuration Options	15
Cycle Time	999 to 0.5 sec
Environmental	-40 to +60 ° Celsius
Gradient Tolerance	7,000 nT/m
Magnetic Readings	299,593
Operating Range	10, 000 to 120,000 nT
Power	12 V @ 0.62 A
Sensitivity	0.1 nT @ 1 sec
Weight (Console/ Sensor)	3.2 Kg
Integrated GPS	Yes

Scintrex CS-3 Survey Magnetometer

Operating Principal	Self-oscillation split-beam Cesium Vapor (non-radioactive Cs-133)
Operating Range	15,000 to 105,000 nT
Gradient Tolerance	40,000 nT/metre
Operating Zones	10° to 85° and 95° to 170°
Hemisphere Switching	a) Automatic b) Electronic control actuated by the control voltage levels (TTL/CMOS) c) Manual
Sensitivity	0.0006 nT $\sqrt{\text{Hz}}$ rms.
Noise Envelope	Typically 0.002 nT P-P, 0.1 to 1 Hz bandwidth
Heading Error	+/- 0.25 nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)
Absolute Accuracy	<2.5 nT throughout range
Output	a) continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) square wave signal at the I/O connector, TTL/CMOS compatible
Information Bandwidth	Only limited by the magnetometer processor used
Sensor Head	Diameter: 63 mm (2.5") Length: 160 mm (6.3") Weight: 1.15 kg (2.6 lb)
Sensor Electronics	Diameter: 63 mm (2.5") Length: 350 mm (13.8") Weight: 1.5 kg (3.3 lb)
Cable, Sensor to Sensor Electronics	3m (9' 8"), lengths up to 5m (16' 4") available
Operating Temperature	-40°C to +50°C
Humidity	Up to 100%, splash proof
Supply Power	24 to 35 Volts DC
Supply Current	Approx. 1.5A at start up, decreasing to 0.5A at 20°C
Power Up Time	Less than 15 minutes at -30°C

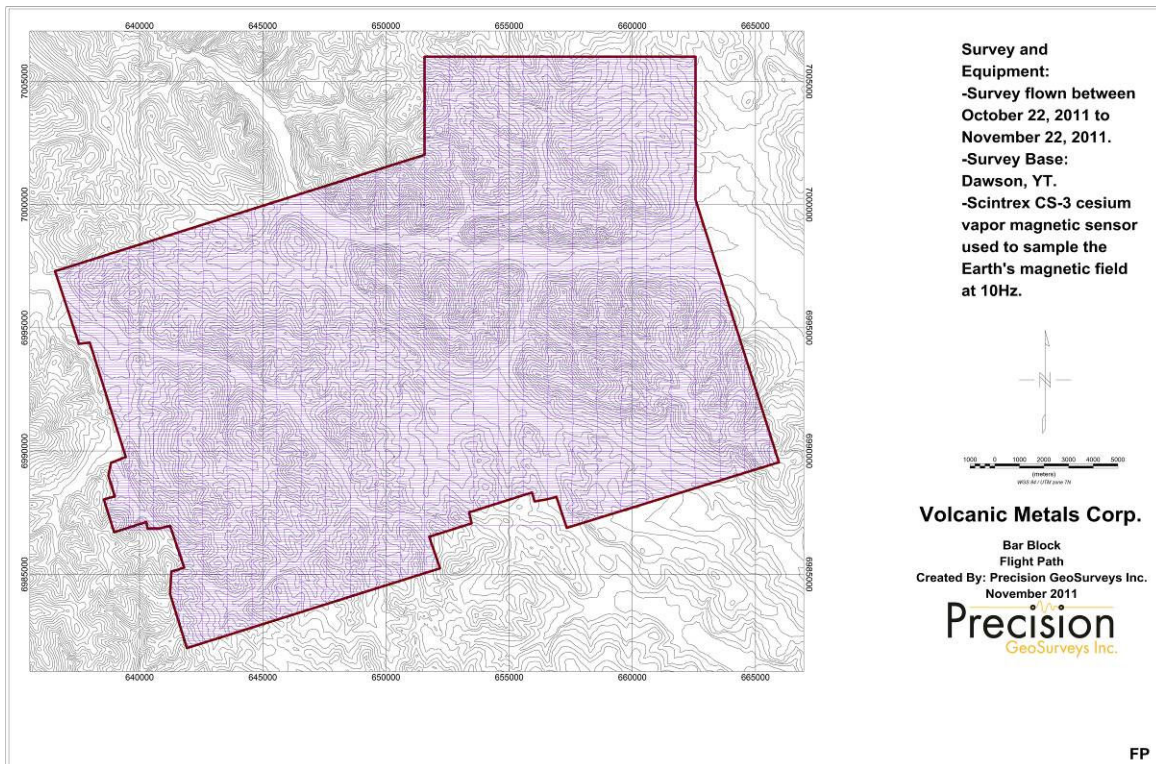
Pico Envirotec AGIS data recorder system

(for Navigation, Gamma spectrometer, VLF-EM and Magnetometer Data Acquisition)

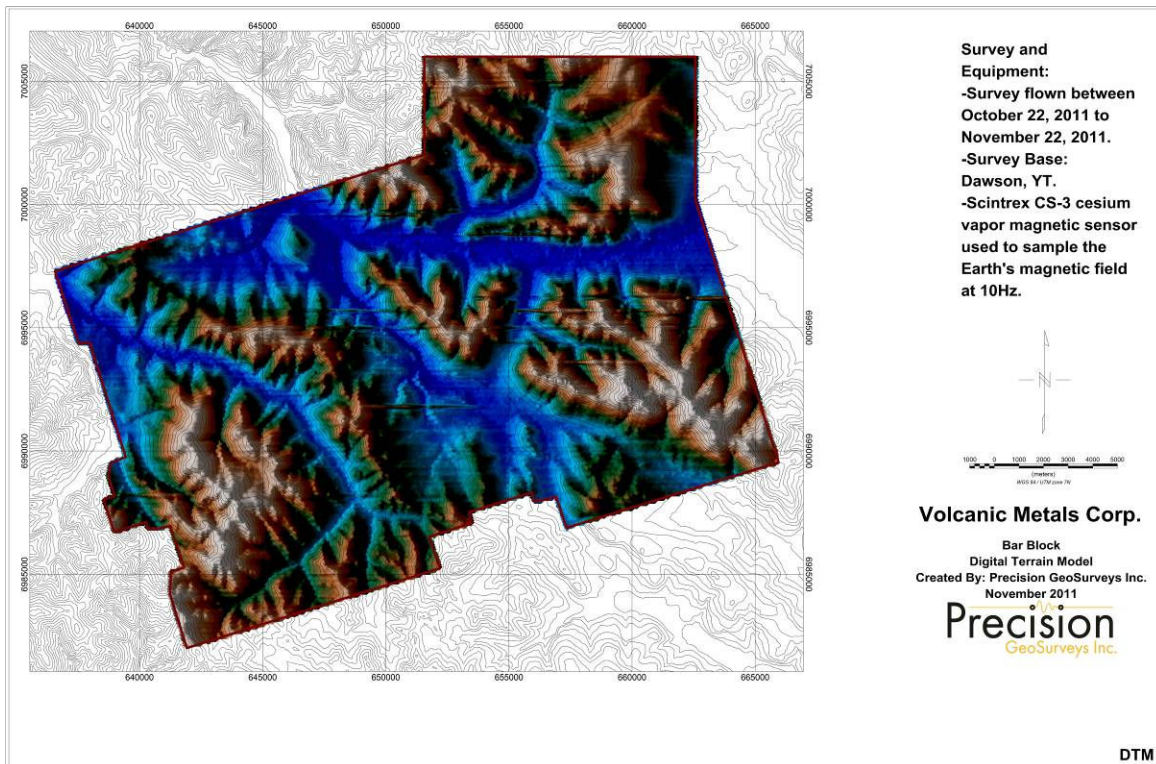
Functions	Airborne Geophysical Information System (AGIS) with integrated Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10, MMS4 Magnetometer, Totem 2A EM, A/D converter, temperature probe, humidity probe, barometric pressure probe, and laser altimeter. Output for the 2 line Pilot Indicator
Display	Touch screen with display of 800 x 600 pixels; customized keypad and operator keyboard. Multi-screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator.
GPS Navigation	Garmin 12-channel, WAAS-enabled
Data Sampling	Sensor dependent
Data Synchronization	Synchronized to GPS position
Data File	PEI Binary data format
Storage	80 GB
Supplied Software	PEIView: Allows fast data Quality Control (QC) Data Format: Geosoft GBN and ASCII output PEIConv: For survey preparation and survey plot after data acquisition
Software	Calibration: High voltage adjustment, linearity correction coefficients calculation, and communication test support Real Time Data Collection: Automatic Gain real time control on natural isotopes and PC based test and calibration software suite
Power Requirements	24 to 32 VDC
Temperature	Operating:-10 to +55 deg C; storage:-20 to +70 deg C

Appendix B

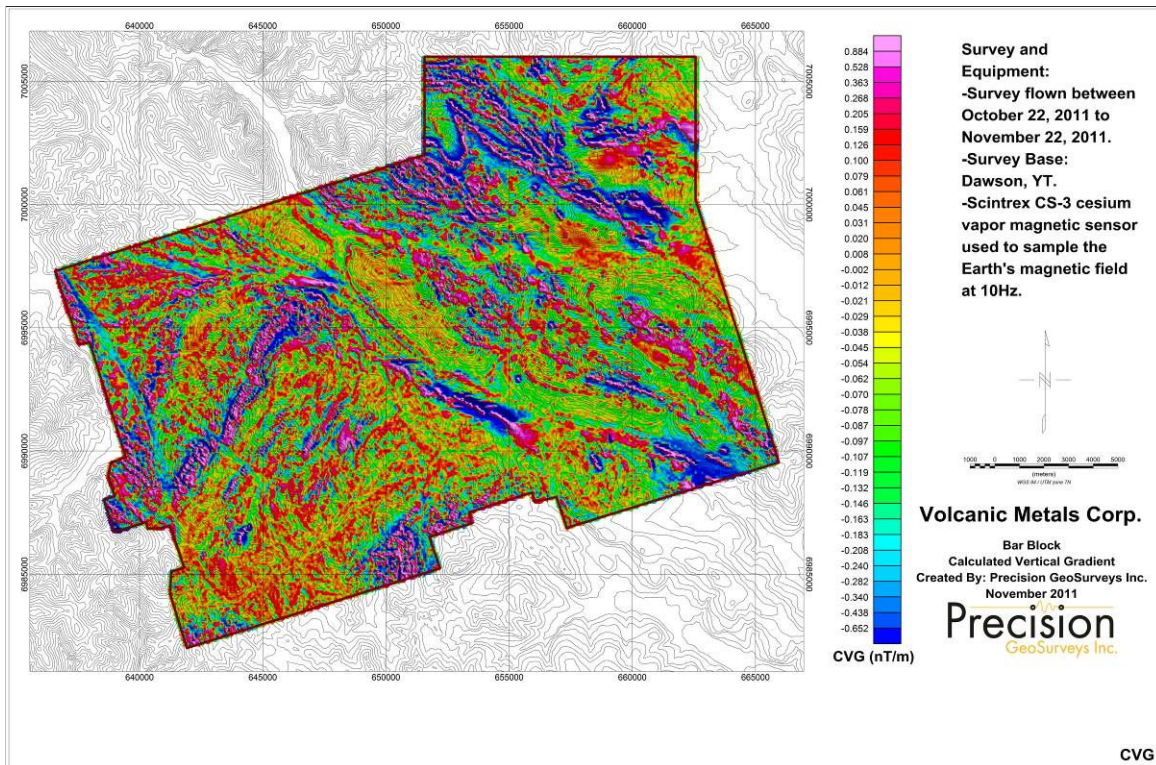
Maps



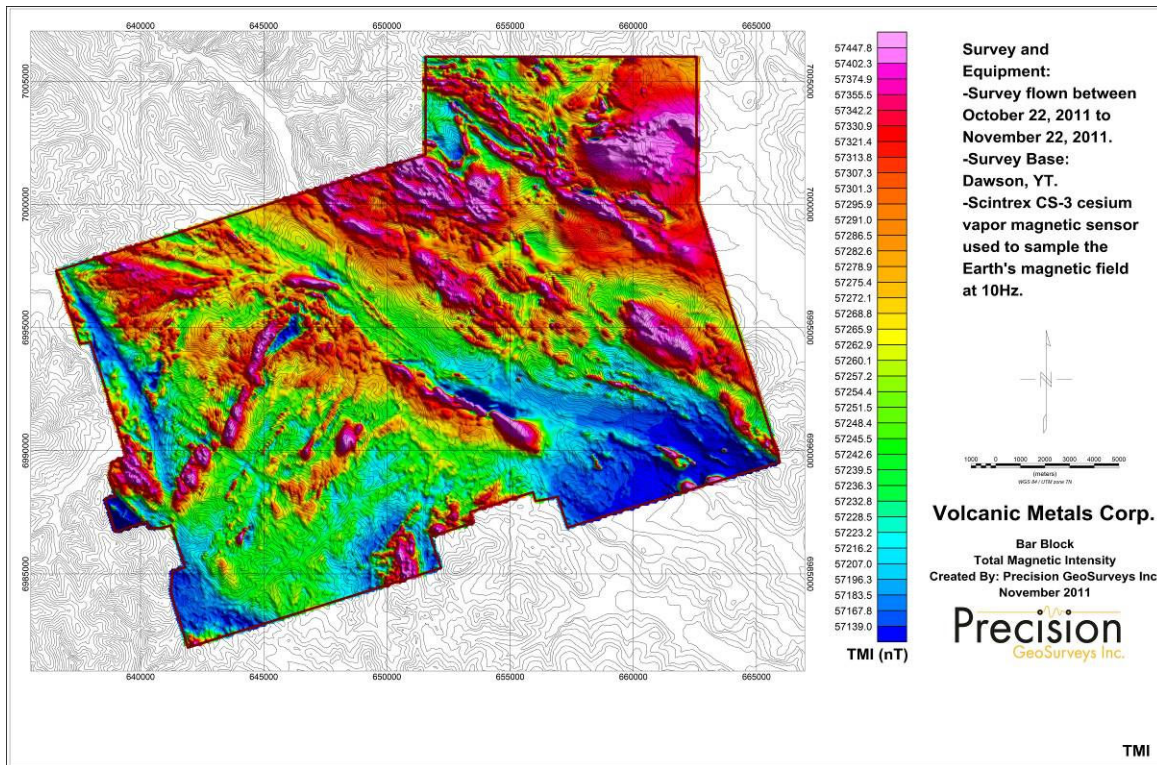
Map 1: Bar block flight path.



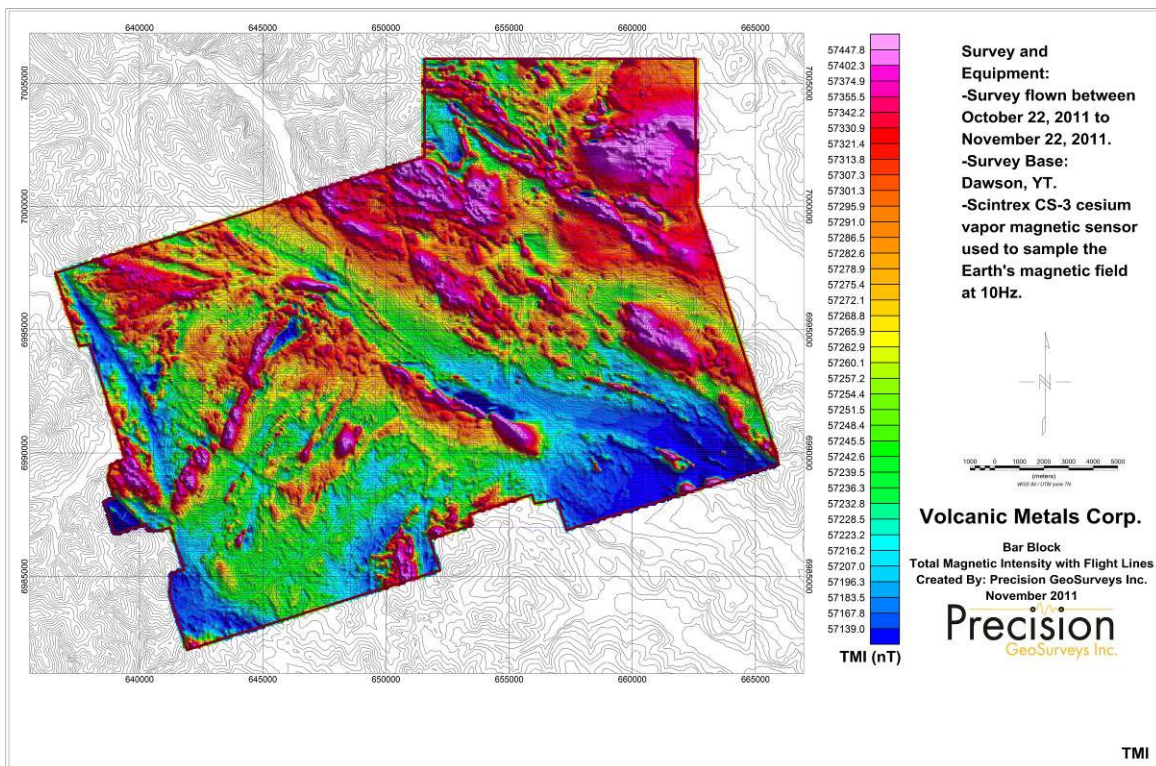
Map 2: Bar block digital terrain model.



Map 3: Bar block calculated vertical gradient.



Map 4: Bar block total magnetic intensity.



Map 5: Bar block total magnetic intensity with plotted flight lines.