

# TECHNICAL REPORT

on the

## WALHALLA PROJECT

Yukon Territory, Canada

BAR 1 – 1983                      YF21001 – YF22983

BAR 1984 – 1988                YF20993 – YF20997

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

62° 59' to 63° 07' North

137° 45' to 137° 55' West

Dawson Mining District

Work performed September 6- 15, 2011

prepared for:

Volcanic Metals Corp.

#711 – 675 West Hastings St.

Vancouver, B.C.

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## 1.0 EXECUTIVE SUMMARY

Volcanic Metals Corp. holds a 25% interest, and has an option to acquire the remaining 75% interest in the Walhalla property in the White Gold district of Yukon Territory from Seafield Explorations Ltd. The property is subject to a 2% Net Smelter Return (NSR) royalty, of which one-half (1% NSR) can be repurchased for \$1m. The property covers approximately 41,800 hectares, and is located 120km southeast of Dawson City.

The Walhalla Property is underlain mostly by the Yukon-Tanana Terrane (YTT), and also covers the northernmost extent of the Stikinia/ Quesnellia Terrane. The Teslin Fault is a major regional structure that cuts and splays within the property. Yukon Tanana rocks include Devonian to Mississippian metamorphosed schist and quartzite, amphibolite, peridotite and orthogneiss. Permian monzogranite underlies the northeast part of the property, and Jurassic monzogranite underlies the southcentral part of the property.

The Walhalla project is considered prospective for discovery of several types of mineral targets, with gold the primary commodity of interest. The White Gold and similar deposits (Coffee, Skookum Jim) located to the west and southwest are the main target, however Minto IOCG type copper-gold deposits found to the southeast are possible, as are VMS type deposits like Touleary to the west.

A first phase program of geochemistry in 2011 was successful in confirming the potential of the property to host gold mineralization. A staged program of ridge & spur and grid soil geochemistry followed by excavator trenching, mapping and prospecting is warranted and recommended to further explore the Walhalla property.

## 2.0 INTRODUCTION

This NI 43-101 compliant report is prepared for Volcanic Metals Corp. (Volcanic). The preparation of this report is in due diligence for Volcanic to identify the Walhalla Property as a property of merit. This report documents the historic and recent exploration work completed on the Walhalla Property in the White Gold region of west-central Yukon. The Walhalla Property is considered an early stage exploration property under NI 43-101.

### 2.1 Qualified Person and Participating Personnel

Mr. William D. Mann, P.Geo. was commissioned by Volcanic Metals Corp. of Vancouver, British Columbia to examine and evaluate the geology and mineral potential on the Walhalla Project (consisting of the Bar 1 to 1988 claims) and to make recommendations for the next phase of exploration work on the property. The report is based on historical information, a review of recent exploration in the area, and work conducted on the property by the author during September 6 - 15, 2011. The author was accompanied on the property by Mr. John LaGourgue, COO of Volcanic, Mr. Sandro Frizzi, geologist, Mr. Matt Little, prospector and Mr. Max Mikhailytchev, prospector.

### 2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are reported in metres (m) and kilometres (km).
- GPS refers to global positioning system with co-ordinates reported in UTM grid, Zones 7V & 8V, NAD 83 projection.
- Minfile showing refers to documented mineral occurrences on file with the Yukon Geological Survey.
- DDH refers to diamond drill hole.
- The term ppm refers to parts per million, which is equivalent to grams per metric tonne (g/t) and ppb refers to parts per billion.
- The abbreviation oz/ton and oz/t refers to troy ounces per imperial short ton. The symbol % refers to weight percent unless otherwise stated.
- Elemental abbreviations used in this report include: gold (Au), silver (Ag), molybdenum (Mo), antimony (Sb), iron (Fe), arsenic (As), and bismuth (Bi). Minerals found on the property include limonite, hematite and goethite (iron oxides).
- The term “ma” refers to million years and “ka” to thousand years.

### 2.3 Source Documents

Sources of information are detailed below and include available public domain information and private company data.

- Research of the Yukon Minfile data available for the area at <http://servlet.gov.yk.ca/ygsmin/index.do>.

- Research of mineral titles and annual assessment reports filed with the government at <http://www.yukonminingrecorder.ca> .
- Review of geological maps and reports completed by the Yukon Geological Survey or its predecessors, mostly available in digital format at: <http://www.geology.gov.yk.ca>
- Review of published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
- The author has previous independent experience and knowledge of the area from exploration and mining work between 1993 and the present.
- Work on the property by the author during September, 2011.

## 2.4 Limitations, Restrictions and Assumptions

The author has assumed that the previous documented work in the region is valid and has not encountered any information to discredit such work. No previous work has been documented on the Walhalla property.

## 2.5 Scope

This report describes the geology, previous exploration history and mineral potential of the Walhalla Project. Research included a review of the historical work that related to the immediate and surrounding area of the property. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area.

The property was examined and evaluated by the author on September 6 – 15, 2011, for Volcanic Metals Corp. Work consisted of geological and geochemical sampling and evaluation.

Based on the literature review and property examination, recommendations are made for the next phase of exploration work. An estimate of costs has been made based on current rates for trenching, soil and geological surveys and professional fees in the Yukon Territory.

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 and north of the Sonora Gulch property of Northern Tiger Resources Ltd.

## 3.0 RELIANCE ON OTHER EXPERTS

The author has relied in part upon work and reports completed by others within the White Gold District and Dawson Range District in the preparation of this report. Thorough checks to confirm the results of such work and reports have not been done. The author has no reason to doubt the

correctness of such work and reports. Unless otherwise stated the author has not independently confirmed the accuracy of the data.

This report is based primarily upon current government geological maps and the airborne total field magnetic survey flown in 2009. There is limited published data. Reports filed with the Yukon Government comprise assessment reports and government geological reports. All reports have been identified throughout the text. Most of the reports used for the purpose of this filing do not meet the standards relating to National Instrument 43-101.

Further, while title documents and option agreements were reviewed for this study, this report does not constitute nor is it intended to represent a legal, or any other, opinion as to the validity of the title.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 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).

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.

### 4.2 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 (Figs. 2 and 3). 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. Several sets of claim posts were observed by the author on the property, and they all appeared to meet the requirements of the Act. Claim boundaries have not been legally surveyed. A table summarizing pertinent claim data follows and a detailed statement of claims is shown in Appendix I.

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
<b>Total</b>		<b>1988</b>		

The claims were staked in August, 2011, and are currently registered in the names of the contract claim stakers. Application has been made to transfer the name of registered owner to Volcanic Metals Corp. which holds a 25% interest in the Property and has entered into an option agreement with Seafield Explorations Ltd. to acquire the remaining 75% interest. The Option remains subject to Exchange approval.

Volcanic acquired its original 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, and a high-resolution airborne magnetic survey, to be flown in November, 2011.

In order to earn the additional 75% interest in the Property, Volcanic must:

- a) pay \$150,000 on confirmation of title;
- b) issue 500,000 shares on Exchange approval;
- c) pay \$150,000 on the earlier of six months after Exchange approval and the completion of a non-flow-through financing of not less than \$500,000;
- d) pay \$50,000 and issue 500,000 shares on each of the first through third anniversaries of Exchange approval;
- e) pay \$100,000 and issue 1,000,000 shares on the fourth anniversary of Exchange approval; and
- f) incur \$1,500,000 in exploration expenditures on or before the fifth anniversary of Exchange approval.

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

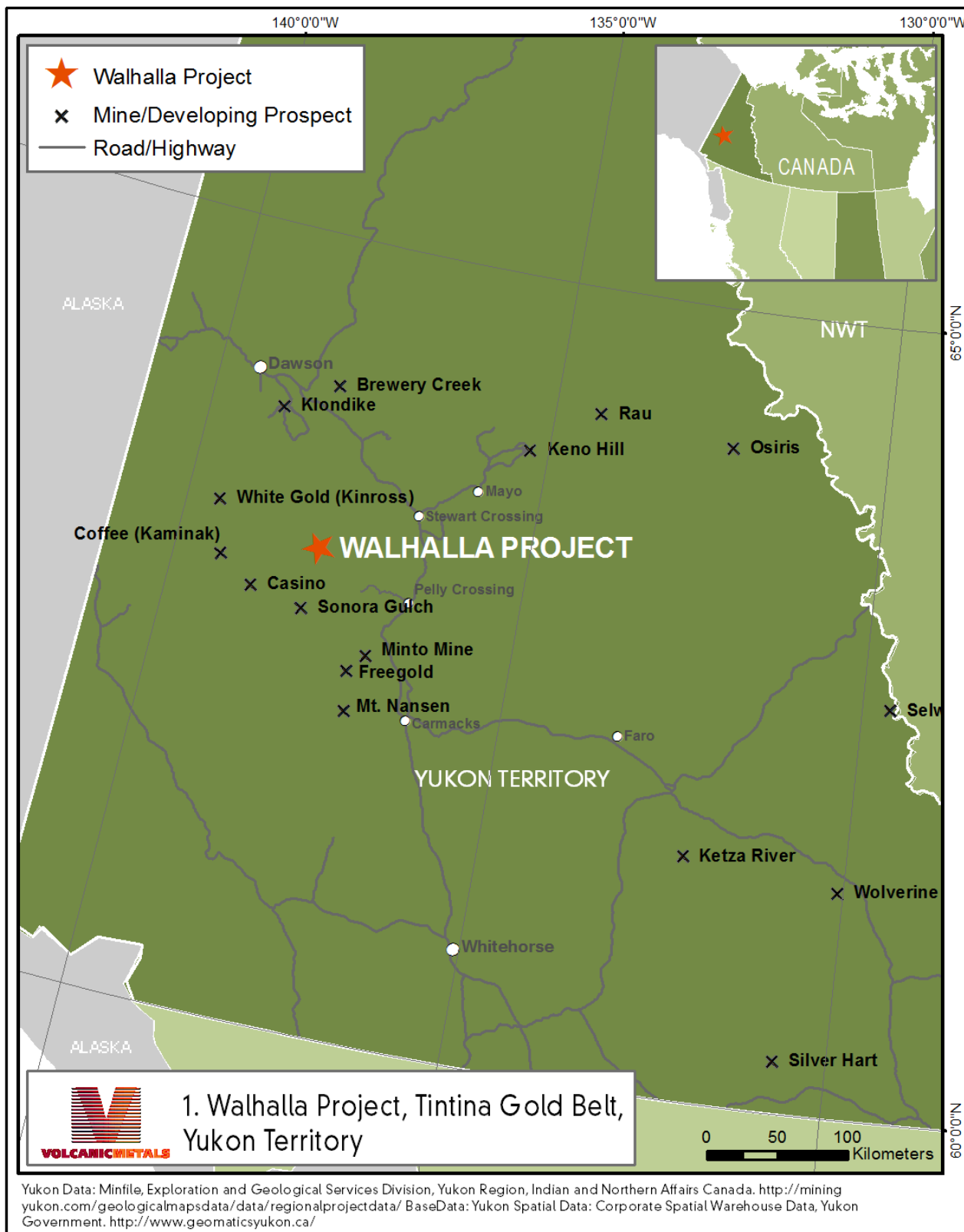
First Nations have settled their land claims in the area. The nearest First Nations surveyed land occurs immediately to the west of the property at Pyroxene Mountain (land claim block SFN R-20A) (Fig. 2). A small “site specific” land claim block, SFN S-49B lies under parts of the BAR 45 and 118 claims on the eastern side of the claim block. The property lies entirely within the traditional territory of the Selkirk First Nation, based in Pelly Crossing, and partially within the traditional territory of the Trondek Hwechin First Nation, based in Dawson City and also the Nacho Nyak Dun First Nation based in Mayo. The land in which the mineral claims are situated

is Crown Land (except as noted above) and the mineral claims fall under the jurisdiction of the Yukon Government. Surface rights would have to be obtained from the government if the property were to go into development. As well, development on First Nation category B land requires a separately negotiated agreement.

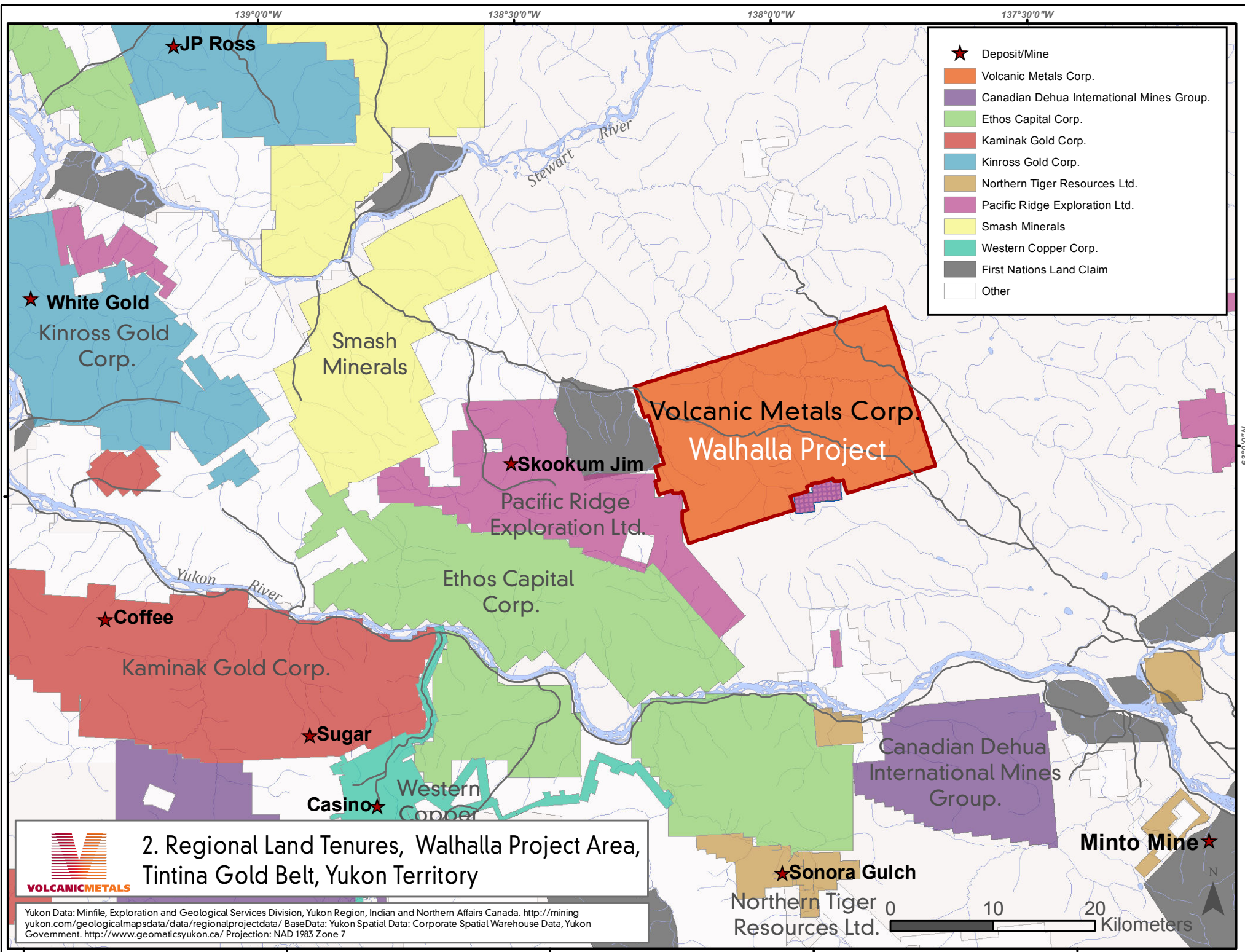
A mineral claim holder is required to perform assessment work and is required to document this work to maintain the title as outlined in the regulations of the Yukon Quartz Mining Act. The amount of work required is equivalent to \$100.00 of assessment work per quartz claim unit per year. Alternatively, the claim holder may pay the equivalent amount per claim unit per year to the Yukon Government as “Pay in Lieu” to maintain title to the claims. The BAR claims of the Walhalla project are currently due to expire in August, 2012, however filing of work performed in 2011 should extend the expiry date for all claims by at least two years.

Preliminary exploration activities do not require permitting, but significant drilling, trenching, blasting, cut lines, and excavating may require a Mining Land Use Permit that must be approved under the Yukon Environmental Socioeconomic Assessment Act (YESSA). To the author’s knowledge, the Walhalla Project area is not subject to any environmental liability.

A summary of major regional land tenures is presented in figure 2, and a detailed map of the Walhalla project claims is presented in figure 3.







**VOLCANICMETALS**

## 2. Regional Land Tenures, Walhalla Project Area, Tintina Gold Belt, Yukon Territory

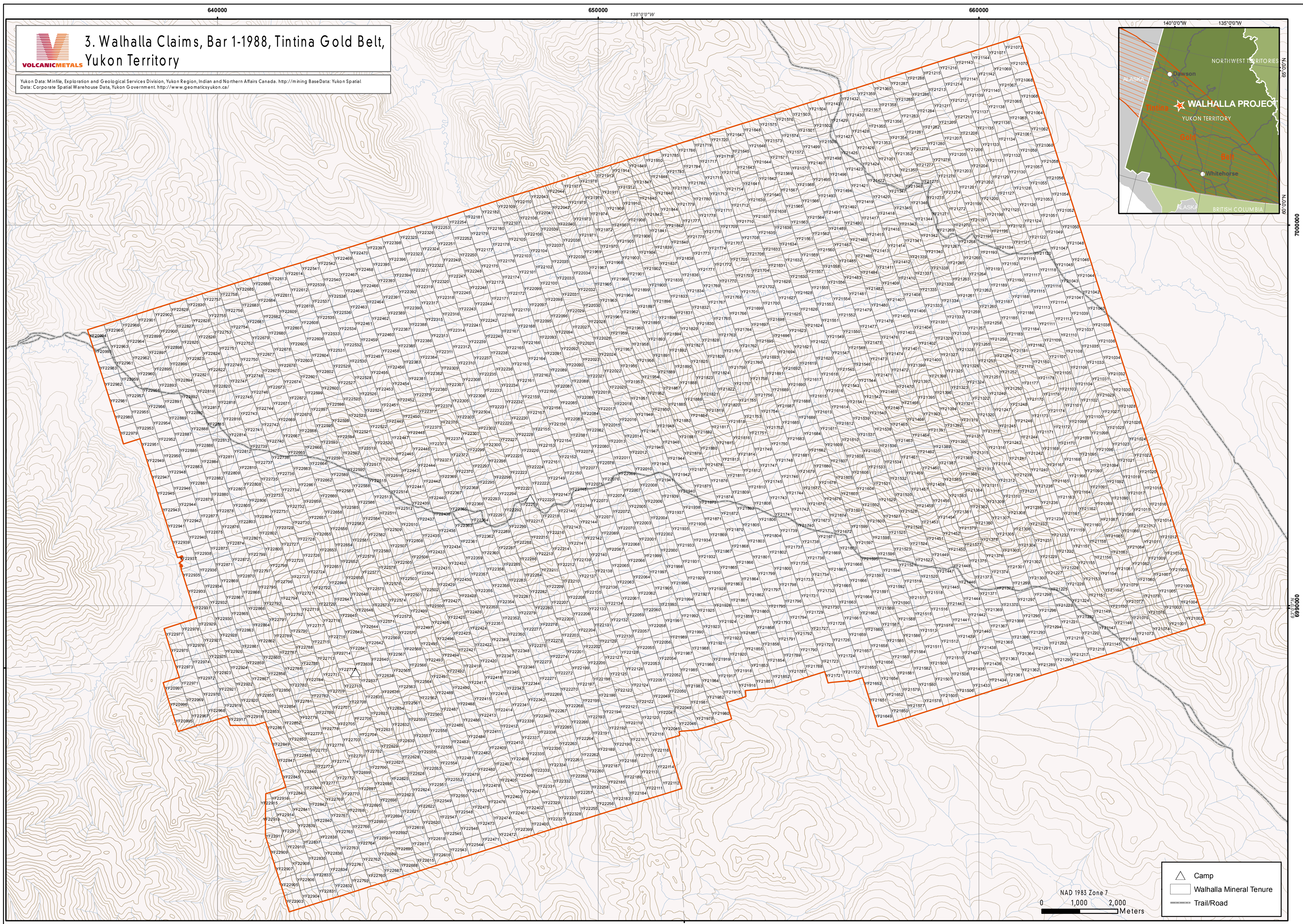
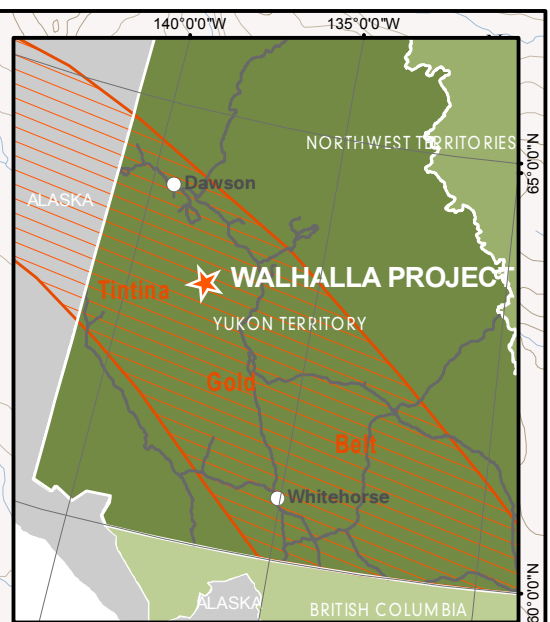
Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.yukon.com/geologicalmapsdata/data/regionalprojectdata/> BaseData: Yukon Spatial Data: Corporate Spatial Warehouse Data, Yukon Government. <http://www.geomaticsyukon.ca/> Projection: NAD 1983 Zone 7





### 3. Walhalla Claims, Bar 1-1988, Tintina Gold Belt, Yukon Territory

Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.BaseData: Yukon Spatial>  
Data: Corporate Spatial Warehouse Data, Yukon Government. <http://www.geomatics.yukon.ca/>



Camp

Walhalla Mineral Tenure

Trail/Road

0

1,000

2,000

Meters

NAD 1983 Zone 7



## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 Access, Local Resources and Infrastructure

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. This trail appears to be in good condition, and could be travelled by all terrain vehicle in the areas observed on the property. A second winter trail extends from the southeast to the northern claim boundary, but it is overgrown. A roadhouse along this second trail on the property at Grand Valley Creek is in ruins, and is considered to be a heritage site.

Dawson City, some 120km to the northwest, can provide personnel and services for re-supply of a camp in this area. Most major supplies like larger food orders, professional personnel, fuel and other mainstays, are obtained from Whitehorse some 275km southeast and are trucked to the closest point of contact and flown in from there. Pelly Landing, on the Pelly River, can be used to helicopter in supplies and may be the easiest point of access from the Klondike Highway (Hwy #2) connecting Whitehorse and Dawson City.

The Yukon hydroelectric power grid follows the Klondike Highway, located about 70 km to the east of the Walhalla property.

### 5.2 Climate and Physiography

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. Summers are warm, with daily averages in July of 23°C dropping to 8°C at night. Winters are cold, with January temperatures of -23°C during the day, dropping to an average of -32°C overnight. Annual precipitation averages about 300 millimetres, including about 150 mm of rain and 150 mm of snow. The exploration season lasts from late May until October.

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 unglaciated, however some of the Rosebud creek tributary valleys on the property were flooded when blocked downstream by glaciers. There is also some glacial outwash in low lying

areas derived from glaciers which terminated immediately east of the property. 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. Treeline in the region lies around 1200m elevation, but the highest point on the property is only about 1100m. The lowest part of the property is at Grand Valley creek at 520m elevation. The claims are therefore well forested, with minor grasslands on south facing slopes, stunted black spruce, moss and labrador tea on frozen north facing slopes and mixed forests of black and white spruce, poplar, birch and pine on warmer slopes. Much of the property has been burned by wildfires within the past few decades, and is partially regrown with thick groves of dwarf birch, willow and alder. Fires in 2009 burned part of the eastern side of the property, specifically near Camps 3 & 4.

## 6.0 HISTORY

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 (see section 15.0 Adjacent Properties). Prospecting would have been done along the trails on the claims, as well as panning of the creeks however this is not documented. 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 it is expected that some placer gold is present to justify the baseline surveys. Placer leases in good standing are present on Alberta creek which forms part of the western property boundary.

Exploration in the area has been focused in phases. The Klondike gold rush of 1898 led to a fairly thorough exploration of streams in the area for placer gold. The discovery of gold at Mt. Freegold in the 1930s caused a second rush of exploration for both placer and hardrock gold. The Casino and Minto copper-molybdenum discoveries in the late 1960s and 1970s led to the first systematic regional exploration, mainly for base metals. The White Gold discovery within the past decade has led to the current focus on gold exploration, with numerous successes.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

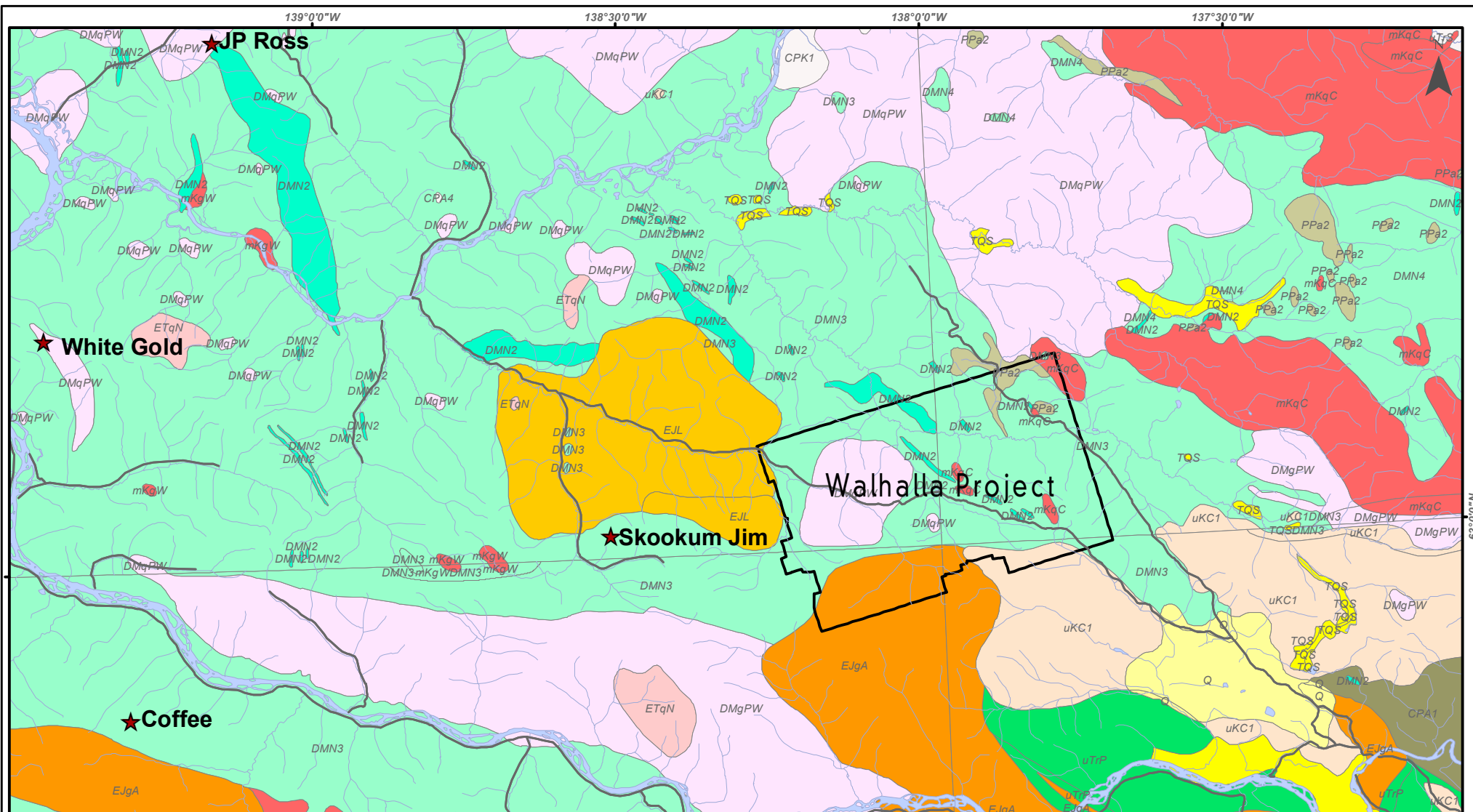
The Walhalla property overlies parts of four map sheets that have been mapped geologically by various parties since the mid 1930s (Bostock, 1942), however this report relies mostly on the most recent mapping (Ryan & Gordey, 2005 and Colpron & Ryan, 2010). The geology of the area is presented in figures 4 and 5, derived from the Yukon digital map (Gordey & Makepeace, 1999), and figure 6 which is a preliminary map produced by a mapping program in progress (Colpron & Ryan, 2010). This most recent mapping benefits from an airborne magnetics survey (Kiss & Coyle, 2009a-h).

### 7.1 Regional Geology

The Walhalla project area is situated southwest of the Tintina fault (Fig. 6) 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. It is uncertain whether amphibolites in the area are part of the Snowcap assemblage or the overlying Finlayson. 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 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. Both Quesnellia and Stikinia are characterized by Upper Triassic augite-phyric andesite and basaltic andesite. Early Jurassic granite plutons intrude the Stikinia, Quesnellia and Yukon-Tanana terranes. Plutons of this suite occupy the southwestern part of the property (Fig. 6). A Late Triassic pyroxenite intrusion occurs just west of the Walhalla property at Pyroxene Mountain, however this unit is not shown clearly in the figures.

The 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.



## 4. Walhalla Project Regional Geology, Tintina Gold Belt, Yukon Territory

Yukon 250k Bedrock Geology, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://miningyukon.com/geologicalmapsdata/data/regionalprojectdata/>

Projection: NAD 1983  
Zone 7



### QUATERNARY

Q: QUATERNARY: unconsolidated glacial, glaciofluvial and glaciolacustrine deposits

### TERTIARY(?) AND QUATERNARY

Basalt flows; minor pillow basalts; basaltic tuffs and breccias

### EARLY TERTIARY

ETqN: NISLING RANGE SUITE: leucocratic, biotite granites

### MID-CRETACEOUS

mKqW: WHITEHORSE SUITE: biotite quartz-monzonite, biotite granite and leucogranite

mKqW: WHITEHORSE SUITE: Hornblende quartz diorite

mKqW: WHITEHORSE SUITE: biotite-hornblende granodiorite, minor hornblende and quartz diorite

mKqC: CASSIAR SUITE: k-feldspar granite and biotite quartz monzonite

### UPPER CRETACEOUS

uKC1: CARMACKS: Basalt andesite and dacite flows and breccias

### EARLY JURASSIC

EJgA: AISHIHIK SUITE: Biotite-hornblende granodiorite; to diorites

EJL: LONG LAKE SUITE: Felsic granite

### UPPER TRIASSIC, CARNIAN AND OLDER (?)

uTrP: POVOAS: Basalt flows, breccias, tuffs & minor sandstone and argillite

### PROTEROZOIC AND PALEOZOIC

PPa2: AMPHIBOLITE: Ultramafic rocks

### LATE DEVONIAN TO MISSISSIPPIAN

DMqPW: PELLY GNEISS SUITE - SOUTHWEST: Foliated muscovite quartz monzonite; quartz granitic gneiss

DMqPW: PELLY GNEISS SUITE - SOUTHWEST: Foliated biotite granite to hornblende granodiorite gneiss

### DEVONIAN, MISSISSIPPIAN AND(?) OLDER

DMN2: NASINA: marble

DMN3: NASINA: quartzite, quartz muscovite, schist

DMN4: NASINA: quartzite, micaceous quartzite, quartz muscovite, schist

### CARBONIFEROUS TO PERMIAN

CPA1: anvil: basalt (local pillows), diorite and gabbro, greenstone and amphibolite

Minto Mine★



## 7.2 Property Geology

The property is underlain primarily by Devonian to Mississippian rocks of the Snowcap assemblage of the Yukon Tanana terrane (formerly called the Nasina), consisting of quartzite and quartz-mica schist (Fig. 5, 6). 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 (unit **DMN2** in Fig. 5). The marble might also be a favourable host for skarn or replacement mineralization. Minor graphitic schist was noted in the road cut near camp 4.

Metabasite consisting of amphibolite or greenstone is present in the northeast part of the property, and is thought to be of volcanic origin (Fig. 6). It is spatially associated with serpentinite, and these two units are not differentiated in the earlier mapping (unit **PPa2** in Fig. 5). The serpentinitized peridotite is now considered to be younger, and not confined to klippe that sit structurally above Yukon-Tanana terrane rocks, but are instead structurally interleaved with them. Similar rocks are present in the mineralized strata at the White Gold area (Mackenzie & Craw, 2010).

The layered rocks of the Yukon Tanana terrane are cut by a variety of intrusions. Many of the intrusive bodies have similar compositions and textures, and recent age dating has changed the ages assigned to various intrusions, a process that is not yet complete (Fig. 5 vs. 6). The intrusions mapped as mid Cretaceous (**mKqc**) in figure 5 are no longer considered to be Cretaceous aged, but either Permian or Jurassic.

The western part of the property is intruded by a large body of the Early Mississippian Simpson Range suite (previously known as the Pelly Gneiss, unit **DMgPW** in Fig. 5). 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 along the bulldozer trail near camp 2 on the property.

Metaplutonic rocks assigned to the Sulphur Creek suite are exposed in the northeastern part of the property (Fig. 6). 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.

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 (Fig. 6). These rocks are intruded by the Early Jurassic Aishihik Suite biotite ± hornblende granodiorite to monzogranite in the southwestern part of the property (unit **EJgA**, Fig. 5), and by Early Jurassic Long Lake suite immediately west of the property (unit **EJL**, Fig. 5).

Rocks of the Upper Cretaceous Carmacks Group occur along the southeastern edge of the property (unit **uKC1**, Fig. 5). They generally form topographic highs and are well defined by patchy high magnetic anomalies in the aeromagnetic data (Fig.10, 11). The Carmacks Group largely comprises dacite and rhyodacite, and minor brown to black basalt and basaltic andesite.

Subaerial to subglacial mafic volcanic flows of the Pliocene-Pleistocene Selkirk volcanics occur at Volcano Mountain, and as valley fill along Rosebud Creek (Fig. 6). The young basalt lava flows and associated breccias are typically vesicular and fresh olivine-phyric basalt; they are expressed in the aeromagnetic data by very strong positive anomalies that follow valleys.

The property is cut by a significant dextral strike-slip fault that might be an extension of the major regional Teslin Fault. This fault is interpreted to splay at the northeastern part of the property. 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 to the east of Camp 4 considerable fault breccia was observed in widely distributed float rock, with minor slickensides. These fault rocks are considered to be related to the major regional fault system.

### 7.3 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 (Colpron & Ryan, 2010). The main foliation observed in these rocks developed at upper greenschist to amphibolite facies conditions and may be representative of a second generation fabric; this is most obvious in metasiliciclastic rocks of the Snowcap assemblage. Metaplutonic rocks of the Simpson Range and Sulphur Creek suites generally only exhibit this second regionally pervasive foliation that developed in the Late Permian. This dominant foliation is itself deformed by two younger sets of open folds that are defined by an axial planar crenulation cleavage that likely developed during episodes of less pervasive Triassic and/or Jurassic deformation and metamorphism.

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 (Fig. 6). This fault could be the northern extension of the Teslin fault system, which juxtaposes the Quesnellia and Cache Creek terranes to the south with a substantial offset of Late Cretaceous dextral displacement. It is unclear whether the fault on the property is the continuation of the Teslin fault proper, or one of its many splays.

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 (Weiershäuser et. al., 2010). The Skookum Jim zone on the Mariposa property, located

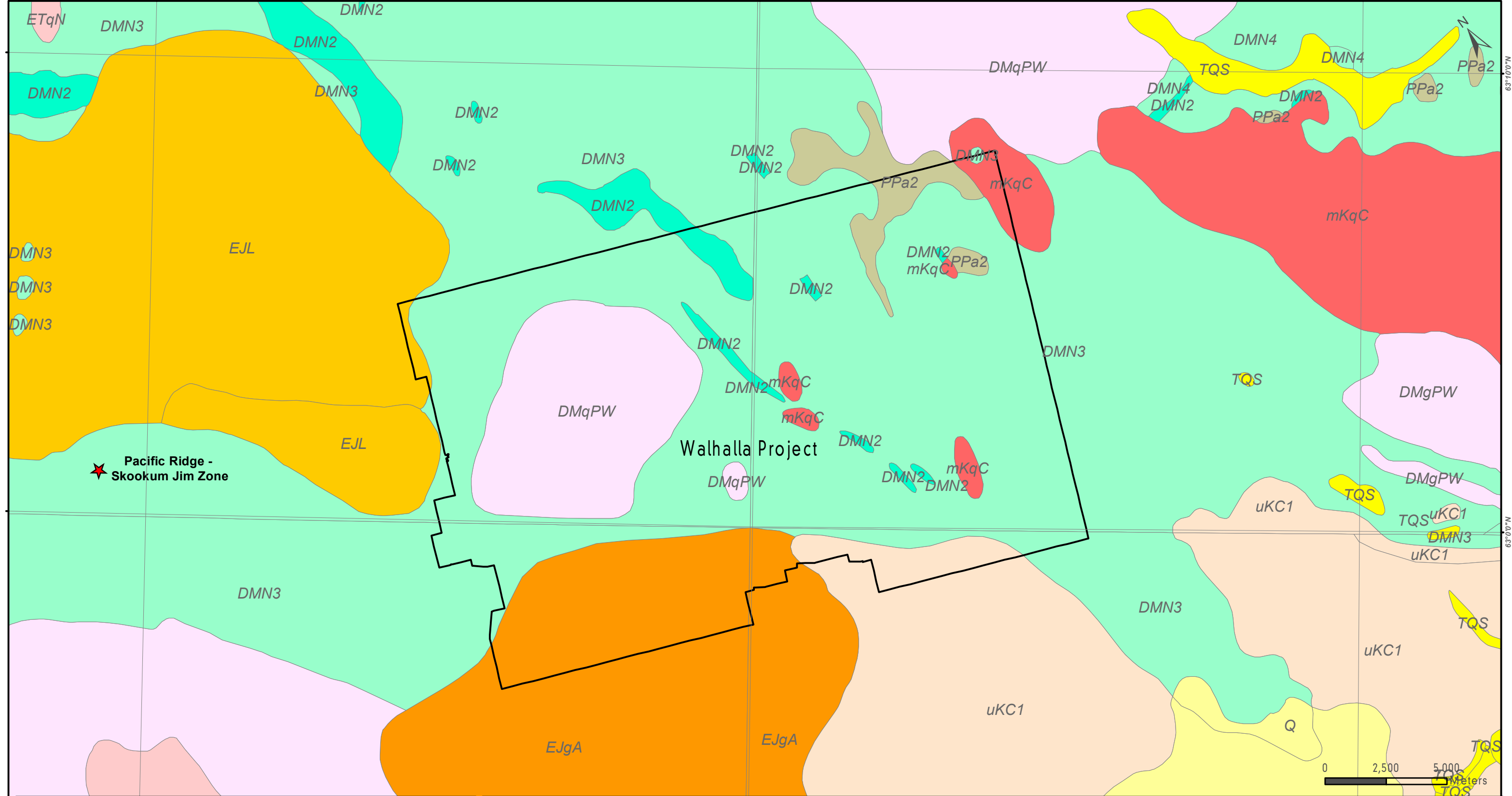
adjacent to the Walhalla property is similarly reported to be hosted in a 75m wide northeasterly trending structural corridor near the contact between granodiorite and quartz-biotite gneiss. Northeasterly trending structures are visible in the magnetics on the Walhalla property (Figs. 10 & 11), and it is expected that the more detailed airborne magnetic survey in progress may reveal other more subtle cross structures that may have potential to focus gold mineralization.

#### 7.4 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. 3ma) 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. Most of the property escaped glaciation entirely, and therefore the soils on the hills are locally derived. This is favourable for the use of soil geochemical surveys as an exploration technique.



138°30'0"W 138°0'0"W 137°30'0"W



N 63°10'0" 63°0'0" 63°0'0"



### 5. Walhalla Property Geology, Tintina Gold Belt, Yukon Territory

Yukon 250k Bedrock Geology, Exploration and Geological  
Services Division, Yukon Region, Indian and Northern Affairs Canada.  
<http://miningyukon.com/geologicalmapsdata/data/regionalprojectdata/>

Projection: Canada Albers  
Equal Area Conic

- ★ Deposit

**QUATERNARY**

Q: QUATERNARY: unconsolidated glacial, glaciofluvial and glaciolacustrine deposits

**TERTIARY(?) AND QUATERNARY**

Basalt flows; minor pillow basalts; basaltic tuffs and breccias

**EARLY TERTIARY**

ETqN: NISLING RANGE SUITE: leucocratic, biotite granites
- MID-CRETACEOUS**

mKqC: CASSIAR SUITE: k-feldspar granite and biotite quartz monzonite

**UPPER CRETACEOUS**

uKC1: CARMACKS: Basalt andesite and dacite flows and breccias

**EARLY JURASSIC**

EJgA: AISHIHIK SUITE: Biotite-hornblende granodiorite; to diorites

EJL: LONG LAKE SUITE: Felsic granite

**UPPER TRIASSIC, CARNIAN AND OLDER (?)**

uTP: POVOAS: Basalt flows, breccias, tuffs & minor sandstone and argillite
- PROTEROZOIC AND PALEOZOIC**

PPa2: AMPHIBOLITE: Ultramafic rocks

**LATE DEVONIAN TO MISSISSIPPIAN**

DMqPW: PELLY GNEISS SUITE - SOUTHWEST: Foliated muscovite quartz monzonite; quartz granitic gneiss

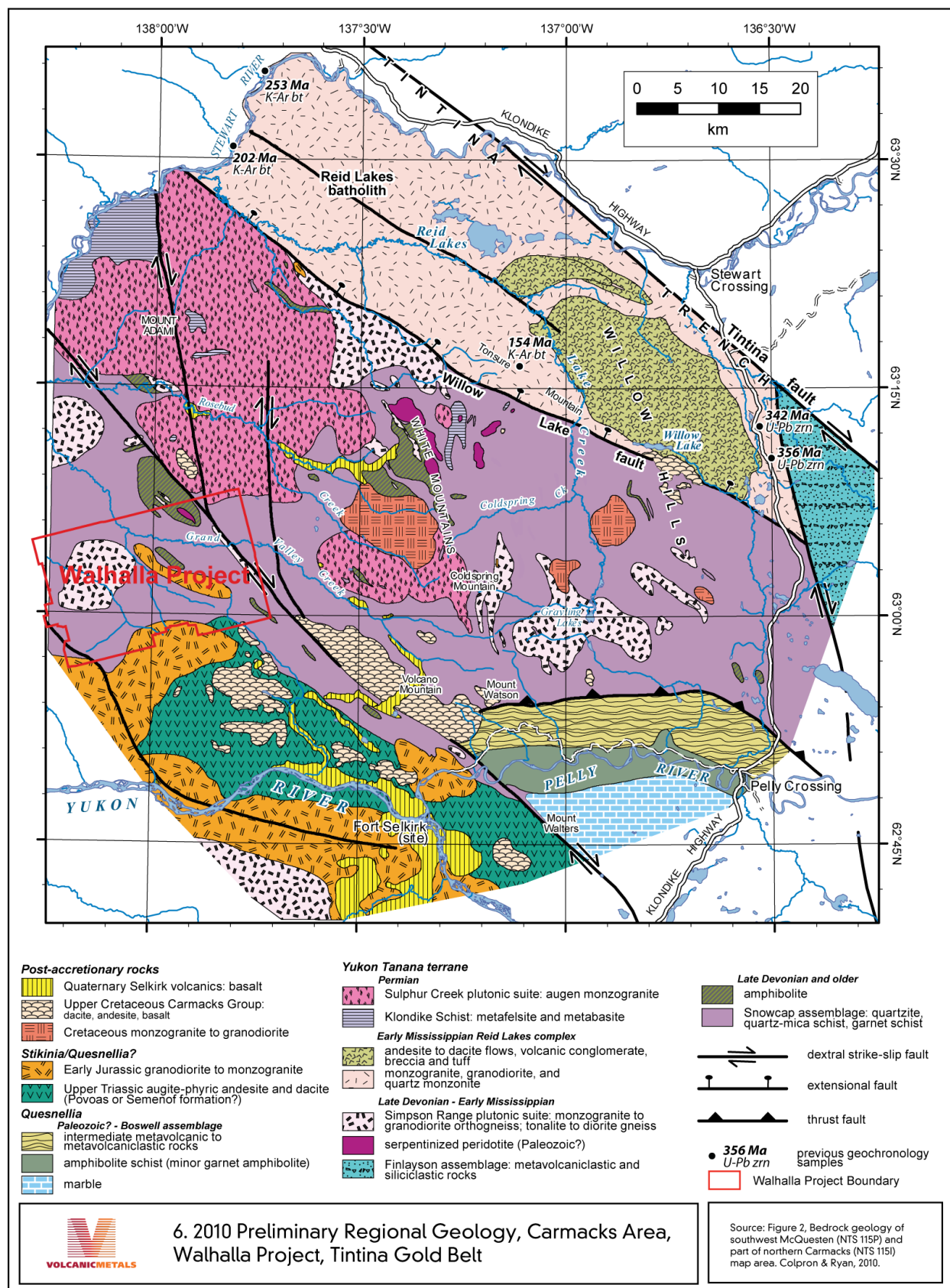
DMgPW: PELLY GNEISS SUITE - SOUTHWEST: Foliated biotite granite to hornblende granodiorite gneiss

**DEVONIAN, MISSISSIPPIAN AND(?) OLDER**

DMN2: NASINA: marble

DMN3: NASINA: quartzite, quartz muscovite, schist

DMN4: NASINA: quartzite, micaceous quartzite, quartz muscovite, schist



## 8.0 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.

Regionally, the White Gold District – Dawson Range experienced approximately 40 million years of protracted intrusive activity from the Late Cretaceous to the Early Tertiary. Multiple gold veins and breccia bodies, including epithermal (Mt. Freegold, Eureka Dome), intrusion-related (Mt. Freegold), porphyry (Casino), and auriferous skarn (Sonora Gulch) occurrences are related to the tectonic environment (Bennett et.al., 2010). The White Gold deposits most closely resemble a form of low sulphidation epithermal gold mineralization that may be related to Cretaceous intrusive activity (Weiershäuser et. al., 2010). Several deposits similar to White Gold have been found southwest of Walhalla at the Coffee property (Wainwright et.al., 2011), emphasizing the regional potential for this target.

The Yukon Tanana terrane, which underlies much of the Walhalla property also hosts orogenic type gold deposits the Klondike area to the northwest (Mackenzie et. al., 2008, Liverton & Mann, 2011). Gold mineralization of the orogenic type is also a potential target at Walhalla.

Early Jurassic intrusions which are found in the southwestern and western part of the project are known to host iron oxide copper gold (IOCG) deposits at the Minto mine and Carmacks copper project located southeast of the property (Hood et. al., 2009). These deposits occur within metamorphosed sections of the host intrusions, and contain high copper grades with significant gold values.

Volcanic associated massive sulphide (VMS) type deposits are known to occur in the Yukon Tanana terrane. A cluster of VMS deposits in the Finlayson District, 400 km to the southeast are hosted in similar Yukon Tanana Terrane stratigraphy. Certain parts of the Dawson area and the Finlayson District are believed to have been linked as part of a concurrent back-arc / basinal environment prior to displacement along the Tintina Fault.

The nearest known VMS deposit to Walhalla project is the recently discovered Touleary zone, located about 45 km west of the property (Arcus Development Group, 2011). The Touleary zone is enriched in copper, zinc, gold and silver over significant strike length and width.

## 9.0 EXPLORATION

Exploration by Volcanic Metals Corp. since acquisition of the Walhalla project in 2011 consists of the geological and geochemical survey conducted under the supervision of the author in September, 2011, and a detailed airborne magnetic geophysical survey in progress (November, 2011).

The airborne geophysical survey is not covered by this report, as it has not been completed. The survey will be flown at a tighter line spacing, lower altitude, slower speed and different orientation (E-W vs. NE-SW) compared to the 2009 government survey.

The main focus of the 2011 field work was ridge and spur soil geochemical sampling (Figs. 7-9). This work was conducted by a crew of six workers based in four fly camps over a ten day period. Samples were generally collected with a 50m to 100m spacing, using the deep auger technique. A dutch soil auger was used to dig as deeply as possible, with the objective to have the sample represent the local bedrock as much as possible. This method penetrates layers of organics, volcanic ash and loess which tend to dilute the bedrock geochemical signature. The depth of sample collected during the program was typically between 35 and 90 cm. 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 locations were marked in the field with flagging tape. A total of 1014 soil samples were collected, including five stream sediment samples.

There is very little rock outcrop on the Walhalla property, less than 1% of the total area. There is also little in the way of boulders and subcropping rock rubble. The outcrop exposed is mostly on ridge crests and in bulldozer cuts on the trail cutting across the property. Most of the rock observed by the author consisted of orthogneiss in the southwest part of the property, with minor quartz-feldspar pegmatitic dykes or veins. One outcrop of unmineralized garnet-pyroxene-epidote skarn was sampled near Camp 1. In the northeastern part of the property there is amphibolite and serpentinite exposed near Camp 3, with breccia and silicified schist/ gneiss in float further to the east. In the camp 4 area in the southeast the rocks observed were schist and quartzite with minor white marble and rare graphitic schist. The graphitic schist underlies the most anomalous gold in soil sample from the 2011 program. Most rock samples were grab samples from float rock, with only one measured chip sample (details presented in Appendix 2). Samples were located and recorded by GPS in the field using UTM coordinates, NAD 83 datum, placed into poly ore bags with a unique sample tag, numbered and secured in the field. Sample locations were marked in the field with flagging tape.

Analysis of the samples collected in the 2011 Walhalla exploration program indicates many areas with anomalous gold in soils (Figs. 7, 8, 9). Work by the author (and others) in the region has led to a general understanding that 10ppb gold in soil should be considered anomalous and 20ppb to be highly anomalous. Over 65 of the 1014 samples returned greater than 20ppb gold, with the highest value 3410 ppb. The highest gold value in rock was 79 ppb, from a limonitic rock near the breccia zone in the northeast part of the property.

The work at Walhalla indicates local highly anomalous gold in most parts of the property examined in 2011. This is very encouraging, since the sampling was widely spaced. There are no elements strongly correlated with gold in the 2011 sampling program, possibly due to the sampling covering multiple geological terranes and rock unit substrates. However, in other parts

of the White Gold District gold is strongly associated with arsenic. Some elevated gold values are associated with elevated arsenic at Walhalla, but there is no consistent trend. All analytical data is presented in Appendix 4.

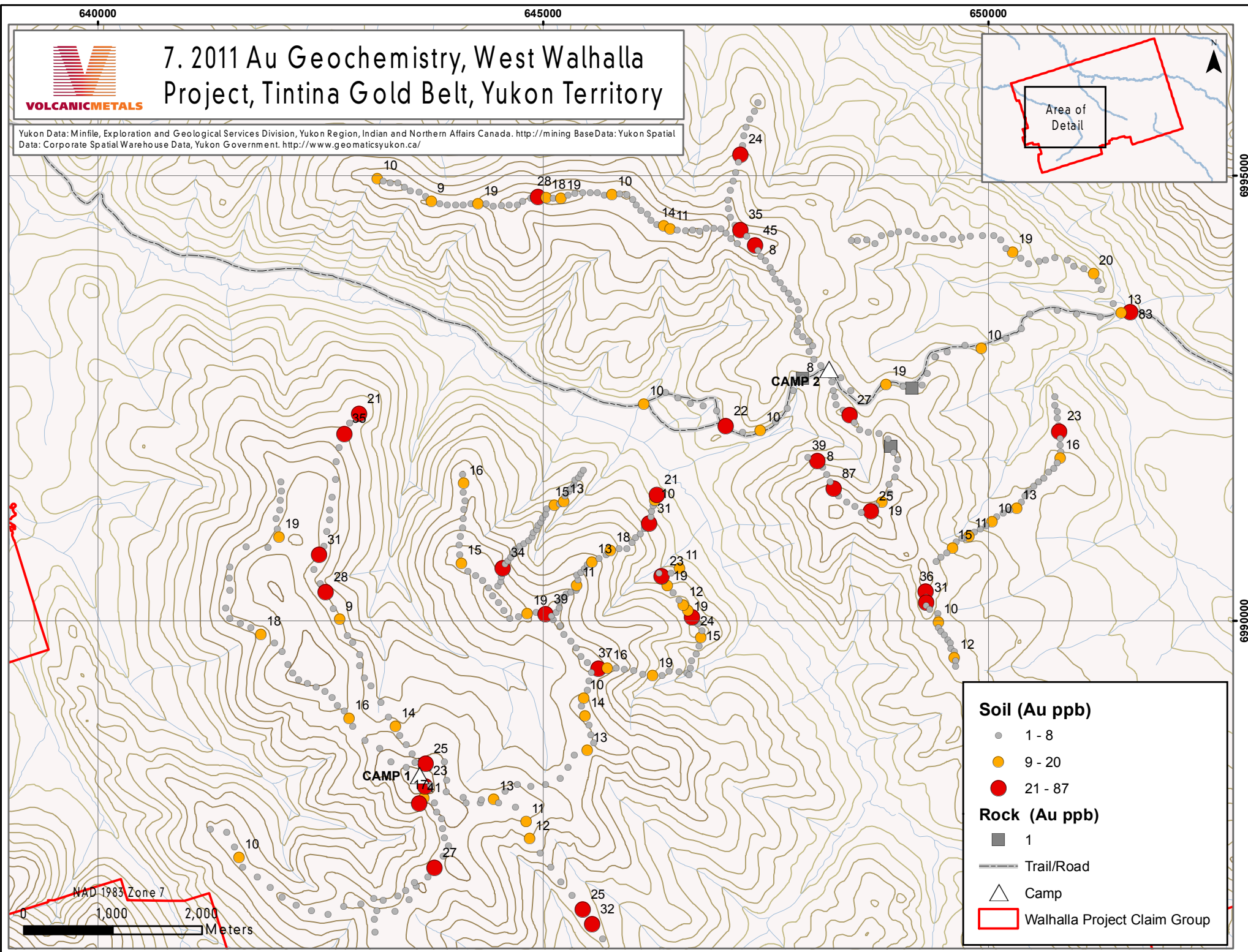
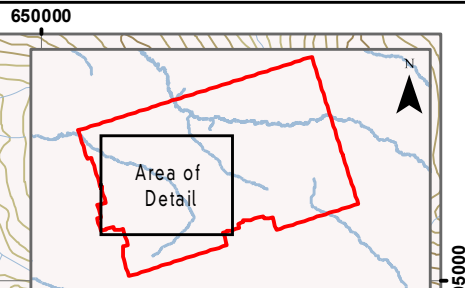




VOLCANICMETALS

## 7. 2011 Au Geochemistry, West Walhalla Project, Tintina Gold Belt, Yukon Territory

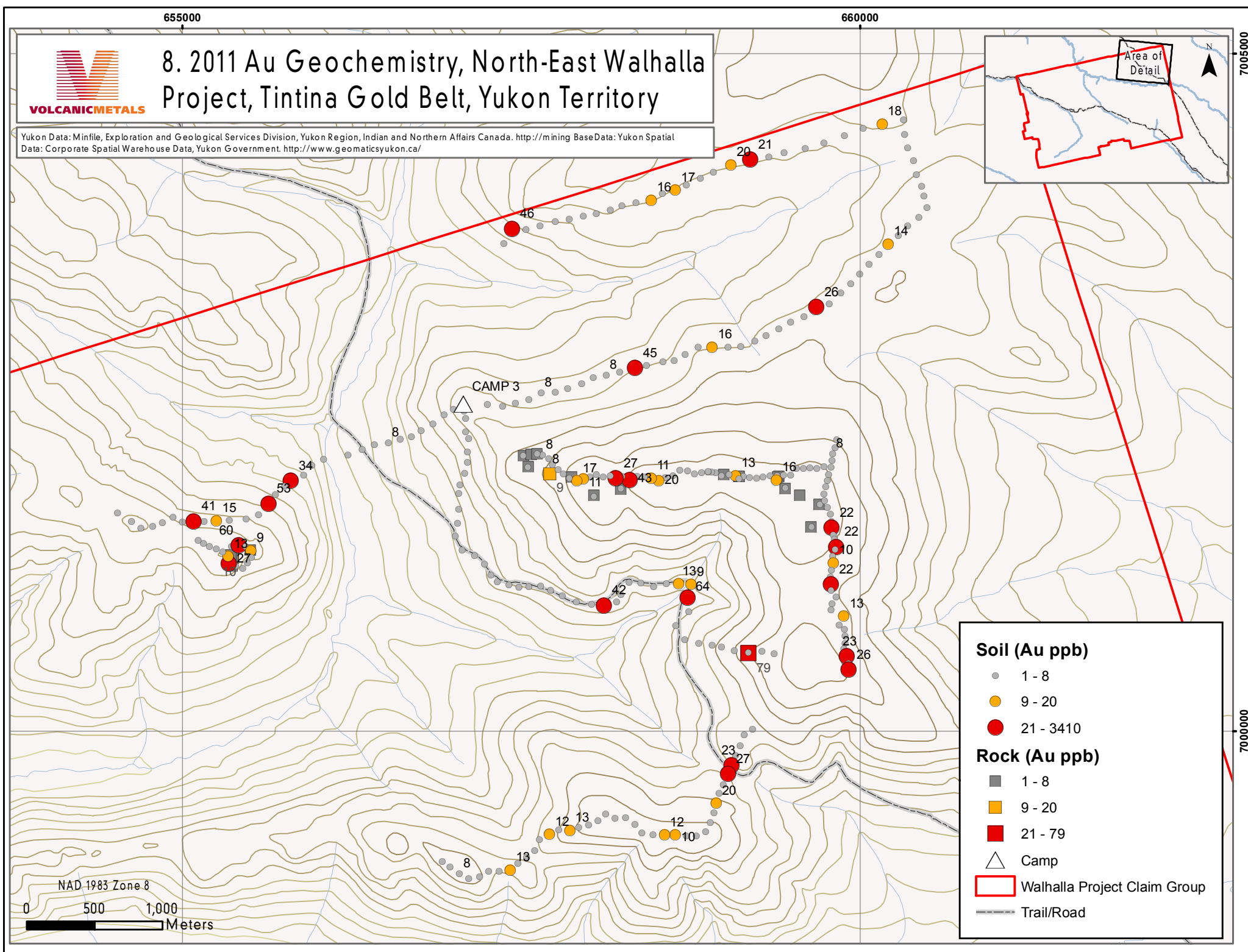
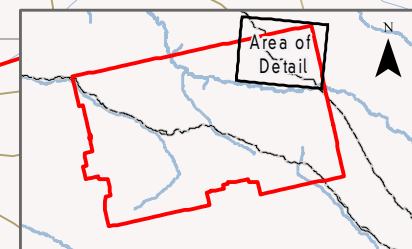
Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.BaseData:Yukon Spatial Data: Corporate Spatial Warehouse Data, Yukon Government. http://www.geomaticsyukon.ca/>





## 8. 2011 Au Geochemistry, North-East Walhalla Project, Tintina Gold Belt, Yukon Territory

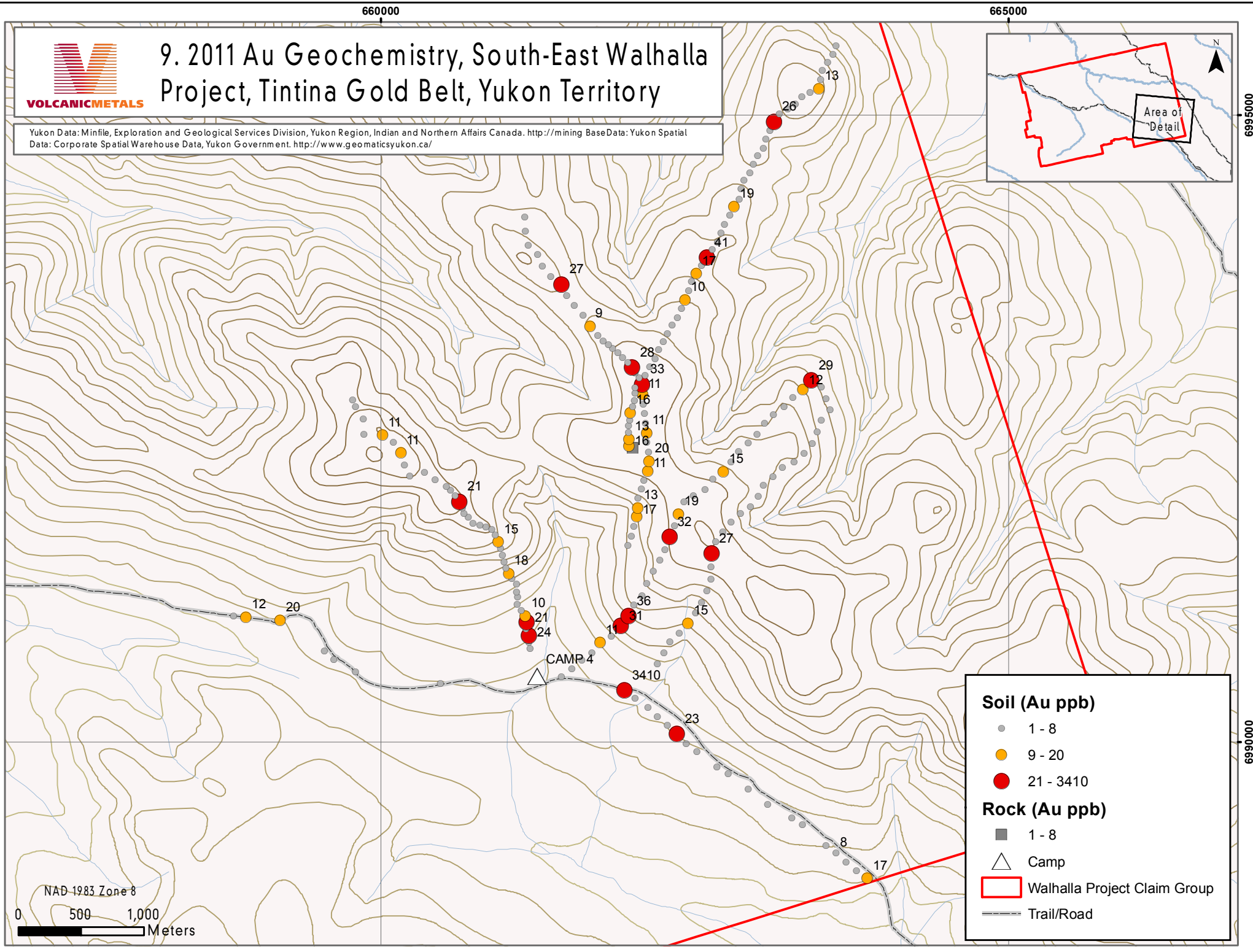
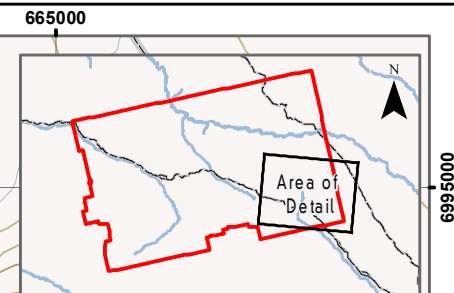
Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.BaseData:Yukon Spatial>  
Data: Corporate Spatial Warehouse Data, Yukon Government. <http://www.geomaticsyukon.ca/>





## 9. 2011 Au Geochemistry, South-East Walhalla Project, Tintina Gold Belt, Yukon Territory

Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.BaseData:Yukon Spatial>  
Data: Corporate Spatial Warehouse Data, Yukon Government. <http://www.geomaticsyukon.ca/>





138°30'0"W

138°0'0"W

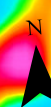
137°30'0"W



# 10. Residual Total Magnetics, Walhalla Project, Tintina Gold Belt, Yukon Territory

Geophysical Data: Canada Geoscience Data Server,  
MAG - Residual Total Field - 100m

Projection: Yukon Albers



63°10'0"N

63°0'0"N

Walhalla Project

0 2,500 5,000  
Meters



138°30'0"W

138°0'0"W

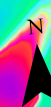
137°30'0"W



## 11. First Vertical Derivative Magnetics, Walhalla Project, Tintina Gold Belt, Yukon Territory

Geophysical Data: Canada Geoscience Data Server,  
Magnetic-Radiometric- EM Surveys, McQuesten -  
100m - Mag - 1st Vertical Derivative

Projection: Yukon Albers



N  
63°10'0"N

N  
63°00'0"N

Walhalla Project

0 2,500 5,000  
Meters



## 10.0 DRILLING

No drilling has been conducted on the Walhalla project.

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The 2011 samples were placed into rice bags in the field by the author, sealed and secured. The samples were delivered directly to the Whitehorse preparation facility of AGAT Laboratories by the author. AGAT Laboratories is accredited and certified to the International Organization for Standardization for ISO 9001 and ISO/IEC 17025 standards.

At the preparation facility samples were dried at 60°C. Soil samples were sieved to -80 mesh. Rocks were crushed to 90% minus 2mm, then a 250g split was pulverized to 85% minus 75µm. The samples were then transported from Whitehorse to the Burnaby mineral geochemistry laboratory of AGAT.

The samples were analyzed by AGAT method #202051 for Gold, determined by fire assay of 30g with AAS finish. They were also analyzed by method #201073 for 46 elements by ICP-OES after digestion of 0.5g by aqua regia.

Quality control procedures were implemented at the laboratory, involving the regular insertion of blanks and standards and repeat analyses on the samples. The procedures for each process and analytical method are presented in Appendix 3. Quality Assurance data is provided for each batch of samples and included with each analytical certificate (Appendix 4).

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

A sampling protocol should be implemented, involving the routine and regular insertion of blanks, standards and duplicates sent to the primary laboratory, and re-assaying of selected mineralized pulps at a second independent laboratory in future trenching and drill programs on the project.

## 12.0 DATA VERIFICATION

The 2011 geochemical data was verified by reviewing the original analytical certificates and digital data. Analytical data quality assurance and quality control was indicated by the favourable reproducibility obtained in laboratory standards, blanks and duplicates.

### 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The Walhalla Project is at an early exploration stage and no metallurgical testing has been carried out.

### 14.0 MINERAL RESOURCE ESTIMATES

There has not been sufficient work on the Walhalla Project to undertake a resource calculation.

### 15.0 ADJACENT PROPERTIES

The Walhalla property was staked to the east of and adjacent to the Mariposa project (Dora and other claims) of Pacific Ridge Exploration Ltd. after the announcement of significant gold drill intersections (2.44 gpt gold over 38.9m) at the Skookum Jim zone on July 28, 2011 (Pacific Ridge, 2011). The author has been unable to verify the information above, and the information is not necessarily indicative of the mineralization on the Walhalla property.

The SMOKO claims of Gordon G. Richards lie along the south central boundary, and cover the 115I 102 (Lumby Cu-Mo-Au) minfile occurrence. Subsequent to the staking of the BAR claims other claims (WC, CRA) have been staked by competitors along the southwest side of the property. These new claims are still registered in the names of the stakers.

Two placer exploration leases cover most of Alberta creek along the western boundary of the property, with some overlap with the BAR quartz claims. The leases are registered in the names of Bruce Wheeler and Giorgio Antonelli.

The west side of Alberta creek is category A land owned by Selkirk First Nation, block SFN R-20A, which covers Pyroxene Mountain and includes minfile occurrence 1150 116.

#### Yukon Minfile occurrences near the Walhalla project:

**115I 102 Lumby** - porphyry Cu-Mo-Au anomaly. Skarn altered roof pendant in granodiorite, explored in 1975. Located approximately 1km south of the Walhalla property.

**115J 104 Gervan** - unknown target explored in 1987. Located approximately 8km west of the Walhalla property.

**115J 106 Pyro** – unknown target explored in 1988. Located approximately 1km west of the Walhalla property.

**115O 075 Mariposa** – gold-quartz veins. Explored intermittently since 1917, currently owned by Pacific Ridge Exploration. Located about 13km west of the the Walhalla property.

**1150 085 McMichael** - Porphyry Cu-Mo-Au showing explored in 1973. Weak copper mineralization was noted. Located about 5km northwest of the Walhalla property.

**1150 116 Pyroxene** – ultramafic intrusion with anomalous gold, platinum, palladium and chromium. Explored between 1981 and 1996. Owned by Selkirk First Nation.

## 16.0 OTHER RELEVANT DATA AND INFORMATION

To the author's knowledge, there is no additional information or explanation necessary to make this technical report understandable and not misleading.

## 17.0 INTERPRETATION AND CONCLUSIONS

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 large area of breccia identified 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, and warrant followup.

## 18.0 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.

A two phase non-contingent exploration budget totalling \$200,000 is recommended for the Walhalla property. The first phase 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 (Fig. 12). A detailed soil geochemical grid survey should be conducted in the area with the best gold in soil results, specifically in the southeast part of the claims near the sample which returned 3410 ppb gold (Fig. 13).

After receipt of analytical results from phase 1, a helicopter portable excavator should be mobilized to the property to conduct trenching near the best gold anomalies. At this time some mapping and prospecting should also be carried out in areas with strong anomalies.

**TABLE 2. WALHALLA PROJECT PROPOSED BUDGET**

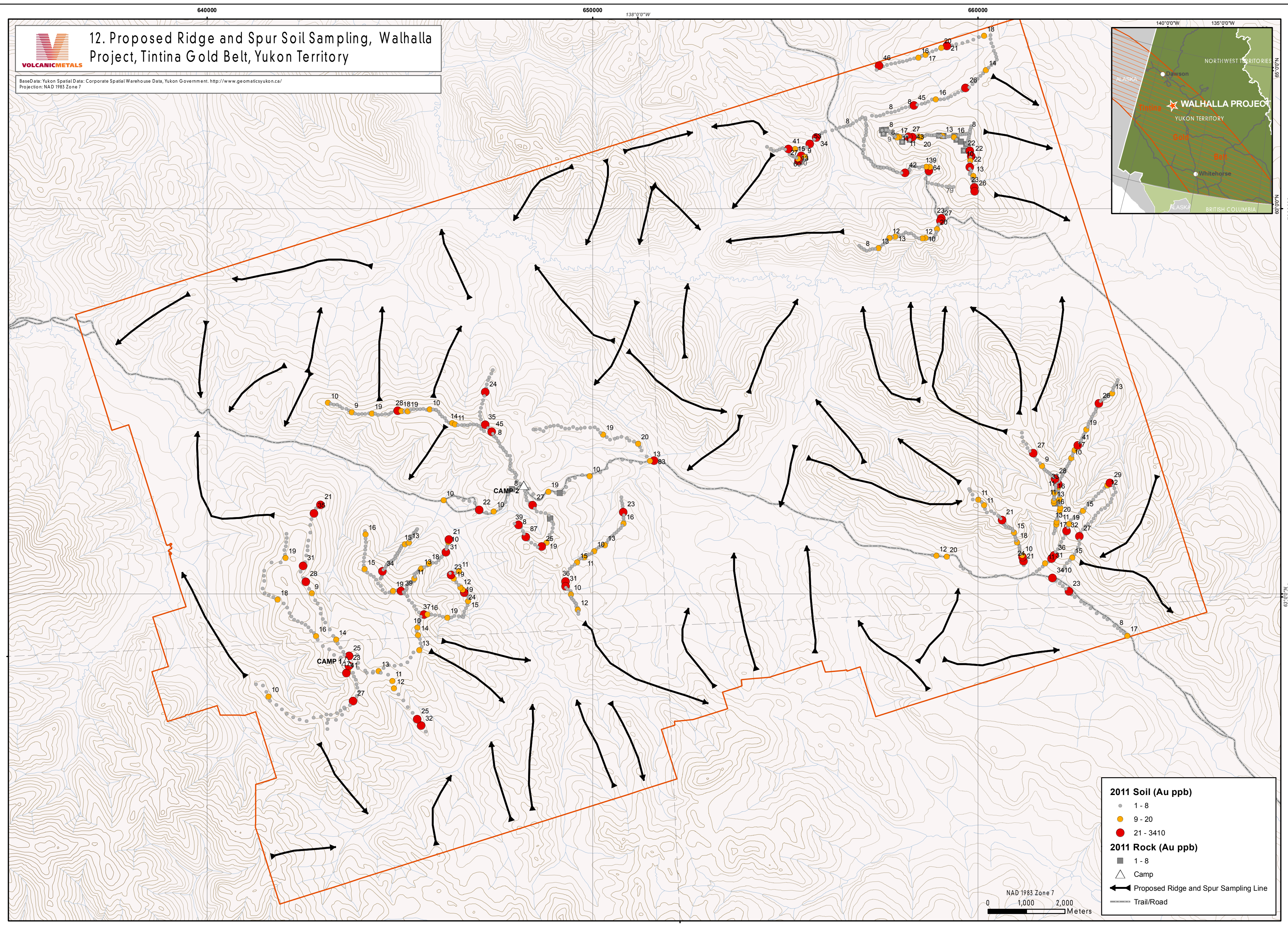
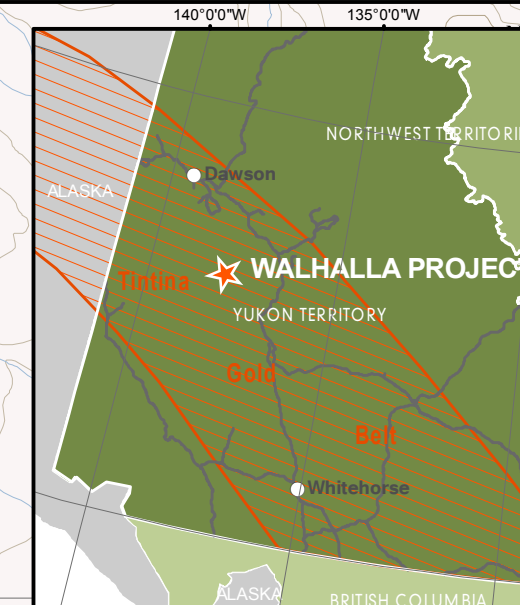
<b><u>PHASE 1</u></b>			
RIDGE AND SPUR GEOCHEMICAL SURVEY			
100 line-km = 2000 samples	\$20 all-in collection cost		\$40,000
Analytical cost	\$24 per sample		\$48,000
GRID GEOCHEMICAL SURVEY			
Southeast area - 750 samples	\$20 all-in collection cost		\$15,000
Analytical cost	\$24 per sample		\$18,000
Helicopter support			\$25,000
<b><u>PHASE 2</u></b>			
Trenching - helicopter portable excavator	7 days @ \$1000		\$7,000
Geological mapping, sampling			\$9,000
Rock analytical cost	100 @ \$30 per sample		\$3,000
Helicopter support			\$15,000
Report writing, drafting			\$10,000
Miscellaneous and contingency			\$10,000
<b>TOTAL:</b>			<b>\$200,000</b>





## 12. Proposed Ridge and Spur Soil Sampling, Walhalla Project, Tintina Gold Belt, Yukon Territory

Base Data: Yukon Spatial Data: Corporate Spatial Warehouse Data, Yukon Government. <http://www.geomatics.yukon.ca/>  
Projection: NAD 1983 Zone 7





660000

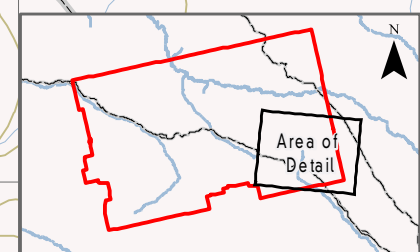
665000



# 13. Proposed Soil Grid, South-East Walhalla Project, Tintina Gold Belt, Yukon Territory

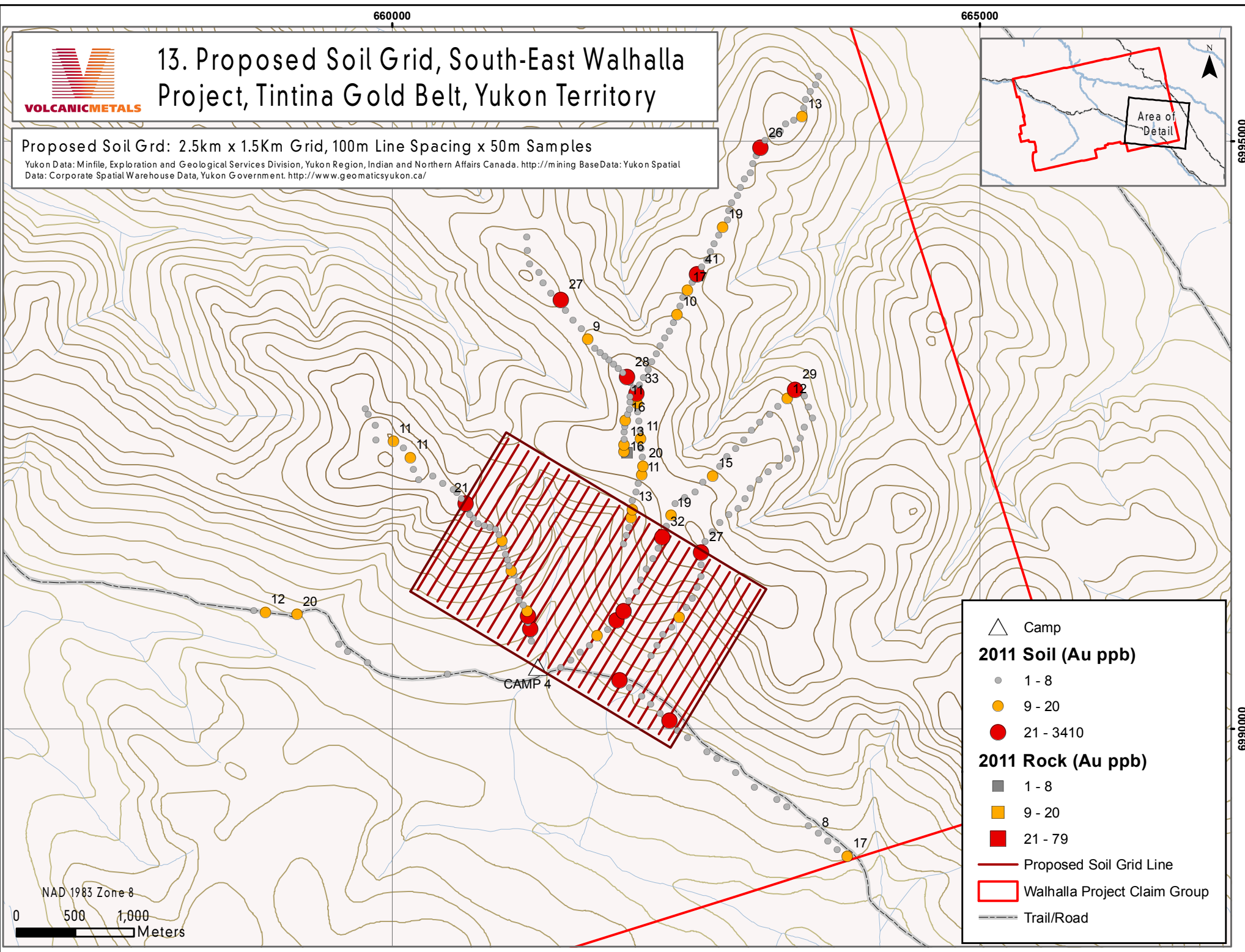
Proposed Soil Grid: 2.5km x 1.5Km Grid, 100m Line Spacing x 50m Samples

Yukon Data: Minfile, Exploration and Geological Services Division, Yukon Region, Indian and Northern Affairs Canada. <http://mining.BaseData:Yukon Spatial Data:Corporate Spatial Warehouse Data, Yukon Government. http://www.geomaticsyukon.ca/>



6995000

6990000





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**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.

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## 20.0 CERTIFICATE, DATE AND SIGNATURE

- 1) I, William Douglas Mann of 19 Hayes Crescent, Whitehorse, Yukon Territory am self-employed as a consultant geologist, authored and am responsible for this report entitled “Technical report on the Walhalla Project”, dated November 15, 2011.
- 2) I am a graduate of Queen’s University, Kingston, Ontario with a M.Sc. degree in mineral exploration geology, 1986 and of the University of British Columbia with a B.Sc. degree in geology, 1983 with more than 25 years mineral exploration experience in the North American Cordillera. Pertinent experience includes exploration work at the Casino copper- gold project in 1993 and 1994, and exploration and production work at Mt. Nansen gold-silver mine in 1995 to 1998, both of these projects are in the Dawson Range. More recent work includes exploration in the Klondike Gold district from 2004 to 2008, and in the Sixtymile Gold district in 2009 and 2010.
- 3) I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia, registration number 31907.
- 4) I have visited the subject mining property of this report and am a “Qualified Person” in the context of and have read and understand National Instrument 43-101 and the Companion Policy to NI 43-101. This report was prepared in compliance with NI 43-101 (revised June 30, 2011).
- 5) This report is based upon work on the property by the author on September 6 to 15, 2011, the author’s personal knowledge of the region from 1993 to 2011, and a review of pertinent data.
- 6) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.
- 7) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.
- 8) I am entirely independent of Volcanic Metals Corp. and any associated companies. I do not have any agreement, arrangement or understanding with Volcanic Metals Corp. and any affiliated company to be or become an insider, associate or employee. I do not own securities in Volcanic Metals Corp. or any affiliated companies and my professional relationship is at arm’s length as an independent consultant, and I have no expectation that the relationship will change.
- 9) I consent to the use of this report by Volcanic Metals Corp for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Whitehorse, Yukon Territory this 15<sup>th</sup> day of November, 2011,  
“Signed and Sealed”



William D. Mann, P.Geo. (APEGBC Reg. No. 31907)  
19 Hayes Cres.  
Whitehorse, Yukon Y1A 0E1

# APPENDIX 1

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## DETAILED CLAIM LIST

WALHALLA PROJECT – BAR CLAIMS

GrantNo.	Name	ClaimNo.	ClaimOwner	Recorded	Staked	ExpiryDate	Status	NTS
YF21001	BAR	1	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115I13
YF21002	BAR	2	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115I13
YF21003	BAR	3	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21004	BAR	4	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21005	BAR	5	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21006	BAR	6	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21007	BAR	7	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21008	BAR	8	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21009	BAR	9	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21010	BAR	10	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21011	BAR	11	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21012	BAR	12	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21013	BAR	13	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21014	BAR	14	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21015	BAR	15	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21016	BAR	16	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21017	BAR	17	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21018	BAR	18	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21019	BAR	19	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21020	BAR	20	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21021	BAR	21	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21022	BAR	22	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21023	BAR	23	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21024	BAR	24	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21025	BAR	25	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21026	BAR	26	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21027	BAR	27	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21028	BAR	28	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21029	BAR	29	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21030	BAR	30	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21031	BAR	31	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21032	BAR	32	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21033	BAR	33	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21034	BAR	34	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21035	BAR	35	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21036	BAR	36	Manny Sidler - 100%	2011-08-26	2011-08-05	2012-08-26	Appl. Pending	115P04
YF21037	BAR	37	Manny Sidler - 100%	2011-08-26	2011-08-06	2012-08-26	Appl. Pending	115P04
YF21038	BAR	38						



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YF22979	BAR	1979	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
YF22980	BAR	1980	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
YF22981	BAR	1981	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
YF22982	BAR	1982	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
<u>YF22983</u>	BAR	1983	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
YF20993	BAR	1984	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115001
YF20994	BAR	1985	Riley Gibson - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	<u>115001</u>
YF20995	BAR	1986	Nicolai Goeppel - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115J16
YF20996	BAR	1987	Nicolai Goeppel - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115J16
YF20997	BAR	1988	Nicolai Goeppel - 100%	2011-08-26	2011-08-11	2012-08-26	Appl. Pending	115J16

# APPENDIX 2.

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## ROCK SAMPLE DESCRIPTIONS

## APPENDIX 2

### Walhalla Project Rock Geochem summary 2011

Sample #	UTM ZONE	COORDINATES		Au ppm	Ag ppm	As ppm	Sample Description
SF60001	8	358424	6991394	<0.002	<0.2	11	collected by Sandro Frizzi - description missing
65244	8	352646	7000848	<b>0.006</b>	<0.2	3	collected by Sandro Frizzi - description missing
65245	8	352790	7000951	<0.002	<0.2	1	collected by Sandro Frizzi - description missing
65246	8	352633	7000913	<0.002	<0.2	<1	Sandro- Ultramafic outcrop (serpentine), grab
65247	8	352645	7000910	<0.002	<0.2	4	Sandro- Ultramafic outcrop (serpentine), grab
65248	8	352654	7000905	<b>0.01</b>	<0.2	3	Sandro- Ultramafic outcrop (serpentine), grab
65249	8	352656	7000914	<0.002	<0.2	<1	Sandro- Ultramafic outcrop (serpentine), grab
65250	8	352646	7000926	<0.002	<0.2	3	Sandro- Ultramafic outcrop (serpentine), grab
<b>ROCK SAMPLES COLLECTED BY W.D.MANN</b>							
65081	7	643678	6988387	<0.002	<0.2	6	3m chip, garnet-pyroxene-epidote skarn
65082	7	649145	6992615	<0.002	<0.2	<1	Biotite-Qtz.-Fspar pegmatite, pink, boulder
65083	7	647916	6992724	<0.002	<0.2	<1	rusty metamorphic boulder w/ Qtz. Vein
65084	8	354890	7001369	<0.002	0.2	1	breccia boulder w/ QV frags, limonitic matrix
65085	8	355198	7001266	<0.002	<b>0.8</b>	<1	silicified schist boulder, FeOx, white & grey Qtz.
65086	8	355352	7001113	<0.002	<0.2	<1	chips from 3 silicified boulders w/ limonite & hematite
65087	8	355551	7001143	<0.002	<0.2	<1	2 cobbles breccia w/ QV frags, limonite & hematite
65088	8	356429	7001157	<0.002	<0.2	6	3 breccia boulders, QV, FeOx, slickensides
65089	8	356429	7001157	<0.002	<0.2	4	field duplicate of above sample 65088
65090	8	356721	7001127	<0.002	<0.2	7	boulder w/ 2 phases of breccia, QV frags, FeOx matrix
65091	8	356714	7001124	<0.002	0.2	3	2 boulders limonitic breccia
65092	8	356760	7001035	<0.002	<0.2	9	6 boulders limonitic breccia
65093	8	356865	7000972	<0.002	<0.2	3	2 boulders silicified, limonitic schist
65094	8	356924	7000732	<0.002	<0.2	2	chips from 4 limonitic cobbles
65095	8	357001	7000895	<0.002	<0.2	2	boulder silicified gneiss w/ limonite, goethite vugs
65096	8	356320	7001178	<b>0.003</b>	<0.2	7	silicified boulder, cobbles, limonite & goethite
65097	8	355042	7001303	<b>0.009</b>	<0.2	3	boulder w/ strong limonite, goethite (S.F.)
65098	8	356376	6999852	<b>0.079</b>	0.3	<b>16</b>	limonitic rock (M.L.)
65099	8	354861	7001455	<b>0.003</b>	0.2	2	limonitic cobbles from soil hole
65100	8	354919	7001457	<0.002	<0.2	<1	boulder breccia w/ strong limonite & goethite boxwork
86456	8	354963	7001458	<0.002	<0.2	3	Sil. Schist w/ lim. Frac. & v, cobbles, boulder



## APPENDIX 3.

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AGAT LABORATORIES – ANALYTICAL PROCEDURES, 2011



## **Sample Preparation Methodology Summary**

### **DRYING OF MINERAL TESTING SAMPLES – MINING BRANCH OFFICES OVERVIEW: MIN-200-12008**

#### **INTRODUCTION AND SCOPE**

This procedure describes the process for drying samples that will undergo analysis in the Mining Geochemistry Assay Division. Most samples contain certain amount of water as a hydrate or as occluded or surface absorbed water. There are several factors affecting moisture content including atmospheric humidity and particle size. Drying is the first step for sample preparation and is required to ensure that a homogeneous sample can be obtained. This will reduce error and bias in the analyses. Upon arrival the samples may appear dry, wet or excessively wet, however most samples require drying, as a pretreatment for the assigned tests such as sieving, fusions, digestions, etc. The types of samples include rocks, core and other drill samples, minerals, concentrates, tills, sands, soils, stream sediments, and dump and grab samples.

#### **PRINCIPLE OF THE METHOD**

The purpose of drying is usually to make the sample anhydrous or to remove absorbed moisture but retain chemically combined water. Drying temperatures above 100°C result in the loss of the water of hydration of some minerals, which affects the mass balance of whole rock analysis. It is preferred to dry samples at lower temperatures for extended periods of time (12 – 24 hours). Once the samples are received, they are placed into trays that will go in the oven at  $60 \pm 10^\circ\text{C}$  for a period of time depending on the sample. Afterwards, the samples will be ready for the next step of analysis.

#### **SAMPLE REQUIREMENTS**

The whole amount of sample received should be dried. The temperature of the drying oven should be set at  $60 \pm 10^\circ\text{C}$ .



## **DETERMINATION OF GOLD, PLATINUM AND PALLADIUM IN GEOLOGICAL SAMPLES BY LEAD FUSION FIRE ASSAY WITH INDUCTIVELY COUPLED PLASMA – OPTICAL EMISSION SPECTROSCOPY (ICP-OES) FINISH OVERVIEW: MIN-200-12006**

### **INTRODUCTION AND SCOPE**

This method determines the concentration of gold, platinum and palladium in many types of solid matrices by Inductively Coupled Plasma - Optical Emission Spectroscopy (ICP-OES) following fire assay and aqua regia digestion of the raw material. The types of samples include rocks, core and other drill samples, minerals, concentrates, tills, sands, soils, stream sediments, slurries, and dump and grab samples.

### **PRINCIPLE OF THE METHOD**

Once the samples have undergone Fire Assay treatment, the resultant doré bead is attacked by wet chemical digestion (aqua regia) and then the instrumental finish is carried out using ICP-OES.

Inductively Coupled Plasma – Optical Emission Spectroscopy is an analytical technique used for the detection of trace metals. It is a type of emission spectroscopy that uses the inductively coupled plasma to produce excited atoms and ions that emit electromagnetic radiation at wavelengths characteristic of a particular element. The intensity of this emission is indicative of the concentration of the element within the sample.

### **SAMPLE REQUIREMENTS**

The samples received may need preparation, or may be prepared by the client (ready as received), or prepared by a different company. Thus, unless the sample is specifically defined as dry, the sample needs to be dried at 60°C. Some samples may also require crushing, splitting and/or milling depending on the package selected by the client and the type of material to be analyzed. The samples are treated to fire assay and then the bead doré is submitted to digestion.

### **Quality Control**

Reagent Blank: is run every 20 samples or once per fire assay set.

QC Solutions: are run at the beginning and end of the instrument data acquisition and also run every 20 samples for Calibration Verification.



Certified Reference Materials (CRM): a reference materials is used to verify calibration and fire assay conditions. A certified reference material must be weighed at least every 20 samples or once per fire assay set.

Replicates: every 20 samples or once per fire assay set a sample is chosen at random and weighed and fused in replicate.

Method Blank: every 40 samples or once per fire assay set a blank is fused (containing no sample).



## **DETERMINATION OF METALS IN GEOLOGICAL SAMPLES USING AN AQUA REGIA (NITRIC AND HYDROCHLORIC ACID) DIGESTION AND A COMBINATION OF INDUCTIVELY COUPLED PLASMA – OPTICAL EMISSION SPECTROSCOPY (ICP-OES) AND INDUCTIVELY COUPLED PLASMA MASS SPECTROSCOPY (ICP-MS) OVERVIEW: MIN-200-12018**

### **INTRODUCTION AND SCOPE**

This method describes the digestion with four acids in many types of solid matrices prior to instrumental determination by Inductively Coupled Plasma - Optical Emission Spectroscopy (ICP-OES) and Inductively Coupled Plasma – Mass Spectrometry (ICP-MS). The types of samples include metal bearing ores and related materials, rocks, core and other drill samples, minerals, concentrates, tills, sands, soils, stream sediments, and dump and grab samples.

### **PRINCIPLE OF THE METHOD**

Aqua Regia digestions are used in the digestion of certain geological samples and are effective for most base metal sulphates, sulphides, oxides and carbonates. It is noted that aqua regia only provides a partial digestion for most rock forming elements and elements of a refractory nature. Each sample of ~ 1.0 g is digested with a 3:1 hot mixture of hydrochloric and nitric acids for one hour. The resultant product is dissolved and diluted to 50 mL with deionized water. An aliquot is measured by a suitable spectrometry instrument.

### **SAMPLE REQUIREMENTS**

The samples received may need preparation, or may be prepared by the client (ready as received), or prepared by a different company. Thus, unless the sample is specifically defined as dry, the sample needs to be dried at 60°C. Some samples may also require crushing, splitting and/or milling depending on the package selected by the client and the type of material to be analyzed.

There are no holding times; however there is the possibility of sulfide oxidation (sample has been received already prepared but the sample is hard). The minimum amount of sample required is 0.5g.

### **QUALITY CONTROL**

Reagent Blank: is run randomly once in every group of up to 30 samples.

QC Solutions: are run at the beginning and end of the instrument data acquisition and also run every 20 samples for Calibration Verification.





Certified Reference Materials (CRM): a reference materials is used to verify digestion conditions. A certified reference material must be weighed at least every 20 samples or once per digestion set.

Replicates: every 20 samples or once per digestion set a sample is chosen at random and weighed and digested in replicate.

## REPORTING

The analyst reviews the results ensuring the blanks, certified reference materials, QC and replicates satisfy acceptance criteria. Data is transferred into the LIMS system by the analyst and the Lab Supervisor or General Manager authorizes the release to the customer. The results are reported in either weight % or mg/L, with a maximum of six significant figures (3 or 4 decimal places depending on the element). All data is kept with each file folder containing the COC and all relevant documentation.

### 51 Elements

Ag	Ni
Al	P
As	Pb
Au*	Rb
B	Re
Ba	S
Be	Sb
Bi	Sc
Ca	Se
Cd	Sn
Ce	Sr
Co	Ta
Cr	Te



Cs	Th
Cu	Ti
Fe	Tl
Ga	U
Ge	V
Hf	W
Hg	Y
In	Zn
K	Zr
La	
Li	
Mg	
Mn	
Mo	
Na	
Nb	

**\* Please note Gold detection is only suitable for exploration purposes**

# APPENDIX 4.

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2011 WALHALLA PROJECT ANALYTICAL CERTIFICATES

CLIENT NAME: VOLCANIC METALS  
SUITE 680, 789 WEST PENDER STREET  
VANCOUVER, BC V6C1H2

ATTENTION TO: Larry Johnson, John Lagourgue

PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y531257

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 07, 2011

PAGES (INCLUDING COVER): 12

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

\*NOTES



## Certificate of Analysis

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40980	<0.2	1.29	5	<5	114	<0.5	<1	0.66	<0.5	14	4.8	83.8	2.7	1.68
40981	<0.2	0.24	<1	<5	230	<0.5	<1	0.04	<0.5	<1	<0.5	70.8	1.2	0.16
SF 60001	<0.2	0.17	11	<5	430	<0.5	<1	0.38	<0.5	1	5.0	458	23.2	4.51
65244	<0.2	1.25	3	<5	827	<0.5	<1	0.64	<0.5	10	4.3	165	83.8	1.89
65245	<0.2	0.22	1	<5	160	<0.5	<1	0.02	<0.5	5	1.7	223	16.5	0.44
65246	<0.2	0.10	<1	40	15	<0.5	<1	0.04	<0.5	<1	71.6	686	1.2	3.87
65247	<0.2	0.06	4	34	18	<0.5	<1	4.03	<0.5	2	60.4	417	3.8	3.18
65248	<0.2	0.05	3	39	20	<0.5	<1	1.04	<0.5	<1	70.1	296	5.3	3.93
65249	<0.2	0.09	<1	17	25	<0.5	<1	0.11	<0.5	<1	68.9	542	10.7	3.77
65250	<0.2	0.07	3	15	45	<0.5	<1	0.82	<0.5	<1	62.9	372	4.5	3.49
65081	<0.2	1.30	6	<5	680	<0.5	<1	3.46	<0.5	8	4.2	127	4.5	1.99
65082	<0.2	0.42	<1	<5	138	<0.5	<1	0.09	<0.5	12	1.2	95.8	0.7	0.57
65083	<0.2	0.09	<1	<5	19	<0.5	<1	0.02	<0.5	2	3.5	207	25.3	1.96
65084	0.2	0.30	1	<5	108	5.4	<1	0.03	<0.5	8	16.5	81.0	48.5	20.9
65085	0.8	0.12	<1	<5	93	<0.5	<1	0.01	<0.5	2	2.1	456	85.1	2.85
65086	<0.2	0.19	<1	<5	147	<0.5	<1	<0.01	<0.5	7	1.2	195	15.3	0.89
65087	<0.2	0.17	<1	<5	164	<0.5	<1	0.02	<0.5	10	1.3	245	21.7	0.99
65088	<0.2	0.24	6	<5	150	<0.5	<1	<0.01	<0.5	3	2.6	181	76.6	7.53
65089	<0.2	0.43	4	<5	354	<0.5	<1	<0.01	<0.5	5	2.6	208	86.7	11.9
65090	<0.2	0.60	7	<5	1070	0.6	<1	<0.01	<0.5	9	8.8	143	52.5	9.58
65091	0.2	0.80	3	<5	5220	1.3	<1	0.04	<0.5	8	31.2	196	107	7.13
65092	<0.2	0.38	9	<5	124	0.7	<1	<0.01	<0.5	22	5.8	170	69.7	7.68
65093	<0.2	0.43	3	<5	580	<0.5	<1	<0.01	<0.5	11	3.5	316	89.2	2.84
65094	<0.2	0.32	2	<5	198	0.7	<1	0.01	<0.5	11	9.7	170	53.6	5.50
65095	<0.2	0.41	2	<5	142	0.6	<1	<0.01	<0.5	7	2.7	245	132	6.06
65096	<0.2	0.48	7	<5	292	0.6	<1	<0.01	<0.5	9	3.9	234	112	10.0
65097	<0.2	0.55	3	<5	240	1.1	<1	0.03	<0.5	3	2.1	134	210	5.32
65098	0.3	0.60	16	<5	850	0.7	<1	0.01	<0.5	34	4.2	101	166	8.40
65099	0.2	0.71	2	<5	349	0.8	<1	0.01	0.8	31	27.6	68.9	109	20.8
65100	<0.2	0.36	<1	<5	194	2.7	<1	0.01	1.0	3	7.2	71.2	66.4	17.0
86456	<0.2	0.40	3	<5	166	0.6	<1	0.02	0.7	6	7.6	227	173	9.77

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40980	<5	<1	<1	0.16	5	6	0.74	565	1.9	0.13	4.7	799	5.0	14
40981	<5	<1	3	0.15	<1	<1	0.03	28	0.8	0.05	1.9	43	3.7	<10
SF 60001	<5	<1	<1	0.02	4	1	0.04	4940	4.8	<0.01	42.3	584	11.4	<10
65244	<5	<1	1	0.11	4	7	0.65	233	3.7	0.06	48.4	495	4.9	13
65245	<5	<1	<1	0.07	1	2	0.02	37	3.0	<0.01	6.0	90	2.2	<10
65246	<5	<1	1	<0.01	<1	1	12.5	660	<0.5	<0.01	1280	45	<0.5	<10
65247	<5	<1	<1	<0.01	<1	1	13.5	1620	0.6	<0.01	1110	298	<0.5	<10
65248	<5	<1	<1	<0.01	<1	<1	12.8	754	<0.5	<0.01	1210	79	<0.5	<10
65249	<5	<1	<1	<0.01	<1	2	11.4	697	<0.5	<0.01	1090	61	<0.5	<10
65250	<5	<1	<1	<0.01	<1	2	11.1	964	<0.5	<0.01	1020	96	<0.5	<10
65081	<5	<1	<1	0.04	4	<1	0.24	1640	2.4	0.05	16.3	1230	3.3	<10
65082	<5	<1	1	0.23	8	1	0.11	107	1.1	0.08	3.3	81	3.0	13
65083	<5	<1	<1	<0.01	<1	<1	0.03	177	3.1	<0.01	7.7	94	0.7	<10
65084	<5	1	<1	<0.01	4	<1	0.01	555	1.2	<0.01	264	4150	<0.5	<10
65085	<5	<1	<1	0.03	1	<1	0.01	34	7.7	<0.01	8.7	539	2.0	<10
65086	<5	<1	1	0.05	3	<1	0.02	28	4.8	<0.01	5.6	264	2.4	<10
65087	<5	<1	<1	0.06	5	<1	0.02	52	15.7	<0.01	4.4	156	2.5	<10
65088	<5	2	<1	0.03	2	<1	0.01	83	4.7	<0.01	7.5	436	3.2	<10
65089	<5	5	<1	0.06	3	1	0.01	79	5.2	<0.01	9.1	470	3.2	<10
65090	<5	<1	<1	0.06	4	1	0.01	481	4.1	<0.01	97.0	1610	6.2	<10
65091	<5	<1	<1	0.03	3	1	<0.01	2370	13.2	<0.01	41.1	2960	7.9	<10
65092	<5	2	<1	0.04	10	<1	<0.01	284	3.8	<0.01	19.5	1090	6.3	<10
65093	<5	<1	<1	0.12	6	2	0.03	101	8.5	<0.01	6.2	549	5.5	<10
65094	<5	<1	<1	0.03	5	<1	0.01	190	11.6	<0.01	53.5	982	6.7	<10
65095	<5	<1	<1	0.02	4	<1	<0.01	42	10.4	<0.01	14.4	1970	3.5	<10
65096	<5	5	<1	0.10	4	1	0.01	81	5.2	<0.01	26.5	557	4.3	<10
65097	<5	<1	<1	0.05	2	<1	0.01	74	26.8	<0.01	14.5	1350	4.2	<10
65098	<5	<1	<1	0.05	15	2	0.01	280	4.5	<0.01	28.0	1310	18.7	<10
65099	<5	<1	<1	0.03	15	<1	<0.01	3150	2.7	<0.01	179	3550	2.4	<10
65100	<5	1	<1	0.06	2	<1	<0.01	175	7.6	<0.01	90.1	2560	<0.5	<10
86456	<5	<1	<1	0.03	3	<1	<0.01	216	8.2	<0.01	42.5	2050	4.0	<10

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40980	0.007	<1	1.6	<10	<5	151	<10	<10	<5	0.08	<5	<5	35.7	<1
40981	<0.005	<1	<0.5	<10	<5	26.7	<10	<10	<5	<0.01	<5	<5	2.3	<1
SF 60001	0.008	<1	1.8	<10	<5	5.7	<10	<10	<5	0.02	<5	<5	14.7	<1
65244	0.021	<1	5.0	<10	<5	29.9	<10	<10	<5	0.17	5	<5	57.9	<1
65245	<0.005	<1	1.1	<10	<5	8.9	<10	<10	<5	<0.01	<5	<5	15.0	<1
65246	<0.005	<1	3.0	<10	<5	1.3	<10	<10	<5	<0.01	<5	<5	27.9	<1
65247	0.040	<1	3.5	<10	<5	60.1	<10	<10	<5	<0.01	<5	<5	24.3	<1
65248	0.012	<1	3.2	<10	<5	22.8	<10	<10	<5	<0.01	<5	<5	23.7	<1
65249	0.011	<1	3.6	<10	<5	3.5	<10	<10	<5	<0.01	<5	<5	27.7	<1
65250	0.005	<1	3.5	<10	<5	14.4	<10	<10	<5	<0.01	<5	<5	23.6	<1
65081	0.054	1	4.5	<10	<5	129	<10	<10	<5	0.08	<5	<5	59.9	<1
65082	<0.005	<1	0.7	<10	<5	30.4	<10	<10	<5	0.03	<5	<5	15.2	<1
65083	<0.005	<1	0.7	<10	<5	5.2	<10	<10	<5	<0.01	<5	<5	18.2	<1
65084	<0.005	<1	2.4	<10	<5	3.0	<10	<10	<5	<0.01	<5	<5	79.4	<1
65085	0.008	<1	1.4	<10	<5	3.3	<10	<10	<5	<0.01	<5	<5	21.3	<1
65086	<0.005	<1	1.4	<10	<5	10.3	<10	<10	<5	<0.01	<5	<5	17.2	<1
65087	<0.005	<1	1.2	<10	<5	14.4	<10	<10	<5	<0.01	<5	<5	31.4	<1
65088	0.016	<1	1.1	<10	<5	9.4	<10	<10	<5	<0.01	<5	<5	29.8	<1
65089	0.020	<1	1.6	<10	<5	17.1	<10	<10	<5	0.01	<5	<5	37.2	<1
65090	0.009	<1	4.3	<10	<5	35.2	<10	<10	<5	<0.01	<5	<5	66.9	<1
65091	0.030	<1	5.7	<10	<5	163	<10	<10	<5	<0.01	<5	<5	111	<1
65092	0.006	3	4.5	<10	<5	9.3	<10	<10	<5	<0.01	<5	<5	45.7	<1
65093	0.007	<1	2.8	16	<5	20.7	<10	<10	<5	<0.01	<5	<5	42.3	<1
65094	<0.005	<1	4.9	<10	<5	11.4	<10	<10	<5	<0.01	<5	<5	153	<1
65095	0.007	<1	4.6	<10	<5	7.7	<10	<10	<5	<0.01	<5	<5	97.2	<1
65096	0.010	<1	2.2	16	<5	13.9	<10	<10	<5	<0.01	<5	<5	34.4	<1
65097	0.005	<1	2.0	<10	<5	29.4	<10	<10	<5	<0.01	<5	<5	204	<1
65098	0.015	<1	3.1	<10	<5	123	<10	<10	<5	<0.01	<5	<5	61.2	<1
65099	<0.005	<1	6.0	<10	<5	4.4	<10	<10	<5	<0.01	<5	<5	50.9	<1
65100	0.006	<1	3.2	<10	<5	16.3	<10	<10	<5	<0.01	<5	<5	89.8	<1
86456	0.008	<1	3.6	10	<5	7.9	<10	<10	<5	<0.01	<5	<5	72.3	<1

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40980	4	92.4	<5
40981	<1	4.2	<5
SF 60001	11	52.9	<5
65244	6	31.7	<5
65245	2	7.3	<5
65246	<1	24.4	<5
65247	<1	17.2	<5
65248	<1	20.3	<5
65249	<1	20.9	<5
65250	<1	14.7	<5
65081	5	71.2	9
65082	1	11.8	<5
65083	2	7.6	<5
65084	8	996	<5
65085	2	9.7	<5
65086	5	7.8	<5
65087	6	6.3	<5
65088	4	41.5	<5
65089	5	56.0	<5
65090	13	172	<5
65091	52	277	<5
65092	10	75.7	<5
65093	7	9.8	<5
65094	12	229	<5
65095	4	71.7	<5
65096	8	81.9	<5
65097	13	66.5	<5
65098	18	126	<5
65099	21	379	<5
65100	11	534	<5
86456	11	232	<5

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## Certificate of Analysis

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Comments: RDL - Reported Detection Limit

Certified By:



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AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Sample Description	Analyte:	Au	Sample
	Unit:	ppm	Login Weight
	RDL:	0.002	kg
40980		<0.002	0.51
40981		<0.002	0.28
SF 60001		<0.002	0.85
65244		0.006	0.99
65245		<0.002	0.63
65246		<0.002	0.55
65247		<0.002	0.78
65248		0.010	0.73
65249		<0.002	0.85
65250		<0.002	1.05
65081		<0.002	0.45
65082		<0.002	0.49
65083		<0.002	0.64
65084		<0.002	0.65
65085		<0.002	0.52
65086		<0.002	0.45
65087		<0.002	0.51
65088		<0.002	0.32
65089		<0.002	0.56
65090		<0.002	0.52
65091		<0.002	0.54
65092		<0.002	0.61
65093		<0.002	0.63
65094		<0.002	0.60
65095		<0.002	0.69
65096		0.003	0.55
65097		0.009	0.22
65098		0.079	0.30
65099		0.003	0.62
65100		<0.002	0.33
86456		<0.002	0.40

Certified By:





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## Certificate of Analysis

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Rock

Comments: RDL - Reported Detection Limit

Certified By:

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

Solid Analysis											
RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2725390	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2725390	1.29	1.25	3.1%	0.12				80%	120%
As	1	2725390	5	5	0.0%	< 1				80%	120%
B	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2725390	114	110	3.6%	< 1				80%	120%
Be	1	2725390	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Bi	1	2725390	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2725390	0.657	0.631	4.0%	1.32				80%	120%
Cd	1	2725390	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2725390	14	14	0.0%	< 1				80%	120%
Co	1	2725390	4.78	4.86	1.7%	< 0.5				80%	120%
Cr	1	2725390	83.8	78.5	6.5%	< 0.5				80%	120%
Cu	1	2725390	2.7	1.5		< 0.5	3947	3700	106%	80%	120%
Fe	1	2725390	1.68	1.66	1.2%	0.81				80%	120%
Ga	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2725390	< 1	< 1	0.0%	< 1				80%	120%
In	1	2725390	< 1	< 1	0.0%	< 1				80%	120%
K	1	2725390	0.157	0.153	2.6%	0.05				80%	120%
La	1	2725390	5	5	0.0%	< 1				80%	120%
Li	1	2725390	6	6	0.0%	< 1				80%	120%
Mg	1	2725390	0.74	0.74	0.0%	1.32				80%	120%
Mn	1	2725390	565	556	1.6%	< 1				80%	120%
Mo	1	2725390	1.9	1.2		< 0.5				80%	120%
Na	1	2725390	0.127	0.119	6.5%	< 0.01				80%	120%
Ni	1	2725390	4.7	4.7	0.0%	< 0.5				80%	120%
P	1	2725390	799	804	0.6%	< 10				80%	120%
Pb	1	2725390	5.05	5.19	2.7%	< 0.5				80%	120%
Rb	1	2725390	14	13	7.4%	< 10				80%	120%
S	1	2725390	0.007	0.007	0.0%	0.090				80%	120%
Sb	1	2725390	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2725390	1.6	1.6	0.0%	< 0.5				80%	120%
Se	1	2725390	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2725390	151	149	1.3%	< 0.5	307	390	79%	80%	120%
Ta	1	2725390	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2725390	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2725390	0.08	0.08	0.0%	< 0.01				80%	120%
Tl	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
U	1	2725390	< 5	< 5	0.0%	< 5				80%	120%
V	1	2725390	35.7	35.3	1.1%	< 0.5				80%	120%
W	1	2725390	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2725390	4	4	0.0%	< 1				80%	120%
Zn	1	2725390	92.4	91.6	0.9%	< 0.5				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Zr	1	2725390	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2725417	0.3	0.3	0.0%	< 0.2				80% 120%
Al	1	2725417	0.60	0.60	0.0%	< 0.01				80% 120%
As	1	2725417	16	16	0.0%	< 1				80% 120%
B	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2725417	850	881	3.6%	< 1				80% 120%
Be	1	2725417	0.7	0.7	0.0%	< 0.5				80% 120%
Bi	1	2725417	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2725417	0.01	0.01	0.0%	< 0.01				80% 120%
Cd	1	2725417	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2725417	34	33	3.0%	< 1				80% 120%
Co	1	2725417	4.24	4.15	2.1%	< 0.5				80% 120%
Cr	1	2725417	101	96.5	4.6%	< 0.5				80% 120%
Cu	1	2725417	166	156	6.2%	< 0.5	3945	3700	106%	80% 120%
Fe	1	2725417	8.40	8.33	0.8%	< 0.01				80% 120%
Ga	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2725417	< 1	1		< 1				80% 120%
In	1	2725417	< 1	< 1	0.0%	< 1				80% 120%
K	1	2725417	0.05	0.05	0.0%	< 0.01				80% 120%
La	1	2725417	15	15	0.0%	< 1				80% 120%
Li	1	2725417	2	2	0.0%	< 1				80% 120%
Mg	1	2725417	0.01	0.01	0.0%	< 0.01				80% 120%
Mn	1	2725417	280	263	6.3%	< 1				80% 120%
Mo	1	2725417	4.5	4.3	4.5%	< 0.5				80% 120%
Na	1	2725417	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Ni	1	2725417	28.0	26.2	6.6%	< 0.5				80% 120%
P	1	2725417	1310	1300	0.8%	< 10				80% 120%
Pb	1	2725417	18.7	19.1	2.1%	< 0.5				80% 120%
Rb	1	2725417	< 10	< 10	0.0%	< 10				80% 120%
S	1	2725417	0.015	0.015	0.0%	< 0.005				80% 120%
Sb	1	2725417	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2725417	3.1	3.0	3.3%	< 0.5				80% 120%
Se	1	2725417	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2725417	123	130	5.5%	< 0.5	308	390	79%	80% 120%
Ta	1	2725417	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2725417	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2725417	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Tl	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
U	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
V	1	2725417	61.2	58.8	4.0%	< 0.5				80% 120%
W	1	2725417	< 1	< 1	0.0%	< 1				80% 120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Y	1	2725417	18	17	5.7%	< 1				80% 120%
Zn	1	2725417	126	120	4.9%	< 0.5				80% 120%
Zr	1	2725417	< 5	< 5	0.0%	< 5				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725390	< 0.002	< 0.002	0.0%	< 0.002	0.0793	0.0849	93%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725401	< 0.002	0.007		< 0.002	0.867	0.922	94%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725417	0.079	0.086	8.5%	< 0.002				80% 120%

Certified By:

## Method Summary

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531257

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

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

CLIENT NAME: VOLCANIC METALS  
SUITE 680, 789 WEST PENDER STREET  
VANCOUVER, BC V6C1H2

ATTENTION TO: Larry Johnson, John Lagourgue

PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y530769

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

DATE REPORTED: Oct 11, 2011

PAGES (INCLUDING COVER): 60

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

\*NOTES





## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40210 (-)	<0.2	1.09	7	<5	91	<0.5	<1	0.22	<0.5	18	2.6	14.3	10.1	2.21
40211 (-)	<0.2	1.81	4	<5	230	0.8	<1	0.88	<0.5	12	8.8	18.4	149	3.68
40212 (-)	<0.2	2.54	11	<5	241	0.5	<1	0.32	<0.5	16	8.4	36.2	66.3	3.99
40213 (-)	<0.2	2.12	7	<5	247	0.8	<1	0.46	<0.5	36	8.4	18.2	12.7	3.60
40214 (-)	<0.2	1.78	6	<5	134	<0.5	<1	0.51	<0.5	15	6.7	15.1	14.0	2.72
40215 (-)	<0.2	2.45	9	<5	248	0.5	<1	0.66	<0.5	16	5.4	13.6	6.4	4.24
40216 (-)	<0.2	2.23	8	<5	416	0.8	<1	1.18	<0.5	45	6.5	15.5	15.9	4.28
40217 (-)	<0.2	2.03	9	<5	277	<0.5	<1	0.44	<0.5	36	6.4	25.3	14.5	3.36
40218 (-)	<0.2	2.25	9	<5	194	<0.5	<1	0.23	<0.5	17	6.9	27.6	11.4	3.36
40219 (-)	<0.2	1.86	9	<5	399	<0.5	<1	0.59	<0.5	25	6.3	25.1	21.2	2.83
40220 (-)	<0.2	1.60	7	<5	271	<0.5	<1	0.52	<0.5	29	5.3	16.1	12.2	2.86
40221 (-)	<0.2	1.63	6	<5	248	<0.5	<1	0.50	<0.5	21	5.8	31.7	44.8	2.68
40222 (-)	<0.2	2.68	6	<5	335	<0.5	<1	0.50	<0.5	23	16.0	43.0	68.0	3.71
40223 (-)	<0.2	2.40	8	<5	162	0.5	<1	0.39	<0.5	15	8.1	46.4	31.5	3.30
40224 (-)	<0.2	1.33	4	<5	120	<0.5	<1	0.30	<0.5	25	4.0	15.7	7.5	2.04
40225 (-)	<0.2	1.77	10	<5	299	0.6	<1	0.47	<0.5	41	7.3	33.2	29.7	2.78
40226 (-)	<0.2	1.89	10	<5	192	<0.5	<1	0.34	<0.5	21	6.5	24.3	14.6	3.14
40227 (-)	<0.2	2.78	11	<5	212	0.6	<1	0.22	<0.5	25	6.8	35.1	17.8	3.90
40228 (-)	<0.2	3.10	69	<5	175	0.8	<1	0.55	<0.5	30	14.2	17.7	9.2	5.09
40229 (-)	<0.2	2.29	7	<5	244	0.5	<1	0.34	<0.5	20	8.1	28.9	42.4	3.24
40230 (-)	<0.2	2.38	11	<5	333	0.6	<1	0.38	<0.5	19	7.2	35.6	14.6	3.48
40231 (-)	<0.2	2.37	12	<5	259	0.6	<1	0.23	<0.5	21	7.7	36.5	16.1	3.38
40232 (-)	<0.2	2.25	7	<5	334	0.6	<1	1.05	<0.5	27	10.8	11.6	74.0	4.47
40233 (-)	<0.2	2.32	7	<5	270	0.7	<1	0.94	<0.5	44	12.3	10.7	13.0	4.42
40234 (-)	<0.2	1.86	6	<5	257	0.6	<1	1.22	<0.5	36	5.3	9.2	6.5	3.76
40235 (-)	<0.2	2.08	8	<5	213	0.6	<1	0.97	<0.5	35	6.8	13.9	15.0	3.81
40236 (-)	<0.2	1.79	6	<5	250	0.6	<1	0.95	<0.5	49	6.4	5.9	6.4	3.35
40237 (-)	<0.2	1.96	6	<5	272	0.7	<1	0.84	<0.5	56	8.0	6.2	9.9	3.74
40238 (-)	<0.2	1.27	8	<5	273	<0.5	<1	0.75	<0.5	27	6.8	19.5	14.6	2.33
40239 (-)	<0.2	1.54	5	<5	166	0.5	<1	0.66	<0.5	32	4.8	8.2	8.2	2.75
40240 (-)	<0.2	2.08	6	<5	279	0.6	<1	1.08	<0.5	41	6.6	8.5	8.3	3.76
40241 (-)	<0.2	2.68	7	<5	295	0.8	<1	1.78	<0.5	19	7.4	10.0	10.1	4.82

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40242 (-)	<0.2	1.79	10	<5	178	0.6	<1	0.51	<0.5	38	6.3	25.8	26.5	3.12
40243 (-)	<0.2	2.24	8	<5	165	0.7	<1	0.74	<0.5	21	6.8	13.5	7.8	3.52
40244 (-)	<0.2	2.10	7	<5	365	0.6	<1	0.98	<0.5	34	7.0	11.1	9.1	3.92
40245 (-)	<0.2	2.06	5	<5	333	<0.5	<1	1.02	<0.5	13	12.7	14.4	186	3.58
40246 (-)	<0.2	2.65	7	<5	218	0.5	5	0.38	<0.5	33	10.7	29.3	950	7.44
40247 (-)	<0.2	2.18	10	<5	233	<0.5	<1	0.24	<0.5	20	7.1	32.6	35.0	3.30
40248 (-)	<0.2	1.64	11	<5	335	0.5	<1	0.68	<0.5	27	9.5	23.1	67.9	3.74
40249 (-)	<0.2	1.67	7	<5	331	<0.5	<1	0.70	<0.5	19	6.3	21.2	62.0	2.65
40250 (-)	<0.2	1.70	7	<5	319	<0.5	<1	0.70	<0.5	23	5.7	21.7	27.4	2.65
40251 (-)	<0.2	1.89	8	<5	270	<0.5	<1	0.60	<0.5	31	5.7	23.5	16.1	2.87
40252 (-)	<0.2	1.55	9	<5	301	<0.5	<1	0.51	<0.5	32	6.5	26.2	19.7	2.44
40253 (-)	<0.2	1.26	9	<5	268	<0.5	<1	0.50	<0.5	24	5.9	23.4	21.9	2.25
40254 (-)	<0.2	1.14	6	<5	198	<0.5	<1	0.51	<0.5	23	4.2	16.8	11.5	1.78
40255 (-)	<0.2	1.46	9	<5	284	<0.5	<1	0.51	<0.5	27	5.7	23.6	19.1	2.33
40256 (-)	<0.2	1.44	9	<5	307	<0.5	<1	0.76	<0.5	24	6.4	28.3	38.8	2.49
40257 (-)	<0.2	2.00	9	<5	355	<0.5	<1	0.30	<0.5	21	5.7	23.8	11.8	3.05
40258 (-)	<0.2	1.48	9	<5	456	0.7	<1	0.14	<0.5	28	7.4	17.6	50.6	3.73
40259 (-)	<0.2	1.84	9	<5	291	0.5	<1	0.33	<0.5	37	7.2	30.7	22.1	3.06
40710 (-)	<0.2	3.15	9	<5	512	0.8	<1	1.23	<0.5	39	8.4	15.5	14.2	5.53
40711 (-)	<0.2	2.15	7	<5	443	<0.5	<1	0.91	<0.5	30	8.0	23.4	15.7	3.34
40712 (-)	<0.2	2.01	10	<5	374	0.7	<1	0.48	<0.5	36	7.0	29.4	21.6	2.95
40713 (-)	<0.2	2.25	11	<5	304	0.7	<1	0.49	<0.5	39	7.6	27.9	13.6	3.27
40714 (-)	0.6	2.98	5	<5	314	0.5	<1	1.43	<0.5	15	9.6	9.8	4.1	5.37
40715 (-)	<0.2	2.22	7	<5	243	0.6	<1	0.50	<0.5	15	5.3	16.3	6.4	3.18
40716 (-)	<0.2	2.94	7	<5	517	0.5	<1	0.57	<0.5	14	12.2	17.9	7.0	4.12
40717 (-)	0.6	1.92	9	<5	396	0.5	<1	0.45	<0.5	32	6.7	29.3	20.5	3.08
40718 (-)	<0.2	2.75	7	<5	580	0.6	<1	0.96	<0.5	24	10.5	15.5	8.4	3.53
40719 (-)	<0.2	2.38	11	<5	209	<0.5	<1	0.29	<0.5	20	6.9	29.2	13.6	3.30
40720 (-)	<0.2	1.78	10	<5	257	<0.5	<1	0.36	<0.5	20	6.5	27.8	15.0	2.83
40721 (-)	<0.2	2.14	9	<5	267	0.6	<1	0.43	<0.5	24	5.9	18.7	12.4	3.09
40722 (-)	<0.2	2.64	11	<5	225	0.8	<1	0.68	<0.5	25	7.1	22.6	14.2	3.91
40723 (-)	<0.2	2.55	13	<5	299	0.8	<1	0.63	<0.5	33	12.2	23.3	24.3	3.87

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40724 (-)	<0.2	2.83	8	<5	307	0.7	<1	1.19	<0.5	44	6.4	14.7	13.2	3.44
40725 (-)	<0.2	2.02	7	<5	249	0.7	<1	0.92	<0.5	45	6.5	15.8	12.2	3.33
40726 (-)	<0.2	2.42	7	<5	314	0.9	<1	0.89	<0.5	31	8.1	13.8	9.5	3.69
40727 (-)	<0.2	2.19	9	<5	310	0.7	<1	0.48	<0.5	37	6.3	29.6	68.0	3.26
40728 (-)	<0.2	2.52	7	<5	290	<0.5	<1	0.51	<0.5	16	13.2	26.3	44.5	3.55
40729 (-)	<0.2	2.76	7	<5	381	0.6	<1	0.67	<0.5	21	10.9	23.8	40.4	3.53
40730 (-)	<0.2	1.80	11	<5	258	0.6	<1	0.23	<0.5	20	7.0	33.4	19.8	2.79
40731 (-)	<0.2	2.34	8	<5	346	0.8	<1	0.53	<0.5	38	9.8	27.7	22.4	4.25
40732 (-)	<0.2	1.92	8	<5	154	0.5	<1	0.53	<0.5	21	7.4	21.3	10.0	2.76
40733 (-)	0.8	2.10	7	<5	135	<0.5	<1	0.26	<0.5	20	6.5	22.8	9.2	3.29
40734 (-)	<0.2	2.14	7	<5	265	<0.5	<1	0.38	<0.5	31	6.8	20.5	14.8	3.12
40735 (-)	<0.2	1.92	7	<5	195	0.5	<1	0.60	<0.5	23	7.5	17.7	6.0	2.97
40736 (-)	<0.2	2.24	9	<5	210	0.7	<1	0.63	<0.5	28	6.8	21.8	11.0	3.11
40737 (-)	<0.2	2.40	7	<5	434	0.5	<1	0.89	<0.5	31	6.6	17.3	5.3	3.50
40738 (-)	<0.2	1.77	9	<5	155	0.6	<1	0.47	<0.5	17	6.7	20.5	9.4	2.57
40739 (-)	0.5	1.65	10	<5	183	<0.5	<1	0.19	<0.5	18	4.3	24.6	13.3	2.77
40740 (-)	<0.2	1.34	9	<5	191	0.5	<1	0.21	<0.5	22	5.9	23.8	16.5	2.26
40741 (-)	<0.2	1.45	8	<5	173	0.6	<1	0.30	<0.5	26	5.3	21.9	12.3	2.43
40742 (-)	<0.2	1.96	11	<5	151	<0.5	<1	0.14	<0.5	15	7.8	31.4	10.6	3.30
40743 (-)	0.2	2.49	10	<5	412	0.7	<1	0.34	<0.5	32	7.8	25.4	28.0	3.24
40744 (-)	<0.2	2.19	7	<5	123	0.5	<1	0.41	<0.5	14	7.4	13.0	9.8	3.89
40745 (-)	<0.2	2.05	9	<5	223	0.6	<1	0.31	<0.5	22	7.4	25.7	13.9	2.96
40746 (-)	<0.2	2.24	10	<5	238	0.7	<1	0.26	<0.5	36	6.7	26.9	17.4	3.67
40747 (-)	<0.2	2.00	8	<5	175	<0.5	<1	0.32	<0.5	19	6.7	21.1	12.2	2.77
40748 (-)	<0.2	1.76	9	<5	145	<0.5	<1	0.29	<0.5	18	5.5	17.8	8.6	3.04
40749 (-)	1.2	1.71	6	<5	156	<0.5	<1	0.48	<0.5	15	4.6	7.1	2.9	2.99
40750 (-)	<0.2	1.69	9	<5	166	<0.5	<1	0.26	<0.5	23	5.3	22.1	8.1	2.57
40751 (-)	<0.2	2.09	9	<5	177	0.5	<1	0.30	<0.5	18	6.2	25.3	12.6	3.06
40752 (-)	0.4	1.98	7	<5	177	<0.5	<1	0.35	<0.5	17	4.6	17.6	12.1	3.22
40753 (-)	<0.2	1.91	7	<5	167	<0.5	<1	0.35	<0.5	20	6.2	22.0	13.1	2.97
40754 (-)	<0.2	1.88	7	<5	161	<0.5	<1	0.48	<0.5	20	6.2	21.8	9.6	2.76
40755 (-)	<0.2	1.97	7	<5	164	<0.5	<1	0.65	<0.5	19	8.5	18.8	7.4	2.58

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40760 (-)	<0.2	2.83	8	<5	329	0.8	<1	0.38	<0.5	21	13.5	17.5	13.4	4.84
40761 (-)	<0.2	2.06	8	<5	250	0.6	<1	0.20	<0.5	41	6.6	29.4	20.6	2.79
40762 (-)	0.4	2.50	6	<5	485	0.6	<1	0.41	<0.5	57	5.7	14.0	9.3	4.33
40763 (-)	<0.2	2.71	8	<5	247	0.6	<1	0.19	<0.5	19	6.5	23.2	22.0	4.16
40764 (-)	<0.2	2.99	5	<5	503	0.6	<1	0.80	<0.5	22	12.0	8.8	69.5	4.53
40765 (-)	<0.2	1.75	9	<5	265	<0.5	<1	0.18	<0.5	24	5.3	25.5	13.0	2.92
40766 (-)	<0.2	1.72	7	<5	220	0.6	<1	0.11	<0.5	17	7.0	23.5	14.3	3.60
40767 (-)	<0.2	1.24	7	<5	1220	0.9	<1	0.81	<0.5	21	7.5	12.7	9.9	3.47
40768 (-)	<0.2	2.08	7	<5	287	0.5	<1	0.21	<0.5	43	5.6	17.2	11.4	3.55
40769 (-)	<0.2	2.52	15	<5	243	0.9	1	0.14	<0.5	71	9.4	37.5	34.3	3.55
40770 (-)	<0.2	2.54	11	<5	284	0.5	<1	0.18	<0.5	24	5.7	30.7	15.8	3.64
40771 (-)	<0.2	2.57	7	<5	188	0.7	<1	0.25	<0.5	28	6.3	11.1	14.9	3.99
40772 (-)	<0.2	2.54	7	<5	304	0.6	<1	0.16	<0.5	22	5.4	21.3	39.9	3.57
40773 (-)	<0.2	2.60	8	<5	238	0.7	<1	0.23	<0.5	27	8.3	30.0	26.5	3.90
40774 (-)	<0.2	1.90	10	<5	301	<0.5	<1	0.18	<0.5	24	5.7	28.5	12.1	3.18
40775 (-)	<0.2	2.43	10	<5	229	0.7	<1	0.24	<0.5	26	7.5	38.4	21.1	3.54
40776 (-)	<0.2	2.27	7	<5	211	0.6	<1	0.36	<0.5	38	9.1	14.6	9.8	4.08
40777 (-)	<0.2	1.63	6	<5	276	<0.5	<1	0.17	<0.5	37	4.7	19.3	19.9	3.45
40778 (-)	<0.2	2.58	8	<5	327	0.6	<1	0.30	<0.5	66	6.5	16.7	123	5.75
40779 (-)	<0.2	2.49	11	<5	329	<0.5	<1	0.21	<0.5	23	7.2	28.9	27.8	3.43
40780 (-)	<0.2	1.92	11	<5	275	0.6	<1	0.15	<0.5	35	7.4	34.3	39.6	3.05
40781 (-)	<0.2	2.93	6	<5	270	<0.5	<1	0.42	<0.5	5	16.2	69.1	27.3	3.38
40782 (-)	<0.2	3.88	7	<5	477	0.5	<1	0.19	<0.5	51	5.5	29.8	58.3	5.87
40783 (-)	<0.2	3.14	9	<5	441	0.8	<1	0.22	<0.5	53	11.9	21.3	45.5	4.52
40784 (-)	<0.2	2.70	9	<5	276	<0.5	<1	0.13	<0.5	18	6.2	35.5	18.0	3.25
40785 (-)	<0.2	2.83	7	<5	350	<0.5	<1	0.43	<0.5	10	12.9	17.5	14.7	4.42
40786 (-)	<0.2	2.36	11	<5	272	0.5	<1	0.15	<0.5	21	6.8	36.5	32.5	3.11
40787 (-)	<0.2	2.59	6	<5	276	<0.5	<1	0.50	<0.5	20	17.5	9.2	12.7	3.95
40788 (-)	<0.2	1.31	4	<5	124	<0.5	<1	0.28	<0.5	5	9.9	111	8.4	1.32
40789 (-)	<0.2	2.74	9	<5	749	0.7	<1	0.91	<0.5	94	14.2	22.4	43.0	4.61
40790 (-)	<0.2	1.84	8	<5	658	<0.5	<1	0.18	<0.5	27	6.0	20.7	48.1	3.51
40791 (-)	<0.2	3.41	4	<5	472	<0.5	<1	0.22	<0.5	8	16.2	21.5	15.5	4.73

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40792 (-)	<0.2	2.37	8	<5	508	<0.5	<1	0.35	<0.5	16	16.4	18.7	15.8	3.16
40793 (-)	<0.2	3.24	5	<5	665	<0.5	<1	0.82	<0.5	32	15.5	11.9	20.2	5.41
40794 (-)	<0.2	2.83	5	<5	575	<0.5	<1	0.68	<0.5	24	16.6	7.7	16.6	4.79
40795 (-)	<0.2	1.68	10	<5	431	<0.5	<1	0.39	<0.5	14	6.5	23.8	21.5	3.55
40796 (-)	<0.2	3.38	4	<5	857	<0.5	<1	0.28	<0.5	76	11.3	13.9	330	4.72
40797 (-)	<0.2	3.71	5	<5	1490	0.7	<1	0.98	<0.5	41	13.0	27.3	13.3	6.88
40798 (-)	<0.2	2.48	12	<5	428	0.8	<1	0.88	<0.5	28	7.4	35.1	29.8	2.99
40799 (-)	<0.2	2.61	7	<5	350	<0.5	<1	0.28	<0.5	27	13.2	22.3	94.6	3.72
40800 (-)	<0.2	1.88	7	<5	270	<0.5	<1	0.59	<0.5	14	18.7	43.8	124	4.17
40801 (-)	<0.2	2.72	9	<5	530	0.5	<1	0.29	<0.5	26	12.4	28.6	92.6	4.60
40802 (-)	<0.2	1.66	11	<5	457	<0.5	<1	0.47	<0.5	28	6.5	33.1	58.1	3.27
40803 (-)	<0.2	1.52	8	<5	579	0.6	<1	0.24	<0.5	36	5.5	30.4	24.8	2.52
40804 (-)	<0.2	2.37	8	<5	294	<0.5	<1	0.23	<0.5	12	17.4	38.4	69.8	3.86
40805 (-)	<0.2	1.56	8	<5	642	<0.5	<1	0.33	<0.5	18	5.8	25.8	20.9	2.77
40806 (-)	<0.2	2.31	6	<5	377	0.5	<1	1.00	<0.5	23	6.9	25.1	18.4	4.05
40807 (-)	<0.2	1.53	6	<5	620	0.5	<1	1.04	<0.5	36	8.8	24.0	29.6	3.73
40808 (-)	<0.2	1.98	7	<5	472	0.6	<1	0.74	<0.5	27	6.2	13.1	21.8	3.34
40809 (-)	<0.2	2.07	9	<5	1060	<0.5	<1	0.33	<0.5	16	5.4	24.1	29.0	2.75
40810 (-)	<0.2	1.51	10	<5	364	0.6	<1	0.23	<0.5	31	5.8	30.0	32.9	2.34
40811 (-)	<0.2	1.93	9	<5	391	<0.5	<1	0.18	<0.5	22	5.1	42.5	44.7	3.28
40812 (-)	<0.2	2.27	6	<5	599	0.7	<1	0.27	<0.5	17	14.2	58.5	94.3	4.66
40813 (-)	<0.2	2.03	7	<5	820	0.6	<1	0.17	<0.5	26	7.2	55.8	55.9	3.45
40814 (-)	<0.2	1.44	8	<5	179	<0.5	<1	0.21	<0.5	19	6.7	29.3	34.5	2.42
40815 (-)	<0.2	1.63	7	<5	482	0.6	<1	0.26	<0.5	23	8.1	30.1	63.5	3.63
40816 (-)	<0.2	1.33	4	<5	138	<0.5	<1	0.08	<0.5	14	7.3	10.9	47.7	4.48
40817 (-)	<0.2	1.47	7	<5	222	<0.5	<1	0.15	<0.5	22	8.4	23.8	49.4	2.72
40818 (-)	<0.2	1.81	10	<5	349	0.5	<1	0.27	<0.5	32	6.4	34.8	45.3	2.75
40819 (-)	<0.2	1.37	6	<5	373	0.5	<1	0.19	<0.5	28	6.1	51.9	58.9	2.75
40820 (-)	<0.2	1.75	5	<5	193	0.6	<1	0.19	<0.5	25	8.6	42.9	37.5	3.27
40821 (-)	<0.2	1.74	11	<5	447	0.6	<1	0.34	<0.5	32	8.3	35.5	50.1	2.96
40822 (-)	<0.2	1.55	4	<5	200	0.6	<1	0.16	<0.5	15	5.2	14.0	64.0	4.51
40823 (-)	<0.2	0.97	4	<5	207	0.6	<1	0.08	<0.5	57	3.3	17.6	44.3	1.63

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40824 (-)	<0.2	1.58	8	<5	224	<0.5	<1	0.11	<0.5	23	4.7	31.9	52.2	2.80
40825 (-)	<0.2	1.36	7	<5	380	0.5	<1	0.23	<0.5	32	5.4	27.3	63.9	2.32
40826 (-)	<0.2	1.08	6	<5	238	<0.5	<1	0.14	<0.5	36	4.2	21.5	42.2	1.68
40827 (-)	<0.2	1.11	4	<5	356	0.7	<1	0.09	<0.5	63	4.8	21.6	55.8	2.29
40828 (-)	<0.2	1.12	6	<5	373	0.7	<1	0.16	<0.5	60	6.0	34.5	55.6	2.44
40829 (-)	<0.2	1.85	10	<5	403	0.7	<1	0.25	<0.5	37	9.8	33.3	68.2	3.26
40830 (-)	<0.2	1.42	8	<5	403	0.5	<1	0.26	<0.5	32	7.3	25.7	49.0	3.08
40831 (-)	<0.2	2.04	12	<5	385	0.8	<1	0.25	<0.5	38	10.5	70.7	47.2	3.49
40832 (-)	<0.2	1.89	11	<5	385	0.6	<1	0.30	<0.5	30	7.7	37.4	38.4	2.99
40833 (-)	<0.2	1.90	9	<5	351	0.5	<1	0.24	<0.5	31	6.2	39.7	30.7	2.79
40834 (-)	<0.2	1.94	11	<5	417	0.6	<1	0.34	<0.5	29	6.8	36.6	36.0	2.93
40835 (-)	<0.2	1.83	11	<5	435	0.6	<1	0.40	<0.5	31	7.6	39.2	40.8	3.01
40836 (-)	<0.2	2.25	10	<5	284	0.6	<1	0.17	<0.5	27	6.2	41.2	36.8	2.94
40837 (-)	<0.2	1.28	7	<5	297	<0.5	<1	0.14	<0.5	30	3.9	30.7	31.1	2.22
40838 (-)	<0.2	1.56	10	<5	381	<0.5	<1	0.34	<0.5	28	6.1	37.6	33.9	2.69
40839 (-)	<0.2	1.74	9	<5	388	0.6	<1	0.29	<0.5	34	6.7	36.0	38.3	2.76
40840 (-)	<0.2	1.88	9	<5	463	0.6	<1	0.28	<0.5	41	6.2	36.9	46.6	3.08
40841 (-)	<0.2	1.96	12	<5	529	0.8	<1	0.30	<0.5	37	9.1	39.9	39.7	3.04
40842 (-)	<0.2	1.85	8	<5	254	0.6	<1	0.13	<0.5	29	6.4	35.6	41.0	2.76
40843 (-)	<0.2	1.89	9	<5	331	0.7	<1	0.17	<0.5	45	7.3	40.8	39.6	2.73
40844 (-)	<0.2	1.99	10	<5	398	0.5	<1	0.27	<0.5	34	6.5	35.1	34.0	3.00
40845 (-)	<0.2	1.72	8	<5	238	<0.5	<1	0.12	<0.5	34	3.9	33.6	23.9	2.38
40846 (-)	<0.2	1.26	6	<5	266	<0.5	<1	0.12	<0.5	35	4.6	29.3	43.8	2.11
40847 (-)	<0.2	2.09	11	<5	247	<0.5	<1	0.17	<0.5	23	6.4	34.1	29.5	3.30
40848 (-)	<0.2	2.01	11	<5	319	0.6	<1	0.15	<0.5	38	6.4	35.3	30.6	2.88
40849 (-)	<0.2	1.70	11	<5	372	0.6	<1	0.25	<0.5	32	7.4	35.0	31.4	2.88
40850 (-)	<0.2	1.88	11	<5	223	<0.5	<1	0.16	<0.5	18	4.4	32.3	13.9	3.19
40851 (-)	<0.2	1.88	8	<5	464	0.8	<1	0.27	<0.5	38	6.8	38.1	58.9	3.22
40852 (-)	<0.2	0.54	4	<5	114	<0.5	<1	0.06	<0.5	19	1.3	18.2	13.3	1.25
40853 (-)	<0.2	0.86	5	<5	274	<0.5	<1	0.14	<0.5	28	4.7	23.8	47.1	1.91
40854 (-)	<0.2	1.44	9	<5	395	<0.5	<1	0.32	<0.5	28	5.4	28.2	55.7	2.44
40860 (-)	<0.2	2.42	9	<5	192	0.6	<1	0.72	<0.5	23	10.2	12.7	13.4	4.02

Certified By:

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SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40861 (-)	<0.2	2.33	12	<5	213	0.5	<1	0.37	<0.5	21	7.9	30.9	32.9	3.69
40862 (-)	<0.2	1.59	7	<5	191	<0.5	<1	0.26	<0.5	19	5.1	22.8	27.2	2.88
40863 (-)	<0.2	2.80	6	<5	180	0.7	<1	0.79	<0.5	20	7.5	7.9	14.0	4.83
40864 (-)	<0.2	2.49	7	<5	161	<0.5	<1	0.39	<0.5	17	7.3	17.6	17.1	3.53
40865 (-)	<0.2	1.89	8	<5	160	<0.5	<1	0.44	<0.5	19	5.4	16.9	24.3	3.46
40866 (-)	<0.2	1.79	9	<5	191	<0.5	<1	0.19	<0.5	24	5.2	24.1	38.9	3.38
40867 (-)	<0.2	1.98	7	<5	229	<0.5	<1	0.39	<0.5	21	7.1	14.8	29.9	3.51
40868 (-)	<0.2	1.82	16	<5	233	0.6	<1	0.15	<0.5	32	8.2	25.0	24.3	3.29
40869 (-)	<0.2	2.06	7	<5	408	<0.5	<1	0.44	<0.5	28	7.2	19.7	29.4	3.27
40870 (-)	<0.2	1.99	9	<5	210	<0.5	<1	0.29	<0.5	30	6.9	24.5	25.0	2.93
40871 (-)	<0.2	2.21	6	<5	290	<0.5	<1	0.73	<0.5	14	10.7	126	24.0	3.12
40872 (-)	<0.2	2.06	8	<5	162	<0.5	<1	0.33	<0.5	20	6.4	20.7	17.2	3.07
40873 (-)	<0.2	1.93	10	<5	146	<0.5	<1	0.15	<0.5	24	6.2	30.1	17.6	2.63
40874 (-)	<0.2	2.01	10	<5	185	<0.5	<1	0.17	<0.5	25	6.6	30.5	18.6	2.92
40875 (-)	<0.2	2.34	9	<5	172	<0.5	<1	0.28	<0.5	18	8.8	26.5	16.6	3.10
40876 (-)	<0.2	2.24	9	<5	166	<0.5	<1	0.24	<0.5	19	8.4	27.6	21.0	2.95
40877 (-)	<0.2	2.28	9	<5	166	<0.5	<1	0.23	<0.5	18	8.1	27.6	17.0	3.44
40878 (-)	<0.2	2.45	7	<5	157	<0.5	<1	0.48	<0.5	16	12.0	18.4	17.2	3.80
40879 (-)	<0.2	1.25	13	<5	355	<0.5	<1	0.19	<0.5	42	7.2	16.5	57.0	3.14
40880 (-)	<0.2	1.92	9	<5	249	<0.5	<1	0.19	<0.5	26	7.9	22.8	42.5	3.54
40881 (-)	<0.2	1.59	12	<5	271	<0.5	<1	0.17	<0.5	34	5.2	20.6	46.8	3.09
40882 (-)	<0.2	2.21	10	<5	274	<0.5	<1	0.17	<0.5	33	7.4	25.9	44.3	3.79
40883 (-)	<0.2	2.23	9	<5	224	<0.5	<1	0.17	<0.5	27	8.1	22.8	50.7	4.25
40884 (-)	<0.2	1.41	12	<5	343	<0.5	<1	0.19	<0.5	40	5.6	18.9	55.5	3.24
40885 (-)	<0.2	1.28	11	<5	340	<0.5	<1	0.22	<0.5	44	5.5	21.0	51.6	2.76
40886 (-)	<0.2	2.12	9	<5	247	0.6	<1	0.44	<0.5	25	16.1	13.1	59.7	5.75
40887 (-)	<0.2	1.31	9	<5	342	<0.5	<1	0.20	<0.5	41	5.3	21.0	48.1	2.77
40888 (-)	<0.2	2.04	9	<5	366	0.5	<1	0.22	<0.5	49	7.5	23.2	61.8	3.72
40889 (-)	<0.2	1.19	12	<5	307	<0.5	<1	0.18	<0.5	41	6.0	12.4	58.7	3.61
40890 (-)	<0.2	2.52	4	<5	447	<0.5	<1	0.51	<0.5	23	22.8	43.9	24.6	4.33
40891 (-)	<0.2	2.01	7	<5	374	0.5	<1	0.43	<0.5	45	5.2	15.8	73.9	3.94
40892 (-)	<0.2	2.24	6	<5	434	0.5	<1	0.42	<0.5	36	5.1	9.2	69.7	5.36

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40893 (-)	<0.2	2.08	8	<5	301	<0.5	<1	0.24	<0.5	31	6.2	24.4	53.0	3.43
40894 (-)	<0.2	1.43	9	<5	159	<0.5	3	0.16	<0.5	22	8.7	25.9	41.8	2.17
40895 (-)	<0.2	2.32	6	<5	427	<0.5	4	0.37	<0.5	27	21.7	58.3	29.4	3.97
40896 (-)	<0.2	1.35	6	<5	257	<0.5	4	0.21	<0.5	31	10.8	30.0	34.5	2.23
40897 (-)	<0.2	2.60	6	<5	457	<0.5	5	0.48	<0.5	26	24.4	61.8	31.5	4.57
40898 (-)	<0.2	2.21	13	<5	256	0.6	2	0.26	<0.5	32	12.5	37.2	40.1	2.90
40899 (-)	<0.2	2.11	19	<5	246	0.6	4	0.15	<0.5	26	8.5	40.3	36.9	3.09
40900 (-)	<0.2	2.20	89	<5	254	0.7	4	0.39	<0.5	33	14.0	28.5	30.4	4.64
40901 (-)	<0.2	2.26	35	<5	255	0.6	4	0.32	<0.5	27	11.3	35.3	29.3	4.27
40902 (-)	<0.2	1.85	13	<5	228	0.6	2	0.17	<0.5	25	10.2	34.8	29.4	3.00
40903 (-)	<0.2	1.85	13	<5	235	<0.5	3	0.18	<0.5	20	10.2	33.5	29.6	2.81
40904 (-)	<0.2	2.12	7	<5	144	<0.5	<1	0.61	<0.5	15	8.5	16.3	30.6	3.44
40905 (-)	<0.2	2.50	10	<5	311	0.5	<1	0.20	<0.5	23	8.9	34.2	36.0	3.43
40906 (-)	<0.2	1.96	8	<5	209	<0.5	<1	0.28	<0.5	20	5.5	30.3	29.0	2.76
40907 (-)	<0.2	2.00	8	<5	207	0.7	<1	0.82	<0.5	21	11.6	40.2	47.0	3.74
40908 (-)	<0.2	2.17	9	<5	226	<0.5	<1	0.38	<0.5	19	7.3	28.9	12.4	3.06
40909 (-)	<0.2	2.28	10	<5	230	0.5	<1	0.33	<0.5	36	7.4	31.2	18.5	3.26
40910 (-)	<0.2	2.63	8	<5	203	<0.5	<1	0.24	<0.5	11	7.1	16.2	7.0	3.71
40911 (-)	<0.2	2.21	10	<5	180	0.5	<1	0.17	<0.5	28	12.5	31.5	37.5	3.38
40912 (-)	<0.2	2.01	7	<5	719	<0.5	<1	0.20	<0.5	16	5.6	19.6	6.4	2.89
40913 (-)	<0.2	1.89	9	<5	296	0.5	<1	0.22	<0.5	33	7.4	32.3	20.6	2.72
40914 (-)	<0.2	2.34	8	<5	178	0.5	<1	0.39	<0.5	23	8.9	28.4	11.7	3.19
40915 (-)	<0.2	1.97	7	<5	117	<0.5	<1	0.69	<0.5	15	6.8	17.2	5.1	3.51
40916 (-)	<0.2	1.96	6	<5	202	<0.5	<1	0.38	<0.5	23	5.8	22.5	14.0	3.13
40917 (-)	<0.2	1.90	9	<5	230	<0.5	<1	0.22	<0.5	23	6.5	29.2	15.0	2.79
40918 (-)	<0.2	1.71	9	<5	306	<0.5	<1	0.32	<0.5	34	8.1	33.4	26.0	2.64
40919 (-)	<0.2	1.66	7	<5	102	<0.5	<1	0.31	<0.5	15	5.0	22.7	9.4	3.00
40920 (-)	<0.2	1.55	7	<5	207	<0.5	<1	0.31	<0.5	24	6.3	26.0	15.7	2.37
40921 (-)	<0.2	1.26	7	<5	133	<0.5	<1	0.35	<0.5	20	5.4	20.5	11.2	2.18
40922 (-)	<0.2	1.82	9	<5	161	<0.5	<1	0.30	<0.5	22	6.3	27.5	14.1	2.86
40923 (-)	<0.2	1.66	7	<5	245	<0.5	<1	0.34	<0.5	27	5.2	20.7	12.1	2.73
40924 (-)	<0.2	1.61	8	<5	278	<0.5	<1	0.26	<0.5	29	5.9	28.3	24.7	2.64

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40925 (-)	<0.2	1.77	9	<5	272	0.6	<1	0.46	<0.5	39	7.7	25.9	34.6	3.29
40926 (-)	<0.2	1.74	9	<5	190	<0.5	<1	0.26	<0.5	19	6.2	29.9	13.9	2.94
40927 (-)	<0.2	2.24	9	<5	156	0.5	<1	0.23	<0.5	28	7.5	31.1	21.0	3.39
40928 (-)	<0.2	1.91	9	<5	186	<0.5	<1	0.22	<0.5	24	6.0	28.8	13.4	3.18
40929 (-)	<0.2	1.97	8	<5	188	<0.5	<1	0.41	<0.5	16	6.8	22.8	9.6	3.14
40930 (-)	<0.2	1.77	10	<5	259	<0.5	<1	0.28	<0.5	33	7.3	31.1	20.0	2.82
40931 (-)	<0.2	2.12	8	<5	409	0.6	<1	0.81	<0.5	22	8.5	13.5	18.8	3.35
40932 (-)	<0.2	2.19	9	<5	215	<0.5	<1	0.35	<0.5	18	8.5	21.9	30.8	3.31
40933 (-)	<0.2	2.35	10	<5	257	<0.5	<1	0.33	<0.5	19	8.2	29.5	23.9	3.15
40934 (-)	<0.2	1.77	8	<5	210	<0.5	<1	0.46	<0.5	15	7.5	16.7	23.2	3.10
40935 (-)	<0.2	2.12	10	<5	316	0.6	<1	0.21	<0.5	39	7.4	30.7	36.0	3.11
40936 (-)	<0.2	2.34	7	<5	307	<0.5	<1	0.40	<0.5	20	6.5	20.1	121	3.80
40938 (-)	<0.2	1.87	5	<5	200	<0.5	<1	0.43	<0.5	12	6.5	13.5	32.9	3.41
40938a (-)	<0.2	2.17	10	<5	216	<0.5	<1	0.20	<0.5	23	6.7	34.5	37.8	3.02
40939 (-)	<0.2	1.85	9	<5	200	<0.5	<1	0.27	<0.5	19	8.2	26.7	20.1	2.91
40940 (-)	<0.2	1.42	7	<5	285	<0.5	<1	0.35	<0.5	34	5.4	23.3	27.7	2.31
40941 (-)	<0.2	2.40	5	<5	438	<0.5	<1	0.35	<0.5	15	13.1	24.9	28.1	3.75
40942 (-)	<0.2	2.40	7	<5	325	0.5	<1	0.43	<0.5	34	13.1	27.2	43.4	3.44
40943 (-)	<0.2	2.17	8	<5	233	<0.5	<1	0.35	<0.5	19	12.4	24.7	64.2	3.41
40944 (-)	<0.2	2.67	9	<5	149	0.5	<1	0.67	<0.5	19	8.9	16.9	15.4	4.66
40945 (-)	<0.2	1.94	6	<5	263	0.5	<1	0.66	<0.5	26	13.0	14.1	19.3	3.37
40946 (-)	<0.2	0.81	6	<5	138	<0.5	<1	0.61	<0.5	31	6.1	56.2	19.8	3.47
40947 (-)	<0.2	0.85	6	<5	156	<0.5	<1	0.63	<0.5	26	6.0	42.2	24.7	3.10
40948 (-)	<0.2	1.30	6	<5	330	<0.5	<1	0.72	<0.5	25	6.7	24.5	34.6	2.17
40949 (-)	<0.2	1.56	8	<5	225	<0.5	<1	0.31	<0.5	24	7.1	23.8	37.9	2.90
40950 (-)	<0.2	1.24	3	<5	363	0.6	<1	0.19	<0.5	30	4.2	8.3	52.7	4.36
40951 (-)	<0.2	4.60	5	<5	346	0.6	<1	0.35	<0.5	20	20.2	17.4	41.9	7.41
40952 (-)	<0.2	0.99	7	<5	242	<0.5	<1	0.34	<0.5	23	4.8	28.1	32.0	1.97
40953 (-)	<0.2	1.03	7	<5	273	<0.5	<1	0.39	<0.5	24	5.7	30.3	38.1	2.06
40954 (-)	<0.2	1.50	9	<5	348	0.5	<1	0.51	<0.5	30	6.9	39.3	49.2	2.80
40955 (-)	<0.2	1.37	10	<5	357	0.5	<1	0.52	<0.5	30	7.9	39.4	49.4	2.68
40956 (-)	<0.2	1.56	6	<5	187	<0.5	<1	0.16	<0.5	21	4.5	19.9	28.7	2.90

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40957 (-)	<0.2	1.67	7	<5	198	0.5	<1	0.19	<0.5	26	4.4	20.2	16.0	2.96
40958 (-)	<0.2	1.87	6	<5	212	0.6	<1	0.20	<0.5	31	3.8	17.8	15.7	3.44
40959 (-)	<0.2	1.73	5	<5	170	<0.5	<1	0.18	<0.5	29	4.0	16.8	15.0	2.88
40960 (-)	<0.2	2.43	9	<5	449	0.6	<1	0.51	<0.5	20	9.3	28.3	26.3	4.16
40961 (-)	<0.2	1.88	9	<5	303	<0.5	<1	0.19	<0.5	19	7.9	31.2	30.9	3.31
40962 (-)	<0.2	2.19	9	<5	380	<0.5	<1	0.21	<0.5	21	8.8	31.3	36.7	3.82
40963 (-)	<0.2	1.81	5	<5	698	0.6	<1	0.39	<0.5	43	14.3	15.2	52.4	7.47
40964 (-)	<0.2	2.11	5	<5	585	<0.5	<1	0.33	<0.5	34	15.7	19.7	74.0	6.66
40965 (-)	<0.2	1.96	6	<5	415	0.5	<1	0.21	<0.5	27	10.1	22.5	56.4	4.86
40966 (-)	<0.2	2.58	8	<5	570	0.6	<1	0.80	<0.5	16	12.7	26.4	7.9	4.45
40967 (-)	<0.2	2.50	9	<5	608	0.6	<1	0.65	<0.5	19	12.4	25.0	16.9	4.60
40968 (-)	<0.2	1.91	9	<5	449	<0.5	<1	0.34	<0.5	16	6.8	27.4	9.7	3.16
40969 (-)	<0.2	4.03	5	<5	564	0.7	<1	1.00	<0.5	20	6.4	39.9	16.7	7.49
40970 (-)	<0.2	3.98	4	<5	505	0.6	<1	0.97	<0.5	25	5.7	35.4	17.4	8.05
40971 (-)	<0.2	4.10	5	<5	508	0.7	<1	0.99	<0.5	25	5.6	34.1	17.0	8.05
40972 (-)	<0.2	2.20	10	<5	336	0.6	<1	0.64	<0.5	18	7.0	27.1	14.0	3.32
40973 (-)	<0.2	2.62	11	<5	356	0.8	<1	0.92	<0.5	20	8.1	26.4	16.8	4.06
40974 (-)	<0.2	2.49	9	<5	289	0.7	<1	1.18	<0.5	20	8.2	24.3	19.2	4.17
40975 (-)	<0.2	2.02	9	<5	291	0.5	<1	0.45	<0.5	19	6.6	27.6	14.6	2.97
40976 (-)	<0.2	2.00	10	<5	1500	<0.5	<1	0.59	<0.5	16	5.8	25.7	10.5	2.81
40977 (-)	<0.2	2.17	11	<5	1640	<0.5	<1	0.50	<0.5	17	6.1	28.6	11.3	2.97
40978 (-)	<0.2	1.94	9	<5	524	0.5	<1	0.27	<0.5	21	6.3	29.8	14.8	2.85
40979 (-)	<0.2	1.91	9	<5	570	<0.5	<1	0.30	<0.5	22	6.8	28.0	13.9	2.79

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40210 (-)	<5	<1	<1	0.09	8	6	0.41	181	1.5	<0.01	4.2	452	6.7	22
40211 (-)	<5	<1	<1	0.05	7	7	0.69	391	0.7	0.02	11.6	1440	3.7	<10
40212 (-)	<5	<1	<1	0.12	7	18	0.89	480	1.8	0.01	18.3	621	10.8	28
40213 (-)	5	<1	<1	0.05	18	12	0.87	506	0.5	0.01	9.4	733	6.8	11
40214 (-)	<5	<1	<1	0.25	6	9	0.57	502	0.7	0.01	7.9	1300	5.6	39
40215 (-)	<5	<1	<1	0.42	5	16	0.98	732	1.8	0.02	7.5	1410	8.2	79
40216 (-)	5	<1	<1	0.30	22	12	0.96	821	1.1	0.02	7.9	4140	5.2	63
40217 (-)	<5	<1	<1	0.19	15	12	0.69	434	1.2	0.02	12.3	706	8.4	31
40218 (-)	<5	<1	<1	0.14	8	14	0.71	349	2.4	0.01	13.9	417	8.7	28
40219 (-)	<5	<1	<1	0.06	11	12	0.58	341	1.0	0.01	16.7	851	8.4	20
40220 (-)	5	<1	<1	0.10	17	10	0.63	396	1.0	0.01	7.6	923	6.7	24
40221 (-)	<5	<1	2	0.15	10	12	0.70	303	1.1	0.01	16.5	981	6.6	35
40222 (-)	6	<1	<1	0.85	11	15	1.53	695	0.7	0.02	28.7	1220	7.1	191
40223 (-)	<5	<1	<1	0.14	7	13	0.77	411	1.7	0.01	26.4	1050	9.0	34
40224 (-)	6	<1	1	0.12	12	9	0.46	389	1.3	0.02	4.1	347	8.2	38
40225 (-)	<5	<1	<1	0.07	20	13	0.69	431	1.5	0.02	22.6	586	7.8	21
40226 (-)	<5	<1	<1	0.07	10	17	0.65	302	0.9	0.01	12.2	532	8.2	21
40227 (-)	<5	<1	<1	0.08	10	14	0.70	472	1.3	<0.01	19.7	466	12.0	25
40228 (-)	9	<1	1	0.07	7	11	0.97	594	1.6	<0.01	9.9	1390	11.1	21
40229 (-)	<5	<1	<1	0.24	10	15	1.00	393	1.3	0.01	18.5	370	8.8	45
40230 (-)	<5	<1	<1	0.06	8	13	0.59	395	1.3	0.02	17.8	400	10.8	19
40231 (-)	<5	<1	<1	0.07	9	13	0.61	440	1.5	<0.01	22.1	481	10.9	18
40232 (-)	5	<1	<1	0.61	10	13	1.20	1030	0.9	0.03	6.8	2520	6.0	94
40233 (-)	8	<1	<1	1.18	24	17	1.43	1080	<0.5	0.02	11.3	3210	5.5	275
40234 (-)	5	<1	<1	0.58	16	18	1.04	750	0.9	0.04	5.2	3050	5.1	77
40235 (-)	5	<1	<1	0.44	15	15	1.10	793	1.2	0.04	11.7	1550	5.8	80
40236 (-)	5	<1	<1	0.64	21	15	1.01	894	1.1	0.03	4.4	2430	3.9	115
40237 (-)	7	<1	<1	0.48	25	15	1.04	1090	1.0	0.02	6.5	1810	4.8	106
40238 (-)	<5	<1	<1	0.10	12	11	0.55	812	1.8	0.02	13.5	759	5.9	22
40239 (-)	<5	<1	<1	0.48	14	10	0.76	506	1.3	0.03	6.2	1210	4.7	98
40240 (-)	6	<1	<1	0.55	19	16	1.07	817	1.6	0.04	5.9	1750	5.7	98
40241 (-)	7	<1	<1	0.19	6	17	1.31	908	1.3	0.09	5.4	2580	8.2	26

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40242 (-)	<5	<1	<1	0.17	18	11	0.74	385	1.1	0.01	18.4	784	6.9	27
40243 (-)	5	<1	<1	0.28	10	12	0.91	671	1.3	0.03	8.3	964	8.8	48
40244 (-)	6	<1	2	0.72	15	12	1.21	932	1.0	0.02	6.4	2680	5.6	125
40245 (-)	<5	<1	<1	0.44	6	11	0.98	638	4.6	0.04	9.2	2680	7.2	43
40246 (-)	7	<1	3	1.40	12	6	1.48	400	13.9	0.04	11.6	1850	11.4	177
40247 (-)	<5	<1	<1	0.07	9	13	0.65	291	2.7	<0.01	16.3	243	10.8	19
40248 (-)	<5	<1	<1	0.11	12	9	0.71	508	2.2	0.02	17.8	1020	6.6	19
40249 (-)	<5	<1	<1	0.12	8	10	0.72	349	1.8	0.02	12.3	775	7.4	23
40250 (-)	<5	<1	<1	0.06	11	11	0.65	318	0.6	0.02	13.2	782	7.4	14
40251 (-)	<5	<1	<1	0.14	15	14	0.71	353	1.4	0.02	13.8	852	8.3	31
40252 (-)	<5	<1	<1	0.07	15	12	0.58	404	1.2	0.02	17.5	716	7.8	23
40253 (-)	<5	<1	<1	0.05	11	10	0.49	295	1.3	0.01	17.6	730	6.6	15
40254 (-)	<5	<1	<1	0.08	11	9	0.54	226	<0.5	0.02	10.7	654	5.7	17
40255 (-)	<5	<1	<1	0.07	12	11	0.54	258	1.7	0.02	13.9	734	7.7	19
40256 (-)	<5	<1	<1	0.07	11	12	0.63	385	1.6	0.02	22.8	700	7.5	19
40257 (-)	<5	<1	<1	0.13	9	14	0.61	675	2.2	<0.01	14.4	436	9.9	36
40258 (-)	<5	<1	2	0.18	11	5	0.38	327	1.9	<0.01	9.5	257	6.8	48
40259 (-)	<5	<1	<1	0.11	17	11	0.80	310	1.4	<0.01	19.6	302	9.0	27
40710 (-)	10	<1	2	0.20	18	20	1.56	1010	1.1	0.01	9.4	3550	7.6	27
40711 (-)	<5	<1	<1	0.34	15	11	1.12	449	1.2	0.02	16.2	1390	5.8	50
40712 (-)	<5	<1	<1	0.07	16	10	0.63	299	1.2	0.02	18.4	625	8.3	16
40713 (-)	<5	<1	<1	0.19	17	11	0.81	413	1.4	0.02	15.5	910	8.7	31
40714 (-)	9	<1	<1	0.11	6	11	1.25	887	1.3	0.06	2.8	2390	6.8	22
40715 (-)	6	<1	2	0.40	6	10	0.88	523	0.9	0.01	8.7	1450	7.9	74
40716 (-)	7	<1	1	0.45	6	17	1.28	829	1.3	0.02	12.5	1230	9.4	83
40717 (-)	<5	<1	<1	0.12	15	12	0.71	343	1.0	0.01	17.2	744	8.0	24
40718 (-)	6	<1	3	0.60	10	10	1.14	698	1.5	0.04	9.4	1580	7.7	94
40719 (-)	<5	<1	<1	0.08	8	14	0.68	333	1.6	<0.01	18.5	578	10.5	23
40720 (-)	<5	<1	<1	0.08	9	11	0.56	366	1.5	0.01	18.0	692	8.6	24
40721 (-)	5	<1	<1	0.26	13	11	0.87	479	0.6	0.01	11.9	721	7.3	44
40722 (-)	6	<1	<1	0.34	11	15	1.05	651	0.9	0.02	15.0	1580	9.3	59
40723 (-)	6	<1	<1	0.59	16	14	1.15	789	1.0	0.02	19.8	1350	8.1	118

Certified By:

*Ron Cardinal*





# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40724 (-)	7	<1	<1	0.45	19	12	1.01	729	1.1	0.04	11.4	2840	8.2	84
40725 (-)	<5	<1	<1	0.44	21	10	0.97	642	1.0	0.04	9.6	2510	5.9	71
40726 (-)	7	<1	<1	0.58	17	11	1.14	863	<0.5	0.03	7.6	2900	6.6	90
40727 (-)	<5	<1	<1	0.31	17	11	0.98	668	1.9	<0.01	18.1	734	8.2	73
40728 (-)	<5	<1	<1	0.52	7	12	1.36	869	1.2	0.02	16.0	1180	8.9	124
40729 (-)	5	<1	<1	0.32	9	10	1.19	571	0.8	0.03	15.0	845	9.0	65
40730 (-)	<5	<1	<1	0.06	10	9	0.56	387	1.1	0.01	21.2	342	9.3	18
40731 (-)	6	<1	<1	0.04	19	12	1.03	633	0.8	0.01	16.4	810	8.2	14
40732 (-)	<5	<1	2	0.19	8	12	0.78	452	0.7	0.03	13.3	1220	8.3	33
40733 (-)	5	<1	<1	0.07	9	12	0.74	488	1.5	<0.01	13.3	607	11.0	21
40734 (-)	<5	<1	<1	0.40	14	13	1.13	536	0.9	0.01	13.6	512	6.7	66
40735 (-)	<5	<1	<1	0.60	11	12	1.02	556	0.9	0.02	12.1	1490	5.1	111
40736 (-)	<5	<1	<1	0.37	16	12	0.89	507	0.9	0.03	12.7	1280	7.4	82
40737 (-)	<5	<1	<1	0.81	17	11	1.28	656	<0.5	0.03	9.3	3060	5.9	143
40738 (-)	<5	<1	<1	0.29	6	8	0.59	413	0.7	0.03	15.3	1040	6.3	52
40739 (-)	<5	<1	<1	0.08	9	11	0.39	196	1.0	<0.01	13.5	286	13.3	17
40740 (-)	<5	<1	<1	0.04	10	7	0.41	307	1.2	0.01	14.2	143	8.8	<10
40741 (-)	<5	<1	<1	0.05	16	12	0.52	298	1.5	0.01	11.2	488	6.8	15
40742 (-)	<5	<1	1	0.11	7	16	0.58	412	1.5	<0.01	14.1	380	9.8	37
40743 (-)	<5	<1	<1	0.13	15	14	0.68	460	1.0	0.02	20.3	449	9.4	39
40744 (-)	<5	<1	3	0.33	7	15	0.90	595	0.7	0.01	7.4	1010	6.8	71
40745 (-)	<5	<1	<1	0.14	10	12	0.69	396	1.1	0.01	15.9	480	8.8	34
40746 (-)	<5	<1	<1	0.05	16	13	0.75	469	0.8	0.01	14.0	467	9.7	17
40747 (-)	<5	<1	<1	0.26	9	14	0.74	441	<0.5	0.02	13.1	619	7.2	60
40748 (-)	<5	<1	1	0.23	10	18	0.73	428	0.9	0.02	11.4	549	6.8	51
40749 (-)	<5	<1	<1	0.55	14	13	0.88	570	1.2	0.02	2.7	1160	6.1	120
40750 (-)	<5	<1	<1	0.13	11	15	0.62	289	0.9	0.01	13.0	446	7.9	31
40751 (-)	<5	<1	<1	0.20	10	13	0.65	402	1.4	0.02	11.8	424	8.9	42
40752 (-)	<5	<1	<1	0.31	9	14	0.75	470	1.9	0.01	8.6	652	8.3	58
40753 (-)	<5	<1	<1	0.18	9	15	0.78	444	1.4	0.01	12.5	700	7.8	41
40754 (-)	<5	<1	<1	0.18	8	13	0.80	386	1.6	0.01	13.2	924	7.2	40
40755 (-)	<5	<1	<1	0.30	8	12	0.68	513	0.9	0.02	12.6	1370	6.3	55

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40760 (-)	<5	<1	<1	0.69	9	15	1.09	768	1.3	<0.01	13.9	962	9.2	188
40761 (-)	<5	<1	<1	0.15	20	11	0.71	323	1.7	0.01	17.5	156	9.9	39
40762 (-)	<5	<1	2	0.91	9	10	1.01	524	1.6	<0.01	8.2	1380	7.1	165
40763 (-)	<5	<1	2	0.43	7	12	0.82	484	2.2	<0.01	13.9	366	10.4	85
40764 (-)	5	<1	<1	1.06	13	16	1.36	424	0.9	0.02	5.5	2730	6.9	195
40765 (-)	<5	<1	<1	0.12	9	10	0.49	303	1.4	<0.01	14.2	270	8.0	32
40766 (-)	<5	<1	<1	0.12	8	9	0.34	233	3.5	<0.01	11.7	312	7.5	33
40767 (-)	<5	<1	<1	0.13	17	4	0.14	606	1.7	<0.01	11.3	733	5.1	18
40768 (-)	<5	<1	<1	0.30	10	8	0.55	521	1.3	<0.01	10.7	556	8.2	59
40769 (-)	5	<1	<1	0.35	38	13	0.70	398	2.0	<0.01	28.9	274	10.4	88
40770 (-)	<5	<1	<1	0.18	10	15	0.55	282	2.4	<0.01	21.2	524	11.5	54
40771 (-)	<5	<1	<1	0.21	17	11	0.73	537	2.3	<0.01	7.7	137	7.1	28
40772 (-)	<5	<1	1	0.44	9	12	0.70	430	2.0	<0.01	16.6	197	9.5	96
40773 (-)	<5	<1	<1	0.43	13	13	1.04	476	1.3	<0.01	19.1	345	8.1	86
40774 (-)	<5	<1	<1	0.10	13	14	0.53	427	2.4	<0.01	16.4	381	9.3	27
40775 (-)	<5	<1	<1	0.12	11	14	0.81	503	2.1	0.01	23.0	308	10.3	33
40776 (-)	5	<1	<1	0.44	9	11	0.68	653	1.7	<0.01	8.4	1390	6.8	103
40777 (-)	<5	<1	<1	0.12	8	11	0.36	524	2.0	<0.01	10.7	517	8.3	31
40778 (-)	<5	<1	1	0.40	15	17	0.75	1010	5.5	<0.01	10.5	1130	8.9	73
40779 (-)	<5	<1	<1	0.10	8	13	0.56	526	1.1	<0.01	19.2	332	10.3	31
40780 (-)	<5	<1	<1	0.05	14	12	0.56	386	1.8	<0.01	20.0	170	10.7	17
40781 (-)	<5	<1	<1	0.30	2	14	1.63	597	1.3	0.02	32.0	344	12.9	68
40782 (-)	10	<1	1	1.28	8	23	2.69	1330	2.4	<0.01	9.4	566	10.3	234
40783 (-)	5	<1	<1	0.48	27	16	1.24	677	0.8	0.01	17.1	208	10.1	105
40784 (-)	<5	<1	2	0.07	8	14	0.49	265	1.8	<0.01	14.0	366	11.7	27
40785 (-)	6	<1	<1	0.52	3	15	1.40	550	2.1	0.04	9.3	781	8.2	87
40786 (-)	<5	<1	<1	0.06	9	13	0.63	404	1.1	<0.01	20.9	260	11.0	24
40787 (-)	10	<1	1	1.00	8	15	2.07	989	0.9	<0.01	9.2	1500	7.1	176
40788 (-)	<5	<1	1	0.20	3	13	1.62	236	<0.5	0.03	60.7	390	3.7	25
40789 (-)	8	<1	<1	0.55	35	14	1.55	1130	0.9	0.01	14.7	2530	6.9	109
40790 (-)	6	<1	<1	0.32	12	12	0.67	955	1.5	<0.01	10.2	471	8.4	82
40791 (-)	10	<1	1	1.50	2	13	2.72	1300	1.1	<0.01	9.6	584	7.5	280

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

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SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40792 (-)		7	<1	6	0.68	7	13	1.99	826	0.9	<0.01	9.6	979	8.0	88
40793 (-)		8	<1	2	0.68	11	24	2.26	1180	1.2	0.01	5.3	1320	6.7	92
40794 (-)		7	<1	2	0.99	11	16	2.18	635	<0.5	0.02	6.1	1210	5.2	149
40795 (-)		<5	<1	<1	0.08	6	10	0.46	885	2.2	<0.01	12.4	621	8.6	28
40796 (-)		6	<1	<1	1.08	33	8	1.41	772	1.1	<0.01	5.5	595	9.2	139
40797 (-)		11	<1	4	1.25	17	27	3.01	1210	1.0	0.02	9.0	989	8.0	225
40798 (-)		<5	<1	<1	0.04	15	13	0.83	410	1.6	<0.01	24.8	446	14.5	13
40799 (-)		<5	<1	<1	0.30	13	14	1.17	458	1.2	0.01	16.2	449	8.0	52
40800 (-)		<5	<1	1	0.33	6	17	0.99	398	1.8	0.04	28.6	711	5.9	47
40801 (-)		6	<1	2	0.52	10	16	1.10	477	1.4	<0.01	19.8	703	9.4	76
40802 (-)		<5	<1	<1	0.08	13	12	0.71	407	2.3	0.02	23.1	484	7.5	16
40803 (-)		<5	<1	2	0.04	17	12	0.55	259	1.1	0.01	16.7	190	8.5	14
40804 (-)		<5	<1	<1	0.53	5	13	1.37	374	2.8	<0.01	40.9	348	7.1	105
40805 (-)		<5	<1	1	0.09	9	11	0.47	337	1.4	0.01	13.4	819	8.0	28
40806 (-)		7	<1	3	0.10	10	14	0.85	388	1.2	0.04	8.8	1790	6.8	14
40807 (-)		<5	<1	2	0.46	27	11	0.88	666	1.6	0.02	10.8	2850	4.2	61
40808 (-)		<5	<1	3	0.06	12	8	0.63	360	0.6	0.04	7.0	1330	7.0	<10
40809 (-)		<5	<1	1	0.04	8	11	0.50	460	1.3	0.02	13.4	371	8.8	12
40810 (-)		<5	<1	<1	0.04	13	10	0.45	255	0.8	<0.01	17.1	173	8.7	11
40811 (-)		<5	<1	<1	0.08	10	12	0.51	275	2.6	<0.01	18.6	218	11.6	20
40812 (-)		<5	<1	3	0.25	7	13	0.85	364	2.1	<0.01	33.5	145	7.0	33
40813 (-)		<5	<1	3	0.25	11	16	0.65	323	2.0	<0.01	44.7	169	9.3	70
40814 (-)		<5	<1	<1	0.06	9	10	0.43	285	1.8	<0.01	19.8	314	7.6	16
40815 (-)		<5	<1	2	0.13	11	10	0.56	453	1.7	<0.01	28.3	145	6.8	28
40816 (-)		<5	<1	1	0.23	6	6	0.35	585	1.9	<0.01	11.8	340	5.0	44
40817 (-)		<5	<1	<1	0.04	9	8	0.31	377	1.5	<0.01	17.0	156	7.7	12
40818 (-)		<5	<1	<1	0.06	14	10	0.46	337	1.6	<0.01	26.9	328	9.3	16
40819 (-)		<5	<1	<1	0.04	12	10	0.36	213	1.8	<0.01	35.5	239	8.1	12
40820 (-)		<5	<1	1	0.04	11	10	0.53	306	1.7	<0.01	42.2	182	6.8	11
40821 (-)		<5	<1	<1	0.05	15	13	0.54	452	1.3	0.01	27.4	234	8.8	15
40822 (-)		<5	<1	<1	0.20	6	5	0.34	237	1.8	<0.01	9.4	177	4.1	32
40823 (-)		<5	<1	3	0.04	24	6	0.18	92	0.9	<0.01	10.7	152	15.6	11

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40824 (-)	<5	<1	1	0.04	9	9	0.33	186	2.0	<0.01	14.3	158	11.9	15
40825 (-)	<5	<1	<1	0.04	15	10	0.39	253	1.3	<0.01	18.2	141	10.3	11
40826 (-)	<5	<1	<1	0.04	16	8	0.30	136	1.0	<0.01	13.8	127	10.0	12
40827 (-)	<5	<1	1	0.17	22	5	0.22	195	1.4	<0.01	15.6	247	13.1	64
40828 (-)	<5	<1	<1	0.11	24	7	0.30	252	2.0	<0.01	21.0	272	18.0	30
40829 (-)	<5	<1	<1	0.07	16	13	0.51	502	2.9	<0.01	28.4	180	11.4	16
40830 (-)	<5	<1	<1	0.08	14	9	0.40	442	1.6	<0.01	29.6	234	9.2	18
40831 (-)	<5	<1	2	0.06	16	13	0.53	413	2.6	<0.01	56.7	209	10.4	17
40832 (-)	<5	<1	2	0.06	13	13	0.60	356	2.4	0.01	25.6	224	10.1	15
40833 (-)	<5	<1	<1	0.05	13	12	0.50	247	2.3	<0.01	22.6	201	10.7	14
40834 (-)	<5	<1	<1	0.06	12	14	0.61	349	2.1	0.01	25.4	211	10.4	15
40835 (-)	<5	<1	<1	0.07	14	13	0.61	437	4.0	0.02	28.1	249	10.5	17
40836 (-)	<5	<1	<1	0.04	12	12	0.42	184	3.3	<0.01	23.5	201	13.2	13
40837 (-)	<5	<1	<1	0.03	13	8	0.30	182	3.2	<0.01	12.8	192	10.9	11
40838 (-)	<5	<1	<1	0.05	13	12	0.54	362	3.7	0.01	23.9	311	9.4	13
40839 (-)	<5	<1	<1	0.05	15	11	0.47	336	1.9	<0.01	23.8	216	9.5	16
40840 (-)	<5	<1	2	0.07	19	12	0.50	254	3.3	0.01	23.6	224	10.6	19
40841 (-)	<5	<1	<1	0.05	17	14	0.52	494	1.6	0.01	26.6	261	11.0	19
40842 (-)	<5	<1	<1	0.04	13	10	0.37	228	3.4	<0.01	23.5	211	11.7	16
40843 (-)	<5	<1	<1	0.10	19	13	0.56	250	2.5	<0.01	30.3	209	11.2	24
40844 (-)	<5	<1	<1	0.07	15	13	0.55	274	2.1	0.01	21.8	119	10.4	19
40845 (-)	5	<1	1	0.04	15	10	0.37	179	2.3	<0.01	13.1	189	11.8	13
40846 (-)	<5	<1	1	0.04	16	10	0.35	171	2.2	<0.01	15.6	212	9.7	12
40847 (-)	<5	<1	<1	0.06	11	15	0.52	224	2.3	<0.01	22.1	304	11.1	17
40848 (-)	<5	<1	<1	0.05	16	13	0.51	294	1.4	<0.01	20.0	117	10.6	13
40849 (-)	<5	<1	<1	0.05	14	11	0.51	339	1.7	0.01	24.2	106	10.0	13
40850 (-)	<5	<1	<1	0.04	8	19	0.42	197	1.6	<0.01	15.1	376	12.4	15
40851 (-)	<5	<1	1	0.06	17	12	0.61	292	2.3	<0.01	29.5	178	10.6	18
40852 (-)	<5	<1	<1	0.03	8	1	0.05	79	1.9	<0.01	5.0	434	8.2	<10
40853 (-)	<5	<1	<1	0.02	13	7	0.25	150	3.3	<0.01	14.7	341	10.4	<10
40854 (-)	<5	<1	1	0.04	13	12	0.47	263	2.0	0.01	19.8	348	8.6	10
40860 (-)	6	<1	<1	0.42	10	17	1.14	933	1.3	0.02	8.1	1750	7.1	77

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40861 (-)	<5	<1	1	0.34	9	17	0.90	486	2.4	0.01	19.8	880	9.3	67
40862 (-)	<5	<1	<1	0.17	8	12	0.63	336	1.8	<0.01	13.0	489	8.3	37
40863 (-)	7	<1	<1	0.78	7	18	1.26	916	1.4	0.02	5.2	2820	6.1	134
40864 (-)	5	<1	<1	0.41	7	19	1.06	609	1.1	0.02	9.3	893	9.3	84
40865 (-)	6	<1	<1	0.08	7	14	0.67	453	1.6	0.01	8.2	929	7.3	21
40866 (-)	<5	<1	<1	0.06	11	12	0.47	288	1.8	<0.01	9.2	477	9.8	22
40867 (-)	6	<1	<1	0.19	9	14	0.77	671	1.7	<0.01	8.0	926	7.5	47
40868 (-)	<5	<1	2	0.06	15	12	0.43	495	1.6	<0.01	14.3	499	11.1	20
40869 (-)	<5	<1	<1	0.13	13	15	0.75	449	0.8	0.02	11.1	826	8.3	24
40870 (-)	<5	<1	<1	0.09	16	13	0.55	397	1.4	0.02	11.9	678	9.4	25
40871 (-)	6	<1	2	0.33	6	18	1.58	690	<0.5	0.02	73.0	2210	7.0	69
40872 (-)	5	<1	1	0.18	10	15	0.73	401	1.3	0.02	9.4	840	9.8	39
40873 (-)	<5	<1	<1	0.05	11	13	0.41	248	0.8	<0.01	14.0	416	10.5	19
40874 (-)	<5	<1	<1	0.07	12	15	0.50	266	1.3	0.01	14.9	394	10.8	21
40875 (-)	<5	<1	<1	0.17	8	17	0.69	385	0.7	0.02	15.0	756	9.7	35
40876 (-)	<5	<1	2	0.14	9	16	0.62	361	0.5	0.01	15.0	627	10.2	32
40877 (-)	<5	<1	<1	0.13	9	19	0.65	380	1.8	0.01	13.7	662	10.3	34
40878 (-)	5	<1	<1	0.31	8	22	0.97	558	1.3	0.03	9.9	1390	8.3	71
40879 (-)	<5	<1	<1	0.12	20	7	0.37	427	1.1	<0.01	10.1	653	6.2	23
40880 (-)	<5	<1	2	0.16	12	12	0.49	580	1.8	<0.01	12.0	607	8.1	32
40881 (-)	<5	<1	<1	0.13	14	10	0.42	414	1.2	<0.01	10.7	520	8.0	34
40882 (-)	<5	<1	<1	0.12	16	13	0.52	579	2.0	<0.01	14.8	460	8.8	28
40883 (-)	<5	<1	<1	0.20	12	11	0.53	537	1.5	<0.01	12.3	556	8.0	42
40884 (-)	<5	<1	<1	0.14	19	7	0.37	432	1.2	<0.01	10.6	541	6.3	27
40885 (-)	<5	<1	<1	0.10	21	8	0.42	410	1.5	0.01	12.3	503	6.0	20
40886 (-)	<5	<1	<1	0.46	14	9	0.58	1090	2.8	<0.01	7.1	1920	5.2	88
40887 (-)	<5	<1	<1	0.10	20	8	0.40	377	1.0	0.01	11.5	487	6.9	20
40888 (-)	<5	<1	<1	0.18	25	11	0.57	661	1.3	0.01	13.3	555	8.1	36
40889 (-)	<5	<1	2	0.17	18	6	0.32	546	1.6	<0.01	7.5	684	4.4	32
40890 (-)	8	<1	<1	0.96	7	15	2.56	1920	<0.5	0.02	15.2	1450	4.6	143
40891 (-)	<5	<1	<1	0.44	26	11	0.71	672	0.9	0.01	8.9	1180	6.6	66
40892 (-)	6	<1	<1	0.47	12	11	0.73	895	1.7	<0.01	4.4	1340	6.7	75

Certified By:

*Ron Cardinali*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40893 (-)	<5	<1	<1	0.17	16	13	0.61	485	1.2	0.01	14.1	553	8.8	31
40894 (-)	<5	<1	<1	0.08	11	8	0.47	341	<0.5	<0.01	14.9	465	7.6	19
40895 (-)	9	<1	4	0.60	11	15	2.15	1210	<0.5	0.01	17.6	1100	4.4	103
40896 (-)	6	<1	3	0.31	15	7	0.94	547	<0.5	0.01	11.7	704	4.5	50
40897 (-)	10	<1	2	0.69	9	18	2.55	1660	0.5	0.02	18.9	1680	4.3	120
40898 (-)	<5	<1	1	0.17	15	12	0.77	415	1.3	0.01	21.7	653	9.1	35
40899 (-)	6	<1	<1	0.08	12	13	0.47	428	1.4	<0.01	17.1	529	13.1	28
40900 (-)	9	<1	2	0.55	14	10	0.86	1780	1.2	0.02	11.7	1920	10.2	115
40901 (-)	7	<1	2	0.40	11	12	0.84	935	1.0	0.01	14.5	1710	11.7	85
40902 (-)	5	<1	1	0.13	11	12	0.60	456	1.0	0.01	19.7	441	11.5	35
40903 (-)	<5	<1	<1	0.12	9	12	0.64	370	1.5	0.01	18.8	365	9.9	26
40904 (-)	<5	<1	<1	0.09	6	8	0.76	380	1.0	0.02	8.4	1490	7.3	16
40905 (-)	5	<1	<1	0.31	10	14	0.83	451	1.9	0.01	21.7	517	11.8	47
40906 (-)	<5	<1	<1	0.07	9	13	0.72	271	1.4	0.01	14.3	356	9.8	26
40907 (-)	6	<1	2	0.06	9	10	0.94	406	1.0	0.02	21.4	1520	6.9	13
40908 (-)	<5	<1	<1	0.11	9	16	0.87	352	0.8	0.02	13.8	794	8.5	22
40909 (-)	5	<1	<1	0.06	17	13	0.67	349	0.8	0.03	14.6	428	10.5	13
40910 (-)	<5	<1	<1	0.05	4	12	0.65	319	1.6	<0.01	8.7	656	11.2	18
40911 (-)	<5	<1	<1	0.08	13	13	0.55	468	1.0	0.02	15.3	225	10.1	16
40912 (-)	<5	<1	<1	0.05	7	11	0.42	240	1.0	<0.01	8.7	272	9.1	14
40913 (-)	<5	<1	<1	0.05	14	12	0.51	416	1.1	0.01	17.7	265	10.2	13
40914 (-)	<5	<1	<1	0.25	11	14	0.72	491	1.2	0.02	14.4	1020	9.6	42
40915 (-)	7	<1	<1	0.33	6	11	0.96	776	0.9	0.03	7.9	2770	7.6	62
40916 (-)	<5	<1	<1	0.09	11	15	0.78	450	1.6	0.02	11.3	760	8.6	20
40917 (-)	5	<1	<1	0.05	11	12	0.52	310	<0.5	0.01	15.7	424	9.5	18
40918 (-)	<5	<1	<1	0.05	15	12	0.53	342	1.5	0.02	18.3	385	8.8	14
40919 (-)	7	<1	<1	0.16	7	8	0.57	457	1.6	0.02	11.3	1600	7.8	47
40920 (-)	<5	<1	2	0.05	12	12	0.50	369	0.9	0.01	14.0	557	7.7	14
40921 (-)	<5	<1	<1	0.06	9	10	0.47	364	0.7	0.02	11.8	882	6.4	14
40922 (-)	<5	<1	<1	0.15	11	14	0.56	415	<0.5	0.01	14.4	889	8.5	32
40923 (-)	5	<1	<1	0.11	13	14	0.58	373	1.0	0.02	11.1	628	7.9	18
40924 (-)	<5	<1	<1	0.08	13	12	0.53	266	0.8	0.01	15.8	308	8.1	16

Certified By:

*Ron Cardinal*





## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40925 (-)	<5	<1	<1	0.08	15	12	0.63	415	1.3	0.02	13.7	638	7.4	15
40926 (-)	<5	<1	1	0.16	8	11	0.53	442	1.2	0.01	18.5	344	8.4	23
40927 (-)	<5	<1	<1	0.18	14	14	0.70	376	0.5	0.02	21.8	418	9.8	30
40928 (-)	<5	<1	<1	0.12	12	13	0.59	354	1.2	0.01	15.3	278	8.9	26
40929 (-)	5	<1	1	0.28	7	14	0.75	535	1.5	0.02	13.1	1010	8.1	58
40930 (-)	<5	<1	<1	0.09	15	13	0.58	338	1.3	0.02	19.6	359	9.5	19
40931 (-)	5	<1	<1	0.14	12	12	0.65	563	<0.5	0.02	8.1	1020	7.0	29
40932 (-)	<5	<1	<1	0.12	7	15	0.76	830	0.9	0.02	12.5	1090	10.1	29
40933 (-)	<5	<1	<1	0.18	9	15	0.72	430	0.8	0.02	17.1	724	10.3	40
40934 (-)	5	<1	1	0.24	7	13	0.68	560	1.8	0.02	9.5	1400	7.1	40
40935 (-)	<5	<1	<1	0.07	19	13	0.56	314	0.6	0.01	21.5	262	10.3	17
40936 (-)	7	<1	<1	0.54	9	14	0.95	630	<0.5	0.02	10.8	1270	9.1	114
40938 (-)	6	<1	<1	0.39	6	10	0.93	553	1.2	0.02	7.1	1430	6.8	73
40938a (-)	<5	<1	<1	0.06	11	14	0.56	329	0.9	0.01	18.5	408	11.1	20
40939 (-)	<5	<1	<1	0.06	9	13	0.48	321	1.0	0.01	14.6	521	9.5	14
40940 (-)	<5	<1	<1	0.06	16	12	0.50	232	0.5	0.02	14.4	513	7.8	12
40941 (-)	6	<1	<1	0.57	6	12	1.04	493	0.9	0.02	12.3	574	8.4	93
40942 (-)	5	<1	<1	0.44	15	12	1.07	608	1.0	0.02	16.8	745	10.9	77
40943 (-)	<5	<1	<1	0.12	9	14	0.70	430	<0.5	0.01	14.7	614	10.5	25
40944 (-)	8	<1	<1	0.13	8	18	1.03	618	1.5	0.02	8.6	1910	9.1	25
40945 (-)	5	<1	<1	0.34	15	13	0.81	953	1.0	0.02	7.6	1500	7.3	53
40946 (-)	<5	<1	<1	0.06	15	6	0.40	375	1.2	0.02	17.9	1170	4.2	11
40947 (-)	<5	<1	<1	0.06	12	7	0.40	340	0.8	0.02	16.4	1180	4.2	12
40948 (-)	<5	<1	<1	0.08	11	10	0.54	356	0.5	0.02	19.0	783	7.2	16
40949 (-)	<5	<1	<1	0.28	11	9	0.75	565	0.9	0.01	16.7	238	6.7	36
40950 (-)	<5	<1	<1	0.26	13	7	0.65	1190	0.6	<0.01	7.8	528	4.6	23
40951 (-)	9	<1	<1	0.54	5	31	4.23	1440	0.6	0.02	8.6	499	10.0	76
40952 (-)	<5	<1	<1	0.05	11	6	0.42	261	0.6	0.02	16.7	506	5.6	<10
40953 (-)	<5	<1	<1	0.05	11	7	0.45	286	0.6	0.02	17.6	686	6.2	<10
40954 (-)	<5	<1	<1	0.07	13	9	0.61	378	1.7	0.03	23.7	883	8.1	14
40955 (-)	<5	<1	<1	0.08	14	9	0.63	390	1.0	0.03	24.0	987	8.3	15
40956 (-)	<5	<1	<1	0.20	9	9	0.56	312	<0.5	<0.01	13.7	323	7.2	33

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40957 (-)	<5	<1	1	0.26	10	9	0.66	373	1.5	<0.01	13.9	353	6.7	45
40958 (-)	<5	<1	<1	0.41	12	9	0.79	449	1.5	<0.01	12.9	377	6.6	70
40959 (-)	<5	<1	<1	0.26	11	8	0.70	345	1.3	<0.01	12.1	316	6.4	44
40960 (-)	6	<1	<1	0.48	9	18	1.28	614	1.2	0.02	14.3	1210	10.0	57
40961 (-)	<5	<1	<1	0.27	8	15	0.83	454	1.1	<0.01	17.6	309	9.5	30
40962 (-)	<5	<1	<1	0.37	9	17	1.02	618	2.0	0.01	17.6	331	11.2	40
40963 (-)	<5	<1	<1	0.43	18	7	0.73	1260	1.6	0.01	9.0	1230	4.2	42
40964 (-)	<5	<1	<1	0.52	14	9	0.84	956	2.5	0.01	13.2	875	5.8	49
40965 (-)	<5	<1	3	0.48	11	8	0.75	653	1.2	<0.01	13.4	623	7.1	55
40966 (-)	6	<1	2	0.54	8	16	1.36	723	0.7	0.03	11.1	1880	8.6	75
40967 (-)	6	<1	<1	0.50	9	16	1.17	695	1.1	0.02	13.1	1580	9.1	66
40968 (-)	<5	<1	<1	0.23	8	13	0.73	404	0.6	0.01	15.0	819	9.1	38
40969 (-)	14	<1	3	0.17	12	24	3.49	1500	2.1	0.02	10.8	705	12.0	25
40970 (-)	14	<1	4	0.05	14	23	3.49	1490	0.8	0.01	9.1	713	11.9	13
40971 (-)	13	<1	<1	0.07	14	24	3.68	1510	1.1	0.01	9.1	705	12.0	14
40972 (-)	6	<1	<1	0.06	8	12	0.79	576	1.2	0.04	14.7	1220	9.6	12
40973 (-)	7	<1	<1	0.08	9	13	1.05	859	1.3	0.05	15.7	1720	9.8	15
40974 (-)	6	<1	2	0.08	9	11	1.20	948	1.4	0.07	14.5	3250	9.0	14
40975 (-)	5	<1	<1	0.05	9	11	0.65	471	2.1	0.02	15.5	804	9.4	11
40976 (-)	<5	<1	1	0.06	7	10	0.44	643	1.5	0.03	13.6	1010	9.4	11
40977 (-)	<5	<1	<1	0.06	8	11	0.48	767	1.4	0.03	15.3	1010	10.3	11
40978 (-)	<5	<1	2	0.04	11	12	0.55	582	1.1	0.02	15.3	480	11.7	13
40979 (-)	<5	<1	4	0.04	11	12	0.53	696	1.0	0.02	14.4	570	11.6	13

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40210 (-)	0.008	<1	2.1	<10	<5	18.0	<10	<10	<5	0.11	<5	<5	74.5	<1
40211 (-)	0.013	<1	10.5	<10	<5	35.4	<10	<10	<5	0.03	<5	<5	93.3	<1
40212 (-)	0.013	<1	4.4	<10	<5	29.2	<10	<10	<5	0.15	<5	<5	98.6	<1
40213 (-)	0.009	<1	7.6	<10	<5	46.8	<10	<10	<5	0.07	<5	<5	86.3	<1
40214 (-)	0.011	<1	3.9	<10	<5	26.5	<10	<10	<5	0.11	<5	<5	69.8	<1
40215 (-)	0.014	<1	4.3	<10	<5	37.5	<10	<10	<5	0.19	7	<5	104	<1
40216 (-)	0.018	<1	10.2	<10	<5	48.5	<10	<10	<5	0.14	6	<5	104	<1
40217 (-)	0.009	<1	5.8	<10	<5	27.6	<10	<10	<5	0.12	<5	<5	79.1	<1
40218 (-)	0.008	<1	4.4	<10	<5	19.6	<10	<10	<5	0.12	<5	<5	77.7	<1
40219 (-)	0.021	<1	5.5	<10	<5	34.9	<10	<10	<5	0.10	<5	<5	72.1	<1
40220 (-)	0.018	<1	5.2	<10	<5	29.1	<10	<10	<5	0.11	<5	<5	76.3	<1
40221 (-)	0.015	<1	4.3	<10	<5	26.3	<10	<10	<5	0.12	<5	<5	74.4	<1
40222 (-)	0.011	<1	4.4	<10	<5	22.8	<10	<10	<5	0.26	8	<5	99.7	<1
40223 (-)	0.011	<1	5.1	<10	<5	21.5	<10	<10	<5	0.12	<5	<5	85.2	<1
40224 (-)	0.011	<1	3.4	<10	<5	23.3	<10	<10	<5	0.13	<5	<5	70.7	<1
40225 (-)	0.010	<1	7.4	<10	<5	35.0	<10	<10	<5	0.11	<5	<5	77.3	<1
40226 (-)	0.009	<1	4.1	<10	<5	23.1	<10	<10	<5	0.11	<5	<5	78.2	<1
40227 (-)	0.009	<1	5.4	<10	<5	22.7	<10	<10	<5	0.10	<5	<5	87.0	<1
40228 (-)	0.012	<1	9.1	<10	<5	48.9	<10	<10	<5	0.03	<5	<5	121	<1
40229 (-)	0.008	<1	4.8	<10	<5	35.4	<10	<10	<5	0.17	5	<5	89.1	<1
40230 (-)	0.010	<1	4.8	<10	<5	34.0	<10	<10	<5	0.11	<5	<5	82.7	<1
40231 (-)	0.008	<1	4.9	<10	<5	24.1	<10	<10	<5	0.11	<5	<5	91.5	<1
40232 (-)	0.019	<1	5.7	<10	<5	52.7	<10	<10	<5	0.22	7	<5	115	<1
40233 (-)	0.015	<1	5.8	<10	<5	36.8	<10	<10	<5	0.31	9	<5	123	<1
40234 (-)	0.018	<1	6.2	<10	<5	53.9	<10	<10	<5	0.22	7	<5	102	<1
40235 (-)	0.014	<1	5.5	19	<5	44.8	<10	<10	<5	0.22	7	<5	98.1	<1
40236 (-)	0.013	<1	5.4	<10	<5	42.1	<10	<10	<5	0.18	6	<5	88.8	<1
40237 (-)	0.013	<1	7.8	<10	<5	42.6	<10	<10	<5	0.11	<5	<5	105	<1
40238 (-)	0.040	<1	3.9	<10	<5	54.9	<10	<10	<5	0.09	<5	<5	55.3	<1
40239 (-)	0.010	<1	5.6	<10	<5	28.1	<10	<10	<5	0.15	6	<5	68.1	<1
40240 (-)	0.016	<1	5.6	<10	<5	58.3	<10	<10	<5	0.19	7	<5	93.5	<1
40241 (-)	0.025	<1	10.8	<10	<5	96.3	<10	<10	<5	0.26	8	<5	126	<1

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40242 (-)	0.010	<1	7.3	<10	<5	69.4	<10	<10	<5	0.12	<5	<5	76.0	<1
40243 (-)	0.013	<1	4.6	<10	<5	77.5	<10	<10	<5	0.16	5	<5	90.2	<1
40244 (-)	0.015	<1	4.9	<10	<5	47.9	<10	<10	<5	0.25	7	<5	106	<1
40245 (-)	0.019	<1	3.6	<10	<5	52.9	<10	<10	<5	0.21	7	<5	92.0	<1
40246 (-)	1.12	<1	18.2	<10	<5	205	<10	<10	<5	0.35	<5	<5	200	<1
40247 (-)	0.010	<1	3.6	<10	<5	22.8	<10	<10	<5	0.12	<5	<5	83.4	<1
40248 (-)	0.030	<1	5.5	<10	<5	47.5	<10	<10	<5	0.13	<5	<5	81.0	<1
40249 (-)	0.030	<1	4.0	<10	<5	48.8	<10	<10	<5	0.14	5	<5	68.7	<1
40250 (-)	0.021	<1	4.4	<10	<5	45.5	<10	<10	<5	0.11	<5	<5	64.8	<1
40251 (-)	0.023	<1	4.6	<10	<5	43.7	<10	<10	<5	0.13	<5	<5	73.1	<1
40252 (-)	0.020	<1	4.5	<10	<5	37.1	<10	<10	<5	0.10	<5	<5	63.2	<1
40253 (-)	0.017	<1	3.8	<10	<5	32.2	<10	<10	<5	0.08	<5	<5	55.8	<1
40254 (-)	0.021	<1	3.2	<10	<5	31.6	<10	<10	<5	0.09	<5	<5	47.9	<1
40255 (-)	0.026	<1	4.1	<10	<5	31.9	<10	<10	<5	0.09	<5	<5	60.5	<1
40256 (-)	0.024	<1	4.4	<10	<5	38.7	<10	<10	<5	0.09	<5	<5	64.0	<1
40257 (-)	0.012	<1	2.6	<10	<5	23.1	<10	<10	<5	0.12	<5	<5	71.3	<1
40258 (-)	0.011	<1	6.0	<10	<5	19.5	<10	<10	8	0.04	<5	<5	57.1	<1
40259 (-)	0.007	<1	5.7	<10	<5	31.0	<10	<10	<5	0.13	<5	<5	73.4	<1
40710 (-)	0.019	<1	7.3	<10	<5	118	<10	<10	<5	0.17	6	<5	129	<1
40711 (-)	0.015	<1	4.4	<10	<5	88.7	<10	<10	<5	0.21	6	<5	92.5	<1
40712 (-)	0.010	<1	7.0	<10	<5	112	<10	<10	<5	0.12	<5	<5	74.3	<1
40713 (-)	0.010	<1	5.5	<10	<5	63.3	<10	<10	<5	0.14	<5	<5	79.0	<1
40714 (-)	0.021	<1	10.2	<10	<5	133	<10	<10	<5	0.18	6	<5	128	<1
40715 (-)	0.015	<1	3.1	<10	<5	52.7	<10	<10	<5	0.17	5	<5	83.5	<1
40716 (-)	0.014	<1	3.4	<10	<5	60.5	<10	<10	<5	0.25	7	<5	108	<1
40717 (-)	0.009	<1	4.1	<10	<5	38.8	<10	<10	<5	0.13	<5	<5	73.6	<1
40718 (-)	0.015	<1	4.0	<10	<5	133	<10	<10	<5	0.23	7	<5	88.9	<1
40719 (-)	0.011	<1	3.1	<10	<5	22.0	<10	<10	<5	0.12	<5	<5	83.7	<1
40720 (-)	0.012	<1	3.3	<10	<5	37.1	<10	<10	<5	0.09	<5	<5	72.6	<1
40721 (-)	0.009	<1	4.2	<10	<5	51.0	<10	<10	<5	0.16	5	<5	81.7	<1
40722 (-)	0.013	<1	5.6	<10	<5	68.6	<10	<10	<5	0.16	5	<5	97.3	<1
40723 (-)	0.011	<1	5.8	<10	<5	71.3	<10	<10	<5	0.21	5	<5	100	<1

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40724 (-)	0.018	<1	6.9	<10	<5	98.8	<10	<10	<5	0.18	7	<5	88.4	<1
40725 (-)	0.015	<1	5.2	<10	<5	44.7	<10	<10	<5	0.18	6	<5	88.0	<1
40726 (-)	0.015	<1	4.7	<10	<5	119	<10	<10	<5	0.22	6	<5	102	<1
40727 (-)	0.011	<1	6.2	<10	<5	45.8	<10	<10	<5	0.15	5	<5	79.4	<1
40728 (-)	0.011	<1	3.9	<10	<5	65.9	<10	<10	<5	0.24	8	<5	102	<1
40729 (-)	0.013	<1	3.7	<10	<5	159	<10	<10	<5	0.24	8	<5	97.1	<1
40730 (-)	0.008	<1	4.3	<10	<5	21.4	<10	<10	<5	0.09	<5	<5	75.4	<1
40731 (-)	0.010	<1	7.3	<10	<5	67.7	<10	<10	<5	0.09	<5	<5	109	<1
40732 (-)	0.010	<1	3.6	<10	<5	21.2	<10	<10	<5	0.12	<5	<5	75.6	<1
40733 (-)	0.009	<1	3.4	<10	<5	27.8	<10	<10	<5	0.08	<5	<5	84.7	<1
40734 (-)	0.008	<1	3.1	<10	<5	42.4	<10	<10	<5	0.21	6	<5	85.9	<1
40735 (-)	0.010	<1	3.1	<10	<5	32.3	<10	<10	<5	0.22	5	<5	91.8	<1
40736 (-)	0.011	<1	5.0	<10	<5	67.5	<10	<10	<5	0.14	<5	<5	85.9	<1
40737 (-)	0.017	<1	3.9	<10	<5	39.0	<10	<10	<5	0.25	8	<5	94.2	<1
40738 (-)	0.012	<1	4.3	<10	<5	16.5	<10	<10	<5	0.11	<5	<5	72.6	<1
40739 (-)	0.013	<1	2.9	<10	<5	25.6	<10	<10	<5	0.07	<5	<5	67.3	<1
40740 (-)	0.007	<1	5.3	<10	<5	21.9	<10	<10	<5	0.05	<5	<5	50.3	<1
40741 (-)	0.006	<1	3.6	<10	<5	24.7	<10	<10	<5	0.07	<5	<5	61.1	<1
40742 (-)	0.008	<1	3.1	<10	<5	19.2	<10	<10	<5	0.09	<5	<5	81.3	<1
40743 (-)	0.010	<1	7.6	<10	<5	29.0	<10	<10	<5	0.18	5	<5	92.5	<1
40744 (-)	0.009	<1	4.0	<10	<5	21.9	<10	<10	<5	0.13	5	<5	94.4	<1
40745 (-)	0.008	<1	4.2	<10	<5	24.4	<10	<10	<5	0.11	<5	<5	74.7	<1
40746 (-)	0.007	<1	8.1	<10	<5	25.5	<10	<10	<5	0.14	<5	<5	91.5	<1
40747 (-)	0.008	<1	3.7	<10	<5	25.3	<10	<10	<5	0.14	<5	<5	74.6	<1
40748 (-)	0.009	<1	3.3	<10	<5	30.6	<10	<10	<5	0.14	<5	<5	83.0	<1
40749 (-)	0.010	<1	2.6	<10	<5	42.4	<10	<10	<5	0.19	6	<5	82.5	<1
40750 (-)	0.007	<1	2.9	<10	<5	20.8	<10	<10	<5	0.11	<5	<5	70.4	<1
40751 (-)	0.007	<1	3.9	<10	<5	52.8	<10	<10	<5	0.14	<5	<5	77.6	<1
40752 (-)	0.009	<1	2.7	<10	<5	42.8	<10	<10	<5	0.18	6	<5	82.3	<1
40753 (-)	0.009	<1	2.7	<10	<5	30.8	<10	<10	<5	0.15	<5	<5	74.4	<1
40754 (-)	0.008	<1	2.8	<10	<5	87.8	<10	<10	<5	0.13	<5	<5	70.1	<1
40755 (-)	0.011	<1	3.3	<10	<5	55.0	<10	<10	<5	0.12	<5	<5	67.3	<1

Certified By:

*Ron Cardinal*



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## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40760 (-)	0.015	<1	3.6	<10	<5	22.1	<10	<10	<5	0.32	8	<5	69.4	<1
40761 (-)	0.007	<1	5.3	<10	<5	19.4	<10	<10	<5	0.15	<5	<5	64.0	<1
40762 (-)	0.014	<1	5.3	<10	<5	17.5	<10	<10	<5	0.28	7	<5	80.4	<1
40763 (-)	0.008	<1	4.9	<10	<5	13.4	<10	<10	<5	0.22	6	<5	71.4	<1
40764 (-)	0.015	<1	4.4	<10	<5	25.6	<10	<10	<5	0.35	10	<5	74.0	<1
40765 (-)	0.008	<1	4.0	<10	<5	17.2	<10	<10	<5	0.08	<5	<5	62.5	<1
40766 (-)	0.010	<1	5.4	<10	<5	15.8	<10	<10	<5	0.03	<5	<5	60.5	<1
40767 (-)	0.018	<1	6.4	<10	<5	37.7	<10	<10	8	<0.01	<5	<5	56.1	<1
40768 (-)	0.010	<1	4.2	<10	<5	15.3	<10	<10	6	0.09	<5	<5	54.7	<1
40769 (-)	0.009	1	7.5	<10	<5	15.5	<10	<10	16	0.21	<5	<5	81.0	<1
40770 (-)	0.013	<1	3.4	<10	<5	14.2	<10	<10	<5	0.13	<5	<5	77.2	<1
40771 (-)	0.007	<1	2.8	<10	<5	23.3	<10	<10	<5	0.06	<5	<5	35.7	<1
40772 (-)	0.015	<1	3.3	<10	<5	12.6	<10	<10	<5	0.21	6	<5	60.9	<1
40773 (-)	0.008	<1	4.4	<10	<5	22.4	<10	<10	<5	0.21	6	<5	74.9	<1
40774 (-)	0.009	<1	3.2	<10	<5	15.6	<10	<10	<5	0.10	<5	<5	77.3	<1
40775 (-)	0.009	<1	4.9	<10	<5	17.2	<10	<10	<5	0.11	<5	<5	78.0	<1
40776 (-)	0.013	<1	7.2	<10	<5	12.3	<10	<10	<5	0.13	<5	<5	61.4	<1
40777 (-)	0.013	<1	3.6	<10	<5	21.6	<10	<10	<5	0.06	<5	<5	61.4	<1
40778 (-)	0.017	<1	9.2	<10	<5	17.9	<10	<10	<5	0.21	6	<5	80.3	<1
40779 (-)	0.011	<1	3.5	<10	<5	21.4	<10	<10	<5	0.12	<5	<5	74.1	<1
40780 (-)	0.005	<1	7.1	<10	<5	17.5	<10	<10	<5	0.08	<5	<5	67.4	<1
40781 (-)	0.008	<1	4.3	<10	<5	37.8	<10	<10	<5	0.25	7	<5	89.8	<1
40782 (-)	0.008	<1	14.3	<10	<5	15.0	<10	<10	<5	0.31	9	<5	115	<1
40783 (-)	0.007	<1	9.6	<10	<5	24.3	<10	<10	<5	0.28	7	<5	93.2	<1
40784 (-)	0.013	<1	4.2	<10	<5	13.1	<10	<10	<5	0.12	<5	<5	74.8	<1
40785 (-)	0.009	<1	7.9	<10	<5	42.5	<10	<10	<5	0.27	8	<5	126	<1
40786 (-)	0.008	<1	4.7	<10	<5	16.7	<10	<10	<5	0.10	<5	<5	74.7	<1
40787 (-)	0.007	<1	10.2	<10	<5	12.7	<10	<10	<5	0.28	8	<5	110	<1
40788 (-)	<0.005	<1	2.1	<10	<5	14.1	<10	<10	<5	0.08	<5	<5	47.8	<1
40789 (-)	0.013	<1	22.6	<10	<5	39.9	<10	<10	<5	0.19	7	<5	80.6	<1
40790 (-)	0.011	<1	6.1	<10	<5	17.1	<10	<10	<5	0.17	<5	<5	72.3	<1
40791 (-)	0.005	<1	18.1	<10	<5	10.9	<10	<10	<5	0.39	9	<5	141	<1

Certified By:

*Ron Cardinal*





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## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40792 (-)	0.008	<1	12.2	<10	<5	16.6	<10	<10	<5	0.23	7	<5	86.2	<1
40793 (-)	0.011	<1	15.0	<10	<5	52.2	<10	<10	<5	0.20	7	<5	133	<1
40794 (-)	0.009	<1	10.1	<10	<5	35.7	<10	<10	<5	0.18	5	<5	115	<1
40795 (-)	0.020	<1	5.8	<10	<5	37.8	<10	<10	<5	0.09	<5	<5	79.0	<1
40796 (-)	0.014	<1	9.1	<10	<5	57.6	<10	<10	<5	0.35	11	<5	127	<1
40797 (-)	0.015	<1	14.8	<10	<5	120	<10	<10	<5	0.27	9	<5	159	<1
40798 (-)	0.018	<1	6.7	<10	<5	32.5	<10	<10	<5	0.05	<5	<5	67.6	<1
40799 (-)	0.010	<1	6.5	<10	<5	35.0	<10	<10	<5	0.14	<5	<5	115	<1
40800 (-)	0.009	<1	7.3	<10	<5	25.2	<10	<10	<5	0.25	7	<5	101	<1
40801 (-)	0.012	<1	6.4	<10	<5	25.8	<10	<10	<5	0.20	6	<5	105	<1
40802 (-)	0.009	<1	7.9	<10	<5	42.7	<10	<10	<5	0.11	<5	<5	77.0	<1
40803 (-)	0.006	<1	7.0	<10	<5	24.7	<10	<10	<5	0.07	<5	<5	60.2	<1
40804 (-)	0.010	<1	6.0	<10	<5	37.8	<10	<10	<5	0.20	6	<5	88.8	<1
40805 (-)	0.011	<1	3.1	<10	<5	30.3	<10	<10	<5	0.07	<5	<5	65.8	<1
40806 (-)	0.016	<1	7.0	<10	<5	112	<10	<10	<5	0.12	<5	<5	106	<1
40807 (-)	0.018	<1	8.5	<10	<5	87.5	<10	<10	<5	0.15	<5	<5	88.2	<1
40808 (-)	0.012	<1	6.9	<10	<5	149	<10	<10	<5	0.08	<5	<5	82.6	<1
40809 (-)	0.013	<1	3.2	<10	<5	66.3	<10	<10	<5	0.07	<5	<5	65.4	<1
40810 (-)	0.006	<1	6.5	<10	<5	22.8	<10	<10	<5	0.06	<5	<5	58.8	<1
40811 (-)	0.011	<1	5.2	<10	<5	19.0	<10	<10	<5	0.11	<5	<5	85.5	<1
40812 (-)	0.008	<1	14.0	<10	<5	23.3	<10	<10	<5	0.09	<5	<5	132	<1
40813 (-)	0.007	<1	6.7	<10	<5	19.8	<10	<10	<5	0.12	<5	<5	87.6	<1
40814 (-)	0.006	<1	4.7	<10	<5	17.8	<10	<10	<5	0.07	<5	<5	60.3	<1
40815 (-)	0.007	<1	11.0	<10	<5	28.5	<10	<10	<5	0.09	<5	<5	105	<1
40816 (-)	0.008	<1	10.9	<10	<5	8.9	<10	<10	<5	0.07	<5	<5	55.2	<1
40817 (-)	0.007	<1	7.8	<10	<5	19.1	<10	<10	<5	0.07	<5	<5	69.9	<1
40818 (-)	0.009	<1	6.2	<10	<5	31.7	<10	<10	<5	0.09	<5	<5	71.0	<1
40819 (-)	0.006	<1	6.4	<10	<5	34.8	<10	<10	<5	0.06	<5	<5	62.4	<1
40820 (-)	0.006	<1	5.0	<10	<5	21.4	<10	<10	<5	0.07	<5	<5	66.7	<1
40821 (-)	0.008	<1	7.7	<10	<5	30.0	<10	<10	<5	0.08	<5	<5	70.7	<1
40822 (-)	<0.005	<1	22.0	11	<5	15.6	<10	<10	<5	0.05	<5	<5	122	<1
40823 (-)	<0.005	<1	4.5	<10	<5	14.1	<10	<10	8	0.02	<5	<5	39.3	<1

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40824 (-)	0.007	<1	4.4	<10	<5	19.9	<10	<10	<5	0.07	<5	<5	69.0	<1
40825 (-)	0.007	<1	6.0	<10	<5	32.8	<10	<10	<5	0.07	<5	<5	58.0	<1
40826 (-)	<0.005	<1	3.6	<10	<5	16.0	<10	<10	<5	0.05	<5	<5	43.1	<1
40827 (-)	<0.005	<1	6.1	<10	<5	15.9	<10	<10	16	0.05	<5	<5	37.6	<1
40828 (-)	<0.005	<1	7.0	<10	<5	20.6	<10	<10	10	0.05	<5	<5	63.2	<1
40829 (-)	0.008	<1	7.9	<10	<5	25.4	<10	<10	<5	0.08	<5	<5	68.0	<1
40830 (-)	0.010	<1	7.9	<10	<5	22.6	<10	<10	<5	0.06	<5	<5	58.4	<1
40831 (-)	0.008	<1	8.7	<10	<5	23.6	<10	<10	<5	0.10	<5	<5	77.7	<1
40832 (-)	0.007	<1	6.6	<10	<5	29.3	<10	<10	<5	0.10	<5	<5	72.6	<1
40833 (-)	0.008	<1	5.1	<10	<5	26.4	<10	<10	<5	0.08	<5	<5	71.8	<1
40834 (-)	0.009	<1	6.8	<10	<5	28.8	<10	<10	<5	0.09	<5	<5	71.9	<1
40835 (-)	0.009	<1	6.9	<10	<5	35.5	<10	<10	<5	0.09	<5	<5	75.3	<1
40836 (-)	0.007	<1	5.1	<10	<5	20.8	<10	<10	<5	0.08	<5	<5	80.6	<1
40837 (-)	0.005	<1	5.3	<10	<5	19.6	<10	<10	<5	0.06	<5	<5	66.5	<1
40838 (-)	0.009	<1	6.9	<10	<5	27.9	<10	<10	<5	0.09	<5	<5	74.3	<1
40839 (-)	0.008	<1	7.6	<10	<5	27.9	<10	<10	<5	0.09	<5	<5	75.6	<1
40840 (-)	0.008	<1	8.9	<10	<5	31.8	<10	<10	<5	0.10	<5	<5	79.1	<1
40841 (-)	0.007	<1	8.2	<10	<5	29.8	<10	<10	<5	0.11	<5	<5	76.4	<1
40842 (-)	0.009	<1	4.6	<10	<5	16.6	<10	<10	<5	0.07	<5	<5	79.5	<1
40843 (-)	<0.005	<1	6.5	<10	<5	24.7	<10	<10	<5	0.10	<5	<5	70.9	<1
40844 (-)	0.006	<1	7.4	<10	<5	29.3	<10	<10	<5	0.11	<5	<5	69.0	<1
40845 (-)	0.006	<1	4.3	<10	<5	20.5	<10	<10	<5	0.09	<5	<5	74.0	<1
40846 (-)	0.005	<1	4.4	<10	<5	21.0	<10	<10	<5	0.06	<5	<5	59.6	<1
40847 (-)	0.013	<1	3.7	<10	<5	20.6	<10	<10	<5	0.08	<5	<5	79.7	<1
40848 (-)	<0.005	<1	7.6	<10	<5	19.3	<10	<10	<5	0.09	<5	<5	70.0	<1
40849 (-)	0.006	<1	8.5	<10	<5	24.8	<10	<10	<5	0.09	<5	<5	68.6	<1
40850 (-)	0.011	<1	2.7	<10	<5	15.2	<10	<10	<5	0.09	<5	<5	83.1	<1
40851 (-)	0.006	<1	8.0	<10	<5	27.5	<10	<10	<5	0.12	<5	<5	74.3	<1
40852 (-)	0.006	<1	0.9	<10	<5	11.9	<10	<10	<5	0.05	<5	<5	48.6	<1
40853 (-)	<0.005	<1	3.7	<10	<5	19.7	<10	<10	<5	0.06	<5	<5	57.4	<1
40854 (-)	0.008	<1	4.9	<10	<5	28.0	<10	<10	<5	0.08	<5	<5	60.5	<1
40860 (-)	0.011	<1	5.3	<10	<5	29.2	<10	<10	<5	0.17	5	<5	101	<1

Certified By:

*Ron Cardinal*



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## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40861 (-)	0.009	<1	6.1	<10	<5	19.7	<10	<10	<5	0.16	<5	<5	92.9	<1
40862 (-)	0.009	<1	3.1	<10	<5	21.1	<10	<10	<5	0.13	<5	<5	82.5	<1
40863 (-)	0.013	<1	6.8	<10	<5	29.7	<10	<10	<5	0.20	6	<5	117	<1
40864 (-)	0.008	<1	3.4	<10	<5	20.2	<10	<10	<5	0.20	6	<5	88.5	<1
40865 (-)	0.010	<1	4.2	<10	<5	30.2	<10	<10	<5	0.09	<5	<5	84.2	<1
40866 (-)	0.006	<1	4.4	<10	<5	16.2	<10	<10	<5	0.09	<5	<5	83.4	<1
40867 (-)	0.009	<1	4.5	<10	<5	21.4	<10	<10	<5	0.15	<5	<5	95.0	<1
40868 (-)	0.010	<1	6.2	<10	<5	17.2	<10	<10	<5	0.06	<5	<5	74.2	<1
40869 (-)	0.012	<1	4.7	<10	<5	30.6	<10	<10	<5	0.09	<5	<5	75.0	<1
40870 (-)	0.018	<1	4.1	<10	<5	22.1	<10	<10	<5	0.08	<5	<5	71.1	<1
40871 (-)	0.019	<1	4.0	<10	<5	31.3	<10	<10	<5	0.17	5	<5	91.6	<1
40872 (-)	0.010	<1	3.7	<10	<5	22.7	<10	<10	<5	0.14	<5	<5	86.3	<1
40873 (-)	0.011	<1	3.8	<10	<5	14.0	<10	<10	<5	0.08	<5	<5	70.1	<1
40874 (-)	0.010	<1	4.1	<10	<5	17.5	<10	<10	<5	0.09	<5	<5	73.0	<1
40875 (-)	0.013	<1	4.0	<10	<5	20.1	<10	<10	<5	0.12	<5	<5	81.9	<1
40876 (-)	0.012	<1	3.9	<10	<5	20.3	<10	<10	<5	0.11	<5	<5	78.6	<1
40877 (-)	0.011	<1	3.9	<10	<5	18.7	<10	<10	<5	0.11	<5	<5	83.8	<1
40878 (-)	0.014	<1	4.1	<10	<5	26.6	<10	<10	<5	0.16	<5	<5	96.8	<1
40879 (-)	0.011	<1	7.4	<10	<5	19.2	<10	<10	<5	0.05	<5	<5	54.2	<1
40880 (-)	0.010	<1	8.6	<10	<5	15.1	<10	<10	<5	0.09	<5	<5	77.5	<1
40881 (-)	0.013	<1	6.7	<10	<5	15.8	<10	<10	<5	0.09	<5	<5	60.5	<1
40882 (-)	0.010	<1	9.0	<10	<5	15.5	<10	<10	<5	0.08	<5	<5	75.5	<1
40883 (-)	0.010	<1	11.2	<10	<5	14.8	<10	<10	<5	0.10	<5	<5	94.9	<1
40884 (-)	0.013	<1	8.5	11	<5	16.7	<10	<10	<5	0.07	<5	<5	58.9	<1
40885 (-)	0.011	<1	6.9	<10	<5	21.5	<10	<10	<5	0.06	<5	<5	57.1	<1
40886 (-)	0.016	<1	17.7	<10	<5	15.2	<10	<10	<5	0.14	<5	<5	127	<1
40887 (-)	0.012	<1	7.3	<10	<5	20.4	<10	<10	<5	0.07	<5	<5	57.2	<1
40888 (-)	0.010	<1	10.7	<10	<5	19.4	<10	<10	<5	0.12	<5	<5	74.6	<1
40889 (-)	0.013	<1	8.5	<10	<5	15.2	<10	<10	<5	0.05	<5	<5	53.3	<1
40890 (-)	0.009	<1	22.0	<10	<5	24.2	<10	<10	<5	0.17	5	<5	123	<1
40891 (-)	0.015	<1	10.4	<10	<5	26.9	<10	<10	<5	0.15	5	<5	50.3	<1
40892 (-)	0.016	<1	12.0	<10	<5	24.1	<10	<10	<5	0.18	5	<5	49.5	<1

Certified By:

*Ron Cardinal*



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## Certificate of Analysis

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40893 (-)	0.010	<1	7.2	<10	<5	20.2	<10	<10	<5	0.11	<5	<5	62.0	<1
40894 (-)	0.006	2	5.6	<10	<5	15.4	<10	<10	<5	0.08	<5	<5	59.6	<1
40895 (-)	0.008	2	22.9	<10	<5	23.7	<10	<10	<5	0.13	<5	<5	126	<1
40896 (-)	0.006	1	12.6	<10	<5	16.1	<10	<10	<5	0.09	<5	<5	77.1	<1
40897 (-)	0.009	3	25.8	<10	<5	27.4	<10	<10	<5	0.13	<5	<5	133	<1
40898 (-)	0.009	2	8.8	<10	<5	20.1	<10	<10	<5	0.12	<5	<5	80.7	<1
40899 (-)	0.011	2	6.5	<10	<5	16.0	<10	<10	5	0.10	<5	<5	86.7	<1
40900 (-)	0.022	3	13.8	<10	<5	23.9	<10	<10	<5	0.16	<5	<5	97.6	<1
40901 (-)	0.015	2	11.4	<10	<5	19.4	<10	<10	<5	0.14	<5	<5	94.9	<1
40902 (-)	0.009	2	6.5	<10	<5	17.9	<10	<10	<5	0.10	<5	<5	79.7	<1
40903 (-)	0.009	1	7.0	<10	<5	18.9	<10	<10	<5	0.10	<5	<5	76.8	<1
40904 (-)	0.014	<1	7.2	<10	<5	29.4	<10	<10	<5	0.08	<5	<5	85.1	<1
40905 (-)	0.012	<1	7.0	<10	<5	19.3	<10	<10	<5	0.15	<5	<5	92.1	<1
40906 (-)	0.010	<1	5.0	<10	<5	20.4	<10	<10	<5	0.11	<5	<5	77.2	<1
40907 (-)	0.017	<1	6.6	<10	<5	42.1	<10	<10	<5	0.09	<5	<5	80.5	<1
40908 (-)	0.009	<1	5.2	<10	<5	32.2	<10	<10	<5	0.12	<5	<5	87.3	<1
40909 (-)	0.009	<1	7.3	<10	<5	29.6	<10	<10	<5	0.10	<5	<5	87.6	<1
40910 (-)	0.011	<1	3.3	<10	<5	22.5	<10	<10	<5	0.01	<5	<5	69.2	<1
40911 (-)	0.010	<1	6.6	<10	<5	15.8	<10	<10	<5	0.12	<5	<5	85.0	<1
40912 (-)	0.007	<1	3.0	<10	<5	115	<10	<10	<5	0.03	<5	<5	55.4	1
40913 (-)	0.007	<1	6.4	<10	<5	23.4	<10	<10	<5	0.08	<5	<5	63.7	<1
40914 (-)	0.010	<1	4.9	<10	<5	28.5	<10	<10	<5	0.12	<5	<5	85.3	<1
40915 (-)	0.013	<1	3.9	<10	<5	33.3	<10	<10	<5	0.18	6	<5	109	<1
40916 (-)	0.011	<1	3.7	<10	<5	26.6	<10	<10	<5	0.15	<5	<5	86.3	<1
40917 (-)	0.007	<1	4.4	<10	<5	21.4	<10	<10	<5	0.10	<5	<5	74.6	<1
40918 (-)	0.008	<1	7.0	<10	<5	28.7	<10	<10	<5	0.11	<5	<5	69.0	<1
40919 (-)	0.011	<1	3.2	<10	<5	22.3	<10	<10	<5	0.14	<5	<5	90.0	<1
40920 (-)	0.008	<1	4.2	<10	<5	26.9	<10	<10	<5	0.08	<5	<5	62.3	<1
40921 (-)	0.009	<1	3.5	<10	<5	24.3	<10	<10	<5	0.09	<5	<5	58.2	<1
40922 (-)	0.009	<1	3.9	<10	<5	23.7	<10	<10	<5	0.10	<5	<5	74.0	<1
40923 (-)	0.012	<1	3.9	<10	<5	32.2	<10	<10	<5	0.09	<5	<5	71.0	<1
40924 (-)	0.008	<1	4.8	<10	<5	24.4	<10	<10	<5	0.09	<5	<5	67.0	<1

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AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40925 (-)	0.010	<1	8.1	<10	<5	35.6	<10	<10	<5	0.08	<5	<5	80.5	<1
40926 (-)	0.008	<1	4.6	<10	<5	23.0	<10	<10	<5	0.10	<5	<5	70.6	<1
40927 (-)	0.008	<1	5.3	<10	<5	27.8	<10	<10	<5	0.14	<5	<5	78.7	<1
40928 (-)	0.006	<1	5.3	<10	<5	22.4	<10	<10	<5	0.11	<5	<5	80.9	<1
40929 (-)	0.011	<1	4.4	14	<5	22.6	<10	<10	<5	0.13	<5	<5	85.4	<1
40930 (-)	0.008	<1	7.4	<10	<5	26.2	<10	<10	<5	0.08	<5	<5	68.7	<1
40931 (-)	0.015	1	6.6	<10	<5	40.0	<10	<10	<5	0.08	<5	<5	87.4	<1
40932 (-)	0.013	<1	2.8	<10	<5	22.6	<10	<10	<5	0.11	<5	<5	83.1	<1
40933 (-)	0.010	<1	4.0	<10	<5	22.5	<10	<10	<5	0.12	<5	<5	84.9	<1
40934 (-)	0.011	<1	3.6	<10	<5	25.6	<10	<10	<5	0.11	<5	<5	83.9	<1
40935 (-)	0.008	<1	5.7	<10	<5	22.1	<10	<10	<5	0.09	<5	<5	77.4	<1
40936 (-)	0.013	<1	4.4	<10	<5	20.2	<10	<10	<5	0.23	6	<5	117	<1
40938 (-)	0.014	<1	3.7	<10	<5	21.4	<10	<10	<5	0.22	6	<5	101	<1
40938a (-)	0.008	<1	4.5	<10	<5	19.5	<10	<10	<5	0.09	<5	<5	74.2	<1
40939 (-)	0.008	<1	3.7	<10	<5	23.3	<10	<10	<5	0.08	<5	<5	68.2	<1
40940 (-)	0.009	<1	5.2	<10	<5	26.0	<10	<10	<5	0.08	<5	<5	58.4	<1
40941 (-)	0.008	<1	6.8	<10	<5	26.7	<10	<10	<5	0.21	6	<5	123	<1
40942 (-)	0.010	<1	5.7	<10	<5	34.6	<10	<10	<5	0.18	5	<5	96.8	<1
40943 (-)	0.010	<1	4.5	<10	<5	24.0	<10	<10	<5	0.11	<5	<5	84.3	<1
40944 (-)	0.015	<1	5.1	<10	<5	41.1	<10	<10	<5	0.07	<5	<5	107	<1
40945 (-)	0.014	<1	4.8	<10	<5	33.7	<10	<10	<5	0.14	5	<5	88.6	<1
40946 (-)	0.021	<1	3.2	<10	<5	38.3	<10	<10	<5	0.11	<5	<5	115	<1
40947 (-)	0.030	<1	3.3	<10	<5	39.3	<10	<10	<5	0.10	<5	<5	96.2	<1
40948 (-)	0.060	<1	4.4	<10	<5	53.8	<10	<10	<5	0.08	<5	<5	56.1	<1
40949 (-)	0.009	<1	8.5	<10	<5	22.4	<10	<10	<5	0.10	<5	<5	70.7	<1
40950 (-)	0.026	<1	13.0	<10	<5	15.8	<10	<10	<5	0.10	<5	<5	34.5	<1
40951 (-)	0.011	<1	16.0	<10	<5	21.7	<10	<10	<5	0.17	7	<5	301	<1
40952 (-)	0.007	<1	5.5	<10	<5	25.5	<10	<10	<5	0.08	<5	<5	52.8	<1
40953 (-)	0.008	<1	6.1	<10	<5	27.5	<10	<10	<5	0.08	<5	<5	52.9	<1
40954 (-)	0.010	<1	8.6	<10	<5	37.0	<10	<10	<5	0.11	<5	<5	64.6	<1
40955 (-)	0.011	<1	8.6	<10	<5	42.0	<10	<10	<5	0.11	<5	<5	63.4	<1
40956 (-)	0.008	<1	4.1	<10	<5	16.8	<10	<10	<5	0.12	<5	<5	44.1	<1

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40957 (-)	0.008	<1	4.4	<10	<5	16.8	<10	<10	<5	0.14	<5	<5	42.6	<1
40958 (-)	0.008	<1	4.9	<10	<5	19.2	<10	<10	<5	0.18	<5	<5	38.1	<1
40959 (-)	0.008	<1	3.6	<10	<5	19.0	<10	<10	<5	0.13	<5	<5	40.0	<1
40960 (-)	0.013	<1	5.9	<10	<5	41.3	<10	<10	<5	0.20	5	<5	106	<1
40961 (-)	0.008	<1	4.9	<10	<5	17.2	<10	<10	<5	0.11	<5	<5	82.1	<1
40962 (-)	0.009	<1	6.0	<10	<5	19.1	<10	<10	<5	0.14	<5	<5	95.8	<1
40963 (-)	0.012	<1	17.9	<10	<5	27.5	<10	<10	<5	0.10	<5	<5	103	<1
40964 (-)	0.012	<1	12.3	<10	<5	25.7	<10	<10	<5	0.14	<5	<5	100	<1
40965 (-)	0.010	<1	9.5	<10	<5	16.8	<10	<10	<5	0.14	<5	<5	95.2	<1
40966 (-)	0.019	<1	5.4	<10	<5	64.0	<10	<10	<5	0.25	7	<5	114	<1
40967 (-)	0.017	<1	5.4	<10	<5	53.8	<10	<10	<5	0.22	6	<5	103	<1
40968 (-)	0.012	<1	3.2	<10	<5	31.3	<10	<10	<5	0.14	<5	<5	77.7	<1
40969 (-)	0.017	<1	14.3	<10	<5	71.4	<10	<10	<5	0.34	10	<5	160	<1
40970 (-)	0.017	<1	14.4	<10	<5	65.3	<10	<10	<5	0.31	9	<5	167	<1
40971 (-)	0.017	<1	15.7	<10	<5	67.0	<10	<10	<5	0.33	10	<5	173	<1
40972 (-)	0.018	<1	4.5	<10	<5	75.0	<10	<10	<5	0.09	<5	<5	85.7	<1
40973 (-)	0.021	<1	6.1	<10	<5	111	<10	<10	<5	0.12	<5	<5	101	<1
40974 (-)	0.024	<1	6.8	<10	<5	113	<10	<10	<5	0.13	<5	<5	99.9	<1
40975 (-)	0.014	<1	4.0	<10	<5	64.7	<10	<10	<5	0.09	<5	<5	81.1	<1
40976 (-)	0.033	<1	4.0	<10	<5	67.3	<10	<10	<5	0.07	<5	<5	73.0	<1
40977 (-)	0.029	<1	4.1	<10	<5	57.5	<10	<10	<5	0.07	<5	<5	77.5	<1
40978 (-)	0.010	<1	4.6	<10	<5	33.3	<10	<10	<5	0.08	<5	<5	78.1	<1
40979 (-)	0.012	<1	4.4	<10	<5	35.6	<10	<10	<5	0.08	<5	<5	77.0	<1

Certified By:

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AGAT WORK ORDER: 11Y530769

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40210 (-)	3	37.2	<5
40211 (-)	10	79.9	<5
40212 (-)	3	72.0	<5
40213 (-)	14	84.3	<5
40214 (-)	5	57.7	<5
40215 (-)	3	85.3	<5
40216 (-)	32	86.0	<5
40217 (-)	9	58.0	<5
40218 (-)	3	59.5	<5
40219 (-)	9	69.6	<5
40220 (-)	8	68.1	<5
40221 (-)	5	74.7	<5
40222 (-)	4	112	<5
40223 (-)	5	76.7	<5
40224 (-)	4	44.1	<5
40225 (-)	14	66.2	<5
40226 (-)	4	56.9	<5
40227 (-)	4	73.9	<5
40228 (-)	11	121	<5
40229 (-)	4	75.3	<5
40230 (-)	4	64.7	<5
40231 (-)	3	62.9	<5
40232 (-)	6	99.5	<5
40233 (-)	8	115	<5
40234 (-)	9	87.1	<5
40235 (-)	7	90.0	<5
40236 (-)	8	87.5	<5
40237 (-)	11	98.1	<5
40238 (-)	8	58.9	<5
40239 (-)	9	62.8	<5
40240 (-)	10	103	<5
40241 (-)	14	104	<5

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DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40242 (-)	9	59.3	5
40243 (-)	5	83.6	<5
40244 (-)	9	92.2	<5
40245 (-)	5	75.8	<5
40246 (-)	10	119	<5
40247 (-)	3	53.0	<5
40248 (-)	10	73.6	<5
40249 (-)	5	68.2	<5
40250 (-)	7	56.5	<5
40251 (-)	8	74.9	<5
40252 (-)	9	71.5	<5
40253 (-)	8	55.5	<5
40254 (-)	6	57.6	<5
40255 (-)	8	63.6	<5
40256 (-)	9	66.4	<5
40257 (-)	3	54.6	<5
40258 (-)	10	85.3	<5
40259 (-)	9	64.7	6
40710 (-)	11	171	<5
40711 (-)	5	81.2	<5
40712 (-)	11	58.7	<5
40713 (-)	10	64.4	<5
40714 (-)	8	128	<5
40715 (-)	2	71.5	<5
40716 (-)	3	101	<5
40717 (-)	5	62.8	<5
40718 (-)	5	78.7	<5
40719 (-)	3	66.5	<5
40720 (-)	3	66.4	<5
40721 (-)	4	73.5	<5
40722 (-)	6	103	<5
40723 (-)	5	91.6	5

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40724 (-)	9	87.6	<5
40725 (-)	9	80.3	<5
40726 (-)	7	102	<5
40727 (-)	10	85.2	<5
40728 (-)	2	99.1	<5
40729 (-)	5	77.6	<5
40730 (-)	3	55.4	<5
40731 (-)	11	101	<5
40732 (-)	4	66.4	<5
40733 (-)	3	96.5	<5
40734 (-)	6	88.8	<5
40735 (-)	4	91.4	<5
40736 (-)	6	77.7	<5
40737 (-)	4	85.9	<5
40738 (-)	4	69.9	<5
40739 (-)	4	61.9	<5
40740 (-)	8	47.0	<5
40741 (-)	5	53.7	<5
40742 (-)	2	65.8	<5
40743 (-)	11	67.6	11
40744 (-)	4	90.1	<5
40745 (-)	6	64.6	<5
40746 (-)	10	72.1	<5
40747 (-)	4	66.5	<5
40748 (-)	4	65.2	<5
40749 (-)	5	78.6	<5
40750 (-)	4	61.5	<5
40751 (-)	4	69.7	<5
40752 (-)	4	77.8	<5
40753 (-)	4	76.4	<5
40754 (-)	4	73.9	<5
40755 (-)	4	65.7	<5

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DATE SAMPLED: Sep 20, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40760 (-)	6	83.5	<5
40761 (-)	9	55.0	5
40762 (-)	5	89.2	<5
40763 (-)	4	73.1	<5
40764 (-)	5	65.0	<5
40765 (-)	4	51.2	<5
40766 (-)	6	56.0	<5
40767 (-)	22	71.1	<5
40768 (-)	7	70.3	<5
40769 (-)	14	77.0	11
40770 (-)	4	65.8	<5
40771 (-)	7	99.3	<5
40772 (-)	4	73.4	<5
40773 (-)	5	62.7	<5
40774 (-)	5	49.2	<5
40775 (-)	5	59.0	<5
40776 (-)	10	59.3	<5
40777 (-)	9	59.1	<5
40778 (-)	15	57.0	<5
40779 (-)	4	66.0	<5
40780 (-)	11	48.2	<5
40781 (-)	2	79.5	<5
40782 (-)	13	106	<5
40783 (-)	11	101	9
40784 (-)	3	59.9	<5
40785 (-)	4	90.0	<5
40786 (-)	4	57.9	<5
40787 (-)	21	84.6	<5
40788 (-)	2	23.4	<5
40789 (-)	50	119	<5
40790 (-)	8	70.3	<5
40791 (-)	9	71.5	<5

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CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40792 (-)	12	80.4	<5
40793 (-)	29	135	<5
40794 (-)	22	59.5	<5
40795 (-)	3	54.4	<5
40796 (-)	55	113	<5
40797 (-)	15	145	<5
40798 (-)	14	58.1	<5
40799 (-)	5	66.3	<5
40800 (-)	8	58.5	<5
40801 (-)	7	79.6	<5
40802 (-)	11	57.9	5
40803 (-)	8	44.6	5
40804 (-)	3	66.8	<5
40805 (-)	2	49.1	<5
40806 (-)	4	73.7	<5
40807 (-)	7	74.8	<5
40808 (-)	6	65.5	<5
40809 (-)	2	52.5	<5
40810 (-)	12	45.1	<5
40811 (-)	6	54.6	<5
40812 (-)	11	90.4	<5
40813 (-)	8	95.8	<5
40814 (-)	4	51.5	<5
40815 (-)	16	63.2	<5
40816 (-)	10	83.2	<5
40817 (-)	6	43.7	<5
40818 (-)	13	48.6	<5
40819 (-)	12	48.2	<5
40820 (-)	8	53.2	<5
40821 (-)	15	55.2	<5
40822 (-)	13	60.4	<5
40823 (-)	19	26.6	<5

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AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40824 (-)	5	39.2	<5
40825 (-)	15	38.3	<5
40826 (-)	14	30.8	<5
40827 (-)	27	59.0	<5
40828 (-)	26	52.8	<5
40829 (-)	19	59.5	<5
40830 (-)	28	66.5	<5
40831 (-)	18	86.7	<5
40832 (-)	12	58.0	<5
40833 (-)	10	51.1	<5
40834 (-)	11	54.4	<5
40835 (-)	13	61.9	<5
40836 (-)	6	47.3	<5
40837 (-)	9	31.3	<5
40838 (-)	10	55.4	<5
40839 (-)	12	60.6	<5
40840 (-)	20	56.2	5
40841 (-)	16	57.6	7
40842 (-)	8	47.2	<5
40843 (-)	15	83.5	<5
40844 (-)	15	51.2	6
40845 (-)	12	39.9	<5
40846 (-)	15	38.6	<5
40847 (-)	7	54.4	<5
40848 (-)	14	45.0	8
40849 (-)	15	51.5	7
40850 (-)	3	43.1	<5
40851 (-)	21	76.7	9
40852 (-)	5	24.9	<5
40853 (-)	15	36.9	<5
40854 (-)	11	49.5	<5
40860 (-)	6	89.8	<5

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40861 (-)	5	68.2	<5
40862 (-)	3	54.4	<5
40863 (-)	6	97.3	<5
40864 (-)	4	77.3	<5
40865 (-)	5	66.1	<5
40866 (-)	4	49.2	<5
40867 (-)	4	64.0	<5
40868 (-)	8	58.0	<5
40869 (-)	6	64.8	<5
40870 (-)	6	53.0	<5
40871 (-)	4	83.9	<5
40872 (-)	4	52.5	<5
40873 (-)	4	44.9	<5
40874 (-)	4	49.3	<5
40875 (-)	4	55.8	<5
40876 (-)	4	50.8	<5
40877 (-)	3	56.6	<5
40878 (-)	4	68.1	<5
40879 (-)	16	63.5	<5
40880 (-)	9	70.6	<5
40881 (-)	10	53.1	<5
40882 (-)	10	82.1	<5
40883 (-)	11	85.8	<5
40884 (-)	15	61.0	<5
40885 (-)	17	59.6	<5
40886 (-)	20	113	<5
40887 (-)	16	54.9	<5
40888 (-)	16	88.7	<5
40889 (-)	17	73.4	<5
40890 (-)	26	163	<5
40891 (-)	21	85.5	<5
40892 (-)	22	122	<5

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40893 (-)	13	67.1	<5
40894 (-)	6	50.2	<5
40895 (-)	23	151	<5
40896 (-)	17	65.7	<5
40897 (-)	25	182	<5
40898 (-)	8	61.1	7
40899 (-)	5	58.2	<5
40900 (-)	15	123	<5
40901 (-)	9	133	<5
40902 (-)	6	68.7	<5
40903 (-)	4	55.6	5
40904 (-)	5	41.7	<5
40905 (-)	6	65.3	<5
40906 (-)	4	47.5	<5
40907 (-)	6	68.6	<5
40908 (-)	4	55.5	<5
40909 (-)	9	58.6	<5
40910 (-)	4	64.7	<5
40911 (-)	6	51.3	<5
40912 (-)	3	46.6	<5
40913 (-)	8	51.7	<5
40914 (-)	5	67.0	<5
40915 (-)	6	78.6	<5
40916 (-)	5	69.0	<5
40917 (-)	5	56.5	<5
40918 (-)	11	57.1	6
40919 (-)	4	62.1	<5
40920 (-)	6	57.0	<5
40921 (-)	5	53.5	<5
40922 (-)	4	53.7	<5
40923 (-)	5	61.0	<5
40924 (-)	5	46.6	<5

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40925 (-)	11	63.7	<5
40926 (-)	3	56.7	<5
40927 (-)	5	65.1	<5
40928 (-)	5	63.9	<5
40929 (-)	5	67.8	<5
40930 (-)	12	53.7	6
40931 (-)	11	71.8	<5
40932 (-)	4	68.4	<5
40933 (-)	4	63.5	<5
40934 (-)	5	73.8	<5
40935 (-)	6	51.5	<5
40936 (-)	4	97.1	<5
40938 (-)	3	84.8	<5
40938a (-)	4	61.5	<5
40939 (-)	4	51.5	<5
40940 (-)	11	46.3	<5
40941 (-)	5	75.6	<5
40942 (-)	6	104	<5
40943 (-)	4	84.3	<5
40944 (-)	6	99.1	<5
40945 (-)	7	75.8	<5
40946 (-)	7	55.0	<5
40947 (-)	7	54.4	<5
40948 (-)	9	62.9	<5
40949 (-)	13	65.3	<5
40950 (-)	28	175	<5
40951 (-)	6	201	<5
40952 (-)	11	46.0	6
40953 (-)	11	50.6	7
40954 (-)	12	63.7	12
40955 (-)	13	61.5	12
40956 (-)	4	83.0	<5

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

DATE SAMPLED: Sep 20, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40957 (-)	6	101	<5
40958 (-)	7	131	<5
40959 (-)	6	103	<5
40960 (-)	5	93.7	<5
40961 (-)	4	60.1	<5
40962 (-)	4	71.8	<5
40963 (-)	17	128	<5
40964 (-)	9	105	<5
40965 (-)	6	76.9	<5
40966 (-)	5	108	<5
40967 (-)	6	102	<5
40968 (-)	3	63.1	<5
40969 (-)	13	231	<5
40970 (-)	12	231	<5
40971 (-)	13	240	<5
40972 (-)	4	80.9	<5
40973 (-)	6	105	<5
40974 (-)	7	109	<5
40975 (-)	4	75.0	<5
40976 (-)	3	55.5	<5
40977 (-)	3	58.5	<5
40978 (-)	3	50.7	<5
40979 (-)	3	48.9	<5

Comments: RDL - Reported Detection Limit

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40210 (-)		0.42	10
40211 (-)		0.44	<2
40212 (-)		0.43	14
40213 (-)		0.49	4
40214 (-)		0.53	4
40215 (-)		0.43	<2
40216 (-)		0.45	13
40217 (-)		0.45	<2
40218 (-)		0.46	<2
40219 (-)		0.61	6
40220 (-)		0.45	5
40221 (-)		0.49	4
40222 (-)		0.49	4
40223 (-)		0.49	<2
40224 (-)		0.45	13
40225 (-)		0.52	4
40226 (-)		0.51	5
40227 (-)		0.45	37
40228 (-)		0.50	16
40229 (-)		0.45	5
40230 (-)		0.48	<2
40231 (-)		0.43	6
40232 (-)		0.49	<2
40233 (-)		0.50	19
40234 (-)		0.48	3
40235 (-)		0.47	<2
40236 (-)		0.51	<2
40237 (-)		0.46	2
40238 (-)		0.40	2
40239 (-)		0.50	6
40240 (-)		0.54	<2
40241 (-)		0.60	<2

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CLIENT NAME: VOLCANIC METALS

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40242 (-)		0.55	4
40243 (-)		0.53	15
40244 (-)		0.50	2
40245 (-)		0.52	<2
40246 (-)		0.47	24
40247 (-)		0.51	19
40248 (-)		0.57	12
40249 (-)		0.55	7
40250 (-)		0.69	5
40251 (-)		0.66	19
40252 (-)		0.58	4
40253 (-)		0.53	23
40254 (-)		0.49	7
40255 (-)		0.51	5
40256 (-)		0.59	11
40257 (-)		0.40	10
40258 (-)		0.49	3
40259 (-)		0.42	4
40710 (-)		0.50	<2
40711 (-)		0.51	6
40712 (-)		0.47	4
40713 (-)		0.50	5
40714 (-)		0.52	<2
40715 (-)		0.48	<2
40716 (-)		0.48	<2
40717 (-)		0.48	4
40718 (-)		0.52	<2
40719 (-)		0.51	<2
40720 (-)		0.51	5
40721 (-)		0.52	<2
40722 (-)		0.53	<2
40723 (-)		0.52	<2

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40724 (-)		0.51	<2
40725 (-)		0.56	<2
40726 (-)		0.55	<2
40727 (-)		0.48	<2
40728 (-)		0.48	<2
40729 (-)		0.49	<2
40730 (-)		0.45	<2
40731 (-)		0.45	27
40732 (-)		0.51	<2
40733 (-)		0.47	<2
40734 (-)		0.53	<2
40735 (-)		0.55	<2
40736 (-)		0.49	<2
40737 (-)		0.48	<2
40738 (-)		0.55	<2
40739 (-)		0.48	4
40740 (-)		0.50	<2
40741 (-)		0.54	<2
40742 (-)		0.51	<2
40743 (-)		0.47	19
40744 (-)		0.52	6
40745 (-)		0.49	25
40746 (-)		0.50	3
40747 (-)		0.52	<2
40748 (-)		0.51	3
40749 (-)		0.52	<2
40750 (-)		0.51	87
40751 (-)		0.49	7
40752 (-)		0.49	5
40753 (-)		0.48	8
40754 (-)		0.52	39
40755 (-)		0.53	<2

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DATE SAMPLED: Sep 20, 2011

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SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40760 (-)		0.44	<2
40761 (-)		0.46	6
40762 (-)		0.48	4
40763 (-)		0.49	<2
40764 (-)		0.44	4
40765 (-)		0.41	9
40766 (-)		0.43	3
40767 (-)		0.41	5
40768 (-)		0.45	3
40769 (-)		0.45	3
40770 (-)		0.36	2
40771 (-)		0.46	19
40772 (-)		0.47	<2
40773 (-)		0.45	3
40774 (-)		0.38	<2
40775 (-)		0.43	<2
40776 (-)		0.51	3
40777 (-)		0.46	4
40778 (-)		0.45	4
40779 (-)		0.42	28
40780 (-)		0.49	18
40781 (-)		0.46	3
40782 (-)		0.43	19
40783 (-)		0.44	2
40784 (-)		0.41	<2
40785 (-)		0.43	<2
40786 (-)		0.42	<2
40787 (-)		0.47	<2
40788 (-)		0.50	<2
40789 (-)		0.43	10
40790 (-)		0.33	3
40791 (-)		0.45	<2

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SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40792 (-)		0.46	<2
40793 (-)		0.47	<2
40794 (-)		0.42	<2
40795 (-)		0.39	<2
40796 (-)		0.49	<2
40797 (-)		0.47	<2
40798 (-)		0.39	14
40799 (-)		0.46	11
40800 (-)		0.49	4
40801 (-)		0.41	2
40802 (-)		0.51	6
40803 (-)		0.44	<2
40804 (-)		0.43	<2
40805 (-)		0.44	<2
40806 (-)		0.43	<2
40807 (-)		0.49	<2
40808 (-)		0.43	<2
40809 (-)		0.37	4
40810 (-)		0.45	4
40811 (-)		0.45	3
40812 (-)		0.39	3
40813 (-)		0.40	<2
40814 (-)		0.47	2
40815 (-)		0.43	<2
40816 (-)		0.39	<2
40817 (-)		0.47	<2
40818 (-)		0.44	<2
40819 (-)		0.42	<2
40820 (-)		0.46	3
40821 (-)		0.40	3
40822 (-)		0.42	<2
40823 (-)		0.45	<2

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40824 (-)		0.54	13
40825 (-)		0.44	5
40826 (-)		0.45	4
40827 (-)		0.42	<2
40828 (-)		0.47	2
40829 (-)		0.48	3
40830 (-)		0.50	4
40831 (-)		0.42	3
40832 (-)		0.46	<2
40833 (-)		0.42	<2
40834 (-)		0.31	<2
40835 (-)		0.47	2
40836 (-)		0.49	20
40837 (-)		0.43	11
40838 (-)		0.41	<2
40839 (-)		0.44	<2
40840 (-)		0.39	43
40841 (-)		0.46	7
40842 (-)		0.36	27
40843 (-)		0.48	<2
40844 (-)		0.45	<2
40845 (-)		0.43	<2
40846 (-)		0.47	<2
40847 (-)		0.35	11
40848 (-)		0.41	17
40849 (-)		0.43	4
40850 (-)		0.39	<2
40851 (-)		0.47	3
40852 (-)		0.38	<2
40853 (-)		0.47	8
40854 (-)		0.44	8
40860 (-)		0.47	<2

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## Certificate of Analysis

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40861 (-)		0.50	<2
40862 (-)		0.35	17
40863 (-)		0.58	<2
40864 (-)		0.47	<2
40865 (-)		0.50	<2
40866 (-)		0.57	4
40867 (-)		0.57	<2
40868 (-)		0.51	3
40869 (-)		0.50	<2
40870 (-)		0.62	27
40871 (-)		0.50	2
40872 (-)		0.50	<2
40873 (-)		0.54	<2
40874 (-)		0.50	3
40875 (-)		0.56	<2
40876 (-)		0.44	3
40877 (-)		0.52	<2
40878 (-)		0.47	<2
40879 (-)		0.52	<2
40880 (-)		0.44	<2
40881 (-)		0.44	4
40882 (-)		0.48	<2
40883 (-)		0.49	2
40884 (-)		0.48	<2
40885 (-)		0.59	19
40886 (-)		0.47	<2
40887 (-)		0.56	3
40888 (-)		0.48	<2
40889 (-)		0.52	3
40890 (-)		0.59	5
40891 (-)		0.54	<2
40892 (-)		0.46	<2

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CLIENT NAME: VOLCANIC METALS

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40893 (-)		0.50	<2
40894 (-)		0.43	5
40895 (-)		0.47	18
40896 (-)		0.48	<2
40897 (-)		0.51	5
40898 (-)		0.52	6
40899 (-)		0.41	5
40900 (-)		0.47	3
40901 (-)		0.46	3
40902 (-)		0.53	<2
40903 (-)		0.43	3
40904 (-)		0.44	<2
40905 (-)		0.37	<2
40906 (-)		0.41	<2
40907 (-)		0.46	16
40908 (-)		0.39	4
40909 (-)		0.54	2
40910 (-)		0.43	<2
40911 (-)		0.43	6
40912 (-)		0.50	2
40913 (-)		0.40	3
40914 (-)		0.49	<2
40915 (-)		0.50	<2
40916 (-)		0.50	<2
40917 (-)		0.45	34
40918 (-)		0.43	2
40919 (-)		0.49	<2
40920 (-)		0.48	3
40921 (-)		0.51	<2
40922 (-)		0.50	<2
40923 (-)		0.55	<2
40924 (-)		0.54	4

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CLIENT NAME: VOLCANIC METALS

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
40925 (-)		0.46	<2
40926 (-)		0.44	<2
40927 (-)		0.45	<2
40928 (-)		0.51	4
40929 (-)		0.51	<2
40930 (-)		0.44	3
40931 (-)		0.52	<2
40932 (-)		0.47	<2
40933 (-)		0.48	<2
40934 (-)		0.47	<2
40935 (-)		0.40	15
40936 (-)		0.40	<2
40938 (-)		0.54	13
40938a (-)		0.37	<2
40939 (-)		0.51	<2
40940 (-)		0.50	3
40941 (-)		0.45	<2
40942 (-)		0.47	4
40943 (-)		0.38	3
40944 (-)		0.45	<2
40945 (-)		0.47	3
40946 (-)		0.63	5
40947 (-)		0.54	83
40948 (-)		0.36	<2
40949 (-)		0.37	<2
40950 (-)		0.50	<2
40951 (-)		0.43	20
40952 (-)		0.54	3
40953 (-)		0.56	2
40954 (-)		0.60	6
40955 (-)		0.44	4
40956 (-)		0.44	2

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Login Weight		
	Unit:	kg	ppb
	RDL:	0.01	2
40957 (-)		0.40	<2
40958 (-)		0.48	<2
40959 (-)		0.47	<2
40960 (-)		0.43	19
40961 (-)		0.43	<2
40962 (-)		0.45	<2
40963 (-)		0.56	<2
40964 (-)		0.57	<2
40965 (-)		0.42	<2
40966 (-)		0.54	<2
40967 (-)		0.44	<2
40968 (-)		0.44	<2
40969 (-)		0.40	<2
40970 (-)		0.37	<2
40971 (-)		0.50	<2
40972 (-)		0.45	<2
40973 (-)		0.52	<2
40974 (-)		0.45	<2
40975 (-)		0.47	<2
40976 (-)		0.43	<2
40977 (-)		0.35	<2
40978 (-)		0.45	<2
40979 (-)		0.36	<2

Comments: RDL - Reported Detection Limit

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## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

Solid Analysis											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2720397	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2720397	1.92	1.95	1.6%	< 0.01				80%	120%
As	1	2720397	7	6	15.4%	< 1				80%	120%
B	1	2720397	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2720397	195	199	2.0%	< 1				80%	120%
Be	1	2720322	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Bi	1	2720397	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2720397	0.60	0.60	0.0%	< 0.01				80%	120%
Cd	1	2720397	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2720397	23	21	9.1%	< 1				80%	120%
Co	1	2720397	7.5	6.8	9.8%	< 0.5				80%	120%
Cr	1	2720397	17.7	15.8	11.3%	< 0.5				80%	120%
Cu	1	2720397	5.96	5.48	8.4%	< 0.5	3863	3700	104%	80%	120%
Fe	1	2720397	2.97	3.02	1.7%	< 0.01				80%	120%
Ga	1	2720397	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2720397	< 1	< 1	0.0%	< 1				80%	120%
In	1	2720397	< 1	< 1	0.0%	< 1				80%	120%
K	1	2720397	0.60	0.62	3.3%	< 0.01				80%	120%
La	1	2720397	11	10	9.5%	< 1				80%	120%
Li	1	2720397	12	12	0.0%	< 1				80%	120%
Mg	1	2720397	1.02	1.03	1.0%	< 0.01				80%	120%
Mn	1	2720397	556	497	11.2%	< 1				80%	120%
Mo	1	2720397	0.88	0.80	9.5%	< 0.5				80%	120%
Na	1	2720397	0.02	0.02	0.0%	< 0.01				80%	120%
Ni	1	2720397	12.1	11.5	5.1%	< 0.5				80%	120%
P	1	2720397	1490	1370	8.4%	< 10				80%	120%
Pb	1	2720397	5.1	5.2	1.9%	< 0.5				80%	120%
Rb	1	2720397	111	99	11.4%	< 10				80%	120%
S	1	2720397	0.010	0.010	0.0%	< 0.005				80%	120%
Sb	1	2720397	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2720397	3.09	2.72	12.7%	< 0.5				80%	120%
Se	1	2720397	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2720397	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2720397	32.3	29.3	9.7%	< 0.5	293	290	101%	80%	120%
Ta	1	2720397	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2720397	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2720397	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2720397	0.224	0.228	1.8%	< 0.01				80%	120%
Tl	1	2720322	< 5	< 5	0.0%	< 5				80%	120%
U	1	2720397	< 5	< 5	0.0%	< 5				80%	120%
V	1	2720397	91.8	84.4	8.4%	< 0.5				80%	120%
W	1	2720397	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2720397	4	3	28.6%	< 1				80%	120%
Zn	1	2720397	91.4	84.5	7.8%	0.7				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Zr	1	2720397	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720347	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720347	2.08	2.10	1.0%	< 0.01				80% 120%
As	1	2720347	8	7	13.3%	< 1				80% 120%
B	1	2720347	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720347	213	211	0.9%	< 1				80% 120%
Be	1	2720347	0.6	0.6	0.0%	< 0.5				80% 120%
Bi	1	2720347	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720347	0.97	1.02	5.0%	< 0.01				80% 120%
Cd	1	2720347	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720347	35	35	0.0%	< 1				80% 120%
Co	1	2720347	6.8	6.3	7.6%	< 0.5				80% 120%
Cr	1	2720347	13.9	12.9	7.5%	< 0.5				80% 120%
Cu	1	2720347	15.0	14.2	5.5%	< 0.5	3902	3700	105%	80% 120%
Fe	1	2720347	3.81	3.84	0.8%	< 0.01				80% 120%
Ga	1	2720347	5	5	0.0%	< 5				80% 120%
Hg	1	2720347	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720347	< 1	< 1	0.0%	< 1				80% 120%
K	1	2720347	0.44	0.44	0.0%	< 0.01				80% 120%
La	1	2720347	15	14	6.9%	< 1				80% 120%
Li	1	2720347	15	15	0.0%	< 1				80% 120%
Mg	1	2720347	1.10	1.10	0.0%	< 0.01				80% 120%
Mn	1	2720347	793	747	6.0%	< 1				80% 120%
Mo	1	2720347	1.2	1.4	15.4%	< 0.5				80% 120%
Na	1	2720347	0.04	0.04	0.0%	< 0.01				80% 120%
Ni	1	2720347	11.7	10.9	7.1%	< 0.5				80% 120%
P	1	2720347	1550	1550	0.0%	< 10				80% 120%
Pb	1	2720347	5.8	6.1	5.0%	< 0.5				80% 120%
Rb	1	2720347	80	74	7.8%	< 10				80% 120%
S	1	2720347	0.014	0.014	0.0%	< 0.005				80% 120%
Sb	1	2720347	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720347	5.50	5.32	3.3%	< 0.5				80% 120%
Se	1	2720547	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720347	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720347	44.8	46.0	2.6%	< 0.5	290	290	100%	80% 120%
Ta	1	2720347	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720347	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720347	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720347	0.222	0.226	1.8%	< 0.01				80% 120%
Tl	1	2720347	7	8	13.3%	< 5				80% 120%
U	1	2720347	< 5	< 5	0.0%	< 5				80% 120%
V	1	2720347	98.1	94.9	3.3%	< 0.5				80% 120%
W	1	2720347	< 1	< 1	0.0%	< 1				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Y	1	2720347	7	7	0.0%	< 1				80% 120%
Zn	1	2720347	90.0	86.3	4.2%	< 0.5				80% 120%
Zr	1	2720347	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720372	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720372	3.15	3.01	4.5%	< 0.01				80% 120%
As	1	2720372	9	10	10.5%	< 1				80% 120%
B	1	2720372	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720372	512	490	4.4%	< 1				80% 120%
Be	1	2720372	0.8	0.8	0.0%	< 0.5				80% 120%
Bi	1	2720372	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720372	1.23	1.17	5.0%	< 0.01				80% 120%
Cd	1	2720372	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720372	39	39	0.0%	< 1				80% 120%
Co	1	2720372	8.4	11.0	26.8%	< 0.5				80% 120%
Cr	1	2720372	15.5	16.5	6.3%	< 0.5				80% 120%
Cu	1	2720372	14.2	14.3	0.7%	< 0.5	3767	3700	101%	80% 120%
Fe	1	2720372	5.53	5.22	5.8%	< 0.01				80% 120%
Ga	1	2720372	10	11	9.5%	< 5				80% 120%
Hg	1	2720372	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720622	3	< 1		< 1				80% 120%
K	1	2720372	0.20	0.20	0.0%	< 0.01				80% 120%
La	1	2720372	18	18	0.0%	< 1				80% 120%
Li	1	2720372	20	20	0.0%	< 1				80% 120%
Mg	1	2720372	1.56	1.50	3.9%	< 0.01				80% 120%
Mn	1	2720372	1010	1040	2.9%	< 1				80% 120%
Mo	1	2720372	1.1	1.4	24.0%	< 0.5				80% 120%
Na	1	2720372	0.01	0.01	0.0%	< 0.01				80% 120%
Ni	1	2720372	9.37	8.39	11.0%	< 0.5				80% 120%
P	1	2720372	3550	3270	8.2%	< 10				80% 120%
Pb	1	2720372	7.6	7.6	0.0%	< 0.5				80% 120%
Rb	1	2720372	27	28	3.6%	< 10				80% 120%
S	1	2720372	0.019	0.019	0.0%	< 0.005				80% 120%
Sb	1	2720372	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720372	7.32	7.46	1.9%	< 0.5				80% 120%
Se	1	2720372	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720372	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720372	118	117	0.9%	< 0.5	308	290	106%	80% 120%
Ta	1	2720372	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720372	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720372	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720372	0.17	0.16	6.1%	< 0.01				80% 120%
Tl	1	2720622	10	11	9.5%	< 5				80% 120%
U	1	2720372	< 5	< 5	0.0%	< 5				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
V	1	2720372	129	128	0.8%	< 0.5				80% 120%
W	1	2720372	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720372	11	11	0.0%	< 1				80% 120%
Zn	1	2720372	171	172	0.6%	< 0.5				80% 120%
Zr	1	2720372	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720422	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720422	2.99	2.95	1.3%	< 0.01	0.433	0.459	94%	80% 120%
As	1	2720422	5	5	0.0%	< 1				80% 120%
B	1	2720422	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720422	503	495	1.6%	< 1				80% 120%
Be	1	2720422	0.6	0.6	0.0%	< 0.5				80% 120%
Bi	1	2720422	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720422	0.802	0.838	4.4%	< 0.01				80% 120%
Cd	1	2720422	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720422	22	21	4.7%	< 1				80% 120%
Co	1	2720422	12.0	7.5		< 0.5	6.2	5.0	124%	80% 120%
Cr	1	2720422	8.79	7.30	18.5%	< 0.5				80% 120%
Cu	1	2720422	69.5	70.5	1.4%	< 0.5	3879	3800	102%	80% 120%
Fe	1	2720422	4.53	4.50	0.7%	< 0.01	1.58	1.51	104%	80% 120%
Ga	1	2720422	5	5	0.0%	< 5				80% 120%
Hg	1	2720422	< 1	< 1	0.0%	< 1	1.5	1.3	114%	80% 120%
In	1	2720422	< 1	< 1	0.0%	< 1				80% 120%
K	1	2720422	1.06	1.05	0.9%	< 0.01				80% 120%
La	1	2720422	13	13	0.0%	< 1				80% 120%
Li	1	2720422	16	16	0.0%	< 1				80% 120%
Mg	1	2720422	1.36	1.34	1.5%	< 0.01				80% 120%
Mn	1	2720422	424	413	2.6%	< 1				80% 120%
Mo	1	2720422	0.9	2.0		< 0.5	318	280	113%	80% 120%
Na	1	2720422	0.02	0.02	0.0%	< 0.01				80% 120%
Ni	1	2720422	5.49	4.62	17.2%	< 0.5				80% 120%
P	1	2720422	2730	2910	6.4%	< 10				80% 120%
Pb	1	2720422	6.91	7.28	5.2%	0.5				80% 120%
Rb	1	2720422	195	192	1.6%	< 10				80% 120%
S	1	2720422	0.015	0.015	0.0%	< 0.005				80% 120%
Sb	1	2720422	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720422	4.39	4.22	3.9%	< 0.5				80% 120%
Se	1	2720422	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720422	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720422	25.6	24.1	6.0%	0.5	309	290	106%	80% 120%
Ta	1	2720422	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720422	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720422	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720422	0.35	0.35	0.0%	< 0.01				80% 120%
Tl	1	2720422	10	11	9.5%	< 5				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

Solid Analysis (Continued)											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
U	1	2720422	< 5	< 5	0.0%	< 5				80%	120%
V	1	2720422	74.0	72.9	1.5%	< 0.5				80%	120%
W	1	2720422	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2720422	5	5	0.0%	< 1				80%	120%
Zn	1	2720422	65.0	64.3	1.1%	< 0.5				80%	120%
Zr	1	2720422	< 5	< 5	0.0%	< 5				80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2720447	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2720447	2.74	2.73	0.4%	< 0.01				80%	120%
As	1	2720447	9	9	0.0%	< 1				80%	120%
B	1	2720447	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2720447	749	733	2.2%	< 1				80%	120%
Be	1	2720447	0.66	0.57	14.6%	< 0.5				80%	120%
Bi	1	2720447	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2720447	0.913	0.930	1.8%	< 0.01				80%	120%
Cd	1	2720447	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2720447	94	94	0.0%	< 1				80%	120%
Co	1	2720447	14.2	13.6	4.3%	< 0.5				80%	120%
Cr	1	2720447	22.4	22.3	0.4%	< 0.5				80%	120%
Cu	1	2720447	43.0	47.0	8.9%	< 0.5	4101	3700	110%	80%	120%
Fe	1	2720447	4.61	4.59	0.4%	< 0.01				80%	120%
Ga	1	2720447	8	7	13.3%	< 5				80%	120%
Hg	1	2720447	< 1	< 1	0.0%	< 1				80%	120%
In	1	2720447	< 1	2		< 1				80%	120%
K	1	2720447	0.549	0.541	1.5%	< 0.01				80%	120%
La	1	2720447	35	34	2.9%	< 1				80%	120%
Li	1	2720447	14	13	7.4%	< 1				80%	120%
Mg	1	2720447	1.55	1.54	0.6%	< 0.01				80%	120%
Mn	1	2720447	1130	1090	3.6%	< 1				80%	120%
Mo	1	2720447	0.9	1.0	10.5%	< 0.5				80%	120%
Na	1	2720447	0.01	0.01	0.0%	< 0.01				80%	120%
Ni	1	2720447	14.7	14.3	2.8%	< 0.5				80%	120%
P	1	2720447	2530	2630	3.9%	< 10				80%	120%
Pb	1	2720447	6.9	6.9	0.0%	< 0.5				80%	120%
Rb	1	2720447	109	104	4.7%	< 10				80%	120%
S	1	2720447	0.013	0.013	0.0%	< 0.005				80%	120%
Sb	1	2720447	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2720447	22.6	22.3	1.3%	< 0.5				80%	120%
Se	1	2720447	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2720447	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2720447	39.9	40.9	2.5%	< 0.5	291	290	100%	80%	120%
Ta	1	2720447	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2720447	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2720447	< 5	< 5	0.0%	< 5				80%	120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Ti	1	2720447	0.19	0.19	0.0%	< 0.01				80% 120%
Tl	1	2720447	7	7	0.0%	< 5				80% 120%
U	1	2720447	< 5	< 5	0.0%	< 5				80% 120%
V	1	2720447	80.6	80.1	0.6%	< 0.5				80% 120%
W	1	2720447	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720447	50	49	2.0%	< 1				80% 120%
Zn	1	2720447	119	117	1.7%	< 0.5				80% 120%
Zr	1	2720447	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720472	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720472	1.44	1.44	0.0%	< 0.01				80% 120%
As	1	2720472	8	8	0.0%	< 1				80% 120%
B	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720472	179	177	1.1%	< 1				80% 120%
Be	1	2720472	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Bi	1	2720472	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720472	0.21	0.21	0.0%	< 0.01				80% 120%
Cd	1	2720472	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720472	19	19	0.0%	< 1				80% 120%
Co	1	2720472	6.7	6.9	2.9%	< 0.5				80% 120%
Cr	1	2720472	29.3	30.0	2.4%	< 0.5				80% 120%
Cu	1	2720472	34.5	38.2	10.2%	< 0.5	3867	3700	104%	80% 120%
Fe	1	2720472	2.42	2.42	0.0%	< 0.01				80% 120%
Ga	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2720472	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720472	< 1	< 1	0.0%	< 1				80% 120%
K	1	2720472	0.06	0.06	0.0%	< 0.01				80% 120%
La	1	2720472	9	9	0.0%	< 1				80% 120%
Li	1	2720472	10	10	0.0%	< 1				80% 120%
Mg	1	2720472	0.43	0.43	0.0%	< 0.01				80% 120%
Mn	1	2720472	285	294	3.1%	< 1				80% 120%
Mo	1	2720472	1.8	1.5	18.2%	< 0.5				80% 120%
Na	1	2720472	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Ni	1	2720472	19.8	20.3	2.5%	< 0.5				80% 120%
P	1	2720472	314	326	3.8%	< 10				80% 120%
Pb	1	2720472	7.64	7.90	3.3%	< 0.5				80% 120%
Rb	1	2720472	16	16	0.0%	< 10				80% 120%
S	1	2720472	0.0063	0.0066	4.7%	< 0.005				80% 120%
Sb	1	2720472	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720472	4.7	4.8	2.1%	< 0.5				80% 120%
Se	1	2720472	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720472	17.8	17.5	1.7%	< 0.5	304	290	104%	80% 120%
Ta	1	2720472	< 10	< 10	0.0%	< 10				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Te	1	2720472	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720472	0.07	0.07	0.0%	< 0.01				80% 120%
Tl	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
U	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
V	1	2720472	60.3	61.9	2.6%	< 0.5				80% 120%
W	1	2720472	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720472	4	4	0.0%	< 1				80% 120%
Zn	1	2720472	51.5	52.6	2.1%	< 0.5				80% 120%
Zr	1	2720472	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720498	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720498	1.88	1.84	2.2%	< 0.01				80% 120%
As	1	2720498	9	9	0.0%	< 1				80% 120%
B	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720498	463	453	2.2%	< 1				80% 120%
Be	1	2720498	0.6	0.6	0.0%	< 0.5				80% 120%
Bi	1	2720498	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720498	0.28	0.27	3.6%	< 0.01				80% 120%
Cd	1	2720498	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720498	41	40	2.5%	< 1				80% 120%
Co	1	2720498	6.18	6.14	0.6%	< 0.5				80% 120%
Cr	1	2720498	36.9	35.8	3.0%	< 0.5				80% 120%
Cu	1	2720498	46.6	45.6	2.2%	< 0.5	3845	3700	103%	80% 120%
Fe	1	2720498	3.08	3.06	0.7%	< 0.01				80% 120%
Ga	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2720498	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720498	2	< 1		< 1				80% 120%
K	1	2720498	0.07	0.07	0.0%	< 0.01				80% 120%
La	1	2720498	19	18	5.4%	< 1				80% 120%
Li	1	2720498	12	12	0.0%	< 1				80% 120%
Mg	1	2720498	0.50	0.50	0.0%	< 0.01				80% 120%
Mn	1	2720498	254	249	2.0%	< 1				80% 120%
Mo	1	2720498	3.3	3.2	3.1%	< 0.5				80% 120%
Na	1	2720498	0.01	< 0.01		< 0.01				80% 120%
Ni	1	2720498	23.6	23.1	2.1%	< 0.5				80% 120%
P	1	2720498	224	215	4.1%	< 10				80% 120%
Pb	1	2720498	10.6	10.0	5.8%	< 0.5				80% 120%
Rb	1	2720498	19	19	0.0%	< 10				80% 120%
S	1	2720498	0.008	0.008	0.0%	< 0.005				80% 120%
Sb	1	2720498	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720498	8.88	8.60	3.2%	< 0.5				80% 120%
Se	1	2720498	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720498	31.8	30.2	5.2%	< 0.5	319	290	110%	80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Ta	1	2720498	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720498	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720498	0.10	0.10	0.0%	< 0.01				80% 120%
Tl	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
U	1	2720498	< 5	< 5	0.0%	< 5				80% 120%
V	1	2720498	79.1	76.1	3.9%	< 0.5				80% 120%
W	1	2720498	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720498	20	19	5.1%	< 1				80% 120%
Zn	1	2720498	56.2	55.6	1.1%	< 0.5				80% 120%
Zr	1	2720498	5	5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Cu	1					< 0.5	3810	3700	102%	80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Al	1					< 0.01	0.465	0.459	101%	80% 120%
Co	1					< 0.5	6.4	6.0	106%	80% 120%
Cu	1					< 0.5	3358	3700	90%	80% 120%
Mo	1					< 0.5	350	380	92%	80% 120%
Sr	1					< 0.5	284	290	97%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720483	5	6	18.2%	<2	845	849	99%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720583	3	<2		<2	806	849	94%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720509	25	25	0.0%	<2	807	849	95%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720358	23	24	4.3%	<2	972	922	105%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720535	<2	2		<2	872	849	102%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720547	5	13	88.9%	,2	860	849	101%	80% 120%

Certified By:



## Method Summary

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530769

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

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

CLIENT NAME: VOLCANIC METALS  
SUITE 680, 789 WEST PENDER STREET  
VANCOUVER, BC V6C1H2

ATTENTION TO: JOHN

PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y530772

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 14, 2011

PAGES (INCLUDING COVER): 52

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

\*NOTES



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
40982 (-)	<0.2	2.37	8	<5	200	<0.5	<1	0.31	<0.5	17	5.4	18.8	17.1	3.64
40983 (-)	<0.2	2.22	10	<5	191	<0.5	<1	0.24	<0.5	17	7.0	23.8	15.9	3.20
40984 (-)	<0.2	2.55	7	<5	247	<0.5	<1	0.42	<0.5	19	6.3	15.9	14.1	3.84
40985 (-)	<0.2	2.46	8	<5	233	<0.5	<1	0.31	<0.5	19	6.7	21.6	16.0	3.46
40986 (-)	<0.2	2.50	8	<5	178	0.6	<1	0.25	<0.5	20	6.6	23.5	18.0	3.38
40987 (-)	<0.2	2.38	8	<5	170	0.5	<1	0.24	<0.5	19	6.4	23.8	18.6	3.21
40988 (-)	<0.2	2.41	7	<5	251	0.5	<1	0.27	<0.5	18	7.0	21.4	15.7	3.41
40989 (-)	<0.2	2.46	9	<5	185	0.5	<1	0.20	<0.5	19	7.1	28.7	18.5	3.17
40990 (-)	<0.2	2.74	5	<5	225	0.5	<1	0.38	<0.5	18	6.8	13.9	14.6	3.97
40991 (-)	<0.2	2.63	8	<5	220	0.5	<1	0.29	<0.5	18	7.6	22.7	17.3	3.56
40992 (-)	<0.2	2.26	9	<5	238	<0.5	<1	0.22	<0.5	17	7.0	27.0	14.8	3.14
40993 (-)	<0.2	1.79	7	<5	156	<0.5	<1	0.49	<0.5	27	6.0	13.7	10.6	2.79
40994 (-)	<0.2	1.78	10	<5	166	<0.5	<1	0.30	<0.5	21	5.3	24.3	12.6	2.82
40995 (-)	<0.2	2.01	7	<5	164	<0.5	<1	0.51	<0.5	27	6.5	13.2	12.3	2.99
40996 (-)	<0.2	2.09	10	<5	184	<0.5	<1	0.23	<0.5	23	6.7	33.0	15.7	2.84
40997 (-)	<0.2	1.91	6	<5	156	<0.5	<1	0.56	<0.5	30	6.8	10.3	11.4	2.85
40998 (-)	<0.2	2.03	8	<5	169	<0.5	<1	0.44	<0.5	22	6.4	18.8	13.5	2.93
40999 (-)	<0.2	1.45	8	<5	163	<0.5	<1	0.28	<0.5	21	4.6	22.3	8.5	2.78
41000 (-)	<0.2	1.66	6	<5	266	0.5	<1	0.11	<0.5	44	9.6	28.9	41.8	2.76
41001 (-)	<0.2	1.74	7	<5	223	<0.5	<1	0.15	<0.5	22	5.5	28.0	32.7	2.58
41002 (-)	<0.2	1.34	6	<5	235	0.7	<1	0.26	<0.5	45	16.3	34.9	100	3.87
41003 (-)	<0.2	0.99	7	<5	197	0.6	<1	0.24	<0.5	26	7.4	36.0	40.4	2.46
41004 (-)	<0.2	1.02	7	<5	245	0.5	<1	0.32	<0.5	23	6.3	36.0	42.9	2.28
41005 (-)	<0.2	1.04	7	<5	236	0.5	<1	0.35	<0.5	22	5.9	27.9	28.0	2.03
41006 (-)	<0.2	1.41	6	<5	326	0.8	<1	0.50	<0.5	28	11.6	89.9	49.4	3.40
41007 (-)	<0.2	1.07	7	<5	221	<0.5	<1	0.36	<0.5	24	4.9	26.1	24.0	2.13
41008 (-)	<0.2	1.24	8	<5	262	<0.5	<1	0.40	<0.5	27	6.1	26.8	26.8	2.25
41009 (-)	<0.2	1.03	8	<5	262	<0.5	<1	0.38	<0.5	22	5.3	29.3	28.3	2.14
41010 (-)	<0.2	1.97	11	<5	380	0.5	<1	0.23	<0.5	22	7.9	29.1	24.2	3.36
41011 (-)	<0.2	1.97	7	<5	362	<0.5	<1	0.36	<0.5	25	7.7	14.9	10.9	4.08
41012 (-)	<0.2	0.78	13	<5	86	<0.5	<1	4.03	<0.5	21	3.0	11.2	34.9	1.04
41013 (-)	<0.2	1.24	11	<5	398	0.7	<1	0.34	<0.5	22	9.6	21.2	19.1	3.83

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
41014 (-)	<0.2	1.86	419	<5	292	0.7	<1	0.17	<0.5	20	9.9	35.9	21.0	4.34
41015 (-)	<0.2	1.91	6	<5	217	0.6	<1	0.94	<0.5	34	7.6	11.5	6.8	3.32
41016 (-)	<0.2	2.19	5	<5	216	0.7	<1	0.96	<0.5	33	7.1	8.5	6.5	4.13
41017 (-)	<0.2	2.08	4	<5	404	0.6	<1	0.24	<0.5	30	15.6	32.4	31.0	5.80
41018 (-)	<0.2	2.65	10	<5	181	0.8	<1	0.48	<0.5	34	9.0	23.9	16.6	4.13
41019 (-)	<0.2	2.59	11	<5	233	0.6	<1	0.29	<0.5	19	7.8	29.6	22.9	3.30
41020 (-)	<0.2	2.06	11	<5	202	<0.5	<1	0.17	<0.5	25	6.9	34.5	17.1	2.74
41021 (-)	<0.2	1.75	7	<5	165	0.6	<1	0.27	<0.5	36	6.9	13.2	10.6	3.80
41022 (-)	<0.2	0.03	<1	<5	3	<0.5	<1	<0.01	<0.5	<1	<0.5	<0.5	<0.5	0.07
41023 (-)	<0.2	0.01	<1	<5	2	<0.5	<1	<0.01	<0.5	<1	<0.5	0.5	<0.5	0.02
41024 (-)	<0.2	0.03	<1	<5	<1	<0.5	<1	<0.01	<0.5	<1	<0.5	<0.5	<0.5	0.03
41025 (-)	<0.2	0.01	<1	<5	2	<0.5	1	<0.01	<0.5	<1	1.0	0.8	<0.5	0.02
41026 (-)	<0.2	1.64	11	<5	151	<0.5	2	0.30	<0.5	16	8.8	20.5	10.4	2.95
41027 (-)	<0.2	1.91	17	<5	444	0.6	3	0.16	<0.5	17	11.0	33.4	24.5	2.76
41028 (-)	<0.2	2.07	16	<5	325	0.7	3	0.12	<0.5	19	11.0	37.7	28.0	3.02
41029 (-)	<0.2	2.76	8	<5	407	<0.5	3	0.31	<0.5	12	22.2	23.1	6.9	4.15
41030 (-)	<0.2	2.47	8	<5	704	<0.5	3	0.21	<0.5	42	7.5	25.3	224	4.63
41031 (-)	<0.2	1.66	12	<5	250	<0.5	2	0.20	<0.5	35	9.2	29.1	21.8	2.59
41032 (-)	<0.2	2.91	7	<5	500	0.5	<1	1.16	<0.5	18	17.2	14.3	73.5	4.57
41033 (-)	<0.2	1.14	11	<5	375	0.5	1	1.52	<0.5	25	9.5	25.2	37.0	1.97
41034 (-)	<0.2	2.08	16	<5	436	0.8	4	0.96	<0.5	28	16.7	32.1	57.3	4.27
41035 (-)	<0.2	2.48	10	<5	234	0.5	3	0.43	<0.5	11	16.4	52.8	39.1	4.24
41036 (-)	<0.2	1.52	13	<5	184	0.8	1	4.10	<0.5	25	7.7	25.7	21.9	2.21
41037 (-)	<0.2	2.03	12	<5	181	0.5	2	0.35	<0.5	15	13.5	44.5	8.9	3.50
41038 (-)	<0.2	2.53	9	<5	347	0.8	3	0.27	<0.5	36	18.6	46.5	168	4.69
41039 (-)	<0.2	1.59	9	<5	279	0.6	2	0.65	<0.5	37	9.3	19.6	28.0	2.61
41040 (-)	<0.2	2.31	9	<5	230	0.9	4	0.71	<0.5	37	13.9	10.7	8.1	3.56
41041 (-)	<0.2	2.04	8	<5	204	0.6	4	0.49	<0.5	27	15.1	21.5	13.4	3.12
41042 (-)	<0.2	2.43	17	<5	227	0.7	4	0.29	<0.5	20	11.6	37.7	22.3	3.26
41043 (-)	<0.2	1.82	13	<5	198	0.7	2	0.23	<0.5	36	9.5	32.9	23.0	2.95
41044 (-)	<0.2	2.08	11	<5	143	0.6	<1	0.46	<0.5	17	10.0	17.9	10.3	3.02
41045 (-)	<0.2	2.40	14	<5	209	0.7	3	0.33	<0.5	17	14.2	37.0	50.8	3.65

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
41046 (-)	<0.2	2.71	10	<5	222	0.9	3	0.59	<0.5	20	13.5	15.8	11.3	3.75
41047 (-)	<0.2	2.54	7	<5	336	0.6	5	0.20	<0.5	15	12.7	6.4	462	5.74
41048 (-)	<0.2	2.29	12	<5	140	0.5	4	0.34	<0.5	15	13.4	33.8	32.9	3.74
41049 (-)	<0.2	2.90	8	<5	296	0.8	4	0.51	<0.5	7	23.1	61.0	278	3.81
41050 (-)	<0.2	2.11	7	<5	232	0.6	3	0.55	<0.5	23	14.6	34.2	10.5	3.41
41051 (-)	<0.2	1.63	9	<5	137	<0.5	3	0.47	<0.5	16	12.3	17.3	27.6	2.48
41052 (-)	<0.2	2.61	12	<5	176	0.8	1	0.75	<0.5	36	13.8	16.6	13.7	3.67
41053 (-)	<0.2	1.81	13	<5	182	<0.5	4	0.43	<0.5	18	10.7	18.5	10.9	3.04
41054 (-)	<0.2	2.17	13	<5	143	0.6	4	0.21	<0.5	18	12.7	30.3	12.3	3.18
41055 (-)	<0.2	2.02	12	<5	224	0.7	2	0.24	<0.5	28	10.1	34.9	20.6	2.68
41056 (-)	<0.2	1.93	15	<5	196	0.6	4	0.21	<0.5	18	13.3	35.6	18.6	2.76
41057 (-)	<0.2	2.54	11	<5	78	0.9	5	0.46	<0.5	24	13.7	12.3	7.3	4.26
41058 (-)	<0.2	2.34	10	<5	176	<0.5	<1	0.14	<0.5	22	6.0	37.1	17.9	2.93
41059 (-)	<0.2	2.64	6	<5	178	0.6	<1	0.60	<0.5	29	13.2	12.7	11.4	3.77
64688 (-)	<0.2	1.32	8	<5	323	<0.5	<1	0.43	<0.5	29	8.6	43.0	45.2	3.00
64689 (-)	<0.2	2.34	5	<5	962	0.7	<1	0.85	<0.5	11	12.8	9.0	12.4	3.52
64690 (-)	<0.2	2.41	8	<5	773	1.6	<1	0.78	<0.5	18	14.9	4.1	11.9	5.07
64691 (-)	<0.2	2.41	8	<5	766	0.8	<1	0.88	<0.5	17	13.8	16.1	16.8	4.43
64692 (-)	<0.2	1.05	8	<5	233	<0.5	<1	0.39	<0.5	24	5.9	29.0	35.2	2.11
64780 (-)	0.4	2.29	11	<5	539	0.9	<1	0.32	<0.5	44	15.9	42.5	93.7	3.30
64781 (-)	<0.2	1.68	11	<5	300	0.6	<1	0.28	<0.5	34	6.9	34.4	33.8	2.45
64782 (-)	<0.2	1.62	6	<5	211	<0.5	<1	0.13	<0.5	22	5.0	31.7	28.5	2.57
64783 (-)	<0.2	1.74	8	<5	385	0.6	<1	0.23	<0.5	41	6.0	30.5	40.9	2.76
64784 (-)	<0.2	0.87	3	<5	329	<0.5	<1	0.07	<0.5	22	7.5	22.3	37.6	1.56
64785 (-)	<0.2	2.35	9	<5	300	0.6	<1	0.16	<0.5	36	8.3	37.3	35.9	2.73
64786 (-)	<0.2	1.74	9	<5	475	0.6	<1	0.27	<0.5	26	18.1	42.9	76.5	4.46
64787 (-)	<0.2	1.63	8	<5	373	<0.5	<1	0.16	<0.5	35	5.2	33.8	36.2	2.60
64788 (-)	<0.2	1.03	7	<5	232	<0.5	<1	0.37	<0.5	23	5.2	27.7	27.5	1.98
64789 (-)	<0.2	1.27	6	<5	294	<0.5	<1	0.43	<0.5	22	7.9	38.4	46.3	2.37
64790 (-)	<0.2	1.43	7	<5	338	0.5	<1	0.40	<0.5	24	8.6	45.5	43.7	2.40
64791 (-)	<0.2	1.49	8	<5	284	0.5	<1	0.39	<0.5	25	6.7	34.6	35.6	2.43
64792 (-)	<0.2	1.23	9	<5	239	<0.5	<1	0.55	<0.5	26	6.2	27.0	29.4	2.14

Certified By:



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
64793 (-)	<0.2	0.81	7	<5	221	<0.5	<1	0.35	<0.5	22	4.1	21.7	19.0	1.67
64794 (-)	<0.2	1.21	10	<5	292	<0.5	<1	0.38	<0.5	25	5.6	28.9	30.3	2.08
64795 (-)	<0.2	1.15	7	<5	280	<0.5	<1	0.45	<0.5	26	4.9	27.3	24.0	1.77
64796 (-)	<0.2	0.75	7	<5	208	<0.5	<1	0.32	<0.5	22	4.1	20.2	16.5	1.72
64797 (-)	<0.2	0.85	6	<5	365	<0.5	<1	0.34	<0.5	27	12.3	35.9	46.4	2.56
64798 (-)	<0.2	0.61	10	<5	246	<0.5	<1	0.17	<0.5	31	9.4	24.6	108	2.75
64799 (-)	<0.2	0.77	8	<5	168	<0.5	<1	0.46	<0.5	22	5.5	24.3	23.7	1.71
64800 (-)	<0.2	0.98	11	<5	164	<0.5	<1	1.01	<0.5	29	5.9	33.7	24.4	2.19
64801 (-)	<0.2	2.15	10	<5	242	<0.5	<1	0.22	<0.5	23	8.4	63.6	27.2	2.66
64802 (-)	<0.2	3.49	12	<5	350	<0.5	<1	0.54	<0.5	24	22.9	285	35.6	3.97
64803 (-)	<0.2	2.48	8	<5	475	0.6	<1	0.52	<0.5	36	10.1	88.5	57.3	3.94
64804 (-)	<0.2	1.66	10	<5	366	0.5	<1	0.48	<0.5	31	7.0	33.5	39.6	2.50
64805 (-)	<0.2	1.63	9	<5	354	<0.5	<1	0.41	<0.5	34	10.8	41.2	26.5	2.52
64806 (-)	<0.2	1.58	7	<5	245	<0.5	<1	0.29	<0.5	26	8.1	38.3	18.0	2.16
64807 (-)	<0.2	1.67	8	<5	253	<0.5	<1	0.30	<0.5	24	7.0	45.4	23.1	2.17
64808 (-)	<0.2	2.07	6	<5	328	0.5	<1	0.29	<0.5	25	41.2	369	41.1	4.02
64809 (-)	<0.2	2.05	7	<5	324	<0.5	<1	0.42	<0.5	26	9.4	97.8	43.5	2.81
64810 (-)	0.4	1.77	8	<5	322	0.8	<1	0.34	<0.5	41	6.0	57.9	67.4	3.32
64811 (-)	<0.2	1.70	10	<5	264	0.5	<1	0.80	<0.5	33	8.1	46.0	34.0	2.62
64812 (-)	<0.2	3.73	8	<5	648	1.5	<1	0.86	<0.5	63	25.4	249	127	4.63
64813 (-)	<0.2	1.73	9	<5	223	<0.5	<1	0.44	<0.5	31	8.8	61.8	33.6	2.66
64814 (-)	<0.2	1.34	8	<5	215	<0.5	<1	0.48	<0.5	33	6.2	39.3	25.1	2.34
64815 (-)	<0.2	1.48	9	<5	194	<0.5	<1	0.41	<0.5	36	5.0	36.3	27.8	2.28
64816 (-)	<0.2	2.36	10	<5	226	0.8	<1	0.69	<0.5	94	6.7	35.8	18.3	2.78
64817 (-)	<0.2	0.92	9	<5	198	<0.5	<1	0.32	<0.5	25	5.5	26.6	27.2	1.81
64818 (-)	<0.2	1.64	10	<5	304	<0.5	<1	0.45	<0.5	33	7.4	35.9	30.6	2.66
64819 (-)	<0.2	1.25	9	<5	291	<0.5	<1	0.43	<0.5	30	6.8	32.5	28.8	2.25
64820 (-)	<0.2	1.67	6	<5	206	0.6	<1	0.43	<0.5	47	8.5	47.9	29.2	2.38
64821 (-)	<0.2	1.53	12	<5	201	0.6	<1	0.36	<0.5	39	6.5	48.8	28.3	2.49
64822 (-)	<0.2	1.98	7	<5	199	0.6	<1	0.42	<0.5	70	6.2	45.5	41.7	2.69
64823 (-)	<0.2	2.06	6	<5	136	1.1	<1	0.56	<0.5	82	5.8	26.7	9.6	2.62
64824 (-)	<0.2	1.91	6	<5	125	1.0	<1	0.36	<0.5	71	5.6	27.7	16.7	2.40

Certified By:



## Certificate of Analysis

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
64825 (-)	<0.2	0.72	7	<5	158	<0.5	<1	0.34	<0.5	20	5.0	18.0	20.0	1.54
64826 (-)	<0.2	0.81	8	<5	203	<0.5	<1	0.54	<0.5	21	5.7	17.9	16.6	1.65
64827 (-)	<0.2	1.04	8	<5	225	<0.5	<1	0.39	<0.5	25	5.7	24.3	31.9	1.94
64828 (-)	<0.2	2.52	6	<5	515	0.8	<1	0.47	<0.5	31	14.1	71.8	36.0	3.55
64829 (-)	<0.2	1.15	6	<5	97	<0.5	<1	0.08	<0.5	28	2.6	11.1	19.3	2.15
64830 (-)	<0.2	1.30	6	<5	218	0.5	<1	0.18	<0.5	55	4.5	23.5	24.1	1.98
64831 (-)	<0.2	1.39	6	<5	190	<0.5	<1	0.24	<0.5	54	4.2	25.2	17.5	1.96
64832 (-)	<0.2	1.52	8	<5	263	0.5	<1	0.30	<0.5	36	5.4	34.1	24.3	2.13
64833 (-)	<0.2	2.02	30	<5	349	0.6	<1	0.86	<0.5	39	18.5	76.5	37.3	3.02
64834 (-)	<0.2	1.91	32	<5	470	0.5	<1	1.16	<0.5	31	18.4	78.1	37.9	2.86
64835 (-)	<0.2	2.36	33	<5	367	0.6	<1	0.58	<0.5	37	15.8	84.5	38.6	3.20
64836 (-)	<0.2	3.15	53	<5	316	0.6	<1	0.79	<0.5	39	30.0	120	44.2	4.33
64837 (-)	<0.2	2.11	27	<5	300	0.5	<1	0.41	<0.5	34	16.9	83.8	42.1	2.97
64838 (-)	<0.2	2.97	12	<5	458	0.6	<1	0.82	<0.5	47	21.2	89.3	40.4	3.66
64839 (-)	<0.2	2.34	15	<5	457	0.6	<1	0.59	<0.5	42	17.6	74.8	40.0	3.07
64840 (-)	<0.2	2.53	11	<5	176	0.5	<1	0.74	<0.5	16	19.6	78.8	58.2	3.36
64841 (-)	<0.2	2.33	24	<5	127	0.6	<1	0.59	<0.5	7	38.0	149	72.5	4.63
64842 (-)	<0.2	2.08	12	<5	169	<0.5	<1	0.60	<0.5	19	14.6	55.6	44.5	3.09
64843 (-)	<0.2	1.82	8	<5	126	<0.5	<1	0.62	<0.5	14	9.3	37.4	45.6	2.50
64844 (-)	<0.2	1.86	10	<5	240	<0.5	<1	0.40	<0.5	28	8.6	41.6	36.7	2.60
64845 (-)	<0.2	1.77	8	<5	151	<0.5	<1	0.37	<0.5	16	8.6	38.0	59.5	2.33
64846 (-)	<0.2	2.35	9	<5	150	0.9	<1	0.70	<0.5	11	17.7	56.5	67.6	3.32
64847 (-)	<0.2	2.23	10	<5	178	<0.5	<1	0.37	<0.5	17	8.8	42.3	26.0	3.01
64848 (-)	<0.2	2.06	12	<5	266	0.8	<1	0.36	<0.5	80	6.3	33.5	23.5	2.99
64849 (-)	<0.2	1.57	9	<5	196	<0.5	<1	0.49	<0.5	27	6.0	38.0	37.4	2.42
64850 (-)	<0.2	2.72	10	<5	168	0.8	<1	0.33	<0.5	53	7.0	38.8	18.9	3.39
65131 (-)	<0.2	2.64	7	<5	304	<0.5	<1	0.38	<0.5	23	20.1	71.9	440	4.45
65132 (-)	<0.2	2.44	8	<5	206	0.7	<1	0.60	<0.5	65	7.8	18.7	15.0	3.57
65133 (-)	<0.2	1.92	4	<5	91	<0.5	<1	0.64	<0.5	27	5.9	10.4	8.0	3.25
65134 (-)	<0.2	1.99	6	<5	135	<0.5	<1	0.75	<0.5	25	7.3	15.8	8.9	2.75
65135 (-)	<0.2	2.70	6	<5	573	0.7	<1	0.81	<0.5	30	16.2	39.2	139	5.10
65136 (-)	<0.2	0.96	16	<5	225	<0.5	<1	0.48	<0.5	25	7.1	22.8	23.9	2.73

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65137 (-)	<0.2	1.76	8	<5	362	0.6	<1	0.58	<0.5	35	8.1	45.9	31.2	3.36
65138 (-)	<0.2	2.34	15	<5	270	0.6	<1	0.45	<0.5	18	9.2	33.6	29.2	4.35
65139 (-)	<0.2	1.64	8	<5	386	<0.5	<1	0.71	<0.5	29	6.3	27.0	50.8	2.67
65140 (-)	<0.2	1.34	7	<5	377	0.5	<1	0.64	<0.5	28	5.4	25.4	48.2	2.52
65141 (-)	<0.2	1.01	11	<5	264	<0.5	<1	1.56	<0.5	27	6.6	23.5	24.1	2.25
65142 (-)	<0.2	1.76	6	<5	436	0.6	<1	0.65	<0.5	23	8.1	37.8	25.5	2.97
65143 (-)	<0.2	1.60	6	<5	313	0.7	<1	0.77	<0.5	29	7.4	33.1	53.0	3.05
65144 (-)	<0.2	1.86	6	<5	242	0.7	<1	0.59	<0.5	31	5.4	25.8	18.6	3.04
65145 (-)	<0.2	2.78	4	<5	489	0.9	<1	1.16	<0.5	35	6.4	14.4	8.4	3.64
65146 (-)	<0.2	1.90	2	<5	302	0.7	<1	0.76	<0.5	22	9.6	6.5	3.5	3.28
65147 (-)	<0.2	1.56	8	<5	287	<0.5	<1	0.29	<0.5	19	5.3	29.0	18.1	2.65
65148 (-)	<0.2	2.47	4	<5	463	0.8	<1	0.96	<0.5	24	5.4	11.3	23.9	4.47
65149 (-)	<0.2	1.87	5	<5	292	0.7	<1	0.64	<0.5	25	5.1	22.5	14.3	2.94
65150 (-)	<0.2	1.65	5	<5	230	0.7	<1	0.61	<0.5	32	5.9	15.6	9.6	3.16
65151 (-)	<0.2	1.60	7	<5	569	0.6	<1	0.27	<0.5	29	7.0	50.7	38.4	3.01
65152 (-)	<0.2	1.44	4	<5	698	0.6	<1	0.29	<0.5	15	8.8	46.5	78.6	3.76
65153 (-)	<0.2	2.12	2	<5	2230	1.3	<1	0.40	<0.5	19	16.4	71.5	123	8.12
65154 (-)	<0.2	1.88	3	<5	963	0.9	<1	0.19	<0.5	21	8.4	45.3	79.9	5.02
65155 (-)	<0.2	1.62	8	<5	428	0.6	<1	0.25	<0.5	34	5.9	36.6	36.9	2.57
65156 (-)	<0.2	1.67	10	<5	262	<0.5	<1	0.15	<0.5	24	5.1	37.7	31.2	3.01
65157 (-)	<0.2	1.70	8	<5	430	0.7	<1	0.22	<0.5	40	6.2	34.9	44.2	2.77
65158 (-)	<0.2	1.48	9	<5	743	0.8	<1	0.29	<0.5	38	8.0	33.1	46.1	2.93
65159 (-)	<0.2	1.86	7	<5	425	0.8	<1	0.18	<0.5	55	14.3	32.7	59.2	3.55
65160 (-)	<0.2	1.90	10	<5	428	0.7	<1	0.32	<0.5	34	7.1	40.7	40.9	3.10
65161 (-)	<0.2	2.11	8	<5	1110	1.0	<1	0.38	<0.5	47	16.5	60.4	90.5	3.58
65162 (-)	<0.2	1.72	10	<5	562	0.7	<1	0.35	<0.5	33	7.8	38.6	53.5	2.85
65163 (-)	<0.2	1.62	10	<5	530	0.6	<1	0.35	<0.5	31	7.4	35.1	46.3	2.79
65164 (-)	<0.2	3.35	3	<5	2720	1.6	<1	0.35	<0.5	107	14.9	106	162	5.07
65165 (-)	<0.2	3.32	4	<5	2710	1.7	<1	0.34	<0.5	105	16.4	102	160	5.14
65166 (-)	<0.2	2.09	10	<5	362	0.6	<1	0.23	<0.5	29	7.7	39.5	39.0	2.98
65167 (-)	<0.2	3.00	4	<5	2200	1.5	<1	0.32	<0.5	76	15.0	103	153	4.74
65168 (-)	<0.2	1.87	11	<5	444	0.8	<1	0.28	<0.5	36	8.0	38.8	41.9	2.77

Certified By:



# Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65169 (-)	<0.2	2.11	10	<5	401	0.7	<1	0.25	<0.5	32	7.3	40.7	38.7	2.91
65170 (-)	<0.2	2.15	10	<5	353	0.7	<1	0.22	<0.5	30	7.2	40.3	34.9	3.02
65171 (-)	<0.2	1.71	10	<5	467	0.7	<1	0.42	<0.5	30	8.2	36.6	42.8	3.01
65172 (-)	<0.2	1.62	9	<5	437	0.6	<1	0.34	<0.5	30	7.1	35.0	37.4	2.76
65173 (-)	<0.2	1.74	10	<5	462	0.7	<1	0.43	<0.5	31	7.8	36.6	41.6	3.03
65174 (-)	<0.2	1.93	10	<5	488	0.7	<1	0.31	<0.5	34	7.3	38.0	33.5	3.03
65175 (-)	<0.2	1.59	7	<5	269	0.5	<1	0.14	<0.5	27	6.0	34.0	27.7	2.45
65176 (-)	<0.2	1.58	7	<5	300	0.5	<1	0.15	<0.5	25	6.3	33.8	29.3	2.47
65177 (-)	<0.2	1.58	8	<5	262	0.6	<1	0.17	<0.5	29	5.1	35.0	20.2	2.43
65178 (-)	<0.2	1.41	7	<5	297	0.6	<1	0.15	<0.5	33	5.1	34.0	34.1	2.41
65179 (-)	<0.2	1.59	7	<5	267	0.5	<1	0.15	<0.5	26	5.8	33.6	25.2	2.41
65180 (-)	<0.2	1.21	6	<5	287	0.6	<1	0.15	<0.5	30	4.9	29.5	37.2	2.30
65181 (-)	<0.2	1.92	7	<5	565	1.0	<1	0.26	<0.5	40	15.4	59.6	68.1	3.89
65182 (-)	<0.2	1.87	8	<5	481	0.9	<1	0.23	<0.5	39	12.7	47.3	49.1	3.33
65183 (-)	<0.2	1.78	9	<5	357	0.7	<1	0.20	<0.5	37	7.5	37.4	33.2	2.80
65184 (-)	<0.2	2.00	7	<5	541	0.9	<1	0.29	<0.5	40	13.7	57.8	60.9	3.87
65185 (-)	<0.2	1.71	8	<5	427	0.8	<1	0.23	<0.5	35	8.0	43.5	42.7	3.11
65186 (-)	<0.2	2.55	5	<5	576	0.9	<1	0.30	<0.5	37	7.6	147	66.9	3.69
65187 (-)	0.2	2.03	5	<5	477	0.7	<1	0.27	<0.5	59	3.1	103	51.2	2.83
65188 (-)	<0.2	2.31	3	<5	1360	1.2	<1	0.58	<0.5	48	18.4	265	94.9	4.72
65189 (-)	<0.2	1.49	10	<5	503	<0.5	<1	0.38	<0.5	19	8.8	42.6	25.6	3.16
65190 (-)	<0.2	2.16	8	<5	368	0.7	<1	0.26	<0.5	25	15.1	151	38.8	3.45
65191 (-)	0.2	1.34	6	<5	279	<0.5	<1	0.27	<0.5	20	8.7	49.3	22.6	2.52
65192 (-)	<0.2	1.90	6	<5	432	0.5	<1	0.25	<0.5	26	15.2	136	53.9	3.43
65193 (-)	<0.2	2.02	6	<5	260	0.6	<1	0.24	<0.5	21	21.1	198	44.6	3.24
65194 (-)	<0.2	2.71	4	<5	445	0.5	<1	0.24	<0.5	17	18.2	337	62.0	3.89
65195 (-)	<0.2	1.42	4	<5	196	<0.5	<1	0.25	<0.5	19	8.2	53.1	7.8	2.36
65196 (-)	<0.2	3.96	15	<5	341	0.6	<1	0.29	<0.5	14	16.5	439	43.2	4.41
65197 (-)	<0.2	4.07	17	<5	434	0.9	<1	0.38	<0.5	29	21.1	514	53.2	4.84
65198 (-)	<0.2	1.22	7	<5	135	<0.5	<1	0.09	<0.5	16	8.9	29.4	39.5	2.50
65199 (-)	<0.2	1.50	8	<5	160	<0.5	<1	0.11	<0.5	16	7.9	34.8	30.2	2.61
65200 (-)	<0.2	3.34	6	<5	601	1.0	<1	0.21	<0.5	49	17.8	206	92.6	4.39

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65201 (-)	<0.2	1.67	10	<5	457	0.7	<1	0.68	<0.5	28	7.4	31.1	30.0	2.79
65202 (-)	<0.2	1.27	12	<5	284	0.7	<1	0.57	<0.5	31	8.5	30.9	37.8	2.72
65203 (-)	<0.2	1.24	8	<5	226	0.5	<1	0.61	<0.5	28	6.4	28.7	25.1	2.42
65204 (-)	<0.2	0.97	8	<5	155	<0.5	<1	0.48	<0.5	22	5.8	26.8	22.3	2.02
65205 (-)	<0.2	0.98	7	<5	230	<0.5	<1	0.40	<0.5	22	4.9	23.9	17.4	1.93
65206 (-)	<0.2	0.95	9	<5	248	<0.5	<1	1.35	<0.5	24	5.9	25.2	19.9	2.01
65207 (-)	<0.2	1.02	9	<5	308	0.5	<1	0.49	<0.5	25	6.3	25.4	26.0	2.17
65208 (-)	<0.2	1.47	9	<5	331	0.6	<1	0.77	<0.5	27	7.0	29.3	30.6	2.59
65209 (-)	<0.2	1.25	6	<5	278	0.5	<1	0.41	<0.5	21	5.8	27.8	18.3	2.42
65210 (-)	<0.2	1.34	7	<5	313	0.6	<1	0.33	<0.5	25	5.9	28.0	21.3	2.32
65211 (-)	<0.2	1.48	6	<5	369	0.6	<1	0.39	<0.5	25	6.5	30.4	28.2	2.67
65212 (-)	<0.2	1.78	8	<5	295	1.0	<1	0.28	<0.5	22	5.2	31.9	21.8	2.92
65213 (-)	<0.2	1.34	10	<5	256	0.7	<1	0.20	<0.5	28	5.5	34.0	20.2	2.45
65214 (-)	<0.2	1.09	7	<5	263	0.6	<1	0.23	<0.5	32	4.9	30.3	24.3	2.28
65215 (-)	<0.2	1.56	6	<5	316	0.9	<1	0.20	<0.5	25	6.2	48.5	24.7	3.27
65216 (-)	<0.2	1.60	6	<5	601	0.9	<1	0.28	<0.5	20	6.5	36.8	31.1	3.11
65217 (-)	<0.2	1.70	8	<5	289	1.0	<1	0.17	<0.5	34	5.2	26.2	28.5	3.07
65218 (-)	<0.2	1.61	9	<5	241	0.6	<1	0.18	<0.5	18	6.7	32.5	17.6	2.75
65219 (-)	<0.2	1.91	7	<5	214	0.9	<1	0.14	<0.5	31	4.8	28.6	19.8	3.32
65220 (-)	<0.2	1.29	5	<5	154	0.6	<1	0.11	<0.5	16	4.6	22.4	23.4	2.50
65221 (-)	<0.2	1.49	8	<5	147	<0.5	<1	0.20	<0.5	16	6.1	29.2	16.3	2.45
65222 (-)	<0.2	1.37	7	<5	161	<0.5	<1	0.18	<0.5	21	4.6	23.6	14.4	2.35
65223 (-)	<0.2	1.84	6	<5	293	0.7	<1	0.23	<0.5	23	7.5	52.1	25.9	3.01
65224 (-)	<0.2	0.88	3	<5	91	<0.5	<1	0.09	<0.5	6	3.6	11.1	5.3	1.70
65225 (-)	<0.2	1.39	6	<5	223	<0.5	<1	0.13	<0.5	24	6.3	26.5	14.0	2.72
65226 (-)	<0.2	1.49	6	<5	149	1.0	<1	0.11	<0.5	17	5.6	26.4	19.7	2.39
65227 (-)	<0.2	1.74	9	<5	179	0.8	<1	0.14	<0.5	16	4.7	30.3	15.2	2.54
65228 (-)	<0.2	1.12	8	<5	236	0.7	<1	0.22	<0.5	26	4.9	25.8	19.1	2.14
65229 (-)	<0.2	1.65	8	<5	150	0.6	<1	0.13	<0.5	18	6.3	28.0	18.1	2.44
65230 (-)	<0.2	1.20	5	<5	126	0.9	<1	0.10	<0.5	22	5.1	26.0	23.7	2.21
65231 (-)	<0.2	1.91	7	<5	180	0.6	<1	0.09	<0.5	15	5.4	31.6	20.8	2.52
65232 (-)	<0.2	1.94	8	<5	178	0.7	<1	0.09	<0.5	15	5.7	32.9	23.1	2.35

Certified By:



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65233 (-)	<0.2	1.55	9	<5	212	0.7	<1	0.12	<0.5	31	6.8	33.1	23.6	2.44
65234 (-)	<0.2	1.66	9	<5	223	0.6	<1	0.11	<0.5	24	6.9	33.3	20.9	2.57
65235 (-)	<0.2	1.70	9	<5	227	0.6	<1	0.11	<0.5	21	6.6	32.4	18.9	2.63
65236 (-)	<0.2	1.28	8	<5	212	0.7	<1	0.16	<0.5	29	5.9	30.1	23.4	2.25
65237 (-)	<0.2	1.13	7	<5	210	0.8	<1	0.18	<0.5	30	5.4	28.3	24.4	2.14
65238 (-)	<0.2	1.53	9	<5	213	0.7	<1	0.13	<0.5	29	6.1	33.1	22.6	2.49
65239 (-)	<0.2	1.36	10	<5	220	0.9	<1	0.14	<0.5	36	6.2	32.5	24.9	2.36
65240 (-)	<0.2	1.24	8	<5	225	0.8	<1	0.17	<0.5	31	5.6	29.6	24.1	2.34
65241 (-)	<0.2	1.77	10	<5	249	0.8	<1	0.13	<0.5	34	6.2	35.2	26.4	2.74

Certified By:





**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
40982 (-)	5	<1	1	0.37	10	18	0.78	569	0.8	0.02	9.7	780	14.8	81
40983 (-)	<5	<1	<1	0.31	8	17	0.71	470	0.6	0.01	16.1	505	9.3	61
40984 (-)	6	<1	2	0.59	12	20	0.91	700	0.8	0.02	8.7	1100	9.4	108
40985 (-)	5	<1	1	0.40	10	18	0.80	570	1.1	0.02	14.9	636	9.9	73
40986 (-)	5	<1	2	0.39	10	18	0.84	554	0.7	0.02	13.8	492	9.5	79
40987 (-)	6	<1	1	0.33	10	18	0.79	516	0.8	0.02	14.8	431	9.7	66
40988 (-)	6	<1	<1	0.40	9	18	0.77	573	1.2	0.01	13.0	596	9.5	73
40989 (-)	5	<1	1	0.26	9	16	0.73	469	1.2	0.01	16.7	404	10.5	62
40990 (-)	6	<1	<1	0.71	9	21	1.02	719	1.6	0.02	9.4	900	9.3	134
40991 (-)	6	<1	<1	0.39	8	18	0.85	577	1.6	0.02	16.4	613	10.4	78
40992 (-)	5	<1	2	0.19	8	15	0.63	467	0.8	0.01	15.8	439	10.6	39
40993 (-)	<5	<1	<1	0.37	16	16	0.71	571	<0.5	0.03	6.5	1490	8.5	75
40994 (-)	<5	<1	1	0.15	11	13	0.54	425	0.9	0.02	11.4	1020	9.4	36
40995 (-)	6	<1	1	0.50	19	18	0.85	633	<0.5	0.03	5.0	1490	9.0	117
40996 (-)	<5	<1	2	0.09	11	15	0.52	356	1.3	0.01	16.8	644	10.7	24
40997 (-)	6	<1	<1	0.50	20	18	0.82	654	<0.5	0.03	3.9	1650	9.4	116
40998 (-)	6	<1	<1	0.38	15	16	0.77	528	1.4	0.03	9.4	1250	9.6	96
40999 (-)	<5	<1	<1	0.11	11	10	0.48	409	1.0	0.01	9.5	1590	8.1	40
41000 (-)	<5	<1	1	0.04	18	10	0.33	300	1.4	<0.01	26.6	293	9.1	13
41001 (-)	<5	<1	<1	0.04	10	12	0.35	202	2.4	<0.01	15.4	325	9.9	10
41002 (-)	<5	<1	<1	0.37	18	11	0.64	1170	3.1	0.01	51.2	466	49.3	69
41003 (-)	<5	<1	<1	0.07	13	7	0.39	415	2.4	0.01	41.4	310	9.0	11
41004 (-)	<5	<1	2	0.10	12	8	0.50	387	2.4	0.01	41.5	541	8.6	17
41005 (-)	<5	<1	<1	0.07	12	8	0.41	333	1.0	0.02	25.2	589	6.7	11
41006 (-)	<5	<1	<1	0.19	13	10	0.73	599	1.5	0.01	79.0	1030	7.3	20
41007 (-)	<5	<1	<1	0.07	12	8	0.46	291	1.4	0.02	21.9	630	6.2	10
41008 (-)	<5	<1	<1	0.06	13	9	0.53	359	1.2	0.02	22.8	477	6.9	10
41009 (-)	<5	<1	2	0.05	11	8	0.44	310	<0.5	0.02	24.0	576	5.6	<10
41010 (-)	<5	<1	<1	0.07	10	11	0.41	424	1.1	0.01	17.8	457	9.4	21
41011 (-)	5	<1	<1	0.54	10	8	0.97	616	1.5	0.01	7.3	1440	7.9	90
41012 (-)	<5	<1	<1	0.03	10	3	0.48	314	<0.5	<0.01	7.9	768	10.9	11
41013 (-)	<5	<1	<1	0.10	12	6	0.32	774	1.3	0.01	16.7	966	6.6	12

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
41014 (-)	<5	<1	<1	0.04	8	9	0.38	567	2.2	<0.01	27.9	358	12.8	13
41015 (-)	5	<1	2	0.26	18	15	0.95	565	<0.5	0.06	6.4	2000	5.0	30
41016 (-)	<5	<1	<1	0.51	18	17	1.03	685	0.8	0.05	3.9	3140	4.4	74
41017 (-)	<5	<1	<1	0.66	12	9	0.91	814	1.4	0.01	20.1	878	6.1	118
41018 (-)	8	<1	<1	0.06	17	17	1.19	603	0.8	0.03	11.7	1040	9.2	14
41019 (-)	5	<1	2	0.22	9	16	0.90	488	1.3	0.02	17.1	816	9.8	41
41020 (-)	<5	<1	2	0.06	12	12	0.51	263	1.3	0.01	16.7	412	11.2	19
41021 (-)	<5	<1	<1	0.07	15	8	0.59	357	0.9	0.01	6.6	661	7.4	11
41022 (-)	<5	<1	<1	<0.01	<1	<1	0.01	7	<0.5	<0.01	<0.5	<10	2.4	<10
41023 (-)	<5	<1	<1	<0.01	<1	<1	<0.01	15	<0.5	<0.01	<0.5	11	2.7	<10
41024 (-)	<5	<1	<1	<0.01	<1	<1	<0.01	<1	<0.5	<0.01	<0.5	12	2.3	<10
41025 (-)	<5	<1	<1	<0.01	<1	<1	<0.01	6	<0.5	<0.01	<0.5	97	2.7	<10
41026 (-)	5	<1	<1	0.13	8	12	0.58	374	<0.5	0.01	9.5	1390	9.5	29
41027 (-)	5	<1	3	0.09	8	13	0.61	308	0.6	<0.01	24.4	354	10.1	22
41028 (-)	5	<1	<1	0.12	9	13	0.60	342	0.9	<0.01	22.9	359	11.9	27
41029 (-)	8	<1	<1	1.11	5	13	2.06	671	0.7	0.01	11.2	1510	6.9	211
41030 (-)	7	<1	3	0.84	16	8	1.40	454	7.4	0.02	9.9	545	7.9	107
41031 (-)	<5	<1	<1	0.16	15	12	0.60	292	0.9	0.01	14.1	426	10.7	39
41032 (-)	9	<1	4	1.01	7	13	2.10	1060	<0.5	0.02	6.5	2500	7.8	164
41033 (-)	<5	<1	1	0.05	13	8	0.48	511	<0.5	0.02	20.3	975	9.8	15
41034 (-)	8	<1	<1	0.84	8	13	1.54	836	1.7	0.01	20.1	3540	7.1	127
41035 (-)	8	<1	2	0.75	5	16	1.47	704	0.6	0.01	26.9	1540	8.0	117
41036 (-)	6	<1	2	0.04	13	8	1.85	474	1.1	<0.01	15.3	877	12.5	17
41037 (-)	7	<1	<1	0.25	6	14	1.11	566	0.9	0.01	15.9	1190	9.4	76
41038 (-)	7	<1	<1	0.46	17	9	1.17	535	2.5	0.02	21.7	459	6.1	91
41039 (-)	6	<1	<1	0.23	16	8	0.69	505	1.0	0.03	12.4	1870	6.0	36
41040 (-)	9	<1	1	0.70	25	15	1.07	865	<0.5	0.03	5.6	2820	5.2	143
41041 (-)	8	<1	1	0.42	14	14	1.01	644	<0.5	0.02	13.1	1880	5.8	88
41042 (-)	6	<1	<1	0.10	9	16	0.77	530	0.9	0.01	23.1	447	10.8	32
41043 (-)	6	<1	<1	0.05	17	11	0.60	351	0.7	0.01	16.1	516	9.6	15
41044 (-)	6	<1	<1	0.30	8	16	0.96	522	<0.5	0.03	10.5	1420	7.3	61
41045 (-)	7	<1	1	0.36	7	15	1.15	591	0.7	0.02	21.8	959	12.8	86

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
41046 (-)		9	<1	<1	0.44	13	12	0.93	676	<0.5	0.04	8.4	2070	7.2	75
41047 (-)		7	<1	3	0.91	6	9	0.97	399	2.4	0.02	6.1	697	10.5	119
41048 (-)		8	<1	2	0.21	8	13	0.92	532	1.0	0.02	20.4	1720	11.4	43
41049 (-)		6	<1	<1	1.15	4	13	1.64	773	1.4	0.05	39.9	1110	10.2	179
41050 (-)		9	<1	<1	0.37	17	13	1.25	578	<0.5	0.01	15.6	1550	4.8	60
41051 (-)		6	<1	<1	0.26	8	12	0.75	507	0.7	0.02	9.9	1960	7.5	51
41052 (-)		8	<1	<1	0.43	13	17	1.17	844	0.7	0.02	11.4	2750	8.5	97
41053 (-)		8	<1	2	0.14	7	11	0.73	621	1.0	0.02	10.0	2060	9.0	48
41054 (-)		7	<1	<1	0.24	8	14	0.81	563	<0.5	0.01	13.3	921	10.6	64
41055 (-)		5	<1	<1	0.09	16	12	0.60	411	0.9	0.01	16.9	698	10.3	28
41056 (-)		5	<1	2	0.07	9	11	0.56	451	1.2	0.01	20.5	704	11.3	29
41057 (-)		9	<1	3	0.09	7	10	0.96	773	0.5	0.01	7.8	2030	5.9	23
41058 (-)		5	<1	<1	0.07	10	15	0.53	338	1.4	0.01	18.4	298	12.1	30
41059 (-)		7	<1	<1	0.53	16	21	1.24	971	0.9	0.03	8.3	1590	7.8	105
64688 (-)		<5	<1	<1	0.07	13	11	0.59	611	1.5	0.02	44.1	445	7.5	13
64689 (-)		6	<1	<1	0.56	5	16	1.41	972	0.8	0.01	8.7	1910	6.9	56
64690 (-)		8	<1	<1	0.10	6	8	0.93	1330	1.4	0.01	5.8	2210	6.3	<10
64691 (-)		7	<1	3	0.14	6	15	1.08	867	1.7	0.04	12.5	1960	7.8	20
64692 (-)		<5	<1	1	0.06	12	8	0.39	295	<0.5	0.02	22.1	554	6.6	<10
64780 (-)		<5	<1	2	0.05	24	12	0.52	866	1.9	0.02	43.1	505	12.4	15
64781 (-)		<5	<1	<1	0.05	16	12	0.51	335	0.9	0.02	24.9	364	9.3	14
64782 (-)		<5	<1	<1	0.05	10	9	0.26	239	3.3	<0.01	16.9	476	13.0	24
64783 (-)		<5	<1	<1	0.07	17	11	0.43	323	2.1	0.01	23.0	210	12.0	16
64784 (-)		<5	<1	<1	0.03	9	4	0.14	317	<0.5	<0.01	20.5	298	7.0	<10
64785 (-)		<5	<1	<1	0.05	16	14	0.48	243	1.0	<0.01	28.3	156	13.1	13
64786 (-)		<5	<1	2	0.05	13	11	0.42	479	3.3	0.01	64.4	676	10.4	12
64787 (-)		<5	<1	<1	0.05	16	11	0.39	306	1.9	0.01	17.0	375	11.5	17
64788 (-)		<5	<1	<1	0.06	13	8	0.38	304	0.9	0.02	22.8	593	6.0	<10
64789 (-)		<5	<1	<1	0.10	10	9	0.58	357	1.2	0.02	38.8	619	6.8	20
64790 (-)		<5	<1	<1	0.06	12	10	0.53	448	1.2	0.02	40.3	410	8.5	16
64791 (-)		<5	<1	<1	0.06	13	10	0.46	381	0.9	0.02	29.2	354	8.1	13
64792 (-)		<5	<1	<1	0.06	12	10	0.46	391	0.7	0.02	23.7	520	7.1	12

Certified By:



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CLIENT NAME: VOLCANIC METALS

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

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SAMPLE TYPE: Soil

	Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
	Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
64793 (-)		<5	<1	1	0.04	10	6	0.32	328	<0.5	0.01	17.7	630	4.7	<10
64794 (-)		<5	<1	<1	0.05	13	9	0.38	329	0.7	0.02	23.5	505	6.9	<10
64795 (-)		<5	<1	<1	0.05	12	9	0.40	288	0.8	0.02	19.8	573	7.3	<10
64796 (-)		<5	<1	1	0.04	11	6	0.29	215	0.8	0.01	15.9	579	5.1	<10
64797 (-)		<5	<1	<1	0.11	11	5	0.35	1490	4.5	0.01	67.1	762	7.3	15
64798 (-)		<5	<1	1	0.08	14	4	0.18	502	8.6	<0.01	52.7	423	9.7	<10
64799 (-)		<5	<1	2	0.05	10	7	0.40	323	0.9	0.02	23.0	723	6.2	<10
64800 (-)		<5	<1	<1	0.08	14	8	0.42	354	0.5	0.02	25.9	674	9.3	14
64801 (-)		<5	<1	2	0.04	11	14	0.47	323	1.4	0.01	57.1	327	10.2	16
64802 (-)		8	<1	2	0.06	10	28	2.92	546	1.3	0.01	311	339	9.7	23
64803 (-)		6	<1	3	0.14	17	18	1.05	517	1.4	0.01	66.3	557	8.9	34
64804 (-)		<5	<1	<1	0.06	15	12	0.48	395	0.5	0.02	26.5	569	9.5	16
64805 (-)		<5	<1	<1	0.05	15	11	0.44	650	0.5	0.02	39.5	675	9.5	15
64806 (-)		<5	<1	1	0.05	13	13	0.53	483	0.6	0.01	37.4	570	8.3	19
64807 (-)		5	<1	3	0.04	11	12	0.55	268	<0.5	0.01	42.2	517	8.4	15
64808 (-)		<5	<1	<1	0.11	12	18	2.34	938	<0.5	0.02	561	293	6.4	25
64809 (-)		<5	<1	1	0.09	12	15	1.08	400	1.4	0.02	94.6	574	8.7	24
64810 (-)		<5	<1	1	0.16	20	16	0.85	479	4.9	0.02	40.6	765	27.4	22
64811 (-)		<5	<1	1	0.06	15	16	0.60	335	2.1	0.02	27.5	716	9.9	14
64812 (-)		14	<1	1	0.26	23	35	2.44	1240	2.2	0.01	154	1280	13.4	33
64813 (-)		<5	<1	<1	0.11	16	13	0.73	293	0.5	0.02	85.2	599	8.5	24
64814 (-)		<5	<1	<1	0.09	16	11	0.50	318	0.9	0.03	39.6	661	7.2	17
64815 (-)		<5	<1	<1	0.08	18	11	0.47	274	<0.5	0.02	21.7	575	8.2	17
64816 (-)		8	<1	2	0.40	40	14	0.71	447	0.7	0.02	14.8	884	12.3	99
64817 (-)		<5	<1	<1	0.04	12	7	0.36	326	0.9	0.01	23.2	622	6.3	<10
64818 (-)		<5	<1	<1	0.10	16	13	0.53	395	0.8	0.02	32.3	612	9.1	20
64819 (-)		<5	<1	<1	0.06	14	10	0.43	376	0.6	0.02	28.0	645	7.7	13
64820 (-)		<5	<1	<1	0.15	22	8	0.61	426	0.7	0.01	43.2	369	7.8	48
64821 (-)		<5	<1	<1	0.10	22	10	0.57	305	<0.5	0.02	59.3	273	7.4	27
64822 (-)		<5	<1	<1	0.18	32	8	0.62	311	<0.5	0.02	55.7	205	7.5	47
64823 (-)		5	<1	<1	0.68	39	10	0.86	597	<0.5	<0.01	10.2	858	10.2	199
64824 (-)		5	<1	<1	0.41	38	10	0.69	408	1.0	<0.01	15.9	402	11.5	124

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
64825 (-)		<5	<1	<1	0.06	9	6	0.34	312	0.6	0.02	17.5	669	5.1	10
64826 (-)		<5	<1	<1	0.04	10	7	0.33	266	0.7	0.02	17.2	706	5.6	<10
64827 (-)		<5	<1	<1	0.06	12	9	0.41	317	0.9	0.02	21.1	568	6.6	12
64828 (-)		6	<1	1	0.53	15	15	1.25	565	0.8	0.01	24.6	426	18.0	112
64829 (-)		6	<1	<1	0.25	10	7	0.20	256	1.0	<0.01	3.6	344	10.6	109
64830 (-)		<5	<1	2	0.06	32	11	0.34	215	0.6	<0.01	15.2	214	8.1	17
64831 (-)		<5	<1	<1	0.15	26	8	0.49	240	<0.5	<0.01	12.9	198	9.8	48
64832 (-)		<5	<1	<1	0.07	17	9	0.45	257	0.7	0.01	25.7	328	8.3	18
64833 (-)		6	<1	<1	0.17	17	30	1.06	469	0.8	0.02	154	721	8.4	41
64834 (-)		<5	<1	<1	0.06	13	28	1.03	1170	1.0	0.02	180	655	8.2	25
64835 (-)		6	<1	2	0.14	19	34	1.04	541	1.3	0.02	156	436	10.2	38
64836 (-)		8	<1	<1	0.48	18	50	2.19	722	0.7	0.02	344	926	10.5	141
64837 (-)		<5	<1	<1	0.11	17	28	1.21	414	1.0	0.02	161	373	8.5	31
64838 (-)		7	<1	1	0.39	23	31	2.24	606	0.8	0.02	230	612	10.4	106
64839 (-)		5	<1	2	0.09	22	25	1.17	544	<0.5	0.02	146	433	9.7	30
64840 (-)		5	<1	<1	0.04	8	12	1.38	694	0.6	0.03	44.7	303	6.5	13
64841 (-)		<5	<1	<1	0.01	4	7	1.12	976	1.2	0.01	111	400	4.2	<10
64842 (-)		<5	<1	<1	0.03	9	12	0.74	430	0.8	0.03	30.3	253	6.3	10
64843 (-)		<5	<1	<1	0.05	6	8	0.60	343	<0.5	0.03	22.6	238	6.4	14
64844 (-)		<5	<1	<1	0.07	13	13	0.69	352	0.5	0.02	23.2	194	8.2	18
64845 (-)		<5	<1	1	0.04	7	9	0.55	276	0.6	0.02	26.5	159	6.7	12
64846 (-)		5	<1	2	0.73	6	16	1.36	653	<0.5	0.02	47.9	676	5.7	168
64847 (-)		<5	<1	<1	0.05	7	14	0.62	379	1.3	0.02	22.2	311	11.7	18
64848 (-)		<5	<1	<1	0.11	43	13	0.57	337	1.3	0.01	18.5	409	14.7	32
64849 (-)		<5	<1	3	0.06	13	11	0.60	306	<0.5	0.02	21.9	560	7.9	14
64850 (-)		8	<1	1	0.83	33	18	1.07	530	0.7	<0.01	14.8	563	16.8	265
65131 (-)		5	<1	<1	0.75	10	17	1.46	591	2.4	0.03	29.5	891	9.2	88
65132 (-)		6	<1	<1	0.28	24	13	0.90	655	0.9	0.03	9.1	1420	8.8	45
65133 (-)		7	<1	1	0.34	11	12	0.93	714	<0.5	0.03	4.7	1960	6.8	63
65134 (-)		<5	<1	<1	0.29	12	15	0.84	602	0.9	0.04	8.4	1960	6.7	42
65135 (-)		8	<1	4	0.62	13	17	1.00	1020	1.1	0.01	20.6	3080	9.6	75
65136 (-)		<5	<1	<1	0.09	11	9	0.44	356	1.4	0.02	21.8	976	6.4	13

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65137 (-)	<5	<1	1	0.20	16	11	0.90	595	1.7	0.02	26.6	1320	8.9	35
65138 (-)	<5	<1	1	0.10	8	12	0.66	490	1.7	0.02	18.3	1260	10.1	23
65139 (-)	<5	<1	<1	0.08	14	12	0.59	440	0.6	0.03	19.4	746	8.6	17
65140 (-)	<5	<1	<1	0.10	13	9	0.60	307	1.0	0.01	18.3	790	6.9	20
65141 (-)	<5	<1	<1	0.09	12	9	0.59	447	1.3	0.02	20.3	812	7.0	16
65142 (-)	<5	<1	<1	0.07	10	10	0.81	411	1.0	0.02	23.7	865	7.7	15
65143 (-)	<5	<1	<1	0.14	13	9	0.66	645	1.6	0.01	28.5	998	7.3	25
65144 (-)	<5	<1	<1	0.14	14	10	0.62	438	1.0	0.01	16.8	888	7.9	26
65145 (-)	5	<1	2	0.88	16	9	1.20	1000	0.8	0.03	9.8	1740	6.8	133
65146 (-)	<5	<1	<1	1.10	17	8	1.05	863	<0.5	0.01	3.3	2820	3.9	161
65147 (-)	<5	<1	<1	0.10	9	9	0.47	258	1.2	<0.01	17.2	355	7.7	23
65148 (-)	6	<1	<1	0.73	10	10	1.07	809	<0.5	<0.01	7.9	2150	6.4	77
65149 (-)	<5	<1	<1	0.30	12	9	0.73	424	1.1	0.02	13.3	667	7.6	37
65150 (-)	<5	<1	<1	0.26	18	9	0.76	517	0.5	<0.01	9.1	951	6.0	38
65151 (-)	<5	<1	<1	0.06	13	12	0.54	277	1.6	<0.01	29.4	258	8.1	16
65152 (-)	<5	<1	<1	0.22	7	8	0.52	434	0.8	<0.01	28.8	374	6.0	27
65153 (-)	<5	<1	<1	1.11	6	15	1.13	1540	0.8	<0.01	38.9	630	4.3	113
65154 (-)	<5	<1	<1	0.48	9	8	0.73	425	1.5	<0.01	41.0	267	6.5	83
65155 (-)	<5	<1	<1	0.04	15	11	0.48	264	1.7	<0.01	19.3	161	9.1	13
65156 (-)	<5	<1	<1	0.04	11	10	0.35	263	2.7	<0.01	17.5	386	11.0	16
65157 (-)	<5	<1	<1	0.04	18	10	0.43	249	1.3	<0.01	21.8	202	9.8	13
65158 (-)	<5	<1	<1	0.04	17	8	0.39	392	2.2	<0.01	28.0	657	10.5	12
65159 (-)	<5	<1	<1	0.12	24	11	0.57	330	1.9	<0.01	27.0	316	8.5	22
65160 (-)	<5	<1	<1	0.05	16	12	0.62	341	1.6	<0.01	28.1	250	10.0	14
65161 (-)	5	<1	<1	0.44	22	12	0.90	549	1.4	<0.01	40.3	440	10.8	61
65162 (-)	<5	<1	1	0.06	15	12	0.56	376	1.5	<0.01	27.8	320	9.9	16
65163 (-)	<5	<1	<1	0.06	14	11	0.56	394	1.7	<0.01	27.1	301	8.8	15
65164 (-)	10	<1	<1	1.49	44	15	1.84	787	0.7	<0.01	51.4	582	12.9	225
65165 (-)	9	<1	<1	1.49	46	15	1.81	860	1.3	<0.01	51.6	620	13.6	226
65166 (-)	<5	<1	<1	0.05	13	12	0.59	299	1.4	<0.01	26.6	201	11.0	15
65167 (-)	8	<1	<1	1.28	35	14	1.67	806	1.2	<0.01	49.6	533	13.3	201
65168 (-)	<5	<1	<1	0.06	15	12	0.59	368	1.1	<0.01	27.2	196	9.6	18

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65169 (-)		<5	<1	<1	0.05	14	13	0.61	313	1.6	<0.01	27.3	177	10.3	15
65170 (-)		<5	<1	<1	0.05	13	13	0.61	276	1.2	<0.01	26.0	163	10.7	15
65171 (-)		<5	<1	1	0.06	14	12	0.63	454	1.9	0.01	28.1	415	10.0	14
65172 (-)		<5	<1	<1	0.06	14	11	0.56	405	2.0	<0.01	25.5	318	9.6	14
65173 (-)		<5	<1	<1	0.06	15	12	0.61	442	1.7	<0.01	28.2	381	10.4	15
65174 (-)		<5	<1	<1	0.06	15	13	0.60	366	1.7	<0.01	25.8	224	10.3	15
65175 (-)		<5	<1	<1	0.03	12	10	0.44	255	2.0	<0.01	19.8	216	9.4	12
65176 (-)		<5	<1	<1	0.03	11	10	0.41	259	1.6	<0.01	18.9	279	9.8	12
65177 (-)		<5	<1	<1	0.04	13	10	0.46	222	1.2	<0.01	16.9	156	10.1	15
65178 (-)		<5	<1	<1	0.04	14	9	0.39	210	2.0	<0.01	17.7	201	10.6	13
65179 (-)		<5	<1	<1	0.03	12	10	0.44	248	1.8	<0.01	19.1	223	9.3	13
65180 (-)		<5	<1	<1	0.03	13	7	0.34	234	2.6	<0.01	15.4	225	11.8	11
65181 (-)		<5	<1	<1	0.27	18	10	0.80	621	2.0	<0.01	43.5	387	10.9	68
65182 (-)		<5	<1	2	0.14	18	10	0.66	460	1.4	<0.01	30.4	271	10.0	30
65183 (-)		<5	<1	<1	0.04	15	10	0.50	313	1.5	<0.01	22.2	149	9.3	15
65184 (-)		<5	<1	<1	0.20	18	11	0.79	604	2.3	<0.01	43.4	392	9.9	45
65185 (-)		<5	<1	<1	0.11	16	9	0.61	403	1.9	<0.01	29.0	243	8.6	25
65186 (-)		7	<1	1	0.57	23	20	2.11	610	7.0	<0.01	70.8	582	9.7	106
65187 (-)		<5	<1	<1	0.34	28	18	1.62	471	8.2	0.01	37.6	297	8.7	54
65188 (-)		6	<1	2	0.35	23	22	2.08	1510	7.4	<0.01	225	406	5.4	59
65189 (-)		<5	<1	<1	0.08	8	11	0.56	789	3.7	<0.01	41.6	404	8.3	22
65190 (-)		<5	<1	<1	0.25	13	21	1.49	396	2.9	<0.01	84.7	700	9.3	56
65191 (-)		<5	<1	<1	0.12	9	14	0.69	444	2.4	<0.01	53.1	327	7.7	26
65192 (-)		<5	<1	<1	0.39	12	17	1.31	465	2.8	<0.01	96.8	363	7.4	73
65193 (-)		<5	<1	<1	0.12	8	19	2.05	358	1.9	<0.01	239	137	6.0	37
65194 (-)		7	<1	<1	0.77	10	28	2.99	352	3.5	<0.01	226	272	7.4	137
65195 (-)		<5	<1	<1	0.03	8	8	0.65	240	0.8	<0.01	66.4	188	7.1	<10
65196 (-)		8	<1	<1	0.28	6	39	4.63	611	4.6	<0.01	316	223	8.7	71
65197 (-)		9	<1	<1	0.37	11	42	5.02	702	6.1	<0.01	404	313	8.5	83
65198 (-)		<5	<1	<1	0.07	7	8	0.40	275	3.6	<0.01	41.8	183	7.9	16
65199 (-)		<5	<1	<1	0.07	8	10	0.48	255	2.8	<0.01	35.0	166	8.6	19
65200 (-)		8	<1	<1	0.54	18	33	2.63	625	9.5	<0.01	142	355	11.5	108

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65201 (-)		<5	<1	<1	0.07	13	13	0.54	413	1.1	0.02	29.0	600	8.5	17
65202 (-)		<5	<1	<1	0.06	14	11	0.53	511	1.1	<0.01	27.4	558	7.9	14
65203 (-)		<5	<1	<1	0.07	12	9	0.52	477	1.6	0.02	23.7	559	6.6	15
65204 (-)		<5	<1	<1	0.07	10	7	0.47	363	1.0	0.01	22.4	595	5.5	14
65205 (-)		<5	<1	<1	0.05	10	7	0.39	258	1.1	<0.01	18.3	546	5.5	12
65206 (-)		<5	<1	<1	0.05	11	8	0.54	388	1.2	0.01	21.5	582	5.8	13
65207 (-)		<5	<1	<1	0.05	12	8	0.47	441	0.6	0.01	22.7	557	6.2	<10
65208 (-)		<5	<1	<1	0.06	12	10	0.52	421	<0.5	<0.01	22.7	319	7.8	17
65209 (-)		<5	<1	<1	0.12	9	9	0.50	411	1.3	<0.01	17.6	409	7.0	25
65210 (-)		<5	<1	<1	0.06	12	9	0.48	374	<0.5	<0.01	19.4	341	6.9	17
65211 (-)		<5	<1	<1	0.10	11	9	0.47	661	1.1	<0.01	20.6	328	7.7	25
65212 (-)		<5	<1	<1	0.08	10	10	0.49	306	1.5	<0.01	20.8	291	8.8	19
65213 (-)		<5	<1	<1	0.08	10	8	0.45	231	0.6	<0.01	23.7	158	7.5	19
65214 (-)		<5	<1	<1	0.08	15	8	0.45	207	0.9	<0.01	21.0	192	5.7	13
65215 (-)		<5	<1	<1	0.34	10	15	0.88	405	0.9	<0.01	25.9	178	8.0	67
65216 (-)		<5	<1	<1	0.44	8	19	0.96	826	0.7	<0.01	23.7	246	7.9	74
65217 (-)		<5	<1	<1	0.43	11	13	0.87	474	1.2	<0.01	18.6	254	8.1	58
65218 (-)		<5	<1	<1	0.17	8	11	0.58	508	1.3	<0.01	22.8	256	9.1	27
65219 (-)		<5	<1	<1	0.26	15	13	0.82	505	0.6	<0.01	15.0	186	8.4	39
65220 (-)		<5	<1	<1	0.05	7	8	0.38	268	0.9	<0.01	15.4	248	6.3	14
65221 (-)		<5	<1	<1	0.07	7	9	0.44	421	1.1	<0.01	17.3	384	7.9	23
65222 (-)		<5	<1	<1	0.06	9	10	0.49	223	<0.5	<0.01	12.6	373	7.0	18
65223 (-)		<5	<1	<1	0.17	10	13	0.83	380	1.4	<0.01	25.4	238	8.1	26
65224 (-)		<5	<1	<1	0.04	3	4	0.16	467	0.8	<0.01	5.7	355	7.9	11
65225 (-)		<5	<1	<1	0.05	10	8	0.40	269	1.5	<0.01	14.5	193	7.2	16
65226 (-)		<5	<1	<1	0.04	8	8	0.37	239	0.9	<0.01	20.1	146	9.2	12
65227 (-)		<5	<1	<1	0.04	7	9	0.36	261	0.8	<0.01	15.2	253	10.5	14
65228 (-)		<5	<1	<1	0.04	13	7	0.41	298	0.5	<0.01	18.8	250	6.4	10
65229 (-)		<5	<1	<1	0.04	8	9	0.45	254	0.7	<0.01	15.9	157	10.8	12
65230 (-)		<5	<1	<1	0.03	11	7	0.38	165	0.9	<0.01	15.4	85	9.9	<10
65231 (-)		<5	<1	<1	0.03	7	11	0.43	287	1.1	<0.01	18.6	203	11.0	14
65232 (-)		<5	<1	<1	0.03	7	10	0.45	273	1.3	<0.01	20.3	161	11.3	14

Certified By:



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65233 (-)	<5	<1	<1	0.04	15	9	0.47	314	0.5	<0.01	22.2	134	9.1	14
65234 (-)	<5	<1	<1	0.04	11	10	0.48	303	<0.5	<0.01	22.2	139	9.2	15
65235 (-)	<5	<1	<1	0.04	9	10	0.48	282	1.2	<0.01	22.1	138	9.1	15
65236 (-)	<5	<1	<1	0.04	13	8	0.43	270	0.8	<0.01	19.9	174	7.6	12
65237 (-)	<5	<1	<1	0.04	14	7	0.41	279	1.2	<0.01	20.0	218	6.9	12
65238 (-)	<5	<1	<1	0.04	13	9	0.46	256	1.4	<0.01	20.1	127	8.8	13
65239 (-)	<5	<1	<1	0.04	17	8	0.44	271	1.2	<0.01	19.9	154	8.1	14
65240 (-)	<5	<1	<1	0.04	15	8	0.44	274	0.6	<0.01	19.7	196	7.4	12
65241 (-)	<5	<1	<1	0.04	15	11	0.51	316	0.8	<0.01	19.2	144	9.8	15

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
40982 (-)	0.020	<1	3.7	<10	<5	19.9	<10	<10	<5	0.21	5	<5	101	<1
40983 (-)	0.012	<1	3.7	<10	<5	23.4	<10	<10	<5	0.16	<5	<5	88.8	<1
40984 (-)	0.015	<1	4.1	<10	<5	25.1	<10	<10	<5	0.24	6	<5	107	<1
40985 (-)	0.014	<1	3.7	<10	<5	28.1	<10	<10	<5	0.19	<5	<5	92.6	<1
40986 (-)	0.011	<1	4.4	<10	<5	23.3	<10	<10	<5	0.20	5	<5	95.3	<1
40987 (-)	0.011	<1	4.4	<10	<5	22.4	<10	<10	<5	0.18	<5	<5	92.4	<1
40988 (-)	0.011	<1	3.7	<10	<5	24.4	<10	<10	<5	0.18	<5	<5	94.6	<1
40989 (-)	0.011	<1	4.2	<10	<5	21.2	<10	<10	<5	0.17	<5	<5	88.6	<1
40990 (-)	0.013	<1	3.9	<10	<5	27.3	<10	<10	<5	0.25	7	<5	107	<1
40991 (-)	0.012	<1	4.1	<10	<5	26.1	<10	<10	<5	0.20	6	<5	95.6	<1
40992 (-)	0.011	<1	3.5	<10	<5	22.3	<10	<10	<5	0.15	<5	<5	88.4	<1
40993 (-)	0.013	<1	3.5	<10	<5	31.5	<10	<10	<5	0.14	<5	<5	72.6	<1
40994 (-)	0.012	<1	3.3	<10	<5	21.3	<10	<10	<5	0.11	<5	<5	74.3	<1
40995 (-)	0.012	<1	3.9	<10	<5	35.0	<10	<10	<5	0.17	<5	<5	80.3	<1
40996 (-)	0.013	<1	3.5	<10	<5	20.8	<10	<10	<5	0.10	<5	<5	70.6	<1
40997 (-)	0.013	<1	3.9	<10	<5	35.0	<10	<10	<5	0.16	<5	<5	77.6	<1
40998 (-)	0.012	<1	3.9	<10	<5	29.2	<10	<10	<5	0.15	<5	<5	76.8	<1
40999 (-)	0.013	<1	2.9	<10	<5	21.4	<10	<10	<5	0.11	<5	<5	70.8	<1
41000 (-)	0.008	<1	8.3	<10	<5	19.4	<10	<10	<5	0.07	<5	<5	62.3	<1
41001 (-)	0.011	<1	4.3	<10	<5	21.8	<10	<10	<5	0.08	<5	<5	67.9	<1
41002 (-)	0.015	<1	10.1	<10	<5	25.7	<10	<10	<5	0.10	<5	<5	73.5	<1
41003 (-)	0.011	<1	6.8	<10	<5	28.7	<10	<10	<5	0.07	<5	<5	57.3	<1
41004 (-)	0.022	<1	6.8	<10	<5	34.6	<10	<10	<5	0.07	<5	<5	53.9	<1
41005 (-)	0.012	<1	5.5	<10	<5	27.6	<10	<10	<5	0.07	<5	<5	55.2	<1
41006 (-)	0.017	<1	8.6	<10	<5	46.8	<10	<10	<5	0.09	<5	<5	77.8	<1
41007 (-)	0.012	<1	5.2	<10	<5	28.1	<10	<10	<5	0.08	<5	<5	55.2	<1
41008 (-)	0.012	<1	5.2	<10	<5	30.0	<10	<10	<5	0.08	<5	<5	56.2	<1
41009 (-)	0.011	<1	5.7	<10	<5	27.2	<10	<10	<5	0.08	<5	<5	54.3	<1
41010 (-)	0.011	<1	5.8	<10	<5	20.6	<10	<10	<5	0.06	<5	<5	86.3	<1
41011 (-)	0.011	<1	10.6	<10	<5	21.7	<10	<10	<5	0.18	<5	<5	112	<1
41012 (-)	0.064	5	5.3	<10	<5	44.1	<10	<10	<5	<0.01	<5	<5	35.1	<1
41013 (-)	0.011	<1	14.2	<10	<5	22.9	<10	<10	<5	0.04	<5	<5	87.3	<1

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
41014 (-)	0.014	<1	10.4	<10	<5	14.6	<10	<10	<5	0.04	<5	<5	100	<1
41015 (-)	0.017	<1	7.6	<10	<5	33.0	<10	<10	<5	0.11	<5	<5	89.5	<1
41016 (-)	0.018	<1	7.8	<10	<5	33.5	<10	<10	<5	0.14	5	<5	103	<1
41017 (-)	0.007	<1	8.6	<10	<5	21.0	<10	<10	<5	0.19	6	<5	115	<1
41018 (-)	0.011	<1	8.5	<10	<5	35.1	<10	<10	<5	0.11	<5	<5	116	<1
41019 (-)	0.012	<1	5.0	<10	<5	23.7	<10	<10	<5	0.13	<5	<5	85.7	<1
41020 (-)	0.008	<1	5.0	<10	<5	18.9	<10	<10	<5	0.08	<5	<5	70.0	<1
41021 (-)	0.008	<1	6.8	<10	<5	29.7	<10	<10	<5	0.05	<5	<5	67.1	<1
41022 (-)	<0.005	<1	<0.5	<10	<5	3.0	<10	<10	<5	<0.01	<5	<5	<0.5	<1
41023 (-)	<0.005	<1	<0.5	<10	<5	3.1	<10	<10	<5	<0.01	<5	<5	<0.5	<1
41024 (-)	<0.005	<1	<0.5	<10	<5	3.4	<10	<10	<5	<0.01	<5	<5	<0.5	<1
41025 (-)	<0.005	<1	<0.5	<10	<5	3.6	<10	<10	<5	<0.01	<5	<5	<0.5	<1
41026 (-)	0.013	2	3.7	<10	<5	20.6	<10	<10	<5	0.09	<5	<5	80.4	<1
41027 (-)	0.009	2	5.7	<10	<5	17.8	<10	<10	<5	0.09	<5	<5	72.2	<1
41028 (-)	0.008	2	6.0	<10	<5	14.4	<10	<10	<5	0.09	<5	<5	77.2	<1
41029 (-)	0.006	2	7.7	<10	<5	14.7	<10	<10	<5	0.27	<5	<5	139	<1
41030 (-)	0.301	2	11.6	<10	<5	61.0	<10	<10	<5	0.20	<5	<5	141	<1
41031 (-)	0.008	2	4.8	<10	<5	15.2	<10	<10	<5	0.10	<5	<5	75.5	<1
41032 (-)	0.024	<1	10.4	<10	<5	34.7	<10	<10	<5	0.36	<5	<5	153	<1
41033 (-)	0.076	4	5.0	<10	<5	40.2	<10	<10	<5	0.06	<5	<5	57.4	<1
41034 (-)	0.022	2	9.1	<10	<5	30.9	<10	<10	<5	0.17	<5	<5	120	<1
41035 (-)	0.013	2	9.4	<10	<5	20.5	<10	<10	<5	0.25	<5	<5	135	<1
41036 (-)	0.075	3	5.5	<10	<5	52.4	<10	<10	<5	0.03	<5	<5	72.0	<1
41037 (-)	0.013	2	7.5	<10	<5	26.3	<10	<10	<5	0.13	<5	<5	118	<1
41038 (-)	0.026	2	12.6	<10	<5	45.3	<10	<10	<5	0.25	<5	<5	164	<1
41039 (-)	0.014	2	7.1	<10	<5	44.5	<10	<10	<5	0.13	<5	<5	75.5	<1
41040 (-)	0.014	3	5.6	<10	<5	28.5	<10	<10	<5	0.19	<5	<5	116	<1
41041 (-)	0.010	2	4.4	14	<5	31.5	<10	<10	<5	0.16	<5	<5	101	<1
41042 (-)	0.009	2	5.8	<10	<5	30.3	<10	<10	<5	0.11	<5	<5	90.4	<1
41043 (-)	0.007	2	7.4	<10	<5	25.4	<10	<10	<5	0.07	<5	<5	78.4	<1
41044 (-)	0.009	1	4.5	<10	<5	22.0	<10	<10	<5	0.15	<5	<5	92.8	<1
41045 (-)	0.011	2	5.7	<10	<5	30.2	<10	<10	<5	0.17	<5	<5	116	<1

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
41046 (-)	0.013	3	5.8	<10	<5	33.7	<10	<10	<5	0.13	<5	<5	108	<1
41047 (-)	0.130	1	13.9	<10	<5	41.2	<10	<10	<5	0.25	<5	<5	236	<1
41048 (-)	0.012	2	5.0	<10	<5	26.4	<10	<10	<5	0.15	<5	<5	105	<1
41049 (-)	0.025	3	3.8	<10	<5	31.9	<10	<10	<5	0.31	<5	<5	149	1
41050 (-)	0.009	2	3.9	<10	<5	59.1	<10	<10	<5	0.10	<5	<5	97.9	<1
41051 (-)	0.010	3	3.4	<10	<5	24.2	<10	<10	<5	0.13	<5	<5	80.1	<1
41052 (-)	0.015	2	4.2	<10	<5	60.3	<10	<10	<5	0.18	<5	<5	102	<1
41053 (-)	0.012	2	4.4	<10	<5	26.2	<10	<10	<5	0.10	<5	<5	91.4	<1
41054 (-)	0.008	2	4.9	10	<5	17.8	<10	<10	<5	0.12	<5	<5	93.0	<1
41055 (-)	0.007	2	6.5	<10	<5	18.4	<10	<10	5	0.10	<5	<5	76.7	<1
41056 (-)	0.009	3	3.4	<10	<5	19.2	<10	<10	<5	0.08	<5	<5	78.6	<1
41057 (-)	0.011	3	7.1	<10	<5	27.8	<10	<10	5	0.05	<5	<5	111	<1
41058 (-)	0.007	<1	3.9	<10	<5	16.2	<10	<10	<5	0.11	<5	<5	79.3	<1
41059 (-)	0.011	<1	5.4	<10	<5	38.0	<10	<10	<5	0.19	7	<5	96.2	<1
64688 (-)	0.013	<1	7.3	<10	<5	31.5	<10	<10	<5	0.06	<5	<5	62.6	<1
64689 (-)	0.017	<1	5.1	<10	<5	94.9	<10	<10	<5	0.19	6	<5	95.7	<1
64690 (-)	0.014	<1	14.3	<10	<5	75.5	<10	<10	<5	0.04	<5	<5	150	<1
64691 (-)	0.019	<1	8.9	<10	<5	74.4	<10	<10	<5	0.11	<5	<5	115	<1
64692 (-)	0.009	1	5.7	<10	<5	29.3	<10	<10	<5	0.07	<5	<5	56.2	<1
64780 (-)	0.009	<1	9.8	<10	<5	37.1	<10	<10	<5	0.10	<5	<5	79.9	<1
64781 (-)	0.008	<1	8.4	<10	<5	29.4	<10	<10	<5	0.08	<5	<5	67.1	<1
64782 (-)	0.019	<1	2.7	<10	<5	18.0	<10	<10	<5	0.10	<5	<5	78.9	<1
64783 (-)	0.010	<1	7.7	<10	<5	26.4	<10	<10	<5	0.07	<5	<5	63.8	<1
64784 (-)	0.006	<1	3.2	<10	<5	43.9	<10	<10	<5	0.04	<5	<5	45.2	<1
64785 (-)	0.008	<1	5.9	<10	<5	21.8	<10	<10	<5	0.08	<5	<5	73.6	<1
64786 (-)	0.012	<1	7.7	<10	<5	31.2	<10	<10	<5	0.07	<5	<5	84.0	<1
64787 (-)	0.008	<1	5.5	<10	<5	20.5	<10	<10	<5	0.10	<5	<5	75.3	<1
64788 (-)	0.009	<1	5.6	<10	<5	26.9	<10	<10	<5	0.08	<5	<5	50.4	<1
64789 (-)	0.010	<1	6.8	<10	<5	34.9	<10	<10	<5	0.09	<5	<5	57.2	<1
64790 (-)	0.010	<1	7.8	<10	<5	34.0	<10	<10	<5	0.10	<5	<5	64.0	<1
64791 (-)	0.010	<1	7.4	<10	<5	31.1	<10	<10	<5	0.09	<5	<5	61.0	<1
64792 (-)	0.012	<1	5.2	<10	<5	31.0	<10	<10	<5	0.08	<5	<5	56.4	<1

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
64793 (-)	0.010	<1	3.4	<10	<5	28.8	<10	<10	<5	0.06	<5	<5	45.2	<1
64794 (-)	0.010	<1	6.2	<10	<5	31.1	<10	<10	<5	0.07	<5	<5	51.6	<1
64795 (-)	0.012	<1	4.6	<10	<5	33.5	<10	<10	<5	0.07	<5	<5	51.2	<1
64796 (-)	0.010	<1	3.0	<10	<5	27.7	<10	<10	<5	0.06	<5	<5	46.8	<1
64797 (-)	0.010	<1	7.2	<10	<5	35.3	<10	<10	<5	0.06	<5	<5	46.6	<1
64798 (-)	0.027	<1	4.9	<10	<5	44.6	<10	<10	6	0.02	<5	<5	32.7	<1
64799 (-)	0.013	1	3.7	<10	<5	27.6	<10	<10	<5	0.06	<5	<5	49.5	<1
64800 (-)	0.028	2	4.0	<10	<5	30.6	<10	<10	<5	0.06	<5	<5	65.3	<1
64801 (-)	0.009	<1	5.1	<10	<5	22.0	<10	<10	<5	0.09	<5	<5	71.0	<1
64802 (-)	0.011	<1	11.0	<10	<5	37.2	<10	<10	<5	0.16	6	<5	99.5	<1
64803 (-)	0.013	<1	11.5	<10	<5	37.8	<10	<10	<5	0.13	5	<5	107	<1
64804 (-)	0.015	1	7.2	<10	<5	38.1	<10	<10	<5	0.11	<5	<5	69.5	<1
64805 (-)	0.023	<1	6.1	<10	<5	36.9	<10	<10	<5	0.08	<5	<5	68.4	<1
64806 (-)	0.018	<1	4.2	<10	<5	26.6	<10	<10	<5	0.08	<5	<5	61.5	<1
64807 (-)	0.019	1	4.8	<10	<5	27.0	<10	<10	<5	0.07	<5	<5	68.2	<1
64808 (-)	0.007	<1	9.5	<10	<5	23.5	<10	<10	<5	0.13	<5	<5	82.5	<1
64809 (-)	0.014	<1	7.0	<10	<5	31.8	<10	<10	<5	0.12	<5	<5	79.9	<1
64810 (-)	0.179	<1	7.1	<10	<5	40.4	<10	<10	<5	0.09	<5	<5	106	<1
64811 (-)	0.043	<1	5.5	<10	<5	30.8	<10	<10	<5	0.09	<5	<5	79.9	<1
64812 (-)	0.017	<1	15.0	<10	<5	35.3	<10	<10	<5	0.21	7	<5	217	<1
64813 (-)	0.010	<1	8.0	<10	<5	32.3	<10	<10	<5	0.11	<5	<5	68.4	<1
64814 (-)	0.012	<1	5.7	<10	<5	32.6	<10	<10	<5	0.11	<5	<5	57.2	<1
64815 (-)	0.010	<1	6.3	<10	<5	32.5	<10	<10	<5	0.12	<5	<5	62.1	<1
64816 (-)	0.013	<1	6.4	<10	<5	38.7	<10	<10	11	0.13	5	<5	52.1	<1
64817 (-)	0.009	<1	4.3	<10	<5	24.5	<10	<10	<5	0.06	<5	<5	49.7	<1
64818 (-)	0.009	<1	7.7	<10	<5	31.7	<10	<10	<5	0.11	<5	<5	64.8	<1
64819 (-)	0.011	<1	5.6	<10	<5	31.3	<10	<10	<5	0.09	<5	<5	56.7	<1
64820 (-)	0.009	<1	6.8	<10	<5	23.8	<10	<10	<5	0.10	<5	<5	56.4	<1
64821 (-)	0.007	<1	6.6	<10	<5	30.3	<10	<10	5	0.09	<5	<5	53.1	<1
64822 (-)	0.008	<1	8.5	<10	<5	29.8	<10	<10	8	0.12	<5	<5	58.8	<1
64823 (-)	0.010	<1	4.1	<10	<5	38.4	<10	<10	12	0.11	5	<5	38.5	<1
64824 (-)	0.009	<1	3.4	<10	<5	26.2	<10	<10	9	0.09	<5	<5	41.7	<1

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

	Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
64825 (-)		0.007	1	3.9	<10	<5	29.4	<10	<10	<5	0.05	<5	<5	40.5	<1
64826 (-)		0.021	<1	3.5	<10	<5	38.2	<10	<10	<5	0.06	<5	<5	42.4	<1
64827 (-)		0.010	<1	4.8	<10	<5	29.0	<10	<10	<5	0.07	<5	<5	48.8	<1
64828 (-)		0.010	<1	8.2	<10	<5	34.2	<10	<10	<5	0.15	<5	<5	82.4	<1
64829 (-)		0.010	<1	2.2	<10	<5	9.5	<10	<10	7	0.09	<5	<5	44.0	<1
64830 (-)		0.007	<1	4.2	<10	<5	18.2	<10	<10	<5	0.07	<5	<5	47.2	<1
64831 (-)		0.007	<1	5.5	<10	<5	22.9	<10	<10	9	0.08	<5	<5	43.0	<1
64832 (-)		0.008	<1	6.7	<10	<5	26.4	<10	<10	<5	0.09	<5	<5	54.9	<1
64833 (-)		0.043	<1	8.1	<10	<5	42.8	<10	<10	<5	0.10	<5	<5	79.9	<1
64834 (-)		0.068	<1	6.6	<10	<5	59.2	<10	<10	<5	0.08	<5	<5	67.2	<1
64835 (-)		0.014	<1	9.4	<10	<5	30.5	<10	<10	<5	0.11	<5	<5	81.6	<1
64836 (-)		0.013	<1	13.2	<10	<5	24.6	<10	<10	<5	0.13	5	<5	100	<1
64837 (-)		0.009	<1	8.6	<10	<5	23.9	<10	<10	<5	0.13	<5	<5	72.2	<1
64838 (-)		0.033	<1	10.2	<10	<5	36.0	<10	<10	<5	0.14	5	<5	87.6	<1
64839 (-)		0.018	<1	8.8	<10	<5	39.6	<10	<10	<5	0.12	<5	<5	73.7	<1
64840 (-)		0.013	<1	12.7	<10	<5	38.3	<10	<10	<5	0.11	<5	<5	93.0	<1
64841 (-)		0.010	<1	14.8	<10	<5	43.5	<10	<10	<5	0.08	<5	<5	140	<1
64842 (-)		0.010	<1	10.6	<10	<5	29.5	<10	<10	<5	0.14	<5	<5	92.2	<1
64843 (-)		0.010	<1	8.7	<10	<5	26.2	<10	<10	<5	0.13	<5	<5	75.3	<1
64844 (-)		0.008	<1	8.3	<10	<5	25.3	<10	<10	<5	0.11	<5	<5	72.2	<1
64845 (-)		0.008	<1	5.9	<10	<5	21.3	<10	<10	<5	0.10	<5	<5	67.2	<1
64846 (-)		0.010	<1	6.8	<10	<5	25.7	<10	<10	<5	0.20	6	<5	71.2	<1
64847 (-)		0.010	<1	4.6	<10	<5	20.9	<10	<10	<5	0.13	<5	<5	87.2	<1
64848 (-)		0.007	<1	9.8	<10	<5	27.8	<10	<10	15	0.08	<5	<5	59.1	<1
64849 (-)		0.009	<1	6.9	<10	<5	29.9	<10	<10	<5	0.11	<5	<5	63.7	<1
64850 (-)		0.009	<1	5.0	<10	<5	25.9	<10	<10	14	0.17	5	<5	55.7	<1
65131 (-)		0.009	<1	14.7	<10	<5	23.8	<10	<10	<5	0.23	6	<5	168	<1
65132 (-)		0.011	<1	8.2	<10	<5	41.6	<10	<10	<5	0.14	5	<5	101	<1
65133 (-)		0.013	<1	4.8	<10	<5	27.4	<10	<10	<5	0.17	6	<5	94.7	<1
65134 (-)		0.015	<1	4.5	<10	<5	29.7	<10	<10	<5	0.12	<5	<5	82.8	<1
65135 (-)		0.016	<1	5.8	<10	<5	44.3	<10	<10	<5	0.12	5	<5	114	<1
65136 (-)		0.022	<1	4.6	<10	<5	41.9	<10	<10	<5	0.08	<5	<5	56.9	<1

Certified By:





**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65137 (-)		0.013	<1	7.0	<10	<5	49.9	<10	<10	<5	0.15	<5	<5	85.5	<1
65138 (-)		0.016	<1	5.2	<10	<5	49.0	<10	<10	<5	0.13	<5	<5	91.2	<1
65139 (-)		0.024	<1	5.2	<10	<5	54.1	<10	<10	<5	0.12	<5	<5	63.9	<1
65140 (-)		0.024	<1	4.8	<10	<5	46.4	<10	<10	<5	0.11	<5	<5	65.0	<1
65141 (-)		0.032	1	4.9	<10	<5	63.2	<10	<10	<5	0.08	<5	<5	58.0	<1
65142 (-)		0.015	<1	5.5	<10	<5	48.4	<10	<10	<5	0.08	<5	<5	72.2	<1
65143 (-)		0.014	<1	7.6	<10	<5	55.4	<10	<10	<5	0.11	<5	<5	74.2	<1
65144 (-)		0.012	<1	6.7	<10	<5	47.1	<10	<10	<5	0.14	<5	<5	74.5	<1
65145 (-)		0.022	<1	4.2	<10	<5	237	<10	<10	<5	0.23	7	<5	86.3	<1
65146 (-)		0.016	<1	3.1	<10	<5	36.7	<10	<10	5	0.24	7	<5	91.5	<1
65147 (-)		0.009	<1	3.9	<10	<5	27.5	<10	<10	<5	0.09	<5	<5	65.3	<1
65148 (-)		0.019	<1	7.0	<10	<5	54.3	<10	<10	<5	0.18	7	<5	95.3	<1
65149 (-)		0.011	<1	6.0	<10	<5	88.7	<10	<10	<5	0.16	5	<5	75.6	<1
65150 (-)		0.011	<1	4.7	<10	<5	91.0	<10	<10	<5	0.13	<5	<5	78.2	<1
65151 (-)		0.013	<1	10.4	<10	<5	25.5	<10	<10	<5	0.09	<5	<5	67.5	<1
65152 (-)		0.009	<1	20.8	<10	<5	22.5	<10	<10	<5	0.06	<5	<5	92.0	<1
65153 (-)		0.010	<1	28.3	<10	<5	22.7	<10	<10	<5	0.20	7	<5	135	<1
65154 (-)		0.049	<1	17.3	<10	<5	21.6	<10	<10	<5	0.11	<5	<5	111	<1
65155 (-)		0.007	<1	8.9	<10	<5	25.6	<10	<10	<5	0.08	<5	<5	71.8	<1
65156 (-)		0.010	<1	4.1	<10	<5	17.1	<10	<10	<5	0.06	<5	<5	77.6	<1
65157 (-)		0.008	<1	9.9	<10	<5	22.8	<10	<10	<5	0.08	<5	<5	68.6	<1
65158 (-)		0.018	<1	8.1	<10	<5	35.9	<10	<10	<5	0.08	<5	<5	78.9	<1
65159 (-)		0.010	<1	8.2	<10	<5	22.5	<10	<10	<5	0.11	<5	<5	76.4	<1
65160 (-)		0.010	<1	8.1	<10	<5	30.4	<10	<10	<5	0.10	<5	<5	77.2	<1
65161 (-)		0.015	<1	10.5	<10	<5	32.7	<10	<10	<5	0.14	<5	<5	100	<1
65162 (-)		0.012	<1	7.5	<10	<5	29.2	<10	<10	<5	0.09	<5	<5	78.0	<1
65163 (-)		0.010	<1	7.3	<10	<5	27.5	<10	<10	<5	0.09	<5	<5	71.8	<1
65164 (-)		0.009	<1	15.7	<10	<5	43.6	<10	<10	<5	0.31	11	<5	146	<1
65165 (-)		0.009	<1	15.2	<10	<5	48.5	<10	<10	<5	0.31	10	<5	144	<1
65166 (-)		0.008	<1	5.9	<10	<5	22.6	<10	<10	<5	0.09	<5	<5	79.5	<1
65167 (-)		0.009	<1	15.2	<10	<5	40.7	<10	<10	<5	0.27	8	<5	135	<1
65168 (-)		0.008	<1	8.3	<10	<5	25.5	<10	<10	<5	0.09	<5	<5	78.5	<1

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65169 (-)	0.008	<1	6.6	<10	<5	23.2	<10	<10	<5	0.09	<5	<5	78.3	<1
65170 (-)	0.008	<1	5.8	<10	<5	22.1	<10	<10	<5	0.09	<5	<5	79.1	<1
65171 (-)	0.014	<1	6.4	<10	<5	34.2	<10	<10	<5	0.09	<5	<5	76.6	<1
65172 (-)	0.010	<1	6.4	<10	<5	30.7	<10	<10	<5	0.09	<5	<5	75.2	<1
65173 (-)	0.014	<1	6.5	<10	<5	34.8	<10	<10	<5	0.09	<5	<5	78.7	<1
65174 (-)	0.009	<1	7.1	<10	<5	27.7	<10	<10	<5	0.10	<5	<5	78.7	<1
65175 (-)	0.006	<1	4.4	<10	<5	16.4	<10	<10	<5	0.08	<5	<5	69.3	<1
65176 (-)	0.007	<1	3.9	<10	<5	18.0	<10	<10	<5	0.08	<5	<5	69.8	<1
65177 (-)	0.006	<1	4.8	<10	<5	18.2	<10	<10	<5	0.09	<5	<5	69.7	<1
65178 (-)	0.007	<1	5.3	<10	<5	19.7	<10	<10	6	0.08	<5	<5	69.9	<1
65179 (-)	0.007	<1	3.8	<10	<5	18.3	<10	<10	<5	0.08	<5	<5	70.1	<1
65180 (-)	0.007	<1	4.9	<10	<5	18.9	<10	<10	<5	0.07	<5	<5	66.5	<1
65181 (-)	0.010	<1	9.4	<10	<5	24.6	<10	<10	<5	0.11	<5	<5	105	<1
65182 (-)	0.008	<1	8.2	<10	<5	23.1	<10	<10	<5	0.10	<5	<5	83.3	<1
65183 (-)	0.006	<1	8.6	<10	<5	19.8	<10	<10	<5	0.08	<5	<5	69.4	<1
65184 (-)	0.012	<1	9.9	<10	<5	27.9	<10	<10	<5	0.11	<5	<5	104	<1
65185 (-)	0.008	<1	7.7	<10	<5	22.7	<10	<10	<5	0.09	<5	<5	78.6	<1
65186 (-)	0.049	<1	10.5	<10	<5	24.2	<10	<10	<5	0.09	<5	<5	138	<1
65187 (-)	0.180	<1	6.4	<10	<5	25.4	<10	<10	<5	0.07	<5	<5	96.7	<1
65188 (-)	0.011	<1	19.5	<10	<5	25.5	<10	<10	5	0.13	<5	<5	143	<1
65189 (-)	0.018	<1	3.6	<10	<5	25.2	<10	<10	<5	0.09	<5	<5	69.7	<1
65190 (-)	0.041	<1	5.7	<10	<5	22.0	<10	<10	<5	0.13	<5	<5	95.8	<1
65191 (-)	0.015	<1	3.7	<10	<5	19.9	<10	<10	<5	0.09	<5	<5	70.6	<1
65192 (-)	0.047	<1	6.4	<10	<5	15.7	<10	<10	<5	0.14	<5	<5	83.4	<1
65193 (-)	0.015	<1	7.0	<10	<5	15.1	<10	<10	<5	0.12	<5	<5	90.0	<1
65194 (-)	0.112	<1	4.7	<10	<5	16.4	<10	<10	<5	0.21	7	<5	116	<1
65195 (-)	0.007	<1	3.7	<10	<5	14.4	<10	<10	<5	0.10	<5	<5	62.3	<1
65196 (-)	0.007	<1	11.0	<10	<5	18.9	<10	<10	<5	0.21	7	<5	144	<1
65197 (-)	0.008	<1	11.7	<10	<5	23.3	<10	<10	<5	0.22	8	<5	151	<1
65198 (-)	0.026	<1	3.9	<10	<5	10.5	<10	<10	<5	0.05	<5	<5	47.6	<1
65199 (-)	0.023	<1	3.8	<10	<5	12.0	<10	<10	<5	0.06	<5	<5	56.1	<1
65200 (-)	0.011	<1	10.4	<10	<5	17.8	<10	<10	<5	0.12	<5	<5	159	<1

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65201 (-)	0.016	<1	8.6	<10	<5	38.2	<10	<10	<5	0.12	<5	<5	69.4	<1
65202 (-)	0.013	<1	6.8	<10	<5	32.4	<10	<10	<5	0.09	<5	<5	68.9	<1
65203 (-)	0.012	<1	5.9	<10	<5	37.4	<10	<10	<5	0.10	<5	<5	59.3	<1
65204 (-)	0.009	<1	5.3	<10	<5	29.5	<10	<10	<5	0.08	<5	<5	54.3	<1
65205 (-)	0.009	<1	4.2	<10	<5	26.6	<10	<10	<5	0.07	<5	<5	51.2	<1
65206 (-)	0.025	1	4.2	<10	<5	48.5	<10	<10	<5	0.07	<5	<5	55.6	<1
65207 (-)	0.013	<1	4.7	<10	<5	33.0	<10	<10	<5	0.07	<5	<5	56.2	<1
65208 (-)	0.016	<1	6.4	<10	<5	29.9	<10	<10	<5	0.10	<5	<5	64.1	<1
65209 (-)	0.012	<1	4.3	<10	<5	26.9	<10	<10	<5	0.08	<5	<5	60.6	<1
65210 (-)	0.010	<1	4.8	<10	<5	25.2	<10	<10	<5	0.07	<5	<5	58.8	<1
65211 (-)	0.012	<1	5.4	<10	<5	30.2	<10	<10	<5	0.08	<5	<5	62.1	<1
65212 (-)	0.012	<1	5.0	<10	<5	22.2	<10	<10	<5	0.06	<5	<5	64.0	<1
65213 (-)	0.007	<1	7.0	<10	<5	17.3	<10	<10	<5	0.08	<5	<5	61.9	<1
65214 (-)	0.008	<1	6.6	<10	<5	20.5	<10	<10	<5	0.08	<5	<5	57.5	<1
65215 (-)	0.008	<1	7.1	<10	<5	20.8	<10	<10	<5	0.10	<5	<5	73.5	<1
65216 (-)	0.015	<1	5.5	<10	<5	27.4	<10	<10	<5	0.11	<5	<5	66.8	<1
65217 (-)	0.009	<1	7.5	<10	<5	15.8	<10	<10	<5	0.12	<5	<5	63.4	<1
65218 (-)	0.010	<1	3.9	<10	<5	17.9	<10	<10	<5	0.10	<5	<5	67.4	<1
65219 (-)	0.006	<1	6.7	<10	<5	17.3	<10	<10	<5	0.12	<5	<5	65.7	<1
65220 (-)	0.007	<1	5.3	<10	<5	10.5	<10	<10	<5	0.04	<5	<5	52.0	<1
65221 (-)	0.012	<1	3.2	<10	<5	17.0	<10	<10	<5	0.06	<5	<5	61.0	<1
65222 (-)	0.007	<1	4.2	<10	<5	15.8	<10	<10	<5	0.08	<5	<5	62.1	<1
65223 (-)	0.006	<1	7.4	<10	<5	22.1	<10	<10	<5	0.10	<5	<5	72.3	<1
65224 (-)	0.006	<1	2.2	<10	<5	11.9	<10	<10	<5	<0.01	<5	<5	30.4	<1
65225 (-)	0.007	<1	3.9	<10	<5	14.5	<10	<10	<5	0.06	<5	<5	62.2	<1
65226 (-)	0.006	<1	4.4	<10	<5	13.2	<10	<10	<5	0.04	<5	<5	53.5	<1
65227 (-)	0.012	<1	3.3	<10	<5	14.6	<10	<10	<5	0.06	<5	<5	63.4	<1
65228 (-)	0.007	<1	5.3	<10	<5	21.9	<10	<10	<5	0.07	<5	<5	49.3	<1
65229 (-)	0.006	<1	4.7	<10	<5	15.5	<10	<10	5	0.07	<5	<5	58.5	<1
65230 (-)	<0.005	<1	6.2	<10	<5	12.7	<10	<10	<5	0.04	<5	<5	60.3	<1
65231 (-)	0.008	<1	3.8	<10	<5	13.9	<10	<10	<5	0.07	<5	<5	66.2	<1
65232 (-)	0.006	<1	4.4	<10	<5	13.0	<10	<10	<5	0.07	<5	<5	62.5	<1

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AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65233 (-)	0.006	<1	5.9	<10	<5	17.9	<10	<10	<5	0.07	<5	<5	63.7	<1
65234 (-)	<0.005	<1	5.3	<10	<5	15.3	<10	<10	<5	0.08	<5	<5	65.7	<1
65235 (-)	<0.005	<1	4.7	<10	<5	14.6	<10	<10	<5	0.07	<5	<5	63.5	<1
65236 (-)	0.005	<1	6.2	<10	<5	16.7	<10	<10	<5	0.07	<5	<5	57.5	<1
65237 (-)	0.006	<1	6.3	<10	<5	16.9	<10	<10	<5	0.06	<5	<5	56.0	<1
65238 (-)	<0.005	<1	5.9	<10	<5	15.9	<10	<10	<5	0.07	<5	<5	62.3	<1
65239 (-)	<0.005	<1	7.1	<10	<5	16.4	<10	<10	<5	0.07	<5	<5	61.4	<1
65240 (-)	0.005	<1	6.4	<10	<5	17.3	<10	<10	<5	0.07	<5	<5	56.5	<1
65241 (-)	<0.005	<1	6.9	<10	<5	15.6	<10	<10	<5	0.08	<5	<5	69.5	<1

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CLIENT NAME: VOLCANIC METALS

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
40982 (-)	4	95.4	<5
40983 (-)	3	67.6	<5
40984 (-)	4	83.2	<5
40985 (-)	4	73.6	<5
40986 (-)	4	76.6	<5
40987 (-)	4	73.6	<5
40988 (-)	4	71.7	<5
40989 (-)	4	68.1	<5
40990 (-)	5	88.8	<5
40991 (-)	4	73.9	<5
40992 (-)	3	59.8	<5
40993 (-)	5	64.2	<5
40994 (-)	4	52.4	<5
40995 (-)	6	73.0	<5
40996 (-)	4	49.7	<5
40997 (-)	6	73.3	<5
40998 (-)	5	67.7	<5
40999 (-)	4	48.9	<5
41000 (-)	14	57.9	7
41001 (-)	7	47.2	<5
41002 (-)	14	91.4	11
41003 (-)	10	59.4	7
41004 (-)	13	62.0	9
41005 (-)	12	46.7	8
41006 (-)	15	76.8	5
41007 (-)	10	47.2	7
41008 (-)	13	48.6	5
41009 (-)	11	49.5	7
41010 (-)	6	63.6	<5
41011 (-)	9	76.9	<5
41012 (-)	9	25.2	<5
41013 (-)	18	77.5	<5

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
41014 (-)	9	80.8	<5
41015 (-)	10	68.9	<5
41016 (-)	9	81.1	<5
41017 (-)	10	113	<5
41018 (-)	8	83.4	<5
41019 (-)	4	67.3	<5
41020 (-)	5	46.8	<5
41021 (-)	10	58.5	<5
41022 (-)	<1	0.7	<5
41023 (-)	<1	2.1	<5
41024 (-)	<1	1.1	<5
41025 (-)	<1	4.6	<5
41026 (-)	4	62.2	<5
41027 (-)	4	60.8	5
41028 (-)	5	62.7	5
41029 (-)	6	97.0	<5
41030 (-)	5	61.8	<5
41031 (-)	6	48.7	<5
41032 (-)	13	102	<5
41033 (-)	15	55.2	<5
41034 (-)	11	110	<5
41035 (-)	6	89.2	<5
41036 (-)	11	55.3	<5
41037 (-)	3	69.7	<5
41038 (-)	19	79.7	<5
41039 (-)	13	66.4	<5
41040 (-)	10	101	<5
41041 (-)	5	91.7	<5
41042 (-)	3	79.1	6
41043 (-)	10	69.5	<5
41044 (-)	4	66.8	<5
41045 (-)	3	93.9	<5

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## PROJECT NO: WALHALLA

CLIENT NAME: VOLCANIC METALS

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

SAMPLE TYPE: Soil

64792 (-)	9	45.8	5
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*y f b m e r a*





PROJECT NO: WALHALLA

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Y. J. Tomura



## AGAT WORK ORDER: 11Y530772

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Aqua Regia Digest - Metals Package, ICP-OES finish (201073)					
DATE SAMPLED: Sep 20, 2011		DATE RECEIVED: Sep 20, 2011		DATE REPORTED: Oct 14, 2011	SAMPLE TYPE: Soil
Analyte:	Y	Zn	Zr		
Unit:	ppm	ppm	ppm		
Sample Description	RDL:	1	0.5	5	
64825 (-)		7	42.7	<5	
64826 (-)		7	38.7	<5	
64827 (-)		9	44.0	5	
64828 (-)		14	99.3	<5	
64829 (-)		8	70.0	<5	
64830 (-)		20	41.2	<5	
64831 (-)		9	46.4	10	
64832 (-)		13	42.1	9	
64833 (-)		13	59.4	<5	
64834 (-)		12	51.7	<5	
64835 (-)		12	59.2	7	
64836 (-)		18	79.1	7	
64837 (-)		11	57.7	8	
64838 (-)		17	64.4	<5	
64839 (-)		17	51.3	5	
64840 (-)		13	57.0	<5	
64841 (-)		14	61.6	<5	
64842 (-)		10	39.5	<5	
64843 (-)		9	34.7	<5	
64844 (-)		8	42.2	5	
64845 (-)		5	36.1	<5	
64846 (-)		7	57.3	<5	
64847 (-)		3	65.4	<5	
64848 (-)		23	56.1	11	
64849 (-)		12	45.8	7	
64850 (-)		11	93.1	6	
65131 (-)		10	53.2	<5	
65132 (-)		17	72.1	<5	
65133 (-)		7	77.3	<5	
65134 (-)		6	59.4	<5	
65135 (-)		10	192	<5	
65136 (-)		9	54.3	5	

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
65137 (-)	11	80.6	6
65138 (-)	5	73.9	<5
65139 (-)	10	57.8	<5
65140 (-)	9	70.1	<5
65141 (-)	9	55.4	5
65142 (-)	6	78.3	<5
65143 (-)	10	73.9	10
65144 (-)	10	78.5	10
65145 (-)	6	95.8	<5
65146 (-)	5	100	<5
65147 (-)	5	49.2	<5
65148 (-)	13	107	<5
65149 (-)	8	81.0	9
65150 (-)	10	88.1	<5
65151 (-)	17	61.5	<5
65152 (-)	13	67.6	<5
65153 (-)	29	147	<5
65154 (-)	17	124	<5
65155 (-)	16	49.4	<5
65156 (-)	6	43.7	<5
65157 (-)	21	55.6	5
65158 (-)	18	72.7	<5
65159 (-)	31	83.6	<5
65160 (-)	20	64.6	<5
65161 (-)	55	120	<5
65162 (-)	15	70.5	<5
65163 (-)	15	60.2	<5
65164 (-)	132	163	<5
65165 (-)	122	164	<5
65166 (-)	10	61.0	<5
65167 (-)	86	157	<5
65168 (-)	14	60.5	<5

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ATTENTION TO: JOHN

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
65201 (-)	12	61.9	17
65202 (-)	12	57.2	8
65203 (-)	10	55.1	7
65204 (-)	8	48.8	6
65205 (-)	7	40.4	<5
65206 (-)	8	50.0	<5
65207 (-)	10	49.3	<5
65208 (-)	10	55.5	8
65209 (-)	5	58.2	<5
65210 (-)	8	49.6	<5
65211 (-)	7	57.8	<5
65212 (-)	5	60.1	<5
65213 (-)	7	48.5	8
65214 (-)	10	46.7	6
65215 (-)	7	72.0	<5
65216 (-)	7	77.0	<5
65217 (-)	12	69.5	<5
65218 (-)	4	58.7	<5
65219 (-)	15	83.2	<5
65220 (-)	4	53.4	<5
65221 (-)	3	51.3	<5
65222 (-)	5	48.7	<5
65223 (-)	9	66.1	<5
65224 (-)	2	43.0	<5
65225 (-)	4	45.9	<5
65226 (-)	5	51.1	<5
65227 (-)	3	42.6	<5
65228 (-)	13	44.1	<5
65229 (-)	4	48.3	<5
65230 (-)	7	55.2	6
65231 (-)	3	54.5	<5
65232 (-)	3	54.1	<5

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
65233 (-)	7	52.3	6
65234 (-)	5	51.5	5
65235 (-)	4	50.4	5
65236 (-)	9	45.8	<5
65237 (-)	10	44.7	<5
65238 (-)	6	47.4	6
65239 (-)	10	47.1	6
65240 (-)	10	45.6	<5
65241 (-)	8	50.7	6

Comments: RDL - Reported Detection Limit

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	0.002
40982 (-)		0.48	0.036
40983 (-)		0.46	<0.002
40984 (-)		0.46	0.031
40985 (-)		0.44	0.005
40986 (-)		0.44	0.004
40987 (-)		0.43	<0.002
40988 (-)		0.50	<0.002
40989 (-)		0.53	0.010
40990 (-)		0.42	<0.002
40991 (-)		0.39	0.003
40992 (-)		0.32	<0.002
40993 (-)		0.51	<0.002
40994 (-)		0.50	0.003
40995 (-)		0.48	<0.002
40996 (-)		0.42	0.005
40997 (-)		0.54	0.012
40998 (-)		0.37	<0.002
40999 (-)		0.33	<0.002
41000 (-)		0.44	0.003
41001 (-)		0.37	0.004
41002 (-)		0.42	0.017
41003 (-)		0.59	<0.002
41004 (-)		0.56	<0.002
41005 (-)		0.23	0.008
41006 (-)		0.35	<0.002
41007 (-)		0.34	<0.002
41008 (-)		0.58	<0.002
41009 (-)		0.55	<0.002
41010 (-)		0.49	<0.002
41011 (-)		0.49	<0.002
41012 (-)		0.59	<0.002
41013 (-)		0.54	0.010

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	0.002
41014 (-)		0.38	<0.002
41015 (-)		0.53	<0.002
41016 (-)		0.55	<0.002
41017 (-)		0.52	<0.002
41018 (-)		0.51	<0.002
41019 (-)		0.45	<0.002
41020 (-)		0.48	0.002
41021 (-)		0.50	0.007
41022 (-)		0.44	<0.002
41023 (-)		0.48	<0.002
41024 (-)		0.58	<0.002
41025 (-)		0.52	<0.002
41026 (-)		0.41	<0.002
41027 (-)		0.43	<0.002
41028 (-)		0.43	0.016
41029 (-)		0.48	<0.002
41030 (-)		0.56	<0.002
41031 (-)		0.50	0.006
41032 (-)		0.54	<0.002
41033 (-)		0.49	<0.002
41034 (-)		0.46	<0.002
41035 (-)		0.45	<0.002
41036 (-)		0.38	<0.002
41037 (-)		0.44	0.015
41038 (-)		0.49	<0.002
41039 (-)		0.50	<0.002
41040 (-)		0.57	<0.002
41041 (-)		0.51	<0.002
41042 (-)		0.47	<0.002
41043 (-)		0.50	<0.002
41044 (-)		0.55	<0.002
41045 (-)		0.31	<0.002

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PROJECT NO: WALHALLA

ATTENTION TO: JOHN

41046 (-)	0.53	<0.002
41047 (-)	0.50	0.019
41048 (-)	0.50	0.003
41049 (-)	0.43	0.039
41050 (-)	0.49	<0.002
41051 (-)	0.52	<0.002
41052 (-)	0.52	<0.002
41053 (-)	0.47	<0.002
41054 (-)	0.47	<0.002
41055 (-)	0.48	0.005
41056 (-)	0.43	0.003
41057 (-)	0.55	<0.002
41058 (-)	0.42	0.007
41059 (-)	0.55	<0.002
64688 (-)	0.52	0.020
64689 (-)	0.51	0.002
64690 (-)	0.39	<0.002
64691 (-)	0.44	<0.002
64692 (-)	0.57	0.002
64780 (-)	0.31	0.007
64781 (-)	0.29	0.003
64782 (-)	0.22	0.004
64783 (-)	0.25	0.007
64784 (-)	0.24	0.016
64785 (-)	0.32	0.002
64786 (-)	0.22	0.003
64787 (-)	0.22	<0.002
64788 (-)	0.28	<0.002
64789 (-)	0.46	<0.002
64790 (-)	0.53	<0.002
64791 (-)	.032	<0.002
64792 (-)	0.44	0.002

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PROJECT NO: WALHALLA

ATTENTION TO: JOHN

64793 (-)	0.51	0.023
64794 (-)	0.50	<0.002
64795 (-)	0.37	<0.002
64796 (-)	0.36	<0.002
64797 (-)	0.39	0.003
64798 (-)	0.60	3.41
64799 (-)	0.41	0.004
64800 (-)	0.41	0.012
64801 (-)	0.46	<0.002
64802 (-)	0.51	<0.002
64803 (-)	0.56	0.016
64804 (-)	0.57	0.002
64805 (-)	0.52	0.002
64806 (-)	0.56	<0.002
64807 (-)	0.49	<0.002
64808 (-)	0.47	0.004
64809 (-)	0.47	<0.002
64810 (-)	0.53	0.004
64811 (-)	0.44	0.026
64812 (-)	0.45	<0.002
64813 (-)	0.51	<0.002
64814 (-)	0.49	0.004
64815 (-)	0.48	<0.002
64816 (-)	0.49	<0.002
64817 (-)	0.44	<0.002
64818 (-)	0.45	0.014
64819 (-)	0.55	<0.002
64820 (-)	0.45	<0.002
64821 (-)	0.46	0.004
64822 (-)	0.50	<0.002
64823 (-)	0.44	<0.002
64824 (-)	0.50	<0.002

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PROJECT NO: WALHALLA

ATTENTION TO: JOHN

64825 (-)	0.50	<0.002
64826 (-)	0.46	<0.002
64827 (-)	0.48	0.002
64828 (-)	0.48	<0.002
64829 (-)	0.43	<0.002
64830 (-)	0.42	0.018
64831 (-)	0.47	<0.002
64832 (-)	0.44	0.007
64833 (-)	0.50	0.003
64834 (-)	0.37	<0.002
64835 (-)	0.54	<0.002
64836 (-)	0.51	0.003
64837 (-)	0.46	0.021
64838 (-)	0.46	0.020
64839 (-)	0.49	<0.002
64840 (-)	0.46	<0.002
64841 (-)	0.46	0.003
64842 (-)	0.47	0.017
64843 (-)	0.42	<0.002
64844 (-)	0.45	0.016
64845 (-)	0.48	<0.002
64846 (-)	0.50	<0.002
64847 (-)	0.39	<0.002
64848 (-)	0.40	<0.002
64849 (-)	0.44	<0.002
64850 (-)	0.49	<0.002
65131 (-)	0.41	0.041
65132 (-)	0.44	0.023
65133 (-)	0.35	<0.002
65134 (-)	0.40	<0.002
65135 (-)	0.31	0.025
65136 (-)	0.31	0.002

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PROJECT NO: WALHALLA

ATTENTION TO: JOHN

65137 (-)	0.34	0.013
65138 (-)	0.33	<0.002
65139 (-)	0.44	0.003
65140 (-)	0.23	0.003
65141 (-)	0.55	<0.002
65142 (-)	0.42	<0.002
65143 (-)	0.52	0.006
65144 (-)	0.62	0.010
65145 (-)	0.43	<0.002
65146 (-)	0.39	<0.002
65147 (-)	0.26	<0.002
65148 (-)	0.32	<0.002
65149 (-)	0.42	<0.002
65150 (-)	0.55	<0.002
65151 (-)	0.43	0.003
65152 (-)	0.42	0.005
65153 (-)	0.43	0.008
65154 (-)	0.44	0.004
65155 (-)	0.37	0.005
65156 (-)	0.47	0.004
65157 (-)	0.39	0.003
65158 (-)	0.40	0.003
65159 (-)	0.41	0.004
65160 (-)	0.46	0.003
65161 (-)	0.45	0.006
65162 (-)	0.44	<0.002
65163 (-)	0.43	0.022
65164 (-)	0.44	0.005
65165 (-)	0.47	0.003
65166 (-)	0.37	0.022
65167 (-)	0.46	0.004
65168 (-)	0.40	0.003

Certified By:

✓ of 10000



## AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	
	RDL:	kg	ppm
65169 (-)		0.41	0.010
65170 (-)		0.44	<0.002
65171 (-)		0.46	0.003
65172 (-)		0.44	0.022
65173 (-)		0.38	0.003
65174 (-)		0.40	0.003
65175 (-)		0.49	<0.002
65176 (-)		0.40	<0.002
65177 (-)		0.44	0.013
65178 (-)		0.44	<0.002
65179 (-)		0.48	<0.002
65180 (-)		0.46	<0.002
65181 (-)		0.46	<0.002
65182 (-)		0.45	<0.002
65183 (-)		0.41	0.023
65184 (-)		0.42	0.004
65185 (-)		0.41	0.026
65186 (-)		0.46	<0.002
65187 (-)		0.45	0.060
65188 (-)		0.44	0.004
65189 (-)		0.38	0.009
65190 (-)		0.39	0.002
65191 (-)		0.43	0.006
65192 (-)		0.38	0.002
65193 (-)		0.46	0.003
65194 (-)		0.47	0.027
65195 (-)		0.37	0.013
65196 (-)		0.36	0.003
65197 (-)		0.33	<0.002
65198 (-)		0.40	0.003
65199 (-)		0.43	0.003
65200 (-)		0.42	<0.002

Certified By:

✓ of 10000



## AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	
	RDL:	kg	ppm
65201 (-)		0.54	0.006
65202 (-)		0.53	0.005
65203 (-)		0.47	0.024
65204 (-)		0.48	0.005
65205 (-)		0.54	0.021
65206 (-)		0.49	0.010
65207 (-)		0.42	0.004
65208 (-)		0.46	0.004
65209 (-)		0.46	<0.002
65210 (-)		0.47	0.006
65211 (-)		0.47	0.007
65212 (-)		0.45	0.004
65213 (-)		0.42	0.018
65214 (-)		0.44	0.006
65215 (-)		0.43	0.003
65216 (-)		0.47	<0.002
65217 (-)		0.39	0.004
65218 (-)		0.34	0.015
65219 (-)		0.42	0.003
65220 (-)		0.56	0.005
65221 (-)		0.38	0.006
65222 (-)		0.42	0.004
65223 (-)		0.49	0.003
65224 (-)		0.45	<0.002
65225 (-)		0.43	<0.002
65226 (-)		0.47	0.004
65227 (-)		0.43	0.021
65228 (-)		0.42	0.004
65229 (-)		0.51	0.003
65230 (-)		0.45	0.004
65231 (-)		0.42	0.002
65232 (-)		0.47	0.004

Certified By:

✓ of 10000





**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 20, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 14, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppm
RDL:		0.01	0.002
65233 (-)		0.46	0.004
65234 (-)		0.47	0.003
65235 (-)		0.48	0.011
65236 (-)		0.53	0.005
65237 (-)		0.53	0.011
65238 (-)		0.48	0.002
65239 (-)		0.47	<0.002
65240 (-)		0.54	0.005
65241 (-)		0.56	0.006

Comments: RDL - Reported Detection Limit

Certified By:

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

Solid Analysis											
RPT Date: Oct 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2720731	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2720731	2.37	2.32	2.1%	< 0.01				80%	120%
As	1	2720731	8	8	0.0%	< 1				80%	120%
B	1	2720731	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2720731	200	201	0.5%	< 1				80%	120%
Be	1	2720731	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Bi	1	2720731	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2720731	0.305	0.292	4.4%	< 0.01				80%	120%
Cd	1	2720731	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2720731	17	17	0.0%	< 1				80%	120%
Co	1	2720731	5.43	5.65	4.0%	< 0.5				80%	120%
Cr	1	2720731	18.8	18.7	0.5%	< 0.5				80%	120%
Cu	1	2720731	17.1	17.2	0.6%	2.6	3882	3700	104%	80%	120%
Fe	1	2720731	3.64	3.56	2.2%	< 0.01				80%	120%
Ga	1	2720831	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2720731	< 1	< 1	0.0%	< 1				80%	120%
In	1	2720906	< 1	< 1	0.0%	< 1				80%	120%
K	1	2720731	0.372	0.363	2.4%	< 0.01				80%	120%
La	1	2720731	10	10	0.0%	< 1				80%	120%
Li	1	2720731	18	18	0.0%	< 1				80%	120%
Mg	1	2720731	0.778	0.773	0.6%	< 0.01				80%	120%
Mn	1	2720731	569	579	1.7%	< 1				80%	120%
Mo	1	2720731	0.84	1.02	19.4%	< 0.5				80%	120%
Na	1	2720731	0.02	0.02	0.0%	< 0.01				80%	120%
Ni	1	2720731	9.7	10.1	4.0%	< 0.5				80%	120%
P	1	2720731	780	796	2.0%	< 10				80%	120%
Pb	1	2720731	14.8	11.6	24.2%	4.1				80%	120%
Rb	1	2720731	81	82	1.2%	< 10	11	13	87%	80%	120%
S	1	2720731	0.020	0.020	0.0%	0.006				80%	120%
Sb	1	2720731	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2720731	3.7	3.7	0.0%	< 0.5				80%	120%
Se	1	2720731	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2720731	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2720731	19.9	22.9	14.0%	1.0	314	390	81%	80%	120%
Ta	1	2720731	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2720731	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2720731	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2720731	0.207	0.199	3.9%	< 0.01				80%	120%
Tl	1	2720731	5	5	0.0%	< 5				80%	120%
U	1	2720731	< 5	< 5	0.0%	< 5				80%	120%
V	1	2720731	101	101	0.0%	< 0.5				80%	120%
W	1	2720731	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2720731	4	4	0.0%	< 1				80%	120%
Zn	1	2720731	95.4	85.1	11.4%	34.3				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS  
PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y530772  
ATTENTION TO: JOHN

Solid Analysis (Continued)											
RPT Date: Oct 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Zr	1	2720731	< 5	< 5	0.0%	< 5				80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2720756	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2720756	1.07	1.06	0.9%	< 0.01				80%	120%
As	1	2720756	7	8	13.3%	< 1				80%	120%
B	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2720756	221	219	0.9%	< 1				80%	120%
Be	1	2720756	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Bi	1	2720756	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2720756	0.36	0.35	2.8%	< 0.01				80%	120%
Cd	1	2720756	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2720756	24	22	8.7%	< 1				80%	120%
Co	1	2720756	4.94	5.13	3.8%	< 0.5				80%	120%
Cr	1	2720756	26.1	25.9	0.8%	< 0.5				80%	120%
Cu	1	2720756	24.0	24.5	2.1%	< 0.5	3888	3700	105%	80%	120%
Fe	1	2720756	2.13	2.06	3.3%	< 0.01				80%	120%
Ga	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2720756	< 1	< 1	0.0%	< 1				80%	120%
In	1	2720856	< 1	< 1	0.0%	< 1				80%	120%
K	1	2720756	0.07	0.07	0.0%	< 0.01				80%	120%
La	1	2720756	12	11	8.7%	< 1				80%	120%
Li	1	2720756	8	8	0.0%	< 1				80%	120%
Mg	1	2720756	0.464	0.473	1.9%	< 0.01				80%	120%
Mn	1	2720756	291	294	1.0%	< 1				80%	120%
Mo	1	2720756	1.4	1.5	6.9%	< 0.5				80%	120%
Na	1	2720756	0.02	0.02	0.0%	< 0.01				80%	120%
Ni	1	2720756	21.9	22.5	2.7%	< 0.5				80%	120%
P	1	2720756	630	584	7.6%	< 10				80%	120%
Pb	1	2720756	6.23	6.46	3.6%	< 0.5				80%	120%
Rb	1	2720756	10	10	0.0%	< 10	11	13	87%	80%	120%
S	1	2720756	0.012	0.012	0.0%	< 0.005				80%	120%
Sb	1	2720756	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2720756	5.2	5.3	1.9%	< 0.5				80%	120%
Se	1	2720756	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2720756	28.1	26.8	4.7%	1.2	305	390	78%	80%	120%
Ta	1	2720756	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2720756	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2720756	0.08	0.08	0.0%	< 0.01				80%	120%
Tl	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
U	1	2720756	< 5	< 5	0.0%	< 5				80%	120%
V	1	2720756	55.2	54.2	1.8%	< 0.5				80%	120%
W	1	2720756	< 1	< 1	0.0%	< 1				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Y	1	2720756	10	10	0.0%	< 1				80% 120%
Zn	1	2720756	47.2	47.2	0.0%	< 0.5				80% 120%
Zr	1	2720756	7	7	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720781	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720781	2.91	2.92	0.3%	< 0.01				80% 120%
As	1	2720781	7	9	25.0%	< 1				80% 120%
B	1	2720781	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720781	500	497	0.6%	< 1				80% 120%
Be	1	2720781	0.5	0.5	0.0%	< 0.5				80% 120%
Bi	1	2720881	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720781	1.16	1.11	4.4%	< 0.01				80% 120%
Cd	1	2720781	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720781	18	18	0.0%	< 1				80% 120%
Co	1	2720781	17.2	18.1	5.1%	< 0.5				80% 120%
Cr	1	2720781	14.3	14.8	3.4%	< 0.5				80% 120%
Cu	1	2720781	73.5	77.8	5.7%	< 0.5	3824	3700	103%	80% 120%
Fe	1	2720781	4.57	4.57	0.0%	< 0.01				80% 120%
Ga	1	2720781	9	11	20.0%	< 5				80% 120%
Hg	1	2720781	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720781	4	4	0.0%	< 1				80% 120%
K	1	2720781	1.01	1.03	2.0%	< 0.01				80% 120%
La	1	2720781	7	7	0.0%	< 1				80% 120%
Li	1	2720781	13	13	0.0%	< 1				80% 120%
Mg	1	2720781	2.10	2.09	0.5%	< 0.01				80% 120%
Mn	1	2720781	1060	1140	7.3%	< 1				80% 120%
Mo	1	2720881	1.33	1.40	5.1%	< 0.5				80% 120%
Na	1	2720781	0.02	0.02	0.0%	< 0.01				80% 120%
Ni	1	2720781	6.49	6.88	5.8%	< 0.5				80% 120%
P	1	2720781	2500	2700	7.7%	< 10				80% 120%
Pb	1	2720781	7.84	7.74	1.3%	< 0.5				80% 120%
Rb	1	2720781	164	180	9.3%	< 10	11	13	85%	80% 120%
S	1	2720781	0.0240	0.0231	3.8%	< 0.005				80% 120%
Sb	1	2720881	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2720781	10.4	10.9	4.7%	< 0.5				80% 120%
Se	1	2720781	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720781	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720781	34.7	33.7	2.9%	< 0.5	298	390	76%	80% 120%
Ta	1	2720781	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720781	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720781	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2720781	0.36	0.36	0.0%	< 0.01				80% 120%
Tl	1	2720781	< 5	< 5	0.0%	< 5				80% 120%
U	1	2720781	< 5	< 5	0.0%	< 5				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
V	1	2720781	153	161	5.1%	< 0.5				80% 120%
W	1	2720781	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720781	13	13	0.0%	< 1				80% 120%
Zn	1	2720781	102	107	4.8%	< 0.5				80% 120%
Zr	1	2720781	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2720806	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2720806	2.54	2.68	5.4%	< 0.01				80% 120%
As	1	2720806	11	11	0.0%	< 1				80% 120%
B	1	2720806	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2720806	78	79	1.3%	< 1				80% 120%
Be	1	2720806	0.9	0.9	0.0%	< 0.5				80% 120%
Bi	1	2720981	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2720806	0.46	0.49	6.3%	< 0.01				80% 120%
Cd	1	2720806	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2720806	24	24	0.0%	< 1				80% 120%
Co	1	2720806	13.7	13.8	0.7%	< 0.5				80% 120%
Cr	1	2720806	12.3	11.9	3.3%	< 0.5				80% 120%
Cu	1	2720806	7.3	7.5	2.7%	< 0.5	3879	3700	104%	80% 120%
Fe	1	2720806	4.26	4.45	4.4%	< 0.01				80% 120%
Ga	1	2720806	9	10	10.5%	< 5				80% 120%
Hg	1	2720806	< 1	< 1	0.0%	< 1				80% 120%
In	1	2720981	< 1	< 1	0.0%	< 1				80% 120%
K	1	2720806	0.092	0.101	9.3%	< 0.01				80% 120%
La	1	2720806	7	7	0.0%	< 1				80% 120%
Li	1	2720806	10	11	9.5%	< 1				80% 120%
Mg	1	2720806	0.96	1.03	7.0%	< 0.01				80% 120%
Mn	1	2720806	773	786	1.7%	< 1				80% 120%
Mo	1	2720981	0.88	0.70	22.8%	< 0.5				80% 120%
Na	1	2720806	0.014	0.015	6.9%	< 0.01				80% 120%
Ni	1	2720806	7.85	7.55	3.9%	< 0.5				80% 120%
P	1	2720806	2030	2060	1.5%	< 10				80% 120%
Pb	1	2720806	5.87	6.46	9.6%	< 0.5				80% 120%
Rb	1	2720806	23	23	0.0%	< 10	11	13	86%	80% 120%
S	1	2720806	0.011	0.011	0.0%	< 0.005				80% 120%
Sb	1	2720806	3	3	0.0%	< 1				80% 120%
Sc	1	2720806	7.1	7.2	1.4%	< 0.5				80% 120%
Se	1	2720806	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2720806	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2720806	27.8	30.4	8.9%	< 0.5	280	390	72%	80% 120%
Ta	1	2720806	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2720806	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2720806	5	4	22.2%	< 5				80% 120%
Ti	1	2720806	0.054	0.057	5.4%	< 0.01				80% 120%
Tl	1	2720806	< 5	< 5	0.0%	< 5				80% 120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS  
PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y530772  
ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 14, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
U	1	2720806	< 5	< 5	0.0%	< 5				80% 120%
V	1	2720806	111	112	0.9%	< 0.5				80% 120%
W	1	2720806	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2720806	6	6	0.0%	< 1				80% 120%
Zn	1	2720806	126	126	0.0%	< 0.5				80% 120%
Zr	1	2720806	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Cu	1					< 0.5	3814	3700	103%	80% 120%
Rb	1					< 10	11	13	84%	80% 120%
Sr	1					< 0.5	292	390	75%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720980	< 0.002	< 0.002	0.0%	< 0.002	0.081	0.0849	95%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720956	0.005	0.009		< 0.002	0.0933	0.0849	110%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720970	0.003	0.011		< 0.002	0.0886	0.0849	104%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720979	< 0.002	< 0.002	0.0%	< 0.002	0.0702	0.0849	83%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720993	0.002	0.005		< 0.002	0.0729	0.0849	86%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720831	0.003	0.003	0.0%	< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720843	< 0.002	0.003		< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720854	< 0.002	< 0.002	0.0%	< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720856	< 0.002	< 0.002	0.0%	< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2720868	< 0.002	< 0.002	0.0%	< 0.002				80% 120%

Certified By:

## Method Summary

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y530772

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

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



CLIENT NAME: VOLCANIC METALS  
SUITE 680, 789 WEST PENDER STREET  
VANCOUVER, BC V6C1H2

ATTENTION TO: Larry Johnson, John Lagourgue

PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y531234

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 07, 2011

PAGES (INCLUDING COVER): 52

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

\*NOTES



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65651 (-)	<0.2	1.82	8	<5	161	0.6	<1	0.41	<0.5	8	11.7	57.1	75.7	2.81
65652 (-)	<0.2	2.17	11	<5	140	0.7	<1	0.76	<0.5	18	15.2	115	65.2	4.12
65653 (-)	<0.2	1.61	13	<5	130	0.7	<1	0.45	<0.5	28	8.7	48.0	43.7	2.94
65654 (-)	<0.2	1.99	9	<5	282	0.8	<1	0.32	<0.5	49	6.3	31.6	33.2	3.09
65655 (-)	<0.2	1.23	9	<5	270	0.6	<1	0.25	<0.5	33	4.8	17.4	21.8	2.70
65656 (-)	<0.2	1.61	9	<5	404	0.6	<1	0.34	<0.5	21	6.6	42.2	38.7	2.67
65657 (-)	<0.2	2.42	8	<5	267	1.0	<1	0.48	<0.5	50	13.6	55.8	122	4.17
65658 (-)	<0.2	3.27	9	<5	186	0.9	<1	0.76	<0.5	23	8.0	38.7	38.9	3.72
65659 (-)	<0.2	3.59	7	<5	237	1.1	<1	1.20	<0.5	10	30.3	76.5	91.6	5.66
65660 (-)	<0.2	3.08	10	<5	406	1.0	<1	1.02	<0.5	33	7.3	28.4	35.7	3.54
65661 (-)	<0.2	3.10	9	<5	258	1.3	<1	1.04	<0.5	30	9.9	18.8	26.4	4.91
65662 (-)	<0.2	1.47	11	<5	336	0.6	<1	0.79	<0.5	24	8.6	27.3	35.3	2.77
65663 (-)	0.3	2.33	7	<5	313	0.9	<1	1.42	<0.5	18	7.8	22.7	43.7	3.95
65664 (-)	<0.2	1.53	7	<5	179	0.6	<1	3.04	<0.5	35	7.4	40.2	94.2	2.91
65665 (-)	<0.2	0.85	7	<5	235	<0.5	<1	0.15	<0.5	19	3.5	24.1	34.7	1.49
65666 (-)	<0.2	1.61	12	<5	756	0.7	<1	0.23	<0.5	32	7.1	42.4	53.6	2.59
65667 (-)	<0.2	1.93	11	<5	487	0.6	<1	0.17	<0.5	19	9.5	43.8	36.4	2.79
65668 (-)	<0.2	1.82	12	<5	375	0.6	<1	0.25	<0.5	22	7.5	42.6	29.7	3.00
65669 (-)	<0.2	1.59	11	<5	265	0.5	<1	0.14	<0.5	23	9.4	45.4	29.6	2.60
65670 (-)	<0.2	1.85	11	<5	343	0.7	<1	0.16	<0.5	43	7.1	44.9	47.4	2.78
65671 (-)	<0.2	1.64	9	<5	314	0.6	<1	0.31	<0.5	34	8.4	69.9	40.7	2.80
65672 (-)	<0.2	2.22	11	<5	350	0.9	<1	0.44	<0.5	30	14.9	218	129	3.93
65673 (-)	0.3	2.02	10	<5	268	<0.5	<1	0.16	<0.5	17	6.9	41.5	26.5	3.04
65674 (-)	<0.2	2.37	11	<5	306	0.8	<1	0.19	<0.5	21	11.7	170	54.5	3.44
65675 (-)	<0.2	1.85	10	<5	283	0.6	<1	0.15	<0.5	16	6.9	38.8	24.4	2.67
65676 (-)	<0.2	1.81	10	<5	244	0.5	<1	0.12	<0.5	16	10.4	38.8	27.5	2.51
65677 (-)	<0.2	1.84	11	<5	345	0.5	<1	0.16	<0.5	15	8.9	37.5	27.0	2.77
65678 (-)	<0.2	1.91	11	<5	399	0.8	<1	0.21	<0.5	34	9.4	66.6	58.7	2.99
65679 (-)	<0.2	1.91	10	<5	254	<0.5	<1	0.21	<0.5	16	7.1	50.1	23.5	2.98
65680 (-)	<0.2	1.81	8	<5	328	0.6	<1	0.21	<0.5	21	8.1	74.2	31.6	2.91
65681 (-)	<0.2	2.12	8	<5	232	0.6	<1	0.23	<0.5	22	10.0	111	47.1	3.15
65682 (-)	<0.2	2.19	10	<5	304	0.7	<1	0.36	<0.5	41	12.9	132	49.9	3.19

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
65683 (-)	<0.2	2.69	86	<5	226	1.2	<1	0.32	<0.5	44	27.8	229	124	5.92
65684 (-)	<0.2	3.99	9	<5	817	1.5	<1	0.64	<0.5	47	35.5	265	144	5.98
65685 (-)	<0.2	4.95	37	<5	239	1.4	<1	0.58	<0.5	66	28.3	422	79.7	5.97
65686 (-)	<0.2	1.45	10	<5	323	<0.5	<1	0.22	<0.5	23	8.8	33.1	30.9	2.56
65687 (-)	<0.2	2.49	20	<5	418	0.9	<1	0.47	<0.5	38	14.4	128	68.7	3.88
65688 (-)	<0.2	1.91	19	<5	407	1.1	<1	0.34	<0.5	51	16.2	118	112	4.51
65689 (-)	<0.2	3.31	7	<5	901	0.8	<1	0.28	<0.5	19	7.5	161	75.0	4.12
65690 (-)	<0.2	1.48	6	<5	313	<0.5	<1	0.22	<0.5	19	8.5	108	37.5	2.66
65691 (-)	<0.2	1.90	15	<5	340	0.9	<1	0.24	<0.5	38	24.2	38.8	53.5	4.64
65692 (-)	<0.2	1.50	9	<5	307	0.5	<1	0.31	<0.5	19	7.1	42.2	34.8	2.68
65693 (-)	<0.2	1.28	15	<5	306	0.6	<1	0.06	<0.5	24	4.9	27.0	61.8	2.15
65694 (-)	<0.2	0.97	5	<5	397	<0.5	<1	0.16	<0.5	21	4.6	23.3	26.6	2.20
65695 (-)	<0.2	2.05	10	<5	491	0.6	<1	0.06	<0.5	20	8.3	33.8	100	3.73
65696 (-)	<0.2	0.68	7	<5	212	<0.5	<1	0.28	<0.5	17	4.4	17.6	13.2	1.53
65697 (-)	<0.2	1.17	8	<5	269	0.6	<1	0.33	<0.5	23	6.9	35.3	43.6	2.27
65698 (-)	<0.2	1.42	10	<5	319	0.7	<1	0.38	<0.5	26	6.9	34.7	48.1	2.50
65699 (-)	<0.2	1.26	9	<5	284	0.7	<1	0.37	<0.5	21	5.6	32.4	47.5	2.42
65700 (-)	<0.2	1.62	7	<5	347	1.2	<1	0.24	<0.5	33	6.6	38.9	93.2	3.28
85260 (-)	<0.2	1.33	6	<5	270	0.9	<1	0.48	<0.5	42	8.5	11.7	32.5	4.47
85261 (-)	<0.2	1.76	7	<5	782	0.8	<1	0.66	<0.5	47	7.8	8.4	29.4	5.06
85262 (-)	<0.2	2.44	9	<5	235	0.6	<1	0.58	<0.5	6	7.3	15.8	12.7	3.71
85263 (-)	<0.2	2.03	7	<5	267	<0.5	<1	0.80	<0.5	5	8.5	9.0	12.6	3.40
85264 (-)	<0.2	2.51	9	<5	361	0.5	<1	0.74	<0.5	7	7.8	12.6	13.9	3.57
85265 (-)	<0.2	2.56	9	<5	182	0.6	<1	0.39	<0.5	14	7.9	25.3	19.9	3.28
85266 (-)	<0.2	2.40	6	<5	435	<0.5	<1	0.77	<0.5	5	7.9	11.5	11.6	3.43
85267 (-)	<0.2	2.33	13	<5	230	0.6	<1	0.51	<0.5	12	8.8	22.9	16.4	3.64
85268 (-)	<0.2	1.32	5	<5	170	0.7	<1	0.16	<0.5	23	7.8	16.6	84.2	3.26
85269 (-)	<0.2	3.06	9	<5	277	0.6	<1	0.61	<0.5	12	11.9	45.6	27.6	4.15
85270 (-)	<0.2	2.03	10	<5	248	0.6	<1	0.32	<0.5	28	7.2	29.6	29.1	3.03
85271 (-)	<0.2	1.85	6	<5	121	<0.5	<1	0.74	<0.5	21	7.8	10.1	13.6	3.15
85272 (-)	<0.2	1.33	12	<5	217	0.5	<1	0.94	<0.5	30	8.1	26.9	36.7	2.59
85273 (-)	<0.2	1.44	7	<5	152	<0.5	<1	0.34	<0.5	24	3.9	16.7	14.8	2.47

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85274 (-)	<0.2	2.36	12	<5	169	0.5	<1	0.29	<0.5	21	9.3	31.3	15.5	3.67
85275 (-)	<0.2	1.92	8	<5	269	<0.5	<1	0.24	<0.5	15	6.1	24.4	11.5	3.02
85276 (-)	<0.2	1.72	7	<5	278	<0.5	<1	0.29	<0.5	34	4.9	17.2	17.1	2.97
85277 (-)	<0.2	1.83	11	<5	301	<0.5	<1	0.18	<0.5	34	5.2	29.8	20.7	3.05
85278 (-)	<0.2	1.68	11	<5	249	<0.5	<1	0.21	<0.5	27	4.5	29.3	12.6	2.80
85279 (-)	<0.2	1.65	8	<5	269	0.5	<1	0.28	<0.5	44	6.0	19.7	42.7	2.57
85280 (-)	<0.2	1.72	8	<5	239	<0.5	<1	0.17	<0.5	28	6.3	35.3	16.5	3.11
85281 (-)	<0.2	1.01	7	<5	292	<0.5	<1	0.19	<0.5	26	6.9	20.5	16.8	2.02
85282 (-)	<0.2	1.24	7	<5	274	<0.5	<1	0.20	<0.5	22	4.0	19.1	14.3	1.89
85283 (-)	<0.2	0.73	4	<5	95	<0.5	<1	0.10	<0.5	24	2.6	7.8	12.1	1.69
85284 (-)	<0.2	1.71	9	<5	195	<0.5	<1	0.15	<0.5	20	4.8	26.4	16.5	2.52
85285 (-)	<0.2	1.63	7	<5	182	<0.5	<1	0.16	<0.5	22	5.7	22.1	13.5	2.69
85286 (-)	<0.2	1.73	8	<5	236	0.6	<1	0.17	<0.5	29	5.6	29.1	17.2	3.10
85287 (-)	<0.2	1.42	9	<5	288	0.5	<1	0.20	<0.5	39	5.9	25.7	24.6	2.36
85288 (-)	<0.2	2.23	7	<5	344	0.9	<1	0.64	<0.5	36	7.6	3.8	27.6	3.87
85289 (-)	<0.2	1.41	11	<5	221	<0.5	<1	0.22	<0.5	34	4.1	19.9	16.3	2.60
85290 (-)	<0.2	1.29	10	<5	144	<0.5	<1	0.18	<0.5	20	3.4	16.9	14.0	2.32
85291 (-)	<0.2	1.51	10	<5	233	<0.5	<1	0.18	<0.5	32	4.2	19.3	28.8	2.67
85292 (-)	<0.2	1.63	7	<5	243	<0.5	<1	0.28	<0.5	28	5.7	16.0	13.3	2.93
85293 (-)	<0.2	2.67	6	<5	678	0.6	<1	0.36	<0.5	33	7.6	17.7	12.6	4.39
85294 (-)	<0.2	1.69	8	<5	189	<0.5	<1	0.26	<0.5	19	5.4	21.5	30.4	2.89
85295 (-)	<0.2	1.51	8	<5	323	<0.5	<1	0.30	<0.5	40	5.7	25.9	28.8	2.47
85296 (-)	<0.2	1.66	9	<5	257	<0.5	<1	0.47	<0.5	22	7.1	22.2	28.5	2.74
85297 (-)	<0.2	2.17	7	<5	436	0.5	<1	0.82	<0.5	27	7.9	21.7	26.0	3.53
85298 (-)	<0.2	1.18	8	<5	171	<0.5	<1	0.39	<0.5	19	3.8	17.3	13.4	1.96
85299 (-)	<0.2	1.67	8	<5	222	<0.5	<1	0.60	<0.5	24	6.4	19.9	24.5	2.84
85300 (-)	<0.2	1.85	8	<5	221	0.5	<1	0.67	<0.5	22	6.8	20.7	24.8	3.13
85301 (-)	<0.2	1.67	8	<5	161	<0.5	<1	0.45	<0.5	18	5.8	19.9	9.5	2.70
85302 (-)	<0.2	1.62	8	<5	264	<0.5	<1	0.48	<0.5	27	6.3	19.8	9.9	2.64
85303 (-)	<0.2	1.88	8	<5	258	<0.5	<1	0.60	<0.5	20	6.9	18.7	13.5	3.13
85304 (-)	<0.2	1.97	8	<5	192	<0.5	<1	0.42	<0.5	18	7.5	15.3	17.6	3.70
85305 (-)	<0.2	2.31	12	<5	243	0.5	<1	0.35	<0.5	16	10.9	33.8	13.3	3.32

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85306 (-)	<0.2	2.13	8	<5	202	0.6	<1	0.30	<0.5	19	8.1	30.9	11.8	3.07
85307 (-)	<0.2	2.42	8	<5	225	0.6	<1	0.30	<0.5	20	11.2	27.9	12.1	3.23
85308 (-)	<0.2	2.15	8	<5	168	<0.5	<1	0.36	<0.5	13	12.3	41.5	10.4	2.95
85309 (-)	<0.2	2.94	6	<5	290	0.7	<1	0.29	<0.5	34	14.5	40.4	12.7	3.60
85310 (-)	<0.2	2.11	9	<5	206	0.5	<1	0.18	<0.5	32	6.7	32.5	20.4	2.88
85311 (-)	<0.2	2.46	6	<5	197	0.6	<1	0.36	<0.5	18	10.7	30.0	6.7	3.15
85312 (-)	<0.2	1.72	9	<5	196	<0.5	<1	0.24	<0.5	22	5.1	23.4	27.8	2.75
85313 (-)	<0.2	1.52	9	<5	191	<0.5	<1	0.24	<0.5	22	6.3	26.5	18.7	2.39
85314 (-)	<0.2	2.38	7	<5	254	0.5	<1	0.28	<0.5	19	12.4	34.0	10.0	2.99
85315 (-)	<0.2	2.58	9	<5	534	0.5	<1	0.28	<0.5	20	8.8	35.9	12.3	3.10
85316 (-)	<0.2	2.57	9	<5	279	0.6	<1	0.36	<0.5	22	13.5	52.9	18.3	3.34
85317 (-)	<0.2	2.10	9	<5	199	0.5	<1	0.25	<0.5	20	8.7	35.6	12.4	2.79
85318 (-)	<0.2	1.96	8	<5	341	0.6	<1	0.42	<0.5	49	8.9	31.5	14.6	2.77
85319 (-)	<0.2	2.03	9	<5	199	0.5	<1	0.19	<0.5	17	8.9	32.4	15.5	2.75
85320 (-)	<0.2	1.70	8	<5	261	<0.5	<1	0.35	<0.5	24	6.8	19.1	9.6	2.42
85321 (-)	<0.2	1.79	7	<5	150	<0.5	<1	0.71	<0.5	26	7.6	15.6	8.6	2.53
85322 (-)	<0.2	1.49	10	<5	194	0.5	<1	0.30	<0.5	45	6.8	28.7	31.2	2.35
85323 (-)	<0.2	2.21	6	<5	289	<0.5	<1	0.28	<0.5	17	10.3	30.7	85.3	3.67
85324 (-)	<0.2	1.65	10	<5	184	<0.5	<1	0.14	<0.5	19	6.2	32.7	19.5	2.60
85325 (-)	<0.2	2.89	6	<5	171	0.6	<1	0.34	<0.5	18	6.7	24.1	116	3.36
85326 (-)	<0.2	2.23	7	<5	242	<0.5	<1	0.53	<0.5	13	10.7	27.9	134	3.93
85327 (-)	<0.2	1.78	9	<5	155	<0.5	<1	0.31	<0.5	20	6.3	27.5	26.9	2.71
85328 (-)	0.3	1.67	7	<5	191	<0.5	<1	0.53	<0.5	25	6.9	21.1	25.3	2.67
85329 (-)	<0.2	2.20	7	<5	231	<0.5	<1	0.67	<0.5	27	8.8	16.2	13.4	3.07
85330 (-)	<0.2	1.66	5	<5	167	0.5	<1	0.59	<0.5	30	5.5	13.4	10.3	2.49
85331 (-)	<0.2	1.40	8	<5	184	<0.5	<1	0.35	<0.5	33	5.6	24.8	23.0	2.27
85332 (-)	0.2	1.62	11	<5	178	<0.5	<1	0.30	<0.5	28	6.0	27.3	20.1	2.49
85333 (-)	<0.2	1.69	9	<5	205	<0.5	<1	0.48	<0.5	43	6.5	23.5	23.5	2.55
85334 (-)	<0.2	1.49	8	<5	248	<0.5	<1	0.49	<0.5	31	6.2	21.5	25.7	2.36
85335 (-)	<0.2	2.93	11	<5	564	0.6	<1	0.64	<0.5	14	10.8	57.3	248	4.59
85336 (-)	<0.2	1.85	13	<5	260	<0.5	<1	0.38	<0.5	16	10.2	30.2	68.6	3.20
85337 (-)	<0.2	1.58	9	<5	788	0.5	<1	0.33	<0.5	34	6.8	30.3	35.0	2.60

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85338 (-)	<0.2	2.35	9	<5	249	0.6	<1	0.24	<0.5	38	11.8	25.5	38.5	4.22
85339 (-)	<0.2	2.15	8	<5	702	0.6	<1	0.69	<0.5	23	10.4	36.9	35.6	3.88
85340 (-)	<0.2	2.09	9	<5	335	<0.5	<1	0.19	<0.5	22	9.0	24.0	14.5	3.20
85341 (-)	<0.2	3.15	8	<5	1260	0.6	<1	0.89	<0.5	78	14.0	20.8	140	6.40
85342 (-)	<0.2	2.24	11	<5	2240	<0.5	<1	0.87	<0.5	14	8.7	42.7	38.7	4.36
85343 (-)	<0.2	1.37	12	<5	840	0.6	<1	2.62	<0.5	23	5.8	23.1	32.6	1.79
85344 (-)	<0.2	1.75	8	<5	514	0.5	<1	6.10	<0.5	10	3.3	10.0	54.1	1.65
85345 (-)	<0.2	1.64	11	<5	284	<0.5	<1	0.59	<0.5	40	8.7	26.9	126	3.10
85346 (-)	<0.2	1.50	8	<5	361	<0.5	<1	0.34	<0.5	15	8.8	30.6	16.3	2.34
85347 (-)	<0.2	2.04	6	<5	454	<0.5	<1	1.11	<0.5	5	13.6	56.8	384	4.45
85348 (-)	<0.2	2.14	6	<5	387	<0.5	<1	0.52	<0.5	16	10.5	36.0	169	3.88
85349 (-)	<0.2	2.18	5	<5	1010	<0.5	<1	1.16	<0.5	21	6.7	18.0	7.1	3.01
85350 (-)	<0.2	2.57	7	<5	566	0.6	<1	1.45	<0.5	36	8.4	4.4	8.8	4.51
85351 (-)	<0.2	1.94	8	<5	387	<0.5	<1	0.20	<0.5	21	5.3	32.1	24.5	2.84
85352 (-)	<0.2	2.18	8	<5	443	<0.5	<1	0.50	<0.5	17	7.0	15.9	35.0	3.93
85353 (-)	<0.2	2.14	9	<5	537	<0.5	<1	0.31	<0.5	14	6.2	24.0	15.6	3.79
85354 (-)	<0.2	1.73	7	<5	675	0.6	<1	0.32	<0.5	18	5.2	23.1	17.6	2.63
85355 (-)	<0.2	2.65	6	<5	624	<0.5	<1	1.19	<0.5	10	6.9	14.7	20.5	3.97
85356 (-)	<0.2	2.94	11	<5	399	0.6	<1	0.90	<0.5	20	6.0	22.1	20.9	3.79
85357 (-)	<0.2	2.15	6	<5	520	<0.5	<1	1.14	<0.5	36	5.4	7.6	18.5	3.82
85358 (-)	<0.2	1.87	8	<5	285	<0.5	<1	0.20	<0.5	16	5.0	30.2	17.8	2.81
85359 (-)	<0.2	1.55	8	<5	291	<0.5	<1	0.42	<0.5	24	4.5	24.1	14.9	2.57
85360 (-)	<0.2	2.27	8	<5	378	<0.5	<1	0.47	<0.5	14	6.1	21.2	21.3	3.92
85361 (-)	<0.2	2.56	7	<5	767	0.7	<1	0.79	<0.5	30	8.1	11.0	21.4	5.43
85362 (-)	<0.2	2.89	7	<5	435	0.6	<1	1.16	<0.5	20	9.5	11.7	9.8	5.57
85363 (-)	<0.2	2.95	4	<5	608	<0.5	<1	0.92	<0.5	64	10.8	24.1	162	5.10
85364 (-)	<0.2	2.50	9	<5	289	0.9	<1	1.02	<0.5	36	9.0	24.2	23.0	4.31
85365 (-)	<0.2	2.36	5	<5	302	0.8	<1	1.02	<0.5	19	7.4	8.2	14.8	4.85
85366 (-)	<0.2	2.91	9	<5	642	0.5	<1	0.79	<0.5	46	5.7	19.3	17.4	4.67
85367 (-)	<0.2	1.75	8	<5	246	<0.5	<1	0.64	<0.5	38	6.5	19.6	16.2	3.07
85368 (-)	<0.2	1.66	10	<5	347	<0.5	<1	0.60	<0.5	26	6.5	44.1	93.3	2.86
85369 (-)	<0.2	1.40	10	<5	312	<0.5	<1	0.59	<0.5	26	6.7	37.1	60.1	2.72

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85370 (-)	<0.2	3.11	7	<5	235	1.1	<1	1.42	<0.5	26	10.0	16.4	54.5	4.60
85371 (-)	<0.2	1.40	7	<5	297	0.6	<1	0.63	<0.5	31	6.5	40.0	71.5	2.77
85372 (-)	<0.2	1.67	9	<5	348	0.6	<1	0.67	<0.5	32	7.5	47.6	82.9	3.00
85373 (-)	<0.2	1.48	10	<5	434	0.5	<1	0.86	<0.5	26	6.1	33.5	51.5	2.70
85374 (-)	<0.2	1.36	10	<5	307	<0.5	<1	0.64	<0.5	26	6.2	34.8	52.6	2.59
85375 (-)	<0.2	1.52	10	<5	369	<0.5	<1	0.68	<0.5	25	5.8	29.7	42.9	2.54
85376 (-)	<0.2	1.57	10	<5	421	<0.5	<1	0.69	<0.5	28	6.9	37.0	62.9	2.76
85377 (-)	<0.2	1.62	9	<5	361	0.7	<1	0.65	<0.5	34	8.1	64.1	70.1	3.36
85378 (-)	<0.2	1.68	10	<5	384	0.7	<1	0.46	<0.5	36	6.2	42.6	51.0	2.95
85379 (-)	<0.2	1.90	9	<5	278	0.6	<1	0.60	<0.5	30	7.2	50.0	60.5	3.33
85380 (-)	<0.2	1.74	10	<5	344	<0.5	<1	0.68	<0.5	27	7.1	39.1	59.0	2.96
85381 (-)	<0.2	1.57	10	<5	386	<0.5	<1	0.90	<0.5	27	6.7	34.6	51.8	2.78
85382 (-)	<0.2	1.27	9	<5	328	<0.5	<1	0.61	<0.5	24	6.1	27.9	47.1	2.36
85383 (-)	<0.2	1.34	9	<5	307	<0.5	<1	0.67	<0.5	22	6.5	24.5	25.9	2.29
85384 (-)	<0.2	1.32	9	<5	372	<0.5	<1	0.61	<0.5	23	6.2	27.8	40.7	2.31
85385 (-)	<0.2	1.37	10	<5	278	<0.5	<1	1.09	<0.5	22	7.0	30.5	40.4	2.56
85386 (-)	<0.2	1.22	8	<5	257	<0.5	<1	0.54	<0.5	22	10.3	25.2	22.0	2.12
85387 (-)	<0.2	1.14	10	<5	266	<0.5	<1	0.60	<0.5	22	6.0	24.1	22.5	2.35
85388 (-)	<0.2	1.02	7	<5	223	<0.5	<1	0.53	<0.5	20	4.8	19.8	16.1	1.83
85389 (-)	<0.2	1.27	8	<5	292	<0.5	<1	0.65	<0.5	23	5.4	26.7	32.9	2.26
85390 (-)	<0.2	1.37	9	<5	308	<0.5	<1	0.65	<0.5	25	6.1	30.4	60.2	2.49
85391 (-)	<0.2	1.38	10	<5	301	<0.5	<1	0.50	<0.5	25	6.3	27.5	35.0	2.52
85392 (-)	<0.2	1.58	4	<5	292	<0.5	<1	1.08	<0.5	13	5.4	9.9	32.4	2.60
85393 (-)	<0.2	1.99	8	<5	360	<0.5	<1	0.61	<0.5	19	9.3	20.3	15.3	3.33
85394 (-)	<0.2	2.21	6	<5	309	0.5	<1	1.14	<0.5	9	9.9	8.4	15.2	3.64
85395 (-)	<0.2	1.69	8	<5	272	1.2	<1	0.21	<0.5	102	9.5	43.2	72.5	4.27
85396 (-)	<0.2	1.84	7	<5	440	1.0	<1	0.47	<0.5	72	8.8	46.6	65.4	3.95
85397 (-)	<0.2	1.58	8	<5	368	<0.5	<1	0.42	<0.5	27	6.5	34.4	50.3	2.57
85398 (-)	<0.2	1.50	8	<5	340	<0.5	<1	0.41	<0.5	27	5.0	28.3	31.4	2.37
85399 (-)	<0.2	1.32	8	<5	230	<0.5	<1	0.32	<0.5	23	4.9	25.4	16.6	2.14
85400 (-)	<0.2	1.50	10	<5	326	<0.5	<1	0.45	<0.5	28	7.0	28.8	28.2	2.58
85401 (-)	<0.2	1.54	9	<5	303	<0.5	<1	0.39	<0.5	28	6.4	28.2	25.1	2.43

Certified By:





**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85402 (-)	<0.2	1.68	8	<5	332	<0.5	<1	0.33	<0.5	26	5.3	30.3	36.2	2.75
85403 (-)	<0.2	1.51	8	<5	248	<0.5	<1	0.26	<0.5	24	7.3	30.4	27.1	2.47
85404 (-)	<0.2	1.73	8	<5	296	<0.5	<1	0.31	<0.5	24	4.9	32.1	23.7	2.58
85405 (-)	<0.2	1.46	8	<5	366	<0.5	<1	0.44	<0.5	26	7.7	36.3	40.0	2.39
85406 (-)	<0.2	1.38	9	<5	276	<0.5	<1	0.33	<0.5	25	6.9	30.6	23.1	2.37
85407 (-)	<0.2	1.54	8	<5	373	<0.5	<1	0.36	<0.5	24	7.2	35.8	33.1	2.39
85408 (-)	<0.2	1.50	7	<5	339	<0.5	<1	0.35	<0.5	23	27.2	28.0	20.2	2.69
85409 (-)	<0.2	1.76	8	<5	454	<0.5	<1	0.46	<0.5	26	10.4	34.4	28.8	2.72
85410 (-)	<0.2	2.25	9	<5	351	0.6	<1	0.18	<0.5	26	7.8	38.2	34.1	3.10
85411 (-)	<0.2	1.69	5	<5	131	0.9	<1	0.05	<0.5	58	11.5	32.6	28.9	4.29
85412 (-)	<0.2	1.58	7	<5	203	<0.5	<1	0.09	<0.5	17	8.3	26.1	20.8	2.88
85413 (-)	<0.2	1.46	6	<5	173	0.5	<1	0.09	<0.5	17	12.7	29.9	48.9	3.03
85414 (-)	<0.2	1.74	7	<5	319	0.6	<1	0.18	<0.5	38	9.2	31.1	45.9	2.85
85415 (-)	<0.2	1.31	4	<5	284	0.6	<1	0.15	<0.5	36	10.1	28.0	56.8	2.65
85416 (-)	<0.2	1.76	15	<5	579	0.6	<1	0.38	<0.5	31	8.2	68.1	51.4	3.03
85417 (-)	<0.2	1.29	9	<5	275	<0.5	<1	0.41	<0.5	23	5.3	28.0	25.5	2.16
85418 (-)	<0.2	1.45	10	<5	371	<0.5	<1	0.84	<0.5	23	6.8	29.8	34.7	2.49
85419 (-)	<0.2	1.38	9	<5	297	<0.5	<1	0.61	<0.5	26	7.4	30.6	33.0	2.52
85420 (-)	<0.2	1.13	8	<5	261	<0.5	<1	0.52	<0.5	24	5.7	24.8	20.0	2.18
85421 (-)	<0.2	1.45	7	<5	299	<0.5	<1	0.48	<0.5	25	6.7	29.1	32.2	2.45
85422 (-)	<0.2	1.75	12	<5	295	0.6	<1	0.53	<0.5	29	7.9	35.5	52.6	3.32
85423 (-)	<0.2	1.75	9	<5	405	0.5	<1	0.46	<0.5	25	7.0	36.3	35.8	2.85
85424 (-)	<0.2	0.71	3	<5	206	0.6	<1	0.12	<0.5	40	6.5	26.3	60.3	2.98
85425 (-)	<0.2	1.73	10	<5	416	0.5	<1	0.54	<0.5	27	8.1	38.8	57.5	3.15
85426 (-)	<0.2	1.46	7	<5	369	0.6	<1	0.18	<0.5	26	8.3	35.3	54.3	3.26
85427 (-)	<0.2	1.94	9	<5	240	<0.5	<1	0.46	<0.5	22	6.3	31.1	32.5	3.38
85428 (-)	<0.2	1.91	8	<5	129	<0.5	<1	0.48	<0.5	8	7.0	14.8	38.0	2.53
85429 (-)	<0.2	2.40	5	<5	209	<0.5	<1	0.57	<0.5	10	9.0	11.0	29.8	4.09
85430 (-)	<0.2	1.66	6	<5	314	<0.5	<1	0.41	<0.5	17	7.3	27.0	17.4	2.77
85431 (-)	<0.2	2.20	6	<5	258	<0.5	<1	0.47	<0.5	12	8.4	22.4	23.3	3.62
85432 (-)	<0.2	2.08	11	<5	287	0.6	<1	0.47	<0.5	26	7.6	35.6	38.0	3.18
85433 (-)	<0.2	1.82	10	<5	297	<0.5	<1	0.44	<0.5	26	7.5	39.5	34.2	3.06

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85434 (-)	<0.2	2.30	7	<5	342	0.5	<1	0.36	<0.5	18	6.3	53.8	19.1	3.25
85435 (-)	<0.2	1.99	9	<5	235	<0.5	<1	0.36	<0.5	16	8.3	57.5	40.8	3.23
85436 (-)	<0.2	1.72	6	<5	223	<0.5	<1	0.25	<0.5	33	6.9	40.3	27.7	3.18
85437 (-)	<0.2	2.74	6	<5	382	0.6	<1	0.27	<0.5	23	6.4	65.0	53.8	4.41
85438 (-)	<0.2	2.84	7	<5	328	0.6	<1	0.35	<0.5	34	13.3	264	51.5	4.19
85439 (-)	<0.2	2.27	7	<5	359	<0.5	<1	0.32	<0.5	18	6.6	65.4	35.2	3.53
85440 (-)	<0.2	1.45	6	<5	280	<0.5	<1	0.44	<0.5	26	5.7	19.4	26.2	2.84
85441 (-)	<0.2	1.44	8	<5	329	<0.5	<1	0.44	<0.5	26	5.9	29.4	39.2	2.35
85442 (-)	<0.2	2.14	6	<5	458	0.6	<1	0.25	<0.5	21	8.4	33.2	11.8	3.23
85443 (-)	<0.2	1.60	7	<5	290	<0.5	<1	0.39	<0.5	20	8.2	25.1	32.7	2.59
85444 (-)	<0.2	1.34	9	<5	332	<0.5	<1	0.65	<0.5	23	6.3	24.8	32.3	2.31
85445 (-)	<0.2	1.56	9	<5	350	0.5	<1	0.58	<0.5	26	7.3	30.0	36.7	2.46
85446 (-)	<0.2	1.24	7	<5	241	<0.5	<1	0.30	<0.5	22	6.2	30.3	25.6	2.25
85447 (-)	<0.2	1.81	7	<5	159	<0.5	<1	0.45	<0.5	11	7.1	17.8	31.9	2.22
85448 (-)	<0.2	1.70	7	<5	249	<0.5	<1	0.34	<0.5	15	7.3	22.1	23.7	2.86
85449 (-)	<0.2	1.39	7	<5	520	<0.5	<1	0.32	<0.5	25	6.3	33.2	36.8	2.49
85450 (-)	<0.2	1.52	9	<5	358	0.6	<1	0.35	<0.5	33	6.9	37.4	49.9	2.96
85451 (-)	0.4	1.25	13	<5	327	0.8	<1	0.33	0.7	34	10.7	49.9	75.8	4.21
85452 (-)	<0.2	1.13	7	<5	424	0.5	<1	0.28	0.6	31	10.7	42.7	54.0	3.21
85453 (-)	0.2	1.83	12	<5	441	0.6	<1	0.15	<0.5	33	15.4	125	62.0	3.78
85454 (-)	<0.2	1.66	8	<5	418	0.6	<1	0.31	<0.5	28	7.0	55.3	29.7	2.71
85455 (-)	0.3	0.93	5	<5	304	<0.5	<1	0.23	0.5	31	7.9	29.0	34.0	2.31
85456 (-)	1.4	1.61	10	<5	419	0.6	<1	0.33	0.8	28	8.8	36.1	43.1	3.36
85457 (-)	0.7	1.65	11	<5	364	0.7	<1	0.37	<0.5	34	7.9	42.6	47.8	3.06
85458 (-)	<0.2	2.19	8	<5	392	0.6	<1	0.40	<0.5	34	6.7	24.7	23.7	4.07
85459 (-)	<0.2	2.22	7	<5	415	<0.5	<1	0.25	<0.5	27	6.4	38.0	46.5	3.82
85460 (-)	<0.2	2.03	5	<5	216	0.5	<1	0.42	<0.5	36	5.1	9.1	75.0	5.22
85461 (-)	<0.2	1.62	11	<5	422	<0.5	<1	0.67	<0.5	36	6.1	29.4	45.5	2.98
85462 (-)	<0.2	1.54	10	<5	406	0.5	<1	0.66	<0.5	30	6.4	32.8	41.0	2.76
85463 (-)	<0.2	1.53	11	<5	379	<0.5	<1	0.89	<0.5	28	6.6	30.7	35.4	2.63
85464 (-)	<0.2	1.38	10	<5	406	0.5	<1	0.69	<0.5	31	7.6	34.3	45.7	2.61
85465 (-)	<0.2	2.58	9	<5	161	<0.5	<1	1.09	<0.5	16	13.3	58.5	50.0	3.93

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
85466 (-)	<0.2	2.08	12	<5	303	0.5	<1	1.12	<0.5	21	12.0	32.8	50.2	3.07
85467 (-)	<0.2	2.00	10	<5	346	0.6	<1	0.64	<0.5	29	6.8	33.4	29.8	2.74
85468 (-)	<0.2	2.29	9	<5	353	0.5	<1	0.92	<0.5	24	5.8	30.3	30.6	2.91
85469 (-)	<0.2	2.06	11	<5	338	<0.5	<1	1.03	<0.5	24	6.5	28.7	29.4	2.80
85470 (-)	<0.2	2.28	9	<5	308	0.5	<1	1.30	<0.5	21	6.3	30.2	37.3	3.23
85471 (-)	<0.2	1.77	11	<5	499	0.6	<1	1.06	<0.5	35	9.0	54.3	41.0	2.92
85472 (-)	<0.2	1.60	13	<5	432	<0.5	<1	0.52	<0.5	31	10.1	55.8	39.2	2.85
85473 (-)	<0.2	1.64	14	<5	521	<0.5	<1	0.48	<0.5	31	9.2	60.8	43.0	2.85
85474 (-)	<0.2	1.99	15	<5	449	0.5	<1	0.25	0.7	29	13.8	92.3	73.7	3.65
85475 (-)	<0.2	1.70	14	<5	561	0.5	<1	0.34	<0.5	29	9.4	90.6	49.0	3.23
85476 (-)	<0.2	1.50	28	<5	423	<0.5	<1	0.31	0.5	29	9.1	88.1	61.3	3.32
85477 (-)	<0.2	1.22	75	<5	793	1.4	<1	0.31	1.6	37	33.6	111	121	7.77
85478 (-)	<0.2	3.18	6	<5	1100	0.5	<1	0.33	<0.5	48	19.2	244	93.2	4.55
85479 (-)	<0.2	3.18	8	<5	901	0.6	<1	0.53	<0.5	64	28.8	268	128	4.94
85480 (-)	<0.2	4.30	6	<5	999	0.8	<1	0.55	0.6	34	25.7	267	123	5.74
85481 (-)	<0.2	1.76	9	<5	263	0.5	<1	0.18	<0.5	26	7.3	57.5	25.4	2.61
85482 (-)	<0.2	3.11	5	<5	383	<0.5	<1	0.23	<0.5	14	24.2	406	99.4	4.24
85483 (-)	<0.2	2.17	13	<5	280	0.5	<1	0.25	<0.5	27	10.5	126	39.2	3.24
85484 (-)	<0.2	3.81	10	<5	303	1.1	2	0.56	<0.5	47	30.0	447	120	4.71

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# Certificate of Analysis

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65651 (-)	<5	<1	<1	0.11	3	9	0.64	392	1.1	0.02	33.0	393	9.1	27
65652 (-)	<5	<1	<1	0.10	7	16	1.53	513	<0.5	0.03	50.5	328	8.9	18
65653 (-)	<5	<1	<1	0.08	14	11	0.66	319	0.6	0.01	29.6	511	9.0	16
65654 (-)	<5	<1	<1	0.14	26	13	0.74	383	<0.5	0.01	21.4	317	12.4	33
65655 (-)	<5	<1	<1	0.24	11	9	0.40	427	0.5	<0.01	10.0	473	11.2	68
65656 (-)	<5	<1	<1	0.05	10	10	0.49	344	0.9	0.01	43.4	285	10.8	15
65657 (-)	<5	<1	<1	0.06	17	17	1.05	645	1.1	0.01	34.1	555	12.9	14
65658 (-)	9	<1	<1	0.17	6	26	1.17	647	1.6	0.01	25.0	551	17.7	37
65659 (-)	6	<1	<1	0.04	3	42	3.52	1600	<0.5	0.04	54.3	1260	11.4	13
65660 (-)	6	<1	<1	0.07	13	17	0.74	500	<0.5	0.02	18.4	586	12.4	14
65661 (-)	8	<1	<1	0.06	14	35	1.43	889	0.8	0.01	12.1	1120	16.1	12
65662 (-)	<5	<1	<1	0.04	11	11	0.61	621	0.8	0.02	24.1	873	9.1	10
65663 (-)	6	<1	<1	0.05	8	16	1.12	763	<0.5	0.02	15.0	1290	10.9	15
65664 (-)	<5	<1	<1	0.07	21	12	1.73	465	<0.5	0.03	20.9	2200	8.0	17
65665 (-)	<5	<1	4	0.04	9	4	0.18	249	2.1	<0.01	14.4	399	13.5	20
65666 (-)	<5	<1	<1	0.04	15	12	0.51	281	1.3	0.01	33.3	197	9.9	10
65667 (-)	<5	<1	<1	0.05	10	11	0.50	247	2.0	<0.01	32.4	166	10.5	16
65668 (-)	<5	<1	<1	0.05	10	11	0.49	304	0.8	0.01	31.2	203	10.7	14
65669 (-)	<5	<1	3	0.04	10	12	0.51	257	0.6	0.01	35.1	170	10.4	16
65670 (-)	<5	<1	<1	0.04	18	11	0.52	251	1.1	0.01	32.7	121	12.5	10
65671 (-)	<5	<1	<1	0.06	15	13	0.91	313	<0.5	0.01	55.7	418	8.4	15
65672 (-)	<5	<1	<1	0.04	13	17	1.46	582	1.1	<0.01	215	452	13.4	17
65673 (-)	<5	<1	<1	0.05	8	14	0.51	648	2.1	<0.01	39.3	192	11.1	20
65674 (-)	6	<1	<1	0.07	11	16	1.10	430	1.1	<0.01	129	218	10.6	33
65675 (-)	<5	<1	<1	0.04	8	13	0.47	322	0.5	0.01	28.2	227	12.4	22
65676 (-)	<5	<1	<1	0.05	8	12	0.53	288	0.8	0.01	31.3	144	10.2	19
65677 (-)	<5	<1	<1	0.05	7	12	0.49	425	1.4	0.01	25.6	259	11.8	18
65678 (-)	<5	<1	<1	0.06	15	13	0.67	305	1.7	0.01	63.9	192	10.9	22
65679 (-)	<5	<1	<1	0.06	7	13	0.60	278	1.4	0.01	34.6	274	11.0	25
65680 (-)	<5	<1	2	0.10	9	14	0.83	367	2.2	0.01	48.7	325	10.1	41
65681 (-)	<5	<1	<1	0.09	8	20	1.29	361	1.6	<0.01	96.1	185	10.4	28
65682 (-)	<5	<1	<1	0.14	19	20	1.54	415	2.9	0.01	123	436	9.6	27

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb	
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
65683 (-)		<5	<1	<1	0.16	20	25	1.72	914	16.0	<0.01	203	602	14.6	43
65684 (-)		10	<1	<1	0.58	12	39	3.25	1020	13.9	<0.01	208	1010	16.7	116
65685 (-)		12	<1	<1	0.23	29	67	5.26	1020	5.6	<0.01	236	1160	11.9	51
65686 (-)		<5	<1	<1	0.07	11	14	0.46	499	2.5	0.01	23.5	375	14.1	27
65687 (-)		<5	<1	<1	0.08	17	26	1.41	548	3.6	<0.01	125	473	11.7	23
65688 (-)		<5	<1	<1	0.16	20	13	1.29	689	9.7	<0.01	146	429	13.4	36
65689 (-)		7	<1	2	1.21	13	33	2.28	514	9.6	0.01	55.8	640	15.0	176
65690 (-)		<5	<1	<1	0.31	7	15	1.09	671	4.3	0.01	84.1	229	8.9	122
65691 (-)		<5	<1	<1	0.32	13	17	0.95	1730	0.7	<0.01	89.6	271	15.0	80
65692 (-)		<5	<1	<1	0.23	8	13	0.71	491	2.4	0.01	29.6	296	10.6	54
65693 (-)		<5	<1	<1	0.06	11	7	0.26	188	1.6	<0.01	24.5	205	10.5	15
65694 (-)		<5	<1	<1	0.12	10	8	0.32	334	2.8	<0.01	16.7	198	8.5	21
65695 (-)		<5	<1	<1	0.28	10	14	0.94	335	26.5	<0.01	42.6	242	14.5	57
65696 (-)		<5	<1	<1	0.04	8	5	0.31	323	0.5	0.01	16.2	552	4.7	<10
65697 (-)		<5	<1	<1	0.05	12	9	0.47	303	1.1	0.01	32.3	473	9.2	13
65698 (-)		<5	<1	<1	0.06	13	10	0.49	427	1.1	0.02	27.4	384	9.9	14
65699 (-)		<5	<1	<1	0.06	11	8	0.46	337	1.3	0.02	22.5	451	9.2	12
65700 (-)		<5	<1	<1	0.08	20	8	0.48	487	1.9	<0.01	32.9	153	15.3	19
85260 (-)		<5	<1	<1	0.08	17	4	0.24	450	<0.5	<0.01	6.8	1360	9.7	19
85261 (-)		<5	<1	2	0.22	17	8	0.45	535	<0.5	<0.01	4.2	1960	25.7	37
85262 (-)		<5	<1	<1	0.26	3	22	0.91	681	<0.5	0.03	6.7	2030	10.2	51
85263 (-)		6	<1	<1	0.45	2	21	1.18	961	<0.5	0.04	3.7	2890	7.6	84
85264 (-)		7	<1	1	0.52	3	23	1.08	739	<0.5	0.04	5.9	3050	8.1	90
85265 (-)		5	<1	1	0.21	6	16	0.82	492	0.8	0.03	9.7	859	9.1	32
85266 (-)		6	<1	<1	0.58	2	19	1.11	665	0.8	0.03	5.3	2650	7.8	85
85267 (-)		5	<1	1	0.09	5	15	0.87	796	0.8	0.02	13.3	1570	12.2	26
85268 (-)		<5	<1	<1	0.13	10	4	0.30	352	<0.5	<0.01	10.6	523	8.8	26
85269 (-)		8	<1	<1	0.54	6	21	1.85	1080	<0.5	0.03	29.3	1600	9.6	109
85270 (-)		<5	<1	<1	0.10	14	12	0.61	396	0.8	0.02	16.1	523	9.8	23
85271 (-)		6	<1	<1	0.49	11	11	1.05	792	0.7	0.05	4.3	1720	7.1	102
85272 (-)		<5	<1	<1	0.13	13	12	0.77	443	<0.5	0.04	24.0	1070	7.7	24
85273 (-)		<5	<1	<1	0.13	12	9	0.56	334	0.7	0.02	5.9	726	7.7	35

Certified By:



## Certificate of Analysis

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85274 (-)	<5	<1	<1	0.10	10	15	0.69	613	1.1	0.02	14.6	803	11.7	27
85275 (-)	<5	<1	<1	0.14	7	13	0.59	372	<0.5	<0.01	10.1	360	9.1	39
85276 (-)	<5	<1	<1	0.34	22	12	0.54	484	0.7	0.01	7.0	767	8.3	72
85277 (-)	<5	<1	<1	0.10	19	13	0.49	337	1.1	0.01	14.3	292	10.1	26
85278 (-)	<5	<1	2	0.08	16	13	0.48	265	<0.5	0.01	12.3	335	8.7	32
85279 (-)	<5	<1	1	0.12	26	17	0.43	636	0.7	0.01	10.6	618	9.6	33
85280 (-)	<5	<1	<1	0.11	12	13	0.53	404	0.7	0.01	14.9	376	10.3	38
85281 (-)	<5	<1	1	0.10	13	6	0.34	877	0.6	0.01	10.0	419	7.2	38
85282 (-)	<5	<1	2	0.06	12	9	0.34	294	0.5	<0.01	11.0	369	7.5	20
85283 (-)	<5	<1	<1	0.18	10	2	0.17	258	1.2	<0.01	3.4	347	5.6	80
85284 (-)	<5	<1	<1	0.08	11	11	0.42	359	1.4	0.01	13.8	248	9.3	27
85285 (-)	<5	<1	<1	0.16	14	10	0.43	427	<0.5	<0.01	11.6	446	7.9	42
85286 (-)	<5	<1	<1	0.19	16	10	0.48	397	0.6	<0.01	13.7	365	8.6	60
85287 (-)	<5	<1	<1	0.06	19	10	0.43	346	<0.5	0.01	12.9	285	8.6	20
85288 (-)	<5	<1	1	0.21	13	3	0.37	675	0.9	0.03	5.0	1530	6.3	22
85289 (-)	<5	<1	<1	0.07	15	10	0.42	240	0.9	0.01	9.8	551	7.7	18
85290 (-)	<5	<1	<1	0.07	11	8	0.36	239	0.8	<0.01	8.1	392	6.4	19
85291 (-)	<5	<1	<1	0.10	15	10	0.40	288	1.2	0.01	7.8	450	7.7	24
85292 (-)	<5	<1	<1	0.36	13	10	0.74	662	0.8	0.01	6.0	819	7.2	54
85293 (-)	7	<1	<1	1.47	14	11	1.68	808	<0.5	0.01	5.5	1150	8.3	246
85294 (-)	<5	<1	<1	0.07	9	12	0.61	193	<0.5	0.01	7.6	409	8.4	21
85295 (-)	<5	<1	<1	0.08	18	12	0.55	256	<0.5	0.01	9.2	489	7.7	18
85296 (-)	<5	<1	1	0.11	11	10	0.63	382	<0.5	0.02	8.8	914	8.2	24
85297 (-)	5	<1	<1	0.69	12	12	1.42	684	<0.5	0.02	7.8	1300	7.4	125
85298 (-)	<5	<1	<1	0.07	9	8	0.45	193	0.6	0.02	9.7	805	6.1	15
85299 (-)	<5	<1	<1	0.23	12	12	0.69	444	<0.5	0.03	8.1	1340	6.7	35
85300 (-)	<5	<1	2	0.29	11	14	0.81	533	<0.5	0.03	8.9	1440	7.2	48
85301 (-)	<5	<1	<1	0.12	9	12	0.68	321	0.6	0.02	7.7	1020	7.6	26
85302 (-)	<5	<1	1	0.13	13	12	0.63	348	1.2	0.02	8.2	1030	7.1	23
85303 (-)	<5	<1	<1	0.19	10	13	0.74	503	<0.5	0.02	7.2	1380	8.2	31
85304 (-)	<5	<1	<1	0.12	9	19	0.76	575	0.7	0.02	6.2	1340	7.6	30
85305 (-)	<5	<1	<1	0.34	8	16	1.18	564	0.7	0.01	18.1	1170	9.0	60

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

	Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
	Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85306 (-)		<5	<1	<1	0.37	13	13	0.86	403	0.7	0.02	17.8	721	7.8	64
85307 (-)		<5	<1	<1	0.67	14	15	1.32	810	0.9	0.01	17.2	894	8.1	125
85308 (-)		6	<1	<1	0.56	6	13	1.56	668	<0.5	0.02	21.7	946	8.0	102
85309 (-)		<5	<1	1	0.80	18	16	1.72	780	<0.5	0.01	23.3	683	8.3	157
85310 (-)		<5	<1	<1	0.14	14	14	0.65	301	0.8	0.01	16.2	378	9.5	34
85311 (-)		<5	<1	<1	0.73	7	18	1.55	705	0.6	0.01	20.6	1240	7.6	137
85312 (-)		<5	<1	1	0.17	12	10	0.71	310	<0.5	0.01	13.1	500	9.4	35
85313 (-)		<5	<1	1	0.07	10	12	0.59	271	0.7	0.01	16.0	433	7.5	20
85314 (-)		<5	<1	1	0.51	10	16	1.51	613	<0.5	0.01	20.3	647	7.4	83
85315 (-)		<5	<1	<1	0.63	11	14	1.29	502	<0.5	0.02	14.0	791	9.2	81
85316 (-)		5	<1	<1	0.41	10	15	1.15	771	<0.5	0.01	28.1	1230	9.4	70
85317 (-)		<5	<1	<1	0.21	12	13	0.94	421	<0.5	0.01	18.7	577	8.6	43
85318 (-)		<5	<1	<1	0.39	24	13	1.00	432	<0.5	0.02	17.7	943	7.7	54
85319 (-)		<5	<1	<1	0.20	9	13	0.89	384	<0.5	0.01	16.7	343	8.5	31
85320 (-)		5	<1	<1	0.31	13	11	0.88	369	<0.5	0.01	8.4	828	7.3	50
85321 (-)		6	<1	<1	0.32	16	13	0.90	388	<0.5	0.02	6.7	1830	5.7	49
85322 (-)		<5	<1	2	0.07	21	13	0.55	283	0.8	0.02	17.8	470	7.6	15
85323 (-)		<5	<1	2	0.71	9	17	1.17	808	0.5	0.02	18.2	650	9.0	115
85324 (-)		<5	<1	<1	0.09	9	13	0.48	261	0.7	0.01	17.8	324	10.0	31
85325 (-)		9	<1	<1	0.58	11	15	1.55	597	<0.5	0.02	7.5	811	9.7	95
85326 (-)		6	<1	1	0.41	7	14	1.24	630	0.6	0.02	16.2	1280	8.2	77
85327 (-)		<5	<1	<1	0.16	11	16	0.71	296	0.6	0.01	12.7	780	7.7	30
85328 (-)		6	<1	2	0.30	11	14	0.85	531	0.9	0.02	9.1	1190	6.9	66
85329 (-)		5	<1	<1	0.42	14	14	1.26	580	<0.5	0.02	7.2	1570	6.9	75
85330 (-)		<5	<1	<1	0.33	17	10	0.76	427	1.5	0.02	4.7	1380	5.4	46
85331 (-)		<5	<1	3	0.07	16	10	0.55	321	0.6	0.02	14.0	714	6.7	17
85332 (-)		<5	<1	<1	0.08	14	13	0.54	322	1.0	0.02	14.0	626	8.0	19
85333 (-)		<5	<1	<1	0.17	24	12	0.63	419	1.2	0.02	10.2	1240	7.7	35
85334 (-)		<5	<1	<1	0.11	15	11	0.51	379	<0.5	0.02	10.2	1100	7.5	22
85335 (-)		<5	<1	2	0.39	7	16	1.63	555	<0.5	0.02	25.1	1450	9.8	60
85336 (-)		<5	<1	<1	0.06	7	10	0.49	657	1.6	0.02	16.6	577	9.9	13
85337 (-)		<5	<1	4	0.08	16	11	0.54	427	<0.5	0.02	19.1	609	8.7	16

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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ATTENTION TO: Larry Johnson, John Lagourgue

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DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85338 (-)	<5	<1	<1	0.12	17	10	1.02	531	1.0	0.01	17.2	764	9.1	30
85339 (-)	<5	<1	3	0.17	12	12	1.10	643	0.8	0.02	17.4	1710	7.6	30
85340 (-)	<5	<1	<1	0.39	9	14	1.05	525	<0.5	0.01	10.2	498	8.6	68
85341 (-)	6	<1	<1	0.43	42	21	1.99	1310	<0.5	0.02	17.2	1450	9.4	68
85342 (-)	5	<1	3	0.21	6	20	1.23	715	1.6	0.01	20.0	3280	10.8	43
85343 (-)	<5	<1	2	0.04	10	10	0.78	689	<0.5	0.02	13.3	1170	8.3	14
85344 (-)	7	<1	<1	0.03	4	13	4.23	1370	<0.5	0.01	5.3	1050	7.6	13
85345 (-)	<5	<1	<1	0.11	20	11	0.67	667	1.2	0.05	17.7	1610	9.0	23
85346 (-)	<5	<1	2	0.06	7	11	0.49	493	0.9	0.02	12.5	431	8.1	11
85347 (-)	5	<1	3	0.50	2	12	1.34	690	<0.5	0.07	31.2	3050	6.0	88
85348 (-)	6	<1	2	0.25	9	18	1.16	507	1.0	0.03	21.7	834	8.1	44
85349 (-)	6	<1	3	0.08	12	7	0.87	427	<0.5	0.08	6.5	1930	6.8	<10
85350 (-)	8	<1	<1	0.23	13	13	1.02	743	0.7	0.05	2.3	4050	7.4	42
85351 (-)	<5	<1	<1	0.04	11	11	0.53	314	1.8	0.01	17.3	169	8.9	12
85352 (-)	6	<1	<1	0.05	7	11	0.55	1550	1.5	0.03	9.6	1260	8.8	<10
85353 (-)	<5	<1	<1	0.05	6	12	0.81	631	1.5	0.02	15.2	736	8.8	20
85354 (-)	<5	<1	<1	0.05	8	10	0.49	329	1.3	0.02	17.6	444	7.6	14
85355 (-)	5	<1	3	0.15	3	13	1.12	915	1.8	0.05	11.0	1630	8.7	13
85356 (-)	7	<1	1	0.08	10	12	0.73	365	1.7	0.03	14.9	832	9.2	12
85357 (-)	<5	<1	<1	0.33	15	11	0.94	470	0.7	0.04	3.5	2180	5.8	38
85358 (-)	<5	<1	<1	0.04	8	12	0.49	203	0.8	0.01	16.1	226	8.9	12
85359 (-)	<5	<1	<1	0.04	11	11	0.52	190	1.1	0.02	12.0	576	7.6	<10
85360 (-)	<5	<1	<1	0.36	6	13	0.88	711	1.0	0.01	13.4	1300	9.0	53
85361 (-)	<5	<1	2	0.06	20	14	1.31	791	1.0	0.02	7.1	1370	6.9	10
85362 (-)	6	<1	1	0.43	7	10	1.57	1110	1.8	0.03	7.3	3860	5.7	51
85363 (-)	5	<1	1	0.82	39	8	1.77	995	1.8	0.01	13.4	1360	7.0	128
85364 (-)	6	<1	2	0.07	16	12	1.28	895	1.3	0.04	17.3	1190	7.9	11
85365 (-)	<5	<1	<1	0.28	10	11	1.39	1080	1.1	0.02	9.0	2110	4.4	38
85366 (-)	<5	<1	<1	0.80	20	14	1.36	872	1.7	0.02	13.3	1710	7.7	143
85367 (-)	<5	<1	<1	0.10	17	10	0.69	467	1.7	0.02	10.5	820	7.5	20
85368 (-)	<5	<1	<1	0.06	13	11	0.58	416	2.4	0.02	35.7	547	8.7	14
85369 (-)	<5	<1	2	0.09	13	10	0.60	495	2.1	0.02	30.2	723	7.2	19

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85370 (-)	10	<1	2	0.04	12	13	1.12	1460	1.9	0.02	14.7	1610	13.5	<10
85371 (-)	<5	<1	<1	0.14	14	8	0.63	583	2.4	0.02	33.2	938	7.6	26
85372 (-)	<5	<1	2	0.12	14	10	0.60	634	1.8	0.02	36.1	730	9.5	25
85373 (-)	<5	<1	2	0.05	12	12	0.59	381	2.0	0.02	28.4	516	8.1	11
85374 (-)	<5	<1	<1	0.05	12	11	0.55	384	2.1	0.02	28.9	577	7.5	12
85375 (-)	<5	<1	<1	0.04	11	9	0.47	351	1.9	0.02	21.0	536	8.1	12
85376 (-)	<5	<1	<1	0.06	13	11	0.57	456	1.8	0.02	29.4	547	8.9	14
85377 (-)	<5	<1	<1	0.18	16	10	0.76	538	2.8	0.02	46.2	984	7.9	38
85378 (-)	<5	<1	<1	0.06	16	10	0.64	358	2.0	0.02	29.9	508	7.6	13
85379 (-)	<5	<1	1	0.16	14	11	0.67	435	2.5	0.02	36.0	882	9.2	29
85380 (-)	<5	<1	1	0.09	12	12	0.57	489	2.1	0.02	30.7	696	8.3	20
85381 (-)	<5	<1	1	0.06	12	11	0.56	479	2.1	0.02	28.4	652	8.5	15
85382 (-)	<5	<1	<1	0.05	11	9	0.48	448	1.7	0.02	22.8	666	7.3	11
85383 (-)	<5	<1	<1	0.05	10	10	0.47	398	1.4	0.02	17.8	680	7.0	15
85384 (-)	<5	<1	<1	0.05	10	11	0.53	401	2.3	0.02	24.8	633	7.3	13
85385 (-)	<5	<1	<1	0.05	10	12	0.73	483	0.9	0.03	25.0	772	7.1	12
85386 (-)	<5	<1	1	0.05	10	11	0.56	473	0.6	0.02	17.8	679	6.7	13
85387 (-)	<5	<1	<1	0.05	10	10	0.53	302	1.3	0.02	18.9	744	5.9	11
85388 (-)	<5	<1	<1	0.05	9	9	0.44	257	1.3	0.02	15.0	672	5.3	10
85389 (-)	<5	<1	<1	0.05	10	10	0.53	321	1.1	0.02	20.6	673	6.6	12
85390 (-)	<5	<1	1	0.06	11	12	0.57	420	1.8	0.02	25.3	740	7.5	14
85391 (-)	<5	<1	<1	0.05	12	12	0.54	419	1.3	0.02	21.1	655	7.2	14
85392 (-)	<5	<1	<1	0.42	6	11	0.83	484	1.5	0.02	9.8	1360	3.9	61
85393 (-)	<5	<1	<1	0.16	7	15	0.82	984	1.8	0.02	11.9	1320	7.1	41
85394 (-)	7	<1	<1	0.37	5	17	1.24	985	2.3	0.04	3.5	2410	6.7	73
85395 (-)	<5	<1	1	0.35	53	7	0.55	448	1.2	<0.01	50.5	317	16.5	100
85396 (-)	<5	<1	2	0.48	37	17	0.72	549	2.4	<0.01	40.1	583	14.3	112
85397 (-)	<5	<1	<1	0.05	13	11	0.46	336	2.0	0.01	26.9	558	9.6	16
85398 (-)	<5	<1	<1	0.04	13	11	0.45	325	2.4	0.02	18.0	575	8.2	15
85399 (-)	<5	<1	<1	0.04	11	10	0.39	219	2.1	0.01	14.4	611	7.7	15
85400 (-)	<5	<1	1	0.05	14	11	0.49	360	1.7	0.02	20.1	643	8.4	17
85401 (-)	<5	<1	<1	0.05	14	11	0.45	278	1.4	0.02	18.4	622	9.1	17

Certified By:



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

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SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85402 (-)	<5	<1	<1	0.05	13	11	0.44	219	3.1	0.01	18.1	640	10.2	16
85403 (-)	<5	<1	<1	0.04	12	10	0.40	348	1.9	0.01	17.9	600	10.7	15
85404 (-)	<5	<1	1	0.05	12	12	0.43	185	1.3	0.01	19.3	576	9.7	16
85405 (-)	<5	<1	<1	0.04	13	10	0.55	493	1.6	0.02	41.5	556	8.5	15
85406 (-)	<5	<1	<1	0.04	13	9	0.39	357	1.3	0.01	19.8	590	8.2	14
85407 (-)	<5	<1	<1	0.04	12	11	0.47	411	1.5	0.01	30.8	534	8.9	16
85408 (-)	<5	<1	<1	0.05	11	11	0.48	1020	1.7	0.02	19.3	573	9.0	17
85409 (-)	<5	<1	<1	0.05	12	13	0.51	992	1.3	0.02	26.0	590	10.3	19
85410 (-)	<5	<1	<1	0.05	13	14	0.52	308	2.1	0.01	28.9	203	12.5	17
85411 (-)	<5	<1	<1	0.21	29	12	0.37	483	1.7	<0.01	42.8	469	14.7	60
85412 (-)	<5	<1	<1	0.05	8	13	0.30	422	2.3	<0.01	20.3	828	9.8	23
85413 (-)	<5	<1	<1	0.07	8	9	0.28	276	2.8	<0.01	28.8	375	9.7	24
85414 (-)	<5	<1	<1	0.07	18	12	0.40	360	2.3	0.01	35.1	193	10.6	19
85415 (-)	<5	<1	1	0.06	17	9	0.31	332	2.1	<0.01	41.1	223	9.3	19
85416 (-)	<5	<1	<1	0.06	16	12	0.63	364	2.0	0.02	98.6	363	8.5	18
85417 (-)	<5	<1	<1	0.04	12	11	0.47	253	0.9	0.02	22.9	507	7.1	12
85418 (-)	<5	<1	<1	0.06	12	11	0.58	525	0.7	0.03	28.8	590	8.5	15
85419 (-)	<5	<1	<1	0.05	13	11	0.56	494	1.9	0.03	28.2	682	7.9	14
85420 (-)	<5	<1	<1	0.05	11	9	0.47	325	1.5	0.02	23.1	650	6.8	12
85421 (-)	<5	<1	<1	0.07	13	12	0.56	365	1.4	0.02	26.4	681	7.5	15
85422 (-)	<5	<1	<1	0.08	18	12	0.55	517	2.2	0.02	42.4	302	8.9	16
85423 (-)	<5	<1	<1	0.11	12	10	0.45	460	1.8	0.01	30.5	402	10.0	23
85424 (-)	<5	<1	<1	0.12	24	3	0.24	250	2.2	<0.01	48.1	239	8.6	22
85425 (-)	<5	<1	<1	0.06	14	12	0.57	498	2.1	0.02	30.8	416	10.5	17
85426 (-)	<5	<1	<1	0.07	13	8	0.34	485	1.9	<0.01	54.1	385	10.7	16
85427 (-)	<5	<1	<1	0.07	11	13	0.76	361	0.7	0.01	19.1	280	9.9	20
85428 (-)	<5	<1	<1	0.07	4	9	0.82	215	1.2	0.04	11.7	487	5.3	15
85429 (-)	<5	<1	<1	0.10	5	13	0.90	562	0.8	0.03	8.0	545	8.1	19
85430 (-)	<5	<1	1	0.12	8	10	0.58	565	1.2	0.02	16.6	424	7.5	21
85431 (-)	<5	<1	<1	0.09	6	14	0.75	421	0.9	0.02	12.2	414	7.1	18
85432 (-)	<5	<1	<1	0.07	13	13	0.71	341	2.2	0.02	26.4	351	9.8	16
85433 (-)	<5	<1	<1	0.16	14	13	0.67	415	1.8	0.02	26.1	250	9.5	32

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85434 (-)	<5	<1	<1	0.09	8	13	0.68	385	1.7	0.02	24.2	195	11.2	23
85435 (-)	<5	<1	<1	0.13	8	14	0.74	408	1.7	0.01	25.6	440	11.8	23
85436 (-)	<5	<1	<1	0.21	17	13	0.74	381	1.5	0.01	18.7	237	10.1	27
85437 (-)	6	<1	<1	0.91	8	17	1.70	672	0.8	<0.01	24.2	209	14.8	158
85438 (-)	6	<1	2	0.52	16	17	2.48	603	1.2	0.01	188	284	10.3	91
85439 (-)	5	<1	1	0.47	6	15	1.61	756	1.0	<0.01	22.8	305	7.9	79
85440 (-)	<5	<1	<1	0.19	11	9	0.62	291	1.2	0.02	11.8	596	5.8	23
85441 (-)	<5	<1	<1	0.05	12	10	0.51	322	1.3	0.02	19.6	395	8.2	13
85442 (-)	<5	<1	<1	0.12	7	12	0.49	547	0.9	0.01	19.1	428	9.9	18
85443 (-)	<5	<1	1	0.05	9	9	0.54	274	1.7	0.02	15.9	304	6.8	12
85444 (-)	<5	<1	<1	0.05	11	10	0.59	303	0.5	0.03	20.6	652	7.3	12
85445 (-)	<5	<1	2	0.06	12	13	0.64	363	1.3	0.03	23.1	595	9.0	15
85446 (-)	<5	<1	<1	0.07	9	9	0.42	255	0.9	0.01	24.6	246	7.2	15
85447 (-)	<5	<1	1	0.03	5	8	0.66	223	<0.5	0.03	12.9	142	5.5	<10
85448 (-)	<5	<1	<1	0.09	6	11	0.58	266	<0.5	0.02	14.5	237	6.9	21
85449 (-)	<5	<1	1	0.07	11	10	0.46	382	2.3	0.02	23.0	446	9.6	17
85450 (-)	<5	<1	<1	0.11	16	13	0.57	358	1.4	0.01	33.6	385	9.1	30
85451 (-)	<5	<1	<1	0.12	15	8	0.33	907	2.7	<0.01	81.0	992	11.6	37
85452 (-)	<5	<1	<1	0.09	14	8	0.28	728	1.8	<0.01	64.5	608	10.0	23
85453 (-)	<5	<1	<1	0.06	15	15	0.67	611	2.7	<0.01	292	479	9.6	35
85454 (-)	<5	<1	<1	0.10	13	13	0.79	326	0.8	0.01	57.4	318	8.5	32
85455 (-)	<5	<1	2	0.09	13	8	0.35	853	2.3	<0.01	36.0	611	9.2	38
85456 (-)	<5	<1	<1	0.12	13	10	0.42	431	3.0	0.01	45.3	867	10.2	35
85457 (-)	<5	<1	2	0.09	20	12	0.49	395	1.6	0.01	36.3	370	11.4	26
85458 (-)	5	<1	<1	0.42	12	13	0.79	691	1.7	0.01	17.6	491	9.1	55
85459 (-)	<5	<1	<1	0.54	8	15	1.09	430	1.8	0.01	15.8	267	8.8	71
85460 (-)	8	<1	<1	0.32	6	12	0.90	496	4.1	0.01	11.3	470	11.0	31
85461 (-)	<5	<1	3	0.09	18	14	0.70	381	1.8	0.03	25.7	649	9.6	18
85462 (-)	<5	<1	2	0.07	15	12	0.65	390	1.5	0.03	27.5	614	8.7	18
85463 (-)	<5	<1	<1	0.07	13	11	0.58	419	1.5	0.02	24.7	575	8.9	16
85464 (-)	<5	<1	<1	0.07	14	10	0.52	408	2.1	0.02	34.3	620	9.0	18
85465 (-)	<5	<1	<1	0.09	6	20	1.49	571	1.5	0.03	25.2	349	9.4	23

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
85466 (-)	5	<1	2	0.07	9	15	1.02	551	1.1	0.05	20.8	1250	8.0	15
85467 (-)	<5	<1	3	0.07	13	13	0.64	350	1.3	0.03	20.6	532	9.3	16
85468 (-)	<5	<1	<1	0.06	11	15	0.70	366	2.4	0.03	19.2	699	9.5	17
85469 (-)	<5	<1	<1	0.05	11	15	0.69	470	1.3	0.02	18.4	779	10.3	14
85470 (-)	<5	<1	<1	0.06	9	16	0.91	512	2.2	0.02	21.5	906	10.2	16
85471 (-)	<5	<1	2	0.06	16	14	0.86	615	2.1	0.02	45.5	726	11.1	19
85472 (-)	<5	<1	2	0.07	14	13	0.72	377	2.9	0.02	42.0	666	12.8	20
85473 (-)	<5	<1	<1	0.09	14	14	0.77	415	4.0	0.02	45.7	541	10.8	25
85474 (-)	<5	<1	<1	0.17	13	17	1.05	941	8.9	0.01	72.7	489	12.6	42
85475 (-)	<5	<1	<1	0.15	14	15	0.90	420	3.8	0.01	63.9	481	19.1	32
85476 (-)	<5	<1	<1	0.19	13	21	0.85	425	11.9	0.01	72.1	629	11.5	40
85477 (-)	<5	1	1	0.18	16	11	0.75	1700	13.3	<0.01	297	697	8.7	38
85478 (-)	6	<1	2	0.86	24	32	2.77	612	12.1	0.03	144	740	12.4	146
85479 (-)	7	<1	3	0.74	30	39	2.93	635	13.5	0.04	250	766	11.6	127
85480 (-)	9	<1	2	0.76	15	44	3.51	726	10.3	0.02	193	819	11.3	167
85481 (-)	<5	<1	<1	0.06	12	13	0.70	227	1.7	0.01	44.1	118	9.3	25
85482 (-)	7	<1	<1	0.53	3	28	2.59	387	6.1	0.01	168	380	8.6	104
85483 (-)	<5	<1	<1	0.07	13	19	1.45	350	2.6	0.01	84.9	185	8.9	26
85484 (-)	13	<1	3	0.04	20	43	3.80	756	10.9	<0.01	272	618	9.8	20

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DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65651 (-)	0.009	<1	5.2	<10	<5	15.8	<10	<10	<5	0.14	<5	<5	74.4	<1
65652 (-)	0.010	<1	16.1	<10	<5	25.1	<10	<10	<5	0.16	6	<5	109	<1
65653 (-)	0.007	1	9.2	<10	<5	29.3	<10	<10	<5	0.12	<5	<5	71.0	<1
65654 (-)	0.007	<1	5.0	<10	<5	24.4	<10	<10	7	0.12	<5	<5	67.5	<1
65655 (-)	0.010	<1	2.7	<10	<5	20.8	<10	<10	<5	0.09	<5	<5	46.1	<1
65656 (-)	0.007	<1	5.5	<10	<5	23.5	<10	<10	<5	0.10	<5	<5	66.1	<1
65657 (-)	0.010	<1	6.3	<10	<5	50.7	<10	<10	<5	0.11	<5	<5	81.3	<1
65658 (-)	0.015	<1	4.1	<10	<5	48.8	<10	<10	<5	0.16	7	<5	97.2	<1
65659 (-)	0.016	<1	13.2	<10	<5	110	<10	<10	<5	0.23	9	<5	159	<1
65660 (-)	0.016	<1	10.1	<10	<5	123	<10	<10	<5	0.11	6	<5	102	<1
65661 (-)	0.014	<1	14.5	<10	<5	82.7	<10	<10	<5	0.10	5	<5	154	<1
65662 (-)	0.024	<1	5.7	<10	<5	49.4	<10	<10	<5	0.08	<5	<5	66.7	<1
65663 (-)	0.033	<1	9.2	<10	<5	128	<10	<10	<5	0.17	7	<5	112	<1
65664 (-)	0.045	<1	6.4	<10	<5	162	<10	<10	<5	0.13	5	<5	107	<1
65665 (-)	0.010	<1	2.9	<10	<5	19.1	<10	<10	<5	0.06	<5	<5	49.7	<1
65666 (-)	0.005	<1	9.8	<10	<5	23.8	<10	<10	<5	0.07	<5	<5	65.0	<1
65667 (-)	0.007	<1	5.5	<10	<5	18.2	<10	<10	<5	0.06	<5	<5	65.9	<1
65668 (-)	0.007	<1	5.3	<10	<5	21.8	<10	<10	<5	0.08	<5	<5	70.6	<1
65669 (-)	0.005	<1	4.8	<10	<5	15.9	<10	<10	<5	0.07	<5	<5	66.7	<1
65670 (-)	0.006	<1	8.9	<10	<5	18.8	<10	<10	<5	0.07	<5	<5	66.7	<1
65671 (-)	0.005	<1	9.1	<10	<5	21.3	<10	<10	<5	0.09	<5	<5	73.6	<1
65672 (-)	0.007	<1	15.4	<10	<5	19.3	<10	<10	<5	0.04	<5	<5	106	<1
65673 (-)	0.008	<1	3.6	<10	<5	15.1	<10	<10	<5	0.09	<5	<5	76.2	<1
65674 (-)	0.007	<1	8.2	<10	<5	17.1	<10	<10	<5	0.08	<5	<5	104	<1
65675 (-)	0.007	<1	3.6	<10	<5	15.8	<10	<10	<5	0.09	<5	<5	72.2	<1
65676 (-)	0.006	<1	3.9	<10	<5	14.4	<10	<10	<5	0.07	<5	<5	62.1	<1
65677 (-)	0.008	<1	3.5	<10	<5	16.3	<10	<10	<5	0.07	<5	<5	65.9	<1
65678 (-)	0.007	<1	8.5	<10	<5	20.5	<10	<10	<5	0.08	<5	<5	73.9	<1
65679 (-)	0.008	<1	4.0	<10	<5	17.4	<10	<10	<5	0.08	<5	<5	68.3	<1
65680 (-)	0.011	<1	4.6	<10	<5	21.1	<10	<10	<5	0.11	<5	<5	73.5	<1
65681 (-)	0.008	<1	5.7	<10	<5	18.4	<10	<10	<5	0.11	<5	<5	79.9	<1
65682 (-)	0.012	<1	6.9	<10	<5	25.8	<10	<10	<5	0.12	5	<5	85.3	<1

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DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
65683 (-)	0.010	<1	13.9	<10	<5	17.2	<10	<10	<5	0.04	<5	<5	152	<1
65684 (-)	0.012	<1	18.1	<10	<5	24.7	<10	<10	<5	0.15	8	<5	218	<1
65685 (-)	0.013	<1	19.0	<10	<5	21.1	<10	<10	<5	0.09	6	<5	200	<1
65686 (-)	0.008	<1	4.4	<10	<5	18.7	<10	<10	<5	0.08	<5	<5	59.4	<1
65687 (-)	0.008	<1	11.0	<10	<5	26.2	<10	<10	<5	0.07	<5	<5	111	<1
65688 (-)	0.007	<1	12.1	<10	<5	41.3	<10	<10	<5	0.07	<5	<5	123	<1
65689 (-)	0.120	<1	11.2	<10	<5	31.9	<10	<10	<5	0.16	6	<5	158	<1
65690 (-)	0.009	<1	3.9	<10	<5	13.8	<10	<10	<5	0.14	<5	<5	75.4	<1
65691 (-)	0.008	<1	8.1	<10	<5	21.4	<10	<10	6	0.10	<5	<5	61.6	<1
65692 (-)	0.013	<1	4.1	<10	<5	19.1	<10	<10	<5	0.10	<5	<5	68.1	<1
65693 (-)	0.005	<1	6.3	10	<5	33.2	<10	<10	<5	0.04	<5	<5	51.0	<1
65694 (-)	0.018	<1	2.4	<10	<5	14.2	<10	<10	<5	0.10	<5	<5	60.0	<1
65695 (-)	0.131	<1	4.3	<10	<5	10.4	<10	<10	<5	0.13	<5	<5	74.6	<1
65696 (-)	0.006	<1	3.6	<10	<5	23.6	<10	<10	<5	0.04	<5	<5	38.2	<1
65697 (-)	0.008	<1	6.9	<10	<5	28.6	<10	<10	<5	0.07	<5	<5	54.5	<1
65698 (-)	0.008	<1	7.8	<10	<5	31.5	<10	<10	<5	0.09	<5	<5	62.0	<1
65699 (-)	0.007	<1	7.1	<10	<5	28.9	<10	<10	<5	0.08	<5	<5	60.0	<1
65700 (-)	0.008	<1	12.9	<10	<5	35.9	<10	<10	<5	0.08	<5	<5	72.5	<1
85260 (-)	0.009	<1	10.9	<10	<5	22.7	<10	<10	<5	0.01	<5	<5	81.4	<1
85261 (-)	0.012	1	7.9	<10	<5	33.1	<10	<10	<5	0.02	<5	<5	101	<1
85262 (-)	0.017	<1	4.2	<10	<5	23.6	<10	<10	<5	0.15	6	<5	98.6	<1
85263 (-)	0.015	<1	4.4	<10	<5	30.0	<10	<10	<5	0.19	6	<5	90.0	<1
85264 (-)	0.015	<1	4.7	<10	<5	27.0	<10	<10	<5	0.20	7	<5	92.1	<1
85265 (-)	0.009	<1	5.5	<10	<5	24.9	<10	<10	<5	0.15	<5	<5	89.8	<1
85266 (-)	0.014	<1	3.6	<10	<5	26.2	<10	<10	<5	0.24	8	<5	95.1	<1
85267 (-)	0.014	<1	5.3	<10	<5	26.7	<10	<10	<5	0.13	<5	<5	94.6	<1
85268 (-)	0.005	<1	6.3	<10	<5	15.8	<10	<10	<5	0.02	<5	<5	61.1	<1
85269 (-)	0.013	<1	4.4	<10	<5	37.8	<10	<10	<5	0.31	9	<5	114	<1
85270 (-)	0.008	<1	6.0	<10	<5	21.5	<10	<10	<5	0.14	<5	<5	76.2	<1
85271 (-)	0.013	<1	3.7	<10	<5	35.8	<10	<10	<5	0.21	7	<5	92.7	<1
85272 (-)	0.024	2	5.4	<10	<5	40.2	<10	<10	<5	0.11	<5	<5	66.0	<1
85273 (-)	0.012	<1	3.2	<10	<5	23.7	<10	<10	<5	0.15	<5	<5	75.6	<1

Certified By:





**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85274 (-)	0.012	<1	4.8	<10	<5	19.9	<10	<10	<5	0.11	<5	<5	87.7	<1
85275 (-)	0.009	<1	2.7	<10	<5	16.1	<10	<10	<5	0.13	<5	<5	59.3	<1
85276 (-)	0.011	<1	4.7	<10	<5	16.5	<10	<10	6	0.15	<5	<5	53.2	<1
85277 (-)	0.009	<1	4.9	<10	<5	17.7	<10	<10	<5	0.10	<5	<5	70.5	<1
85278 (-)	0.007	<1	4.2	<10	<5	16.4	<10	<10	<5	0.11	<5	<5	69.0	<1
85279 (-)	0.012	<1	4.0	<10	<5	19.5	<10	<10	6	0.08	<5	<5	46.6	<1
85280 (-)	0.007	<1	5.1	<10	<5	13.2	<10	<10	<5	0.11	<5	<5	66.0	<1
85281 (-)	0.009	<1	2.7	<10	<5	14.1	<10	<10	<5	0.08	<5	<5	48.1	<1
85282 (-)	0.012	<1	2.7	<10	<5	15.0	<10	<10	<5	0.04	<5	<5	42.0	<1
85283 (-)	0.009	<1	2.4	<10	<5	6.8	<10	<10	<5	0.08	<5	<5	29.7	<1
85284 (-)	0.007	<1	3.5	<10	<5	14.3	<10	<10	<5	0.08	<5	<5	54.6	<1
85285 (-)	0.007	<1	3.4	<10	<5	8.8	<10	<10	<5	0.09	<5	<5	44.8	<1
85286 (-)	0.009	<1	5.8	<10	<5	13.4	<10	<10	<5	0.12	<5	<5	57.8	<1
85287 (-)	0.008	<1	5.4	<10	<5	15.0	<10	<10	<5	0.09	<5	<5	51.8	<1
85288 (-)	0.010	<1	13.2	<10	<5	28.7	<10	<10	<5	0.06	<5	<5	75.3	<1
85289 (-)	0.009	<1	5.0	<10	<5	14.5	<10	<10	<5	0.08	<5	<5	48.6	<1
85290 (-)	0.007	<1	4.8	<10	<5	11.8	<10	<10	<5	0.09	<5	<5	48.1	<1
85291 (-)	0.009	<1	5.1	<10	<5	11.9	<10	<10	<5	0.08	<5	<5	48.6	<1
85292 (-)	0.010	<1	7.6	<10	<5	11.0	<10	<10	<5	0.16	<5	<5	62.0	<1
85293 (-)	0.011	<1	16.8	<10	<5	14.7	<10	<10	<5	0.34	9	<5	101	<1
85294 (-)	0.011	<1	5.4	<10	<5	23.5	<10	<10	<5	0.10	<5	<5	77.0	<1
85295 (-)	0.007	<1	7.8	<10	<5	20.8	<10	<10	<5	0.09	<5	<5	64.5	<1
85296 (-)	0.021	<1	6.1	<10	<5	22.0	<10	<10	<5	0.11	<5	<5	70.6	<1
85297 (-)	0.023	<1	12.2	<10	<5	25.4	<10	<10	<5	0.18	7	<5	103	<1
85298 (-)	0.019	<1	3.4	<10	<5	25.5	<10	<10	<5	0.08	<5	<5	52.6	<1
85299 (-)	0.012	<1	5.1	<10	<5	32.9	<10	<10	<5	0.13	<5	<5	75.3	<1
85300 (-)	0.020	<1	4.4	<10	<5	35.4	<10	<10	<5	0.16	6	<5	80.7	<1
85301 (-)	0.012	<1	4.2	<10	<5	27.1	<10	<10	<5	0.12	<5	<5	74.8	<1
85302 (-)	0.014	<1	4.6	<10	<5	24.1	<10	<10	<5	0.11	<5	<5	73.5	<1
85303 (-)	0.020	<1	4.7	<10	<5	30.5	<10	<10	<5	0.10	<5	<5	74.9	<1
85304 (-)	0.013	<1	5.6	<10	<5	23.0	<10	<10	<5	0.07	<5	<5	88.8	<1
85305 (-)	0.008	<1	3.2	<10	<5	23.4	<10	<10	<5	0.18	6	<5	91.0	<1

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85306 (-)	0.006	<1	4.3	<10	<5	22.5	<10	<10	<5	0.14	<5	<5	81.2	<1
85307 (-)	0.008	<1	3.2	<10	<5	31.6	<10	<10	<5	0.21	6	<5	80.6	<1
85308 (-)	0.006	<1	3.5	<10	<5	30.9	<10	<10	<5	0.23	6	<5	92.3	<1
85309 (-)	0.005	<1	3.7	<10	<5	25.7	<10	<10	<5	0.25	9	<5	98.1	<1
85310 (-)	0.007	<1	4.9	<10	<5	17.6	<10	<10	<5	0.13	<5	<5	71.9	<1
85311 (-)	0.008	<1	2.7	<10	<5	32.6	<10	<10	<5	0.23	8	<5	87.0	<1
85312 (-)	0.009	<1	2.9	<10	<5	18.4	<10	<10	<5	0.15	5	<5	78.2	<1
85313 (-)	0.006	<1	4.0	<10	<5	17.9	<10	<10	<5	0.10	<5	<5	58.6	<1
85314 (-)	0.006	<1	2.3	<10	<5	28.2	<10	<10	<5	0.23	6	<5	84.6	<1
85315 (-)	0.006	<1	3.5	<10	<5	27.1	<10	<10	<5	0.20	6	<5	96.3	<1
85316 (-)	0.008	<1	6.5	<10	<5	22.7	<10	<10	<5	0.18	6	<5	90.7	<1
85317 (-)	0.010	<1	3.2	<10	<5	29.0	<10	<10	<5	0.13	<5	<5	73.9	<1
85318 (-)	0.007	<1	4.1	<10	<5	46.2	<10	<10	<5	0.17	<5	<5	76.2	<1
85319 (-)	0.006	<1	3.5	<10	<5	25.6	<10	<10	<5	0.13	<5	<5	76.7	<1
85320 (-)	0.011	<1	2.9	<10	<5	26.6	<10	<10	<5	0.15	<5	<5	74.6	<1
85321 (-)	0.015	2	4.4	<10	<5	38.3	<10	<10	<5	0.11	<5	<5	80.8	<1
85322 (-)	0.006	<1	6.0	<10	<5	27.1	<10	<10	<5	0.09	<5	<5	57.4	<1
85323 (-)	0.010	<1	8.4	<10	<5	21.2	<10	<10	<5	0.20	7	<5	110	<1
85324 (-)	0.008	<1	3.2	<10	<5	17.1	<10	<10	<5	0.09	<5	<5	66.6	<1
85325 (-)	0.014	<1	3.5	<10	<5	35.2	<10	<10	<5	0.24	8	<5	125	<1
85326 (-)	0.014	<1	5.4	<10	<5	53.9	<10	<10	<5	0.18	6	<5	115	<1
85327 (-)	0.008	<1	3.7	<10	<5	24.5	<10	<10	<5	0.10	<5	<5	66.4	<1
85328 (-)	0.017	<1	3.5	<10	<5	40.7	<10	<10	<5	0.12	<5	<5	78.8	<1
85329 (-)	0.013	<1	4.1	<10	<5	76.7	<10	<10	<5	0.17	6	<5	88.6	<1
85330 (-)	0.010	<1	4.4	<10	<5	88.8	<10	<10	<5	0.12	5	<5	64.4	<1
85331 (-)	0.007	2	5.3	<10	<5	29.2	<10	<10	<5	0.10	<5	<5	59.0	<1
85332 (-)	0.008	<1	4.6	<10	<5	24.8	<10	<10	<5	0.10	<5	<5	62.2	<1
85333 (-)	0.021	<1	5.2	<10	<5	33.9	<10	<10	<5	0.10	<5	<5	65.0	<1
85334 (-)	0.023	1	4.4	<10	<5	38.7	<10	<10	<5	0.09	<5	<5	59.8	<1
85335 (-)	0.014	<1	7.5	<10	<5	41.1	<10	<10	<5	0.22	7	<5	106	<1
85336 (-)	0.015	<1	4.6	<10	<5	23.1	<10	<10	<5	0.07	<5	<5	78.1	<1
85337 (-)	0.009	<1	7.3	<10	<5	23.1	<10	<10	<5	0.07	<5	<5	59.9	<1

Certified By:



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# Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CANADA L4Z 1N9  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85338 (-)		0.008	<1	8.7	<10	<5	15.7	<10	<10	<5	0.05	<5	<5	85.7	<1
85339 (-)		0.015	<1	20.0	<10	<5	34.6	<10	<10	<5	0.07	<5	<5	96.6	<1
85340 (-)		0.006	<1	8.9	<10	<5	14.7	<10	<10	<5	0.15	<5	<5	71.4	<1
85341 (-)		0.018	<1	11.0	<10	<5	68.8	<10	<10	<5	0.15	8	<5	113	<1
85342 (-)		0.072	<1	5.2	<10	<5	101	<10	<10	<5	0.10	<5	<5	106	<1
85343 (-)		0.093	3	4.5	<10	<5	91.8	<10	<10	<5	0.06	<5	<5	51.7	<1
85344 (-)		0.100	3	3.6	<10	<5	138	<10	<10	<5	0.03	<5	<5	42.1	<1
85345 (-)		0.014	<1	5.6	<10	<5	38.1	<10	<10	<5	0.13	<5	<5	72.5	<1
85346 (-)		0.011	<1	3.2	<10	<5	24.8	<10	<10	<5	0.09	<5	<5	67.8	<1
85347 (-)		0.026	<1	9.8	<10	<5	102	<10	<10	<5	0.22	8	<5	108	<1
85348 (-)		0.016	<1	5.5	<10	<5	95.0	<10	<10	<5	0.21	6	<5	104	<1
85349 (-)		0.019	<1	7.1	<10	<5	214	<10	<10	<5	0.10	5	<5	63.7	<1
85350 (-)		0.028	<1	9.4	<10	<5	321	<10	<10	<5	0.14	6	<5	112	<1
85351 (-)		0.007	<1	4.3	<10	<5	25.1	<10	<10	<5	0.07	<5	<5	62.3	<1
85352 (-)		0.018	<1	5.1	<10	<5	108	<10	<10	<5	0.09	<5	<5	70.7	<1
85353 (-)		0.011	<1	5.2	<10	<5	34.4	<10	<10	<5	0.07	<5	<5	85.1	<1
85354 (-)		0.011	<1	3.5	<10	<5	84.1	<10	<10	<5	0.06	<5	<5	57.3	<1
85355 (-)		0.022	<1	5.6	<10	<5	316	<10	<10	<5	0.23	10	<5	111	<1
85356 (-)		0.015	<1	6.5	<10	<5	164	<10	<10	<5	0.11	6	<5	90.7	<1
85357 (-)		0.018	<1	6.4	<10	<5	173	<10	<10	<5	0.17	8	<5	90.5	<1
85358 (-)		0.007	<1	3.3	<10	<5	26.5	<10	<10	<5	0.07	<5	<5	62.3	<1
85359 (-)		0.007	<1	4.7	<10	<5	56.9	<10	<10	<5	0.08	<5	<5	60.3	<1
85360 (-)		0.012	<1	3.8	<10	<5	30.3	<10	<10	<5	0.19	7	<5	87.1	<1
85361 (-)		0.013	<1	6.3	<10	<5	158	<10	<10	<5	0.05	<5	<5	99.5	<1
85362 (-)		0.019	<1	5.2	<10	<5	123	<10	<10	<5	0.16	7	<5	124	<1
85363 (-)		0.017	<1	3.6	18	<5	76.2	<10	<10	<5	0.41	16	<5	140	<1
85364 (-)		0.016	<1	7.8	<10	<5	116	<10	<10	<5	0.17	7	<5	93.8	<1
85365 (-)		0.016	<1	7.8	<10	<5	53.0	<10	<10	<5	0.08	<5	<5	94.3	<1
85366 (-)		0.016	<1	5.8	<10	<5	182	<10	<10	<5	0.32	13	<5	114	<1
85367 (-)		0.010	<1	4.7	<10	<5	60.0	<10	<10	<5	0.13	6	<5	67.6	<1
85368 (-)		0.013	<1	6.1	<10	<5	38.2	<10	<10	<5	0.10	5	<5	61.7	<1
85369 (-)		0.013	<1	5.6	<10	<5	39.4	<10	<10	<5	0.10	<5	<5	63.8	<1

Certified By:



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85370 (-)	0.020	<1	7.6	<10	<5	145	<10	<10	<5	0.04	<5	<5	106	<1
85371 (-)	0.011	<1	5.3	<10	<5	42.5	<10	<10	<5	0.10	<5	<5	63.4	<1
85372 (-)	0.011	<1	7.8	<10	<5	45.7	<10	<10	<5	0.11	5	<5	67.4	<1
85373 (-)	0.023	<1	5.2	<10	<5	45.3	<10	<10	<5	0.08	<5	<5	58.9	<1
85374 (-)	0.016	<1	5.2	<10	<5	36.3	<10	<10	<5	0.08	<5	<5	54.8	<1
85375 (-)	0.024	<1	4.6	<10	<5	44.7	<10	<10	<5	0.07	<5	<5	58.8	<1
85376 (-)	0.015	<1	5.9	<10	<5	41.2	<10	<10	<5	0.09	<5	<5	62.2	<1
85377 (-)	0.012	<1	9.2	<10	<5	49.0	<10	<10	<5	0.14	6	<5	72.7	<1
85378 (-)	0.009	<1	8.5	<10	<5	36.9	<10	<10	<5	0.11	<5	<5	67.8	<1
85379 (-)	0.011	<1	7.1	<10	<5	42.2	<10	<10	<5	0.13	6	<5	72.3	<1
85380 (-)	0.012	<1	6.9	<10	<5	37.6	<10	<10	<5	0.12	5	<5	66.7	<1
85381 (-)	0.022	1	5.6	<10	<5	46.7	<10	<10	<5	0.09	<5	<5	59.2	<1
85382 (-)	0.018	<1	4.6	<10	<5	37.7	<10	<10	<5	0.08	<5	<5	54.2	<1
85383 (-)	0.030	<1	3.7	<10	<5	42.6	<10	<10	<5	0.07	<5	<5	53.1	<1
85384 (-)	0.023	<1	4.3	<10	<5	42.3	<10	<10	<5	0.07	<5	<5	54.7	<1
85385 (-)	0.027	<1	4.9	<10	<5	47.7	<10	<10	<5	0.09	<5	<5	61.6	<1
85386 (-)	0.027	1	4.1	<10	<5	33.2	<10	<10	<5	0.08	<5	<5	56.1	<1
85387 (-)	0.027	<1	4.0	<10	<5	36.6	<10	<10	<5	0.08	<5	<5	57.8	<1
85388 (-)	0.017	<1	3.5	<10	<5	33.8	<10	<10	<5	0.08	<5	<5	46.4	<1
85389 (-)	0.021	<1	4.1	<10	<5	39.2	<10	<10	<5	0.08	<5	<5	55.7	<1
85390 (-)	0.018	<1	4.9	<10	<5	38.7	<10	<10	<5	0.09	<5	<5	57.9	<1
85391 (-)	0.020	<1	4.7	<10	<5	35.6	<10	<10	<5	0.09	<5	<5	57.3	<1
85392 (-)	0.051	<1	5.0	<10	<5	63.9	<10	<10	<5	0.15	6	<5	72.7	<1
85393 (-)	0.013	<1	4.4	<10	<5	39.8	<10	<10	<5	0.09	<5	<5	78.6	<1
85394 (-)	0.017	<1	5.8	<10	<5	48.1	<10	<10	<5	0.13	6	<5	90.1	<1
85395 (-)	0.007	<1	8.5	<10	<5	13.2	<10	<10	13	0.09	<5	<5	54.2	<1
85396 (-)	0.016	<1	7.0	<10	<5	18.5	<10	<10	<5	0.11	<5	<5	70.0	<1
85397 (-)	0.016	<1	4.9	<10	<5	28.3	<10	<10	<5	0.08	<5	<5	58.9	<1
85398 (-)	0.018	<1	4.1	<10	<5	28.0	<10	<10	<5	0.07	<5	<5	58.3	<1
85399 (-)	0.020	<1	3.2	<10	<5	22.9	<10	<10	<5	0.06	<5	<5	57.7	<1
85400 (-)	0.016	<1	4.3	<10	<5	31.4	<10	<10	<5	0.08	<5	<5	62.2	<1
85401 (-)	0.016	<1	4.2	<10	<5	27.0	<10	<10	<5	0.07	<5	<5	62.5	<1

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AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85402 (-)	0.017	<1	4.2	<10	<5	26.0	<10	<10	<5	0.07	<5	<5	66.5	<1
85403 (-)	0.015	<1	3.8	<10	<5	21.4	<10	<10	<5	0.07	<5	<5	64.4	<1
85404 (-)	0.019	<1	4.1	<10	<5	23.3	<10	<10	<5	0.06	<5	<5	62.0	<1
85405 (-)	0.020	<1	4.3	<10	<5	28.4	<10	<10	<5	0.06	<5	<5	56.0	<1
85406 (-)	0.016	<1	4.0	<10	<5	22.8	<10	<10	<5	0.07	<5	<5	58.7	<1
85407 (-)	0.020	<1	4.2	<10	<5	24.5	<10	<10	<5	0.06	<5	<5	57.8	<1
85408 (-)	0.025	<1	4.0	<10	<5	23.7	<10	<10	<5	0.06	<5	<5	62.2	<1
85409 (-)	0.033	<1	5.0	<10	<5	32.3	<10	<10	<5	0.06	<5	<5	64.5	<1
85410 (-)	0.008	<1	4.9	<10	<5	19.0	<10	<10	<5	0.08	<5	<5	71.2	<1
85411 (-)	0.018	<1	3.7	<10	<5	5.5	<10	<10	<5	0.05	<5	<5	49.7	<1
85412 (-)	0.012	<1	2.6	<10	<5	9.6	<10	<10	<5	0.06	<5	<5	55.4	<1
85413 (-)	0.010	<1	3.5	<10	<5	11.9	<10	<10	5	0.04	<5	<5	58.3	<1
85414 (-)	0.008	<1	5.3	<10	<5	20.1	<10	<10	<5	0.08	<5	<5	57.2	<1
85415 (-)	0.007	<1	6.7	<10	<5	18.0	<10	<10	<5	0.08	<5	<5	56.6	<1
85416 (-)	0.008	<1	8.7	<10	<5	29.8	<10	<10	<5	0.09	<5	<5	70.6	<1
85417 (-)	0.010	<1	4.4	<10	<5	28.1	<10	<10	<5	0.07	<5	<5	54.7	<1
85418 (-)	0.026	<1	4.7	<10	<5	53.1	<10	<10	<5	0.08	<5	<5	59.0	<1
85419 (-)	0.016	<1	5.5	<10	<5	38.3	<10	<10	<5	0.08	<5	<5	60.7	<1
85420 (-)	0.016	<1	3.9	<10	<5	32.3	<10	<10	<5	0.07	<5	<5	51.4	<1
85421 (-)	0.014	<1	4.8	<10	<5	32.7	<10	<10	<5	0.09	<5	<5	60.2	<1
85422 (-)	0.017	<1	7.6	<10	<5	30.2	<10	<10	<5	0.09	<5	<5	72.0	<1
85423 (-)	0.019	<1	5.6	<10	<5	29.5	<10	<10	<5	0.07	<5	<5	70.4	<1
85424 (-)	0.050	<1	4.2	<10	<5	19.4	<10	<10	6	0.03	<5	<5	52.1	<1
85425 (-)	0.016	<1	7.5	<10	<5	33.8	<10	<10	<5	0.08	<5	<5	76.3	<1
85426 (-)	0.010	<1	7.2	<10	<5	21.7	<10	<10	<5	0.05	<5	<5	74.8	<1
85427 (-)	0.012	<1	8.4	<10	<5	25.6	<10	<10	<5	0.08	<5	<5	83.5	<1
85428 (-)	0.009	<1	6.2	<10	<5	17.8	<10	<10	<5	0.07	<5	<5	76.5	<1
85429 (-)	0.013	<1	10.0	<10	<5	27.3	<10	<10	<5	0.06	<5	<5	97.1	<1
85430 (-)	0.010	<1	6.3	<10	<5	24.7	<10	<10	<5	0.09	<5	<5	64.8	<1
85431 (-)	0.013	<1	7.9	<10	<5	23.7	<10	<10	<5	0.08	<5	<5	100	<1
85432 (-)	0.012	<1	8.6	<10	<5	28.4	<10	<10	<5	0.10	<5	<5	79.8	<1
85433 (-)	0.011	<1	7.5	<10	<5	25.9	<10	<10	<5	0.11	<5	<5	72.3	<1

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AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85434 (-)	0.010	<1	5.4	<10	<5	19.7	<10	<10	<5	0.13	5	<5	74.9	<1
85435 (-)	0.013	<1	5.4	<10	<5	19.3	<10	<10	<5	0.08	<5	<5	84.0	<1
85436 (-)	0.010	<1	5.6	<10	<5	16.8	<10	<10	<5	0.08	<5	<5	59.4	<1
85437 (-)	0.008	<1	10.9	<10	<5	18.4	<10	<10	<5	0.15	6	<5	95.0	<1
85438 (-)	0.020	<1	10.0	<10	<5	22.9	<10	<10	<5	0.14	5	<5	89.3	<1
85439 (-)	0.009	<1	7.6	<10	<5	20.1	<10	<10	<5	0.12	<5	<5	85.3	<1
85440 (-)	0.009	<1	7.5	<10	<5	17.1	<10	<10	<5	0.11	<5	<5	69.8	<1
85441 (-)	0.011	<1	5.5	<10	<5	27.8	<10	<10	<5	0.07	<5	<5	63.2	<1
85442 (-)	0.010	<1	4.2	<10	<5	18.6	<10	<10	<5	0.11	<5	<5	75.4	<1
85443 (-)	0.008	<1	6.1	<10	<5	22.7	<10	<10	<5	0.08	<5	<5	69.9	<1
85444 (-)	0.016	1	5.0	<10	<5	38.9	<10	<10	<5	0.07	<5	<5	56.8	<1
85445 (-)	0.013	1	6.0	<10	<5	36.0	<10	<10	<5	0.08	<5	<5	65.5	<1
85446 (-)	0.009	1	4.1	<10	<5	19.4	<10	<10	<5	0.07	<5	<5	58.4	<1
85447 (-)	0.009	<1	5.6	<10	<5	22.8	<10	<10	<5	0.08	<5	<5	70.8	<1
85448 (-)	0.008	<1	5.3	<10	<5	18.5	<10	<10	<5	0.08	<5	<5	75.2	<1
85449 (-)	0.012	<1	4.6	<10	<5	23.4	<10	<10	<5	0.08	<5	<5	61.0	<1
85450 (-)	0.010	<1	7.7	<10	<5	21.9	<10	<10	<5	0.07	<5	<5	69.3	<1
85451 (-)	0.011	<1	8.4	<10	<5	24.5	<10	<10	<5	0.04	<5	<5	83.7	<1
85452 (-)	0.010	1	5.6	<10	<5	26.9	<10	<10	<5	0.04	<5	<5	75.6	<1
85453 (-)	0.008	<1	6.0	<10	<5	25.6	<10	<10	<5	0.07	<5	<5	85.2	<1
85454 (-)	0.008	<1	5.6	<10	<5	19.2	<10	<10	<5	0.11	<5	<5	73.3	<1
85455 (-)	0.012	<1	3.6	<10	<5	14.7	<10	<10	<5	0.06	<5	<5	58.7	<1
85456 (-)	0.019	<1	5.7	<10	<5	24.3	<10	<10	<5	0.06	<5	<5	77.0	<1
85457 (-)	0.012	<1	8.8	<10	<5	21.4	<10	<10	<5	0.07	<5	<5	78.8	<1
85458 (-)	0.014	<1	9.7	<10	<5	23.2	<10	<10	<5	0.14	<5	<5	74.8	<1
85459 (-)	0.009	<1	7.2	<10	<5	14.1	<10	<10	<5	0.18	6	<5	88.2	<1
85460 (-)	0.009	<1	8.3	<10	<5	35.6	<10	<10	<5	0.18	6	<5	25.3	<1
85461 (-)	0.020	1	6.8	<10	<5	37.1	<10	<10	<5	0.09	<5	<5	55.2	<1
85462 (-)	0.019	1	6.6	<10	<5	35.9	<10	<10	<5	0.09	<5	<5	59.9	<1
85463 (-)	0.032	2	5.5	<10	<5	46.3	<10	<10	<5	0.08	<5	<5	60.1	<1
85464 (-)	0.026	2	6.0	<10	<5	40.3	<10	<10	<5	0.07	<5	<5	62.1	<1
85465 (-)	0.027	<1	9.4	<10	<5	78.4	<10	<10	<5	0.13	6	<5	109	<1

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AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
85466 (-)	0.023	3	8.0	<10	<5	100	<10	<10	<5	0.13	<5	<5	92.0	<1
85467 (-)	0.012	1	6.7	<10	<5	66.8	<10	<10	<5	0.10	<5	<5	72.4	<1
85468 (-)	0.017	<1	6.2	<10	<5	81.4	<10	<10	<5	0.11	5	<5	77.6	<1
85469 (-)	0.019	1	6.6	<10	<5	110	<10	<10	<5	0.11	<5	<5	74.2	<1
85470 (-)	0.029	<1	7.2	<10	<5	110	<10	<10	<5	0.13	5	<5	84.8	<1
85471 (-)	0.035	1	6.6	<10	<5	48.2	<10	<10	<5	0.09	<5	<5	75.1	<1
85472 (-)	0.012	2	6.9	<10	<5	32.6	<10	<10	<5	0.09	<5	<5	72.5	<1
85473 (-)	0.013	<1	6.2	<10	<5	29.3	<10	<10	<5	0.09	<5	<5	72.7	<1
85474 (-)	0.057	<1	7.1	<10	<5	27.3	<10	<10	<5	0.08	<5	<5	95.4	<1
85475 (-)	0.030	<1	8.0	<10	<5	26.7	<10	<10	<5	0.09	<5	<5	86.7	<1
85476 (-)	0.052	<1	6.9	<10	<5	26.6	<10	<10	<5	0.08	<5	<5	87.5	<1
85477 (-)	0.033	<1	13.5	<10	<5	47.6	<10	<10	<5	0.04	<5	<5	131	<1
85478 (-)	0.258	<1	8.9	<10	<5	37.0	<10	<10	<5	0.19	8	<5	127	<1
85479 (-)	0.339	<1	11.3	<10	<5	52.9	<10	<10	<5	0.19	7	<5	133	<1
85480 (-)	0.032	<1	16.4	13	<5	29.9	<10	<10	<5	0.21	8	<5	199	<1
85481 (-)	0.006	<1	5.5	<10	<5	16.1	<10	<10	<5	0.09	<5	<5	66.0	<1
85482 (-)	0.010	<1	4.2	12	<5	10.7	<10	<10	<5	0.21	6	<5	120	<1
85483 (-)	0.012	<1	7.2	<10	<5	16.8	<10	<10	<5	0.11	<5	<5	87.8	<1
85484 (-)	0.010	5	19.6	<10	<5	19.5	<10	<10	<5	0.08	<5	<5	200	<1

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
65651 (-)	3	51.1	<5
65652 (-)	6	55.2	<5
65653 (-)	12	50.2	8
65654 (-)	11	82.5	<5
65655 (-)	9	66.3	<5
65656 (-)	6	51.6	<5
65657 (-)	6	104	<5
65658 (-)	3	116	<5
65659 (-)	4	82.7	<5
65660 (-)	8	65.1	<5
65661 (-)	11	91.2	6
65662 (-)	10	51.5	<5
65663 (-)	10	88.7	<5
65664 (-)	9	74.1	<5
65665 (-)	4	38.1	<5
65666 (-)	18	53.2	7
65667 (-)	5	50.5	6
65668 (-)	4	46.3	6
65669 (-)	5	54.3	<5
65670 (-)	12	51.8	13
65671 (-)	11	50.2	8
65672 (-)	19	98.6	5
65673 (-)	3	60.5	<5
65674 (-)	6	95.8	<5
65675 (-)	4	59.9	<5
65676 (-)	3	52.4	<5
65677 (-)	3	64.6	<5
65678 (-)	8	71.1	9
65679 (-)	3	55.1	<5
65680 (-)	5	69.6	<5
65681 (-)	4	67.4	<5
65682 (-)	6	68.0	6

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CLIENT NAME: VOLCANIC METALS

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
65683 (-)	12	140	<5
65684 (-)	13	114	5
65685 (-)	13	132	6
65686 (-)	9	60.4	<5
65687 (-)	13	87.3	<5
65688 (-)	16	117	6
65689 (-)	6	103	<5
65690 (-)	4	60.7	<5
65691 (-)	9	190	<5
65692 (-)	4	60.5	<5
65693 (-)	5	52.2	5
65694 (-)	3	54.8	<5
65695 (-)	5	163	<5
65696 (-)	7	36.8	<5
65697 (-)	11	44.0	9
65698 (-)	13	45.1	9
65699 (-)	12	45.3	9
65700 (-)	21	84.7	16
85260 (-)	19	98.4	<5
85261 (-)	12	137	<5
85262 (-)	5	74.1	<5
85263 (-)	7	81.5	<5
85264 (-)	7	85.0	<5
85265 (-)	5	77.1	<5
85266 (-)	7	84.5	<5
85267 (-)	5	97.9	<5
85268 (-)	5	99.3	<5
85269 (-)	2	136	<5
85270 (-)	7	47.4	<5
85271 (-)	4	89.8	<5
85272 (-)	10	61.0	<5
85273 (-)	5	44.2	<5

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

DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85274 (-)	4	53.9	<5
85275 (-)	3	47.0	<5
85276 (-)	9	53.2	<5
85277 (-)	5	44.8	<5
85278 (-)	6	56.3	<5
85279 (-)	11	73.8	<5
85280 (-)	6	73.1	<5
85281 (-)	5	46.9	<5
85282 (-)	6	47.4	<5
85283 (-)	4	37.5	<5
85284 (-)	4	44.6	<5
85285 (-)	8	59.1	<5
85286 (-)	10	63.1	<5
85287 (-)	13	52.8	<5
85288 (-)	19	41.0	<5
85289 (-)	11	50.4	<5
85290 (-)	9	46.2	<5
85291 (-)	12	47.1	<5
85292 (-)	10	75.9	<5
85293 (-)	20	109	<5
85294 (-)	5	41.5	<5
85295 (-)	11	34.6	<5
85296 (-)	8	46.9	<5
85297 (-)	15	79.7	<5
85298 (-)	5	53.2	<5
85299 (-)	7	72.2	<5
85300 (-)	6	79.5	<5
85301 (-)	5	52.4	<5
85302 (-)	7	51.2	<5
85303 (-)	6	76.0	<5
85304 (-)	6	79.3	<5
85305 (-)	3	70.5	<5

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85306 (-)	4	50.0	<5
85307 (-)	4	92.5	<5
85308 (-)	3	71.4	<5
85309 (-)	4	82.5	<5
85310 (-)	6	53.3	5
85311 (-)	2	90.7	<5
85312 (-)	3	70.6	<5
85313 (-)	5	45.0	5
85314 (-)	3	76.5	<5
85315 (-)	3	57.3	<5
85316 (-)	6	67.2	5
85317 (-)	3	53.4	<5
85318 (-)	6	47.7	<5
85319 (-)	3	45.2	<5
85320 (-)	4	43.7	<5
85321 (-)	5	53.6	<5
85322 (-)	7	44.8	8
85323 (-)	5	75.4	<5
85324 (-)	3	59.5	<5
85325 (-)	3	135	<5
85326 (-)	4	90.0	<5
85327 (-)	5	45.5	<5
85328 (-)	5	57.4	<5
85329 (-)	5	82.0	<5
85330 (-)	7	54.5	<5
85331 (-)	8	52.4	6
85332 (-)	6	52.0	<5
85333 (-)	11	52.3	<5
85334 (-)	9	45.7	<5
85335 (-)	6	110	<5
85336 (-)	3	54.9	<5
85337 (-)	15	45.4	<5

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AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85338 (-)	6	105	<5
85339 (-)	27	89.3	<5
85340 (-)	7	51.7	<5
85341 (-)	18	117	<5
85342 (-)	6	92.5	<5
85343 (-)	11	39.6	<5
85344 (-)	7	65.1	<5
85345 (-)	8	57.2	<5
85346 (-)	3	47.6	<5
85347 (-)	6	128	<5
85348 (-)	4	78.4	<5
85349 (-)	4	54.2	<5
85350 (-)	9	106	<5
85351 (-)	4	50.6	<5
85352 (-)	3	104	<5
85353 (-)	3	70.9	<5
85354 (-)	4	47.8	<5
85355 (-)	4	80.8	<5
85356 (-)	5	81.6	5
85357 (-)	11	92.0	<5
85358 (-)	3	41.7	<5
85359 (-)	7	36.8	<5
85360 (-)	4	103	<5
85361 (-)	7	122	<5
85362 (-)	5	144	<5
85363 (-)	8	154	<5
85364 (-)	7	130	<5
85365 (-)	12	112	<5
85366 (-)	10	102	<5
85367 (-)	5	73.5	<5
85368 (-)	11	84.1	<5
85369 (-)	11	79.1	<5

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AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85370 (-)	16	124	<5
85371 (-)	13	85.6	<5
85372 (-)	11	87.9	12
85373 (-)	11	60.0	<5
85374 (-)	10	65.9	<5
85375 (-)	8	53.2	<5
85376 (-)	11	73.8	<5
85377 (-)	13	92.3	15
85378 (-)	11	66.5	13
85379 (-)	10	88.9	<5
85380 (-)	10	83.0	8
85381 (-)	11	73.1	<5
85382 (-)	9	66.8	<5
85383 (-)	7	52.8	<5
85384 (-)	9	62.5	<5
85385 (-)	10	77.8	<5
85386 (-)	8	63.3	<5
85387 (-)	9	58.1	<5
85388 (-)	7	37.0	<5
85389 (-)	9	58.9	<5
85390 (-)	11	75.5	<5
85391 (-)	10	70.5	<5
85392 (-)	37	76.5	<5
85393 (-)	11	76.7	<5
85394 (-)	14	89.0	<5
85395 (-)	27	115	6
85396 (-)	25	103	<5
85397 (-)	10	79.2	<5
85398 (-)	9	61.8	<5
85399 (-)	6	57.4	<5
85400 (-)	9	64.3	<5
85401 (-)	9	61.7	<5

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85402 (-)	9	65.6	<5
85403 (-)	7	69.1	<5
85404 (-)	7	61.8	<5
85405 (-)	9	67.6	<5
85406 (-)	7	60.4	<5
85407 (-)	8	71.4	<5
85408 (-)	8	64.0	<5
85409 (-)	9	72.3	<5
85410 (-)	7	62.7	<5
85411 (-)	14	131	<5
85412 (-)	4	58.6	<5
85413 (-)	8	65.9	<5
85414 (-)	17	60.3	<5
85415 (-)	25	74.7	<5
85416 (-)	17	75.9	8
85417 (-)	7	52.1	<5
85418 (-)	9	58.4	<5
85419 (-)	11	67.7	<5
85420 (-)	8	51.4	<5
85421 (-)	10	67.0	<5
85422 (-)	19	75.7	5
85423 (-)	10	59.4	<5
85424 (-)	20	105	<5
85425 (-)	15	75.6	<5
85426 (-)	16	105	<5
85427 (-)	9	55.5	<5
85428 (-)	3	26.9	<5
85429 (-)	7	72.4	<5
85430 (-)	5	48.3	<5
85431 (-)	5	42.9	<5
85432 (-)	10	59.0	6
85433 (-)	10	58.0	6

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

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DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85434 (-)	4	52.7	<5
85435 (-)	4	64.4	<5
85436 (-)	9	78.6	<5
85437 (-)	8	119	<5
85438 (-)	9	96.7	<5
85439 (-)	5	106	<5
85440 (-)	13	38.8	<5
85441 (-)	9	54.8	<5
85442 (-)	4	79.1	<5
85443 (-)	6	39.5	<5
85444 (-)	9	41.7	<5
85445 (-)	10	67.4	<5
85446 (-)	5	50.9	<5
85447 (-)	3	29.4	<5
85448 (-)	4	39.3	<5
85449 (-)	7	65.7	<5
85450 (-)	15	82.7	<5
85451 (-)	14	157	<5
85452 (-)	13	160	<5
85453 (-)	12	206	<5
85454 (-)	7	67.0	<5
85455 (-)	7	94.7	<5
85456 (-)	9	162	<5
85457 (-)	10	84.6	7
85458 (-)	11	87.0	<5
85459 (-)	6	95.6	<5
85460 (-)	14	161	<5
85461 (-)	15	80.6	<5
85462 (-)	13	69.1	<5
85463 (-)	10	59.5	<5
85464 (-)	13	67.2	<5
85465 (-)	6	63.6	<5

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AGAT WORK ORDER: 11Y531234

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
85466 (-)	9	72.5	<5
85467 (-)	9	61.7	<5
85468 (-)	8	66.0	<5
85469 (-)	9	67.2	<5
85470 (-)	8	80.4	<5
85471 (-)	14	75.6	<5
85472 (-)	11	70.6	<5
85473 (-)	11	75.6	<5
85474 (-)	12	123	<5
85475 (-)	12	97.5	<5
85476 (-)	11	115	<5
85477 (-)	36	241	<5
85478 (-)	8	133	<5
85479 (-)	13	148	<5
85480 (-)	12	167	<5
85481 (-)	4	51.5	8
85482 (-)	4	73.2	<5
85483 (-)	5	62.8	5
85484 (-)	13	125	6

Comments: RDL - Reported Detection Limit

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppm
RDL:		0.01	0.002
65651 (-)		0.42	<0.002
65652 (-)		0.38	<0.002
65653 (-)		0.42	0.003
65654 (-)		0.43	0.046
65655 (-)		0.38	<0.002
65656 (-)		0.53	<0.002
65657 (-)		0.46	<0.002
65658 (-)		0.48	<0.002
65659 (-)		0.49	<0.002
65660 (-)		0.50	0.023
65661 (-)		0.44	0.027
65662 (-)		0.44	0.004
65663 (-)		0.45	0.005
65664 (-)		0.43	0.020
65665 (-)		0.44	0.004
65666 (-)		0.47	0.007
65667 (-)		0.35	<0.002
65668 (-)		0.39	0.003
65669 (-)		0.43	0.002
65670 (-)		0.41	0.010
65671 (-)		0.44	0.012
65672 (-)		0.39	<0.002
65673 (-)		0.36	<0.002
65674 (-)		0.38	<0.002
65675 (-)		0.40	<0.002
65676 (-)		0.44	<0.002
65677 (-)		0.35	<0.002
65678 (-)		0.45	0.003
65679 (-)		0.34	0.007
65680 (-)		0.43	<0.002
65681 (-)		0.46	0.013
65682 (-)		0.43	<0.002

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AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppm
RDL:		0.01	0.002
65683 (-)		0.41	0.012
65684 (-)		0.44	<0.002
65685 (-)		0.46	<0.002
65686 (-)		0.44	<0.002
65687 (-)		0.42	0.007
65688 (-)		0.45	0.013
65689 (-)		0.51	<0.002
65690 (-)		0.41	<0.002
65691 (-)		0.43	<0.002
65692 (-)		0.37	<0.002
65693 (-)		0.46	0.008
65694 (-)		0.27	<0.002
65695 (-)		0.37	<0.002
65696 (-)		0.48	<0.002
65697 (-)		0.52	0.007
65698 (-)		0.51	<0.002
65699 (-)		0.46	<0.002
65700 (-)		0.45	0.011
85260 (-)		0.47	<0.002
85261 (-)		0.52	0.032
85262 (-)		0.53	0.025
85263 (-)		0.58	<0.002
85264 (-)		0.58	0.004
85265 (-)		0.58	<0.002
85266 (-)		0.56	<0.002
85267 (-)		0.57	0.012
85268 (-)		0.53	0.011
85269 (-)		0.59	<0.002
85270 (-)		0.51	<0.002
85271 (-)		0.53	<0.002
85272 (-)		0.63	<0.002
85273 (-)		0.52	<0.002

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	
		0.01	0.002
85274 (-)		0.57	<0.002
85275 (-)		0.51	0.021
85276 (-)		0.53	<0.002
85277 (-)		0.50	0.035
85278 (-)		0.48	0.002
85279 (-)		0.54	<0.002
85280 (-)		0.49	<0.002
85281 (-)		0.48	<0.002
85282 (-)		0.47	<0.002
85283 (-)		0.48	<0.002
85284 (-)		0.50	<0.002
85285 (-)		0.48	<0.002
85286 (-)		0.47	0.031
85287 (-)		0.47	0.002
85288 (-)		0.57	<0.002
85289 (-)		0.48	0.028
85290 (-)		0.53	<0.002
85291 (-)		0.49	0.009
85292 (-)		0.51	0.003
85293 (-)		0.55	<0.002
85294 (-)		0.48	0.003
85295 (-)		0.49	<0.002
85296 (-)		0.57	<0.002
85297 (-)		0.60	<0.002
85298 (-)		0.54	<0.002
85299 (-)		0.60	0.002
85300 (-)		0.57	0.014
85301 (-)		0.53	<0.002
85302 (-)		0.62	<0.002
85303 (-)		0.61	<0.002
85304 (-)		0.52	<0.002
85305 (-)		0.50	<0.002

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
RDL:	kg		
	0.01		0.002
85306 (-)		0.46	<0.002
85307 (-)		0.51	<0.002
85308 (-)		0.50	<0.002
85309 (-)		0.49	<0.002
85310 (-)		0.46	0.003
85311 (-)		0.50	<0.002
85312 (-)		0.48	<0.002
85313 (-)		0.47	0.011
85314 (-)		0.50	<0.002
85315 (-)		0.53	<0.002
85316 (-)		0.44	<0.002
85317 (-)		0.43	<0.002
85318 (-)		0.53	<0.002
85319 (-)		0.46	0.013
85320 (-)		0.48	0.003
85321 (-)		0.50	<0.002
85322 (-)		0.52	0.018
85323 (-)		0.48	<0.002
85324 (-)		0.46	<0.002
85325 (-)		0.51	<0.002
85326 (-)		0.49	0.002
85327 (-)		0.49	0.004
85328 (-)		0.45	<0.002
85329 (-)		0.47	0.031
85330 (-)		0.52	<0.002
85331 (-)		0.50	<0.002
85332 (-)		0.50	0.005
85333 (-)		0.59	0.010
85334 (-)		0.52	0.021
85335 (-)		0.48	<0.002
85336 (-)		0.47	<0.002
85337 (-)		0.50	0.004

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	
		0.01	0.002
85338 (-)		0.47	0.002
85339 (-)		0.48	<0.002
85340 (-)		0.48	<0.002
85341 (-)		0.50	0.024
85342 (-)		0.48	<0.002
85343 (-)		0.47	<0.002
85344 (-)		0.51	<0.002
85345 (-)		0.54	<0.002
85346 (-)		0.44	<0.002
85347 (-)		0.48	<0.002
85348 (-)		0.49	<0.002
85349 (-)		0.50	<0.002
85350 (-)		0.52	0.035
85351 (-)		0.49	<0.002
85352 (-)		0.46	<0.002
85353 (-)		0.47	0.045
85354 (-)		0.45	<0.002
85355 (-)		0.49	<0.002
85356 (-)		0.49	0.008
85357 (-)		0.49	<0.002
85358 (-)		0.46	<0.002
85359 (-)		0.51	0.002
85360 (-)		0.44	<0.002
85361 (-)		0.50	<0.002
85362 (-)		0.47	<0.002
85363 (-)		0.44	<0.002
85364 (-)		0.45	<0.002
85365 (-)		0.46	0.023
85366 (-)		0.52	<0.002
85367 (-)		0.48	<0.002
85368 (-)		0.54	0.007
85369 (-)		0.56	0.016

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
RDL:	kg	0.01	0.002
85370 (-)		0.46	0.004
85371 (-)		0.57	<0.002
85372 (-)		0.55	<0.002
85373 (-)		0.58	0.007
85374 (-)		0.61	0.003
85375 (-)		0.61	0.004
85376 (-)		0.60	0.004
85377 (-)		0.65	<0.002
85378 (-)		0.50	0.004
85379 (-)		0.74	0.013
85380 (-)		0.58	<0.002
85381 (-)		0.49	0.003
85382 (-)		0.67	0.005
85383 (-)		0.56	0.010
85384 (-)		0.51	0.004
85385 (-)		0.54	0.002
85386 (-)		0.44	<0.002
85387 (-)		0.46	0.011
85388 (-)		0.59	<0.002
85389 (-)		0.54	0.003
85390 (-)		0.47	0.003
85391 (-)		0.55	0.015
85392 (-)		0.33	<0.002
85393 (-)		0.51	<0.002
85394 (-)		0.48	<0.002
85395 (-)		0.57	<0.002
85396 (-)		0.55	<0.002
85397 (-)		0.63	0.003
85398 (-)		0.58	0.007
85399 (-)		0.49	0.008
85400 (-)		0.51	<0.002
85401 (-)		0.52	<0.002

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AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	
		0.01	0.002
85402 (-)		0.58	<0.002
85403 (-)		0.55	0.005
85404 (-)		0.51	0.008
85405 (-)		0.51	0.003
85406 (-)		0.54	0.045
85407 (-)		0.50	0.003
85408 (-)		0.42	<0.002
85409 (-)		0.43	<0.002
85410 (-)		0.52	0.006
85411 (-)		0.51	<0.002
85412 (-)		0.47	<0.002
85413 (-)		0.51	0.002
85414 (-)		0.50	0.002
85415 (-)		0.49	0.005
85416 (-)		0.51	0.006
85417 (-)		0.49	<0.002
85418 (-)		0.49	0.003
85419 (-)		0.48	0.002
85420 (-)		0.50	0.064
85421 (-)		0.50	0.009
85422 (-)		0.54	0.013
85423 (-)		0.43	<0.002
85424 (-)		0.51	<0.002
85425 (-)		0.48	0.004
85426 (-)		0.50	<0.002
85427 (-)		0.43	<0.002
85428 (-)		0.50	<0.002
85429 (-)		0.50	0.042
85430 (-)		0.44	<0.002
85431 (-)		0.50	<0.002
85432 (-)		0.44	<0.002
85433 (-)		0.44	<0.002

Certified By:



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	
		0.01	0.002
85434 (-)		0.41	<0.002
85435 (-)		0.47	0.005
85436 (-)		0.49	<0.002
85437 (-)		0.49	<0.002
85438 (-)		0.48	<0.002
85439 (-)		0.45	<0.002
85440 (-)		0.52	0.003
85441 (-)		0.49	<0.002
85442 (-)		0.43	<0.002
85443 (-)		0.48	<0.002
85444 (-)		0.46	<0.002
85445 (-)		0.45	<0.002
85446 (-)		0.44	<0.002
85447 (-)		0.52	<0.002
85448 (-)		0.51	0.004
85449 (-)		0.56	<0.002
85450 (-)		0.48	0.007
85451 (-)		0.47	<0.002
85452 (-)		0.50	<0.002
85453 (-)		0.46	0.003
85454 (-)		0.48	0.003
85455 (-)		0.48	<0.002
85456 (-)		0.48	0.004
85457 (-)		0.46	0.006
85458 (-)		0.49	<0.002
85459 (-)		0.47	<0.002
85460 (-)		0.53	0.002
85461 (-)		0.56	0.008
85462 (-)		0.50	0.005
85463 (-)		0.51	<0.002
85464 (-)		0.55	0.002
85465 (-)		0.51	<0.002

Certified By:



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: Larry Johnson, John Lagourgue

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 07, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	ppm
	RDL:	kg	
		0.01	0.002
85466 (-)		0.52	0.002
85467 (-)		0.58	0.003
85468 (-)		0.51	0.034
85469 (-)		0.50	0.002
85470 (-)		0.52	<0.002
85471 (-)		0.49	0.053
85472 (-)		0.55	<0.002
85473 (-)		0.54	<0.002
85474 (-)		0.47	<0.002
85475 (-)		0.50	0.015
85476 (-)		0.49	<0.002
85477 (-)		0.51	0.041
85478 (-)		0.48	0.003
85479 (-)		0.50	<0.002
85480 (-)		0.50	0.002
85481 (-)		0.47	0.003
85482 (-)		0.49	0.005
85483 (-)		0.45	0.002
85484 (-)		0.45	<0.002

Comments: RDL - Reported Detection Limit

Certified By:

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

Solid Analysis											
RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2724872	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2724872	1.82	1.83	0.5%	0.12				80%	120%
As	1	2724872	8	6	28.6%	< 1				80%	120%
B	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2724872	161	162	0.6%	< 1				80%	120%
Be	1	2724872	0.58	0.54	7.1%	< 0.5				80%	120%
Bi	1	2724872	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2724872	0.41	0.41	0.0%	1.32				80%	120%
Cd	1	2724872	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2724872	8	8	0.0%	< 1				80%	120%
Co	1	2724872	11.7	10.8	8.0%	< 0.5				80%	120%
Cr	1	2724872	57.1	55.4	3.0%	< 0.5				80%	120%
Cu	1	2724872	75.7	72.5	4.3%	< 0.5	4084	3700	110%	80%	120%
Fe	1	2724872	2.81	2.84	1.1%	0.81				80%	120%
Ga	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2724872	< 1	< 1	0.0%	< 1				80%	120%
In	1	2724872	< 1	< 1	0.0%	< 1				80%	120%
K	1	2724872	0.11	0.11	0.0%	0.05				80%	120%
La	1	2724872	3	3	0.0%	< 1				80%	120%
Li	1	2724872	9	9	0.0%	< 1				80%	120%
Mg	1	2724872	0.64	0.64	0.0%	1.32				80%	120%
Mn	1	2724872	392	378	3.6%	< 1				80%	120%
Mo	1	2725024	1.8	2.3	24.4%	< 0.5				80%	120%
Na	1	2724872	0.02	0.02	0.0%	< 0.01				80%	120%
Ni	1	2724872	33.0	32.2	2.5%	< 0.5				80%	120%
P	1	2724872	393	372	5.5%	< 10				80%	120%
Pb	1	2724872	9.1	8.9	2.2%	< 0.5				80%	120%
Rb	1	2724872	27	26	3.8%	< 10				80%	120%
S	1	2724872	0.009	0.009	0.0%	0.090				80%	120%
Sb	1	2724872	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2724872	5.2	5.0	3.9%	< 0.5				80%	120%
Se	1	2724872	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2724872	15.8	16.5	4.3%	< 0.5	308	390	79%	80%	120%
Ta	1	2724872	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2724872	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2724872	0.14	0.14	0.0%	< 0.01				80%	120%
Tl	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
U	1	2724872	< 5	< 5	0.0%	< 5				80%	120%
V	1	2724872	74.4	72.4	2.7%	< 0.5				80%	120%
W	1	2724872	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2724872	3	3	0.0%	< 1				80%	120%
Zn	1	2724872	51.1	49.1	4.0%	< 0.5				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Zr	1	2724872	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2724898	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2724898	1.84	2.00	8.3%	0.42				80% 120%
As	1	2724898	11	10	9.5%	< 1				80% 120%
B	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2724898	345	352	2.0%	< 1				80% 120%
Be	1	2724898	0.5	0.5	0.0%	< 0.5				80% 120%
Bi	1	2724898	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2724898	0.160	0.169	5.5%	0.14				80% 120%
Cd	1	2724898	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2724898	15	17	12.5%	< 1				80% 120%
Co	1	2724898	8.9	6.8	26.8%	< 0.5				80% 120%
Cr	1	2724898	37.5	39.2	4.4%	< 0.5				80% 120%
Cu	1	2724898	27.0	28.7	6.1%	< 0.5	3962	3700	107%	80% 120%
Fe	1	2724898	2.77	2.96	6.6%	0.68				80% 120%
Ga	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2724898	< 1	< 1	0.0%	< 1				80% 120%
In	1	2724898	< 1	< 1	0.0%	< 1				80% 120%
K	1	2724898	0.05	0.05	0.0%	0.02				80% 120%
La	1	2724898	7	8	13.3%	< 1				80% 120%
Li	1	2724898	12	12	0.0%	< 1				80% 120%
Mg	1	2724898	0.49	0.50	2.0%	0.23				80% 120%
Mn	1	2724898	425	425	0.0%	< 1				80% 120%
Mo	1	2725049	1.3	1.4	7.4%	< 0.5				80% 120%
Na	1	2724898	0.01	0.01	0.0%	0.02				80% 120%
Ni	1	2724898	25.6	26.5	3.5%	< 0.5				80% 120%
P	1	2724898	259	265	2.3%	< 10				80% 120%
Pb	1	2724898	11.8	12.5	5.8%	< 0.5				80% 120%
Rb	1	2724898	18	20	10.5%	< 10				80% 120%
S	1	2724898	0.008	0.008	0.0%	< 0.005				80% 120%
Sb	1	2724898	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2724898	3.5	3.7	5.6%	< 0.5				80% 120%
Se	1	2724974	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2724898	16.3	16.1	1.2%	< 0.5	315	390	81%	80% 120%
Ta	1	2724898	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2724898	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2724898	0.073	0.083	12.8%	0.03				80% 120%
Tl	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
U	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
V	1	2724898	65.9	70.3	6.5%	< 0.5				80% 120%
W	1	2724898	< 1	< 1	0.0%	< 1				80% 120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Y	1	2724898	3	3	0.0%	< 1				80% 120%
Zn	1	2724898	64.6	65.9	2.0%	< 0.5				80% 120%
Zr	1	2724898	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2724923	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2724923	1.76	1.79	1.7%	< 0.01				80% 120%
As	1	2724923	7	6	15.4%	< 1				80% 120%
B	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2724923	782	790	1.0%	< 1				80% 120%
Be	1	2724923	0.84	0.87	3.5%	< 0.5				80% 120%
Bi	1	2724923	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2724923	0.66	0.66	0.0%	< 0.01				80% 120%
Cd	1	2724923	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2724923	47	45	4.3%	< 1				80% 120%
Co	1	2724923	7.81	7.88	0.9%	< 0.5				80% 120%
Cr	1	2724923	8.43	9.42	11.1%	< 0.5				80% 120%
Cu	1	2724923	29.4	28.2	4.2%	< 0.5	4037	3700	109%	80% 120%
Fe	1	2724923	5.06	5.13	1.4%	< 0.01				80% 120%
Ga	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2724923	< 1	< 1	0.0%	< 1				80% 120%
In	1	2724999	4	2		< 1				80% 120%
K	1	2724923	0.22	0.22	0.0%	< 0.01				80% 120%
La	1	2724923	17	16	6.1%	< 1				80% 120%
Li	1	2724923	8	8	0.0%	< 1				80% 120%
Mg	1	2724923	0.453	0.460	1.5%	< 0.01				80% 120%
Mn	1	2724923	535	551	2.9%	< 1				80% 120%
Mo	1	2724923	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Na	1	2724999	0.02	0.02	0.0%	< 0.01				80% 120%
Ni	1	2724923	4.20	4.12	1.9%	< 0.5				80% 120%
P	1	2724923	1960	1960	0.0%	< 10				80% 120%
Pb	1	2724923	25.7	25.2	2.0%	< 0.5				80% 120%
Rb	1	2724923	37	39	5.3%	< 10				80% 120%
S	1	2724923	0.0115	0.0114	0.9%	< 0.005				80% 120%
Sb	1	2724999	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2724923	7.93	8.19	3.2%	< 0.5				80% 120%
Se	1	2724999	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2724923	33.1	31.3	5.6%	< 0.5	309	390	79%	80% 120%
Ta	1	2724923	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2724923	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2724923	0.02	0.02	0.0%	< 0.01				80% 120%
Tl	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
U	1	2724923	< 5	< 5	0.0%	< 5				80% 120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS  
PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y531234  
ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
V	1	2724923	101	104	2.9%	< 0.5				80% 120%
W	1	2724923	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2724923	12	12	0.0%	< 1				80% 120%
Zn	1	2724923	137	141	2.9%	< 0.5				80% 120%
Zr	1	2724923	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Cu	1					< 0.5	3987	3700	107%	80% 120%
Sr	1					< 0.5	308	390	79%	80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Cu	1					< 0.5	4002	3700	108%	80% 120%
Sr	1					< 0.5	312	390	80%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724977	< 0.002	< 0.002	0.0%	< 0.002	0.0812	0.0849	96%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724884	0.0053	0.0071	29.0%	< 0.002	0.0757	0.0849	89%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725120	< 0.002	< 0.002	0.0%	< 0.002	0.0763	0.0849	90%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724909	0.013	0.012	8.0%	< 0.002	0.0814	0.0849	96%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724923	0.032	< 0.002		< 0.002	0.076	0.0849	90%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725100	< 0.002	< 0.002	0.0%	< 0.002	0.078	0.0849	92%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725146	< 0.002	< 0.002	0.0%	< 0.002	0.87	0.922	94%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724974	< 0.002	< 0.002	0.0%	< 0.002	0.0746	0.0849	88%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724984	0.018	0.012		< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724996	0.021	0.002		< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2724999	0.004	0.018		< 0.002				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725016	< 0.002	0.019		< 0.002				80% 120%



## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

### Solid Analysis (Continued)

RPT Date: Oct 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper

Certified By:

## Method Summary

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531234

PROJECT NO: WALHALLA

ATTENTION TO: Larry Johnson, John Lagourgue

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

CLIENT NAME: VOLCANIC METALS  
SUITE 680, 789 WEST PENDER STREET  
VANCOUVER, BC V6C1H2

ATTENTION TO: JOHN

PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y531249

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

DATE REPORTED: Oct 11, 2011

PAGES (INCLUDING COVER): 38

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

\*NOTES



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
86439 (-)	<0.2	1.54	6	<5	248	0.5	<1	0.54	<0.5	33	5.9	19.7	22.3	2.51
86440 (-)	<0.2	3.17	6	<5	713	0.8	<1	0.79	<0.5	25	12.1	30.8	34.3	4.98
86441 (-)	<0.2	2.79	7	<5	233	0.6	<1	0.57	<0.5	15	8.4	26.5	69.6	4.65
86442 (-)	<0.2	2.76	7	<5	391	0.8	<1	1.01	<0.5	44	7.3	9.6	20.9	4.44
86443 (-)	<0.2	1.08	10	<5	273	<0.5	<1	1.12	<0.5	24	6.7	24.1	22.3	2.10
86444 (-)	<0.2	1.86	8	<5	265	0.8	<1	0.99	<0.5	44	7.3	8.5	22.6	3.73
86445 (-)	<0.2	2.19	10	<5	384	0.9	<1	0.96	<0.5	40	9.0	16.9	22.1	4.47
86446 (-)	<0.2	1.66	9	<5	255	0.5	<1	0.91	<0.5	22	6.3	19.1	24.8	3.14
86447 (-)	<0.2	2.17	5	<5	172	<0.5	<1	1.15	<0.5	27	7.3	15.7	9.1	3.24
86448 (-)	<0.2	1.38	11	<5	280	0.6	<1	0.58	<0.5	30	6.9	30.3	38.4	2.34
86449 (-)	<0.2	2.33	11	<5	351	0.8	<1	1.02	<0.5	29	8.7	19.2	20.5	4.38
86450 (-)	<0.2	2.49	9	<5	408	0.7	<1	1.11	<0.5	36	8.2	15.1	17.8	3.67
86451 (-)	<0.2	3.33	6	<5	711	0.9	<1	1.19	<0.5	35	19.9	38.5	202	5.80
86452 (-)	<0.2	1.92	9	<5	264	0.6	<1	0.68	<0.5	35	5.8	20.6	17.2	2.79
86453 (-)	<0.2	2.43	9	<5	378	0.7	<1	1.10	<0.5	48	7.4	14.0	24.1	3.75
86454 (-)	<0.2	3.30	8	<5	611	1.0	<1	1.42	<0.5	28	8.6	17.9	30.9	5.63
86455 (-)	<0.2	2.57	7	<5	238	0.9	<1	1.28	<0.5	34	6.6	10.8	14.8	3.65
MM 1001 (-)	<0.2	1.60	7	<5	293	1.1	<1	0.19	<0.5	30	5.1	21.2	24.5	3.02
MM 1002 (-)	<0.2	0.92	4	<5	300	<0.5	<1	0.09	<0.5	23	2.9	12.8	92.3	4.54
MM 1003 (-)	<0.2	2.18	6	<5	427	1.2	<1	0.25	<0.5	29	6.0	32.6	29.2	3.48
MM 1004 (-)	<0.2	1.36	8	<5	228	0.8	<1	0.15	<0.5	25	4.7	30.4	112	2.15
MM 1005 (-)	<0.2	1.73	9	<5	223	<0.5	<1	0.14	<0.5	25	5.4	26.5	15.1	2.50
MM 1006 (-)	<0.2	1.74	5	<5	202	0.9	<1	0.14	<0.5	18	3.2	11.8	23.1	3.90
MM 1007 (-)	<0.2	1.10	5	<5	100	0.8	<1	0.13	<0.5	12	3.6	19.2	20.6	2.10
MM 1008 (-)	<0.2	1.53	9	<5	366	0.7	<1	0.28	<0.5	25	9.7	56.1	55.5	3.13
MM 1009 (-)	<0.2	1.78	13	<5	327	0.7	<1	0.19	<0.5	35	10.3	41.9	53.2	2.97
MM 1010 (-)	<0.2	1.46	12	<5	292	0.7	<1	0.29	<0.5	28	7.7	32.8	41.5	2.72
MM 1011 (-)	<0.2	1.82	10	<5	239	0.5	<1	0.18	<0.5	24	6.8	30.0	24.3	2.65
MM 1012 (-)	<0.2	1.63	12	<5	405	0.6	<1	0.27	<0.5	31	6.6	34.2	29.5	2.62
MM 1013 (-)	<0.2	1.84	12	<5	520	0.7	<1	0.27	<0.5	28	8.1	38.9	60.1	3.06
MM 1014 (-)	<0.2	1.65	9	<5	366	0.6	<1	0.28	<0.5	25	7.3	34.0	42.3	2.72
MM 1015 (-)	<0.2	1.69	6	<5	608	1.1	<1	0.25	<0.5	43	9.4	33.9	96.7	3.21

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
Sample Description														
MM 1016 (-)	<0.2	1.66	11	<5	359	0.5	<1	0.33	<0.5	27	7.3	38.3	37.1	2.60
MM 1017 (-)	<0.2	1.71	15	<5	290	0.7	<1	0.25	<0.5	41	9.5	73.9	63.4	3.23
MM 1018 (-)	<0.2	0.90	26	<5	225	0.5	<1	0.15	<0.5	30	10.9	66.7	85.1	3.59
MM 1019 (-)	<0.2	1.55	9	<5	196	0.5	2	0.13	<0.5	24	7.3	34.2	51.0	3.10
MM 1020 (-)	<0.2	3.04	6	<5	763	0.7	<1	0.43	<0.5	39	15.7	305	85.6	4.11
MM 1021 (-)	<0.2	2.77	4	<5	408	0.8	<1	0.23	<0.5	57	25.8	152	124	4.43
MM 1022 (-)	<0.2	1.87	8	<5	398	<0.5	<1	0.46	<0.5	19	13.2	50.8	89.6	3.41
MM 1023 (-)	<0.2	2.18	5	<5	351	0.5	<1	0.35	<0.5	21	10.8	93.2	68.6	3.25
MM 1024 (-)	<0.2	1.73	6	<5	326	0.9	<1	0.23	<0.5	41	28.2	60.1	85.4	2.58
MM 1025 (-)	<0.2	2.55	6	<5	303	0.6	<1	0.26	<0.5	28	13.7	110	71.1	3.30
MM 1026 (-)	<0.2	1.45	18	<5	687	0.6	<1	0.21	<0.5	33	7.0	34.5	55.1	2.62
MM 1027 (-)	<0.2	1.49	7	<5	974	0.6	<1	0.10	<0.5	37	12.3	33.3	73.0	2.84
MM 1028 (-)	<0.2	1.76	7	<5	924	0.6	<1	0.11	<0.5	22	14.9	34.8	69.3	3.19
MM 1029 (-)	<0.2	1.30	9	<5	557	<0.5	<1	0.13	<0.5	25	7.7	31.0	67.4	2.41
MM 1030 (-)	<0.2	2.10	6	<5	425	<0.5	<1	0.33	<0.5	30	10.5	115	67.6	3.03
MM 1031 (-)	<0.2	2.12	8	<5	334	0.6	<1	0.55	<0.5	29	12.3	141	73.3	3.40
MM 1032 (-)	<0.2	1.75	9	<5	282	<0.5	<1	0.32	<0.5	24	10.6	101	58.1	2.77
MM 1033 (-)	<0.2	1.59	10	<5	225	0.6	<1	0.23	<0.5	32	9.1	65.4	76.2	2.63
MM 1034 (-)	<0.2	2.59	5	<5	445	0.7	<1	0.36	<0.5	42	8.1	181	94.7	4.07
MM 1035 (-)	<0.2	2.22	7	<5	260	0.6	<1	0.13	<0.5	31	7.4	112	70.1	3.51
MM 1036 (-)	<0.2	1.87	7	<5	368	<0.5	<1	0.17	<0.5	19	15.8	63.8	53.2	3.35
MM 1037 (-)	<0.2	1.87	5	<5	346	0.6	<1	0.19	<0.5	49	4.2	65.5	70.8	3.50
MM 1038 (-)	0.4	0.89	32	<5	135	<0.5	<1	0.10	<0.5	30	9.7	28.2	51.2	2.49
MM 1039 (-)	<0.2	2.03	8	<5	273	0.9	<1	0.57	<0.5	42	11.8	93.3	116	4.09
MM 1040 (-)	<0.2	1.60	7	<5	326	0.9	<1	0.27	<0.5	33	7.0	57.7	96.5	3.03
MM 1041 (-)	<0.2	1.36	15	<5	173	<0.5	<1	0.22	<0.5	19	8.6	39.4	21.2	2.47
MM 1042 (-)	<0.2	1.47	6	<5	434	0.6	<1	0.22	<0.5	39	7.6	36.9	86.9	2.40
MM 1043 (-)	<0.2	1.49	8	<5	794	<0.5	<1	0.20	<0.5	16	7.0	33.0	37.8	2.57
MM 1044 (-)	<0.2	2.20	6	<5	673	0.7	<1	0.32	<0.5	42	13.1	44.7	108	3.85
MM 1045 (-)	<0.2	1.84	11	<5	336	0.7	<1	0.17	<0.5	33	7.5	34.2	39.1	2.79
MM 1046 (-)	<0.2	1.19	22	<5	182	<0.5	<1	0.07	<0.5	16	6.5	32.3	64.7	2.92
MM 1047 (-)	<0.2	1.97	12	<5	360	0.9	<1	0.14	<0.5	33	11.1	44.0	50.7	3.03

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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<http://www.agatlabs.com>

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
Sample Description														
MM 1048 (-)	<0.2	1.94	10	<5	280	0.5	<1	0.20	<0.5	19	8.4	65.0	65.6	3.02
MM 1049 (-)	<0.2	1.32	10	<5	374	<0.5	<1	0.27	<0.5	25	6.6	35.1	39.1	2.25
MM 1050 (-)	<0.2	1.16	10	<5	307	0.5	<1	0.37	<0.5	22	7.5	34.2	54.8	2.40
MM 1051 (-)	<0.2	1.15	11	<5	322	0.6	<1	0.33	<0.5	29	8.8	40.6	45.9	2.68
MM 1052 (-)	<0.2	1.40	10	<5	373	0.5	<1	0.36	<0.5	22	8.0	44.0	29.4	2.57
MM 1053 (-)	<0.2	1.27	9	<5	243	1.0	<1	0.23	<0.5	35	6.5	29.9	43.8	3.55
MM 1054 (-)	<0.2	1.88	10	<5	333	0.9	<1	0.40	<0.5	32	8.4	57.5	71.2	3.38
MM 1055 (-)	<0.2	1.33	9	<5	301	0.6	<1	0.35	<0.5	24	5.8	35.8	44.6	2.45
MM 1056 (-)	<0.2	1.41	9	<5	330	0.6	<1	0.26	<0.5	24	7.2	50.5	50.6	2.42
MM 1057 (-)	<0.2	1.40	6	<5	323	0.7	<1	0.56	<0.5	10	14.8	38.1	106	2.74
MM 1058 (-)	<0.2	1.24	10	<5	358	0.5	<1	0.43	<0.5	23	7.5	30.3	33.7	2.31
MM 1059 (-)	<0.2	1.68	10	<5	342	0.5	<1	0.34	<0.5	24	6.1	34.0	42.2	2.45
MM 1060 (-)	<0.2	1.56	10	<5	270	0.5	<1	0.25	<0.5	26	7.1	30.3	24.4	2.34
MM 1061 (-)	<0.2	1.36	10	<5	322	0.6	<1	0.33	<0.5	27	5.8	31.4	42.1	2.38
MM 1062 (-)	<0.2	1.56	8	<5	226	0.6	<1	0.15	<0.5	27	5.5	29.3	32.8	2.24
MM 1063 (-)	<0.2	0.56	5	<5	48	<0.5	<1	0.06	<0.5	9	3.7	8.8	17.0	1.63
MM 1064 (-)	<0.2	1.77	6	<5	531	0.9	<1	0.13	<0.5	43	14.5	27.0	138	3.29
MM 1065 (-)	<0.2	1.12	3	<5	411	0.9	<1	0.27	<0.5	27	5.0	12.8	27.7	2.11
MM 1066 (-)	<0.2	1.80	6	<5	281	0.9	<1	0.19	<0.5	66	8.0	74.4	81.4	3.50
MM 1067 (-)	<0.2	3.04	5	<5	333	0.8	<1	0.35	<0.5	76	10.0	117	71.9	2.85
MM 1068 (-)	<0.2	1.43	9	<5	271	0.5	<1	0.14	0.8	37	13.1	38.5	124	3.00
MM 1069 (-)	0.7	0.95	367	<5	262	0.8	<1	2.50	0.5	15	38.1	128	89.3	6.57
MM 1070 (-)	<0.2	2.33	5	<5	225	0.6	<1	0.22	<0.5	51	9.4	56.2	93.6	4.37
MM 1071 (-)	<0.2	1.83	7	<5	307	<0.5	<1	0.41	<0.5	19	15.1	194	69.3	2.93
MM 1072 (-)	<0.2	1.31	14	<5	237	1.8	<1	0.68	<0.5	47	33.3	192	115	9.58
MM 1073 (-)	<0.2	2.80	4	<5	707	0.6	<1	0.11	<0.5	38	5.0	132	96.7	4.28
MM 1074 (-)	<0.2	1.87	6	<5	235	0.8	<1	0.22	<0.5	19	9.0	45.5	21.1	2.72
MM 1075 (-)	<0.2	3.16	6	<5	821	0.8	<1	0.52	<0.5	30	14.0	255	102	4.30
MM 1076 (-)	<0.2	2.76	5	<5	722	0.6	<1	0.36	<0.5	48	13.2	236	114	4.55
MM 1077 (-)	<0.2	2.22	7	<5	321	0.6	<1	0.26	<0.5	24	13.9	48.1	57.9	3.61
MM 1078 (-)	<0.2	3.57	4	<5	678	0.8	<1	0.43	<0.5	30	36.3	228	61.2	4.98
MM 1079 (-)	<0.2	2.25	6	<5	327	<0.5	<1	0.15	<0.5	33	7.0	45.6	52.2	3.17

Certified By:

*Ron Cardinal*





## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

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SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
MM 1080 (-)	<0.2	1.69	6	<5	308	<0.5	<1	0.20	<0.5	25	4.0	48.6	38.6	2.85
MM 1081 (-)	<0.2	1.72	5	<5	189	0.5	<1	0.11	<0.5	17	10.0	32.5	71.4	3.22
MM 1082 (-)	<0.2	2.65	4	<5	333	<0.5	<1	0.52	<0.5	20	10.0	140	83.7	3.66
MM 1083 (-)	<0.2	2.17	7	<5	305	0.5	<1	0.22	<0.5	30	8.0	59.8	58.0	3.57
MM 1084 (-)	<0.2	2.16	4	<5	395	0.7	<1	0.24	<0.5	52	8.4	52.7	111	3.71
MM 1085 (-)	<0.2	2.67	7	<5	422	0.6	<1	0.31	<0.5	48	6.0	126	114	4.47
MM 1086 (-)	<0.2	2.44	4	<5	336	0.6	<1	0.18	<0.5	35	9.6	85.2	64.4	3.99
MM 1087 (-)	<0.2	2.37	5	<5	245	0.8	<1	0.22	<0.5	48	11.0	140	95.9	3.80
MM 1088 (-)	<0.2	1.97	5	<5	281	0.5	<1	0.27	<0.5	39	3.6	94.9	74.6	3.20
MM 1089 (-)	<0.2	1.15	5	<5	145	<0.5	<1	0.10	<0.5	59	1.6	19.3	53.2	2.93
MM 1090 (-)	<0.2	3.11	6	<5	648	0.7	<1	0.84	<0.5	12	25.3	141	71.9	4.79
MM 1091 (-)	<0.2	1.71	4	<5	267	<0.5	<1	0.88	<0.5	8	25.7	192	59.6	3.27
MM 1092 (-)	<0.2	2.68	7	<5	1120	0.6	<1	0.30	<0.5	25	3.1	92.8	172	4.78
MM 1093 (-)	<0.2	3.27	4	<5	721	0.7	<1	0.40	<0.5	28	22.5	274	121	4.99
MM 1094 (-)	<0.2	1.67	6	<5	292	<0.5	<1	0.34	<0.5	21	6.7	98.6	50.8	2.79
MM 1095 (-)	<0.2	3.35	4	<5	498	0.7	<1	0.33	<0.5	30	2.8	219	160	3.83
MM 1096 (-)	<0.2	2.70	4	<5	411	0.9	<1	0.28	<0.5	32	21.2	187	128	3.85
MM 1097 (-)	<0.2	3.11	7	<5	447	1.1	<1	0.60	<0.5	47	21.3	249	103	5.08
MM 1098 (-)	<0.2	2.26	4	<5	272	0.8	<1	0.11	<0.5	63	3.7	52.8	85.6	4.00
MM 1099 (-)	<0.2	2.47	11	<5	452	0.8	<1	0.19	<0.5	37	3.9	43.0	135	3.72
MM 1100 (-)	<0.2	3.88	3	<5	475	0.8	<1	0.35	<0.5	36	38.6	342	125	6.47
MM 1101 (-)	<0.2	1.90	6	<5	307	0.5	<1	0.96	<0.5	49	9.2	46.8	92.6	2.70
MM 1102 (-)	<0.2	3.70	6	<5	274	1.0	<1	0.48	<0.5	31	45.9	429	72.3	5.27
MM 1103 (-)	<0.2	2.94	8	<5	150	0.6	<1	0.35	<0.5	23	11.1	267	94.5	4.07
MM 1104 (-)	<0.2	2.81	5	<5	568	<0.5	<1	0.49	<0.5	16	23.5	227	93.9	4.51
MM 1105 (-)	<0.2	2.84	5	<5	239	0.5	<1	0.48	<0.5	41	14.5	338	92.2	4.54
MM 1106 (-)	<0.2	2.87	5	<5	609	<0.5	<1	0.21	<0.5	19	6.1	251	71.9	4.14
MM 1107 (-)	<0.2	2.33	8	<5	117	0.6	<1	0.38	<0.5	44	20.0	188	86.8	3.83
MM 1108 (-)	<0.2	1.81	10	<5	366	<0.5	<1	0.31	<0.5	15	6.8	33.8	27.0	2.81
MM 1109 (-)	<0.2	1.68	7	<5	280	0.5	<1	0.17	<0.5	19	9.0	33.8	48.0	4.02
MM 1110 (-)	<0.2	1.16	5	<5	263	<0.5	<1	0.16	<0.5	19	6.5	25.3	101	3.75
MM 1111 (-)	<0.2	1.53	7	<5	250	0.5	<1	0.15	<0.5	21	4.9	35.6	30.5	2.74

Certified By:

*Ron Cardinali*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
Sample Description														
MM 1112 (-)	<0.2	2.09	7	<5	419	0.7	<1	0.38	<0.5	36	4.9	133	73.8	3.95
MM 1113 (-)	<0.2	1.75	4	<5	275	1.2	<1	0.38	0.8	27	32.4	160	133	6.63
MM 1114 (-)	<0.2	0.55	5	<5	247	<0.5	<1	0.27	<0.5	14	6.7	24.6	63.4	2.15
MM 1115 (-)	<0.2	1.33	7	<5	243	<0.5	<1	0.19	<0.5	19	10.3	49.9	68.8	2.80
SF 5001 (-)	<0.2	1.79	8	<5	509	0.6	<1	0.18	<0.5	23	8.2	37.6	61.1	3.04
SF 5002 (-)	<0.2	1.61	4	<5	386	0.7	<1	0.18	<0.5	36	6.4	28.7	74.3	2.55
SF 5003 (-)	<0.2	2.09	10	<5	268	0.6	<1	0.17	<0.5	26	10.1	62.9	40.0	3.04
SF 5004 (-)	<0.2	1.34	24	<5	155	0.5	<1	0.36	<0.5	15	10.6	72.5	60.7	2.89
SF 5005 (-)	<0.2	1.40	9	<5	267	0.5	<1	0.26	<0.5	29	6.7	40.1	37.6	2.59
SF 5006 (-)	<0.2	1.46	9	<5	331	<0.5	<1	0.26	<0.5	24	6.4	40.9	29.7	2.65
SF 5007 (-)	<0.2	1.92	7	<5	240	<0.5	<1	0.15	<0.5	20	7.6	45.0	47.9	2.97
SF 5008 (-)	<0.2	2.33	6	<5	347	0.7	<1	0.29	<0.5	53	9.6	130	79.9	3.74
SF 5009 (-)	<0.2	1.15	21	<5	193	<0.5	<1	0.11	<0.5	14	4.5	61.7	47.8	2.76
SF 5010 (-)	<0.2	2.40	7	<5	350	0.5	<1	0.24	<0.5	29	9.2	146	40.1	3.14
SF 5011 (-)	<0.2	1.92	11	<5	252	0.6	<1	0.13	<0.5	23	8.5	35.4	31.1	2.89
SF 5012 (-)	<0.2	1.95	9	<5	276	0.5	<1	0.11	<0.5	23	8.3	49.1	26.8	3.23
SF 5013 (-)	<0.2	1.79	9	<5	203	<0.5	<1	0.12	<0.5	17	6.6	30.2	19.3	2.81
SF 5014 (-)	<0.2	2.04	9	<5	206	<0.5	<1	0.13	<0.5	15	7.4	35.7	22.3	2.90
SF 5015 (-)	<0.2	1.96	7	<5	340	0.7	<1	0.25	<0.5	34	7.1	44.1	72.5	3.24
SF 5016 (-)	<0.2	2.00	10	<5	224	<0.5	<1	0.13	<0.5	17	7.4	35.5	25.1	3.08
SF 5017 (-)	<0.2	2.06	10	<5	305	0.5	<1	0.15	<0.5	17	7.9	34.3	33.3	2.93
SF 5018 (-)	<0.2	3.00	5	<5	442	0.9	<1	0.20	<0.5	31	12.4	101	117	4.33
SF 5019 (-)	<0.2	1.58	8	<5	236	<0.5	<1	0.18	<0.5	27	6.6	32.4	34.0	2.56
SF 5020 (-)	<0.2	2.04	9	<5	386	0.6	<1	0.14	<0.5	24	7.7	35.3	25.4	3.07
SF 5021 (-)	<0.2	2.15	6	<5	469	0.6	<1	0.40	<0.5	29	8.6	86.7	90.2	3.09
SF 5022 (-)	<0.2	2.24	5	<5	668	0.6	<1	0.38	<0.5	27	5.3	86.2	86.8	3.60
SF 5023 (-)	<0.2	1.15	7	<5	269	<0.5	<1	0.26	<0.5	20	5.5	31.9	35.9	2.13
SF 5024 (-)	<0.2	1.56	7	<5	286	0.6	<1	0.18	<0.5	31	6.7	35.1	46.0	2.57
SF 5025 (-)	<0.2	2.01	5	<5	441	0.6	<1	0.40	<0.5	25	8.5	102	96.8	3.21
SF 5026 (-)	<0.2	1.40	8	<5	272	<0.5	<1	0.17	<0.5	26	5.2	30.2	27.0	2.30
SF 5027 (-)	<0.2	1.41	9	<5	309	0.5	<1	0.21	<0.5	27	6.5	32.5	28.3	2.49
SF 5028 (-)	<0.2	1.49	5	<5	174	<0.5	<1	0.14	<0.5	16	4.4	37.0	28.6	2.46

Certified By:

*Ron Cardinal*



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.2	0.01	1	5	1	0.5	1	0.01	0.5	1	0.5	0.5	0.5	0.01
SF 5029 (-)	<0.2	1.67	7	<5	214	<0.5	<1	0.17	<0.5	21	6.3	49.4	35.8	2.51
SF 5030 (-)	<0.2	1.51	9	<5	359	0.6	<1	0.21	<0.5	33	7.2	32.8	35.6	2.59
SF 5031 (-)	<0.2	1.40	10	<5	344	<0.5	<1	0.27	<0.5	25	6.8	31.9	28.4	2.64

Certified By:

*Ron Cardinal*



## Certificate of Analysis

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

DATE SAMPLED: Sep 21, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
86439 (-)	<5	<1	<1	0.49	16	9	0.78	430	1.2	0.02	8.2	1240	6.8	75
86440 (-)	7	<1	1	1.53	11	17	1.87	1420	<0.5	0.02	18.8	2340	10.4	238
86441 (-)	6	<1	<1	0.50	6	10	1.18	702	<0.5	0.02	14.4	1040	9.4	90
86442 (-)	7	<1	<1	0.38	25	16	1.11	668	<0.5	0.02	4.7	1880	8.8	50
86443 (-)	<5	<1	<1	0.08	11	10	0.63	357	<0.5	0.03	21.4	861	6.1	14
86444 (-)	<5	<1	<1	0.28	19	13	0.82	829	0.6	0.02	9.4	2100	7.1	29
86445 (-)	6	<1	<1	0.20	23	18	1.04	1040	0.6	0.02	13.8	1670	8.5	38
86446 (-)	<5	<1	<1	0.29	11	12	0.80	557	<0.5	0.04	13.8	1840	6.2	35
86447 (-)	6	<1	<1	0.59	14	13	1.27	786	<0.5	0.06	6.4	1880	6.6	102
86448 (-)	<5	<1	1	0.08	14	9	0.48	437	0.6	0.02	20.3	1020	8.6	15
86449 (-)	5	<1	<1	0.26	13	16	1.28	882	<0.5	0.03	12.8	1820	9.3	39
86450 (-)	6	<1	<1	0.42	16	14	1.03	713	<0.5	0.03	8.3	2880	9.0	54
86451 (-)	7	<1	1	1.19	27	22	2.10	1220	<0.5	0.02	21.9	1950	12.3	153
86452 (-)	<5	<1	<1	0.57	17	11	0.88	449	<0.5	0.02	11.5	1560	6.7	74
86453 (-)	6	<1	<1	0.66	24	14	1.18	836	<0.5	0.04	7.8	2610	7.5	102
86454 (-)	8	<1	<1	1.01	13	17	1.43	1080	0.5	0.02	11.1	3400	12.9	152
86455 (-)	7	<1	<1	0.17	23	11	0.88	699	0.8	0.05	6.2	1510	8.7	27
MM 1001 (-)	<5	<1	<1	0.56	16	13	0.91	458	<0.5	<0.01	11.9	188	8.2	82
MM 1002 (-)	<5	<1	<1	0.36	11	7	0.44	275	2.4	0.05	5.2	255	9.4	30
MM 1003 (-)	6	<1	1	0.46	13	20	1.53	623	<0.5	0.01	17.0	384	8.7	92
MM 1004 (-)	<5	<1	<1	0.04	11	7	0.39	267	0.6	<0.01	17.8	143	10.1	15
MM 1005 (-)	<5	<1	1	0.05	11	11	0.64	250	0.7	<0.01	15.1	231	8.6	20
MM 1006 (-)	<5	<1	<1	0.34	8	13	0.69	316	1.6	<0.01	7.0	318	8.3	58
MM 1007 (-)	<5	<1	<1	0.03	6	4	0.22	127	0.5	<0.01	16.6	156	8.8	<10
MM 1008 (-)	<5	<1	<1	0.07	12	11	0.58	656	1.0	0.01	48.6	359	13.7	16
MM 1009 (-)	<5	<1	2	0.06	17	11	0.59	514	2.0	<0.01	38.7	240	10.7	17
MM 1010 (-)	<5	<1	2	0.05	14	10	0.49	757	0.8	0.01	30.4	380	9.3	15
MM 1011 (-)	<5	<1	<1	0.05	11	11	0.44	408	1.0	0.01	23.5	219	9.9	15
MM 1012 (-)	<5	<1	4	0.06	14	11	0.53	383	<0.5	0.01	22.5	224	9.7	14
MM 1013 (-)	<5	<1	<1	0.07	16	14	0.64	571	1.1	0.02	36.3	250	9.9	18
MM 1014 (-)	<5	<1	1	0.06	12	10	0.48	445	1.4	0.01	23.5	412	11.1	15
MM 1015 (-)	<5	<1	2	0.48	19	15	0.89	1080	<0.5	<0.01	53.7	451	11.7	109

Certified By:

*Ron Cardinali*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
MM 1016 (-)	<5	<1	<1	0.06	13	12	0.52	405	0.8	0.01	26.7	375	9.5	16
MM 1017 (-)	<5	<1	<1	0.23	19	11	0.81	445	4.0	<0.01	67.0	528	11.4	49
MM 1018 (-)	<5	<1	<1	0.06	13	4	0.30	403	7.2	<0.01	101	477	10.3	14
MM 1019 (-)	<5	<1	<1	0.06	11	10	0.39	177	6.0	<0.01	27.0	336	15.5	19
MM 1020 (-)	6	<1	1	1.00	19	23	2.41	516	12.5	0.01	158	936	12.2	168
MM 1021 (-)	<5	<1	<1	0.60	27	20	1.61	866	11.1	<0.01	227	1020	10.1	113
MM 1022 (-)	<5	<1	<1	0.38	9	21	0.82	458	1.5	0.01	58.0	1200	7.6	41
MM 1023 (-)	<5	<1	2	0.45	11	25	1.30	479	2.1	<0.01	70.2	715	8.2	66
MM 1024 (-)	<5	<1	<1	0.37	17	14	1.23	1220	4.5	<0.01	93.0	343	9.0	77
MM 1025 (-)	<5	<1	1	0.20	14	19	1.61	607	8.8	<0.01	104	482	11.8	39
MM 1026 (-)	<5	<1	3	0.06	15	10	0.45	361	1.2	0.01	31.0	323	9.1	14
MM 1027 (-)	<5	<1	2	0.19	18	11	0.67	1000	3.2	<0.01	44.2	372	12.1	35
MM 1028 (-)	<5	<1	2	0.18	11	18	0.80	629	0.9	<0.01	52.3	188	9.2	45
MM 1029 (-)	<5	<1	4	0.08	11	12	0.45	946	2.9	<0.01	40.8	278	9.0	20
MM 1030 (-)	5	<1	2	0.37	15	22	1.66	1280	6.8	0.01	79.5	470	9.8	66
MM 1031 (-)	<5	<1	<1	0.22	15	19	1.61	552	5.0	0.02	111	563	9.5	54
MM 1032 (-)	<5	<1	<1	0.26	11	20	1.27	468	4.9	0.01	82.3	582	8.2	52
MM 1033 (-)	<5	<1	<1	0.10	17	15	1.00	749	2.8	0.01	73.3	324	8.3	26
MM 1034 (-)	6	<1	<1	0.62	18	23	2.21	534	11.4	0.02	115	551	12.1	108
MM 1035 (-)	<5	<1	<1	0.17	16	17	1.29	406	7.8	0.01	48.2	304	23.1	41
MM 1036 (-)	<5	<1	<1	0.31	9	17	0.96	699	6.0	<0.01	90.6	640	9.3	98
MM 1037 (-)	<5	<1	<1	0.21	20	11	1.15	298	13.0	0.01	26.8	471	19.5	48
MM 1038 (-)	<5	<1	2	0.05	13	6	0.18	542	2.1	<0.01	43.5	402	7.6	17
MM 1039 (-)	<5	<1	<1	0.06	21	16	1.59	666	9.7	<0.01	142	783	14.6	18
MM 1040 (-)	<5	<1	<1	0.07	15	11	0.88	283	9.6	<0.01	64.8	425	9.9	14
MM 1041 (-)	<5	<1	<1	0.07	9	11	0.46	456	3.3	<0.01	24.0	893	10.2	21
MM 1042 (-)	<5	<1	<1	0.33	16	11	0.91	667	2.1	<0.01	54.1	431	7.9	84
MM 1043 (-)	<5	<1	5	0.05	8	13	0.53	313	1.8	0.01	26.0	440	8.0	18
MM 1044 (-)	<5	<1	2	0.31	19	16	1.23	706	1.4	0.01	52.6	380	8.6	59
MM 1045 (-)	<5	<1	3	0.04	14	13	0.49	478	1.5	0.01	27.7	191	10.7	13
MM 1046 (-)	<5	<1	1	0.05	7	8	0.24	440	1.4	<0.01	30.4	331	138	19
MM 1047 (-)	<5	<1	<1	0.06	17	13	0.54	500	1.2	0.01	39.1	242	11.8	24

Certified By:

*Ron Cardinali*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
MM 1048 (-)	<5	<1	1	0.06	9	14	0.78	418	1.5	0.01	53.7	273	10.6	25
MM 1049 (-)	<5	<1	<1	0.04	12	10	0.48	317	0.6	0.01	24.7	402	8.2	11
MM 1050 (-)	<5	<1	<1	0.06	12	10	0.50	382	0.9	0.02	31.8	733	6.9	12
MM 1051 (-)	<5	<1	<1	0.05	13	8	0.41	543	1.4	0.01	42.7	711	8.7	11
MM 1052 (-)	<5	<1	1	0.06	10	10	0.56	500	0.8	0.02	29.5	476	9.4	16
MM 1053 (-)	<5	<1	2	0.09	15	7	0.41	453	1.0	<0.01	26.1	288	7.9	18
MM 1054 (-)	<5	<1	<1	0.06	17	11	0.57	486	2.5	0.02	39.5	274	11.8	19
MM 1055 (-)	<5	<1	1	0.05	11	9	0.48	342	<0.5	0.01	25.0	466	8.4	15
MM 1056 (-)	<5	<1	<1	0.04	12	10	0.55	328	1.1	0.01	35.9	289	8.3	16
MM 1057 (-)	<5	<1	2	0.12	6	15	0.81	502	<0.5	0.03	30.9	854	5.9	20
MM 1058 (-)	<5	<1	5	0.04	11	10	0.49	502	<0.5	0.02	23.8	815	8.0	15
MM 1059 (-)	<5	<1	2	0.04	11	12	0.48	375	0.6	0.02	22.9	465	10.5	13
MM 1060 (-)	<5	<1	2	0.04	12	11	0.43	364	0.9	0.01	20.7	617	8.3	14
MM 1061 (-)	<5	<1	4	0.05	13	9	0.43	380	1.1	0.01	23.1	570	9.1	11
MM 1062 (-)	<5	<1	<1	0.04	11	9	0.36	308	1.3	0.01	21.2	178	9.4	12
MM 1063 (-)	<5	<1	<1	0.01	4	<1	0.05	78	<0.5	<0.01	6.0	254	4.8	<10
MM 1064 (-)	6	<1	<1	0.61	16	12	0.96	1780	0.7	<0.01	51.8	705	12.9	148
MM 1065 (-)	<5	<1	1	0.06	12	4	0.27	499	<0.5	<0.01	23.1	631	9.4	15
MM 1066 (-)	<5	<1	<1	0.11	40	9	0.80	372	13.0	<0.01	60.5	465	12.3	23
MM 1067 (-)	6	<1	1	0.21	20	21	2.03	577	12.9	<0.01	105	554	9.5	40
MM 1068 (-)	<5	<1	<1	0.07	18	8	0.43	857	5.4	<0.01	33.6	381	16.0	16
MM 1069 (-)	<5	<1	<1	0.07	7	5	0.49	2580	5.3	<0.01	186	683	9.8	15
MM 1070 (-)	<5	<1	1	0.23	24	13	1.07	568	7.4	<0.01	81.9	739	11.9	57
MM 1071 (-)	<5	<1	<1	0.17	10	17	1.62	351	1.4	<0.01	153	406	5.9	52
MM 1072 (-)	<5	1	<1	0.10	14	6	0.46	1750	4.9	<0.01	248	1290	13.8	27
MM 1073 (-)	<5	<1	2	0.80	19	25	1.61	360	16.2	0.03	54.7	530	10.8	140
MM 1074 (-)	6	<1	<1	0.30	15	17	0.87	886	0.6	<0.01	48.8	413	7.3	64
MM 1075 (-)	7	<1	2	0.73	24	35	2.82	706	6.7	<0.01	192	813	9.2	135
MM 1076 (-)	5	<1	2	0.82	23	23	2.51	495	11.7	0.02	211	476	10.8	129
MM 1077 (-)	<5	<1	<1	0.16	12	20	0.90	962	2.6	<0.01	43.3	572	10.8	36
MM 1078 (-)	<5	<1	1	0.88	14	50	2.30	1100	0.9	0.01	98.9	774	9.5	99
MM 1079 (-)	<5	<1	1	0.37	16	24	1.21	463	5.0	<0.01	31.9	477	9.6	61

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
MM 1080 (-)	<5	<1	<1	0.25	12	17	1.04	372	6.3	0.01	23.1	320	8.2	43
MM 1081 (-)	<5	<1	1	0.31	7	14	0.77	553	3.2	<0.01	35.5	330	9.5	79
MM 1082 (-)	6	<1	<1	0.73	11	25	2.47	838	8.8	<0.01	95.0	641	7.7	111
MM 1083 (-)	<5	<1	<1	0.29	15	18	1.14	501	6.0	0.01	45.2	577	15.6	51
MM 1084 (-)	<5	<1	<1	0.62	25	17	1.34	614	4.7	<0.01	62.5	348	9.9	138
MM 1085 (-)	6	<1	<1	0.91	24	23	2.17	633	11.6	0.02	55.0	695	10.8	162
MM 1086 (-)	5	<1	<1	0.51	15	18	1.57	939	7.9	<0.01	47.4	606	9.7	106
MM 1087 (-)	6	<1	<1	0.36	23	19	1.59	463	9.3	<0.01	101	400	9.5	121
MM 1088 (-)	<5	<1	<1	0.17	17	15	1.25	319	9.5	0.02	47.2	279	12.8	24
MM 1089 (-)	<5	<1	<1	0.10	30	5	0.37	98	21.1	0.02	16.1	346	15.8	17
MM 1090 (-)	8	<1	2	0.93	6	33	2.64	509	1.9	0.02	85.8	2080	6.7	129
MM 1091 (-)	<5	<1	<1	0.45	3	19	1.53	346	1.0	0.02	218	1800	2.7	79
MM 1092 (-)	6	<1	2	0.72	11	19	1.41	371	3.5	0.02	25.2	505	15.3	102
MM 1093 (-)	6	<1	2	1.01	13	26	2.70	529	16.7	0.01	164	597	10.2	180
MM 1094 (-)	<5	<1	<1	0.33	10	24	1.28	309	5.8	0.01	80.1	408	7.1	74
MM 1095 (-)	9	<1	<1	0.49	12	28	3.08	569	10.9	0.02	45.3	330	14.9	83
MM 1096 (-)	6	<1	<1	0.56	14	27	2.28	564	10.5	0.01	145	293	12.6	109
MM 1097 (-)	9	<1	<1	0.51	37	32	2.96	1630	10.7	0.01	198	544	8.5	97
MM 1098 (-)	5	<1	1	0.49	27	14	1.70	560	19.2	<0.01	27.9	413	14.3	89
MM 1099 (-)	<5	<1	<1	0.71	17	19	1.53	547	13.7	0.02	20.5	415	15.6	198
MM 1100 (-)	9	<1	<1	0.92	23	37	4.07	1810	7.0	<0.01	208	521	8.3	185
MM 1101 (-)	7	<1	<1	0.43	23	19	1.64	1650	3.1	<0.01	58.0	576	5.4	127
MM 1102 (-)	12	<1	3	0.81	11	39	4.51	1640	107	<0.01	218	407	18.7	151
MM 1103 (-)	6	<1	<1	0.96	13	26	2.53	455	6.3	<0.01	135	544	9.6	205
MM 1104 (-)	5	<1	<1	0.53	6	28	2.30	590	2.5	0.01	214	606	6.9	122
MM 1105 (-)	7	<1	<1	0.51	16	32	3.23	512	9.7	<0.01	159	602	10.3	102
MM 1106 (-)	7	<1	<1	0.97	9	21	2.18	387	9.9	0.01	75.0	446	9.6	176
MM 1107 (-)	<5	<1	<1	0.09	23	23	1.84	396	5.4	<0.01	202	295	13.3	25
MM 1108 (-)	<5	<1	<1	0.06	7	11	0.51	1020	2.9	<0.01	29.5	332	9.8	18
MM 1109 (-)	<5	<1	<1	0.04	9	9	0.30	1030	8.6	<0.01	22.7	563	10.4	19
MM 1110 (-)	<5	<1	<1	0.05	9	9	0.18	477	5.8	<0.01	24.0	718	8.9	10
MM 1111 (-)	<5	<1	<1	0.04	10	10	0.43	240	3.8	<0.01	20.4	162	9.5	11

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
MM 1112 (-)	<5	<1	<1	0.38	18	20	1.61	480	13.1	0.02	39.6	432	13.0	58
MM 1113 (-)	<5	<1	<1	0.27	13	17	0.93	1360	9.1	<0.01	222	690	8.5	54
MM 1114 (-)	<5	<1	3	0.08	6	4	0.15	1290	4.9	<0.01	33.9	751	8.0	15
MM 1115 (-)	<5	<1	1	0.05	9	13	0.50	499	5.4	<0.01	47.2	260	9.1	14
SF 5001 (-)	<5	<1	<1	0.09	11	17	0.72	592	1.3	0.01	31.8	155	8.7	20
SF 5002 (-)	<5	<1	<1	0.24	17	11	0.98	307	8.0	<0.01	41.4	206	10.1	53
SF 5003 (-)	<5	<1	<1	0.06	12	13	0.75	373	4.4	<0.01	54.4	197	10.7	19
SF 5004 (-)	<5	<1	<1	0.06	8	9	0.59	403	3.8	<0.01	92.2	378	6.0	14
SF 5005 (-)	<5	<1	<1	0.07	11	11	0.59	375	1.9	<0.01	42.8	328	8.8	19
SF 5006 (-)	<5	<1	<1	0.04	11	9	0.50	314	1.8	0.01	38.6	535	9.0	14
SF 5007 (-)	<5	<1	<1	0.08	10	14	0.64	281	5.1	<0.01	37.5	321	10.0	24
SF 5008 (-)	<5	<1	<1	0.15	21	16	1.51	1020	10.9	<0.01	91.5	283	9.6	24
SF 5009 (-)	<5	<1	1	0.03	7	8	0.29	141	8.6	<0.01	33.1	256	9.4	<10
SF 5010 (-)	<5	<1	<1	0.31	14	20	1.60	329	3.6	<0.01	83.1	306	8.6	57
SF 5011 (-)	<5	<1	<1	0.07	11	13	0.63	314	1.0	<0.01	30.7	135	10.3	17
SF 5012 (-)	<5	<1	<1	0.06	10	13	0.54	443	2.0	<0.01	33.7	146	11.0	19
SF 5013 (-)	<5	<1	1	0.04	8	12	0.47	313	1.8	<0.01	19.7	207	11.5	17
SF 5014 (-)	<5	<1	<1	0.06	8	15	0.57	266	1.5	<0.01	25.0	246	10.7	22
SF 5015 (-)	<5	<1	<1	0.13	11	12	0.91	338	7.7	<0.01	49.9	346	10.6	25
SF 5016 (-)	<5	<1	<1	0.06	8	14	0.54	352	1.4	<0.01	23.8	290	10.9	22
SF 5017 (-)	<5	<1	<1	0.08	9	14	0.57	319	0.8	<0.01	27.3	199	10.4	21
SF 5018 (-)	6	<1	<1	0.38	15	17	1.49	681	7.4	<0.01	75.9	323	12.6	79
SF 5019 (-)	<5	<1	<1	0.05	12	11	0.56	268	1.4	<0.01	27.2	239	8.4	13
SF 5020 (-)	<5	<1	<1	0.07	12	13	0.58	363	2.0	<0.01	28.7	257	11.9	22
SF 5021 (-)	<5	<1	<1	0.36	16	15	1.52	486	6.3	0.01	72.1	421	8.9	67
SF 5022 (-)	<5	<1	1	0.65	16	16	1.62	547	12.9	<0.01	61.8	676	9.7	106
SF 5023 (-)	<5	<1	<1	0.07	9	9	0.56	272	1.9	<0.01	35.3	381	6.4	16
SF 5024 (-)	<5	<1	<1	0.04	15	14	0.55	283	2.3	<0.01	35.4	244	9.1	16
SF 5025 (-)	<5	<1	<1	0.39	15	14	1.39	461	5.6	<0.01	78.8	581	7.8	82
SF 5026 (-)	<5	<1	<1	0.03	13	11	0.49	231	1.3	<0.01	25.2	185	7.8	13
SF 5027 (-)	<5	<1	2	0.05	13	11	0.52	291	1.5	0.01	27.7	283	8.5	13
SF 5028 (-)	<5	<1	<1	0.04	8	11	0.57	194	3.2	<0.01	29.7	168	8.6	16

Certified By:

*Ron Cardinal*





**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

5623 McADAM ROAD  
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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ga	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Rb
Unit:	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	5	1	1	0.01	1	1	0.01	1	0.5	0.01	0.5	10	0.5	10
SF 5029 (-)	<5	<1	2	0.05	11	12	0.65	249	2.5	<0.01	38.5	199	8.7	18
SF 5030 (-)	<5	<1	<1	0.04	15	12	0.52	358	2.0	0.01	32.6	287	9.2	16
SF 5031 (-)	<5	<1	<1	0.05	12	10	0.52	338	1.3	0.01	32.0	409	8.2	13

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DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

	Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
86439 (-)		0.010	<1	3.5	<10	<5	40.4	<10	<10	<5	0.18	<5	<5	69.8	<1
86440 (-)		0.018	<1	3.6	<10	<5	94.1	<10	<10	<5	0.36	11	<5	126	<1
86441 (-)		0.012	<1	4.4	<10	<5	88.8	<10	<10	<5	0.28	10	<5	125	<1
86442 (-)		0.013	<1	4.5	<10	<5	158	<10	<10	<5	0.17	7	<5	102	<1
86443 (-)		0.036	1	4.2	<10	<5	53.3	<10	<10	<5	0.09	<5	<5	52.8	<1
86444 (-)		0.013	<1	6.7	<10	<5	44.8	<10	<10	<5	0.14	6	<5	80.9	<1
86445 (-)		0.013	<1	8.3	<10	<5	112	<10	<10	<5	0.18	6	<5	106	<1
86446 (-)		0.013	<1	6.0	<10	<5	51.4	<10	<10	<5	0.13	6	<5	77.1	<1
86447 (-)		0.013	<1	5.1	<10	<5	72.3	<10	<10	<5	0.22	9	<5	93.6	<1
86448 (-)		0.010	1	6.3	<10	<5	36.4	<10	<10	<5	0.11	<5	<5	64.6	<1
86449 (-)		0.014	<1	6.9	<10	<5	46.7	<10	<10	<5	0.26	9	<5	101	<1
86450 (-)		0.021	<1	4.7	<10	<5	176	<10	<10	<5	0.20	7	<5	94.0	<1
86451 (-)		0.018	<1	5.4	<10	<5	81.4	<10	<10	<5	0.49	15	<5	170	<1
86452 (-)		0.010	<1	5.5	<10	<5	76.8	<10	<10	<5	0.16	5	<5	72.0	<1
86453 (-)		0.014	<1	6.8	<10	<5	162	<10	<10	<5	0.24	9	<5	98.0	<1
86454 (-)		0.021	<1	4.8	<10	<5	125	<10	<10	<5	0.42	14	<5	144	<1
86455 (-)		0.019	<1	7.5	<10	<5	156	<10	<10	<5	0.18	7	<5	95.6	<1
MM 1001 (-)		0.005	<1	10.0	<10	<5	25.3	<10	<10	<5	0.12	<5	<5	65.1	<1
MM 1002 (-)		0.354	<1	5.6	<10	<5	18.6	<10	<10	<5	0.06	<5	<5	40.2	<1
MM 1003 (-)		0.008	<1	8.0	<10	<5	21.5	<10	<10	<5	0.16	<5	<5	74.3	<1
MM 1004 (-)		0.007	<1	6.2	<10	<5	16.2	<10	<10	<5	0.05	<5	<5	54.4	<1
MM 1005 (-)		0.007	<1	3.9	<10	<5	12.6	<10	<10	<5	0.07	<5	<5	53.9	<1
MM 1006 (-)		0.009	<1	7.8	<10	<5	16.6	<10	<10	<5	0.07	<5	<5	34.9	<1
MM 1007 (-)		0.005	<1	4.8	<10	<5	13.4	<10	<10	<5	0.02	<5	<5	41.2	<1
MM 1008 (-)		0.009	<1	8.4	<10	<5	22.4	<10	<10	<5	0.09	<5	<5	70.0	<1
MM 1009 (-)		0.017	<1	8.4	11	<5	16.4	<10	<10	<5	0.09	<5	<5	63.9	<1
MM 1010 (-)		0.009	<1	7.2	<10	<5	20.8	<10	<10	<5	0.08	<5	<5	60.7	<1
MM 1011 (-)		0.011	<1	5.2	<10	<5	17.2	<10	<10	<5	0.08	<5	<5	57.4	<1
MM 1012 (-)		0.013	<1	7.5	<10	<5	23.9	<10	<10	<5	0.09	<5	<5	64.9	<1
MM 1013 (-)		0.012	<1	8.1	<10	<5	24.8	<10	<10	<5	0.10	<5	<5	71.9	<1
MM 1014 (-)		0.014	<1	6.5	<10	<5	26.1	<10	<10	<5	0.08	<5	<5	62.3	<1
MM 1015 (-)		0.009	<1	7.0	<10	<5	26.6	<10	<10	<5	0.12	<5	<5	60.5	<1

Certified By:

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## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

	Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description	RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
MM 1016 (-)		0.009	<1	5.7	<10	<5	26.0	<10	<10	<5	0.09	<5	<5	63.6	<1
MM 1017 (-)		0.024	<1	6.9	<10	<5	22.3	<10	<10	<5	0.09	<5	<5	64.5	<1
MM 1018 (-)		0.018	1	10.7	<10	<5	26.6	<10	<10	<5	0.03	<5	<5	67.5	<1
MM 1019 (-)		0.045	1	4.0	<10	<5	15.1	<10	<10	<5	0.06	<5	<5	51.2	<1
MM 1020 (-)		0.107	<1	8.6	<10	<5	26.7	<10	<10	<5	0.20	8	<5	135	<1
MM 1021 (-)		0.022	<1	6.1	<10	<5	16.0	<10	<10	<5	0.13	5	<5	99.8	<1
MM 1022 (-)		0.012	<1	5.9	<10	<5	19.4	<10	<10	<5	0.19	7	<5	79.8	<1
MM 1023 (-)		0.008	<1	5.8	<10	<5	17.0	<10	<10	<5	0.16	6	<5	84.2	<1
MM 1024 (-)		0.007	<1	6.5	<10	<5	15.9	<10	<10	<5	0.06	<5	<5	61.6	<1
MM 1025 (-)		0.076	<1	7.1	<10	<5	28.4	<10	<10	<5	0.05	<5	<5	84.1	<1
MM 1026 (-)		0.008	1	7.2	<10	<5	20.4	<10	<10	<5	0.07	<5	<5	58.2	<1
MM 1027 (-)		0.033	<1	5.9	<10	<5	14.4	<10	<10	<5	0.08	<5	<5	60.0	<1
MM 1028 (-)		0.007	<1	7.0	<10	<5	12.6	<10	<10	<5	0.12	<5	<5	66.0	<1
MM 1029 (-)		0.016	<1	5.3	<10	<5	14.9	<10	<10	<5	0.07	<5	<5	48.2	<1
MM 1030 (-)		0.108	<1	6.8	<10	<5	27.5	<10	<10	<5	0.10	5	<5	86.5	<1
MM 1031 (-)		0.089	<1	7.5	<10	<5	27.2	<10	<10	<5	0.12	<5	<5	85.6	<1
MM 1032 (-)		0.068	<1	5.2	<10	<5	20.8	<10	<10	<5	0.10	<5	<5	73.8	<1
MM 1033 (-)		0.015	<1	8.6	<10	<5	21.6	<10	<10	<5	0.08	<5	<5	61.6	<1
MM 1034 (-)		0.323	<1	10.4	<10	<5	42.1	<10	<10	<5	0.15	6	<5	103	<1
MM 1035 (-)		0.120	<1	6.4	<10	<5	20.1	<10	<10	<5	0.13	<5	<5	102	<1
MM 1036 (-)		0.040	<1	3.4	<10	<5	15.1	<10	<10	<5	0.13	<5	<5	69.9	<1
MM 1037 (-)		0.197	<1	5.7	<10	<5	26.2	<10	<10	<5	0.12	<5	<5	68.4	<1
MM 1038 (-)		0.007	3	3.5	<10	<5	11.0	<10	<10	<5	0.02	<5	<5	40.3	<1
MM 1039 (-)		0.017	<1	13.9	<10	<5	27.1	<10	<10	<5	0.08	<5	<5	96.6	<1
MM 1040 (-)		0.077	<1	7.8	<10	<5	28.3	<10	<10	<5	0.04	<5	<5	65.7	<1
MM 1041 (-)		0.018	<1	2.8	<10	<5	17.6	<10	<10	<5	0.06	<5	<5	57.7	<1
MM 1042 (-)		0.013	<1	6.3	<10	<5	15.7	<10	<10	<5	0.09	<5	<5	51.4	<1
MM 1043 (-)		0.008	<1	4.0	<10	<5	17.3	<10	<10	<5	0.08	<5	<5	63.7	<1
MM 1044 (-)		0.007	<1	10.5	<10	<5	23.5	<10	<10	<5	0.11	<5	<5	90.7	<1
MM 1045 (-)		0.007	<1	6.9	<10	<5	16.4	<10	<10	<5	0.09	<5	<5	63.3	<1
MM 1046 (-)		0.028	3	7.1	<10	<5	16.8	<10	<10	<5	0.04	<5	<5	67.0	<1
MM 1047 (-)		0.007	<1	10.6	<10	<5	12.7	<10	<10	<5	0.10	<5	<5	72.6	<1

Certified By:

*Ron Cardinali*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
MM 1048 (-)	0.008	<1	6.3	<10	<5	17.6	<10	<10	<5	0.10	<5	<5	79.1	<1
MM 1049 (-)	0.009	<1	5.9	<10	<5	23.5	<10	<10	<5	0.06	<5	<5	54.9	<1
MM 1050 (-)	0.010	<1	6.5	<10	<5	21.7	<10	<10	<5	0.08	<5	<5	59.9	<1
MM 1051 (-)	0.009	1	7.6	<10	<5	23.9	<10	<10	<5	0.07	<5	<5	60.8	<1
MM 1052 (-)	0.010	<1	5.6	<10	<5	23.0	<10	<10	<5	0.09	<5	<5	59.3	<1
MM 1053 (-)	0.009	<1	10.1	<10	<5	15.7	<10	<10	<5	0.06	<5	<5	55.7	<1
MM 1054 (-)	0.010	<1	10.7	<10	<5	24.1	<10	<10	<5	0.11	<5	<5	72.9	<1
MM 1055 (-)	0.010	<1	6.0	<10	<5	23.1	<10	<10	<5	0.07	<5	<5	54.3	<1
MM 1056 (-)	0.009	<1	7.7	<10	<5	19.9	<10	<10	<5	0.10	<5	<5	62.3	<1
MM 1057 (-)	0.010	1	8.2	<10	<5	22.6	<10	<10	<5	0.11	<5	<5	75.8	<1
MM 1058 (-)	0.014	1	4.2	<10	<5	25.3	<10	<10	<5	0.07	<5	<5	55.1	<1
MM 1059 (-)	0.010	<1	4.9	<10	<5	25.8	<10	<10	<5	0.07	<5	<5	60.0	<1
MM 1060 (-)	0.007	<1	4.7	<10	<5	20.2	<10	<10	<5	0.07	<5	<5	57.0	<1
MM 1061 (-)	0.010	<1	5.9	12	<5	27.1	<10	<10	<5	0.08	<5	<5	54.3	<1
MM 1062 (-)	0.009	<1	5.1	<10	<5	17.3	<10	<10	<5	0.07	<5	<5	53.1	<1
MM 1063 (-)	0.007	1	3.0	<10	<5	7.8	<10	<10	<5	<0.01	<5	<5	17.9	<1
MM 1064 (-)	0.006	<1	5.6	<10	<5	7.8	<10	<10	<5	0.13	<5	<5	49.4	<1
MM 1065 (-)	0.007	<1	5.5	<10	<5	21.1	<10	<10	<5	<0.01	<5	<5	39.0	<1
MM 1066 (-)	0.112	<1	6.9	<10	<5	39.2	<10	<10	<5	0.12	<5	<5	81.9	<1
MM 1067 (-)	0.015	<1	9.6	<10	<5	27.2	<10	<10	<5	0.06	<5	<5	87.1	<1
MM 1068 (-)	0.055	<1	8.6	<10	<5	19.3	<10	<10	<5	0.06	<5	<5	62.6	<1
MM 1069 (-)	0.041	7	21.2	15	<5	84.2	<10	<10	<5	0.02	<5	<5	131	<1
MM 1070 (-)	0.019	<1	6.7	<10	<5	14.7	<10	<10	<5	0.09	<5	<5	72.9	<1
MM 1071 (-)	0.009	<1	7.6	<10	<5	19.5	<10	<10	<5	0.11	<5	<5	85.3	<1
MM 1072 (-)	0.012	<1	19.7	14	<5	15.4	<10	<10	<5	0.02	<5	<5	174	<1
MM 1073 (-)	0.397	<1	6.8	<10	<5	28.9	<10	<10	<5	0.19	5	<5	123	<1
MM 1074 (-)	0.007	<1	4.5	<10	<5	17.3	<10	<10	<5	0.10	<5	<5	56.3	<1
MM 1075 (-)	0.013	<1	10.1	18	<5	24.8	<10	<10	<5	0.13	5	<5	119	<1
MM 1076 (-)	0.384	<1	9.0	<10	<5	43.1	<10	<10	<5	0.17	6	<5	110	<1
MM 1077 (-)	0.013	<1	6.0	<10	<5	14.5	<10	<10	<5	0.10	<5	<5	78.1	<1
MM 1078 (-)	0.013	<1	12.0	13	<5	18.1	<10	<10	<5	0.30	10	<5	129	<1
MM 1079 (-)	0.109	<1	4.0	<10	<5	27.9	<10	<10	<5	0.12	<5	<5	66.2	<1

Certified By:

*Ron Cardinali*



## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
MM 1080 (-)	0.118	<1	4.6	<10	<5	22.1	<10	<10	<5	0.10	<5	<5	66.4	<1
MM 1081 (-)	0.015	<1	5.9	<10	<5	8.4	<10	<10	<5	0.11	<5	<5	66.8	<1
MM 1082 (-)	0.017	<1	8.3	<10	<5	21.4	<10	<10	<5	0.12	6	<5	118	<1
MM 1083 (-)	0.148	<1	5.8	<10	<5	24.5	<10	<10	<5	0.10	<5	<5	79.7	<1
MM 1084 (-)	0.009	<1	7.3	<10	<5	14.0	<10	<10	<5	0.10	<5	<5	69.7	<1
MM 1085 (-)	0.451	1	10.4	11	<5	51.1	<10	<10	<5	0.17	<5	<5	121	<1
MM 1086 (-)	0.048	<1	6.8	<10	<5	16.2	<10	<10	<5	0.10	<5	<5	92.1	<1
MM 1087 (-)	0.022	<1	9.4	<10	<5	19.2	<10	<10	<5	0.04	<5	<5	101	<1
MM 1088 (-)	0.190	<1	9.5	<10	<5	30.0	<10	<10	<5	0.10	<5	<5	88.7	<1
MM 1089 (-)	0.184	<1	5.7	<10	<5	28.6	<10	<10	7	0.13	<5	<5	41.2	<1
MM 1090 (-)	0.012	<1	4.5	<10	<5	32.1	<10	<10	<5	0.24	9	<5	160	<1
MM 1091 (-)	0.010	<1	3.3	<10	<5	30.6	<10	<10	<5	0.13	6	<5	79.1	<1
MM 1092 (-)	0.311	<1	11.8	<10	<5	22.6	<10	<10	<5	0.32	10	<5	141	<1
MM 1093 (-)	0.236	<1	12.6	<10	<5	34.5	<10	<10	<5	0.21	7	<5	148	<1
MM 1094 (-)	0.066	<1	6.5	<10	<5	26.5	<10	<10	<5	0.12	<5	<5	74.6	<1
MM 1095 (-)	0.325	<1	13.1	<10	<5	37.1	<10	<10	<5	0.11	<5	<5	138	<1
MM 1096 (-)	0.060	<1	12.1	<10	<5	25.3	<10	<10	<5	0.09	<5	<5	121	<1
MM 1097 (-)	0.012	<1	21.3	<10	<5	25.2	<10	<10	<5	0.11	6	<5	166	<1
MM 1098 (-)	0.283	<1	5.8	<10	<5	20.7	<10	<10	<5	0.05	<5	<5	69.2	<1
MM 1099 (-)	0.370	<1	6.0	<10	<5	33.2	<10	<10	<5	0.08	<5	<5	75.5	<1
MM 1100 (-)	0.006	<1	30.9	<10	<5	11.7	<10	<10	<5	0.24	9	<5	246	<1
MM 1101 (-)	0.016	<1	7.5	<10	<5	9.8	<10	<10	<5	0.14	6	<5	61.6	<1
MM 1102 (-)	0.009	<1	14.4	<10	<5	23.3	<10	<10	<5	0.23	10	<5	199	<1
MM 1103 (-)	0.047	<1	8.4	<10	<5	22.5	<10	<10	<5	0.18	7	<5	134	<1
MM 1104 (-)	0.009	<1	8.7	<10	<5	15.7	<10	<10	<5	0.16	6	<5	125	<1
MM 1105 (-)	0.009	<1	11.8	<10	<5	19.0	<10	<10	<5	0.14	5	<5	146	<1
MM 1106 (-)	0.233	<1	7.9	<10	<5	24.5	<10	<10	<5	0.21	7	<5	138	<1
MM 1107 (-)	0.015	<1	7.9	<10	<5	20.4	<10	<10	<5	0.18	6	<5	116	<1
MM 1108 (-)	0.015	<1	3.4	<10	<5	28.9	<10	<10	<5	0.08	<5	<5	64.3	<1
MM 1109 (-)	0.014	<1	3.4	<10	<5	19.9	<10	<10	<5	0.11	<5	<5	67.1	<1
MM 1110 (-)	0.012	<1	4.2	<10	<5	18.6	<10	<10	<5	0.05	<5	<5	63.4	<1
MM 1111 (-)	0.007	<1	5.3	<10	<5	13.1	<10	<10	<5	0.09	<5	<5	62.3	<1

Certified By:

*Ron Cardinal*



# AGAT Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
MM 1112 (-)	0.380	<1	11.0	<10	<5	29.0	<10	<10	<5	0.08	<5	<5	110	<1
MM 1113 (-)	0.033	<1	16.7	<10	<5	24.4	<10	<10	<5	0.04	<5	<5	117	<1
MM 1114 (-)	0.014	<1	4.5	<10	<5	30.3	<10	<10	<5	0.02	<5	<5	38.3	<1
MM 1115 (-)	0.012	<1	6.1	<10	<5	20.1	<10	<10	<5	0.05	<5	<5	57.3	<1
SF 5001 (-)	0.006	<1	7.5	<10	<5	14.1	<10	<10	<5	0.11	<5	<5	77.7	<1
SF 5002 (-)	0.107	<1	4.7	<10	<5	25.2	<10	<10	<5	0.06	<5	<5	51.7	<1
SF 5003 (-)	0.022	<1	6.0	<10	<5	16.2	<10	<10	<5	0.08	<5	<5	71.6	<1
SF 5004 (-)	0.010	2	10.3	<10	<5	18.9	<10	<10	<5	0.02	<5	<5	67.0	<1
SF 5005 (-)	0.009	<1	6.7	<10	<5	17.3	<10	<10	<5	0.06	<5	<5	60.6	<1
SF 5006 (-)	0.011	<1	2.7	<10	<5	20.8	<10	<10	<5	0.05	<5	<5	59.1	<1
SF 5007 (-)	0.039	<1	4.0	<10	<5	18.2	<10	<10	<5	0.09	<5	<5	69.7	<1
SF 5008 (-)	0.087	<1	9.3	<10	<5	27.9	<10	<10	<5	0.11	<5	<5	99.1	<1
SF 5009 (-)	0.011	<1	6.6	<10	<5	15.7	<10	<10	<5	0.03	<5	<5	69.8	<1
SF 5010 (-)	0.017	<1	5.1	<10	<5	20.4	<10	<10	<5	0.14	<5	<5	87.1	<1
SF 5011 (-)	0.008	<1	5.4	<10	<5	12.5	<10	<10	<5	0.08	<5	<5	61.1	<1
SF 5012 (-)	0.006	<1	5.7	<10	<5	10.4	<10	<10	<5	0.08	<5	<5	67.5	<1
SF 5013 (-)	0.011	<1	3.0	<10	<5	8.6	<10	<10	<5	0.07	<5	<5	61.9	<1
SF 5014 (-)	0.010	<1	3.8	<10	<5	11.9	<10	<10	<5	0.08	<5	<5	64.5	<1
SF 5015 (-)	0.018	<1	5.7	<10	<5	25.4	<10	<10	<5	0.06	<5	<5	71.3	<1
SF 5016 (-)	0.009	<1	3.8	<10	<5	10.1	<10	<10	<5	0.09	<5	<5	65.3	<1
SF 5017 (-)	0.007	<1	4.5	<10	<5	13.9	<10	<10	<5	0.08	<5	<5	61.4	<1
SF 5018 (-)	0.015	<1	8.0	<10	<5	14.9	<10	<10	<5	0.13	<5	<5	104	<1
SF 5019 (-)	0.017	<1	5.0	<10	<5	17.0	<10	<10	<5	0.06	<5	<5	53.5	<1
SF 5020 (-)	0.009	<1	4.4	<10	<5	12.0	<10	<10	<5	0.09	<5	<5	61.2	<1
SF 5021 (-)	0.010	<1	8.2	<10	<5	25.4	<10	<10	<5	0.08	<5	<5	90.0	<1
SF 5022 (-)	0.078	<1	7.5	<10	<5	49.5	<10	<10	<5	0.11	<5	<5	109	<1
SF 5023 (-)	0.012	<1	4.8	<10	<5	19.3	<10	<10	<5	0.06	<5	<5	48.7	<1
SF 5024 (-)	0.007	<1	5.8	<10	<5	15.1	<10	<10	<5	0.06	<5	<5	55.6	<1
SF 5025 (-)	0.017	<1	8.2	<10	<5	25.9	<10	<10	<5	0.08	<5	<5	97.2	<1
SF 5026 (-)	0.006	<1	5.0	<10	<5	14.0	<10	<10	<5	0.06	<5	<5	51.9	<1
SF 5027 (-)	0.007	<1	5.6	<10	<5	18.4	<10	<10	<5	0.06	<5	<5	56.6	<1
SF 5028 (-)	0.009	<1	3.1	<10	<5	13.0	<10	<10	<5	0.06	<5	<5	57.4	<1

Certified By:

*Ron Cardinal*



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W
Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Sample Description RDL:	0.005	1	0.5	10	5	0.5	10	10	5	0.01	5	5	0.5	1
SF 5029 (-)	0.009	<1	4.1	<10	<5	12.9	<10	<10	<5	0.07	<5	<5	61.2	<1
SF 5030 (-)	0.007	<1	6.4	<10	<5	15.7	<10	<10	<5	0.07	<5	<5	57.5	<1
SF 5031 (-)	0.008	<1	5.6	<10	<5	21.0	<10	<10	<5	0.07	<5	<5	57.1	<1

Certified By:

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AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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

CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

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

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
86439 (-)	8	71.7	<5
86440 (-)	5	169	<5
86441 (-)	4	120	<5
86442 (-)	6	132	<5
86443 (-)	8	48.0	<5
86444 (-)	12	114	7
86445 (-)	15	117	<5
86446 (-)	10	72.0	<5
86447 (-)	4	91.6	<5
86448 (-)	11	49.4	8
86449 (-)	10	106	<5
86450 (-)	8	110	<5
86451 (-)	9	332	<5
86452 (-)	6	47.2	5
86453 (-)	17	97.2	<5
86454 (-)	9	156	<5
86455 (-)	11	95.5	<5
MM 1001 (-)	13	87.6	8
MM 1002 (-)	11	80.1	<5
MM 1003 (-)	16	94.5	<5
MM 1004 (-)	8	132	7
MM 1005 (-)	13	47.9	<5
MM 1006 (-)	12	43.7	<5
MM 1007 (-)	5	50.0	9
MM 1008 (-)	14	75.0	<5
MM 1009 (-)	14	73.1	<5
MM 1010 (-)	17	64.1	<5
MM 1011 (-)	5	57.7	<5
MM 1012 (-)	13	56.3	<5
MM 1013 (-)	21	74.6	<5
MM 1014 (-)	8	62.3	<5
MM 1015 (-)	11	117	<5

Certified By:

*Ron Cardinal*





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AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

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DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
MM 1016 (-)	9	58.4	<5
MM 1017 (-)	12	89.1	<5
MM 1018 (-)	22	123	<5
MM 1019 (-)	4	48.4	<5
MM 1020 (-)	13	152	<5
MM 1021 (-)	17	181	<5
MM 1022 (-)	7	91.8	<5
MM 1023 (-)	5	90.7	<5
MM 1024 (-)	18	125	<5
MM 1025 (-)	13	104	<5
MM 1026 (-)	16	59.3	<5
MM 1027 (-)	10	98.6	<5
MM 1028 (-)	7	93.8	<5
MM 1029 (-)	8	74.4	<5
MM 1030 (-)	8	88.6	<5
MM 1031 (-)	15	82.9	<5
MM 1032 (-)	8	76.6	<5
MM 1033 (-)	12	63.1	7
MM 1034 (-)	14	107	<5
MM 1035 (-)	5	90.4	<5
MM 1036 (-)	4	92.8	<5
MM 1037 (-)	7	81.4	<5
MM 1038 (-)	5	72.4	<5
MM 1039 (-)	23	112	<5
MM 1040 (-)	18	94.5	5
MM 1041 (-)	3	55.5	<5
MM 1042 (-)	11	93.1	<5
MM 1043 (-)	5	45.4	<5
MM 1044 (-)	17	103	<5
MM 1045 (-)	13	60.3	<5
MM 1046 (-)	5	73.7	<5
MM 1047 (-)	14	63.6	11

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SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
MM 1048 (-)	6	69.1	<5
MM 1049 (-)	10	38.7	<5
MM 1050 (-)	11	49.3	<5
MM 1051 (-)	12	61.9	<5
MM 1052 (-)	8	53.6	<5
MM 1053 (-)	19	91.4	<5
MM 1054 (-)	16	79.2	10
MM 1055 (-)	10	60.1	<5
MM 1056 (-)	12	53.2	10
MM 1057 (-)	9	50.0	<5
MM 1058 (-)	8	58.0	<5
MM 1059 (-)	7	61.3	<5
MM 1060 (-)	8	49.3	<5
MM 1061 (-)	11	57.6	<5
MM 1062 (-)	6	47.5	7
MM 1063 (-)	3	24.9	<5
MM 1064 (-)	6	114	5
MM 1065 (-)	8	66.7	5
MM 1066 (-)	12	88.3	<5
MM 1067 (-)	39	165	<5
MM 1068 (-)	18	302	<5
MM 1069 (-)	22	114	<5
MM 1070 (-)	17	165	<5
MM 1071 (-)	8	55.5	<5
MM 1072 (-)	19	175	<5
MM 1073 (-)	6	95.7	<5
MM 1074 (-)	4	85.0	<5
MM 1075 (-)	21	128	<5
MM 1076 (-)	12	136	<5
MM 1077 (-)	8	76.2	<5
MM 1078 (-)	8	148	<5
MM 1079 (-)	5	88.7	<5

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DATE SAMPLED: Sep 21, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
MM 1080 (-)	5	65.9	<5
MM 1081 (-)	4	92.9	<5
MM 1082 (-)	9	102	<5
MM 1083 (-)	7	91.8	<5
MM 1084 (-)	15	111	<5
MM 1085 (-)	10	120	<5
MM 1086 (-)	9	128	<5
MM 1087 (-)	13	140	<5
MM 1088 (-)	16	85.6	<5
MM 1089 (-)	12	32.5	8
MM 1090 (-)	4	70.4	<5
MM 1091 (-)	5	45.7	<5
MM 1092 (-)	4	90.8	<5
MM 1093 (-)	13	200	<5
MM 1094 (-)	19	69.6	<5
MM 1095 (-)	19	129	5
MM 1096 (-)	20	128	<5
MM 1097 (-)	23	135	<5
MM 1098 (-)	7	109	<5
MM 1099 (-)	4	102	<5
MM 1100 (-)	16	108	<5
MM 1101 (-)	12	98.4	<5
MM 1102 (-)	8	160	8
MM 1103 (-)	7	107	<5
MM 1104 (-)	5	78.4	<5
MM 1105 (-)	8	110	<5
MM 1106 (-)	5	101	5
MM 1107 (-)	10	98.4	<5
MM 1108 (-)	3	68.7	<5
MM 1109 (-)	4	80.9	<5
MM 1110 (-)	11	87.5	<5
MM 1111 (-)	7	49.9	6

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DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description RDL:	1	0.5	5
MM 1112 (-)	12	90.7	<5
MM 1113 (-)	20	311	<5
MM 1114 (-)	10	165	<5
MM 1115 (-)	11	80.8	<5
SF 5001 (-)	10	63.5	<5
SF 5002 (-)	12	92.3	<5
SF 5003 (-)	7	76.1	<5
SF 5004 (-)	19	78.6	<5
SF 5005 (-)	11	58.4	<5
SF 5006 (-)	8	57.7	<5
SF 5007 (-)	4	64.0	<5
SF 5008 (-)	17	102	<5
SF 5009 (-)	6	38.4	<5
SF 5010 (-)	5	73.9	<5
SF 5011 (-)	5	63.8	5
SF 5012 (-)	6	65.4	<5
SF 5013 (-)	3	53.2	<5
SF 5014 (-)	3	52.2	<5
SF 5015 (-)	13	71.3	<5
SF 5016 (-)	3	53.9	<5
SF 5017 (-)	4	61.8	<5
SF 5018 (-)	11	114	<5
SF 5019 (-)	5	46.3	<5
SF 5020 (-)	5	65.8	<5
SF 5021 (-)	15	111	<5
SF 5022 (-)	12	101	<5
SF 5023 (-)	10	54.8	<5
SF 5024 (-)	14	57.0	<5
SF 5025 (-)	14	111	<5
SF 5026 (-)	11	44.4	<5
SF 5027 (-)	13	50.5	<5
SF 5028 (-)	5	51.7	<5

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

DATE SAMPLED: Sep 21, 2011

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DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Y	Zn	Zr
Unit:	ppm	ppm	ppm
Sample Description	RDL:	1	0.5
SF 5029 (-)		6	57.8
SF 5030 (-)		18	57.9
SF 5031 (-)		15	52.8

Comments: RDL - Reported Detection Limit

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CLIENT NAME: VOLCANIC METALS

ATTENTION TO: JOHN

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	Login Weight	
	RDL:	kg	ppb
		0.01	2
86439 (-)		0.33	7
86440 (-)		0.27	19
86441 (-)		0.24	<2
86442 (-)		0.29	<2
86443 (-)		0.40	10
86444 (-)		0.48	3
86445 (-)		0.43	5
86446 (-)		0.54	<2
86447 (-)		0.51	2
86448 (-)		0.63	<2
86449 (-)		0.56	22
86450 (-)		0.49	5
86451 (-)		0.47	10
86452 (-)		0.46	3
86453 (-)		0.49	4
86454 (-)		0.48	<2
86455 (-)		0.55	8
MM 1001 (-)		0.44	6
MM 1002 (-)		0.44	31
MM 1003 (-)		0.38	36
MM 1004 (-)		0.41	3
MM 1005 (-)		0.45	3
MM 1006 (-)		0.48	<2
MM 1007 (-)		0.41	<2
MM 1008 (-)		0.46	4
MM 1009 (-)		0.45	5
MM 1010 (-)		0.49	32
MM 1011 (-)		0.42	4
MM 1012 (-)		0.43	19
MM 1013 (-)		0.49	5
MM 1014 (-)		0.44	<2
MM 1015 (-)		0.48	3

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

DATE RECEIVED: Sep 20, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Sample Description	Analyte: Sample Login Weight	Au
	Unit: kg RDL: 0.01	ppb 2
MM 1016 (-)	0.42	3
MM 1017 (-)	0.46	15
MM 1018 (-)	0.45	<2
MM 1019 (-)	0.46	4
MM 1020 (-)	0.47	<2
MM 1021 (-)	0.50	2
MM 1022 (-)	0.39	6
MM 1023 (-)	0.43	6
MM 1024 (-)	0.45	<2
MM 1025 (-)	0.46	<2
MM 1026 (-)	0.46	12
MM 1027 (-)	0.46	29
MM 1028 (-)	0.45	2
MM 1029 (-)	0.46	3
MM 1030 (-)	0.45	<2
MM 1031 (-)	0.42	3
MM 1032 (-)	0.51	6
MM 1033 (-)	0.50	3
MM 1034 (-)	0.47	3
MM 1035 (-)	0.46	<2
MM 1036 (-)	0.50	<2
MM 1037 (-)	0.50	6
MM 1038 (-)	0.43	<2
MM 1039 (-)	0.46	<2
MM 1040 (-)	0.47	5
MM 1041 (-)	0.43	<2
MM 1042 (-)	0.46	<2
MM 1043 (-)	0.51	6
MM 1044 (-)	0.56	3
MM 1045 (-)	0.47	27
MM 1046 (-)	0.41	<2
MM 1047 (-)	0.49	6

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SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
MM 1048 (-)		0.52	<2
MM 1049 (-)		0.39	2
MM 1050 (-)		0.45	2
MM 1051 (-)		0.51	15
MM 1052 (-)		0.42	2
MM 1053 (-)		0.38	<2
MM 1054 (-)		0.48	3
MM 1055 (-)		0.42	3
MM 1056 (-)		0.50	<2
MM 1057 (-)		0.50	<2
MM 1058 (-)		0.48	<2
MM 1059 (-)		0.43	17
MM 1060 (-)		0.47	13
MM 1061 (-)		0.53	3
MM 1062 (-)		0.44	<2
MM 1063 (-)		0.47	<2
MM 1064 (-)		0.51	11
MM 1065 (-)		0.44	20
MM 1066 (-)		0.43	<2
MM 1067 (-)		0.45	<2
MM 1068 (-)		0.43	11
MM 1069 (-)		0.47	6
MM 1070 (-)		0.47	<2
MM 1071 (-)		0.46	2
MM 1072 (-)		0.49	11
MM 1073 (-)		0.50	33
MM 1074 (-)		0.45	<2
MM 1075 (-)		0.47	2
MM 1076 (-)		0.50	<2
MM 1077 (-)		0.45	2
MM 1078 (-)		0.44	4
MM 1079 (-)		0.45	<2

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Sample Description	Analyte:	Sample	Au
	Unit:	kg	ppb
RDL:		0.01	2
MM 1080 (-)		0.48	3
MM 1081 (-)		0.47	<2
MM 1082 (-)		0.48	2
MM 1083 (-)		0.47	10
MM 1084 (-)		0.49	<2
MM 1085 (-)		0.46	<2
MM 1086 (-)		0.52	17
MM 1087 (-)		0.47	<2
MM 1088 (-)		0.43	41
MM 1089 (-)		0.50	4
MM 1090 (-)		0.53	<2
MM 1091 (-)		0.56	4
MM 1092 (-)		0.49	<2
MM 1093 (-)		0.54	3
MM 1094 (-)		0.49	19
MM 1095 (-)		0.47	<2
MM 1096 (-)		0.49	<2
MM 1097 (-)		0.44	<2
MM 1098 (-)		0.48	<2
MM 1099 (-)		0.49	<2
MM 1100 (-)		0.47	<2
MM 1101 (-)		0.46	<2
MM 1102 (-)		0.48	<2
MM 1103 (-)		0.49	<2
MM 1104 (-)		0.44	26
MM 1105 (-)		0.47	2
MM 1106 (-)		0.42	<2
MM 1107 (-)		0.43	<2
MM 1108 (-)		0.40	4
MM 1109 (-)		0.45	6
MM 1110 (-)		0.49	13
MM 1111 (-)		0.47	3

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### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Sample Description	Analyte: Sample Login Weight	Au
	Unit: kg RDL: 0.01	ppb 2
MM 1112 (-)	0.47	<2
MM 1113 (-)	0.43	<2
MM 1114 (-)	0.45	3
MM 1115 (-)	0.47	3
SF 5001 (-)	0.57	16
SF 5002 (-)	0.42	13
SF 5003 (-)	0.49	<2
SF 5004 (-)	0.46	<2
SF 5005 (-)	0.48	6
SF 5006 (-)	0.44	16
SF 5007 (-)	0.39	4
SF 5008 (-)	0.50	3
SF 5009 (-)	0.44	2
SF 5010 (-)	0.49	<2
SF 5011 (-)	0.45	2
SF 5012 (-)	0.41	5
SF 5013 (-)	0.35	28
SF 5014 (-)	0.41	<2
SF 5015 (-)	0.54	<2
SF 5016 (-)	0.32	<2
SF 5017 (-)	0.46	<2
SF 5018 (-)	0.49	<2
SF 5019 (-)	0.48	<2
SF 5020 (-)	0.36	<2
SF 5021 (-)	0.42	9
SF 5022 (-)	0.55	<2
SF 5023 (-)	0.40	<2
SF 5024 (-)	0.49	<2
SF 5025 (-)	0.52	27
SF 5026 (-)	0.49	<2
SF 5027 (-)	0.54	5
SF 5028 (-)	0.41	<2

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ATTENTION TO: JOHN

### Fire Assay - Trace Au, AAS finish (202051)

DATE SAMPLED: Sep 21, 2011

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SAMPLE TYPE: Soil

Analyte:	Sample	Au
	Login Weight	
Unit:	kg	ppb
Sample Description	RDL:	2
SF 5029 (-)	0.39	<2
SF 5030 (-)	0.59	4
SF 5031 (-)	0.46	3

Comments: RDL - Reported Detection Limit

Certified By:

*Ron Cardinal*

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

Solid Analysis											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2725325	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2725223	1.54	1.55	0.6%	< 0.01				80%	120%
As	1	2725223	6	6	0.0%	< 1				80%	120%
B	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2725223	248	256	3.2%	< 1				80%	120%
Be	1	2725223	0.5	0.5	0.0%	< 0.5				80%	120%
Bi	1	2725223	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2725223	0.545	0.550	0.9%	< 0.01				80%	120%
Cd	1	2725223	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2725223	33	33	0.0%	< 1				80%	120%
Co	1	2725223	5.87	5.25	11.2%	< 0.5				80%	120%
Cr	1	2725223	19.7	19.7	0.0%	< 0.5				80%	120%
Cu	1	2725223	22.3	22.4	0.4%	0.5	3934	3700	106%	80%	120%
Fe	1	2725223	2.51	2.52	0.4%	< 0.01				80%	120%
Ga	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2725223	< 1	< 1	0.0%	< 1				80%	120%
In	1	2725223	< 1	< 1	0.0%	< 1				80%	120%
K	1	2725223	0.49	0.49	0.0%	< 0.01				80%	120%
La	1	2725223	16	16	0.0%	< 1				80%	120%
Li	1	2725223	9	10	10.5%	< 1				80%	120%
Mg	1	2725223	0.78	0.80	2.5%	< 0.01				80%	120%
Mn	1	2725223	430	414	3.8%	< 1				80%	120%
Mo	1	2725223	1.17	1.14	2.6%	1.8				80%	120%
Na	1	2725223	0.02	0.02	0.0%	< 0.01				80%	120%
Ni	1	2725223	8.17	7.52	8.3%	< 0.5				80%	120%
P	1	2725223	1240	1180	5.0%	< 10				80%	120%
Pb	1	2725223	6.8	6.7	1.5%	0.9				80%	120%
Rb	1	2725223	75	74	1.3%	< 10				80%	120%
S	1	2725223	0.010	0.010	0.0%	< 0.005				80%	120%
Sb	1	2725223	< 1	< 1	0.0%	2				80%	120%
Sc	1	2725223	3.45	3.39	1.8%	< 0.5				80%	120%
Se	1	2725223	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2725223	40.4	43.1	6.5%	< 0.5	313	290	107%	80%	120%
Ta	1	2725223	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2725223	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2725223	0.18	0.18	0.0%	< 0.01				80%	120%
Tl	1	2725325	< 5	< 5	0.0%	< 5				80%	120%
U	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
V	1	2725223	69.8	69.3	0.7%	< 0.5				80%	120%
W	1	2725223	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2725223	8	8	0.0%	< 1				80%	120%
Zn	1	2725223	71.7	75.0	4.5%	< 0.5				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

Solid Analysis (Continued)											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Zr	1	2725223	< 5	< 5	0.0%	< 5				80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2725250	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2725250	1.82	1.66	9.2%	< 0.01				80%	120%
As	1	2725250	10	10	0.0%	< 1				80%	120%
B	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2725250	239	224	6.5%	< 1				80%	120%
Be	1	2725250	0.54	0.56	3.6%	< 0.5				80%	120%
Bi	1	2725250	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2725250	0.182	0.174	4.5%	< 0.01				80%	120%
Cd	1	2725250	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2725250	24	23	4.3%	< 1				80%	120%
Co	1	2725250	6.8	6.8	0.0%	< 0.5				80%	120%
Cr	1	2725250	30.0	30.3	1.0%	< 0.5				80%	120%
Cu	1	2725250	24.3	24.2	0.4%	< 0.5	3880	3700	104%	80%	120%
Fe	1	2725250	2.65	2.40	9.9%	< 0.01				80%	120%
Ga	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2725250	< 1	< 1	0.0%	< 1				80%	120%
In	1	2725250	< 1	< 1	0.0%	< 1				80%	120%
K	1	2725250	0.05	0.05	0.0%	< 0.01				80%	120%
La	1	2725250	11	11	0.0%	< 1				80%	120%
Li	1	2725250	11	10	9.5%	< 1				80%	120%
Mg	1	2725250	0.436	0.408	6.6%	< 0.01				80%	120%
Mn	1	2725250	408	393	3.7%	< 1				80%	120%
Mo	1	2725348	8.58	9.26	7.6%	< 0.5				80%	120%
Na	1	2725250	0.01	0.01	0.0%	< 0.01				80%	120%
Ni	1	2725250	23.5	22.9	2.6%	< 0.5				80%	120%
P	1	2725250	219	216	1.4%	< 10				80%	120%
Pb	1	2725250	9.9	9.5	4.1%	< 0.5				80%	120%
Rb	1	2725250	15	15	0.0%	< 10				80%	120%
S	1	2725250	0.011	0.011	0.0%	< 0.005				80%	120%
Sb	1	2725250	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2725250	5.2	5.2	0.0%	< 0.5				80%	120%
Se	1	2725250	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2725250	17.2	15.7	9.1%	0.6	292	290	100%	80%	120%
Ta	1	2725250	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2725250	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
Ti	1	2725250	0.075	0.070	6.9%	< 0.01				80%	120%
Tl	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
U	1	2725250	< 5	< 5	0.0%	< 5				80%	120%
V	1	2725250	57.4	57.0	0.7%	< 0.5				80%	120%
W	1	2725250	< 1	< 1	0.0%	< 1				80%	120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Y	1	2725250	5	5	0.0%	< 1				80% 120%
Zn	1	2725250	57.7	58.4	1.2%	< 0.5				80% 120%
Zr	1	2725250	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2725275	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2725275	1.87	1.85	1.1%	< 0.01				80% 120%
As	1	2725275	7	6	15.4%	< 1				80% 120%
B	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2725275	368	367	0.3%	< 1				80% 120%
Be	1	2725275	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Bi	1	2725275	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2725275	0.175	0.178	1.7%	< 0.01				80% 120%
Cd	1	2725275	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2725275	19	19	0.0%	< 1				80% 120%
Co	1	2725275	15.8	16.2	2.5%	< 0.5				80% 120%
Cr	1	2725275	63.8	65.5	2.6%	< 0.5				80% 120%
Cu	1	2725275	53.2	55.3	3.9%	< 0.5	3861	3700	104%	80% 120%
Fe	1	2725275	3.35	3.30	1.5%	< 0.01				80% 120%
Ga	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2725275	< 1	< 1	0.0%	< 1				80% 120%
In	1	2725275	< 1	< 1	0.0%	< 1				80% 120%
K	1	2725275	0.308	0.304	1.3%	< 0.01				80% 120%
La	1	2725275	9	8	11.8%	< 1				80% 120%
Li	1	2725275	17	17	0.0%	< 1				80% 120%
Mg	1	2725275	0.96	0.97	1.0%	< 0.01				80% 120%
Mn	1	2725275	699	720	3.0%	< 1				80% 120%
Mo	1	2725275	6.0	6.0	0.0%	< 0.5				80% 120%
Na	1	2725275	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Ni	1	2725275	90.6	94.0	3.7%	< 0.5				80% 120%
P	1	2725275	640	663	3.5%	< 10				80% 120%
Pb	1	2725275	9.30	9.68	4.0%	< 0.5				80% 120%
Rb	1	2725275	98	100	2.0%	< 10				80% 120%
S	1	2725275	0.0398	0.0382	4.1%	< 0.005				80% 120%
Sb	1	2725275	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2725275	3.42	3.46	1.2%	< 0.5				80% 120%
Se	1	2725275	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2725275	15.1	15.7	3.9%	< 0.5	304	290	104%	80% 120%
Ta	1	2725275	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2725275	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2725275	0.13	0.13	0.0%	< 0.01				80% 120%
Tl	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
U	1	2725275	< 5	< 5	0.0%	< 5				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
V	1	2725275	69.9	71.4	2.1%	< 0.5				80% 120%
W	1	2725275	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2725275	4	5	22.2%	< 1				80% 120%
Zn	1	2725275	92.8	96.9	4.3%	< 0.5				80% 120%
Zr	1	2725275	< 5	< 5	0.0%	< 5				80% 120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)										
Ag	1	2725300	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Al	1	2725300	1.36	1.30	4.5%	< 0.01				80% 120%
As	1	2725300	10	10	0.0%	< 1				80% 120%
B	1	2725300	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2725300	322	318	1.3%	< 1				80% 120%
Be	1	2725300	0.57	0.55	3.6%	< 0.5				80% 120%
Bi	1	2725300	< 1	< 1	0.0%	< 1				80% 120%
Ca	1	2725300	0.328	0.314	4.4%	< 0.01				80% 120%
Cd	1	2725300	< 0.5	< 0.5	0.0%	< 0.5				80% 120%
Ce	1	2725300	27	25	7.7%	< 1				80% 120%
Co	1	2725300	5.8	5.8	0.0%	< 0.5				80% 120%
Cr	1	2725300	31.4	31.4	0.0%	< 0.5				80% 120%
Cu	1	2725300	42.1	42.5	0.9%	< 0.5	3968	3700	107%	80% 120%
Fe	1	2725300	2.38	2.29	3.9%	< 0.01				80% 120%
Ga	1	2725300	< 5	< 5	0.0%	< 5				80% 120%
Hg	1	2725300	< 1	< 1	0.0%	< 1				80% 120%
In	1	2725371	< 1	< 1	0.0%	< 1				80% 120%
K	1	2725300	0.045	0.044	2.2%	< 0.01				80% 120%
La	1	2725300	13	13	0.0%	< 1				80% 120%
Li	1	2725300	9	9	0.0%	< 1				80% 120%
Mg	1	2725300	0.43	0.42	2.4%	< 0.01				80% 120%
Mn	1	2725300	380	384	1.0%	< 1				80% 120%
Mo	1	2725371	0.8	1.4		< 0.5				80% 120%
Na	1	2725300	0.01	0.01	0.0%	< 0.01				80% 120%
Ni	1	2725300	23.1	23.4	1.3%	< 0.5				80% 120%
P	1	2725300	570	577	1.2%	< 10				80% 120%
Pb	1	2725300	9.1	9.2	1.1%	< 0.5				80% 120%
Rb	1	2725300	11	10	9.5%	< 10				80% 120%
S	1	2725300	0.010	0.010	0.0%	< 0.005				80% 120%
Sb	1	2725371	< 1	< 1	0.0%	< 1				80% 120%
Sc	1	2725300	5.9	5.8	1.7%	< 0.5				80% 120%
Se	1	2725371	< 10	< 10	0.0%	< 10				80% 120%
Sn	1	2725300	< 5	< 5	0.0%	< 5				80% 120%
Sr	1	2725300	27.1	24.4	10.5%	< 0.5	325	290	112%	80% 120%
Ta	1	2725300	< 10	< 10	0.0%	< 10				80% 120%
Te	1	2725300	< 10	< 10	0.0%	< 10				80% 120%
Th	1	2725300	< 5	< 5	0.0%	< 5				80% 120%
Ti	1	2725300	0.076	0.072	5.4%	< 0.01				80% 120%
Tl	1	2725300	< 5	< 5	0.0%	< 5				80% 120%

## Quality Assurance

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

Solid Analysis (Continued)											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
U	1	2725300	< 5	< 5	0.0%	< 5				80%	120%
V	1	2725300	54.3	52.5	3.4%	< 0.5				80%	120%
W	1	2725300	< 1	< 1	0.0%	< 1				80%	120%
Y	1	2725300	11	10	9.5%	< 1				80%	120%
Zn	1	2725300	57.6	56.1	2.6%	< 0.5				80%	120%
Zr	1	2725300	< 5	< 5	0.0%	< 5				80%	120%
Aqua Regia Digest - Metals Package, ICP-OES finish (201073)											
Ag	1	2725378	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Al	1	2725378	1.56	1.67	6.8%	< 0.01				80%	120%
As	1	2725378	7	9	25.0%	< 1				80%	120%
B	1	2725378	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2725378	286	304	6.1%	< 1				80%	120%
Be	1	2725378	0.6	0.6	0.0%	< 0.5				80%	120%
Bi	1	2725378	< 1	< 1	0.0%	< 1				80%	120%
Ca	1	2725378	0.185	0.196	5.8%	< 0.01				80%	120%
Cd	1	2725378	< 0.5	< 0.5	0.0%	< 0.5				80%	120%
Ce	1	2725378	31	33	6.3%	< 1				80%	120%
Co	1	2725378	6.74	6.82	1.2%	< 0.5				80%	120%
Cr	1	2725378	35.1	35.9	2.3%	< 0.5				80%	120%
Cu	1	2725378	46.0	46.2	0.4%	< 0.5	3912	3700	105%	80%	120%
Fe	1	2725378	2.57	2.72	5.7%	< 0.01				80%	120%
Ga	1	2725378	< 5	< 5	0.0%	< 5				80%	120%
Hg	1	2725378	< 1	< 1	0.0%	< 1	1.5	1.3	119%	80%	120%
In	1	2725378	< 1	< 1	0.0%	< 1				80%	120%
K	1	2725378	0.042	0.045	6.9%	< 0.01				80%	120%
La	1	2725378	15	16	6.5%	< 1				80%	120%
Li	1	2725378	14	14	0.0%	< 1				80%	120%
Mg	1	2725378	0.55	0.58	5.3%	< 0.01				80%	120%
Mn	1	2725378	283	287	1.4%	< 1				80%	120%
Mo	1	2725378	2.3	1.4		< 0.5				80%	120%
Na	1	2725378	< 0.01	0.01		< 0.01				80%	120%
Ni	1	2725378	35.4	35.9	1.4%	< 0.5				80%	120%
P	1	2725378	244	246	0.8%	< 10				80%	120%
Pb	1	2725378	9.11	9.27	1.7%	< 0.5				80%	120%
Rb	1	2725378	16	16	0.0%	< 10				80%	120%
S	1	2725378	0.007	0.007	0.0%	< 0.005				80%	120%
Sb	1	2725378	< 1	< 1	0.0%	< 1				80%	120%
Sc	1	2725378	5.82	5.92	1.7%	< 0.5				80%	120%
Se	1	2725378	< 10	< 10	0.0%	< 10				80%	120%
Sn	1	2725378	< 5	< 5	0.0%	< 5				80%	120%
Sr	1	2725378	15.1	14.4	4.7%	< 0.5	298	290	102%	80%	120%
Ta	1	2725378	< 10	< 10	0.0%	< 10				80%	120%
Te	1	2725378	< 10	< 10	0.0%	< 10				80%	120%
Th	1	2725378	< 5	< 5	0.0%	< 5				80%	120%





## Quality Assurance

CLIENT NAME: VOLCANIC METALS  
PROJECT NO: WALHALLA

AGAT WORK ORDER: 11Y531249  
ATTENTION TO: JOHN

### Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Ti	1	2725378	0.062	0.067	7.8%	< 0.01				80% 120%
TI	1	2725378	< 5	< 5	0.0%	< 5				80% 120%
U	1	2725378	< 5	< 5	0.0%	< 5				80% 120%
V	1	2725378	55.6	57.0	2.5%	< 0.5				80% 120%
W	1	2725378	< 1	< 1	0.0%	< 1				80% 120%
Y	1	2725378	14	14	0.0%	< 1				80% 120%
Zn	1	2725378	57.0	57.5	0.9%	< 0.5				80% 120%
Zr	1	2725378	< 5	< 5	0.0%	< 5				80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725378	<2	<2	0.0%	<2	863	849	101%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725234	47	43	8.9%	<2	814	849	95%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725250	4	3	28.6%	<2	965	922	104%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725258	4	<2		<2	795	849	93%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725275	<2	<2	0.0%	<2	910	922	98%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725285	<2	2		<2	919	922	99%	80% 120%
Fire Assay - Trace Au, AAS finish (202051)										
Au	1	2725300	3	4	28.6%	<2	837	849	98%	80% 120%

Certified By:

*Ron Cardinal*

## Method Summary

CLIENT NAME: VOLCANIC METALS

AGAT WORK ORDER: 11Y531249

PROJECT NO: WALHALLA

ATTENTION TO: JOHN

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