GEOLOGICAL and GEOCHEMICAL and GEOPHYSICAL REPORT

on the

ICE RIVER PROPERTY

Volume I - Report

Golden Mining Division

Mapsheet 82N/01W

Center of Work

Latitude 51° 10' N, Longitude 116°23'W

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November 13, 2009

SUMMARY

The 2009 Bootleg Exploration program at the Ice River property continued exploration for REE and Nb, Zr, (Ta, Hf), (Fe,Ti,P), and (Pb-Zn-Ag-Cu-Au) associated with syenite and carbonatite intrusions of the Ice River Complex (IRC) and Cambrian and Ordovician carbonates. This consisted of geophysical surveying, grid and contour soil sampling, ground mapping and prospecting, and rock and stream sediment sampling.

The I.P. and ground magnetic surveys carried out over the known mineralization at the Waterloo showing indicated a pronounced anomalous signature of high chargeability, low resistivity and extreme high and low magnetic signatures.

Extension of previous systematic soil, and stream-silt geochemical surveys have successfully highlighted targets of interest. A REE (La, Ce, Y) anomaly on the southeast flank of Buttress Peak is consistent over a 600 x 600 meter area and represents a prime target for further evaluation. Additional spotty anomalies in Nb and Mo were detected.

Field work to date has established a widespread spatial distribution of REE and Nb mineralization with economic potential. Total REEs in excess of 26000 ppm have been documented insitu with 24 samples over 5.6 kilometeres returning greater than 3000 ppm tREE. Thirty-four samples over 5.6 kilometeres have returned greater than 600 ppm Nb, with the best sample returning 3923 ppm Nb. The styles of mineralization are now well established with the most prospective mineralization associated with syenite and carbonatite dykes and zones that have been extensively zeolite and/or fennite altered.

A number of other commodities are being passively explored for on the property. Those which show some promise include 1) (nepheline) syenite as a source of ceramic grade feldspathic minerals, 2) sodalite syenite as a source of semi-precious gemstones or aggregate, and 3) a wide variety of intrusive phases of the Ice River complex which could be used as dimension stone. Despite the complex structural history of the area, felsic and mafic phases of the complex are remarkably undeformed and could readily be developed into a range of attractive building products.

Future work should include detailed prospecting and mapping of the REE, Nb, Mo soil anomaly along the SE aspect of Buttress Peak followed by trenching activities. Depending on the initial findings, ground based geophysical surveys including magnetics, scintillometer and possibly I.P. could be employed to further delineate sound drilling targets.

As well, detailed prospecting and mapping in the northern area of the property on the south flank of Sentry peak and along the ridge above the south South Bowl is highly recommended. Thus far no detailed exploration has been undertaken in these areas.

A total of $224,382.23 was spent during the 2009 field program. A forecast for the following field season recommends a budget of $95 416.20.

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Location and Access

The Ice River property is located within the Golden Mining Division, on NTS mapsheet 82N/1W at Latitude 51° 10' N, Longitude 116° 23' W (Figure 1). It is located within the headwaters of Moose Creek, occupying the western side of the valley. Moose Creek drains southward to the Beaverfoot Valley, which flows northwestward to the Kicking Horse River . The property is situated 45 km east of Golden, B.C. and is currently accessed by helicopter. Forest Service roads reach to within 5km of property boundaries.

The property is located from elevation 1760 to 2800m, and consists of primary subalpine scrub vegetation and talus. Lower elevations are forest-covered, with mature spruce and pine dominating. The climate is dominated by prevailing moist westerly winds from the Pacific Ocean. Occasionally, drier continental weather patterns extend over the region. Generally, summers are short and cool, with occasional hot spells, while winters are long and snowy. Annual precipitation in the adjacent Kootenay National Park ranges from less than 380 mm at lower elevations to over 1250 mm at higher elevations. In valley bottoms, average January highs are -7°C, while July highs average 22°C. Average temperatures decrease by about 0.5°C for every 100 m of elevation gain.

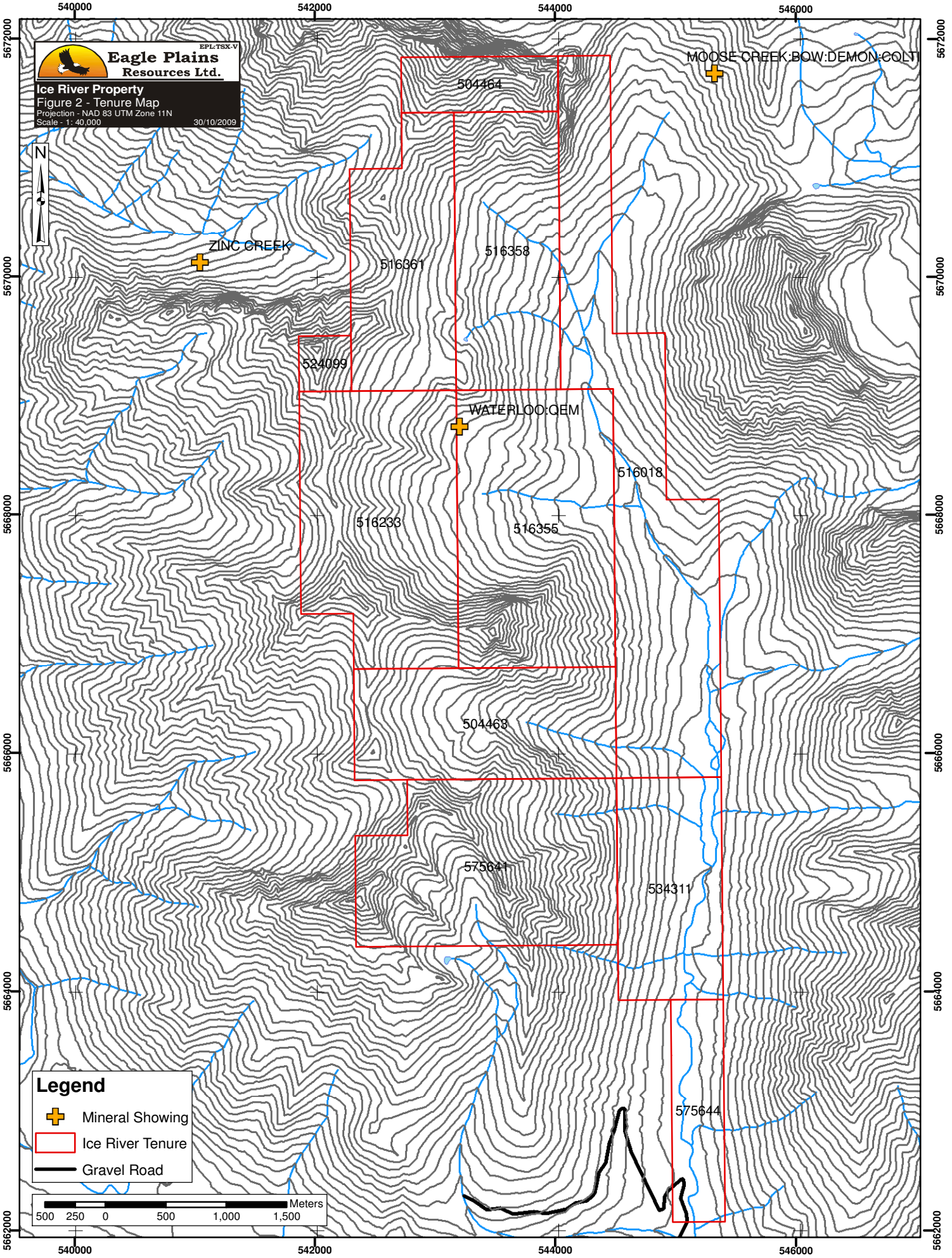

EPL:TSX-V
Eagle Plains Resources Ltd.
Ice River Property
Figure 1 - Property Location Map
Projection - NAD 83 UTM Zone 11N
Scale - 1: 7,678,198
30/10/2009
140°0'0"W
130°0'0"W
120°0'0"W
60°0'0"N
50°0'0"N
Yukon Territory
Northwest Territories
Alaska
British Columbia
Alberta
Pacific Ocean
Ice River Property
Vancouver
Victoria
Washington
Montana
Idaho
N
150 75 0 150 300
Kilometers

TENURE

The property consists of 11 MTO mineral claims totaling 2169 Ha, located within NTS mapsheet 082N/01W, and is entirely within 1:20000 mapsheet 082N.019 (Figure 2). The area is approximately 45 kilometres east of Golden, B.C. The claims are owned 100% by Eagle Plains Resources Ltd. and carry no underlying encumbrances.

Table 1 – Ice River Tenure Summary

Tenure Number	Ownership	Claim Name	Recording Date	Expiry Date	Mining Division	Area (ha)
575641	100% EPL	IV	08/02/2008	15/11/2011	6 Golden	283.9060
575644	100% EPL	IV	08/02/2008	15/11/2011	6 Golden	81.1473
524099	100% EPL	IV (ZINC MTN)	20/12/2005	15/11/2016	6 Golden	20.2630
534311	100% EPL	IV	23/05/2006	15/11/2016	6 Golden	162.2380
504463	100% EPL	IV	21/01/2005	15/11/2016	6 Golden	202.7440
504464	100% EPL	IRC 6	21/01/2005	15/11/2016	6 Golden	60.7630
516018	100% EPL	IRC EAST	05/07/2005	15/11/2016	6 Golden	385.0650
516233	100% EPL	IV	07/07/2005	15/11/2016	6 Golden	283.7520
516355	100% EPL	IV	08/07/2005	15/11/2016	6 Golden	304.0240
516358	100% EPL	IV	08/07/2005	15/11/2016	6 Golden	202.5960
516361	100% EPL	IV	08/07/2005	15/11/2016	6 Golden	182.3390


Eagle Plains Resources Ltd.
EPL:TSX-V
Ice River Property
Figure 2 - Tenure Map
Projection - NAD 83 UTM Zone 11N
Scale - 1: 40,000
30/10/2009
N
ZINC CREEK
MOOSE CREEK:BOW:DEMON:COLT
WATERLOO:QEM
504464
516361
516358
524099
516018
516233
516355
504463
575641
534311
575644
540000
542000
544000
546000
5672000
5670000
5668000
5666000
5664000
5662000
Legend
Mineral Showing
Ice River Tenure
Gravel Road
Meters
500 250 0 500 1,000 1,500

History and Previous Work

The Ice River group of claims overlies a sequence of rocks that has seen geologic investigation since the early 1900s. This is due to both the unique geological and geochemical characteristics of the area, and the considerable economic potential located there. Various groups have completed programs in the area, first described in 1914 by J.A. Allan in GSC Memoir No. 55, Map 142A. Albany Oil and Gas in 1971 staked the Bow 1-49 claims, which cover most of the area now underlain by the Ice River tenures. Their work consisted of evaluating the property for a number of commodities, including titaniferous magnetite, uranium, columbium/niobium, and sodalite. Cominco Ltd. investigated the Moose Creek area in 1971 (Webber and MacKean, 1971).

In the late 1980's to early 1990's the property was revisited for its sodalite potential (Addie, 1990). The area is of great interest to mineral collectors primarily for sodalite, and also for a wide variety of rareminerals associated with alkaline complexes (http://www.mindat.org/loc-475.html).

In 1993, the headwaters of the Moose Creek basin were acquired by Magtite Mineral Ltd. and restaked as the Kim and Gust claims. The initial focus of work was to test the potential of industrial quality titaniferous magnetite and ilmenite (Termuende, 1998; Butrenchuck, 2001). Results included a rough resource calculation and brief notes on the distribution of sodalite on the property.

The Ice River Complex is one of the largest and best preserved alkaline ijolite/syenite/carbonatite complexes in the world. As such, it has been the focus of several projects from both economic and academic perspectives. Over the decades since its discovery, several competing theories have been presented to explain its derivation, evolution, and emplacement. Many details remain speculative or controversial. In particular, little work on the metallogenesis of the complex has been reported.

Allan (1914) originally mapped the central core carbonate units as limestone inclusions. Allan's work was revised and updated by Currie (1975) after Rapson (1963) argued for the presence of an igneous carbonatite body. Gussow (1977) supported Allan's interpretation that the crystalline limestone masses of the complex are recrystallized and remobilized limestone. He went further to suggest that the entire\ complex is actually a Precambrian basement complex brought to the surface in two thrust sheets, comprising nepheline and sodalite syenite, paragneiss and crystalline limestones. These arguments were made despite the prevailing body of knowledge supporting igneous derivation and emplacement, supported by textural evidence (Currie, 1975), differentiation trends (Campbell, 1961) and Devonian K-Ar mica dates (Baadsgaard, 1961; Rapson 1963). Parrish et al., (1987) proposed an age of 368+-4 Ma for the complex, based on a synthesis of dating techniques, including U-Pb dating of zircon and sphene, Rb-Sr analysis of various minerals, and $^{40}Ar/^{39}Ar$ age spectrum on hornblende. He acknowledged that all isotopic systems are disturbed. Locock (1994) discussed the metamorphic conditions that affected these and other isotopic systems, and provided a concordant U-Pb age date of 356+-6 Ma.

Questions are ongoing regarding the petrogenetic evolution of the complex. Currie (1975), and Locock (1994) concluded that the complex was emplaced mainly as sill-like bodies and subordinate dykes and plugs. The diverse array of rock types were derived from a single magma pulse, ultimately affected by various combinations of fractional crystallization, and silicate/carbonate and silicate/silicate immiscibility. Work done by Peterson (1983) agreed with Currie's petrologic subdivisions, but brought into question the role of liquid immiscibility and specifics of emplacement.

Peterson and Currie (1994) provided evidence to suggest that the ijolite and nepheline syenite were derived from separate magma batches, but that the evolution of the igneous system is complex because of variable degrees of incorporation of country rock. They also suggested that metasomatic activity may provide possible mechanisms for the formation of some of the rock types in the complex, particularly the units rich in zeolites. They concluded that it is difficult to explain the complex shape and distribution of the units of the Ice River Complex while envisioning a single source pluton of simple shape.

History of work by Eagle Plains Resources Ltd.

The northern half of the current tenure was staked by Eagle Plains Resources in October of 2003. Work commenced in 2005 and included reconnaissance rock geochemical sampling and prospecting of talus and outcrop in the cirques and valleys east of the Yoho National park boundary (Brown, 2006). Two persons spent five days exploring alpine and subalpine areas north and east of the ridges delimitated by Buttress Peak west to Manganese Mountain, and Manganese Mountain north to the minor peak between Zinc Mountain and Sentry Peak.

Traverses in the property area successfully located or verified mineral potential for the semiprecious gemstone sodalite, dimension stone (syenite, and alkaline mafic intrusive rock), and industrial or rare metals including titanium, niobium, zirconium and a variety of rare earth elements (REEs). Many occurrences of zeolite mineralization/alteration were also noted throughout the property area, both as large euhedral vug filling masses, and as microscopic alteration of syenite as mapped by Currie (1975). Massive sulfide mineralization at the Waterloo showing comprises of structurally controlled and replacement mineralization, with 2005 outcrop samples containing up to several percent lead and zinc, greater than 6500 ppm copper, 1200 ppb gold, and above detection limit silver (>100 ppm) (Brown, 2006). Total expenditures for the 2005 program were $19,186.51.

The 2006 Bootleg Exploration program (Brown, 2007) consisted of four components: i) Detailed stratigraphic and structural mapping of country rock in the vicinity of the Waterloo Zn-Pb-Ag showing; ii) property-scale geologic mapping of the cirque east and north of the divides defined by Zinc Mountain, Manganese Mountain and Buttress Peak; iii) lithogeochemical and contour soil geochemical sampling within areas iⅈ and iv) stream, silt and heavy mineral sampling of Moose Creek and tributaries.

The geologic mapping at the Waterloo showing area identified a significant sub-unit lithological contact within the Ottertail Formation, and a swarm of lamprophyre (ultramafic diatreme) and syenite dykes and a dominant WNW trending, tight fold system. Mapping of the cirque below Zinc and Manganese mountains provided greater detail of the distribution of the zoned syenite and layered mafic intrusions of the Ice River complex. Mapping also revealed the presence of two previously unreported zones rich in sodalite syenite. One such zone coincides with a multi-element soil geochemical anomaly (Zn, Pb, Li, Mo, Y, Ba, Cu, La, and Nb). Total expenditures for the 2006 program were $40,015.81.

The 2007 exploration program conducted by Bootleg Exploration Inc (Brown, 2008) consisted of two parts: i) a nine day field program consisting of soil sampling, prospecting and mapping along the east flank of Buttress peak and the upper benches from Sodalite cirque and the 2800 m elevation marker on the south flank of the Sentry peak. ii) A five hole diamond drill program from two pad locations, Pad A located 20 m WSW of the main Waterloo adit and Pad B, located near the projected intersection of the 2a-2b contact and a second parallel set of lamprophyre-syenite dykes, located 120 m ENE of the

Waterloo adit.. This drill program coincided with prospecting and sampling the ridge lines and the northern and southernmost bowls below Sentry peak and south of Butress peak respectively.

The 2007 drilling program successfully verified significant Pb, Zn, Ag, Cu metal contents in addition to notable gold up to 340 ppb. At the property scale, mineralization is generally conformable to E-W bedding planes, but this association is complicated by other subparallel foliation structures, as well as a number of crosscutting features (dykes and veins), that also exhibit base metal mineralization. Of great significance to future programs at the showing is the fact that associated mineralization was intersected at Pad B, 120 metres west of the showing, thus verifying the continuity of mineralization along a predictable stratigraphic/structural feature.

Two days were spent on the property in 2008, conducting geologic mapping focused on the layered mafic complex along the ridge between Zinc Mountain and Sentry peak, the Waterloo adit and an outcrop of crosscutting syenite dykes located 600 m north of Manganese Mountain.

Recent mapping has extended delineations of the Ottertail Limstone (Unit 2) into the north and south bowls (Figure 4). Although, mineralization at the Waterloo is associated with the unit 2a-2b contact; extensive ankerite gossan with minor sulphides have also been observed along the stratigraphically higher 2b-2c contact. Semimassive, stratabound pyrrohtite was observed near the contact, in the midst of a sizable gossan.

Total expenditures for the 2007 and 2008 programs were $216,789.13.

GEOLOGY

Regional Geology

The Ice River Complex (IRC) is a large, J-shaped alkaline intrusion, approximately 18 kilometres in length with a total exposure of 29 square kilometres (Figure 3). Within the complex, two distinct suites are present: an early, rhythmically layered, feldspar-free intrusion of jacupirangite, ijolite and urtite, cored by a carbonatite plug and cross-cut by carbonatite dykes rich in mafic silicates and oxides; and a later zoned and cross-cutting syenitic series, associated with a zeolite and feldspar-bearing carbonatite. The alkaline rocks intruded Cambrian and Ordovician shales and carbonates of the Chancellor, Ottertail and McKay Formations. The following stratigraphic unit descriptions are derived mainly from Currie (1975):

Stratigraphy

Country Rock

The oldest country rock in the area consists of sheared argillaceous rocks of the Upper Cambrian *Chancellor Formation* (Unit 1). The lowest parts of the formation comprise grayish calcareous shales or argillites, sometimes showing phyllitic parting, whereas upper lithologies are dominated by reddish slate interbedded with dolomite or siliceous limestone (Currie, 1975). In the Ice River Valley, a succession more than 600m thick is exposed. No exposures have been documented in the Moose Creek drainage area. Macroscopically there is a sharp contact between the Chancellor Formation and the overlying Ottertail limestone; however, lithologies consistent with one formation are noted to interbed in the adjacent one, suggesting a conformable gradational contact at a local scale.

The overlying *Ottertail Formation* (Unit 2) consists of essentially massive limestone with some intercalated shaly beds near the base. On a fresh surface the rock displays a blue-grey shade, weathering to pale grey. This unit is the most common throughout the map area, and may obtains thicknesses greater than 500m (Currie, 1975). The unit is almost pure carbonate, with only minor insoluable constituents including argillaceous material and lesser quartz. Towards the top of the formation, lithologies exhibit a characteristic olive shade, with a transition from massive cliff-forming limestone to sharply angular blocks. This physical variation demarcates a transition to the overlying McKay Group.

The *McKay Group* (Unit 3) exposed in the Ice River area is characterized by alternating bands of slate, siliceous slate, siliceous limestone, and dolomite. The colour is commonly olive to brownish, with distinct colour striping, as on Striped Mountain southeast of the area. The unit forms a capping on the ranges of the Ice River, and is thus thickest at higher elevations. Currie (1975) calculated a true thickness of exposure on top of Mt. Goodsir to a minimum of 1035 m. Another large but thin exposure exists on Eagle Ridge and parts of Mt. Mollison, where it appears to form a narrow synclinal core in the Ottertail Formation. Fossil evidence suggests an Ordovician age for the top of the Group, and a Late Cambrian age for the base (Aitken and Norford, 1967).

Layered Mafic Intrusion (units 5-9)

The lowermost units of the Ice River Complex are characterized as mafic mesocratic to melanocratic rocks, with a general lack of feldspar, and a poorly to moderately developed layered structure. Five units were recognized and described by Currie (1975): jacupirangite, mela-ijolite, melanite ijolite, ijolite, and urtite. In general, the units are coarse grained with a high proportion of euhedral to subhedral crystals, but textures of the mafic complex are highly variable comprising significant numbers of veins, schlieren and pegmatitic patches. The general pattern of layering consists of a repetitive sequence of graded layers 10-200 m thick, with each layer becoming richer in nepheline towards the top.

The *jacupirangite* (unit 5) is a brown- and green-weathering ultramafic rock having granular and gneissic textures. White carbonate and/or syenitic veining is common. Rocks of the unit are high density with a panidiomorphic texture comprising grains averaging more than 5mm in length. Pyroxene and magnetite are primary constituents, with lesser honey coloured sphene and minor patches of phlogopite flakes. Nepheline and apatite are common minor to trace constituents.

The *mela-ijolite* (unit 6) has a distinctive fine-grained bluish matrix, and contains abundant mica in the form of large euhedral books up to 10 cm across. Pyroxene is the most abundant constituent with lesser nepheline as rounded or scalloped grains approaching a cubic form. Sphene is moderately abundant. Apatite is present, but in lesser volumes in comparison to the jacupirangite.

The *melanite ijolite* (unit 7) exhibits a typical ijolite texture (subequal amounts of cubic nepheline enclosed in stubby laths of pyroxene). Melanite, a black titanium-rich garnet, commonly comprises 5-15% of the volume. The unit is characterized by coarse to pegmatitic grain sizes, with greenish grey nepheline surrounded by greenish black pyroxene. Biotite forms as a minor constituent rimming pyroxene and less commonly as fine disseminations. Apatite is common as sizable euhedra. Sphene occurs rarely and is lesser brown than in the mela-ijolite. Alteration of nepheline to carbonate, natrolite, cancrinite and/or sericite is much more widespread than in the more mafic units.

The *ijolite* (unit 8) is recognized as the largest component of the layered igneous complex, and is characterized as mesocratic to melanocratic in appearance with generally greenish tones, in comparison to the bluish-black tones of the more mafic units. Large scale textures are the most variable of all the mafic units; and may include coxcomb textures, megapoikolitic areas, pegmatitic schlieren and porphyritic textures, and others. Composition is essentially equal proportions of nepheline and pyroxene, with accessory sphene and apatite, and trace biotite and opaques.

Rocks of the *urtite* (unit 9) were identified by Currie (1975) on the basis of nepheline content (>65%) and lack of the typical ijolite or ‘buckshot’ texture. In hand specimen the urtite is leucocratic with a pale greenish or grayish colour, punctuated by clots of greenish black pyroxene. The texture is always coarse grained with common fissile or schistose textures due to the elongation of pyroxene or presence of oriented wollastonite. Mafic minerals are commonly poikilitic at fine to coarse scale. Kaersutite and melanite are found occasionally, as is small amounts of anhedral, interstitial albite. This is the only unit of the layered mafic complex that contains primary feldspar. Other trace minerals, also coarse grained, include sphene, apatite and calcite. The urtite unit is believed to represent the end member differentiation product of the mafic layered complex, which culminated in a leucocratic nepheline-rich rock. However, the unit shows an impoverishment of Zr, Nb and REE’s compared to the ijolites and syenites of the zoned complex, suggesting that these elements may have been siphoned off elsewhere

as residual differentiates (Currie, 1975).

Carbonatite (unit 10)

A 400 m wide intrusive carbonate unit in the northwestern part of the complex occurs as a lenticular mass with occasional apparent layering. Smaller dykes and sills are also evident throughout the complex crosscutting the mafic layered complex, but are clearly crosscut by the later zoned syenite complex. In outcrop, purer carbonatite tends to be buff or reddish brown with a rounded ropy surface. More silicaterich rocks tend to have a dark greenish appearance, with pronounced fluidal banding. Vugs and solution cavities are prevalent throughout. Composition is >50% carbonate – heavy hand samples suggest high Fe content (Currie, 1975). Crystal faces of the carbonate are always present, and commonly exceed 5 mm in length. Minor minerals include iron-stained to black phlogopitic mica, acmitic pyroxene, and lesser apatite and pyrite. Rare alkali feldspars are interpreted as xenoliths. Margins commonly exhibit skarn-like mineral assemblages including apple green diopside, sprays of white tremolite, epidote and chlorite. Sodalite was observed as veins within the carbonatite, but no disseminations were noted. Anastomosing leucocratic veins are also common in the carbonatite masses, containing abundant natrolite and dark margins of the Fe-serpentine, berthierine (Peterson and Currie, 1994).

Zoned syenite complex (units 11-15)

The syenitic complex as mapped by Currie (1975) comprises 5 units including unit 11) Saturated syenite and contact breccia, 12) Melanocratic syenitic agmatite and migmatite, 13) Leucocratic grey nepheline syenite, 14) Sodalite-nepheline syenite, and 15) Altered zeolite-rich syenite. In simplest terms, the syenite complex is envisioned as an inwardly crystallized mass of feldspar-nepheline-rich rocks, comprising a saturated (contaminated) border zone, and evolution from melanocratic syenites to progressively lighter coloured feldspar-sodalite-zeolite enriched lithologies.

The *contact breccia syenite* (unit 11) is characterized as a white to pale grey, fine-grained, commonly porphyritic syenite, which forms a discontinuous rim varying from a few centimetres up to 200 m in width. In outcrop, it is a drab whitish colour with abundant plate-like crystals of albite, which reveal a distinctive tracery of white lines. Inclusions of all sizes, shapes and compositions are common. Both alkali and plagioclase feldspars are present, commonly comprising more than 75% of rock volume. Pyroxene is the most common mafic mineral, with common but subordinate epidote and Na-rich amphiboles. Minor minerals include: sphene, commonly partially replaced by ilmenite; analcite, commonly intergrown with thompsonite, natrolite and calcite. Calcite may also be common, and associated with nepheline.

The *melanocratic syenite* (unit 12) comprises mesocratic to melanocratic rocks with variable agmatitc and migmatitic textures. In had specimen the rocks are characterized by large amphibole euhedra and bluish-grey alkali feldspar with good crystal faces but with form variations from near equant grains in more mafic lithologies to elongated laths in the more salic rocks. Alkali feldspar, nepheline and sodalite are virtually always present, with the nepheline vs. feldspar ratio generally higher in the darker lithologies. Kaersutite is very characteristic of this unit, and is closely associated with late pyroxene of aegirinic affinity. Biotite is present in the more mafic rocks, as rimming alteration of pyroxene, and more rarely as chains of small euhedra parallel to foliation defined by alignment of pyroxene and amphibole. Sphene and apatite are the most common accessory minerals.

The *leucocratic grey nepheline syenite* (unit 13) is white to pale grey in outcrop and is readily identifiable as smooth non-weathered cliff forming outcrops. Compared to the melanocratic syenite, rocks of this unit are much more homogeneous and free of inclusions. Many examples have a slight greenish tinge, others show a strong gneissic texture. The previous unit grades continuously into this unit, and is conspicuous by a low content of coarse-grained euhedral mafics which may include hedenbergitic pyroxene, aegirine, kaersutite, hastinsite and biotite. Intensely jade green to opaque aegirine is perhaps quite common, as is poikilitic amphibole. Feldspar is typically up to several centimetres in length as tabular and aligned prisms. Nepheline is less common in this unit than in the darker syenites, rarely exceeding 20%. It typically formed rounded and corroded grains with square or hexagonal cross-section, and is invariably rimmed with cancrinite. Sodalite is commonly associated with nepheline, and may locally exceed nepheline in volume. The sodalite occurs both as overgrowths on nepheline and as individual interstitial grains. It has been noted by previous workers, that intensely blue sodalite is commonly associated with pyrite cubes. Sphene is invariably present, but apatite occurrences are more rare. Sr and Ba contents are among the highest observed in the Ice River Complex, but Nb and rare-earth contents are lower than in the older units (Currie, 1975).

The *sodalite-nepheline syenite* (unit 14) is widely distributed throughout the Ice River complex, but is volumetrically insignificant. Most of the rocks from this unit are coarse grained to pegmatitc. The unit is easily identifiable as containing leucocratic rock rich in jade-green to blue sodalite. The volumetrically lesser mafic minerals, also commonly exhibit a distinct jade-green tinge. Feldspar is volumetrically the most significant mineral, generally occurring as subhedral forms with complex sutured edges. Nepheline is common, but not in large amounts, occurring as rounded and xenomorphic grains with little alteration. In contrast to the other units of the complex, sphene and apatite are essentially absent. Accessory minerals found include disseminated fluorite, and a variety of rare minerals characteristic of sodium-rich rocks, including lavenite, lamprophyllite, ramsayite, and possibly arfvedsonite (Currie, 1975).

The *altered zeolite-rich syenite* (unit 15) is a distinctive buff-weathering, medium-grained, inhomogeneous syenite. It occurs as irregular, poorly defined layers some 10's of metres thick. In handsample the rock is pale brown and dominated by phenocrysts of alkali feldspar up to 2cm across. Acmitic pyroxene is the dominant mafic mineral, occurring as stubby rounded prisms. Biotite occurs locally as an overgrowth on pyroxene. In thin section, significant volumes of the zeolite natrolite (unit 14), were observed as large radiating sheaves along veins, and as a fine granular mass in the matrix of the rock.

Mafic dyke rocks (unit 16)

Mafic dykes are found cross-cutting all units of the Ice River complex and are found most commonly near the presumed roof of the complex. They are all lamprophyric, meaning that they contain only mafic phenocrysts, and no salic phenocrysts. Biotite followed by olivine are the most common phyric components. As determined in thin section (Currie, 1975), alkali feldspar and lesser nepheline are the most common interstitial minerals, along with minor biotite or pyroxene. Sphene, calcite and apatite are common accessory minerals. Chemically, the lamprophyre is identical to the mela-ijolite (Currie, 1975), thus presenting timing and emplacement conundrums considering they also intrude some of the youngest syenite units.

Contact metamorphism and alteration

Emplacement of the Ice River Complex in late Devonian time (Parish et al., 1987; Locock, 1994), resulted in significant contact metamorphism of the surrounding country rock. These effects are most visible within the prevalent Ottertail Formation as extensive and pervasive hornfelsing, and morelocalized skarn development.

"The hornfels is composed of extremely hard dense, greenish grey to olive rocks with characteristic brownish spots 2-10 mm in diameter. The rocks break into discs or plates a few centimetres thick, commonly along slickensided surfaces which may contain quartz or calcite veinlets up to a centimetre thick forming en echelon gash or ladder veins. Carbonate interbeds in the hornfels are invariably finely sacharroidal marble, even when the containing beds are intensely altered to hornfels. Near the contact of the igneous rocks, the spots in the hornfels tend to become elongate, forming augen, and the rock takes on a more marked foliation becoming phyllitic. Within a few feet of the contact, some hornfels become more massive and pinkish, approaching foliated syenite gneiss, generally with interbeds of syenite material (Curie, 1975, pg. 8)." The margins of the hornfels are difficult to delineate as they blend into low-grade regional metamorphic rocks, which are also characterized as fine grained and hard with an angular habit.

Fenitization is defined as a type of alkali metasomatism characterized by secondary K-feldspar as well as sodic amphiboles and pyroxenes. Typical minerals include sodic amphibole, wollastonite, nepheline, mesoperthite, antiperthite, aegerine-augite, pale brown biotite, phlogopite and albite. Most fenites are zones of desilicification with additions of Fe3+, Na and K (Birkett and Simandl, 1999). The net result is to alter the host to a rock resembling a syenite. Thus, it often becomes difficult to distinguish the alkali intrusives from metasomatically altered gneiss (http://geology.csupomona.edu/drjessey/fieldtrips/mtp/mtnpass.htm). Fenitization is commonly associated with alkaline intrusions. Surprisingly, its recognition is sparse in the vicinity of the Ice River complex (Peterson and Currie, 1994; Currie 1975). Peterson and Currie (1994) did recognize and describe limited examples of fenitic alteration in the Garnet Mountain area. i) Alteration of limestone screens within ijolite to zeolites+aegirine. Zeolite rich lithologies alter to a distinctive white to pink or red. Large bodies of zeolite-rich syenite recognized by Currie (1975) may represent coalesced, melted fenites. ii) Secondary? wollastonite in pegmatitic dykes of ijolite and urtite, as evidence for fenitization, and iii) A cap of pegmatitic syenite overlying an ijolite-carbonatite dyke swarm. It is composed of the only silica saturated rocks known in the drainage area, and is interpreted to be the product of isochoric replacement of country rock.

Economic Geology

Four minfile occurences are located within the Ice River Complex or within its contact metamorphic halo (Table 2; Figure 3).

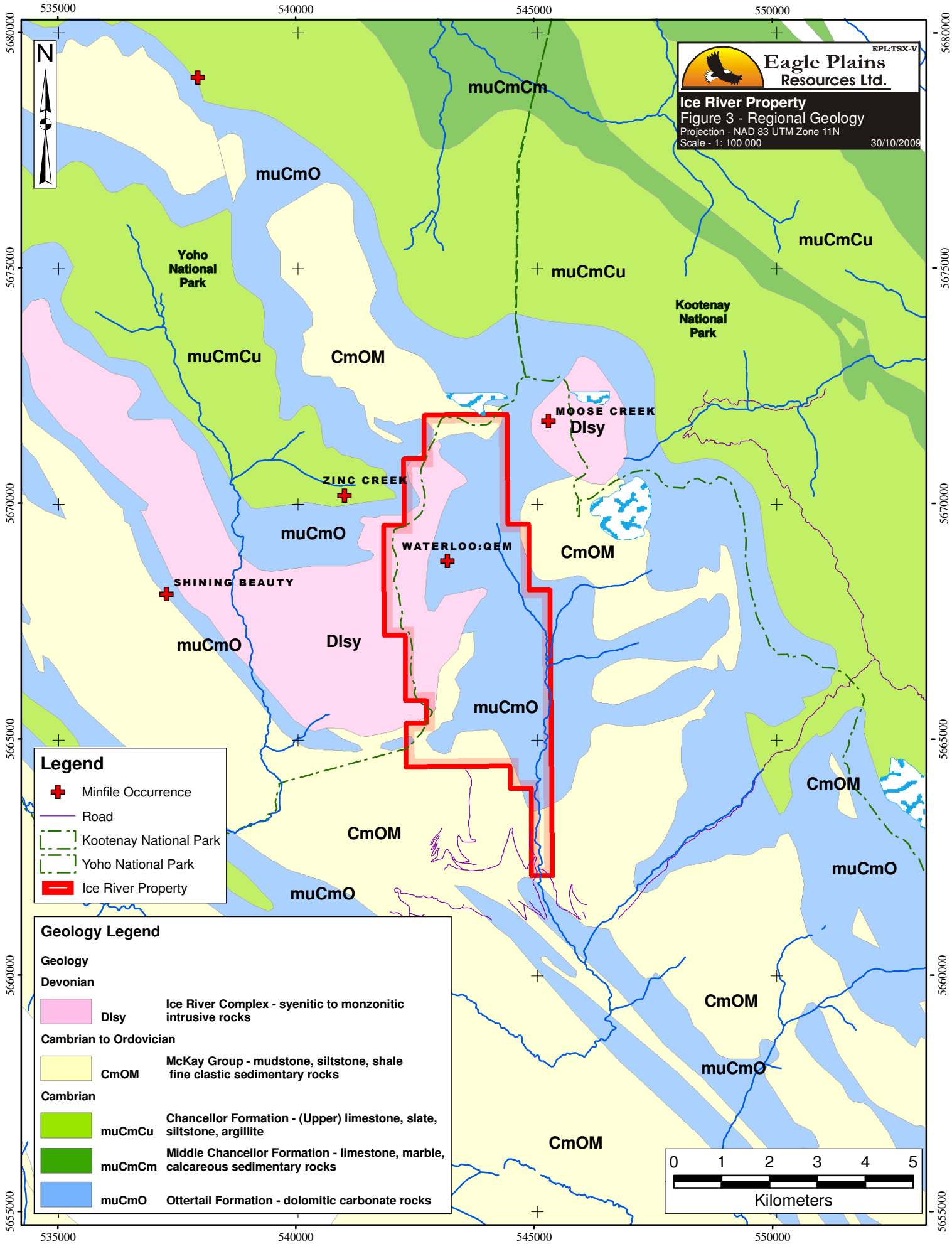
Table 2 – Minfile Mineral Occurrences

Minfile No.	Name	Status	Commodities	Deposity Type	Latitude	Longitude
082N 025	Shining Beauty, Shining Beauty Creek	Past Producer	Zn, Ag, Pb, Cu	I05	51 09 44	116 28 00
082N 026	Zinc Creek	Showing	Zn, Pb	E12	51 10 50	116 24 46
082N 027	Moose Creek, Bow, Demon, Colti	Developed Prospect	Ma, Ti, Rs, Nb, Th	N01	51 11 40	116 21 04
082N 028	Waterloo, QEM	Prospect	Ag, Pb, Zn, Cu, Au, Gs, Ur, Ns	E14, J01, N01	51 10 00	116 22 59

The *Waterloo prospect* and *Shining Beauty mine site* are both hosted in limestone of the Ottertail Formation. Both showings contain Zn-Pb-Ag-Cu base metal mineralization associated with moderate to high temperature replacement, mantos or vein structures. Base metal mineralization at the Waterloo showing is also anomalously enriched in U-Th and rare earth elements as well as Au. Mining operations at the Shining Beauty from 1908-1911 produced an unspecified amount of silver and zinc ore from 3 almost parallel tunnels about 60 metres apart. Only the Waterloo prospect lies within the current EPL mineral titles listed in Table 1.

The *Zinc Creek showing* occurs within a thick series of thin bedded, well-cleaved calcareous shales of the Chancellor Group. Interbedded with the shales are narrow bands of siliceous limestone 0.6 to 0.9 metre thick. Lead-zinc mineralization is developed within one of these bands. An irregular lenticular pocket of quartz-calcite with bands of pyrite, arsenopyrite, sphalerite and galena replaces a siliceous limestone band about 3 metres thick.

The *Moose Creek developed prospect* contains a number of commodities all hosted in or closely associated with layered mafic units of the Ice River Complex. Ilmenite-magnetite mineralization, mainly as sphene and magnetite, occurs in quartzite, pegmatite and jacupirangite rocks. Assays range up to 13.2 per cent TiO_2 and 20.6 per cent iron (Assessment Report 3389). Knopite, a cerium-bearing perovskite, is present in a pegmatite dike. Sodalite occurs as veins in the intrusion. Analysis for columbium/niobium yielded 0.67 per cent Cb_2O_5 (Assessment Report 3389). A radioactive northeast-trending shear zone, 1200 metres to the south, yielded up to 0.019 per cent uranium. Other commodities include thorium (up to 0.077 per cent ThO_2 over 3 metres) and traces of rare earths, chiefly lanthanum and ytterbium (Minister of Mines Annual Report 1954, page 150). Ilmenite-magnetite bearing gravels and sands occupy the valley along Moose Creek. A 10 by 300 metre area assayed up to 8.2 per cent TiO_2 (Assessment Report 3389).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EPL:TSX-V
Eagle Plains Resources Ltd.
Ice River Property
Figure 3 - Regional Geology
Projection - NAD 83 UTM Zone 11N
Scale - 1: 100 000
30/10/2009
muCmCm
muCmO
muCmCu
Yoho National Park
Kootenay National Park
CmOM
MOOSE CREEK
Dlsy
ZINC CREEK
WATERLOO:QEM
SHINING BEAUTY
Legend
Minfile Occurrence
Road
Kootenay National Park
Yoho National Park
Ice River Property
Geology Legend
Geology
Devonian
Dlsy
Ice River Complex - syenitic to monzonitic intrusive rocks
Cambrian to Ordovician
CmOM
McKay Group - mudstone, siltstone, shale fine clastic sedimentary rocks
Cambrian
muCmCu
Chancellor Formation - (Upper) limestone, slate, siltstone, argillite
muCmCm
Middle Chancellor Formation - limestone, marble, calcareous sedimentary rocks
muCmO
Ottertail Formation - dolomitic carbonate rocks
0 1 2 3 4 5
Kilometers

Property Geology

Historic geologic mapping at the Ice River property is limited to regional scale (1:25000) mapping by Currie (1975) and Allan (1914). The western half of the 2.8 km wide by 6.0 km long property is dominated by intrusives of the zoned syenite complex and subordinate but significant occurrences of the layered mafic complex (Figure 4). The central to eastern parts of the property, including the eastern flanks of Zinc and Buttress peaks down to the valley bottom, is dominated by limestone of the Ottertail formation. The Waterloo prospect (MF 082N 028; Table II) lays essentially dead centre of the property area, within the Ottertail formation, approximately 350 metres east of the northerly trending contact with the syenite complex.

Geological mapping carried out in 2006 (Brown, 2007) contributed greater detail of east aspect lithologies over a 2 x 1.8 kilometre area centred along the ridge separating the sodalite-bearing cirque and the Waterloo-bearing bowl (Figure 4). The original Currie (1975) map was used as a basemap with modifications overlain on Figure 4. Important modifications include:

1) Subdivision of the Ottertail Formation (Unit 2) into four subunits:
    a) Tannish-grey, medium- to fine-well bedded, fine to very fine grained, silty to phyllitic limestone.
    b) Brown to grey weathering, light bluish-grey to greenish-grey fresh, hard blocky, medium to finely laminated, poorly bedded, fine to medium grained calcareous limestone. 2Bf: Grey, poorly bedded, fragmental limestone; common on the east aspect at the northern limit of mapping (Figure 4).
    c) Grey and light grey, thin and thick interbedded, well bedded limestone.
    d) Orange weathering, tannish-grey, thin-well bedded limestone with pervasive ironcarbonate alteration.
2) Extension of Unit 2 (2b) southwards: Rationale – Several unambiguous limestone outcrops exposed in the main sodalite-bearing bowl.
3) Additional layered mafic units were observed in several areas of the sodalite-bearing bowl and up to the divide between Manganese and Zinc mountains.

A large unit 14 is interpreted based on abundant exposure of sodalite-bearing syenite at the base of the cliffs at the head of sodalite-bowl. The northern limit of this unit is entirely obscured by talus. The southern limits are tentatively interpreted to extend upslope toward the col between Manganese Mountain and Buttress Peak. Verification of these contacts requires technical climbing traverses.

Structure

Regional mapping of the area by Allan (1914) indicates that the country rock is close to flat lying, with a slight average low angle dip to the east. Local bedding orientation however may vary markedly depending on vicinity to the Ice River Complex, and other regional structures present in the area. Structures in the property area are consistent with the 3 phases of deformation recognized by Currie (1975) for the Ice River Complex as a whole.

The earliest fold structures consist of small-scale tight folds around the margins of the zoned syenite

complex. The small folds are rare at distances greater than a few hundred metres from the complex, and are interpreted to be related to the intrusion of the complex. Currie (1975) did not observe these structures adjacent to the contact between country rock and the layered mafic complex.

The main fold structure in the area is defined as open to isoclinal folding with a frequency of a couple hundred metres. In the property area, the main expression of this structure is as a NNW to WNW sigmoidal-shaped anticline-trace exposed along the saddle dividing Zinc mountain and Sentry Peak (Figure 4). Currie (1975) tentatively interpreted the fold structure to follow the Moose Creek Valley along the eastern reaches of the property area. A plunge calculation based on So planes from Currie's (1975) map indicates a plunge at the saddle of 69/132.

The sigmoidal shape of the axial traces of the main fold structure mentioned above is a result the 3rd phase of deformation in the region. The axes of the pair of folds defined by the sigmoidal deformation trend north to northwest, approximately parallel to the regional trend, but the plunge of these folds appears to be almost vertical.

Currie (1975) noted a surprising lack of significant faults in the region, and attributed this to a stress regime that decompressed via small-scale displacements and flowage. Much of the deformation appears to have been taken up by homogeneous deformation of the country rock, with the igneous complex largely undeformed. The lack of deformation of the igneous complex has preserved many primary features such as igneous layering and flow banding.

Structural measurements made by the author in 2006-2007 confirm an increasing intensity of tight folding in proximity to the eastern margin of the Ice River Complex. In the bowl above the Waterloo showing, limestone of the Ottertail Formation exhibits a monoclinal character over several hundreds of metres, with sudden attenuation into tight to isoclinal overturned fold hinge zones on the order of 50-80 metres wide (Brown, 2007).

Mineralization

Within the property area, a variety of commodities have been recognized, or are interpreted to have good economic potential in light of the nature of the mineral deposit type: alkaline/carbonatite intrusive complex. Commodities generated during primary magmatic formation of the layered and syenite complexes could include dimension stone of varying lithologies, industrial minerals such as nepheline and feldspar, and industrial elements including Ti, Fe and P. Deposits containing gemstones (sodalite, corundum?), industrial minerals (zeolite, vermiculite?), high field strength elements such as Nb, Ta, Zr, Hf, and rare metals including the REE's may also have formed in economic quantities. The latter set of elements is also found associated with base and precious metal occurrences in hydrothermalreplacement, skarn or mantos type deposits within the metasomatic halo of the IRC (ie. Waterloo prospect; Table 2).

One of the most recent discoveries of mineralization are summarized in a February 20, 2008 news release:

> **Cranbrook, B.C., February 20th, 2008: Eagle Plains Resources (TSX-V:EPL)** has recently received whole rock analyses from Eagle Plains 100% owned Ice River Property. Encouraging values were returned, including up to 3.0% REOs (total Rare Earth Oxides), and 5600 g/t Nb2O3 (Niobium / "Columbium" oxide). One 2.5 metre chip sample (JBIVR048) returned 2.4% REOs. Mineralization is hosted in syenite and carbonatite dyke systems that are numerous and widespread over a 4+ kilometre long corridor within

the Ice River Intrusive Complex, located 40 kilometres southeast of Golden, British Columbia, Canada.

Rare Earth Elements (REEs) and other elements with high-tech applications, including Nb and Zr, have long been suspected as potential commodities on the property; but it was not until resultsfrom the recent 2005-2007 mapping and geochemical surveys, that this suite of elements became fully appreciated. Other potential commodities identified include extensive nepheline syenite as an industrial mineral source, and presence of the ornamental mineral sodalite.

Previous and ongoing work by Eagle Plains at the Ice River Property has focused on the economic potential of strataform/replacement massive sulphides of the Waterloo prospect (see August 23, 2007 news release). At the Waterloo occurrence, sulfide horizons are exposed in two historical adits excavated in the early 1900's, with historical samples returning assays up to 3.69% Pb, 16.10% Zn, 1.59% Cu, 27.30% Fe, 99.4 g/T Ag and 1.7 g/T Au (GSC Memoir 55, page 229).

In 2006-2007, detailed surface and underground mapping by EPL Chief geologist Jarrod Brown, P.Geo., revealed a combination of structural and stratigraphic controls over the mineralization. A 5-hole, 259m drill program was completed on the property in August, 2007 and intersected massive to semi-massive strataform sulfide mineralization and associated stockwork zones, hosted in variably altered limestone wall-rock of the Ice River Intrusive Complex.

The known style of Nb mineralization at the Ice River property within altered pegmatitic syenite and microsyenite shares similarities to that documented in alkaline complexes in Greenland (Gupta and Suri, 1994). The Sarfortoq deposit in southwest Greenland, is a high grade low tonnage deposit containing mineralized pyrochlore-rich veins. The mineralized rock on average carries 1.5% Nb2O5, with tonnage estimates on the order of 0.1 million tones. The Motzfeldt So deposits located in south Greenland are made up of multiple intrusions of syenite, broadly divided into central nepheline syenite and an outer altered syenite characterized by hydrothermal alteration. Similar to the Ice River, Nb mineralization at Motzfeldt So is hosted in altered syenite and microsyenite near the outer margins of the intrusive complex. Niobium content in the minaeable rock varies between 0.4 and 1.0% Nb2O5, contained in nearly 80 million tones of peralkaline microsyenite (Gupta and Suri, 1994). This rock type is also host to huge reserves of zirconium and rare earths with contents of 1-2% ZrO2 and less than 1% rare earth oxides.

Rare earth element (REE) mineralization at the Ice River property is in its early stages of understanding. REE accumulations have been noted in syenite units containing red minerals visually similar to the Zr- REE bearing silicate eudialyte. Eudialyte is a critical defining component of a rare subgroup of peralkaline intrusive rocks termed *agpaitic* nepheline syenites (Sorensen, 1992). This IUGS rock type definition is limited to nepheline syenites containing chemically complex minerals such as eudialyte or mosandrite, rather than chemically simple minerals such as zircon and ilmenite. Rocks of this type are known to form economic deposits of high field strength elements (Zr, Nb, U, Y) and rare earth elements (REE's). Important examples include the Ilimaussaq Complex in Greenland and the Khibina and Lovozero Complexes of the Kola Peninsula in Russia (Salvi and Williams-Jones, 2005). Eudialyte is particularly advantageous from a metallurgical perspective, as it is easily digested in weak acid. To date,

REE bearing structures at the Ice River Property, also enriched in barium, zirconium and thorium share similarities to altered fennite/syenite veins and dykes and associated carbonatites in the Southern Bear Lodge Mountains of Northeastern Wyoming (Staatz, 1983) and in the Wet Mountains Area of Colorado (Armbrustmacher, 1988).

2009 Exploration Program Results

Summary of work

The 2009 Bootleg Exploration program at the Ice River property had two phases. Phase 1 consisted of a geophysical program and some ground exploration while phase 2 consisted of extensive ground exploration.

Phase 1

An Induced Polarization (I.P.) and a magnetic geophysical survey were conducted on a 5.4 line-km grid over the Waterloo Showing area to further characterize and delineate potential extensions of Pb-Zn-Ag-Cu-Au +-Nb,REE mineralization eastwards of the known workings and corresponding 2007 diamond drilling results. The geophysical survey was conducted by Scott Geophysics between August 7th and 12th, 2009.

Phase 1 ground exploration consisted of insitu analysis of soils at stations on the geophysical grid using an InnovX hand-held XRF and detailed stratigraphic and structural mapping. A 3 person crew performed this work between August 7th and 13th, 2009.

Phase 2

Phase 2 consisted of soil sampling at stations on the geophysical grid, contour soil sampling around the base of Buttress Peak and to the south, silt sampling of Moose Creek and tributaries leading into the EPL tenured area, and detailed geology mapping, prospecting, and sampling of the South Bowl, area south of the South Bowl, area above the geophysical grid, and some of the area between Zinc and Sentry Mountains. A hand-held XRF unit was used by one team each day as a sampling proxy and for immediate feedback on rock composition and mineralization. Scintillometers were used to detect elevated Th concentrations, which are related to REE and Nb mineralization, and aid in identifying rocks which had no visual indication of mineralization. Phase 2 exploration was conducted by a 7 person crew between August 18th and 26th, 2009.

Field crews were mobilized from either the airport in Golden, BC or from the staging area near the uppermost bridge crossing of the Moose Creek on the (545126E 5662220N) by Alpine Helicopters.

A total of 129 rock samples were collected for analysis. The soil and silt geochemical sampling program included 419 soil samples and 4 stream sediment samples. All samples, excluding the odd numbered grid soil samples, were sent to ACME Laboratories in Vancouver BC. Several carbonatite and zeolite altered samples have been sent to Thomas Mumford M.Sc. at the University of New Brunswick, for isotopic and petrographic analysis (results pending). At no time did personnel enter into any parks in the area.

Geological Mapping

The geological mapping had two main goals. Detailed mapping of dykes located in both the country rock and igneous complex and further mapping of the *Ottertail Formation* (Unit 2) subdivisions were completed.

A new dyke swarm has been identified midway up the south flank of Buttress peak (Figure 4). The dyke swarm is comprised of sodalite syenite dykes and syenite dykelets which range from fine to

coarse grained and are light grey to greenish grey with accessory blue, black and green minerals. Other areas of concentrated dykes were found on the upper slopes of the South Bowl and on the ridge south of Manganese Mountain. Additionally, in this area many zones of intense hematite and/or zeolite and/or diopside alteration were identified. In one area, down the ridge from Manganese Mountain, a pocket of very large natrolite crystals up to 20cm in length was found.

Some unit contacts within the Ice River Complex were remapped during the exploration program (Figure 4). For example the area of jacupirangite (unit 5) above the glacier in the South Bowl was actually much larger than previously mapped. Other parts of the IRC are highly brecciated with various combinations of both matrix and clasts formed from units 5,8,12, and 13.

Geological mapping on the southeast flank of Buttress peak led to extended delineation of the unit 2 subdivisions. Subunit 2A (tannish-grey, medium- to fine-well bedded, fine to very fine grained, silty to phyllitic limestone) was mapped in the gullies near Moose Creek. The contact between subunit 2B (brown to grey weathering, light bluish-grey to greenish-grey fresh, hard blocky, medium to finely laminated, poorly bedded, fine to medium grained calcareous limestone) and subunit 2C (grey and light grey, thin and thick interbedded, well bedded limestone) was defined in the South Bowl. These contacts may be important as fluid conduits for base metal rich fluids such as those involved in the Waterloo Showing. The 2C unit hosts a greater number of dykes and appears more altered than the 2B unit indicating it is more permeable than the tighter 2B unit.

The 2B/2C contact was also mapped in the bowl to the south of the South Bowl (south South Bowl). A large anticline was confirmed in this area which had abundant small parasitic folds. The 2C unit may occur as a thin drape over part of the 2B unit. Additionally, a meter scale siltstone layer was seen in the 2C unit in both the South Bowl and the south South Bowl.

Geochemistry

Prospecting and grab sampling has expanded the known extent of mineralized zones exposed in the alpine. The best 2009 REE sample (BWIVR016), a zeolite altered syenite, returned 12302 ppm total Rare Earth Elements (tREE). Another seven grab samples returned greater than 5000 ppm tREE. These often had hematite and/or zeolite alteration, and the presence of fluorite may be related to higher REE potential. A total of 10 samples returned greater than 1000 ppm Nb, with the best grab sample (BWIVR007) returning 3252 ppm Nb. A new lamprophyre dyke was found above the geophysical grid with visible chalcopyrite, a sample of this returned a Cu value of 2823.5 ppm (AGIVR001).

Two sets of channel samples were completed on a grey nepheline syenite dyke swarm high in the alpine in the South Bowl. Thirteen channel samples (NTIVR010 to 022) were cut across one 10.5 m wide dyke and resulted in an average of 275 ppm Nb and 360 ppm tREE. The best 1m channel interval for Nb (NTIVR020) returned 652 ppm. The best REE channel sample (NTIVR022) returned 1144 ppm tREE.

Seven channel samples (NTIVR023 to 029) were cut across the second nearby 6m dyke. Average results for the dyke were 141 ppm Nb, and 395 ppm tREE.

The basis of the exploration strategy to date has been to assess the diverse rock types in the alpine regions of the property for mineralization potential, and then to use geochemistry to locate additional mineralization potential lower in the valley. To this end, the latest soil geochemical results have proven to be very encouraging. A cluster of approximately 40 soil samples across all three contour lines on the

southeast flank of Buttress Peak are anomalous to very anomalous in REE's (La, Ce, Y) and Ba, with additional spotty anomalies in Nb and Mo. Fourteen of forty soil samples were over detection limit (>2000 ppm) for the Rare Earth Element – Cerium. The anomaly is consistent over a 600 x 600 meter area and represents a prime target for further evaluation (Figures 5c and 5d).

Silt sample collection was inhibited by the rocky nature of drainages at higher elevations and the thick alder cover at lower elevations. Slightly higher values further up the Moose Creek (BWIVS001) compared to further down stream (BWIVS002-003) may indicate the far south portion of the property is not a great prospect for base metal mineralization (Figures 5b-d).

RS-125 spectrometers (Appendix 3.3) were utilized as prospecting and preliminary analytical tools while prospecting and mapping. Table 3 lists correllation coefficients (R^2) from 46 samples of spectrometer results taken at sample locations where there is corresponding ICP-MS results (Figure 5e). These results verify that Thorium is a useful proxy for predicting qualitative REE abundances, and that radiometric tequniqes are a useful prospecting tool over the property.

Table 3– Spectrometer results and Rock analyses correlation coefficients

	Nb_ppm	Th_ppm	U_ppm	Zr_ppm	Y_ppm	La_ppm	Nd_ppm	Gd_ppm	Yb_ppm
correl peak counts (CPS)	0.01	**0.53**	-0.04	-0.11	0.45	0.49	**0.53**	**0.56**	0.31
correl Th% scint	-0.16	**0.75**	-0.30	-0.24	**0.69**	**0.74**	**0.77**	**0.81**	0.56
correl U% scint	0.26	-0.11	0.40	0.23	-0.15	-0.05	-0.10	-0.13	-0.14
correl K% scint	-0.10	-0.49	0.17	-0.12	-0.51	-0.33	-0.46	-0.47	-0.56

Geophysics

The I.P and ground magnetic surveys carried out over the known mineralization at the Waterloo showing do indicate a pronounced anomalous signature of high chargeability, low resistivity and extreme high and low magnetic signatures (Appendix VII). In general, chargeabilites increase grid west and with depth. Soil geochemical results for Pb, Zn and Cu broadly correlate spatially with increasing chargeability at surface. Preliminary ground truthing of several geophysical anomalies did result in the discovery of at least 2 new weakly mineralized zones. Initial rock sampling of these zones indicates limited, low grade mineralization (LJIVR002-006), but with an alteration/mineralization signature that is consistent with those noted in drill core west of the showing in 2007, thus highlighting a further extension of Waterloo-style replacement and vein mineralization to 300 m west of the showing.

Towards grid east, there is a low and flat soil geochemical response. However, the geophysical surveys indicate an eastward deepening of the potential mineralization horizon, which could account for the poor surface geochemical response. The two easternmost I.P lines do indicate the presence of an emerging conductive feature, but with the thick overburden it is unlikely that anything other than a geophysical anomaly can reasonably be detected prior to drilling.

It is the opinion of the geophysicist, Brad Scott, that the IP gird was ideally situated to adequately bracket the most anomalous geophysical targets.

Summary of REE and Nb mineralization at the Ice River Complex (IRC)

The most significant host rock assemblages of REE mineralization include: calcium/dolomite-rich carbonatite, barite-rich carbonatite, and zeolite and Fe-Mn altered fenitized syenite, ijolite, or jacupirangite lithologies. One of the most significant features associated with REE mineralization appears to be the ubiquitous strong alteration of the host rocks. In the syenites, the alteration is expressed as a white-yellow- and brown zeolite alteration as a fine grained pervasive alteration, up to a very coarse grained assemblage containing euhedral zeolite crystal aggregates associated with vugs. Associated yellow brown and black amorphous minerals occur as bands and fracture fill throughout the altered zone, and/or as coatings within vugs. The more mafic host rocks take on a felted to disaggregated assemblage of phlogopite-rich punky material (glimmerite). Late reddish-brown Fe-Mn carbonate rich veins are a common feature of the altered and mineralized zones as well. As the REE mineralization appears to be strongly associated with this alteration, this opens an avenue for further prospecting. The orientation of mineralization and alteration appears to be conformable to the igneous layering and/or contact orientations between the different intrusive units, as well as the IRC – limestone contact. Another feature of great interest may also be Currie's *unit 15 – the zeolite syenite*. It is suspected that these areas may be broad expressions of the same alteration that is bringing in the mineralization, thus these contact zones, especially those proximal to the "zeolite syenite" should be assessed carefully. Another noteworthy feature is the high barium contents of some of the dykes, the mineralogy of these dykes should make them easy to detect with soil and silt geochemistry.

Niobium and zirconium±hafnium are strongly correlated, but mineralization associated with these elements appears to be unrelated to the REE mineralization. Syenite appears to be the only significant host for these elements. In general, it is the coarser grained (pegmatitic) and sodalite bearing syenite dykes that returned the best values.

CONCLUSIONS

The Ice River property has the potential to host several commodities of economic significance both within the intrusive phases of the Ice River Complex and within altered and unaltered country rocks proximal to the intrusive contact. The current tenure is well situated by virtue of its location: straddling the easternmost contact of the Ice River Alkaline Complex. Historical exploration on the property was limited mostly to prospecting, and site specific mining activities (i.e. Waterloo adits). Mid elevations on the property do offer good exposure, however access to the upper (>2400 m) elevations on the property is hampered by extreme topography. Below 2000 m AMSL, outcrops are rare due to talus, glacial drift and vegetation cover.

Field work to date has established a widespread spatial distribution of REE and Nb mineralization with economic potential. Total REEs in excess of 26000 ppm have been documented insitu with 24 samples over 5.6 kilometers returning greater than 3000 ppm tREE. Thirty-four samples over 5.6 kilometeres have returned greater than 600 ppm Nb, with the best sample returning 3923 ppm Nb. The styles of mineralization are now well established with the most prospective mineralization associated with syenite and carbonatite dykes and zones that have been extensively zeolite and/or fennite altered.

The soil geochemical results have proven to be very encouraging. A REE (La, Ce, Y) anomaly on the southeast flank of Buttress Peak is consistent over a 600 x 600 meter area and represents a prime target for further evaluation. Fourteen soil samples were over detection limit (>2000 ppm) for the Rare Earth Element – Cerium. Additional overlapping spotty anomalies in Nb and Mo were detected.

Analysis of the Waterloo base-metal showing indicates a clear geophysical anomaly associated with a weak and spotty geochemical anomaly. Compilation and analysis of the 2006-2009 data suggests that the showing is broadly structurally controlled but locally stratabound at the 2a/2b limestone contact. High grade base-metal mineralization occurs as blowouts at the intersection of these two structural components, but mineralization continuity appears to be limited. Due to overburden, the use of surface exploration data (geology, geochemistry) is limited in discerning anomalies. Other high grade targets could be inferred using the new geophysical data, but drill targets based on this data alone would be considered high risk.

A number of other commodities are being passively explored for on the property, but will remain subeconomic until a road can be put in to the base of the property. Those which show some promise include 1) (nepheline) syenite as a source of ceramic grade feldspathic minerals, 2) sodalite syenite as a source of semi-precious gemstones or aggregate, and 3) a wide variety of intrusive phases of the Ice River complex which could be used as dimension stone.

RECOMMENDATIONS

Fieldwork and geochemical programs carried out over the last few seasons have successfully determined a number of rock type hosts to REE and Nb +- Zr+-Hf mineralization. Continuing exploration on the property should focus on these elements with high-tech and metallurgical applications. Field identification of the REE minerals has proven to be very difficult as most samples comprise fine bands, wisps and disseminations of very fine orange, brown and black amorphous mineralization, generally obscured by a strong Fe-Mn overprint. Further petrographic and XRD studies to identify the mineral carriers of the REE and Nb +- Zr+-Hf mineralization are needed.

The REE, Nb, Mo soil anomaly along the SE aspect of Buttress Peak is of intense interest. Detailed prospecting and mapping should occur in this area, followed by trenching activities. Depending on the initial findings, ground based geophysical surveys including magnetics, scintillometer and possibly I.P. could be employed to further delineate sound drilling targets.

Detailed prospecting and mapping in the northern area of the property on the south flank of Sentry peak is recommended to follow up prospective float found in lower talus which was not sampled due to time constraints. As well, prospecting and mapping along the ridge above the south South Bowl is highly recommended to follow up the high tREE sample BWIVR016. Thus far no detailed exploration has been undertaken in these areas. An airborne radiometric survey is recommended as this may delineate areas of high tREE concentration.

The current contour soil lines should also be extended to cover the slope below the south South Bowl. This would require approximately 2 line-kilometres of soil sampling, which at 25 meter spacing would be 80 samples.

Budget for the proposed 2010 field and geochemical program is as follows:

Table 4 – 2010 Recommended Budget

2010 Ice River Reccommended Budget					
Personnel:		no. of persons	rate	no. of days	Total
Project Manager		1	$600	7	$4,200.00
Project Geologists		3	$500	7	$10,500.00
Geological Technicians		2	$350	7	$4,900.00
				TOTAL PERSONNEL:	$19,600.00
	Type		# of Samples	Cost	Total
Analytical:	rocks(prep)		50	$6.10	$305.00
	rocks(BMS-11)		50	$25.00	$1,250.00
	soils + silts(prep)		80	$1.90	$152.00
	soils + silts(BMS-11)		80	$25.00	$2,000.00
				TOTAL ANALYTICAL:	$3,707.00
Geophysical work:	airborne radiometrics, geophys over REE anomaly on Buttress flank				$25,000.00
Helicopter charter: hours x rate including fuel			hours	rate	Total
LONGRANGER (personnel / fieldwork)			14	$1,475.00	$20,650.00
				TOTAL HELICOPTER:	$20,650.00
Equipment rental:		time	units	rate	Total
trucks, ATVs	2 vehicles	7 days	14	$75.00	$1,050.00
millage			960	$0.25	$240.00
communication including satellite dish, radios, satellite phone			42	$80.00	$3,360.00
Mobilization of crews to Golden including meals, airfare, accommodation					$2,000.00
Pre-field:					
Base Map preparation					$1,000.00
ongoing compilation of data into GIS database					$1,000.00
permitting:					$250.00
Field Expenses:		no. of	rate	days	Total
meals/groceries:		6	$60.00	7	$2,520.00
hotel:		6	$75.00	7	$3,150.00
shipping:		2	$20.00		$40.00
fuel:					$175.00
Report writing and reproduction:					$3,000.00
				Subtotal A:	$86,742.00
				10% contingency:	$8,674.20
				TOTAL:	$95,416.20

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GEOLOGICAL and GEOCHEMICAL and GEOPHYSICAL REPORT

on the

ICE RIVER PROPERTY

Volume II - Appendices

Golden Mining Division

Mapsheet 82N/01W

Center of Work

Latitude 51° 10' N, Longitude 116°23'W

Prepared for:

Eagle Plains Resources Ltd.

Suite 200, 16-11th Ave. S.

Cranbrook, B.C. V1C 2P1

And

Waterloo Resources Ltd.

Suite 1050, 625 Howe Street

Vancouver, B.C. V6C 2T6

By

Bronwen Wallace, M.Sc.

BOOTLEG EXPLORATION INC.

Suite 200, 16-11th Ave. S.

Cranbrook, B.C. V1C 2P1

and

Jarrod A. Brown, M.Sc., P.Geo.

BOOTLEG EXPLORATION INC.

Suite 200, 16-11th Ave. S.

Cranbrook, B.C. V1C 2P1

November 13, 2009

Appendix I – Statement of Qualifications

APPENDIX I – STATEMENT OF QUALIFICATIONS

I, Jarrod A. Brown of 6660-A Harrop-Procter Road, in the city of Nelson in the Province of British Columbia hereby certify that:

1) I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (#29239).

2) I am a graduate of the University of Manitoba with the degree of Master of Science in Geology (2001).

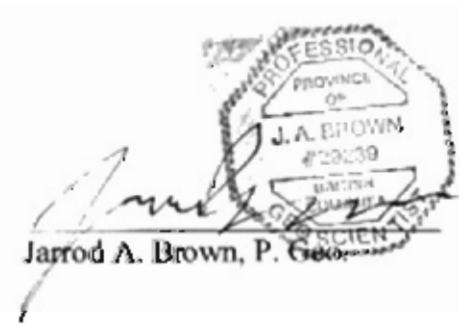
3) I am a graduate of Simon Fraser University with the degree of Bachelor of Science in Physical Geography (1997).

4) I have practiced my profession in North America since 1998, having worked for various Junior Resource Companies and government surveys.

5) This report is based upon a personal examination of all available company and government reports pertinent to the subject property, and upon fieldwork undertaken on the property in August of 2005, 2006, 2007 and 2009.

6) I hold an option to purchase 100,000 Common Shares each of Eagle Plains and Copper Canyon at $0.40 per share.

Dated this 10th day of November, 2009, in Nelson, British Columbia.



Jarrod A. Brown, P. Geo.

APPENDIX 1 - STATEMENT OF QUALIFICATIONS

I, Bronwen Wallace, M.Sc., hereby ceritfy that:

1) I am a contract employee of Eagle Plains Resources Ltd., with an office located at Suite 200, 16 - 11th Ave. S., Cranbrook, BC, V1C 2P1 (Telephone: (250) 426-0749, email: srwallac@ualberta.ca)
2) I am a graduate of the University of Alberta with the degree of Master of Science in Geology (2009).
3) I am a graduate of the University of Western Ontario with the degree of Bachelor of Science in Geology (2006).
4) I have practised my profession as a Geologist in both research and exploration geology since 2006. I have worked in Yukon, Northwest Territories, Alberta, British Columbia, and Saskatchewan.
5) I am responsible for the preparation of this technical report under the supervision of Jarrod A. Brown, titled "Geological and Geochemical and Geophysical report on the Ice River Property".
6) I do not hold any shares in Eagle Plains Resources Ltd.

Dated at Cranbrook, British Columbia, Canada, this 12th day of November, 2009.

Respectfully sumitted

Bronwen Wallace, M.Sc. (Geol)

Appendix II – Statement of Expenditures

2009 Ice River Expenditures

(All costs are derived from Bootleg Exploration invoices to Waterloo and Eagle Plains Resources)

Exploration Work type	**Comment**	**Days**			**Totals**
Personnel / Position	**Field Days**	**Days**	**Rate**	**Subtotal**	
Jarrod Brown, Chief Geologist: Mapping, Prospecting, Project Management	Aug 4, Aug 6-13, Aug 17-27, Aug 29	21.00	$600.00	$12,600.00	
Glen Hendrickson, GIS Specialist: XRF work, database management, prospecting, data acquisition	Aug 6-14, Aug 17-27	20.00	$475.00	$9,500.00	
Bronwyn Wallace, Geologist: Mapping, prospecting	Aug 17-27	11.00	$475.00	$5,225.00	
Alexia Greschner, Geologist: Mapping, prospecting	Aug 17-27	11.00	$475.00	$5,225.00	
Lewis Jones, Field Technicion: data acquisition	Aug 17-27	11.00	$375.00	$4,125.00	
Mike Galicki, Geologist: mapping, prospecting	Aug 20-24	5.00	$375.00	$1,875.00	
Nathan Taylor, Field Techinicion: data acquisition	Aug 17-27	12.00	$400.00	$4,800.00	
				$43,350.00	**$43,350.00**
Office Studies	**List Personnel**				
Project Management, project planning, data compilation	Jarrod Brown, Chief Geologist	7.50	$600.00	$4,500.00	
Project Management	Jesse Campbell, President Bootleg Exploration	7.40	600	$4,440.00	
Database compilation, Project Preparation and GIS work	Glen Hendrickson, GIS Specialist	8.25	$475.00	$3,918.75	
Project Management	Chuck Downie, VP Exploration	1.40	$750.00	$1,050.00	
Data compilation and processing of data	Chris Gallagher, Chief Geotechnologist	7.00	$720.00	$5,040.00	
Permiting	Jim Ryley, Project Geologist	3.10	$600.00	$1,860.00	
Project Planning and Preparation, and XRF work post project, Report Preparation	Bronwen Wallace, Geologist	5.00	$475.00	$2,375.00	
Project Planning and Preparation	Alexia Greschner, Geologist	1.50	$475.00	$712.50	
XRF analyzing work	Leigh Block	2.00	$300.00	$600.00	
Report preparation	Glen Hendrickson, GIS Specialist	9.0	$475.00	$4,275.00	
Report preparation	Jarrod Brown, Chief Geologist	2.0	$600.00	$1,200.00	
Report preparation	Aaron Higgs, Project Geologist	4.0	$525.00	$2,100.00	
				$32,071.25	**$32,071.25**
Ground geophysics	**Line Kilometres**				
IP	Scott Geophyiscs Ltd			$18,686.07	
				$18,686.07	**$18,686.07**
Consultants/Subcontractors					
Database work and Equipment Management	Legacy GIS Solutions	1.75	$475.00	$831.25	
Line Cutting	Geotronics Consulting Inc			$6,814.00	
				$7,645.25	**$7,645.25**
Geochemical Surveying	**Number of Samples**	**No.**	**Rate**	**Subtotal**	
Stream sediment	4			$0.00	
Soil	419			$0.00	
Rock	129			$0.00	
				$7,918.93	**$7,918.93**
Transportation		**No.**	**Rate**	**Subtotal**	
Flights	Bronwen Wallace, Geologist			396.98	
truck rental	Phase I, one truck, Phase II, 2 trucks	34.00	$100.00	$3,400.00	
kilometers		1650.00	$0.30	$495.00	
truck fuel				$935.93	
Helicopter				$37,644.00	
Heli Fuel				$5,408.80	
				$48,280.71	**$48,280.71**

Accommodation & Food	**Rates per day**				
Hotel				$7,974.94	
Meals and groceries				$5,358.37	
				$13,333.31	**$13,333.31**
Miscellaneous					
Repair and Maintenance				29.59	
Map Plotting and scanning				$412.90	
Field and Camp Supplies	gloves, sampling supplies, XRF supplies, gerenal field supplies			$1,485.15	
Costs related to Masters Thesis, analytical work, lab time, office time	Thomas Mumford, Geologist			$15,000.00	
				$16,927.64	**$16,927.64**
Equipment Rentals					
Field Gear Kit	$35/day/person for full field kit, compass, GPS, Palm, etc…	114.00	$35.00	$3,990.00	
Radios with charger		102.00	$10.00	$1,020.00	
Survival Kit		22.00	$5.00	$110.00	
Sat phone		22.00	$15.00	$330.00	
Scintilometer RS-125		44.00	$135.00	$5,940.00	
XRF - Innov-X		22.00	$315.00	$6,930.00	
Trailer		12.00	$100.00	$1,200.00	
Rock Saw		12.00	$15.00	$180.00	
Computers		44.00	$10.00	$440.00	
Printer		22.00	$10.00	$220.00	
				$20,360.00	**$20,360.00**
Freight, rock samples					
equipment, samples				$665.73	
				$665.73	**$665.73**
Bootleg Exploration Inc. Administration and Handling Costs				$15,143.34	**$15,143.34**
TOTAL Expenditures					**$224,382.23**

Appendix III – Geochemical Protocol

3.1Geochemistry – Field Sampling Techniques
3.2Geochemistry – Analytical Techniques
3.3 Scintillometer Information

3.1Geochemistry – Field Sampling Techniques

The purpose of rock, soil, and stream silt sampling at Ice River property was to locate areas with elevated base metals and high-tech metals, as well as other potential pathfinder elements, in order to assess the overall economic potential of the area. Known base metal occurrences of economic significance in the area are hosted mainly in limestone host rocks, within the metamorphic halo of the Ice River Complex. Known high-tech metal occurrences have been observed both within and external to the Ice River Complex. The most significant mineralised zones are associated with late? stage dyke systems contained within the complex, but also extend greater than 1 kilometre out into the host limestone. These dyke systems are the main focus of recent prospecting and geochemical sampling programs. The dykes themselves are targets for high-tech metals. For the base-metals, the dyke systems represent possible structural features that may have contributed to the formation of mineralized sulphide zones.

Rock samples were collected in the field by placing 1-3 kg of material in heavy grade plastic sample bags with the sample number written on both sides in permanent marker. Each sample bag was then sealed with a plastic cable tie and samples were transported back to camp at the end of each day. A representative piece of each sample was often collected and returned to camp for further examination in the event of an interesting or exceptional analytical result.

Soil samples were collected from the B-horizon wherever possible. Silt samples were collected from active creeks whenever possible. Both soil and silt samples were placed and sealed into brown paper kraft bags. Samples were dried in the field daily, weather permitting. Relevant details pertaining to the soil and silt samples such as location parameters, depth, horizon, quality, were recorded by the sampler in the field.

Sample sites were marked in the field with orange or pink arctic-grade flagging and an aluminum tag, both having been marked with the appropriate sample number. Sample locations were determined by hand-held GPS set to report locations in UTM coordinates using the North American datum established in 1983 (NAD 83). The Ice River property lies within UTM zone 11. Thus, all maps, figures and UTM coordinates referring to herein may be assumed to reference UTM NAD 83 zone 11.

All surface geochemical samples were collected by company geologists or sampling technician employees trained by Bootleg staff geologists. All drill core logging and sampling was completed by Bootleg geologists Jarrod Brown, M.Sc., P.Geo. and Thomas Mumford B.Sc. (M.Sc. pending). Once returned to camp, samples were organized, dried and catalogued and then placed in poly woven “rice” bags. The samples were maintained as a single group that were demobilized from camp to Cranbrook, BC, at the end of the program with the field crew. All rock, silt and soil samples were sent for analysis at ACME labs in Vancouver BC.

3.2Geochemistry – Analytical Techniques

All samples were sent to ACME Laboratories in Vancouver BC, which is a certified lab under the Assayers Certification Program of British Columbia. Rock samples were analyzed using the *Group 4B* package which is a two part analysis. Rare earth and refractory elements are determined by ICP mass spectrometry (ICP-MS) following a Lithium metaborate/tetraborate fusion; while precious and base metals are determined using the 1Dx package by aqua regia digestion followed by ICP-MS. All soil and silt samples were analyzed using the *Group 1Ex* analytical package which is a four acid digestion followed by ICP-MS analysis. All samples were collected, handled, catalogued and prepared for shipment by Eagle Plains Resources staff.

2009 Analyses by Acme Labs (http://www.acmelab.com)

Package	Elements
Group 4B: LiBO2 Fusion + Nitric Acid ICP-MS - 5g	Be,Co,Cs,Ga,Hf,Nb,Rb,Sn,Sr,Ta,Th,U,V,W,Zr,Y, La,Ce,Pr,Nd,Sm,Eu,Gd,Tb,Dy,Ho,Er,Tm,Yb,Lu
Group 1DX: Aqua regia ICP-MS - 0.5g	Mo,Cu,Pb,Zn,Ni,As,Cd,Sb,Bi,Ag,Au,Hg,Tl,Se
Group 1EX: Four acid digestion ICP-MS - 0.25g	Ag,Al,As,Au,Ba,Be,Bi,Ca,Cd,Ce,Co,Cr,Cu,Fe,Hf,K,La,Li,Mg,Mn,Mo,Na,Nb,Ni,P,Pb,Rb,S,Sb,Sc,Sn,Sr,Ta,Th,Ti,U,V,W,Y,Zn,Zr

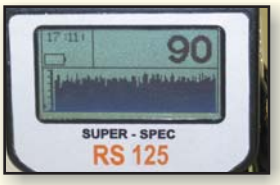
3.3 Scintillometer Information

RS-125 Super-SPEC

Handheld Gamma-Ray Spectrometer

Providing search, assay and scan modes of operation

The RS-125 allows the user to produce profiles of the total count data from either the Search, Scan or Assay modes. The data can be from a continuous drill core or from a survey with GPS positioning data.

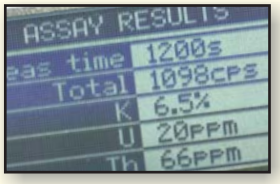


Survey and Scan Modes

Total Count readout at a 1x / sec rate in the Survey Mode or variable (1 - 20 sec.) in the Scan Mode. When used with a GPS receiver, data can be stored and profiles produced. Ideal for both area survey and drill core scanning.

Assay Mode

The assay mode provides the concentrations of K, U and Th as shown in the display below. The user can select the desired sample time.



RS-Analyst Software

The RS-125 is provided with utility software to download the data that is stored in memory. All data in memory is output via Bluetooth or USB to the RS-Analyst program on a PC. This may take the form of 1024 channel spectra, data or Scan data + GPS. The program also gives graphical and numeric views of the data. The data can also be re-exported as a text file for further processing.

Standard Accessories

- RS-125 Scintillometer with carrying handle
- Removable protective boot with shoulder strap
- Battery cartridge with 4 x AA rechargeable batteries & charger
- Spare battery holder cartridge
- RS-Analyst utility software
- USB cable
- User guide
- Delivered in hard case with foam insert

Temperature Range

- -20°C to +50°C

Control

- Single one button, Thumb activated

- **Alarm**
- Audio via miniature speaker
- Variable audio threshold set point
- Audio proportional to count rate

Weight

- 4.4 lb (2 kg) including batteries

Size & Package Style

- 10.2" x 3.2" x 3.8" (259 mm x 81 mm x 96 mm)
- 1 mm aluminum outer case
- In a flashlight configuration with side support strap, wrist strap and optional detachable handle

Memory

- 2MB
- Memory can be partitioned for desired storage
  Example
  Scan Total Count only - 94,000 readings
  Scan + Assay - more than 1000 readings
  Assay only - more than 400 readings
  (plus full spectrum)

Data Input / Output

(Using supplied RS-Analyst software)

- USB
- Bluetooth (BT)
- GPS link via BT

Display

- 128 x 64 pixels, 1 1/8" x 2 3/8"
- Graphic LCD display with white backlight and automatic dimming

Readout

- Search Mode: Counts in CPS from 0 to 65,535 and Histogram chart
- Assay Mode: Display in %K, ppm of U & Th (ROIs per IAEA)

Energy Response

- 30 keV 3000 keV

Internal Sampling

- 20 / second

Batteries

- Internal battery pack module (4xAA) easily replaceable
- Rechargeable or alkaline
- Life: 8 + hours at 20°C

Specifications subject to change without notice #01/08

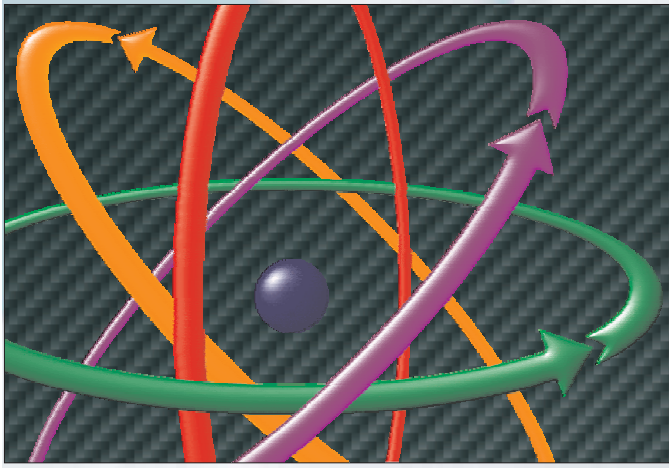
RADIATION SOLUTIONS INC

160 Matheson Blvd, Unit 4, Mississauga
Ontario Canada L4Z 1V4
Tel 905-890-1111
Fax 905-890-1964
e-mail sales@radiationsolutions.ca
web www.radiation-solutions-inc.com

Radiation Solutions Inc. is a Canadian company specializing in nuclear instrumentation for the detection, measurement and analysis of low level ionizing radiation from both naturally occurring or man made sources.

RSI's focus is the design and manufacture of airborne and mobile systems using advanced DSP (Digital Signal Processing) technology. This technology provides a level of quality previously only attainable in laboratory equipment.

RSI's philosophy is to work as closely as possible with customers in all aspects of the product life cycle including; product requirement, application, training, support and product improvement. It is this philosophy that will enable RSI to supply industry leading software techniques and hardware components that not only meet, but exceed the customer's requirements.



Locate radioactive mineralization easier and eyes free!

RS-125 Super-SPEC

Handheld Gamma-Ray Spectrometer

Providing Search, Assay and Scan Modes of Operation

RS-125 - Ideal For Field Exploration

The RS-125 Spectrometer is the state-of-the art in portable hand-held radiation survey devices for the geophysical industry. It offers an integrated design with a large detector for survey or search, direct Assay readout, a Scan mode and data storage. It offers weather protection with ease of use. In addition, it has **Bluetooth (BT) connectivity** providing for wireless connection to a Bluetooth equipped external GPS receiver, earphone or computer.

The spectrometer is auto-stabilizing on the naturally occurring (K, U, & Th) radioactivity and does not require any test sources.

Features include

- **High Sensitivity with large 2.0 x 2.0 NaI crystal 103 cm^3 (6.3 in^3)**
- **Lightweight & rugged 4.4 lb (2 kg) including batteries**
- **Easy to use, single button**
  - survey, scan, and assay modes of operation
- **Assay mode readout in %K, ppm of U & Th**
- **Auto-stabilizing on naturally occurring radio elements**
- **5-digit LCD display with high count rate - 65,535 cps**
  - scrolling histogram graph display of last 100 readings
- **Fast audio output with adjustable audio threshold set point**
  - BT earphone audio support for noisy area surveying
- **Bluetooth and USB equipped with external GPS integrated into data stream via BT**
- **Special rugged design to withstand typical field usage, full IP66 weatherproofing with protection against streaming water and fully dust protected**
- **Low power (4 x AA batteries) - typical 8-12 hour battery life at 20° C**
- **No radioactive sources required for proper operation**

RADIATION SOLUTIONS INC

Appendix IV – Sample Locations and Descriptions

4.1Rock Samples
4.2Silt Samples
4.3Soil Samples

4.1Rock Samples

Sample #	Sample Date	Sample Type	Sample Purpose	Location method	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Channel Sample Length (m)	Channel Sample Azimuth	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic indicators	Major Mineralization	Minor Mineralization	Mineralization Style	Mineralization Percent	Alteration	Alteration Degree	Description
AGIVR001	18-Aug-09	GRAB	REE	GPS		542726	5668979	11N	17				lamprophyre		grey	greenish	very fine	massive								
AGIVR002	19-Aug-09	TALUS	REE	GPS	2391	542958	5667315	11N	38				zeolite syenite		white	grey	coarse	crystalline						Zeolite	5	
AGIVR003	21-Aug-09	GRAB	REE	GPS	2554	542700	5666103	11N	18				syenite		reddish	pinkish	medium-coarse	massive			CALC-SILICATE			Fe-Staining	5	
AGIVR004	21-Aug-09	GRAB	REE	GPS	2554	542700	5666103	11N	18				syenite		reddish	pinkish	medium-coarse	massive			CALC-SILICATE			Fe-Staining	5	1056 Th by scint assay; in altered syenite.
AGIVR005	22-Aug-09	GRAB	REE	GPS	2238	543957	5666805	11N	3				mafic dyke		grey	orangish	fine									
AGIVR006	22-Aug-09	GRAB	REE	GPS	2287	543906	5666874	11N	2				carbonatite		reddish	brownish										
AGIVR007	22-Aug-09	GRAB	REE	GPS	1762	544679	5666868	11N	4			2b	limestone		grey											Syenite sill 80 cm thick
AGIVR009	23-Aug-09	GRAB	REE	GPS	2619	542766	5665686	11N	2				carbonatite		greyish	brownish	medium									Carbonatite dyke on ridge.
AGIVR010	23-Aug-09	GRAB	REE	GPS	2638	542801	5665651	11N	2				carbonatite		brownish	brownish	medium	massive								
AGIVR011	24-Aug-09	GRAB	REE	GPS	2171	543542	5670305	11N	2			2c	limestone		grey	grey	medium									
AGIVR012	24-Aug-09	GRAB	REE	GPS	2162	543542	5670178	11N	2			2	limestone		grey	grey										
AGIVR013	24-Aug-09	GRAB	REE	GPS	2145	543500	5669946	11N	2			2	limestone		grey	grey										Sample for xrf
AGIVR014	25-Aug-09	GRAB	XRF	GPS	2370	543594	5665459	11N	3			2b	limestone		brownish	brownish	fine-medium									Lamproophyre, sample for xrf
AGIVR015	25-Aug-09	GRAB	XRF	GPS	2353	543570	5665458	11N	2				lamprophyre		grey	brownish	medium									Dyke is boudined and appears to serve as a drainage on cliffs.
AGIVR016	25-Aug-09	GRAB	XRF	GPS	2424	543510	5665615	11N	2				lamprophyre		dark	brownish	fine-medium									Minor disseminated sulfides.
AGIVR017	25-Aug-09	GRAB	OTHER	GPS	2226	543979	5665467	11N	2			2b	limestone 2b		grey	grey	very fine			galena		VEINED	5			Galena-bearing qrz veins and limestone host rock. Sample more for hand-sample and show& tell than assay. Galena cubes are ~ .5cm
AGIVR018	25-Aug-09	GRAB	XRF	GPS	2508	543419	5665657	11N	2				lamprophyre		black	brownish	fine-medium									Sample of presumed subcrop grabbed from inside and beneath tunnel.
BWIVR001	19-Aug-09	GRAB	REE	GPS	2338	543022	5667300	11N	4			15	zeolite syenite	leucocratic syenite	greyish	beige	medium-coarse	massive						Zeolite	2	Reddish grey, feld-neph sye, trace ox. 3 XRF shot best 2700ppm Zr. Sample taken 4 XRF.
BWIVR002	19-Aug-09	GRAB	REE	GPS	2358	542964	5667346	11N	2			15	zeolite syenite	leucocratic syenite	greenish	greyish	medium-coarse	massive								Very high scint, XRF shot. Zeo and hem alt. High Nb.
BWIVR003	19-Aug-09	GRAB	XRD	GPS	2358	542964	5667346	11N	2			15	zeolite syenite	leucocratic syenite	greenish	greyish	medium-coarse	massive								Nb rich, zeo + hem, mini calcite veining. Mystery green/brown mineral
BWIVR004	20-Aug-09	GRAB	REE	GPS	2695	542525	5666741	11N	3				zeolite syenite	mesocratic syenite	dark	milky	fine-medium									Top 30cm of zeolite pod fine grained black + dio + edd
BWIVR005	20-Aug-09	GRAB	REE	GPS	2665	542527	5666795	11N	4				leucocratic syenite	mafic dyke	greyish	grey	medium-coarse									Sample from 50cm thick band of highly altered rock between breccia
BWIVR006	20-Aug-09	GRAB	REE	GPS	2661	542547	5666810	11N	1				zeolite syenite	ijolite	greyish	white	medium-coarse									
BWIVR007	21-Aug-09	GRAB	REE	GPS		543401	5666402	11N	10			2c	syenite	limestone	grey	light	fine-medium									1% disseminated pyr and trace gal, from 20 x 60cm boudined sye sill

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BWIVR008	21-Aug-09	GRAB	REE	GPS		543379	5666415	11N	10				mafic dyke		dark	grey	fine	massive								Sample of vein material, poss monazite with high Th
BWIVR009	21-Aug-09	GRAB	XRD	GPS		543329	5666320	11N	12			2c	limestone 2c		grey	grey	fine	veined								Reddish mineral in sye dyke vein
BWIVR010	22-Aug-09	GRAB	REE	GPS	2330	543854	5666737	11N	3			2c	limestone 2c		purplish	brownish	fine	bedded								Calcite vein withcm size sulphide blobs
BWIVR011	23-Aug-09	GRAB	REE	GPS	2622	542792	5665674	11N	2				syenite	jacupiran gite	grey	grey	medium-coarse									Some hem alt, grern and pink colours, also rusty.
BWIVR012	23-Aug-09	GRAB	REE	GPS	2597	542650	5665803	11N	5			5	jacupirang ite	leucocrati c syenite	dark	rusty	fine-medium	massive								See scint notes
BWIVR013	24-Aug-09	GRAB	REE	GPS	2412	543217	5670817	11N	2			4	skarn	syenite	brownish	rusty	fine	laminated								Sye was very hard
BWIVR014	24-Aug-09	GRAB	REE	GPS	2522	543258	5670990	11N	3			4	skarn		green	green	fine-medium	laminated								Sample from close to highest scint count, difficult to get sample off
BWIVR015	25-Aug-09	GRAB	REE	GPS	2233	543921	5665192	11N	2			2c	limestone 2c		brownish	brownish	fine-medium	laminated								
BWIVR016	25-Aug-09	TALUS	REE	GPS	2138	544027	5665209	11N	2			2c	limestone 2c	syenite	greyish	brownish	fine	bedded								Sye talus right below 2c cliff, cannot have come far. Has flu, some mag, hem. Is rusty in most places, white, grey, and pink fresh.
GHIVR001	09-Jul-09	GRAB	REE	GPS	2207	543496	5668914	11N	7				limestone		grey	orangish	fine	bedded								
GHIVR002	18-Jul-09	FLOAT	REE	GPS		542804	5668592	11N	18			2b	limestone	dolomite	grey	black	medium-coarse	altered		pyrite		BLEBBY	3	Silicic	4	Float at gully near IVL10+00E 01+75S
GHIVR003	05-Aug-09	GRAB	REE	GPS	2562	543309	5665489	11N	9	0			limestone 2c		grey	orange	medium	wavy bedded								contact of 2b/2c limestones, rusty weathering
GHIVR004	25-Aug-09	GRAB	REE	GPS	2556	543319	5665511	11N	17	0		2b	syenite dike		white	black	medium									30cm dike sampled across width
JBIVR087	08-Jul-09	GRAB	REE	GPS	2610	542668	5669814	11N	1				carbonatit e		brownish	brown	fine-medium								4	Rusty carbonatite dyke 2m
JBIVR088	08-Jul-09	GRAB	REE	GPS	2609	542674	5669819	11N	2				syenite		light	light	medium-coarse		diopside						3	Good vein dennity w 10% bi-pyramid, adamantine, submettallic charcoal min (need id)
JBIVR089	08-Jul-09	GRAB	REE	GPS	2609	542674	5669819	11N	2				syenite		light	light	medium-coarse		diopside						3	See n-book
JBIVR090	08-Jul-09	GRAB	REE	GPS	2609	542674	5669819	11N	2				syenite		light	light	medium-coarse		diopside						3	Ijolite or cb- see n-book
JBIVR091	08-Jul-09	GRAB	REE	GPS	2609	542674	5669819	11N	2				syenite		light	light	medium-coarse		diopside						3	Soda-sy- see notes
JBIVR092	08-Jul-09	GRAB	REE	GPS	2609	542674	5669819	11N	2				syenite		light	light	medium-coarse		diopside						3	Cream carbonatite see notes
JBIVR093	08-Jul-09	GRAB	REE	GPS	2639	542625	5669753	11N	2				syenite		light	light	medium								4	Cse carb dyke with skarn alt assemblage and tr galena.
JBIVR094	08-Jul-09	GRAB	REE	GPS	2677	542569	5669646	11N	2				zeolite syenite		orangish	orangish		porphyritic						Zeolite	4	80 cm prx-phyric dyke rich in cb.=ijolite? Strg zeolite alt. Near top of unit 15.
JBIVR095	08-Jul-09	GRAB	REE	GPS	2570	542721	5669821	11N	1				zeolite syenite													3x5 m pod of cse brn carb with good scint
JBIVR096	09-Jul-09	CHIP	REE	GPS	2230	542974	5668728	11N	2	2.5	305		limestone 2a	syenite	light	orange	very fine	banded							4	Orng rusty v. Fn graind w creamy si-alb alt, ank weath and band specific ds py to 1%.
JBIVR097	09-Jul-09	CHIP	REE	GPS	2232	542955	5668739	11N	2	3	320		limestone 2a		light	orange	very fine								4	Very chunky chip over 3m of v fine creamy-altrd lst with 1-2% ds sulf

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JBIVR098	10-Jul-09	GRAB	REE	GPS	2263	543308	5669914	11N	4			2	limestone	syenite	grey	orangish				galena		SEMIMASSIVE			4	Gal-py k altered and silic gry hard limestone. See XRF. Grab samp from 4m wide rusty exp near NTIVD110
JBIVR099	10-Jul-09	GRAB	REE	GPS	2234	543333	5670000	11N	1			2c	limestone 2c			tan									3	1.5 m cntact zone in 2b ha qrz stkwrk w tr py in vuggs. Same as prev stat vein descip
JBIVR100	10-Jul-09	GRAB	REE	GPS	2234	543333	5670000	11N	1			2c	limestone 2c			tan									3	1.5m rusty sy dike w ds&ff py-gal-sphal. At 2b-2c cntact
JBIVR101	10-Jul-09	CHIP	REE	GPS	2254	543267	5669854	11N	1	0.8			limestone 2b	limestone 2c											4	Sy sill
JBIVR102	10-Jul-09	GRAB	REE	GPS	2242	543304	5669830	11N	2			2bf	limestone 2b	limestone 2b	greyish	tan	fine-medium	fragmental							4	20 cm zone of v rusty 2b w 2% ds py. & 50+ cm alt halo resulted in creamy hard texture w tr ds py.
JBIVR103	10-Jul-09	GRAB	REE	GPS	2242	543304	5669830	11N	2			2bf	limestone 2b	limestone 2b	greyish	tan	fine-medium	fragmental							4	V fngrd 1.5m sy dyke. Rusty.
JBIVR104	10-Jul-09	GRAB	REE	GPS	2289	543236	5669761	11N	1				syenite			orange									5	Gal in sy dyke.
JBIVR105	12-Aug-09	CHIP	REE	GPS	2014	544006	5667553	11N	4	1		13	syenite	skarn	grey	greenish	fine-medium		diopside					Skarn	4	Skarn margin of sy dyke. See notes
JBIVR106	12-Aug-09	CHIP	REE	GPS	2014	544006	5667553	11N	4	2		13	syenite	skarn	grey	greenish	fine-medium		diopside					Skarn	4	
JBIVR107	12-Aug-09	CHIP	REE	GPS	2014	544006	5667553	11N	4	1		13	syenite	skarn	grey	greenish	fine-medium		diopside					Skarn	4	West margin -top-of sy dyke.v. Rsty. See notes.
JBIVR108	12-Aug-09	GRAB	REE	GPS	2011	543939	5667524	11N	2			2b	limestone 2b		bluish	tan	very fine									3-5 m sy dyke with 40%wht feld, 40% grn-alt prx, tr bte. Rest is wht and dk gry fn matrix. Trc py & submtallic ox=ilmn or ?
JBIVR109	12-Aug-09	GRAB	REE	GPS	2008	543972	5667524	11N	3				fennite	limestone	greenish	brown										Fn grnd greenish, hard. Ankerite disease. Abundant mn stn
JBIVR110	12-Aug-09	GRAB	REE	GPS	2027	543986	5667553	11N	2				sodalite syenite	skarn	bluish	green	fine	banded						Fenitic	4	Fn grnd dk grey and grn gry banded. Radioctive phase
JBIVR111	12-Aug-09	GRAB	REE	GPS	2027	543986	5667553	11N	2				sodalite syenite	skarn	bluish	green	fine	banded						Fenitic	4	Med to cse grnd feld syenite w minor sodalite. Red blebs hoping for eudylite but prob=zeolite alt.
JBIVR112	12-Aug-09	GRAB	REE	GPS	2027	543986	5667553	11N	2				sodalite syenite	skarn	bluish	green	fine	banded						Fenitic	4	Banded diopside&Sodalite in footwall cntct of 5m dyke=sill.
JBIVR113	12-Aug-09	SUBCROP	REE	GPS	1998	543948	5667681	11N	2			14	sodalite syenite		grey	bluish	fine									Fn sodalite syenite. No cb
JBIVR114	25-Aug-09	GRAB	REE	GPS		543336	5666677					3	limestone 3	skarn	purplish	tan										Channel samps taken here: NTIVR010-021 @ Az150 across apparent cross -strike. Hs for xrd.
LJIVR001	22-Aug-09	GRAB	REE	GPS	1846	544505	5666892	11N	11			2b	limestone 2b		grey	bluish	fine			magnetite		VEINED	2			Sample contains only veined rock
LJIVR002	27-Aug-09	CHIP	REE	GPS	2311	542794	5668683	11N	15	1	90	2b	limestone 2b		greyish	brownish	fine			pyrite		NONE				reddish brown 2b lst with alb-Si alt and dissem pyrite
LJIVR003	27-Aug-09	CHIP	REE	GPS	2321	542794	5668688	11N	11	2	90	2b	limestone 2b		greyish	brownish	fine			pyrite		MASSIVE	0.5			brown 2b lst with alb-Si alt and dissem pyrite
LJIVR004	27-Aug-09	CHIP	REE	GPS	2314	542797	5668683	11N	7	2.4	90	2b	limestone 2b		greyish	brownish	fine			pyrite		MASSIVE	55			red weathering massive py stratabound min up to 0.4 m thick. = culmination of visible mineralization that would account for IP anomaly at surface on L10,11,12
LJIVR005	27-Aug-09	CHIP	REE	GPS	2315	542806	5668679	11N	5	4	90	2b	limestone 2b		greyish	brownish	fine					NONE				intense albite-si alt with ds py in footwall of massive pyrite bed.

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LJIVR006	27-Aug-09	GRAB	REE	GPS	2318	542798	5668676	11N	8				limestone 2b		greyish	brownish	fine			pyrite		FRACTURES	0.2			grab sample of two qtz veins in hangingwall of massive py bed.
MGIVR001	09-Jul-09	GRAB	REE	GPS	2142	543127	5668423	11N	2				syenite		greenish	white	fine								1	2b bedding dragged with dyke
MGIVR002	10-Jul-09	GRAB	REE	GPS		543373	5668901	11N	7				syenite		greenish	white	fine-medium			pyrite		DISSEMINATED	4		3	
MGIVR003	10-Jul-09	GRAB	REE	GPS		543410	5668999	11N	13				syenite		greenish	white	medium			pyrite		DISSEMINATED	7		3	
MGIVR004	12-Aug-09	GRAB	REE	GPS	2036	544025	5667560	11N	3			2	limestone		greenish	tan	fine			pyrite	ANKERITE	DISSEMINATED	3	Carbonate	4	
MGIVR005	12-Aug-09	GRAB	REE	MAP	2046	544024	5667549	11N				2	limestone		green	tan	fine			pyrite		DISSEMINATED	3			
MGIVR006	12-Aug-09	GRAB	REE	GPS	1977	544063	5667511	11N	7				syenite		grey green	brownish	medium-coarse			pyrite		DISSEMINATED	6			
MGIVR007	12-Aug-09	GRAB	REE	GPS	1973	544103	5667667	11N	25				syenite		green	brownish	fine-medium									
MGIVR008	19-Aug-09	GRAB	REE	GPS	2391	542892	5667392	11N	3			16	mafic dyke		purplish	brown	medium-coarse									
MGIVR009	20-Aug-09	GRAB	REE	GPS	2649	542448	5666480	11N	2				syenite	ijolite	white	brownish								None	3	
MGIVR010	20-Aug-09	GRAB	REE	GPS	2605	542464	5666257	11N	1			12	syenite	mafic dyke	greenish	greenish										
MGIVR012	20-Aug-09	GRAB	REE	GPS	2649	542448	5666480	11N	2				syenite	ijolite	white	brownish								None	3	
MGIVR013	20-Aug-09	GRAB	REE	GPS	2687	542525	5666677	11N	1				syenite											Carbonate	2	
MGIVR014	20-Aug-09	GRAB	REE	GPS	2676	542544	5666685	11N	1				syenite		reddish	white							0.7	Zeolite	2	
MGIVR015	20-Aug-09	GRAB	REE	GPS	2650	542549	5666641	11N	1				syenite		greenish	brownish								Zeolite	3	
MGIVR016	20-Aug-09	GRAB	REE	GPS	2600	542650	5666652	11N	2				syenite													
MGIVR017	20-Aug-09	GRAB	REE	GPS	2574	542671	5666658	11N	4				fennite													
MGIVR018	21-Aug-09	GRAB	REE	GPS	2611	542480	5666207	11N	2			12	syenite		white	pinkish	fine-medium			pyrite		DISSEMINATED	2			Hem/zeo and diop alt syn @ contact to mafic mag+opx+sphene bearing unit
MGIVR020	21-Aug-09	GRAB	REE	GPS	2554	542540	5666219	11N	1				syenite		greenish	brownish	medium			pyrite		DISSEMINATED	2	Zeolite	2	Zeo/hem and diop alt syn; px, neph. Zeo needles; micas, sulphides
MGIVR021	21-Aug-09	GRAB	REE	GPS	2565	542489	5666314	11N	2				syenite		brownish	brownish	fine-medium									
MGIVR022	21-Aug-09	GRAB	REE	GPS	2539	542633	5666150	11N	3				syenite		greenish	greenish	medium-coarse									
MGIVR023	21-Aug-09	GRAB	REE	GPS	2509	542718	5666088	11N	2				syenite		white	greenish										
MGIVR024	21-Aug-09	GRAB	REE	GPS	2541	542675	5666044	11N	4				jacupirangite		black	purplish	fine-medium									
MGIVR025	21-Aug-09	GRAB	REE	GPS	2605	542830	5665941	11N	2				syenite		white	rusty	fine-medium									
MGIVR026	21-Aug-09	GRAB	REE	GPS	2468	542856	5665897	11N	2				syenite		grey	grey green	medium-coarse									
MGIVR027	22-Aug-09	GRAB	XRF	GPS	2309	543870	5666746	11N	3				skarn		bluish	rusty	fine									Chert, not skarn
MGIVR028	22-Aug-09	GRAB	XRF	GPS	4141	544809	5666377	11N	4				carbonatite		white	white	fine-medium									F-mg 'calcitite', fresh color is pale green, blueish, white
MGIVR029	22-Aug-09	GRAB	XRF	GPS	1894	544483	5666531	11N	8				syenite		white	brownish	medium			pyrite		DISSEMINATED	2	Carbonate	2	

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MGIVR030	22-Aug-09	GRAB	XRF	GPS	1809	544583	5666514	11N	3				syenite		black	brown	fine									
MGIVR031	23-Aug-09	GRAB	REE	GPS	2374	543319	5666604	11N	4				syenite		white	rusty	medium-coarse									
MGIVR032	23-Aug-09	GRAB	REE	GPS	2414	543332	5666663	11N	2				syenite											Zeolite	2	
MGIVR033	23-Aug-09	GRAB	REE	GPS	2442	543343	5666677	11N	2				syenite		pinkish	dark	medium				HEMATITE			Zeolite-Hematite	3	Green-pinkish grey
MGIVR034	23-Aug-09	GRAB	REE	GPS	2112	543600	5666975	11N	3				syenite		bluish	bluish	medium-coarse			pyrite		VEINED	6			
MGIVR035	23-Aug-09	GRAB	REE	GPS	2506	543361	5666735	11N	2				carbonatite			black	fine-medium							Zeolite-Hematite	5	
MGIVR036	23-Aug-09	GRAB	REE	GPS	2497	543369	5666738	11N	3				carbonatite			brown								Zeolite-Hematite	2	
MGIVR037	23-Aug-09	GRAB	REE	GPS	2499	543285	5666793	11N	2				carbonatite		brown	brown	fine-medium									Pinching out of carb
MGIVR038	24-Aug-09	GRAB	REE	GPS	2312	543470	5670622	11N	3				syenite		dark	grey	fine-medium				DIOPSIDE			Zeolite-Hematite	1	
MGIVR039	24-Aug-09	GRAB	REE	GPS	2434	543256	5670850	11N	2				syenite		greyish	white	medium									
MGIVR040	26-Aug-09	GRAB	REE	GPS	2504	543254	5666828	11N	4				syenite		greyish	grey green	medium-coarse									Rusty green-red alt with zeo-core
NTIVR010	25-Aug-09	CHIP	REE	GPS		543339	5666675	11N	7	1	330		syenite		grey	greyish	fine-medium									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min
NTIVR011	27-Aug-09	CHANNEL	REE	MAP		543339	5666675	11N		0.55	330		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, fluorite, feldspar, sodalite, diopside
NTIVR012	27-Aug-09	CHANNEL	REE	MAP		543339	5666675	11N		1.6	330		syenite		grey	greyish	medium-coarse			pyrite		DISSEMINATED	2			minerals: nepheline, ilmenite, fluorite, diopside, yellowish-brown min, feldspar
NTIVR013	27-Aug-09	CHANNEL	REE	MAP		543339	5666675	11N		2.85	330		syenite		grey	greyish	medium			pyrite		DISSEMINATED	2	Zeolite-Hematite	1	minerals: nepheline, ilmenite, fluorite, feldspar, brownish min, diopside
NTIVR014	27-Aug-09	CHANNEL	REE	MAP		543339	5666675	11N		3.9	330		syenite		grey	greyish	medium									minerals: nepheline, sodalite, fluorite, diopside, yellowish-brown min
NTIVR015	27-Aug-09	CHANNEL	REE	GPS		543339	5666675	11N		4.95	330		syenite		grey	greyish	fine-medium									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min, sodalite
NTIVR016	27-Aug-09	CHANNEL	REE	GPS		543339	5666675	11N		6	330		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min, sodalite, salmon-colored min
NTIVR017	27-Aug-09	CHANNEL	REE	GPS		543339	5666675	11N		6.7	330		syenite		grey	greyish	medium-coarse							Diopside	2	minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min, sodalite, salmon-colored min
NTIVR018	27-Aug-09	CHANNEL	REE	GPS		543339	5666675	11N		7.7	330		syenite		grey	greyish	medium									minerals: nepheline, fluorite, feldspar, diopside, pyroxene, sodalite
NTIVR019	27-Aug-09	CHIP	REE	GPS		543339	5666675	11N		8.7	330		syenite		grey	greyish	coarse									minerals: nepheline, fluorite, feldspar, diopside, pyroxene
NTIVR020	27-Aug-09	CHIP	REE	GPS		543339	5666675	11N		9.7	330		syenite		grey	greyish	medium-coarse									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min
NTIVR021	27-Aug-09	CHIP	REE	GPS		543340	5666675	11N		11	330		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min

Sample #	Sample Date	Sample Type	Sample Purpose	Location method	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Channel Sample Length (m)	Channel Sample Azimuth	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic indicators	Major Mineralization	Minor Mineralization	Mineralization Style	Mineralization Percent	Alteration	Alteration Degree	Description
NTIVR022	27-Aug-09	CHANNEL	REE	GPS		543340	5666675	11N	9	0.75	330		syenite		grey	greyish	fine-medium			pyrite	chalcopyrite	MASSIVE		Diopside	2	minerals: nepheline, diopside, sodalite, feldspar
NTIVR023	27-Aug-09	CHANNEL	REE	GPS		543318	5666632	11N	9	1	340		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, diopside, feldspar, yellowish-brown min, salmon-colored min
NTIVR024	27-Aug-09	CHANNEL	REE	GPS		543318	5666632	11N	9	1	340		syenite		grey	greyish	medium									minerals: nepheline, sodalite, fluorite, feldspar, pyroxene
NTIVR025	27-Aug-09	CHANNEL	REE	GPS		543246	5666506	11N		1	5		syenite		grey	greyish	coarse			pyrite		DISSEMINATED				minerals: nepheline, diopside, fluorite, sodalite, pyroxene
NTIVR026	27-Aug-09	CHANNEL	REE	GPS		543246	5666506	11N		1	5		syenite		grey	greyish	very coarse									minerals: nepheline, pyroxene, fluorite, feldspar, sodalite
NTIVR027	27-Aug-09	CHANNEL	REE	GPS		543246	5666506	11N		1	5		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, feldspar, yellowish-brown min
NTIVR028	27-Aug-09	CHANNEL	REE	GPS		543246	5666506	11N		1	5		syenite		grey	greyish	medium									minerals: nepheline, ilmenite, fluorite, feldspar, yellowish-brown min, sodalite, calcite, diopside
NTIVR029	27-Aug-09	CHANNEL	REE	GPS		543246	5666506	11N		1	5		syenite		grey	greyish	medium-coarse									minerals: nepheline, ilmenite, diopside, feldspar, yellowish-brown min, calcite

4.2Silt Samples

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Sample Elevation	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Stream Turbulance	Sample Depth (m)	Sample Size	Sample Quality	Stream Triburtary #
BWIVS001	26-Aug-09	SILT	ASSAY	GPS	1472	545209	5664883	11N	2.8	MED	25	5	4	1
BWIVS002	26-Aug-09	SILT	ASSAY	GPS	1461	545086	5664474	11N	2.6	MED	25	5	4	1
BWIVS003	26-Aug-09	SILT	ASSAY	GPS	1484	545140	5663494	11N	2.8	MED	25	5	4	1
LJIVS001	23-Aug-09	SILT	ASSAY	GPS	1965	544234	5665450	11N	10	VERY LOW	5	4	4	3

4.3Soil Samples

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
GHIVD001	09/08/2009	SOIL	XRF	GPS		2185	543118	5668778	11N	8	brown	NA	20 - 40	15	B	4		
GHIVD002	09/08/2009	SOIL	XRF	GPS		2203	543117	5668824	11N	7	brown	NA	20 - 40	15	B	3	ORGANIC	
GHIVD003	09/08/2009	SOIL	XRF	GPS		2179	543214	5668824	11N	8	brown	NA	20 - 40	15	B	4		
GHIVD004	09/08/2009	SOIL	XRF	GPS		2161	543214	5668778	11N	12	brown	NA	20 - 40	15	B	4		
GHIVD005	09/08/2009	SOIL	XRF	GPS		2139	543320	5668778	11N	8	brown	NA	20 - 40	15	B	4		
GHIVD006	09/08/2009	SOIL	XRF	GPS		2164	543317	5668824	11N	9	brown	NA	20 - 40	15	B	4		
GHIVD007	09/08/2009	SOIL	XRF	GPS		2164	543367	5668827	11N	17	brown	NA	20 - 40	15	B	3	ORGANIC	
GHIVD008	09/08/2009	SOIL	XRF	GPS		2166	543416	5668824	11N	14	brown	orange	20 - 40	15	B	4		
GHIVD009	09/08/2009	SOIL	XRF	GPS		2172	543417	5668876	11N	10	brown	orange	20 - 40	15	B	4		
GHIVD010	09/08/2009	SOIL	XRF	GPS		2177	543417	5668876	11N	11								
GHIVD011	09/08/2009	SOIL	XRF	GPS		2205	543415	5668902	11N	8	brown	orange	40 - 60	15	B	4		
GHIVD012	09/08/2009	SOIL	XRF	GPS		2217	543415	5668923	11N	12	brown	orange	40 - 60	15	B	4		LINE_END
GHIVD013	09/08/2009	SOIL	XRF	GPS		2192	543508	5668911	11N	7	brown	orange	40 - 60	15	B	4		LINE_END
GHIVD014	09/08/2009	SOIL	XRF	GPS		2186	543511	5668874	11N	10	brown	orange	20 - 40	15	B	4		
GHIVD015	09/08/2009	SOIL	XRF	GPS			543521	5668822	11N	15	brown	orange	40 - 60	5	B	4		
GHIVD016	09/08/2009	SOIL	XRF	GPS			543521	5668776	11N	20	brown	orange	20 - 40	5	B	5		
GHIVD017	09/08/2009	SOIL	XRF	GPS		2137	543411	5668802	11N	9	brown	NA	20 - 40	5	B	3	ORGANIC	ROCKY
GHIVD018	09/08/2009	SOIL	XRF	GPS		2122	543412	5668775	11N	13	brown	NA	20 - 40	5	B	3	ORGANIC	ROCKY
GHIVD019	10/08/2009	SOIL	XRF	GPS		2258	543325	5669913	11N	8	brown	NA	40 - 60	15	B	5		
GHIVD020	10/08/2009	SOIL	XRF	GPS		2260	543330	5669939	11N	14	brown	orange	40 - 60	15	B	5		
GHIVD021	10/08/2009	SOIL	XRF	GPS		2254	543337	5669977	11N	8	brown	orange	40 - 60	15	B	5		
GHIVD022	10/08/2009	SOIL	XRF	GPS		2240	543344	5670002	11N	9	brown	NA	40 - 60	15	B	5		
GHIVD023	10/08/2009	SOIL	XRF	GPS		2248	543343	5670024	11N	9	brown	NA	40 - 60	15	B	5		
GHIVD024	10/08/2009	SOIL	XRF	GPS		2246	543340	5670054	11N	12	brown	NA	20 - 40	15	B	4		
GHIVD025	10/08/2009	SOIL	XRF	GPS		2252	543366	5670094	11N	7	brown	NA	20 - 40	15	B	3		
GHIVD026	10/08/2009	SOIL	XRF	GPS		2165	543458	5669970	11N	7	brown	NA	20 - 40	15	B	4		
GHIVD027	10/08/2009	SOIL	XRF	GPS		2166	543452	5669950	11N	7	brown	NA	20 - 40	15	B	4		
GHIVD028	10/08/2009	SOIL	XRF	GPS		2165	543443	5669928	11N	6	brown	NA	20 - 40	15	B	4		
GHIVD029	10/08/2009	SOIL	XRF	GPS		2169	543420	5669902	11N	6	brown	NA	20 - 40	15	B	5		
GHIVD030	10/08/2009	SOIL	XRF	GPS		2163	543413	5669887	11N	7	brown	NA	20 - 40	15	B	4		
GHIVD031	10/08/2009	SOIL	XRF	GPS		2163	543405	5669865	11N	9	brown	NA	20 - 40	15	B	5		
GHIVD032	10/08/2009	SOIL	XRF	GPS		2177	543399	5669834	11N	10	brown	NA	20 - 40	15	B	4		
GHIVD033	10/08/2009	SOIL	XRF	GPS		2165	543391	5669813	11N	11	brown	NA	20 - 40	15	B	4		
GHIVD034	10/08/2009	SOIL	XRF	GPS		2163	543408	5669772	11N	12	brown	NA	20 - 40	15	B	4	ROCKY	
GHIVD035	12/08/2009	SOIL	XRF	GPS		1962	543955	5667609	11N	10	brown	NA	40 - 60	15	B	3	ROCKY	
GHIVD036	12/08/2009	SOIL	XRF	GPS		1954	543972	5667620	11N	20	brown	NA	40 - 60	15	B	3	ROCKY	
GHIVD037	12/08/2009	SOIL	XRF	GPS		1960	543990	5667607	11N	11	brown	NA	40 - 60	15	B	3	ROCKY	
GHIVD038	12/08/2009	SOIL	XRF	GPS			544004	5667606	11N	10	brown	orange	40 - 60	15	B	3	ROCKY	
GHIVD039	12/08/2009	SOIL	XRF	GPS		2000	544047	5667623	11N	15	tan	NA	40 - 60	15	B	4		
GHIVD040	12/08/2009	SOIL	XRF	GPS		1997	544091	5667647	11N	19	brown	orange	40 - 60	15	B	4		
GHIVD041	12/08/2009	SOIL	XRF	GPS		1964	544150	5667667	11N	11	brown	orange	40 - 60	15	B	3		
GHIVD042	12/08/2009	SOIL	XRF	GPS		1926	544192	5667618	11N	15	brown	NA	40 - 60	15	B	4		
GHIVD043	14/08/2009	SOIL	XRF	GPS		1964	544209	5667564	11N	13	brown	orange	40 - 60	15	B	5		
GHIVD044	14/08/2009	SOIL	XRF	GPS		1973	544220	5667515	11N	18	brown	NA	40 - 60	25	B	5		
GHIVD045	14/08/2009	SOIL	XRF	GPS			544252	5667470	11N		brown	orange	40 - 60	25	B	5		
GHIVD046	14/08/2009	SOIL	XRF	GPS			544240	5667394	11N		brown	orange	40 - 60	15	B	5		
GHIVD047	14/08/2009	SOIL	XRF	GPS			544298	5667325	11N		brown	orange	40 - 60	25	B	4		
GHIVD048	14/08/2009	SOIL	XRF	GPS			543522	5670398	11N									
IVL001 00+00	21/08/2009	SOIL	ASSAY	GPS		2062	543378	5668443	11N	7	brown	brown	0 - 20	15	A	3	LINE_START	
IVL001 00+25E	21/08/2009	SOIL	ASSAY	GPS		2063	543405	5668446	11N	9	dark	brown	0 - 20	15	A	3	ORGANIC	
IVL001 00+50E	21/08/2009	SOIL	ASSAY	GPS		2058	543427	5668444	11N	11	dark	brown	0 - 20	15	A	3	ORGANIC	
IVL001 00+75E	21/08/2009	SOIL	ASSAY	GPS		2051	543455	5668443	11N	9	dark	brown	0 - 20	25	B	3	ORGANIC	
IVL001 01+00E	21/08/2009	SOIL	ASSAY	GPS		2045	543480	5668444	11N	2	dark	brown	0 - 20	25	A	3	ORGANIC	

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL001 01+25E	21/08/2009	SOIL	ASSAY	GPS		2044	543505	5668443	11N	3	dark	brown	0 - 20	25	B	3	ORGANIC	
IVL001 01+50E	21/08/2009	SOIL	ASSAY	GPS		2036	543528	5668443	11N	3	dark	brown	0 - 20	25	B	3	ORGANIC	
IVL001 01+75E	21/08/2009	SOIL	ASSAY	GPS		2025	543554	5668442	11N	5	dark	brown	0 - 20	25	B	4	ORGANIC	
IVL001 02+00E	21/08/2009	SOIL	ASSAY	GPS		21	543579	5668443	11N	7	brown	brown	0 - 20	25	B	4	LINE_END	
IVL002 00+00	21/08/2009	SOIL	ANALYSIS	GPS		2058	543731	5666101	11N	18	grey	grey	0 - 20	15	A	3	LINE_START	ROCKY
IVL002 00+50N	21/08/2009	SOIL	ANALYSIS	MAP			543709	5666150	11N		grey	grey	0 - 20	15	A	4	ROCKY	
IVL002 01+00N	21/08/2009	SOIL	ANALYSIS	MAP			543684	5666197	11N		light	brown	0 - 20	5	A	3	ROCKY	
IVL002 01+50N	21/08/2009	SOIL	ANALYSIS	MAP			543678	5666248	11N		light	brown	0 - 20	5	A	3	ROCKY	
IVL002 02+00N	21/08/2009	SOIL	ANALYSIS	GPS		2062	543712	5666288	11N	8	light	brown	0 - 20	15	A	3	ROCKY	
IVL002 02+50N	21/08/2009	SOIL	ANALYSIS	MAP			543757	5666313	11N		dark	brown	0 - 20	15	A	1	ORGANIC	ROCKY
IVL002 03+00N	21/08/2009	SOIL	ANALYSIS	MAP			543790	5666351	11N		brown	brown	0 - 20	15	A	4	ORGANIC	
IVL002 03+50N	21/08/2009	SOIL	ANALYSIS	MAP			543831	5666378	11N		grey	brown	0 - 20	15	B	4		
IVL002 04+00N	21/08/2009	SOIL	ANALYSIS	GPS		2058	543877	5666399	11N	5	brown	brown	0 - 20	15	B	5		
IVL002 04+50N	21/08/2009	SOIL	ANALYSIS	MAP			543916	5666433	11N		dark	brown	0 - 20	15	A	1	ORGANIC	ROCKY
IVL002 05+00N	21/08/2009	SOIL	ANALYSIS	MAP			543968	5666432	11N		dark	brown	0 - 20	15	A	3	ORGANIC	ROCKY
IVL002 05+50N	21/08/2009	SOIL	ANALYSIS	MAP			544016	5666454	11N		dark	brown	0 - 20	15	A	4	ORGANIC	
IVL002 06+00N	21/08/2009	SOIL	ANALYSIS	GPS		2033	544060	5666479	11N	11	brown	brown	0 - 20	15	A	4	ORGANIC	BASE OF CLIFF
IVL002 06+50N	21/08/2009	SOIL	ANALYSIS	MAP			544114	5666477	11N		brown	brown	0 - 20	15	B	4		BASE OF CLIFF
IVL002 07+00N	21/08/2009	SOIL	ANALYSIS	GPS		2034	544166	5666483	11N	3	brown	brown	0 - 20	15	B	4		BASE OF CLIFF
IVL002 07+50N	22/08/2009	SOIL	ANALYSIS	MAP			544213	5666512	11N		brown	brown	0 - 20	15	A	4		BASE OF CLIFF
IVL002 08+00N	22/08/2009	SOIL	ANALYSIS	GPS		2051	544259	5666528	11N	2	grey	brown	20 - 40	15	A	3		BASE OF CLIFF
IVL002 08+50N	22/08/2009	SOIL	ANALYSIS	GPS		2035	544260	5666601	11N	6	brown	brown	20 - 40	15	A	3	ORGANIC	BASE OF CLIFF
IVL002 09+00N	22/08/2009	SOIL	ANALYSIS	MAP			544296	5666646	11N		brown	brown	20 - 40	15	A	3	ORGANIC	BASE OF CLIFF
IVL002 09+50N	22/08/2009	SOIL	ANALYSIS	MAP			544279	5666701	11N		brown	brown	20 - 40	15	B	4		
IVL002 10+00N	22/08/2009	SOIL	ANALYSIS	GPS		2052	544252	5666753	11N	12	dark	brown	20 - 40	15	A	3	ORGANIC	
IVL002 10+50N	22/08/2009	SOIL	ANALYSIS	MAP			544247	5666801	11N		light	grey	20 - 40	5	A	3	ROCKY	
IVL002 11+00N	22/08/2009	SOIL	ANALYSIS	MAP			544250	5666850	11N		dark	brown	20 - 40	15	A	3	ORGANIC	
IVL002 11+50N	22/08/2009	SOIL	ANALYSIS	GPS		2031	544229	5666895	11N	8	brown	brown	20 - 40	25	B	3	ROCKY	
IVL002 12+00N	22/08/2009	SOIL	ANALYSIS	GPS		2047	544224	5666936	11N	9	grey	brown	20 - 40	5	B	5	BASE OF CLIFF	5M BEFORE
IVL002 12+50N	22/08/2009	SOIL	ANALYSIS	GPS		2056	544241	5666999	11N	13	rusty	brown	20 - 40	25	B	4		
IVL002 13+00N	22/08/2009	SOIL	ANALYSIS	MAP			544236	5667052	11N		brown	brown	20 - 40	25	B	4		
IVL002 13+50N	22/08/2009	SOIL	ANALYSIS	GPS		2047	544255	5667099	11N	5	rusty	brown	20 - 40	25	B	4		
IVL002 14+00N	22/08/2009	SOIL	ANALYSIS	MAP			544265	5667149	11N		brown	brown	20 - 40	15	A	2	ORGANIC	
IVL002 14+50N	22/08/2009	SOIL	ANALYSIS	GPS		2056	544242	5667197	11N	0	grey	brown	20 - 40	35	A	2	ORGANIC	LINE_END
IVL003 00+00	21/08/2009	SOIL	ANALYSIS	MAP		1910	543927	5666169	11N	11	grey	NA	0 - 20	15	A	1	LINE_START	ROCKY
IVL003 00+50N	21/08/2009	SOIL	ANALYSIS	MAP			543924	5666204	11N		brown	NA	0 - 20	25	B	3		ORGANIC
IVL003 01+00N	21/08/2009	SOIL	ANALYSIS	MAP	100		543926	5666238	11N		brown	NA	0 - 20	25	B	3		ORGANIC
IVL003 01+50N	21/08/2009	SOIL	ANALYSIS	NO SAMPLE			543944	5666267	11N									
IVL003 02+00N	21/08/2009	SOIL	ANALYSIS	MAP	200	1913	543976	5666280	11N	11	brown	NA	0 - 20	25	B	3		ORGANIC
IVL003 02+50N	21/08/2009	SOIL	ANALYSIS	MAP	250	1913	544024	5666297	11N		brown	dark	0 - 20	25	B	2		ORGANIC
IVL003 03+00N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544065	5666326	11N		brown	dark	0 - 20	25	B	5		
IVL003 03+50N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544095	5666366	11N		brown	light	0 - 20	25	B	3	ROCKY	
IVL003 04+00N	21/08/2009	SOIL	ANALYSIS	MAP	400	1912	544142	5666383	11N	21	brown	dark	0 - 20	15	B	3	ORGANIC	
IVL003 04+50N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544189	5666405	11N		brown	rusty	0 - 20	15	B	5		

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL003 05+00N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544228	5666436	11N		brown	dark	0 - 20	15	B	3		
IVL003 05+50N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544278	5666435	11N		brown	dark	0 - 20	15	B	5		
IVL003 06+00N	21/08/2009	SOIL	ANALYSIS	MAP	600	1910	544329	5666440	11N	14	brown	dark	0 - 20	15	B	4	ORGANIC	
IVL003 06+50N	21/08/2009	SOIL	ANALYSIS	MAP			544378	5666451	11N		brown	dark	0 - 20	15	B	4	ORGANIC	
IVL003 07+00N	21/08/2009	SOIL	ANALYSIS	MAP		1911	544396	5666498	11N		brown	rusty	0 - 20	15	B	4	ORGANIC	
IVL003 07+50N	21/08/2009	SOIL	ANALYSIS	MAP			544388	5666547	11N		brown	dark	0 - 20	15	B	4	ORGANIC	
IVL003 08+00N	21/08/2009	SOIL	ANALYSIS	MAP	800	1908	544411	5666591	11N	12	brown	dark	0 - 20	15	B	5		
IVL003 08+50N	21/08/2009	SOIL	ANALYSIS	NO SAMPLE			544422	5666632	11N									
IVL003 09+00N	21/08/2009	SOIL	ANALYSIS	MAP			544417	5666675	11N		brown	dark	0 - 20	15	B	4		
IVL003 09+50N	21/08/2009	SOIL	ANALYSIS	MAP			544402	5666716	11N		brown	dark	0 - 20	15	B	4		
IVL003 10+00N	21/08/2009	SOIL	ANALYSIS	MAP	1000	1909	544386	5666756	11N	29	brown	dark	0 - 20	15	B	4		
IVL003 10+50N	21/08/2009	SOIL	ANALYSIS	MAP			544391	5666807	11N		brown	dark	0 - 20	15	B	3	ORGANIC	
IVL003 11+00N	21/08/2009	SOIL	ANALYSIS	MAP			544398	5666857	11N		brown	rusty	0 - 20	15	B	3	ORGANIC	
IVL003 11+50N	21/08/2009	SOIL	ANALYSIS	MAP			544360	5666895	11N		brown	rusty	0 - 20	15	B	3	ORGANIC	
IVL003 12+00N	21/08/2009	SOIL	ANALYSIS	MAP	1200	1909	544367	5666935	11N	15	brown	rusty	0 - 20	15	B	3	ROCKY	
IVL003 12+50N	21/08/2009	SOIL	ANALYSIS	MAP			544395	5666962	11N		brown	rusty	0 - 20	15	B	4		
IVL003 13+00N	21/08/2009	SOIL	ANALYSIS	MAP			544397	5667000	11N		brown	rusty	0 - 20	15	B	4		
IVL003 13+50N	21/08/2009	SOIL	ANALYSIS	MAP			544387	5667038	11N		brown	rusty	0 - 20	15	B	4		
IVL003 14+00N	21/08/2009	SOIL	ANALYSIS	MAP	1400	1910	544391	5667072	11N	17	brown	rusty	0 - 20	15	B	4	ORGANIC	
IVL003 14+50N	21/08/2009	SOIL	ANALYSIS	MAP	1450	1910	544383	5667137	11N	17	brown	rusty	0 - 20	15	B	5		
IVL004 00+00	22/08/2009	SOIL	ANALYSIS	GPS		1853	544527	5667149	11N	14	Brown	orange	20 - 40	25	B	4	LINE_START	
IVL004 00+50S	22/08/2009	SOIL	ANALYSIS	MAP			544530	5667100	11N		Brown	orange	20 - 40	25	B	4		
IVL004 01+00S	22/08/2009	SOIL	ANALYSIS	MAP			544518	5667053	11N		Brown	dark	20 - 40	15	A	3	ORGANIC	
IVL004 01+50S	22/08/2009	SOIL	ANALYSIS	MAP			544526	5667007	11N		Brown	orange	20 - 40	15	B	4	ORGANIC	
IVL004 02+00S	22/08/2009	SOIL	ANALYSIS	GPS		1860	544525	5666958	11N	14	Brown	orange	20 - 40	15	B	4		
IVL004 02+50S	22/08/2009	SOIL	ANALYSIS	MAP			544514	5666921	11N		Brown	orange	20 - 40	15	B	4		
IVL004 03+00S	22/08/2009	SOIL	ANALYSIS	MAP			544488	5666893	11N		Brown	dark	20 - 40	5	A	3		
IVL004 03+50S	23/08/2009	SOIL	ANALYSIS	MAP			544504	5666860	11N		Brown	dark	20 - 40	15	A	3	ORGANIC	
IVL004 04+00S	23/08/2009	SOIL	ANALYSIS	GPS		1875	544515	5666823	11N	11	Brown	orange	20 - 40	25	B	4		
IVL004 04+50S	23/08/2009	SOIL	ANALYSIS	MAP			544505	5666781	11N		Brown	dark	20 - 40	25	B	3		
IVL004 05+00S	23/08/2009	SOIL	ANALYSIS	MAP			544527	5666741	11N		Brown	dark	20 - 40	25	B	4		
IVL004 05+50S	23/08/2009	SOIL	ANALYSIS	MAP			544532	5666693	11N		Brown	dark	20 - 40	15	B	3	ORGANIC	
IVL004 06+00S	23/08/2009	SOIL	ANALYSIS	GPS		1867	544526	5666646	11N	10	Brown	dark	20 - 40	15	A	2	ORGANIC	
IVL004 06+50S	23/08/2009	SOIL	ANALYSIS	MAP			544517	5666594	11N		Brown	dark	20 - 40	15	B	4		
IVL004 07+00S	23/08/2009	SOIL	ANALYSIS	MAP			544502	5666542	11N		Brown	dark	20 - 40	15	A	4		
IVL004 07+50S	23/08/2009	SOIL	ANALYSIS	MAP			544512	5666491	11N		Brown	light	20 - 40	15	B	4		
IVL004 08+00S	23/08/2009	SOIL	ANALYSIS	GPS		1857	544508	5666438	11N	10	Brown	orange	20 - 40	15	B	4		
IVL004 08+50S	23/08/2009	SOIL	ANALYSIS	MAP			544494	5666385	11N		Brown	orange	20 - 40	15	B	4		
IVL004 09+00S	23/08/2009	SOIL	ANALYSIS	MAP			544467	5666339	11N		Brown	orange	20 - 40	15	B	4		
IVL004 09+50S	23/08/2009	SOIL	ANALYSIS	MAP			544427	5666302	11N		Brown	orange	20 - 40	15	B	4		
IVL004 10+00S	23/08/2009	SOIL	ANALYSIS	MAP	1000	1813	544381	5666301	11N	18	Brown	orange	20 - 40	15	B	4		
IVL004 10+50S	23/08/2009	SOIL	ANALYSIS	MAP			544341	5666309	11N		Brown	orange	20 - 40	15	B	5		
IVL004 11+00S	23/08/2009	SOIL	ANALYSIS	MAP			544300	5666271	11N		Brown	NA	20 - 40	15	B	3	ORGANIC	
IVL004 11+50S	23/08/2009	SOIL	ANALYSIS	MAP			544255	5666241	11N		Brown	orange	0 - 20	15	B	5		
IVL004 12+00S	23/08/2009	SOIL	ANALYSIS	MAP	1200	1809	544213	5666203	11N	8	Brown	orange	0 - 20	15	B	4		
IVL004 12+50S	23/08/2009	SOIL	ANALYSIS	MAP			544188	5666177	11N		Brown	orange	0 - 20	15	B	4		
IVL004 13+00S	23/08/2009	SOIL	ANALYSIS	MAP			544162	5666152	11N		Brown	orange	0 - 20	15	B	4		
IVL004 13+50S	23/08/2009	SOIL	ANALYSIS	MAP			544134	5666128	11N		Brown	light	0 - 20	15	A	3	ROCKY	
IVL004 14+00S	23/08/2009	SOIL	ANALYSIS	MAP	1400	1811	544132	5666096	11N	17	Brown	grey	0 - 20	25	B	5		
IVL004 14+50S	23/08/2009	SOIL	ANALYSIS	MAP			544155	5666053	11N		Brown	dark	0 - 20	25	A	2	ORGANIC	
IVL004 15+00S	23/08/2009	SOIL	ANALYSIS	MAP			544179	5666012	11N		Brown	grey	0 - 20	25	A	1	ORGANIC	ROCKY
IVL004 15+50S	23/08/2009	SOIL	ANALYSIS	MAP			544210	5665975	11N		Brown	dark	0 - 20	25	A	3	ORGANIC	

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL004 16+00S	23/08/2009	SOIL	ANALYSIS	MAP	1600	1810	544243	5665941	11N	12	Brown	dark	0 - 20	25	A	2	ORGANIC	
IVL004 16+50S	23/08/2009	SOIL	ANALYSIS	MAP			544285	5665915	11N		Brown	dark	0 - 20	25	B	3	ORGANIC	
IVL004 17+00S	23/08/2009	SOIL	ANALYSIS	MAP	1700	1810	544313	5665874	11N	13	Brown	dark	0 - 20	25	B	5	LINE_END	
IVL005 00+00	23/08/2009	SOIL	ANALYSIS	GPS		2062	544131	5665777	11N	6	Brown	grey	0 - 20	25	B	3	LINE_START	
IVL005 00+50S	23/08/2009	SOIL	ANALYSIS	MAP			544141	5665726	11N		Brown	brown	20 - 40	15	B	4		
IVL005 01+00S	23/08/2009	SOIL	ANALYSIS	MAP			544133	5665675	11N		Brown	brown	20 - 40	15	B	3		
IVL005 01+50S	23/08/2009	SOIL	ANALYSIS	MAP			544150	5665631	11N		Brown	brown	20 - 40	15	B	3		
IVL005 02+00S	23/08/2009	SOIL	ANALYSIS	GPS		2067	544149	5665584	11N	6	Brown	brown	20 - 40	15	B	3	ORGANIC	
IVL005 02+50S	23/08/2009	SOIL	ANALYSIS	MAP			544128	5665538	11N		Brown	brown	20 - 40	15	B	3		
IVL005 03+00S	23/08/2009	SOIL	ANALYSIS	GPS		2069	544109	5665490	11N	11	Brown	brown	20 - 40	15	B	3	LINE_END	
IVL006 00+00	23/08/2009	SOIL	ANALYSIS	GPS		1965	544233	5665449	11N	10	Brown	brown	20 - 40	15	A	3	LINE_START	
IVL006 00+50N	23/08/2009	SOIL	ANALYSIS	MAP			544262	5665488	11N		Brown	brown	20 - 40	15	B	3		
IVL006 01+00N	23/08/2009	SOIL	ANALYSIS	MAP			544291	5665526	11N		Brown	brown	20 - 40	15	B	3		
IVL006 01+50N	23/08/2009	SOIL	ANALYSIS	MAP			544316	5665567	11N		brown	light	20 - 40	25	B	4		
IVL006 02+00N	23/08/2009	SOIL	ANALYSIS	GPS		1958	544331	5665612	11N	8	brown	light	20 - 40	25	B	4	ORGANIC	
IVL006 02+50N	23/08/2009	SOIL	ANALYSIS	MAP			544307	5665654	11N		brown	dark	20 - 40	25	A	1	ORGANIC	ROCKY
IVL006 03+00N	23/08/2009	SOIL	ANALYSIS	MAP			544304	5665705	11N		brown	light	20 - 40	25	B	4		
IVL006 03+50N	23/08/2009	SOIL	ANALYSIS	MAP			544281	5665750	11N		brown	dark	20 - 40	5	A	3	ROCKY	
IVL006 04+00N	23/08/2009	SOIL	ANALYSIS	GPS		1977	544243	5665785	11N	10	brown	dark	20 - 40	5	A	3		
IVL006 04+50N	23/08/2009	SOIL	ANALYSIS	MAP		1940	544221	5665827	11N		brown	grey	20 - 40	15	A	3	ROCKY	
IVL006 05+00N	23/08/2009	SOIL	ANALYSIS	MAP			544182	5665853	11N		brown	black	20 - 40	5	A	2	ORGANIC	ROCKY
IVL006 05+50N	24/08/2009	SOIL	ANALYSIS	MAP			544149	5665883	11N		brown	black	20 - 40	5	A	3	ORGANIC	ROCKY
IVL006 06+00N	24/08/2009	SOIL	ANALYSIS	GPS		1957	544109	5665907	11N	10	brown	dark	20 - 40	15	A	3		
IVL006 06+50N	24/08/2009	SOIL	ANALYSIS	MAP			544067	5665935	11N		brown	dark	20 - 40	15	B	3	ROCKY	
IVL006 07+00N	24/08/2009	SOIL	ANALYSIS	MAP			544026	5665966	11N		brown	grey	20 - 40	15	A	2	ROCKY	TALUS
IVL006 07+50N	24/08/2009	SOIL	ANALYSIS	MAP			543983	5665993	11N		brown	grey	20 - 40	15	A	1	ROCKY	TALUS
IVL006 08+00N	24/08/2009	SOIL	ANALYSIS	MAP	800	1950	543943	5666026	11N	8	brown	grey	20 - 40	15	B	3	ROCKY	TALUS
IVL007 00+00	24/08/2009	SOIL	ANALYSIS	MAP	0	1840	544344	5665845	11N	10	brown	grey	20 - 40	15	B	3	LINE_START	ORGANIC
IVL007 00+50S	24/08/2009	SOIL	ANALYSIS	MAP			544390	5665819	11N		brown	rusty	20 - 40	15	B	5		
IVL007 01+00S	24/08/2009	SOIL	ANALYSIS	MAP			544429	5665785	11N		brown	grey	20 - 40	15	B	5		
IVL007 01+50S	24/08/2009	SOIL	ANALYSIS	MAP			544442	5665735	11N		brown	grey	20 - 40	15	B	5		
IVL007 02+00S	24/08/2009	SOIL	ANALYSIS	MAP	200	1840	544464	5665688	11N	12	brown	grey	20 - 40	15	B	5		
IVL007 02+50S	24/08/2009	SOIL	ANALYSIS	MAP			544479	5665640	11N		brown	orange	20 - 40	15	B	5		
IVL007 03+00S	24/08/2009	SOIL	ANALYSIS	MAP			544477	5665590	11N		brown	orange	20 - 40	15	B	4	ORGANIC	
IVL007 03+50S	24/08/2009	SOIL	ANALYSIS	MAP			544471	5665539	11N		brown	orange	20 - 40	15	B	3	ORGANIC	
IVL007 04+00S	24/08/2009	SOIL	ANALYSIS	MAP			544459	5665490	11N	12	brown	orange	20 - 40	15	B	4	LINE_END	
IVL008 00+00	24/08/2009	SOIL	ANALYSIS	GPS		1893	544492	5670503	11N	8	brown	grey	0 - 20	25	B	5	LINE_START	
IVL008 00+50S	24/08/2009	SOIL	ANALYSIS	MAP			544451	5670480	11N		brown	grey	0 - 20	25	B	5		
IVL008 01+00S	24/08/2009	SOIL	ANALYSIS	MAP			544416	5670447	11N		brown	brown	0 - 20	25	B	4		
IVL008 01+50S	24/08/2009	SOIL	ANALYSIS	MAP			544369	5670434	11N		brown	dark	0 - 20	25	A	4		
IVL008 02+00S	24/08/2009	SOIL	ANALYSIS	GPS		1895	544339	5670397	11N	8	brown	brown	0 - 20	25	B	5		
IVL008 02+50S	24/08/2009	SOIL	ANALYSIS	MAP			544310	5670346	11N		brown	grey	0 - 20	25	B	5		
IVL008 03+00S	24/08/2009	SOIL	ANALYSIS	MAP			544276	5670297	11N		brown	grey	0 - 20	15	B	3		
IVL008 03+50S	24/08/2009	SOIL	ANALYSIS	MAP			544241	5670250	11N		brown	dark	0 - 20	15	B	4		
IVL008 04+00S	24/08/2009	SOIL	ANALYSIS	GPS		1894	544210	5670199	11N	11	brown	light	0 - 20	15	B	4		
IVL008 04+50S	24/08/2009	SOIL	ANALYSIS	MAP			544188	5670153	11N		brown	light	0 - 20	5	B	3		
IVL008 05+00S	24/08/2009	SOIL	ANALYSIS	MAP			544168	5670106	11N		brown	light	0 - 20	5	B	4		
IVL008 05+50S	24/08/2009	SOIL	ANALYSIS	MAP			544147	5670061	11N		brown	light	0 - 20	15	B	4		
IVL008 06+00S	24/08/2009	SOIL	ANALYSIS	GPS		1884	544108	5670093	11N	14	brown	light	0 - 20	15	B	4	LINE_END	
IVL009 00+00	24/08/2009	SOIL	ANALYSIS	NO SAMPLE	0	1995	543909	5670472	11N		brown	rusty	0 - 20	15	B	5		
IVL009 00+50N	24/08/2009	SOIL	ANALYSIS	MAP			543955	5670483	11N		brown	rusty	0 - 20	15	B	3	ORGANIC	
IVL009 01+00N	24/08/2009	SOIL	ANALYSIS	MAP			544000	5670505	11N		brown	brown	0 - 20	15	B	4		

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL009 01+50N	24/08/2009	SOIL	ANALYSIS	MAP			544046	5670487	11N		brown	dark	0 - 20	15	A	4	ORGANIC	
IVL009 02+00N	24/08/2009	SOIL	ANALYSIS	MAP	200	2002	544091	5670471	11N	8	brown	brown	0 - 20	25	B	5		
IVL009 02+50N	24/08/2009	SOIL	ANALYSIS	MAP			544132	5670500	11N		brown	grey	0 - 20	25	B	4		
IVL009 03+00N	24/08/2009	SOIL	ANALYSIS	MAP			544169	5670534	11N		brown	grey	0 - 20	25	B	4		
IVL009 03+50N	24/08/2009	SOIL	ANALYSIS	MAP			544204	5670570	11N		brown	dark	0 - 20	25	B	3		
IVL009 04+00N	24/08/2009	SOIL	ANALYSIS	GPS	400	2000	544240	5670605	11N	8	brown	dark	0 - 20	25	A	1	ROCKY	
IVL009 04+50N	24/08/2009	SOIL	ANALYSIS	MAP			544273	5670636	11N		brown	grey	0 - 20	25	B	2	ROCKY	
IVL009 05+00N	24/08/2009	SOIL	ANALYSIS	MAP			544304	5670669	11N		brown	black	0 - 20	25	B	3	ROCKY	
IVL009 05+50N	24/08/2009	SOIL	ANALYSIS	MAP			544336	5670700	11N		brown	brown	0 - 20	25	B	3	ORGANIC	
IVL009 06+00N	24/08/2009	SOIL	ANALYSIS	GPS	600	2000	544370	5670730	11N	10	brown	rusty	0 - 20	25	B	3	ROCKY	
IVL009 06+50N	24/08/2009	SOIL	ANALYSIS	MAP			544403	5670776	11N		brown	rusty	0 - 20	25	B	4		
IVL009 07+00N	24/08/2009	SOIL	ANALYSIS	MAP			544436	5670821	11N		brown	brown	0 - 20	25	B	3	ORGANIC	ROCKY
IVL009 07+50N	24/08/2009	SOIL	ANALYSIS	GPS	750	2005	544468	5670866	11N	8	brown	brown	0 - 20	25	B	3	LINE_END	
IVL10+00E 00+00	18/08/2009	SOIL	ASSAY	GPS		2315	542819	5668687	11N	5								
IVL10+00E 00+25S	18/08/2009	SOIL	ASSAY	GPS		2316	542814	5668678	11N	6	brown	Select	40 - 60	15	B	3	ORGANIC	
IVL10+00E 00+50N	18/08/2009	SOIL	ASSAY	GPS			542813	5668744	11N	8	dark	brown	40 - 60	15	A	3	ORGANIC	
IVL10+00E 00+50S	18/08/2009	SOIL	ASSAY	GPS			542821	5668654	11N	4	brown	Select	40 - 60	15	B	3	ROCKY	
IVL10+00E 00+75N	18/08/2009	SOIL	ASSAY	GPS		2349	542813	5668766	11N	7	dark	brown	20 - 40	15	B	4		
IVL10+00E 00+75S	18/08/2009	SOIL	ASSAY	GPS			542812	5668637	11N	3	brown	Select	40 - 60	15	B	5	5M BEFORE	
IVL10+00E 01+00N	18/08/2009	SOIL	ASSAY	GPS			542809	5668788	11N	5	dark	brown	20 - 40	15	B	4		
IVL10+00E 01+00S	18/08/2009	SOIL	ASSAY	MAP		2298	542810	5668631	11N	5	brown	Select	40 - 60	15	B	3		
IVL10+00E 01+25N	18/08/2009	SOIL	ASSAY	GPS		2365	542811	5668809	11N	6	dark	brown	20 - 40	15	B	4		
IVL10+00E 01+25S	18/08/2009	SOIL	ASSAY	GPS			542818	5668589	11N	7	brown	brown	40 - 60	15	B	3	ROCKY	
IVL10+00E 01+50N	18/08/2009	SOIL	ASSAY	MAP			542809	5668833	11N	2	brown	brown	20 - 40	25	B	4		
IVL10+00E 01+50S	18/08/2009	SOIL	ASSAY	GPS			542818	5668570	11N	6	brown	rusty	40 - 60	15	B	3		
IVL10+00E 01+75N	18/08/2009	SOIL	ASSAY	GPS		2382	542808	5668855	11N	7	brown	brown	0 - 20	25	B	4		
IVL10+00E 02+00N	18/08/2009	SOIL	ASSAY	GPS		2385	542810	5668881	11N	6	brown	brown	0 - 20	5	A	4		
IVL10+00E 02+25N	18/08/2009	SOIL	ASSAY	GPS		2385	542801	5668910	11N	10	brown	brown	0 - 20	15	A	4	LINE_END	
IVL10+00E 00+25N	08/08/2009	SOIL	ASSAY	GPS	0	2382	542815	5668724	11N	17	brown	NA	20 - 40	5	B	4	LINE_START	TOP OF CLIFF
IVL10+50E 00+00	08/08/2009	SOIL	ASSAY	GPS	50	2298	542866	5668723	11N	7	brown	NA	0 - 20	15	B	4		
IVL11+00E 00+00	08/08/2009	SOIL	ASSAY	GPS	100	2277	542905	5668718	11N	8	brown	light	20 - 40	15	B	4		
IVL11+00E 00+25N	18/08/2009	SOIL	ASSAY	MAP			542918	5668732	11N	13	brown	grey	20 - 40	15	B	3		
IVL11+00E 00+25S	19/08/2009	SOIL	ASSAY	MAP			542909	5668696	11N	6	brown	rusty	0 - 20	15	B	4	ORGANIC	
IVL11+00E 00+50N	18/08/2009	SOIL	ASSAY	MAP	50		542917	5668759	11N	12	brown	dark	20 - 40	15	B	3	ROCKY	
IVL11+00E 00+50S	19/08/2009	SOIL	ASSAY	MAP			542894	5668671	11N	9	brown	dark	0 - 20	15	A	1	ORGANIC	
IVL11+00E 00+75N	18/08/2009	SOIL	ASSAY	MAP			542916	5668780	11N	12	brown	red	20 - 40	15	B	3	ROCKY	
IVL11+00E 00+75S	19/08/2009	SOIL	ASSAY	MAP			542900	5668642	11N	9	brown	dark	0 - 20	15	B	4		
IVL11+00E 01+00N	18/08/2009	SOIL	ASSAY	MAP			542915	5668799	11N		brown	red	20 - 40	15	B	3	ROCKY	
IVL11+00E 01+00S	19/08/2009	SOIL	ASSAY	MAP			542900	5668614	11N	9	brown	dark	0 - 20	15	B	3		ORGANIC
IVL11+00E 01+25N	18/08/2009	SOIL	ASSAY	MAP			542921	5668825	11N	8	brown	red	20 - 40	15	B	2	ROCKY	
IVL11+00E 01+25S	19/08/2009	SOIL	ASSAY	MAP			542906	5668592	11N	12	brown	dark	0 - 20	15	B	3		ORGANIC
IVL11+00E 01+50N	18/08/2009	SOIL	ASSAY	MAP			542917	5668853	11N		brown	dark	20 - 40	15	B	3	5M PAST	
IVL11+00E 01+50S	19/08/2009	SOIL	ASSAY	MAP			542909	5668564	11N	9	brown	dark	0 - 20	15	A	3		ROCKY
IVL11+00E 01+75N	18/08/2009	SOIL	ASSAY	MAP			542914	5668888	11N	8	brown	dark	20 - 40	15	A	3		
IVL11+00E 02+00N	18/08/2009	SOIL	ASSAY	MAP			542916	5668915	11N	8	brown	dark	20 - 40	15	B	3	LINE_END	
IVL11+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2234	542952	5668720	11N	8	brown	light	20 - 40	15	B	3		
IVL12+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2202	543014	5668723	11N	11	brown	light	20 - 40	15	B	4		
IVL12+00E 00+25N	18/08/2009	SOIL	ASSAY	MAP			543020	5668738	11N	7	brown	dark	0 - 20	15	B	4		
IVL12+00E 00+25S	19/08/2009	SOIL	ASSAY	MAP			543012	5668689	11N	13	brown	dark	0 - 20	15	B	4		
IVL12+00E 00+50N	18/08/2009	SOIL	ASSAY	MAP			543016	5668761	11N	12	brown	dark	0 - 20	15	B	3	ORGANIC	
IVL12+00E 00+50S	19/08/2009	SOIL	ASSAY	MAP			543013	5668666	11N	12	brown	dark	0 - 20	15	B	4	ORGANIC	
IVL12+00E 00+75N	18/08/2009	SOIL	ASSAY	MAP			543018	5668782	11N	9	brown	light	0 - 20	15	B	4		

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL12+00E 00+75S	19/08/2009	SOIL	ASSAY	MAP			543008	5668644	11N	6	brown	dark	0 - 20	15	B	4	ORGANIC	
IVL12+00E 01+00N	18/08/2009	SOIL	ASSAY	MAP			543015	5668805	11N	13	brown	rusty	0 - 20	15	B	4	ROCKY	
IVL12+00E 01+00S	19/08/2009	SOIL	ASSAY	MAP			543012	5668614	11N	8	brown	dark	0 - 20	15	A	1	ORGANIC	ROCKY
IVL12+00E 01+25N	18/08/2009	SOIL	ASSAY	MAP			543012	5668830	11N	9	brown	rusty	0 - 20	15	B	4	ORGANIC	
IVL12+00E 01+25S	19/08/2009	SOIL	ASSAY	MAP			543011	5668593	11N	8	brown	dark	0 - 20	15	A	4		
IVL12+00E 01+50N	18/08/2009	SOIL	ASSAY	MAP			543014	5668853	11N	8	brown	dark	0 - 20	15	B	4		
IVL12+00E 01+50S	19/08/2009	SOIL	ASSAY	NO SAMPLE			543011	5668563	11N		brown	dark	0 - 20	15	A	4		ROCKY
IVL12+00E 01+75N	18/08/2009	SOIL	ASSAY	MAP			543015	5668872	11N	10	brown	dark	20 - 40	15	B	4		
IVL12+00E 01+75S	19/08/2009	SOIL	ASSAY	MAP			543015	5668536	11N	9	brown	grey	0 - 20	15	A	2		ROCKY
IVL12+00E 02+00N	18/08/2009	SOIL	ASSAY	MAP			543016	5668891	11N	8	brown	dark	20 - 40	15	B	4		
IVL12+00E 02+00S	19/08/2009	SOIL	ASSAY	MAP			543010	5668510	11N	9	brown	grey	0 - 20	15	A	1		ROCKY
IVL12+00E 02+25N	18/08/2009	SOIL	ASSAY	MAP			543013	5668915	11N	8	brown	dark	20 - 40	15	B	4	LINE_END	
IVL12+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2185	543070	5668720	11N	9	brown	light	20 - 40	15	B	4		
IVL13+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2167	543111	5668721	11N	11	brown	light	20 - 40	15	B	4		
IVL13+00E 00+25N	19/08/2009	SOIL	ASSAY	GPS		2161	543115	5668731	11N	14	dark	brown	0 - 20	15	A	3	LINE_START	ORGANIC
IVL13+00E 00+25S	19/08/2009	SOIL	ASSAY	GPS		2177	543114	5668683	11N	7	brown	brown	0 - 20	15	B	4	LINE_START	ORGANIC
IVL13+00E 00+50N	19/08/2009	SOIL	ASSAY	GPS			543119	5668755	11N	7	brown	brown	0 - 20	15	B	3	ORGANIC	
IVL13+00E 00+50S	19/08/2009	SOIL	ASSAY	GPS			543117	5668660	11N	3	brown	brown	0 - 20	15	B	4		ORGANIC
IVL13+00E 00+75N	19/08/2009	SOIL	ASSAY	GPS			543118	5668775	11N	6	brown	brown	0 - 20	15	B	4		
IVL13+00E 00+75S	19/08/2009	SOIL	ASSAY	GPS			543115	5668637	11N	17	brown	brown	0 - 20	15	B	4		
IVL13+00E 01+00N	19/08/2009	SOIL	ASSAY	GPS		2189	543117	5668802	11N	10	brown	brown	0 - 20	15	B	3		
IVL13+00E 01+00S	19/08/2009	SOIL	ASSAY	GPS		2158	543116	5668611	11N	2	dark	brown	0 - 20	15	A	3	ORGANIC	
IVL13+00E 01+25N	19/08/2009	SOIL	ASSAY	GPS			543120	5668828	11N	6	dark	brown	0 - 20	15	A	3	ORGANIC	
IVL13+00E 01+25S	19/08/2009	SOIL	ASSAY	GPS			543116	5668587	11N	2	dark	brown	0 - 20	15	A	3	ORGANIC	
IVL13+00E 01+50N	19/08/2009	SOIL	ASSAY	GPS			543119	5668848	11N	8	brown	brown	0 - 20	15	B	5	5M BEFORE	
IVL13+00E 01+50S	19/08/2009	SOIL	ASSAY	GPS			543116	5668566	11N	3	light	brown	0 - 20	25	B	4		
IVL13+00E 01+75N	19/08/2009	SOIL	ASSAY	GPS			543117	5668873	11N	7	brown	brown	0 - 20	5	A	3	ROCKY	SMALL_SAMPLE
IVL13+00E 01+75S	19/08/2009	SOIL	ASSAY	GPS			543112	5668537	11N	6	light	brown	0 - 20	25	B	4		
IVL13+00E 02+00N	19/08/2009	SOIL	ASSAY	GPS		2218	543121	5668895	11N	7	brown	brown	0 - 20	5	A	3	ROCKY	ORGANIC
IVL13+00E 02+00S	19/08/2009	SOIL	ASSAY	NO SAMPLE		2137	543112	5668513	11N	7	light	brown	0 - 20	25	B	4	TALUS	LINE_END
IVL13+00E 02+25N	19/08/2009	SOIL	ASSAY	GPS			543121	5668920	11N	8	brown	brown	0 - 20	15	B	4	LINE_END	
IVL13+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2151	543170	5668722	11N	9	brown	light	20 - 40	15	B	3	ORGANIC	
IVL14+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2150	543215	5668722	11N	10	brown	orange	20 - 40	15	B	5	ORGANIC	
IVL14+00E 00+25N	19/08/2009	SOIL	ASSAY	MAP			543211	5668728	11N	7	brown	dark	0 - 20	25	B	2		ORGANIC
IVL14+00E 00+25S	19/08/2009	SOIL	ASSAY	MAP			543211	5668685	11N	9	brown	NA	0 - 20	15	A	2	ORGANIC	
IVL14+00E 00+50N	19/08/2009	SOIL	ASSAY	MAP			543215	5668756	11N	12	brown	dark	0 - 20	25	B	4		ORGANIC
IVL14+00E 00+50S	19/08/2009	SOIL	ASSAY	MAP			543214	5668658	11N	9	brown	NA	0 - 20	15	A	2	ORGANIC	
IVL14+00E 00+75N	19/08/2009	SOIL	ASSAY	MAP			543217	5668780	11N	9	brown	dark	0 - 20	25	B	2	ROCKY	ORGANIC
IVL14+00E 00+75S	19/08/2009	SOIL	ASSAY	MAP			543212	5668635	11N	9	brown	rusty	0 - 20	25	B	3	ORGANIC	
IVL14+00E 01+00N	19/08/2009	SOIL	ASSAY	MAP			543214	5668803	11N	8	brown	dark	0 - 20	25	B	3	ROCKY	ORGANIC
IVL14+00E 01+00S	19/08/2009	SOIL	ASSAY	MAP			543212	5668612	11N	12	brown	NA	0 - 20	15	B	3	ORGANIC	
IVL14+00E 01+25N	19/08/2009	SOIL	ASSAY	MAP			543217	5668826	11N	6	brown	dark	0 - 20	25	B	3	ROCKY	ORGANIC
IVL14+00E 01+25S	19/08/2009	SOIL	ASSAY	MAP			543212	5668585	11N	7	brown	NA	0 - 20	15	B	2	ORGANIC	
IVL14+00E 01+50N	19/08/2009	SOIL	ASSAY	MAP			543219	5668848	11N	6	brown	dark	0 - 20	25	B	3	ROCKY	ORGANIC
IVL14+00E 01+50S	19/08/2009	SOIL	ASSAY	MAP			543212	5668562	11N	9	brown	NA	0 - 20	25	B	3	ORGANIC	
IVL14+00E 01+75N	19/08/2009	SOIL	ASSAY	MAP			543219	5668870	11N	8	brown	dark	0 - 20	25	B	2	ROCKY	ORGANIC
IVL14+00E 01+75S	19/08/2009	SOIL	ASSAY	MAP			543213	5668538	11N	9	brown	NA	0 - 20	25	B	3	ORGANIC	
IVL14+00E 02+00N	19/08/2009	SOIL	ASSAY	MAP			543221	5668891	11N	10	brown	dark	0 - 20	25	B	2	ROCKY	ORGANIC
IVL14+00E 02+00S	19/08/2009	SOIL	ASSAY	MAP			543209	5668511	11N	8	brown	dark	0 - 20	25	B	3	ORGANIC	
IVL14+00E 02+25N	19/08/2009	SOIL	ASSAY	MAP			543221	5668912	11N	7	brown	dark	0 - 20	25	B	3	ROCKY	

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL14+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2129	543269	5668725	11N	8	brown	NA	20 - 40	15	B	4	ORGANIC	
IVL15+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2114	543310	5668728	11N	12	brown	NA	20 - 40	15	B	3	ORGANIC	
IVL15+00E 00+25N	19/08/2009	SOIL	ASSAY	MAP			543311	5668713	11N	8	brown	dark	0 - 20	15	A	2	ROCKY	ORGANIC
IVL15+00E 00+25S	19/08/2009	SOIL	ASSAY	MAP			543312	5668665	11N	8	brown	dark	0 - 20	15	B	3		
IVL15+00E 00+50N	19/08/2009	SOIL	ASSAY	MAP			543311	5668738	11N	11	brown	dark	0 - 20	15	A	2	ROCKY	ORGANIC
IVL15+00E 00+50S	19/08/2009	SOIL	ASSAY	MAP			543315	5668644	11N	8	brown	dark	0 - 20	15	B	3		
IVL15+00E 00+75N	19/08/2009	SOIL	ASSAY	MAP			543316	5668763	11N	11	brown	dark	0 - 20	15	A	1	ROCKY	ORGANIC
IVL15+00E 00+75S	19/08/2009	SOIL	ASSAY	MAP			543317	5668621	11N	8	brown	dark	0 - 20	15	B	3		ROCKY
IVL15+00E 01+00N	19/08/2009	SOIL	ASSAY	MAP			543317	5668785	11N	9	brown	dark	0 - 20	15	A	2	ROCKY	ORGANIC
IVL15+00E 01+00S	19/08/2009	SOIL	ASSAY	MAP			543315	5668596	11N	11	brown	dark	0 - 20	15	B	3		ROCKY
IVL15+00E 01+25N	19/08/2009	SOIL	ASSAY	MAP			543317	5668809	11N	9	brown	dark	0 - 20	15	A	1	ROCKY	ORGANIC
IVL15+00E 01+25S	19/08/2009	SOIL	ASSAY	MAP			543317	5668570	11N	8	brown	dark	0 - 20	15	A	2	ORGANIC	ROCKY
IVL15+00E 01+50N	19/08/2009	SOIL	ASSAY	NO SAMPLE			543318	5668826	11N									
IVL15+00E 01+50S	19/08/2009	SOIL	ASSAY	MAP			543317	5668545	11N	8	brown	dark	0 - 20	25	B	3		
IVL15+00E 01+75N	19/08/2009	SOIL	ASSAY	NO SAMPLE			543317	5668851	11N	9	brown	dark	0 - 20	15	A	1	ROCKY	ORGANIC
IVL15+00E 01+75S	19/08/2009	SOIL	ASSAY	MAP			543320	5668522	11N	11	brown	dark	0 - 20	25	B	3		
IVL15+00E 02+00N	19/08/2009	SOIL	ASSAY	MAP			543314	5668871	11N	14	brown	dark	0 - 20	15	B	2	ROCKY	ORGANIC
IVL15+00E 02+00S	19/08/2009	SOIL	ASSAY	MAP			543320	5668499	11N	6	brown	dark	0 - 20	25	B	3		
IVL15+50E 00+00	08/08/2009	SOIL	ASSAY	GPS			543370	5668737	11N	7	brown	NA	20 - 40	15	B	4	ORGANIC	
IVL16+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2118	543410	5668721	11N	8	brown	NA	20 - 40	15	B	4	ORGANIC	
IVL16+00E 00+25N	19/08/2009	SOIL	ASSAY	GPS		2107	543413	5668718	11N	11	brown	brown	0 - 20	15	B	3	LINE_START	ORGANIC
IVL16+00E 00+25S	20/08/2009	SOIL	ASSAY	GPS		2087	543414	5668672	11N	8	light	brown	20 - 40	25	B	3	LINE_START	
IVL16+00E 00+50N	19/08/2009	SOIL	ASSAY	GPS			543412	5668742	11N	14	brown	brown	0 - 20	15	B	3	ORGANIC	
IVL16+00E 00+50S	20/08/2009	SOIL	ASSAY	GPS			543411	5668649	11N	12	dark	brown	0 - 20	25	B	3	ORGANIC	
IVL16+00E 00+75N	19/08/2009	SOIL	ASSAY	GPS			543413	5668765	11N	11	brown	brown	0 - 20	15	A	3	ORGANIC	ROCKY
IVL16+00E 00+75S	20/08/2009	SOIL	ASSAY	GPS			543413	5668621	11N	14	dark	brown	0 - 20	25	B	4		
IVL16+00E 01+00N	19/08/2009	SOIL	ASSAY	GPS		2122	543412	5668786	11N	11	brown	brown	0 - 20	15	A	3	ORGANIC	ROCKY
IVL16+00E 01+00S	20/08/2009	SOIL	ASSAY	GPS		2069	543415	5668595	11N	8	dark	brown	0 - 20	25	B	4	ORGANIC	
IVL16+00E 01+25N	19/08/2009	SOIL	ASSAY	MAP			543404	5668802	11N	16	light	brown	0 - 20	25	B	4		
IVL16+00E 01+25S	20/08/2009	SOIL	ASSAY	GPS			543415	5668576	11N	6	brown	brown	0 - 20	15	B	4		
IVL16+00E 01+50N	19/08/2009	SOIL	ASSAY	GPS			543414	5668833	11N	11	light	brown	0 - 20	25	B	4		
IVL16+00E 01+50S	20/08/2009	SOIL	ASSAY	GPS			543414	5668550	11N	7	dark	brown	0 - 20	15	B	4		
IVL16+00E 01+75N	19/08/2009	SOIL	ASSAY	GPS			543417	5668860	11N	13	light	brown	0 - 20	25	B	4		
IVL16+00E 01+75S	20/08/2009	SOIL	ASSAY	GPS			543413	5668529	11N	10	dark	brown	0 - 20	15	B	4		
IVL16+00E 02+00N	19/08/2009	SOIL	ASSAY	GPS			543416	5668869	11N	12	light	brown	0 - 20	25	B	4		
IVL16+00E 02+00S	20/08/2009	SOIL	ASSAY	GPS		2066	543419	5668501	11N	4	dark	brown	0 - 20	15	B	4	LINE_END	
IVL16+00E 02+25N	20/08/2009	SOIL	ASSAY	GPS			543417	5668891	11N	10	light	brown	0 - 20	5	A	3	ORGANIC	
IVL16+00E 02+50N	20/08/2009	SOIL	ASSAY	GPS		2217	543420	5668911	11N	5	light	brown	20 - 40	25	B	4	LINE_END	
IVL16+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2108	543470	5668713	11N	10	brown	dark	20 - 40	15	B	4		
IVL17+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2103	543536	5668724	11N	10	orange	brown	20 - 40	15	B	5		
IVL17+00E 00+25N	20/08/2009	SOIL	ASSAY	GPS		2071	543512	5668720	11N	10	light	brown	0 - 20	15	B	4	LINE_START	
IVL17+00E 00+25S	20/08/2009	SOIL	ASSAY	GPS			543523	5668606	11N	13	light	brown	20 - 40	15	B	4	LINE_START	
IVL17+00E 00+50N	20/08/2009	SOIL	ASSAY	GPS			543504	5668753	11N	15	light	brown	0 - 20	15	B	5		
IVL17+00E 00+50S	20/08/2009	SOIL	ASSAY	GPS			543520	5668645	11N	10	light	brown	20 - 40	15	B	4	ORGANIC	
IVL17+00E 00+75N	20/08/2009	SOIL	ASSAY	GPS			543505	5668792	11N	13	light	brown	0 - 20	15	B	5		
IVL17+00E 00+75S	20/08/2009	SOIL	ASSAY	LS			543521	5668622	11N	16	light	brown	0 - 20	15	B	3	ORGANIC	ROCKY
IVL17+00E 01+00N	20/08/2009	SOIL	ASSAY	MAP		2044	543520	5668762	11N	10	light	brown	0 - 20	15	B	3	ROCKY	
IVL17+00E 01+00S	20/08/2009	SOIL	ASSAY	GPS		1989	543519	5668594	11N	8	light	brown	0 - 20	15	B	4		
IVL17+00E 01+25N	20/08/2009	SOIL	ASSAY	GPS			543507	5668793	11N	6	light	brown	20 - 40	25	B	5		
IVL17+00E 01+25S	20/08/2009	SOIL	ASSAY	GPS			543518	5668575	11N	1	light	brown	0 - 20	15	B	4		
IVL17+00E 01+50N	20/08/2009	SOIL	ASSAY	GPS			543515	5668813	11N	6	light	brown	20 - 40	25	B	5		

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL17+00E 01+50S	20/08/2009	SOIL	ASSAY	GPS			543518	5668547	11N	3	light	brown	0 - 20	15	B	4	ORGANIC	
IVL17+00E 01+75N	20/08/2009	SOIL	ASSAY	GPS			543516	5668838	11N	30	light	brown	20 - 40	15	B	4	TOP OF CLIFF	
IVL17+00E 01+75S	20/08/2009	SOIL	ASSAY	GPS			543516	5668526	11N	8	brown	brown	0 - 20	15	B	4		
IVL17+00E 02+00N	20/08/2009	SOIL	ASSAY	GPS			543516	5668855	11N	55	light	brown	20 - 40	15	B	4		
IVL17+00E 02+00S	20/08/2009	SOIL	ASSAY	GPS		2041	543518	5668503	11N	3	brown	brown	0 - 20	15	B	4	LINE_END	
IVL17+00E 02+25N	20/08/2009	SOIL	ASSAY	GPS			543512	5668888	11N	35	light	brown	20 - 40	15	B	4	ROCKY	
IVL17+00E 02+50N	20/08/2009	SOIL	ASSAY	GPS		2201	543514	5668905	11N	9	light	brown	20 - 40	15	B	4	LINE_END	
IVL17+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2094	543572	5668712	11N	22	orange	brown	20 - 40	15	B	4		
IVL18+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2079	543626	5668714	11N	10	orange	brown	20 - 40	15	B	4		
IVL18+00E 00+25N	20/08/2009	SOIL	ASSAY	MAP		2048	543615	5668721	11N	14	brown	brown	0 - 20	15	B	4	LINE_START	
IVL18+00E 00+25S	20/08/2009	SOIL	ASSAY	GPS		2083	543616	5668672	11N	8	rusty	brown	20 - 40	15	B	4	LINE_START	ORGANIC
IVL18+00E 00+50N	20/08/2009	SOIL	ASSAY	GPS			543602	5668733	11N	12	rusty	brown	0 - 20	15	B	4		
IVL18+00E 00+50S	20/08/2009	SOIL	ASSAY	GPS			543616	5668653	11N	25	rusty	brown	20 - 40	15	B	4		
IVL18+00E 00+75N	20/08/2009	SOIL	ASSAY	GPS			543601	5668763	11N	7	rusty	brown	20 - 40	15	B	4		
IVL18+00E 00+75S	20/08/2009	SOIL	ASSAY	GPS			543613	5668627	11N	14	rusty	brown	20 - 40	15	B	4		
IVL18+00E 01+00N	20/08/2009	SOIL	ASSAY	GPS		2108	543616	5668782	11N	19	light	brown	20 - 40	15	B	4		
IVL18+00E 01+00S	20/08/2009	SOIL	ASSAY	GPS		2047	543613	5668609	11N	14	rusty	brown	20 - 40	15	B	4		
IVL18+00E 01+25N	20/08/2009	SOIL	ASSAY	GPS			543615	5668809	11N	9	rusty	brown	20 - 40	15	B	5		
IVL18+00E 01+25S	20/08/2009	SOIL	ASSAY	GPS			543609	5668581	11N	11	light	brown	20 - 40	15	B	5		
IVL18+00E 01+50N	20/08/2009	SOIL	ASSAY	GPS			543613	5668836	11N	20	light	brown	20 - 40	15	B	4		
IVL18+00E 01+50S	20/08/2009	SOIL	ASSAY	GPS			543609	5668560	11N	13	brown	brown	20 - 40	15	B	3	ROCKY	
IVL18+00E 01+75N	20/08/2009	SOIL	ASSAY	GPS			543616	5668855	11N	8	rusty	brown	20 - 40	15	B	4		
IVL18+00E 01+75S	20/08/2009	SOIL	ASSAY	GPS			543610	5668537	11N	10	brown	brown	20 - 40	15	B	4	CROSSED_CREEK	
IVL18+00E 02+00N	20/08/2009	SOIL	ASSAY	GPS			543612	5668884	11N	12	brown	brown	20 - 40	15	B	5		
IVL18+00E 02+00S	20/08/2009	SOIL	ASSAY	GPS		2007	543613	5668516	11N	9	brown	brown	20 - 40	15	B	4	LINE_END	
IVL18+00E 02+25N	20/08/2009	SOIL	ASSAY	GPS			543612	5668910	11N	8	brown	brown	20 - 40	15	B	5	LINE_END	
IVL18+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2069	543670	5668714	11N	10	orange	brown	20 - 40	15	B	4		
IVL19+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2039	543713	5668717	11N	14	orange	brown	20 - 40	15	B	4		
IVL19+00E 00+25N	20/08/2009	SOIL	ASSAY	MAP			543712	5668712	11N	10	brown	rusty	0 - 20	25	B	3		ORGANIC
IVL19+00E 00+25S	20/08/2009	SOIL	ASSAY	GPS		2012	543714	5668667	11N	12	rusty	brown	20 - 40	15	B	4	LINE_START	
IVL19+00E 00+50N	20/08/2009	SOIL	ASSAY	MAP			543708	5668739	11N	10	brown	rusty	0 - 20	25	B	3		ORGANIC
IVL19+00E 00+50S	20/08/2009	SOIL	ASSAY	GPS			543714	5668647	11N	9	rusty	brown	20 - 40	15	B	4		
IVL19+00E 00+75N	20/08/2009	SOIL	ASSAY	MAP			543714	5668763	11N	11	brown	rusty	0 - 20	25	B	3		
IVL19+00E 00+75S	20/08/2009	SOIL	ASSAY	GPS			543718	5668623	11N	19	brown	brown	20 - 40	15	B	4	ORGANIC	
IVL19+00E 01+00N	20/08/2009	SOIL	ASSAY	MAP			543719	5668787	11N	50	brown	rusty	0 - 20	25	B	3		
IVL19+00E 01+00S	20/08/2009	SOIL	ASSAY	GPS		1977	543719	5668592	11N	18	brown	brown	20 - 40	15	B	4	ORGANIC	
IVL19+00E 01+25N	20/08/2009	SOIL	ASSAY	MAP			543711	5668816	11N	37	brown	rusty	0 - 20	25	B	3		
IVL19+00E 01+25S	20/08/2009	SOIL	ASSAY	GPS			543711	5668562	11N	10	brown	brown	20 - 40	15	B	4	ORGANIC	
IVL19+00E 01+50N	20/08/2009	SOIL	ASSAY	MAP			543721	5668832	11N	43	brown	rusty	0 - 20	25	B	3		
IVL19+00E 01+50S	20/08/2009	SOIL	ASSAY	GPS			543725	5668551	11N	11	brown	brown	20 - 40	15	B	4		
IVL19+00E 01+75N	20/08/2009	SOIL	ASSAY	MAP			543720	5668818	11N	100	brown	rusty	0 - 20	25	B	3	ORGANIC	
IVL19+00E 01+75S	20/08/2009	SOIL	ASSAY	GPS			543717	5668532	11N	12	brown	brown	20 - 40	15	B	4	CROSSED_CREEK	
IVL19+00E 02+00N	20/08/2009	SOIL	ASSAY	MAP			543722	5668818	11N	100	brown	rusty	0 - 20	25	B	4		
IVL19+00E 02+00S	20/08/2009	SOIL	ASSAY	GPS		1979	543719	5668506	11N	10	brown	brown	20 - 40	15	B	4	LINE_END	ORGANIC
IVL19+00E 02+25N	20/08/2009	SOIL	ASSAY	MAP			543721	5668913	11N	100	brown	rusty	0 - 20	25	B	4		
IVL19+50E 00+00	08/08/2009	SOIL	ASSAY	GPS		2032	543748	5668719	11N	13	orange	brown	20 - 40	15	B	4		
IVL20+00E 00+00	08/08/2009	SOIL	ASSAY	GPS		2036	543825	5668714	11N	11	orange	brown	20 - 40	15	B	4	LINE_END	
IVL20+00E 00+25N	20/08/2009	SOIL	ASSAY	MAP			543812	5668711	11N	27	brown	rusty	0 - 20	25	B	4		
IVL20+00E 00+25S	20/08/2009	SOIL	ASSAY	MAP			543814	5668661	11N	15	brown	rusty	0 - 20	25	B	2	ORGANIC	ROCKY
IVL20+00E 00+50N	20/08/2009	SOIL	ASSAY	MAP			543811	5668743	11N	23	brown	rusty	0 - 20	25	B	4		

Sample #	Sample Date	Sample Type	Sample Purpose	Location Method	Hip chain length (m)	Sample Elevation (m)	UTM East	UTM North	UTM Zone	GPS Accuracy (m)	Primary Sample Colour	Secondary Sample Colour	Slope	Sample Depth (cm)	Sample Horizon	Sample Quality	Sample Note 1	Sample Note 2
IVL20+00E 00+50S	20/08/2009	SOIL	ASSAY	MAP			543821	5668650	11N	11	brown	light	0 - 20	25	B	3		ROCKY
IVL20+00E 00+75N	20/08/2009	SOIL	ASSAY	MAP			543808	5668764	11N	100	brown	rusty	0 - 20	25	B	4		
IVL20+00E 00+75S	20/08/2009	SOIL	ASSAY	MAP			543822	5668652	11N	19	brown	NA	0 - 20	25	B	3		ROCKY
IVL20+00E 01+00N	20/08/2009	SOIL	ASSAY	MAP			543811	5668789	11N		brown	rusty	0 - 20	25	B	3	ROCKY	
IVL20+00E 01+00S	20/08/2009	SOIL	ASSAY	MAP			543813	5668595	11N		brown	red	0 - 20	25	B	4		
IVL20+00E 01+25N	20/08/2009	SOIL	ASSAY	MAP			543814	5668810	11N	92	brown	rusty	0 - 20	25	B	3	ROCKY	
IVL20+00E 01+25S	20/08/2009	SOIL	ASSAY	MAP			543817	5668570	11N	9	brown	red	0 - 20	25	B	4		
IVL20+00E 01+50N	20/08/2009	SOIL	ASSAY	MAP			543815	5668840	11N	20	brown	rusty	0 - 20	25	B	4		
IVL20+00E 01+50S	20/08/2009	SOIL	ASSAY	MAP			543814	5668543	11N	17	brown	red	0 - 20	25	B	4		
IVL20+00E 01+75N	20/08/2009	SOIL	ASSAY	MAP			543817	5668863	11N	100	brown	rusty	0 - 20	25	B	4		
IVL20+00E 01+75S	20/08/2009	SOIL	ASSAY	MAP			543807	5668511	11N	42	brown	grey	0 - 20	25	B	3		
IVL20+00E 02+00N	20/08/2009	SOIL	ASSAY	MAP			543815	5668886	11N	27	brown	rusty	0 - 20	25	B	4		
IVL20+00E 02+00S	20/08/2009	SOIL	ASSAY	MAP			543818	5668507	11N	14	brown	rusty	0 - 20	25	B	3	ORGANIC	LINE_END
IVL20+00E 02+25N	20/08/2009	SOIL	ASSAY	MAP			543817	5668914	11N	12	brown	rusty	0 - 20	25	B	4		
LJIVD001	26/08/2009	SOIL	XRF	GPS		2413	542774	5668915	11	5	brown	brown	0 - 20	25	A	4		

Appendix V – XRF

5.1XRF Techniques
5.2 XRF Geochemical Results

Appendix 5.1 – XRF Techniques

Sample Preparation

The soil samples collected at the Ice River property were first completely dried while in the original soil bags. The samples were then sieved to a less than 250µm size; a minimum of 1 teaspoon of this fine fraction was placed in a labeled thin plastic bag (e.g. Ziplock bag).

XRF Analysis

Samples were analyzed using an InnovX Omega Explore handheld x-ray fluorescence (XRF) analyzer. The ziplock bags were shaken to compact the sample in a bottom corner of the bag and this was then positioned under the XRF analyzer window. Samples were analyzed for a total of 60 seconds using 2 filters for 30 seconds each. Results were downloaded to the Bootleg database at the end of each day and quality assurance and quality control procedures were conducted.

Quality Control Quality Assurance

The integrity of the XRF analyzer was tested daily by verifying calibration of the analyzer, analyses of blank samples and standards. As an internal QAQC function, the Omega Explore will not function if the calibration of the fails. Blanks and standards are compared to assure they are within the accepted range of values provided by the standard supplier. Duplicate samples were analyzed approximately every 25 samples and results were compared nightly.

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
GHIVD001	SOIL	09/08/2009	10:03:35 AM	IN SITU	0	37	140	269	0	0	21	1530	4.595	56	0	27
GHIVD002	SOIL	09/08/2009	10:21:35 AM	IN SITU	0	21	71	133	0	0	11	1666	4.9458	29	0	0
GHIVD003	SOIL	09/08/2009	10:41:31 AM	IN SITU	0	29	46	177	0	0	0	2042	5.0131	55	0	17
GHIVD004	SOIL	09/08/2009	10:58:08 AM	IN SITU	0	22	77	144	0	0	12	1834	5.0364	44	0	28
GHIVD005	SOIL	09/08/2009	11:19:43 AM	IN SITU	0	21	72	180	72	0	8	1507	4.3717	47	0	14
GHIVD006	SOIL	09/08/2009	11:32:58 AM	IN SITU	0	18	46	155	0	0	9	980	3.9385	40	0	21
GHIVD007	SOIL	09/08/2009	12:07:18 PM	IN SITU	0	0	51	170	0	0	7	665	3.6771	36	0	17
GHIVD008	SOIL	09/08/2009	12:18:22 PM	IN SITU	0	15	63	131	0	0	7	2478	4.6229	43	0	0
GHIVD009	SOIL	09/08/2009	12:35:57 PM	IN SITU	0	13	53	130	0	0	7	709	4.2194	50	0	15
GHIVD010	SOIL	09/08/2009	12:56:34 PM	IN SITU	0	30	151	211	0	0	0	2550	4.656	57	0	24
GHIVD011	SOIL	09/08/2009	1:12:34 PM	IN SITU	0	37	82	201	0	0	0	4530	5.607	64	0	0
GHIVD012	SOIL	09/08/2009	1:35:44 PM	IN SITU	11	44	109	246	0	0	10	3597	5.8741	108	0	19
GHIVD013	SOIL	09/08/2009	2:32:33 PM	IN SITU	0	26	62	173	0	0	10	1077	4.004	41	0	23
GHIVD014	SOIL	09/08/2009	2:55:06 PM	IN SITU	0	24	31	146	0	0	9	657	4.7279	38	0	21
GHIVD015	SOIL	09/08/2009	3:14:23 PM	IN SITU	0	0	66	101	0	0	7	1036	3.384	25	0	0
GHIVD016	SOIL	09/08/2009	3:27:10 PM	IN SITU	0	0	47	123	0	0	6	1027	3.9728	42	0	15
GHIVD017	SOIL	09/08/2009	3:42:31 PM	IN SITU	0	13	70	151	0	0	9	2088	3.8328	26	0	16
GHIVD018	SOIL	09/08/2009	3:51:30 PM	IN SITU	0	14	62	75	0	0	0	2412	2.8048	20	0	15
GHIVD019	SOIL	10/08/2009	10:19:03 AM	IN SITU	0	28	64	284	0	0	12	1145	6.2742	55	0	15
GHIVD021	SOIL	10/08/2009	11:35:15 AM	IN SITU	14	68	118	360	149	0	17	1596	8.6415	80	0	20
GHIVD022	SOIL	10/08/2009	11:48:43 AM	IN SITU	0	45	0	121	122	0	13	1321	6.667	34	0	0
GHIVD023	SOIL	10/08/2009	12:11:49 PM	IN SITU	0	59	20	151	157	0	10	1325	7.1916	49	0	0
GHIVD024	SOIL	10/08/2009	1:09:32 PM	IN SITU	0	24	34	167	139	0	0	1823	5.9797	69	0	0
GHIVD025	SOIL	10/08/2009	1:20:30 PM	IN SITU	0	24	20	95	0	0	0	972	3.7565	30	0	15
GHIVD026	SOIL	10/08/2009	1:56:03 PM	IN SITU	0	43	0	161	104	0	0	1681	6.7729	44	0	0
GHIVD027	SOIL	10/08/2009	2:00:59 PM	IN SITU	0	33	44	202	69	0	0	1421	5.942	38	0	0
GHIVD028	SOIL	10/08/2009	2:10:19 PM	IN SITU	0	32	98	318	0	0	0	2295	6.2401	78	0	23
GHIVD029	SOIL	10/08/2009	2:21:48 PM	IN SITU	0	56	31	165	65	0	14	1170	6.4136	33	0	18
GHIVD030	SOIL	10/08/2009	2:32:42 PM	IN SITU	NR	NR	NR	NR	58	0	9	2050	NR	NR	0	0
GHIVD031	SOIL	10/08/2009	2:41:22 PM	IN SITU	0	75	226	754	211	0	12	1935	7.2289	103	0	0
GHIVD032	SOIL	10/08/2009	2:58:33 PM	IN SITU	0	39	197	565	113	0	9	1440	6.5955	89	0	16
GHIVD033	SOIL	10/08/2009	3:14:47 PM	IN SITU	0	17	71	218	0	0	7	974	2.9006	32	0	21
GHIVD034	SOIL	10/08/2009	3:25:28 PM	IN SITU	NR	NR	NR	NR	86	0	0	2913	NR	NR	0	15
GHIVD035	SOIL	12/08/2009	10:15:00 AM	IN SITU	0	24	93	223	110	0	9	1211	3.5025	0	0	18

Appendix 5.2 XRF Geochemical Results

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
GHIVD001	208	0	0	0	591	1.5701	0	0	383	0.5089	1.1353	0	0	0	0	0	36	0	160
GHIVD002	212	0	0	0	563	2.0399	0	50	517	0.643	1.9089	25	0	0.2915	0	0	52	150	177
GHIVD003	301	0	0	0	621	1.6169	0	42	605	0.5609	1.5227	0	0	0.4048	0	0	25	96	182
GHIVD004	357	0	0	0	389	1.8973	0	55	499	0.6549	1.1298	0	0	0.2198	0	0	32	0	166
GHIVD005	238	0	0	0	320	1.6784	0	49	454	0.49	1.7311	31	0	0.2388	0	0	29	0	134
GHIVD006	226	0	0	0	452	1.7071	0	0	457	0.4591	1.4839	0	0	0	0	0	21	0	169
GHIVD007	135	0	0	0	0	1.6954	0	0	310	0.3362	1.5146	0	0	0.3013	0	0	18	0	91
GHIVD008	229	0	0	0	574	1.2599	0	66	575	0.6329	1.7763	32	0	0	0	0	22	64	228
GHIVD009	184	0	0	0	365	1.0309	0	41	456	0.4615	1.1834	0	0	0	0	0	16	0	162
GHIVD010	180	0	0	0	498	0.9246	0	0	437	0.5139	1.2258	0	0	0.2078	0	0	31	0	142
GHIVD011	169	0	0	0	621	1.3216	0	60	602	0.5826	1.8668	34	0	0.2318	0	0	32	69	200
GHIVD012	169	0	0	0	723	1.6631	0	89	641	0.6349	1.7809	0	0	0.2693	0	0	51	0	265
GHIVD013	277	0	0	0	333	0.8155	0	62	327	0.4318	1.0664	0	0	0	0	0	28	0	166
GHIVD014	301	0	0	0	406	1.048	0	40	434	0.5416	1.3931	0	0	0	0	0	27	0	164
GHIVD015	132	0	0	0	0	0.7845	0	0	438	0.3239	1.3175	0	0	0	0	0	26	0	127
GHIVD016	119	0	0	0	356	0.4629	0	0	439	0.4185	1.484	0	0	0	0	0	16	0	128
GHIVD017	151	0	0	0	268	1.1889	0	30	324	0.5327	1.2807	0	0	0.1934	0	0	23	0	133
GHIVD018	128	0	0	0	402	1.1652	0	0	338	0.4435	0.9084	0	0	0.1482	0	0	20	0	145
GHIVD019	188	0	0	0	880	4.3055	0	0	662	1.6271	0.9326	0	0	0.3078	0	0	24	0	267
GHIVD021	388	0	0	0	1177	5.2311	0	0	1121	1.8201	1.5692	45	0	0.3812	0	0	45	78	305
GHIVD022	313	0	0	0	762	5.8278	0	0	902	1.7801	1.0071	0	0	0	0	105	28	0	315
GHIVD023	367	0	0	0	1062	5.6407	0	0	1063	1.715	1.2951	0	0	0	0	0	28	0	362
GHIVD024	773	0	0	0	915	3.9454	0	0	859	1.2435	0.9587	0	0	0.3308	0	0	20	87	248
GHIVD025	231	0	0	0	652	2.3449	0	0	515	0.7683	0.7787	0	0	0.1803	0	0	21	0	172
GHIVD026	348	0	0	0	1149	6.9064	0	0	998	2.0312	1.3408	0	0	0.3531	0	0	39	67	293
GHIVD027	262	72	0	0	814	4.0011	0	0	679	1.3625	0.942	0	0	0	0	0	23	0	224
GHIVD028	184	0	0	0	953	4.8072	0	0	716	1.4041	1.1164	0	0	0.2825	0	0	35	0	261
GHIVD029	216	0	0	0	1168	5.3092	0	0	719	1.7148	0.968	0	0	0.2714	0	0	38	0	254
GHIVD030	238	0	0	0	760	3.0955	0	73	810	1.06	1.3317	0	0	0.3183	0	0	36	0	248
GHIVD031	291	0	0	0	884	4.9965	0	43	923	1.504	1.7671	44	0	0.3077	0	0	47	128	287
GHIVD032	247	68	0	0	661	4.1426	0	0	887	1.3668	1.3053	35	0	0	0	0	34	0	236
GHIVD033	201	0	396	0	392	2.1111	0	0	325	0.6205	0.7855	0	0	0.1521	0	0	24	0	167
GHIVD034	201	0	0	0	608	2.5328	0	0	653	1.245	1.4332	0	0	0.3548	0	0	27	0	218
GHIVD035	341	0	0	0	679	2.3021	0	43	438	0.2767	1.102	0	0	0.1686	0	0	39	0	137

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
GHIVD036	SOIL	12/08/2009	10:36:53 AM	IN SITU	0	25	86	243	0	0	12	1407	3.8693	26	0	31
GHIVD037	SOIL	12/08/2009	11:10:43 AM	IN SITU	0	15	94	198	0	0	8	1255	3.7429	0	0	23
GHIVD038	SOIL	12/08/2009	11:24:57 AM	IN SITU	0	18	56	263	0	0	5	1781	3.6626	28	0	19
GHIVD039	SOIL	12/08/2009	11:50:13 AM	IN SITU	17	16	77	270	0	0	8	1476	4.9223	21	0	24
GHIVD040	SOIL	12/08/2009	12:10:54 PM	IN SITU	0	0	72	169	0	0	11	619	3.3207	0	0	27
GHIVD041	SOIL	12/08/2009	1:03:34 PM	IN SITU	0	0	20	94	0	0	6	714	3.3216	14	0	14
GHIVD042	SOIL	12/08/2009	1:30:11 PM	IN SITU	10	15	167	439	0	0	0	2902	3.1595	67	0	21
GHIVD043	SOIL	12/08/2009	2:08:33 PM	IN SITU	0	0	26	235	0	0	4	1371	2.9902	24	0	21
GHIVD044	SOIL	12/08/2009	2:20:54 PM	IN SITU	0	22	76	168	0	0	0	1319	3.4058	19	0	14
GHIVD045	SOIL	12/08/2009	2:45:49 PM	IN SITU	0	14	43	143	0	0	6	1633	4.0128	32	0	26
GHIVD046	SOIL	12/08/2009	3:35:26 PM	IN SITU	24	14	188	344	0	0	8	1538	3.8474	0	0	0
GHIVD047	SOIL	12/08/2009	3:50:11 PM	IN SITU	0	0	95	200	0	0	5	297	2.9244	18	0	17
IVL10+00E 00+00	SOIL	04/11/2009	12:00:00 AM	250µ	15	108	176	245	152	0	721	1787	8.0647	589	0	10
IVL10+00E 00+00	SOIL	02/09/2009	9:47:33 AM	PULP	11	85	136	206	209	0	17	1526	7.2926	502	0	23
IVL10+00E 00+25N	SOIL	08/08/2009	10:08:57 AM	SITU	0	68	38	151	0	0	0	1607	5.7428	133	0	22
IVL10+00E 00+25S	SOIL	02/09/2009	9:51:03 AM	PULP	0	178	26	150	195	0	20	1474	8.2857	69	0	0
IVL10+00E 00+50N	SOIL	02/09/2009	10:09:45 AM	PULP	0	117	80	192	182	0	20	1639	6.6729	70	0	19
IVL10+00E 00+50S	SOIL	02/09/2009	9:56:34 AM	PULP	18	198	55	246	316	0	20	2130	9.0052	73	0	25
IVL10+00E 00+75N	SOIL	02/09/2009	10:13:18 AM	PULP	0	51	41	165	110	0	19	2242	7.6852	40	0	19
IVL10+00E 00+75S	SOIL	02/09/2009	9:59:23 AM	PULP	0	245	0	108	174	0	20	1407	7.8496	86	0	0
IVL10+00E 01+00N	SOIL	02/09/2009	10:15:45 AM	PULP	0	27	17	174	148	0	16	1182	6.093	45	0	19
IVL10+00E 01+00S	SOIL	02/09/2009	10:01:53 AM	PULP	0	94	95	226	227	0	19	1835	7.7949	97	0	16
IVL10+00E 01+25N	SOIL	02/09/2009	10:21:16 AM	PULP	0	51	0	207	125	0	17	1603	6.3398	39	0	21
IVL10+00E 01+25S	SOIL	02/09/2009	10:04:19 AM	PULP	14	90	210	360	203	0	17	1972	7.4215	216	0	18
IVL10+00E 01+50N	SOIL	02/09/2009	10:23:42 AM	PULP	0	36	25	187	128	0	14	1351	5.9973	0	0	14
IVL10+00E 01+50S	SOIL	02/09/2009	10:06:59 AM	PULP	17	57	154	276	158	0	21	2379	7.4988	116	0	24
IVL10+00E 01+75N	SOIL	02/09/2009	10:26:25 AM	PULP	0	40	36	131	56	0	21	1023	6.0203	18	0	17
IVL10+00E 02+00N	SOIL	02/09/2009	10:29:11 AM	PULP	11	38	22	113	119	0	13	1256	4.8816	17	0	18
IVL10+00E 02+25N	SOIL	02/09/2009	10:32:03 AM	PULP	0	29	102	205	103	0	19	2436	6.4792	103	0	26
IVL10+50E 00+00	SOIL	08/08/2009	10:30:31 AM	SITU	0	18	108	145	0	0	7	1168	3.6601	24	0	16
IVL10+50E 00+00	SOIL	04/11/2009	10:47:48 AM	250µ	0	29	153	203	0	0	454	1708	5.2507	18	0	0
IVL11+00E 00+00	SOIL	08/08/2009	10:53:56 AM	SITU	11	32	375	325	0	0	7	1483	3.0652	31	0	22
IVL11+00E 00+00	SOIL	04/11/2009	10:51:06 AM	250µ	0	26	217	303	0	0	370	1836	4.8847	33	0	0
IVL11+00E 00+25N	SOIL	02/09/2009	10:57:17 AM	PULP	0	22	207	188	0	0	12	1285	4.6045	35	0	16

Appendix 5.2 XRF Geochemical Results

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
GHIVD036	206	73	0	0	450	1.8798	0	81	542	0.3278	1.0894	25	0	0.1503	0	0	52	0	130
GHIVD037	216	0	0	0	620	1.5059	0	96	643	0.3189	1.3649	0	0	0	0	0	46	0	137
GHIVD038	195	69	0	0	1066	1.3839	0	130	956	0.3048	1.3984	0	0	0	0	0	49	74	140
GHIVD039	230	0	0	0	1165	2.0382	0	90	976	0.483	1.9405	0	0	0	0	0	48	74	252
GHIVD040	187	0	0	0	464	1.0354	0	52	470	0.3517	0.9794	0	0	0	0	0	22	0	160
GHIVD041	183	0	0	0	415	0.668	0	40	425	0.2807	0.9682	0	0	0	0	0	18	0	240
GHIVD042	99	0	0	0	496	0.5615	0	64	519	0.264	0.9	0	0	0	0	0	23	0	297
GHIVD043	304	0	0	0	749	1.0319	0	70	676	0.2396	1.3713	0	0	0.1495	0	0	25	0	107
GHIVD044	374	0	0	0	478	1.535	0	37	426	0.3177	1.3346	0	0	0.1715	0	0	40	0	151
GHIVD045	102	62	0	0	497	0.5625	0	110	664	0.375	0.9004	0	0	0	0	0	43	0	180
GHIVD046	116	0	0	0	898	0.8224	0	82	727	0.3531	1.1641	0	0	0	0	0	30	324	154
GHIVD047	235	0	0	0	239	1.6242	0	0	292	0.2723	0.6488	0	0	0	0	0	43	0	137
IVL10+00E 00+00	377	0	0	0	1505	3.7937	0	321	1333	0.4119	1.0794	0	0	0.2985	0	0	67	59	184
IVL10+00E 00+00	385	0	0	0	1309	3.2986	0	200	1049	0.3965	0.9237	0	0	0	0	0	69	72	172
IVL10+00E 00+25N	356	0	0	0	571	3.7932	0	0	481	0.5543	0.8168	0	0	0.4386	0	0	30	0	162
IVL10+00E 00+25S	414	91	0	0	1008	7.7575	0	123	995	1.4605	1.0784	0	0	0	0	0	42	84	215
IVL10+00E 00+50N	614	66	0	0	948	4.9945	0	75	820	0.7597	1.1793	0	0	0.3226	0	0	38	0	172
IVL10+00E 00+50S	313	0	0	0	891	6.9332	0	88	1102	1.4944	1.2503	0	0	0.3538	0	0	48	103	232
IVL10+00E 00+75N	356	0	0	0	1010	3.6198	0	88	1037	0.9727	1.004	0	0	0.3461	0	0	44	104	299
IVL10+00E 00+75S	235	78	0	0	1054	5.4691	0	0	1005	1.8177	1.3273	30	0	0.2412	0	0	42	61	307
IVL10+00E 01+00N	341	0	0	0	566	2.2159	0	45	660	0.7187	0.9813	0	0	0	0	0	46	0	231
IVL10+00E 01+00S	274	67	0	0	953	3.1555	0	98	922	1.0162	1.5867	0	0	0	0	0	89	109	336
IVL10+00E 01+25N	340	89	0	0	502	2.5469	0	75	634	0.6277	1.1324	0	0	0.3133	0	0	45	0	268
IVL10+00E 01+25S	360	0	0	0	828	3.168	0	124	821	0.5073	1.3524	32	0	0.2541	0	0	96	104	222
IVL10+00E 01+50N	668	0	0	0	449	3.4815	0	83	526	0.6118	0.9172	0	0	0	0	0	41	0	194
IVL10+00E 01+50S	348	0	0	0	1005	2.3804	0	163	896	0.5864	1.214	0	0	0.3421	0	0	95	95	199
IVL10+00E 01+75N	220	67	0	0	473	2.1789	0	81	610	0.8638	1.0921	0	0	0.2378	0	0	36	0	253
IVL10+00E 02+00N	325	0	0	0	571	2.3015	0	72	580	0.5602	1.7219	27	0	0	0	0	53	0	212
IVL10+00E 02+25N	285	0	0	0	559	1.8133	0	74	648	0.7488	1.0917	0	0	0.2819	0	0	51	0	208
IVL10+50E 00+00	265	0	0	0	267	2.3744	0	0	299	0.3484	0.519	0	0	0	0	0	27	0	113
IVL10+50E 00+00	404	0	0	0	370	3.9315	0	103	451	0.5061	0.8704	0	0	0	0	0	32	0	149
IVL11+00E 00+00	306	0	0	0	384	1.3612	0	56	361	0.2797	0.6694	0	0	0.16	0	0	75	0	113
IVL11+00E 00+00	402	0	0	0	433	2.2204	0	115	570	0.4793	0.9352	0	0	0.2136	0	0	44	0	143
IVL11+00E 00+25N	371	0	0	0	461	3.3185	0	71	469	0.4472	0.9158	0	0	0	0	0	37	0	167

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL11+00E 00+25S	SOIL	02/09/2009	10:34:51 AM	PULP	0	37	49	167	80	0	18	1764	5.96	63	0	13
IVL11+00E 00+50N	SOIL	02/09/2009	10:59:15 AM	PULP	0	82	71	113	201	0	22	1016	7.0925	65	0	14
IVL11+00E 00+50S	SOIL	02/09/2009	10:37:22 AM	PULP	0	28	0	98	0	0	8	721	3.5144	41	0	0
IVL11+00E 00+75N	SOIL	02/09/2009	11:01:13 AM	PULP	0	42	41	67	163	0	14	812	4.8287	69	0	0
IVL11+00E 00+75S	SOIL	02/09/2009	10:40:01 AM	PULP	13	167	46	151	217	0	22	1465	7.3574	91	0	21
IVL11+00E 01+00N	SOIL	02/09/2009	11:03:38 AM	PULP	0	74	87	113	146	0	14	1392	6.0033	59	0	24
IVL11+00E 01+00S	SOIL	02/09/2009	10:43:34 AM	PULP	12	51	123	209	141	0	21	1841	6.5985	91	0	24
IVL11+00E 01+25N	SOIL	02/09/2009	11:06:00 AM	PULP	0	46	73	170	0	0	13	1960	5.1254	39	0	0
IVL11+00E 01+25S	SOIL	02/09/2009	10:52:00 AM	PULP	0	60	161	295	122	0	19	2656	6.9603	115	0	27
IVL11+00E 01+50N	SOIL	02/09/2009	11:07:45 AM	PULP	0	50	53	184	65	0	14	2018	5.3097	56	0	14
IVL11+00E 01+50S	SOIL	02/09/2009	10:54:43 AM	PULP	0	83	78	261	98	69	15	2469	6.9812	99	0	24
IVL11+00E 01+75N	SOIL	02/09/2009	11:09:32 AM	PULP	0	57	97	222	119	0	13	1935	5.3316	119	0	23
IVL11+00E 02+00N	SOIL	02/09/2009	11:11:34 AM	PULP	0	46	53	126	64	0	15	1851	5.1966	134	0	0
IVL11+50E 00+00	SOIL	08/08/2009	11:15:34 AM	IN SITU	0	12	174	211	0	0	8	1265	3.3282	101	0	12
IVL12+00E 00+00	SOIL	08/08/2009	11:32:40 AM	SITU	0	58	90	191	0	0	12	1672	5.7476	57	0	17
IVL12+00E 00+00	SOIL	04/11/2009	10:54:01 AM	250µ	0	43	123	198	132	0	548	1572	5.9509	63	0	6
IVL12+00E 00+25N	SOIL	02/09/2009	11:32:21 AM	PULP	10	31	66	174	110	0	17	1659	6.0786	65	0	0
IVL12+00E 00+25S	SOIL	02/09/2009	11:14:10 AM	PULP	0	35	139	192	106	0	15	1284	5.5065	45	0	17
IVL12+00E 00+50N	SOIL	02/09/2009	11:34:39 AM	PULP	0	34	54	139	0	0	14	1673	5.4492	55	0	0
IVL12+00E 00+50S	SOIL	02/09/2009	11:15:54 AM	PULP	0	17	80	211	72	0	11	1531	5.0226	44	0	0
IVL12+00E 00+75N	SOIL	02/09/2009	11:37:10 AM	PULP	0	22	79	118	48	0	17	481	4.9639	20	0	23
IVL12+00E 00+75S	SOIL	02/09/2009	11:17:43 AM	PULP	0	73	61	158	131	0	17	1406	6.5109	86	0	0
IVL12+00E 01+00N	SOIL	02/09/2009	11:39:52 AM	PULP	0	24	21	117	110	0	13	1396	4.8601	16	0	15
IVL12+00E 01+00S	SOIL	02/09/2009	11:19:36 AM	PULP	0	151	55	214	203	0	26	1973	8.0321	77	0	21
IVL12+00E 01+25N	SOIL	02/09/2009	11:42:10 AM	PULP	0	41	86	138	57	0	11	1792	5.121	35	0	13
IVL12+00E 01+25S	SOIL	02/09/2009	11:21:42 AM	PULP	20	92	137	240	268	0	18	8294	9.6358	79	0	38
IVL12+00E 01+50N	SOIL	02/09/2009	12:07:45 PM	PULP	0	23	94	132	0	0	8	967	4.5681	20	0	0
IVL12+00E 01+75N	SOIL	03/09/2009	10:40:21 AM	PULP	0	34	69	142	63	0	11	1635	4.8742	39	0	0
IVL12+00E 01+75S	SOIL	02/09/2009	11:23:46 AM	PULP	18	58	151	258	146	0	18	2229	6.7864	35	0	16
IVL12+00E 02+00N	SOIL	03/09/2009	10:42:20 AM	PULP	0	29	100	172	97	0	8	1413	5.2982	28	0	0
IVL12+00E 02+00S	SOIL	02/09/2009	11:25:46 AM	PULP	19	55	80	245	175	0	19	2217	6.465	29	0	0
IVL12+00E 02+25N	SOIL	03/09/2009	10:44:33 AM	PULP	0	37	190	161	120	0	13	1124	4.9469	35	0	20
IVL12+50E 00+00	SOIL	08/08/2009	11:55:11 AM	SITU	17	34	98	217	0	0	13	1703	4.3656	210	20	22
IVL12+50E 00+00	SOIL	04/11/2009	10:55:57 AM	250µ	0	39	117	282	65	0	523	2305	5.9478	303	0	5

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL11+00E 00+25S	423	0	0	0	536	1.9251	0	86	681	0.6707	1.6501	0	0	0.2074	0	0	45	92	213
IVL11+00E 00+50N	710	95	0	0	631	4.1268	0	80	507	0.3494	1.4933	31	0	0.2747	0	0	80	0	161
IVL11+00E 00+50S	304	0	0	0	287	4.6799	0	58	578	0.4049	0.7585	0	0	0.3894	0	0	0	0	58
IVL11+00E 00+75N	809	0	0	0	337	3.1555	0	67	348	0.2989	1.9466	0	0	0	0	0	52	0	140
IVL11+00E 00+75S	319	0	0	0	928	5.5494	0	67	810	1.1172	1.3043	0	0	0.2924	0	0	55	68	234
IVL11+00E 01+00N	734	64	0	0	444	3.7317	0	84	442	0.4201	2.3191	33	0	0	0	0	68	0	213
IVL11+00E 01+00S	230	0	0	0	898	2.0058	0	162	846	0.5223	1.4579	0	0	0.1956	0	0	85	59	217
IVL11+00E 01+25N	373	0	0	0	317	4.1959	0	61	473	0.4918	1.033	0	0	0.2392	0	0	35	0	143
IVL11+00E 01+25S	261	0	0	0	992	2.2231	0	140	857	0.5258	1.4142	0	0	0.3625	0	0	89	83	201
IVL11+00E 01+50N	455	66	0	0	351	4.4741	0	35	507	0.5646	1.1402	27	0	0	0	0	39	0	194
IVL11+00E 01+50S	306	61	0	0	733	3.5513	0	126	760	0.6699	1.1943	0	0	0.2802	0	0	71	0	204
IVL11+00E 01+75N	488	0	0	0	343	4.5131	0	74	473	0.4106	0.9011	0	0	0.2867	0	0	58	0	215
IVL11+00E 02+00N	412	0	0	0	267	4.7057	0	60	398	0.4729	0.9235	0	0	0.227	0	0	47	0	184
IVL11+50E 00+00	138	51	0	0	263	0.964	0	61	396	0.2439	0.5786	0	0	0.1489	0	0	38	0	72
IVL12+00E 00+00	417	0	0	0	717	2.7026	0	82	602	0.5788	1.4591	0	0	0	0	0	47	0	170
IVL12+00E 00+00	395	0	0	0	390	2.6471	0	101	558	0.5852	1.3846	0	0	0.2626	0	0	55	61	207
IVL12+00E 00+25N	288	0	0	0	443	1.7079	0	57	538	0.5391	1.4605	0	0	0.1959	0	0	37	68	176
IVL12+00E 00+25S	297	0	0	0	384	1.3393	0	107	691	0.5273	1.6368	0	0	0.209	0	0	68	0	199
IVL12+00E 00+50N	447	0	0	0	541	3.6756	0	81	541	0.5421	1.2989	0	0	0	0	0	36	0	158
IVL12+00E 00+50S	194	0	0	0	493	1.8062	0	89	553	0.4785	2.2322	0	0	0	0	0	31	0	150
IVL12+00E 00+75N	387	0	0	0	297	2.625	0	70	515	0.4842	1.8398	0	0	0.2165	0	0	31	0	145
IVL12+00E 00+75S	399	0	0	0	518	3.9117	0	100	809	0.8086	1.3685	0	0	0.2196	0	0	47	0	178
IVL12+00E 01+00N	313	0	0	0	510	1.2553	0	72	670	0.4931	2.2221	0	0	0	0	0	35	0	192
IVL12+00E 01+00S	505	0	0	0	1050	5.5401	0	101	1105	1.2315	1.6997	0	0	0.2514	0	0	55	85	256
IVL12+00E 01+25N	420	0	0	0	347	1.7957	0	89	536	0.5145	1.7902	0	0	0.2281	0	0	47	0	175
IVL12+00E 01+25S	336	0	0	0	2558	3.4559	0	371	1979	0.3583	2.0149	0	0	0	0	0	167	91	186
IVL12+00E 01+50N	242	55	0	0	370	2.4419	0	64	538	0.4441	2.0108	31	0	0.2366	0	0	23	0	149
IVL12+00E 01+75N	295	0	0	0	432	1.9774	0	91	489	0.5004	1.9134	0	0	0	0	0	32	0	142
IVL12+00E 01+75S	327	0	0	0	734	2.7999	0	150	717	0.5319	1.662	0	0	0.2256	0	0	77	72	223
IVL12+00E 02+00N	463	0	0	0	377	1.9283	0	92	535	0.544	1.7805	0	0	0.1928	0	0	43	0	166
IVL12+00E 02+00S	365	0	0	0	686	4.4997	0	145	667	0.4899	1.2215	0	0	0	0	0	81	109	192
IVL12+00E 02+25N	372	59	0	0	450	1.92	0	106	518	0.4573	1.8674	0	0	0	0	0	52	0	183
IVL12+50E 00+00	313	0	0	0	251	2.3314	0	0	314	0.4957	1.2765	0	0	0.2847	0	0	35	58	154
IVL12+50E 00+00	346	0	0	0	411	2.4864	0	98	521	0.6297	1.2706	0	0	0	0	0	47	75	208

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL13+00E 00+00	SOIL	08/08/2009	12:08:57 PM	SITU	15	32	56	210	0	0	12	2773	5.9263	68	0	18
IVL13+00E 00+00	SOIL	04/11/2009	11:06:15 AM	250µ	0	40	62	188	0	0	445	2831	6.6449	63	0	5
IVL13+00E 00+25N	SOIL	03/09/2009	11:03:06 AM	PULP	0	30	40	199	130	0	14	3233	6.8104	139	0	15
IVL13+00E 00+25S	SOIL	03/09/2009	10:46:58 AM	PULP	0	34	59	179	57	0	12	1574	5.3711	103	0	15
IVL13+00E 00+50N	SOIL	03/09/2009	11:05:09 AM	PULP	0	38	84	185	88	0	13	2157	5.3701	40	0	14
IVL13+00E 00+50S	SOIL	03/09/2009	10:49:00 AM	PULP	0	23	71	232	0	0	8	2358	5.992	59	0	0
IVL13+00E 00+75N	SOIL	03/09/2009	11:07:08 AM	PULP	0	22	159	249	48	0	12	1389	5.2	35	0	16
IVL13+00E 00+75S	SOIL	03/09/2009	10:50:55 AM	PULP	0	43	95	189	83	0	16	1524	6.4003	92	0	15
IVL13+00E 01+00N	SOIL	03/09/2009	11:09:05 AM	PULP	0	51	66	165	146	0	15	1447	6.2759	28	0	0
IVL13+00E 01+00S	SOIL	03/09/2009	10:53:01 AM	PULP	0	67	30	131	99	0	13	2158	6.4994	49	0	0
IVL13+00E 01+25N	SOIL	03/09/2009	11:11:09 AM	PULP	0	27	45	142	67	0	12	2038	4.9252	29	0	0
IVL13+00E 01+25S	SOIL	03/09/2009	10:54:55 AM	PULP	0	99	46	197	149	0	18	2600	7.5215	99	0	0
IVL13+00E 01+50N	SOIL	03/09/2009	11:13:27 AM	PULP	0	28	81	184	113	0	9	1034	4.8292	27	0	15
IVL13+00E 01+50S	SOIL	03/09/2009	10:56:44 AM	PULP	0	52	63	166	106	0	13	1693	5.7448	54	0	16
IVL13+00E 01+75N	SOIL	03/09/2009	11:15:37 AM	PULP	0	75	86	234	135	0	16	1088	5.7629	63	0	0
IVL13+00E 01+75S	SOIL	03/09/2009	10:58:42 AM	PULP	0	106	43	183	176	0	14	1982	7.571	83	0	17
IVL13+00E 02+00N	SOIL	03/09/2009	11:17:40 AM	PULP	11	63	106	214	166	0	16	1567	6.2752	69	0	14
IVL13+00E 02+25N	SOIL	03/09/2009	11:19:58 AM	PULP	14	49	131	244	174	0	16	1683	6.8945	283	0	21
IVL13+50E 00+00	SOIL	08/08/2009	12:29:17 PM	SITU	0	19	49	144	0	0	12	1811	4.1141	28	0	0
IVL13+50E 00+00	SOIL	04/11/2009	11:08:20 AM	250µ	0	32	74	180	70	0	507	2061	4.8442	25	20	7
IVL14+00E 00+00	SOIL	08/08/2009	12:46:16 PM	SITU	14	467	2932	1556	149	57	19	2786	9.6112	566	0	38
IVL14+00E 00+00	SOIL	04/11/2009	11:11:32 AM	250µ	25	439	3459	1462	206	0	1050	3013	10.2253	413	0	9
IVL14+00E 00+25N	SOIL	04/11/2009	1:35:29 PM	250µ	0	31	127	235	60	0	431	1843	5.4938	142	0	0
IVL14+00E 00+25S	SOIL	03/09/2009	11:22:58 AM	PULP	0	15	58	173	90	0	10	2138	4.9996	59	0	0
IVL14+00E 00+50N	SOIL	04/11/2009	1:37:24 PM	250µ	0	36	125	248	108	0	376	1651	5.7686	119	0	0
IVL14+00E 00+50S	SOIL	03/09/2009	11:28:49 AM	PULP	0	26	46	202	0	0	11	1496	4.8487	210	0	0
IVL14+00E 00+75N	SOIL	04/11/2009	1:39:28 PM	250µ	0	26	84	191	94	0	295	2893	6.1277	44	0	5
IVL14+00E 00+75S	SOIL	03/09/2009	11:30:55 AM	PULP	0	31	65	216	125	0	12	1938	5.7871	145	0	13
IVL14+00E 01+00N	SOIL	04/11/2009	1:41:54 PM	250µ	0	39	130	204	0	0	346	2621	6.1065	57	0	8
IVL14+00E 01+00S	SOIL	03/09/2009	11:33:30 AM	PULP	0	34	118	194	136	0	10	1124	5.0494	110	0	12
IVL14+00E 01+25N	SOIL	04/11/2009	1:44:23 PM	250µ	0	32	179	257	0	0	491	3182	6.4332	73	0	4
IVL14+00E 01+25S	SOIL	03/09/2009	11:36:17 AM	PULP	0	126	67	194	197	0	20	2100	7.8757	87	0	23
IVL14+00E 01+50N	SOIL	04/11/2009	1:46:28 PM	250µ	0	40	113	183	89	0	348	1672	5.0435	30	0	5
IVL14+00E 01+50S	SOIL	03/09/2009	11:38:45 AM	PULP	12	106	59	193	170	0	15	2474	7.3634	59	0	0

Appendix 5.2 XRF Geochemical Results

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL13+00E 00+00	194	0	0	0	0	1.9213	0	0	419	0.81	1.6681	0	0	0.4499	0	0	27	66	155
IVL13+00E 00+00	242	0	0	0	498	2.0378	0	65	581	0.8691	1.5011	0	0	0.3244	0	0	25	0	197
IVL13+00E 00+25N	278	84	0	0	587	2.3448	0	60	543	0.8118	1.5779	0	0	0.2054	0	0	33	56	201
IVL13+00E 00+25S	446	76	0	0	428	3.6453	0	78	479	0.5627	1.4257	24	0	0.2391	0	0	37	0	165
IVL13+00E 00+50N	496	0	0	0	299	2.5686	0	73	498	0.5522	1.8483	0	0	0	0	0	36	0	188
IVL13+00E 00+50S	296	0	0	0	459	2.3562	0	46	391	0.7419	1.5264	26	0	0.1957	0	0	23	0	138
IVL13+00E 00+75N	248	0	0	0	406	1.6706	0	71	495	0.5696	1.4908	0	0	0.2396	0	0	33	0	171
IVL13+00E 00+75S	336	79	0	0	477	3.2766	0	94	641	0.7046	1.3723	0	0	0	0	0	44	0	185
IVL13+00E 01+00N	430	0	0	0	571	2.5818	0	76	675	0.5982	2.1161	27	0	0.2123	0	0	44	84	224
IVL13+00E 01+00S	283	0	0	0	820	5.3937	0	57	807	1.0285	1.1979	0	0	0.3539	0	0	24	0	189
IVL13+00E 01+25N	493	0	0	0	500	3.7578	0	53	543	0.5255	1.8164	0	0	0	0	0	34	0	162
IVL13+00E 01+25S	276	65	0	0	931	4.8089	0	131	942	1.0881	1.1154	0	0	0.2817	0	0	36	88	222
IVL13+00E 01+50N	478	70	0	0	369	2.6262	0	59	454	0.5263	1.9063	0	0	0	0	0	37	0	165
IVL13+00E 01+50S	348	0	0	0	556	3.1848	0	82	608	0.6959	1.4485	0	0	0	0	0	44	0	165
IVL13+00E 01+75N	467	63	0	0	338	3.5521	0	74	561	0.6107	1.7739	27	0	0.3195	0	0	39	0	181
IVL13+00E 01+75S	324	0	0	0	570	4.7918	0	74	910	1.0167	1.2249	0	0	0	0	0	54	89	216
IVL13+00E 02+00N	504	77	0	0	451	3.5304	0	66	652	0.833	1.5291	28	0	0	0	0	53	102	231
IVL13+00E 02+25N	410	0	0	0	690	2.3083	0	110	855	0.6122	1.6828	35	0	0	0	0	67	76	225
IVL13+50E 00+00	434	0	0	0	334	3.3842	0	42	346	0.4689	1.8043	0	0	0.3058	0	0	30	0	115
IVL13+50E 00+00	573	62	0	0	387	3.2103	0	69	489	0.4939	1.9333	0	0	0	0	0	40	0	161
IVL14+00E 00+00	163	0	0	0	799	0.6401	0	178	678	1.4943	1.5344	0	0	1.0737	0	0	58	75	325
IVL14+00E 00+00	188	0	0	400	1015	0.8344	0	212	812	1.5544	1.5506	67	0	1.1835	0	0	80	146	361
IVL14+00E 00+25N	477	0	0	0	650	2.9689	0	83	634	0.5465	1.5114	30	0	0	0	0	47	0	183
IVL14+00E 00+25S	479	0	0	0	450	2.5634	0	58	518	0.5277	1.6744	27	0	0.2506	0	0	25	0	165
IVL14+00E 00+50N	448	74	0	0	654	2.5294	0	103	591	0.5542	1.4198	0	0	0	0	0	57	0	204
IVL14+00E 00+50S	365	0	0	0	452	3.2205	0	66	449	0.5022	1.5001	0	0	0.3214	0	0	28	0	142
IVL14+00E 00+75N	346	73	0	0	458	2.1909	0	88	572	0.8225	1.7534	0	0	0.2444	0	0	30	0	226
IVL14+00E 00+75S	364	92	0	0	489	2.4608	0	67	570	0.5938	1.4961	0	0	0.2821	0	0	47	0	215
IVL14+00E 01+00N	259	0	0	0	598	1.5888	0	66	640	0.6744	1.6622	0	0	0.24	0	0	24	0	229
IVL14+00E 01+00S	517	67	0	0	576	3.0094	0	75	500	0.4893	1.266	0	0	0	0	0	48	0	165
IVL14+00E 01+25N	211	58	0	0	635	1.6929	0	131	797	0.7556	1.6656	27	0	0.2486	0	0	36	0	237
IVL14+00E 01+25S	556	0	0	0	916	5.9998	0	96	1090	1.1688	1.6331	0	0	0.2764	0	0	54	91	260
IVL14+00E 01+50N	405	66	0	0	679	2.4947	0	97	595	0.5199	1.3976	0	0	0	0	0	54	0	184
IVL14+00E 01+50S	287	0	0	0	907	5.8734	0	68	917	1.0342	1.3822	35	0	0.3275	0	0	41	87	210

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL14+00E 01+50S	SOIL	04/11/2009	1:26:19 PM	250µ	0	87	55	177	108	0	523	2181	6.8644	50	0	5
IVL14+00E 01+75N	SOIL	04/11/2009	1:49:44 PM	250µ	0	22	106	216	100	0	374	1544	5.5674	54	0	0
IVL14+00E 01+75S	SOIL	04/11/2009	1:28:33 PM	250µ	13	133	101	210	221	0	686	2317	7.817	47	0	6
IVL14+00E 02+00N	SOIL	04/11/2009	1:51:54 PM	250µ	0	50	115	194	55	0	380	2258	6.0853	101	0	6
IVL14+00E 02+00S	SOIL	04/11/2009	1:31:16 PM	250µ	0	22	39	148	0	0	383	1497	5.4358	31	0	0
IVL14+00E 02+25N	SOIL	04/11/2009	1:54:00 PM	250µ	0	55	151	199	147	0	510	2174	6.5634	150	0	6
IVL14+50E 00+00	SOIL	08/08/2009	1:01:53 PM	SITU	0	18	36	168	0	0	13	1926	4.8626	42	0	0
IVL14+50E 00+00	SOIL	04/11/2009	11:14:09 AM	250µ	0	37	81	191	0	0	622	2820	6.7265	37	0	5
IVL15+00E 00+00	SOIL	08/08/2009	1:14:35 PM	SITU	0	47	167	221	0	0	13	2120	4.9515	54	0	59
IVL15+00E 00+00	SOIL	04/11/2009	11:26:48 AM	250µ	0	26	96	148	0	0	345	2020	5.3769	51	0	4
IVL15+00E 00+25N	SOIL	04/11/2009	2:02:35 PM	250µ	0	24	55	131	0	0	378	1891	5.3324	26	0	4
IVL15+00E 00+25S	SOIL	04/11/2009	3:32:07 PM	250µ	0	13	32	101	0	0	217	1502	5.0567	46	0	0
IVL15+00E 00+50N	SOIL	04/11/2009	2:07:43 PM	250µ	0	21	87	172	0	0	408	1915	5.2818	26	0	4
IVL15+00E 00+50S	SOIL	04/11/2009	3:34:17 PM	250µ	0	18	38	113	67	0	268	1305	4.771	23	0	0
IVL15+00E 00+75N	SOIL	04/11/2009	2:09:35 PM	250µ	0	19	82	155	0	0	410	1544	4.8453	39	0	5
IVL15+00E 00+75S	SOIL	04/11/2009	3:37:04 PM	250µ	0	21	42	126	67	0	419	1249	4.9595	27	0	4
IVL15+00E 01+00N	SOIL	04/11/2009	3:24:21 PM	250µ	0	17	69	166	0	0	273	2341	5.1145	44	0	5
IVL15+00E 01+00S	SOIL	04/11/2009	3:40:27 PM	250µ	0	23	119	164	0	0	296	1666	4.721	51	0	5
IVL15+00E 01+25N	SOIL	04/11/2009	3:27:25 PM	250µ	0	32	72	156	63	0	434	1804	5.5071	35	0	4
IVL15+00E 01+25S	SOIL	04/11/2009	3:42:40 PM	250µ	0	44	129	200	143	0	288	1231	4.7937	87	0	5
IVL15+00E 01+50S	SOIL	04/11/2009	3:47:35 PM	250µ	0	39	101	202	116	0	524	1210	5.5819	60	0	6
IVL15+00E 01+75S	SOIL	04/11/2009	3:49:36 PM	250µ	0	82	89	156	144	0	539	1702	5.8824	58	0	7
IVL15+00E 02+00N	SOIL	04/11/2009	3:29:40 PM	250µ	0	30	146	202	0	0	349	1885	5.2677	48	0	4
IVL15+00E 02+00S	SOIL	04/11/2009	4:56:24 PM	250µ	0	119	55	173	175	0	657	1505	7.3025	50	0	0
IVL15+50E 00+00	SOIL	08/08/2009	1:38:08 PM	SITU	0	0	44	160	0	0	9	1851	5.1217	31	0	0
IVL15+50E 00+00	SOIL	04/11/2009	11:29:02 AM	250µ	0	20	96	226	93	0	410	2303	5.7225	39	0	5
IVL16+00E 00+00	SOIL	08/08/2009	1:51:45 PM	SITU	12	0	100	188	0	0	12	1794	4.5893	31	0	16
IVL16+00E 00+00	SOIL	04/11/2009	11:33:03 AM	250µ	0	20	119	179	0	0	363	1829	4.9154	30	0	0
IVL16+00E 00+25N	SOIL	04/11/2009	5:29:10 PM	250µ	0	20	90	167	0	0	295	1681	4.4854	34	0	4
IVL16+00E 00+25S	SOIL	04/11/2009	4:59:40 PM	250µ	0	26	93	149	0	0	448	1075	4.815	34	0	4
IVL16+00E 00+50N	SOIL	04/11/2009	5:31:10 PM	250µ	0	19	133	222	111	0	355	2539	4.9269	41	0	7
IVL16+00E 00+50S	SOIL	04/11/2009	5:01:38 PM	250µ	0	17	48	118	0	0	321	1389	4.6511	23	0	6
IVL16+00E 00+75N	SOIL	04/11/2009	12:00:00 PM	250µ	0	31	144	173	66	0	355	2637	5.0631	27	0	5
IVL16+00E 00+75S	SOIL	04/11/2009	5:03:30 PM	250µ	0	0	48	122	0	0	332	1525	4.6837	30	0	0

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL14+00E 01+50S	256	68	0	0	700	5.587	0	97	919	1.0041	1.2192	0	0	0.2856	0	0	30	0	189
IVL14+00E 01+75N	226	0	0	0	428	1.1633	0	111	565	0.5347	1.6733	0	0	0.2405	0	0	44	60	189
IVL14+00E 01+75S	263	94	0	0	995	4.8839	0	93	942	1.124	1.2734	0	0	0.2347	0	0	45	103	240
IVL14+00E 02+00N	314	0	0	0	506	1.3412	0	122	640	0.5069	1.6722	31	0	0.2526	0	0	50	0	203
IVL14+00E 02+00S	223	0	0	0	320	2.0545	0	70	572	0.6537	1.4292	0	0	0	0	0	14	0	140
IVL14+00E 02+25N	552	0	0	0	658	2.2348	0	148	567	0.5651	1.6806	0	0	0.2884	0	0	66	0	214
IVL14+50E 00+00	165	0	0	0	0	1.2811	0	0	358	0.6331	1.2625	0	0	0.2357	0	0	17	0	153
IVL14+50E 00+00	192	0	0	0	422	1.8113	0	65	677	0.8863	1.487	0	0	0.4681	0	0	26	0	222
IVL15+00E 00+00	451	0	0	0	464	2.2363	0	77	532	0.528	1.6008	0	0	0.3435	0	0	66	82	235
IVL15+00E 00+00	382	58	0	0	273	2.6836	0	90	473	0.5684	1.4581	23	0	0.2387	0	0	15	0	140
IVL15+00E 00+25N	278	0	0	0	432	1.671	0	60	669	0.6717	1.5783	24	0	0	0	0	24	0	206
IVL15+00E 00+25S	155	0	0	0	228	0.857	0	65	496	0.5307	2.2112	0	0	0	0	0	8	0	122
IVL15+00E 00+50N	221	0	0	0	339	1.5477	0	87	474	0.6649	1.5543	0	0	0	0	0	15	0	173
IVL15+00E 00+50S	146	0	0	0	532	0.6944	0	54	571	0.4639	2.4738	0	0	0	0	0	27	0	148
IVL15+00E 00+75N	317	0	0	0	274	1.6549	0	85	451	0.4962	1.4809	0	0	0	0	0	19	0	142
IVL15+00E 00+75S	225	0	0	0	446	1.0678	0	96	553	0.5439	1.847	0	0	0.1684	0	0	27	0	176
IVL15+00E 01+00N	274	76	0	0	443	2.1379	0	75	525	0.5873	1.7217	0	0	0.1716	0	0	25	0	209
IVL15+00E 01+00S	308	60	0	0	343	2.1313	0	91	468	0.4783	1.5395	0	0	0.1829	0	0	21	0	145
IVL15+00E 01+25N	270	0	0	0	566	2.0098	0	98	631	0.6204	1.765	30	0	0.204	0	0	33	64	249
IVL15+00E 01+25S	508	0	0	0	578	2.8485	0	80	590	0.469	1.1637	0	0	0	0	0	60	0	189
IVL15+00E 01+50S	377	0	0	0	499	2.6864	0	88	558	0.5914	1.1315	0	0	0.1909	0	0	46	0	187
IVL15+00E 01+75S	446	92	0	0	851	4.7063	0	89	764	0.789	1.1032	26	0	0	0	0	39	0	197
IVL15+00E 02+00N	319	0	0	0	549	1.9187	0	111	522	0.4087	1.726	0	0	0.2372	0	0	44	0	150
IVL15+00E 02+00S	367	0	0	0	865	5.8975	0	69	923	1.0977	1.2395	0	0	0	0	0	40	64	218
IVL15+50E 00+00	549	0	0	0	289	3.083	0	73	462	0.5572	1.8356	0	0	0.288	0	0	20	0	147
IVL15+50E 00+00	293	0	0	0	601	1.7336	0	103	539	0.574	1.6133	0	0	0.1869	0	0	33	63	233
IVL16+00E 00+00	214	0	0	0	303	1.1288	0	66	399	0.522	1.8158	0	0	0.1705	0	0	35	0	145
IVL16+00E 00+00	217	80	0	0	255	1.3406	0	72	433	0.5316	1.5406	0	0	0.2103	0	0	21	0	160
IVL16+00E 00+25N	244	0	0	0	441	1.9977	0	67	477	0.4902	1.3489	0	0	0.1964	0	0	23	0	215
IVL16+00E 00+25S	288	0	0	0	555	1.0337	0	93	470	0.4525	1.6172	27	0	0	0	0	36	51	184
IVL16+00E 00+50N	204	66	0	0	435	1.2678	0	73	489	0.5343	1.5526	0	0	0.25	0	0	27	0	187
IVL16+00E 00+50S	366	0	0	0	433	1.7953	0	75	403	0.5202	1.2509	0	0	0.1714	0	0	24	0	154
IVL16+00E 00+75N	244	57	0	0	404	1.3269	0	78	492	0.5893	1.5625	0	0	0.2547	0	0	30	0	193
IVL16+00E 00+75S	317	0	0	0	323	1.4298	0	61	471	0.5162	1.5251	0	0	0	0	0	23	0	181

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL16+00E 01+00N	SOIL	04/11/2009	12:00:00 PM	250µ	0	21	108	156	0	0	324	2705	4.9014	24	0	5
IVL16+00E 01+00S	SOIL	04/11/2009	5:07:20 PM	250µ	0	24	61	153	65	0	317	1775	4.88	35	0	4
IVL16+00E 01+25N	SOIL	05/11/2009	11:17:52 AM	250µ	0	29	115	204	92	0	295	2239	5.0152	38	0	0
IVL16+00E 01+25S	SOIL	04/11/2009	5:20:24 PM	250µ	0	63	85	188	84	0	605	1449	5.9411	77	0	5
IVL16+00E 01+50N	SOIL	05/11/2009	11:24:22 AM	250µ	0	24	85	169	98	0	436	1153	5.5487	31	0	5
IVL16+00E 01+50S	SOIL	04/11/2009	5:22:43 PM	250µ	0	33	49	157	0	0	336	1795	4.9737	39	0	7
IVL16+00E 01+75N	SOIL	05/11/2009	11:19:59 AM	250µ	0	32	90	182	104	0	402	1110	4.9102	35	0	8
IVL16+00E 01+75S	SOIL	04/11/2009	5:24:44 PM	250µ	0	30	78	213	0	0	444	1502	5.2086	62	0	5
IVL16+00E 02+00N	SOIL	05/11/2009	11:28:16 AM	250µ	0	31	149	236	73	0	551	1915	5.6233	52	0	0
IVL16+00E 02+00S	SOIL	04/11/2009	5:26:54 PM	250µ	13	72	71	199	150	0	554	1759	6.0039	51	0	6
IVL16+00E 02+25N	SOIL	05/11/2009	11:30:06 AM	250µ	0	27	374	214	120	0	428	3446	5.5984	55	0	7
IVL16+00E 02+50N	SOIL	05/11/2009	11:31:58 AM	250µ	0	42	74	176	111	0	497	3057	6.3774	66	0	6
IVL16+50E 00+00	SOIL	08/08/2009	2:10:26 PM	SITU	0	0	78	133	0	0	12	1656	3.6097	36	0	0
IVL16+50E 00+00	SOIL	04/11/2009	11:34:57 AM	250µ	0	16	71	138	0	0	183	1754	4.644	34	0	0
IVL17+00E 00+00	SOIL	08/08/2009	2:27:10 PM	SITU	0	13	83	137	0	0	7	850	4.1983	46	0	14
IVL17+00E 00+00	SOIL	04/11/2009	11:39:34 AM	250µ	0	22	92	155	71	0	267	865	4.845	37	0	4
IVL17+00E 00+25N	SOIL	05/11/2009	12:08:45 PM	250µ	11	15	75	131	71	0	420	765	4.8241	38	0	4
IVL17+00E 00+25S	SOIL	05/11/2009	11:46:30 AM	250µ	0	0	57	105	80	0	396	879	4.3456	22	0	0
IVL17+00E 00+50N	SOIL	05/11/2009	12:23:51 PM	250µ	0	14	57	131	70	0	364	698	4.9072	32	0	6
IVL17+00E 00+50S	SOIL	05/11/2009	11:48:30 AM	250µ	0	30	83	144	0	0	403	1123	4.8812	32	0	0
IVL17+00E 00+75N	SOIL	05/11/2009	12:26:00 PM	250µ	0	0	77	136	68	0	349	802	4.6902	33	0	0
IVL17+00E 00+75S	SOIL	05/11/2009	11:50:26 AM	250µ	0	18	65	113	0	0	473	1076	4.7426	31	0	0
IVL17+00E 01+00N	SOIL	05/11/2009	12:27:55 PM	250µ	0	0	64	131	109	0	400	902	4.4827	18	0	4
IVL17+00E 01+00S	SOIL	05/11/2009	11:52:52 AM	250µ	0	26	60	128	0	0	428	1537	4.8164	25	0	5
IVL17+00E 01+25N	SOIL	05/11/2009	12:29:44 PM	250µ	0	14	68	149	0	0	366	591	4.1321	17	0	0
IVL17+00E 01+25S	SOIL	05/11/2009	11:59:51 AM	250µ	0	24	85	182	69	0	395	1679	5.3466	36	0	0
IVL17+00E 01+50N	SOIL	05/11/2009	12:31:36 PM	250µ	0	13	74	143	59	0	271	659	4.6639	35	0	5
IVL17+00E 01+50S	SOIL	05/11/2009	12:02:00 PM	250µ	0	27	82	160	0	0	470	1323	4.859	17	0	5
IVL17+00E 01+75N	SOIL	05/11/2009	12:33:39 PM	250µ	0	11	85	138	0	0	370	181	3.9498	0	0	0
IVL17+00E 01+75S	SOIL	05/11/2009	12:04:03 PM	250µ	11	21	54	160	92	0	383	1741	5.077	26	0	0
IVL17+00E 02+00N	SOIL	05/11/2009	12:37:47 PM	250µ	0	0	54	126	66	0	414	1179	4.5803	35	0	5
IVL17+00E 02+00S	SOIL	05/11/2009	12:06:07 PM	250µ	0	25	57	141	0	0	381	1625	4.8283	22	0	6
IVL17+00E 02+25N	SOIL	05/11/2009	12:40:22 PM	250µ	0	23	73	166	121	0	450	1272	5.0095	16	0	0
IVL17+00E 02+50N	SOIL	05/11/2009	12:42:20 PM	250µ	11	19	47	147	76	0	515	1156	5.1332	18	0	0

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL16+00E 01+00N	205	0	0	0	370	1.5908	0	75	456	0.6828	1.41	28	0	0	0	0	23	0	181
IVL16+00E 01+00S	293	0	0	0	392	1.4316	0	67	508	0.5869	1.5651	0	0	0.2294	0	0	27	0	178
IVL16+00E 01+25N	244	0	0	0	551	1.5164	0	84	463	0.5712	1.4389	0	0	0.1731	0	0	41	0	215
IVL16+00E 01+25S	358	0	0	0	882	3.9801	0	106	666	0.8225	1.239	0	0	0.3068	0	0	36	0	190
IVL16+00E 01+50N	257	0	0	0	636	1.2417	0	89	596	0.5827	1.4983	0	0	0.1934	0	0	35	61	264
IVL16+00E 01+50S	267	61	0	0	408	1.6559	0	50	495	0.6704	1.2262	0	0	0.2623	0	0	28	0	233
IVL16+00E 01+75N	332	0	0	0	606	1.6048	0	84	625	0.5165	1.3563	0	0	0	0	0	39	0	264
IVL16+00E 01+75S	296	0	0	0	569	2.3924	0	54	599	0.6198	1.1328	0	0	0	0	0	27	0	200
IVL16+00E 02+00N	195	0	0	0	509	1.2782	0	80	528	0.5669	1.4281	0	0	0.2169	0	0	23	0	179
IVL16+00E 02+00S	309	0	0	0	577	3.6374	0	49	719	0.8302	1.1811	0	0	0.2585	0	0	34	60	218
IVL16+00E 02+25N	232	0	0	0	486	1.2838	0	58	462	0.6485	1.5589	33	0	0	0	0	31	0	190
IVL16+00E 02+50N	160	0	0	0	547	1.2011	0	86	552	0.5771	1.604	0	0	0.2534	0	0	37	0	182
IVL16+50E 00+00	127	0	0	0	305	0.6153	0	0	373	0.4184	1.219	22	0	0.1693	0	0	19	0	135
IVL16+50E 00+00	150	0	0	0	257	0.9992	0	80	450	0.5637	1.6707	0	0	0	0	0	15	0	169
IVL17+00E 00+00	146	0	0	0	243	0.5559	0	0	434	0.4222	1.6248	0	0	0	0	0	33	0	178
IVL17+00E 00+00	163	0	0	0	473	0.7742	0	80	437	0.4607	1.7027	0	0	0.1635	0	0	38	0	218
IVL17+00E 00+25N	188	0	0	0	326	0.7605	0	73	498	0.5218	1.739	0	0	0	0	0	29	0	245
IVL17+00E 00+25S	175	0	0	0	423	0.7105	0	79	475	0.5039	1.6546	0	0	0	0	0	22	0	229
IVL17+00E 00+50N	192	0	0	0	332	0.8148	0	67	463	0.5555	1.6172	25	0	0	0	0	29	0	203
IVL17+00E 00+50S	156	0	0	0	356	0.7452	0	80	481	0.4853	1.5588	0	0	0.2166	0	0	19	0	191
IVL17+00E 00+75N	168	0	0	0	293	0.7392	0	75	465	0.5248	1.7709	0	0	0.1759	0	0	21	0	179
IVL17+00E 00+75S	172	62	0	0	271	0.7832	0	81	380	0.5854	1.3996	0	0	0	0	0	24	0	207
IVL17+00E 01+00N	184	0	0	0	469	0.6249	0	92	464	0.5236	1.7097	31	0	0	0	0	25	0	193
IVL17+00E 01+00S	261	0	0	0	275	1.3232	0	59	473	0.6375	1.4751	0	0	0.218	0	0	19	0	188
IVL17+00E 01+25N	185	0	0	0	545	0.7941	0	71	536	0.5034	1.4909	0	0	0	0	0	27	0	192
IVL17+00E 01+25S	269	0	0	0	467	1.0916	0	102	565	0.5308	1.4642	24	0	0	0	0	35	0	207
IVL17+00E 01+50N	180	0	0	0	379	0.787	0	77	437	0.419	1.3057	0	0	0	0	0	33	0	164
IVL17+00E 01+50S	277	0	0	0	441	1.1225	0	94	501	0.5693	1.4468	27	0	0	0	0	34	0	192
IVL17+00E 01+75N	198	0	0	0	388	0.8233	0	63	420	0.4776	1.0451	0	0	0	0	0	18	0	158
IVL17+00E 01+75S	278	0	0	0	496	1.3757	0	75	514	0.6386	1.4733	0	0	0.2544	0	0	31	55	192
IVL17+00E 02+00N	291	0	0	0	361	1.0785	0	75	453	0.5529	1.4167	0	0	0	0	0	27	0	203
IVL17+00E 02+00S	252	0	0	0	435	1.3893	0	66	488	0.5981	1.4524	0	0	0	0	0	15	0	168
IVL17+00E 02+25N	306	77	0	0	382	1.3485	0	86	396	0.5446	1.3815	29	0	0	0	0	28	74	210
IVL17+00E 02+50N	342	70	0	0	487	1.4097	0	88	479	0.6522	1.459	0	0	0	0	0	25	0	211

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL17+50E 00+00	SOIL	08/08/2009	2:46:35 PM	SITU	0	19	36	104	0	0	7	740	3.7021	44	0	24
IVL17+50E 00+00	SOIL	04/11/2009	11:42:59 AM	250µ	0	24	56	116	0	0	253	505	4.8256	38	0	0
IVL18+00E 00+00	SOIL	08/08/2009	2:53:51 PM	SITU	0	0	30	111	0	0	0	3632	4.4432	39	0	18
IVL18+00E 00+00	SOIL	04/11/2009	11:49:36 AM	250µ	0	0	29	120	0	0	247	2051	4.7318	26	0	5
IVL18+00E 00+25N	SOIL	05/11/2009	1:10:33 PM	250µ	0	26	41	121	66	0	467	1428	4.7742	28	0	0
IVL18+00E 00+25S	SOIL	05/11/2009	12:46:09 PM	250µ	14	26	59	151	0	0	462	860	5.0059	25	0	5
IVL18+00E 00+50N	SOIL	05/11/2009	1:15:31 PM	250µ	0	15	42	97	54	0	406	693	5.2382	17	0	0
IVL18+00E 00+50S	SOIL	05/11/2009	12:48:03 PM	250µ	13	16	52	133	74	0	420	1167	4.9999	0	0	6
IVL18+00E 00+75N	SOIL	05/11/2009	1:17:40 PM	250µ	0	16	87	112	0	0	475	537	4.941	46	0	6
IVL18+00E 00+75S	SOIL	05/11/2009	12:50:50 PM	250µ	0	16	65	182	120	0	457	1314	4.9929	20	0	5
IVL18+00E 01+00N	SOIL	05/11/2009	1:19:48 PM	250µ	11	17	58	122	102	0	494	484	4.6487	25	0	0
IVL18+00E 01+00S	SOIL	05/11/2009	12:54:10 PM	250µ	10	0	45	141	85	0	460	1400	4.8117	15	0	0
IVL18+00E 01+25N	SOIL	05/11/2009	3:18:23 PM	250µ	0	13	39	111	0	0	353	692	4.5444	24	0	0
IVL18+00E 01+25S	SOIL	05/11/2009	12:56:23 PM	250µ	0	18	72	187	94	0	492	870	5.1125	22	0	5
IVL18+00E 01+50N	SOIL	05/11/2009	3:20:57 PM	250µ	0	0	47	117	108	0	298	773	4.9893	22	0	4
IVL18+00E 01+50S	SOIL	05/11/2009	12:58:55 PM	250µ	0	49	112	199	169	0	597	1659	6.0758	78	0	0
IVL18+00E 01+75N	SOIL	05/11/2009	3:22:44 PM	250µ	0	19	52	107	93	0	298	483	4.7705	23	0	4
IVL18+00E 01+75S	SOIL	05/11/2009	1:05:37 PM	250µ	0	24	65	147	61	0	534	1235	5.5461	28	0	5
IVL18+00E 02+00N	SOIL	05/11/2009	3:24:44 PM	250µ	0	13	69	108	0	0	387	887	4.078	20	0	0
IVL18+00E 02+00S	SOIL	05/11/2009	1:07:45 PM	250µ	0	32	74	153	75	0	572	1456	6.0596	61	0	6
IVL18+00E 02+25N	SOIL	05/11/2009	3:26:44 PM	250µ	0	0	59	116	0	0	405	866	4.6143	45	0	6
IVL18+50E 00+00	SOIL	08/08/2009	3:04:25 PM	SITU	0	0	37	127	0	0	0	4137	3.5111	34	0	22
IVL18+50E 00+00	SOIL	04/11/2009	11:52:01 AM	250µ	0	0	44	147	0	0	279	1115	4.5969	28	0	0
IVL19+00E 00+00	SOIL	08/08/2009	3:16:37 PM	SITU	0	13	47	121	0	0	6	1727	4.1111	45	0	16
IVL19+00E 00+00	SOIL	04/11/2009	11:55:08 AM	250µ	0	18	75	163	54	0	380	1522	5.1916	31	0	5
IVL19+00E 00+25N	SOIL	05/11/2009	3:51:11 PM	250µ	10	23	48	189	102	0	517	413	5.2396	35	0	5
IVL19+00E 00+25S	SOIL	05/11/2009	3:29:37 PM	250µ	0	18	43	130	64	0	424	838	4.911	27	0	5
IVL19+00E 00+50N	SOIL	05/11/2009	3:53:00 PM	250µ	0	22	57	126	65	0	495	1140	5.1733	35	0	0
IVL19+00E 00+50S	SOIL	05/11/2009	3:31:46 PM	250µ	0	24	60	162	94	0	368	1544	5.129	23	0	0
IVL19+00E 00+75N	SOIL	05/11/2009	3:55:15 PM	250µ	0	24	48	88	0	0	583	347	5.0802	39	0	0
IVL19+00E 00+75S	SOIL	05/11/2009	3:34:57 PM	250µ	0	14	47	127	85	0	422	533	4.866	19	0	5
IVL19+00E 01+00N	SOIL	05/11/2009	3:57:19 PM	250µ	0	0	27	64	0	0	499	528	4.5143	27	0	0
IVL19+00E 01+00S	SOIL	05/11/2009	3:37:09 PM	250µ	0	21	49	152	0	0	339	924	4.5384	33	0	4
IVL19+00E 01+25N	SOIL	05/11/2009	3:59:09 PM	250µ	0	0	43	86	0	0	462	942	4.84	29	0	5

Appendix 5.2 XRF Geochemical Results

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL17+50E 00+00	192	0	0	0	246	0.8562	0	0	321	0.4011	1.1604	0	0	0	0	0	24	0	137
IVL17+50E 00+00	238	0	0	0	419	1.0359	0	69	425	0.5143	1.4629	23	0	0.2257	0	0	16	0	191
IVL18+00E 00+00	480	0	0	0	406	1.5543	0	0	427	0.6118	1.5167	0	0	0.2596	0	0	32	0	205
IVL18+00E 00+00	252	0	0	0	435	1.2243	0	0	434	0.63	1.4511	0	0	0	0	0	24	0	189
IVL18+00E 00+25N	265	0	0	0	416	1.1922	0	57	499	0.6533	1.5422	0	0	0	0	93	23	0	225
IVL18+00E 00+25S	261	0	0	0	289	1.065	0	77	536	0.5839	1.5248	24	0	0	0	0	21	61	212
IVL18+00E 00+50N	259	0	0	0	330	1.0696	0	74	559	0.6855	1.529	0	0	0	0	0	25	0	214
IVL18+00E 00+50S	247	0	0	0	400	1.119	0	75	457	0.6436	1.7715	0	0	0	0	0	19	0	207
IVL18+00E 00+75N	280	0	0	0	437	1.0655	0	79	509	0.5794	1.5322	0	0	0	0	0	22	0	220
IVL18+00E 00+75S	251	0	0	0	466	1.1617	0	95	437	0.6014	1.3344	0	0	0	0	0	37	0	201
IVL18+00E 01+00N	324	0	0	0	342	1.008	0	89	484	0.6932	1.3768	0	0	0	0	0	32	64	260
IVL18+00E 01+00S	293	0	0	0	358	1.7268	0	59	515	0.6797	1.4252	0	0	0	0	0	32	91	223
IVL18+00E 01+25N	241	0	0	0	376	0.9495	0	74	527	0.554	1.4611	0	0	0	0	0	20	0	189
IVL18+00E 01+25S	205	0	0	0	435	0.8252	0	107	578	0.4975	1.3782	0	0	0.1907	0	0	44	112	214
IVL18+00E 01+50N	280	0	0	0	424	1.0423	0	67	453	0.7016	1.4581	0	0	0	0	0	27	0	222
IVL18+00E 01+50S	295	0	0	0	930	2.2941	0	178	944	0.8085	1.8574	0	0	0	0	0	52	112	323
IVL18+00E 01+75N	310	73	0	0	316	0.9918	0	66	427	0.6351	1.2821	28	0	0	0	0	25	0	233
IVL18+00E 01+75S	217	0	0	0	298	1.8498	0	92	565	0.9049	1.1973	0	0	0	0	0	31	57	256
IVL18+00E 02+00N	267	63	0	0	301	1.0342	0	81	417	0.4192	1.2543	0	0	0	0	0	21	0	179
IVL18+00E 02+00S	259	0	0	0	683	2.1016	0	98	617	0.8806	1.3968	0	0	0	0	0	29	0	224
IVL18+00E 02+25N	292	0	0	0	341	1.1875	0	68	434	0.5386	1.3444	0	0	0.1625	0	0	31	0	203
IVL18+50E 00+00	218	0	0	0	550	0.8466	0	0	428	0.4931	1.3846	0	0	0	0	0	22	0	150
IVL18+50E 00+00	236	62	0	0	385	1.0148	0	66	469	0.6352	1.5082	0	0	0	0	0	15	0	189
IVL19+00E 00+00	190	75	87	0	261	0.7625	0	0	349	0.4455	1.2421	29	0	0	0	0	20	0	160
IVL19+00E 00+00	252	69	0	0	464	1.2257	0	73	506	0.6339	1.4909	0	0	0	0	0	26	0	201
IVL19+00E 00+25N	287	0	0	0	430	1.1903	0	87	421	0.5926	1.6278	0	0	0	0	0	25	0	192
IVL19+00E 00+25S	283	0	0	0	362	2.2007	0	83	440	0.5973	1.0431	31	0	0.2041	0	0	23	0	201
IVL19+00E 00+50N	249	0	0	0	291	0.8962	0	83	478	0.6267	1.558	0	0	0	0	0	28	0	199
IVL19+00E 00+50S	255	0	0	0	451	1.5546	0	78	431	0.6801	1.2775	0	0	0	0	0	20	0	207
IVL19+00E 00+75N	264	0	0	0	340	0.8888	0	65	408	0.5962	1.4345	0	0	0.1991	0	0	27	0	200
IVL19+00E 00+75S	345	0	0	0	456	2.0958	0	55	418	0.6024	1.0566	0	0	0	0	0	25	55	222
IVL19+00E 01+00N	245	0	0	0	298	1.0112	0	73	372	0.6773	1.4916	21	0	0	0	0	12	0	178
IVL19+00E 01+00S	221	0	0	0	382	1.0717	0	73	415	0.6316	1.3905	0	0	0.163	0	0	17	0	198
IVL19+00E 01+25N	345	0	0	0	224	1.4115	0	65	389	0.6366	1.7142	24	0	0	0	0	21	0	160

Appendix 5.2 XRF Geochemical Results

Sample Number	Sample Type	Analysis Date	Analysis Time	Sample Prep	Mo (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)	Ag (ppm)	Ni (ppm)	Co (ppm)	Mn (ppm)	Fe (%)	As (ppm)	U (ppm)	Th (ppm)
IVL19+00E 01+25S	SOIL	05/11/2009	3:39:06 PM	250µ	14	14	64	104	71	0	477	415	4.7577	17	0	0
IVL19+00E 01+50N	SOIL	05/11/2009	4:01:31 PM	250µ	0	25	34	127	0	0	526	1113	6.5269	55	0	0
IVL19+00E 01+50S	SOIL	05/11/2009	3:41:06 PM	250µ	0	16	73	143	0	0	446	508	5.0879	37	0	4
IVL19+00E 01+75S	SOIL	05/11/2009	3:44:42 PM	250µ	0	28	78	133	81	0	467	836	5.1591	23	0	6
IVL19+00E 02+00N	SOIL	05/11/2009	4:05:19 PM	250µ	0	23	45	117	93	0	563	524	4.8854	40	0	0
IVL19+00E 02+00S	SOIL	05/11/2009	3:46:45 PM	250µ	11	0	55	155	83	0	405	1564	4.8453	29	0	4
IVL19+00E 02+25N	SOIL	05/11/2009	4:07:03 PM	250µ	0	19	33	75	0	0	465	287	5.4748	58	0	0
IVL19+50E 00+00	SOIL	08/08/2009	3:22:43 PM	SITU	0	13	26	83	79	0	10	550	4.8038	38	0	0
IVL19+50E 00+00	SOIL	04/11/2009	11:57:47 AM	250µ	0	29	52	108	123	0	613	653	5.1025	47	0	0
IVL20+00E 00+00	SOIL	08/08/2009	3:31:07 PM	SITU	0	17	22	67	0	0	7	453	4.4249	30	0	14
IVL20+00E 00+00	SOIL	04/11/2009	12:03:12 PM	250µ	0	0	37	82	0	0	445	443	5.1572	23	0	0
IVL20+00E 00+25N	SOIL	05/11/2009	4:42:19 PM	250µ	0	26	75	133	121	0	486	703	5.3989	29	0	5
IVL20+00E 00+25S	SOIL	05/11/2009	5:03:28 PM	250µ	0	20	48	72	0	0	397	510	5.0538	18	0	0
IVL20+00E 00+50N	SOIL	05/11/2009	4:44:59 PM	250µ	10	19	51	101	65	0	483	623	5.2435	23	0	0
IVL20+00E 00+50S	SOIL	05/11/2009	5:07:13 PM	250µ	0	0	32	86	0	0	425	638	4.3162	17	0	0
IVL20+00E 00+75N	SOIL	05/11/2009	4:47:10 PM	250µ	0	0	51	67	54	0	318	337	4.9338	31	0	0
IVL20+00E 00+75S	SOIL	05/11/2009	5:09:20 PM	250µ	0	12	0	64	0	0	263	1420	4.0846	16	0	0
IVL20+00E 01+00N	SOIL	05/11/2009	4:49:15 PM	250µ	0	13	44	104	61	0	492	1149	5.1571	25	0	0
IVL20+00E 01+00S	SOIL	05/11/2009	5:12:24 PM	250µ	0	22	41	122	0	0	391	347	5.6282	19	0	0
IVL20+00E 01+25N	SOIL	05/11/2009	4:52:01 PM	250µ	0	0	30	102	53	0	313	1891	4.8474	68	0	4
IVL20+00E 01+25S	SOIL	05/11/2009	5:14:33 PM	250µ	0	16	35	78	0	0	371	304	3.8513	14	0	0
IVL20+00E 01+50N	SOIL	05/11/2009	4:53:57 PM	250µ	0	26	37	77	0	0	419	529	5.0729	39	0	0
IVL20+00E 01+50S	SOIL	05/11/2009	5:16:31 PM	250µ	0	37	82	142	0	0	525	425	4.4789	58	0	4
IVL20+00E 01+75N	SOIL	05/11/2009	4:55:51 PM	250µ	0	17	43	76	0	0	562	557	6.1925	54	0	0
IVL20+00E 01+75S	SOIL	05/11/2009	5:18:40 PM	250µ	0	30	97	140	93	0	503	1141	5.3703	57	0	0
IVL20+00E 02+00N	SOIL	05/11/2009	4:58:20 PM	250µ	0	20	48	85	0	0	469	537	5.262	36	0	0
IVL20+00E 02+00S	SOIL	05/11/2009	5:20:42 PM	250µ	0	22	54	128	0	0	359	632	4.1117	39	0	6
IVL20+00E 02+25N	SOIL	05/11/2009	5:01:02 PM	250µ	0	12	32	68	0	0	495	456	4.837	31	0	0

Appendix 5.2 XRF Geochemical Results

Sample Number	Sr (ppm)	Cd (ppm)	Sb (ppm)	Bi (ppm)	V (ppm)	Ca (%)	P (%)	Cr (ppm)	Ba (ppm)	Ti (%)	K (%)	W (ppm)	Hg (ppm)	S (%)	Se (ppm)	Sn (ppm)	Y (ppm)	Nb (ppm)	Zr (ppm)
IVL19+00E 01+25S	212	0	0	0	305	1.0485	0	82	480	0.7169	1.4308	0	0	0	0	0	23	58	238
IVL19+00E 01+50N	297	0	0	0	490	1.62	0	127	579	0.9115	1.6503	0	0	0	0	0	15	0	184
IVL19+00E 01+50S	206	0	0	0	320	1.4187	0	84	444	0.6709	1.0959	0	0	0	0	0	20	0	208
IVL19+00E 01+75S	282	0	0	0	545	2.134	0	119	681	0.7446	1.2488	0	0	0	0	0	41	77	288
IVL19+00E 02+00N	415	0	0	0	305	1.0626	0	86	325	0.516	1.5833	0	0	0	0	0	28	64	172
IVL19+00E 02+00S	235	0	0	0	553	1.7848	0	64	530	0.6836	0.9768	0	0	0	0	0	35	77	254
IVL19+00E 02+25N	335	0	0	0	255	0.9954	0	119	411	0.6031	1.631	0	0	0	0	0	17	0	144
IVL19+50E 00+00	210	57	0	0	392	0.9496	0	43	489	0.5884	1.5495	0	0	0.1935	0	0	18	0	172
IVL19+50E 00+00	305	83	0	0	498	1.1548	0	76	490	0.5913	1.5552	0	0	0	0	0	33	94	256
IVL20+00E 00+00	236	73	0	0	625	0.8473	0	41	384	0.6595	1.5964	28	0	0	0	0	18	0	175
IVL20+00E 00+00	237	0	0	0	314	1.01	0	70	456	0.7603	1.5887	25	0	0	0	0	19	0	210
IVL20+00E 00+25N	276	0	0	0	416	1.1482	0	89	464	0.6691	1.5615	0	0	0	0	0	26	68	255
IVL20+00E 00+25S	213	0	0	0	417	1.2592	0	57	468	0.7489	1.7155	0	0	0	0	0	16	0	188
IVL20+00E 00+50N	277	0	0	0	426	1.0496	0	45	493	0.7098	1.5382	0	0	0.1919	0	0	27	75	231
IVL20+00E 00+50S	203	0	0	0	355	1.3632	0	49	509	0.7478	1.5963	0	0	0	0	0	12	0	200
IVL20+00E 00+75N	259	0	0	0	381	0.8551	0	62	481	0.6523	1.757	26	0	0.1787	0	0	19	0	234
IVL20+00E 00+75S	166	0	0	0	232	1.183	0	48	475	0.6892	1.4243	0	0	0	0	0	0	0	144
IVL20+00E 01+00N	307	0	0	0	327	1.1628	0	74	508	0.6095	1.6302	0	0	0.1886	0	0	24	0	208
IVL20+00E 01+00S	192	0	0	0	332	1.0612	0	74	464	0.6529	1.3531	0	0	0	0	0	17	0	205
IVL20+00E 01+25N	264	103	0	0	0	1.1159	0	0	456	0.5751	1.5204	0	0	0.1882	0	0	21	0	167
IVL20+00E 01+25S	257	53	0	0	294	1.3318	0	58	450	0.728	1.3859	0	0	0	0	0	17	0	219
IVL20+00E 01+50N	265	0	0	0	0	1.07	0	85	428	0.6612	1.5935	0	0	0	0	0	19	0	175
IVL20+00E 01+50S	204	0	0	0	0	1.0474	0	76	403	0.4957	0.9913	0	0	0.1839	0	0	29	0	190
IVL20+00E 01+75N	261	0	0	0	434	1.1426	0	48	472	0.6873	1.6205	0	0	0.2924	0	0	13	0	155
IVL20+00E 01+75S	288	76	0	0	535	1.8704	0	116	721	0.6403	1.7579	0	0	0	0	0	44	0	235
IVL20+00E 02+00N	263	0	0	0	314	1.0296	0	70	381	0.6808	1.5786	0	0	0	0	0	21	0	184
IVL20+00E 02+00S	249	0	0	0	516	1.1022	0	69	538	0.4655	1.7141	0	0	0	0	0	21	0	224
IVL20+00E 02+25N	324	0	0	0	349	0.9275	0	71	423	0.6392	1.7633	0	0	0	0	0	16	0	180

Appendix VI -Analytical Certificates

6.1- Rock Samples
6.2 - Silt / Soil Samples

6.1- Rock Samples

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Submitted By: Jarrod Brown
Receiving Lab: Canada-Vancouver
Received: September 11, 2009
Report Date: October 04, 2009
Page: 1 of 5

CERTIFICATE OF ANALYSIS VAN09004198.1

CLIENT JOB INFORMATION

Project: ICE RIVER
Shipment ID:
P.O. Number IV09-001
Number of Samples: 116

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200	116	Crush, split and pulverize rock to 200 mesh			VAN
4B Full Suite	116	LiBO2/Li2B4O7 fusion ICP-MS analysis	0.2	Completed	VAN

SAMPLE DISPOSAL

RTRN-PLP Return
RTRN-RJT Return

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

ADDITIONAL COMMENTS

Invoice To: Bootleg Exploration Inc.
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1
Canada

CC: CSG

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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

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200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

Method		WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
Analyte		Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
AGIVR-001	Rock	2.00	524	4	106.7	11.3	15.5	8.7	34.1	127.2	3	607.5	2.3	2.2	0.9	341	2.2	240.8	17.3	32.1	79.4
AGIVR-002	Rock	1.42	5945	2	11.7	1.6	17.3	1.4	425.9	11.6	2	562.0	12.2	446.0	8.9	40	11.7	55.7	182.4	159.7	350.6
AGIVR-003	Rock	2.04	>50000	3	33.8	0.6	13.0	1.5	378.1	58.8	9	2323	12.1	2126	3.3	155	5.4	29.0	144.5	1325	3378
AGIVR-004	Rock	1.22	>50000	2	59.1	1.4	16.9	2.8	505.4	68.3	9	2608	7.5	1793	5.4	160	6.8	50.7	89.3	1016	2634
AGIVR-005	Rock	0.86	970	3	19.8	1.4	22.1	2.3	171.3	64.4	5	214.7	1.7	148.7	0.7	71	6.4	105.4	35.7	36.8	95.2
AGIVR-006	Rock	1.15	3161	1	26.5	1.0	10.8	1.0	68.5	4.6	2	1844	0.6	432.2	3.1	37	3.8	34.2	102.3	109.7	389.2
AGIVR-007	Rock	0.76	738	1	6.4	0.4	10.5	1.7	26.4	25.4	<1	1102	0.2	10.0	0.5	34	0.5	80.7	56.6	96.6	172.4
AGIVR-009	Rock	1.70	1708	4	72.3	3.0	16.4	6.7	49.2	171.9	2	421.4	2.2	34.5	1.2	578	4.3	195.9	79.6	77.1	170.7
AGIVR-010	Rock	2.01	483	2	59.7	2.0	18.7	5.5	531.0	109.8	7	706.1	4.2	136.2	2.6	378	8.8	79.2	132.5	129.4	371.3
AGIVR-011	Rock	0.97	713	5	9.0	6.8	30.7	10.8	112.9	144.6	3	325.5	1.4	110.3	11.1	141	10.7	642.5	85.5	47.4	85.8
AGIVR-012	Rock	0.81	219	1	6.1	4.7	10.2	1.7	14.4	50.5	<1	479.6	0.3	7.6	1.1	38	0.8	57.4	10.1	21.7	43.0
AGIVR-013	Rock	1.14	411	2	6.2	4.5	19.9	3.2	16.6	107.6	2	620.5	1.1	15.9	2.1	71	1.9	101.0	18.8	51.3	98.3
BWIVR-001	Rock	1.14	1604	13	0.3	8.7	31.5	5.8	911.6	131.5	2	577.4	43.7	25.9	94.8	<8	8.4	426.1	6.8	37.2	51.3
BWIVR-002	Rock	2.25	1308	6	3.6	2.0	30.2	19.1	821.4	218.1	8	267.2	27.8	107.3	82.7	21	8.8	1260	22.7	167.1	247.9
BWIVR-004	Rock	1.96	6043	2	8.8	1.1	25.4	4.5	289.2	51.0	3	583.9	8.4	159.0	4.7	90	9.5	271.5	25.6	114.9	235.1
BWIVR-005	Rock	1.59	24364	2	25.6	1.6	13.1	1.6	250.4	24.2	3	1445	3.6	331.1	2.0	72	3.9	34.4	132.6	256.7	550.6
BWIVR-006	Rock	1.33	1627	1	28.3	2.7	17.3	4.8	189.1	127.0	2	1093	8.8	512.9	2.0	222	2.9	213.3	171.5	249.8	490.5
BWIVR-007	Rock	1.01	1468	9	1.6	3.5	65.9	49.2	3252	82.3	14	450.1	115.3	132.3	223.0	83	34.7	3255	73.1	143.0	244.8
BWIVR-008	Rock	0.86	1685	4	14.6	4.9	21.9	2.9	31.1	108.3	1	777.4	1.4	372.1	2.8	44	2.7	138.9	31.4	28.4	55.4
BWIVR-010	Rock	1.58	27	<1	25.8	<0.1	1.3	0.1	6.2	0.5	<1	467.8	0.1	1.0	0.8	<8	<0.5	6.9	7.2	4.0	9.7
BWIVR-011	Rock	1.36	698	7	20.8	5.5	29.1	8.4	473.1	253.6	16	205.3	19.1	29.2	9.0	225	3.7	536.6	46.9	21.9	43.1
BWIVR-012	Rock	1.34	60	7	4.9	7.4	34.2	10.5	249.4	385.2	3	284.1	6.0	26.7	13.9	9	3.0	784.5	32.7	48.7	75.8
BWIVR-013	Rock	1.37	657	4	1.4	8.6	31.4	11.4	198.4	327.6	5	576.7	8.6	32.7	18.2	<8	2.1	604.4	16.8	88.5	128.7
BWIVR-014	Rock	1.17	965	8	6.5	0.5	23.3	16.9	119.7	145.2	6	417.3	0.7	52.3	1.7	219	0.7	778.5	52.7	11.7	31.4
BWIVR-015	Rock	1.54	983	<1	24.6	5.3	10.4	0.2	54.9	76.1	1	648.6	0.5	21.8	<0.1	28	3.7	3.2	102.1	24.3	58.5
BWIVR-016	Rock	1.95	3917	3	58.4	2.5	8.9	<0.1	11.5	26.2	8	1420	<0.1	4694	1.4	38	7.8	5.4	307.6	756.9	5079
GHIVR-001	Rock	0.70	1540	6	12.0	8.9	40.5	6.3	48.1	261.4	6	186.6	2.4	44.2	4.4	133	4.6	239.7	58.5	109.0	213.4
GHIVR-002	Rock	1.81	1998	2	13.1	11.4	28.9	4.0	416.4	77.9	4	710.2	1.6	28.2	22.2	37	1.8	253.5	17.2	214.0	398.0
GHIVR-003	Rock	1.15	23	<1	1.6	3.7	2.7	0.2	1.3	13.9	<1	804.1	<0.1	1.0	0.9	12	<0.5	5.9	9.3	5.1	11.2
GHIVR-004	Rock	2.05	1218	25	0.7	16.0	55.7	41.9	1169	345.0	15	1873	41.0	77.9	28.1	<8	9.0	3187	58.4	240.5	300.2

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Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

		Method	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
AGIVR-001	Rock		10.31	44.5	8.13	2.34	6.16	0.84	3.83	0.60	1.44	0.20	1.11	0.15	0.1	2824	2.0	147	143.5	22.6	1.8	0.3
AGIVR-002	Rock		44.56	177.7	34.05	10.43	28.83	4.25	25.21	5.56	17.44	2.46	14.04	1.80	0.3	18.0	136.5	531	4.5	9.3	0.2	<0.1
AGIVR-003	Rock		369.3	1378	268.4	64.65	133.8	10.84	38.09	4.21	9.12	1.25	7.33	0.83	2.2	20.6	101.3	96	10.0	37.7	0.3	0.5
AGIVR-004	Rock		323.0	1292	239.3	48.81	82.72	5.64	17.55	1.65	3.90	0.80	5.55	0.71	5.6	64.1	312.9	354	20.7	76.8	0.8	0.8
AGIVR-005	Rock		14.19	60.7	17.69	4.81	13.66	1.69	7.36	1.05	2.63	0.37	2.44	0.37	0.5	15.5	6.1	59	22.7	1.1	<0.1	0.2
AGIVR-006	Rock		54.45	237.4	48.67	15.85	51.59	7.73	33.88	3.82	5.68	0.58	3.18	0.43	2.0	1.8	18.0	174	49.8	1.7	0.3	<0.1
AGIVR-007	Rock		17.05	56.1	9.84	2.95	8.61	1.49	8.70	1.71	5.14	0.84	5.50	0.79	6.1	2.7	55.6	61	8.9	7.2	0.1	0.1
AGIVR-009	Rock		20.25	85.4	16.93	5.55	18.14	2.97	15.50	2.63	6.52	0.86	4.67	0.61	1.8	46.5	12.1	77	11.6	7.2	<0.1	0.7
AGIVR-010	Rock		44.97	167.9	33.97	14.34	48.01	6.81	31.47	4.58	9.68	1.11	5.42	0.59	2.5	62.8	116.1	129	28.5	47.9	0.2	0.1
AGIVR-011	Rock		9.16	30.5	8.14	2.41	11.34	2.30	13.63	2.63	7.90	1.20	7.42	0.98	0.8	61.1	9.8	44	21.2	40.4	<0.1	0.2
AGIVR-012	Rock		4.83	17.6	3.05	0.60	2.37	0.34	1.68	0.32	0.90	0.14	0.81	0.12	0.1	9.7	182.0	210	15.1	17.2	0.9	1.3
AGIVR-013	Rock		11.54	40.3	6.73	1.31	4.74	0.66	3.38	0.63	1.72	0.27	1.82	0.28	0.2	3.3	2.3	67	25.6	7.6	<0.1	0.3
BWIVR-001	Rock		3.66	9.3	1.30	0.38	1.07	0.18	1.04	0.21	0.68	0.13	0.94	0.15	4.5	1.7	12.8	52	0.2	4.7	0.2	<0.1
BWIVR-002	Rock		20.06	57.3	9.46	2.33	4.66	0.60	3.01	0.60	1.95	0.35	2.39	0.33	6.4	3.2	48.7	261	0.9	2.3	0.2	<0.1
BWIVR-004	Rock		24.73	88.7	18.87	5.37	12.86	1.48	6.09	0.83	1.80	0.23	1.40	0.20	3.1	27.6	40.7	86	3.9	7.0	0.1	<0.1
BWIVR-005	Rock		62.51	258.2	77.69	27.10	74.31	8.52	34.98	4.62	8.25	0.79	3.56	0.34	12.4	50.5	880.0	271	35.4	24.5	0.2	0.1
BWIVR-006	Rock		52.04	203.1	47.38	15.66	43.45	6.13	31.66	5.36	13.93	1.77	9.35	1.09	15.2	49.0	417.7	2629	17.8	15.5	2.9	0.1
BWIVR-007	Rock		19.11	53.9	8.33	2.48	8.20	1.68	10.65	2.31	7.98	1.45	10.07	1.39	5.3	4.4	305.5	310	2.7	4.9	1.8	0.1
BWIVR-008	Rock		6.86	26.3	5.70	1.66	5.88	0.99	5.36	1.03	2.87	0.44	2.54	0.37	1.8	22.1	29.1	40	25.8	3.6	<0.1	<0.1
BWIVR-010	Rock		0.92	3.8	0.85	0.32	0.97	0.15	0.90	0.18	0.62	0.13	1.20	0.23	0.6	22.1	3.5	4	51.4	1.8	<0.1	<0.1
BWIVR-011	Rock		4.49	17.4	6.62	2.89	10.35	1.74	9.15	1.54	3.78	0.50	2.60	0.32	6.5	15.5	792.4	174	4.7	108.1	0.2	0.1
BWIVR-012	Rock		5.89	16.4	2.70	0.85	2.70	0.58	4.04	1.01	3.65	0.71	5.05	0.73	2.6	32.9	18.3	66	6.4	4.2	0.2	<0.1
BWIVR-013	Rock		9.85	27.1	3.08	0.40	2.10	0.39	2.21	0.48	1.49	0.28	1.82	0.30	0.7	2.7	15.3	61	1.0	1.9	0.1	0.4
BWIVR-014	Rock		4.08	19.8	7.34	2.90	9.99	1.70	9.42	1.72	4.58	0.68	4.62	0.74	0.4	2.5	52.4	58	7.0	6.4	<0.1	0.1
BWIVR-015	Rock		10.20	65.5	36.89	18.02	66.14	8.60	34.80	4.35	8.14	0.86	4.21	0.43	0.4	<0.1	9.2	179	50.6	0.9	0.2	<0.1
BWIVR-016	Rock		1006	4639	443.2	88.10	176.7	14.90	61.34	7.54	14.71	2.09	10.99	1.05	0.4	51.0	83.4	87	28.1	7.4	<0.1	0.9
GHIVR-001	Rock		25.25	93.8	14.65	3.78	12.11	1.90	10.69	1.94	5.01	0.70	3.97	0.47	0.2	10.6	6.3	67	15.2	1.8	<0.1	0.1
GHIVR-002	Rock		38.61	126.7	10.58	2.24	3.95	0.48	2.01	0.38	1.02	0.16	0.99	0.14	400.7	31.8	4768	3736	8.8	12.7	6.3	1.8
GHIVR-003	Rock		1.76	8.3	2.17	0.55	2.01	0.31	1.59	0.28	0.75	0.11	0.59	0.09	0.5	5.5	11.1	16	4.6	2.0	<0.1	<0.1
GHIVR-004	Rock		21.47	55.1	6.35	1.42	6.73	1.14	7.45	1.80	6.36	1.10	7.14	0.93	2.0	0.4	35.2	168	0.2	1.6	0.3	0.1

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Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

		Method	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Bi	Ag	Au	Hg	Tl	Se
		Unit	ppm	ppm	ppb	ppm	ppm	ppm
		MDL	0.1	0.1	0.5	0.01	0.1	0.5
AGIVR-001	Rock		<0.1	2.0	2.0	<0.01	0.7	<0.5
AGIVR-002	Rock		0.3	<0.1	3.6	0.02	0.2	<0.5
AGIVR-003	Rock		0.2	<0.1	27.9	0.05	0.1	<0.5
AGIVR-004	Rock		1.2	<0.1	3.9	0.05	0.1	<0.5
AGIVR-005	Rock		<0.1	<0.1	1.0	<0.01	<0.1	<0.5
AGIVR-006	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
AGIVR-007	Rock		0.4	<0.1	<0.5	<0.01	<0.1	<0.5
AGIVR-009	Rock		<0.1	<0.1	<0.5	<0.01	0.3	<0.5
AGIVR-010	Rock		0.4	<0.1	1.6	<0.01	0.1	<0.5
AGIVR-011	Rock		0.3	<0.1	0.7	<0.01	<0.1	<0.5
AGIVR-012	Rock		0.3	<0.1	<0.5	0.02	<0.1	<0.5
AGIVR-013	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BWIVR-001	Rock		<0.1	<0.1	<0.5	<0.01	0.1	<0.5
BWIVR-002	Rock		0.2	<0.1	<0.5	<0.01	0.2	<0.5
BWIVR-004	Rock		0.2	<0.1	2.4	<0.01	<0.1	<0.5
BWIVR-005	Rock		1.9	0.1	0.7	0.03	0.1	<0.5
BWIVR-006	Rock		1.4	<0.1	<0.5	0.03	0.2	<0.5
BWIVR-007	Rock		1.9	0.2	<0.5	<0.01	0.1	<0.5
BWIVR-008	Rock		0.2	<0.1	<0.5	<0.01	0.2	<0.5
BWIVR-010	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BWIVR-011	Rock		2.9	0.2	3.5	<0.01	0.2	<0.5
BWIVR-012	Rock		0.1	<0.1	<0.5	<0.01	0.2	<0.5
BWIVR-013	Rock		0.2	<0.1	<0.5	<0.01	0.2	<0.5
BWIVR-014	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BWIVR-015	Rock		<0.1	<0.1	<0.5	<0.01	0.1	<0.5
BWIVR-016	Rock		0.2	0.1	1386	<0.01	<0.1	<0.5
GHIVR-001	Rock		<0.1	<0.1	1.3	<0.01	<0.1	<0.5
GHIVR-002	Rock		44.2	10.7	12.2	0.14	1.6	0.9
GHIVR-003	Rock		0.3	<0.1	<0.5	<0.01	<0.1	<0.5
GHIVR-004	Rock		0.4	<0.1	1.2	<0.01	0.1	<0.5

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Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

Method		WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
Analyte		Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
JBIVR-087	Rock	1.87	315	<1	28.0	1.0	15.6	1.0	150.5	45.3	3	537.4	5.7	157.7	2.1	55	2.8	34.1	21.7	124.0	316.0
JBIVR-088	Rock	2.02	4364	2	16.8	2.1	18.9	8.2	249.7	100.3	3	3220	10.8	289.7	2.7	117	5.5	342.2	59.2	244.1	499.8
JBIVR-089	Rock	1.52	>50000	<1	53.7	2.2	9.5	0.9	58.6	40.3	<1	11379	1.9	529.2	0.4	24	0.8	8.7	96.9	533.2	1379
JBIVR-090	Rock	2.42	4242	3	9.0	11.0	18.4	8.3	217.4	106.4	3	1538	9.1	76.1	2.3	133	1.2	327.4	47.5	77.7	181.0
JBIVR-091	Rock	1.42	3939	3	4.0	0.8	18.2	15.4	378.9	82.1	2	1661	7.7	48.0	6.6	82	6.9	709.1	57.0	76.7	170.9
JBIVR-092	Rock	0.76	1795	<1	5.6	<0.1	0.9	0.2	9.6	0.4	<1	1782	0.3	4.5	0.1	9	<0.5	5.4	87.7	27.5	69.4
JBIVR-093	Rock	2.44	>50000	<1	5.2	2.1	7.7	2.3	103.3	48.9	<1	26538	4.2	2337	1.0	22	1.1	29.3	133.4	1600	4697
JBIVR-094	Rock	1.88	3631	1	22.2	<0.1	22.4	<0.1	230.0	0.8	3	8510	4.0	901.8	12.2	38	2.6	5.7	338.1	1024	2241
JBIVR-095	Rock	1.31	10860	1	10.9	0.3	20.5	2.3	271.5	80.9	2	4464	4.6	1585	8.6	87	4.2	98.2	177.9	1615	4012
JBIVR-096	Rock	1.28	1151	5	10.2	4.0	14.9	3.7	45.2	87.8	2	1410	1.7	56.9	2.4	114	13.6	166.0	36.8	74.3	141.5
JBIVR-097	Rock	1.32	902	2	7.1	2.6	13.7	2.5	35.8	48.1	1	1021	1.0	69.9	1.4	54	5.2	102.3	27.7	82.8	178.8
JBIVR-098	Rock	0.91	518	3	4.7	4.9	15.7	3.4	17.8	149.4	4	138.2	1.0	27.8	3.9	75	3.6	113.2	16.3	52.8	104.3
JBIVR-099	Rock	1.22	922	3	13.3	4.5	26.1	3.5	23.4	146.7	2	432.2	1.4	42.1	1.9	81	3.3	110.1	21.3	83.0	159.9
JBIVR-100	Rock	0.76	640	4	2.3	1.4	34.8	14.3	132.7	92.0	6	199.4	0.9	67.3	12.3	39	4.6	910.5	22.1	47.8	56.1
JBIVR-101	Rock	1.13	550	2	10.7	1.9	25.4	16.7	142.0	120.9	2	345.9	1.5	52.6	9.7	154	5.2	733.5	74.1	35.3	68.7
JBIVR-102	Rock	1.03	612	4	52.7	4.3	23.8	3.8	22.9	118.3	2	321.3	1.2	15.9	1.4	72	3.3	120.9	20.0	49.3	96.9
JBIVR-103	Rock	0.93	2987	6	1.5	1.9	49.5	24.4	232.1	146.7	5	154.9	1.1	77.3	27.7	103	11.3	1504	81.8	85.1	123.4
JBIVR-104	Rock	0.88	1683	11	3.7	1.9	41.0	20.1	216.4	98.4	7	154.7	1.2	93.4	16.2	79	4.0	1139	29.8	85.9	105.0
JBIVR-105	Rock	1.50	3356	1	8.4	2.7	24.5	1.7	260.1	200.1	1	724.5	2.4	100.4	6.4	40	4.5	65.4	73.0	115.5	205.3
JBIVR-106	Rock	1.52	1133	6	8.5	25.9	69.4	89.6	1189	719.4	5	207.3	32.1	73.1	60.6	38	5.8	4688	24.8	102.9	171.5
JBIVR-107	Rock	0.83	3590	2	7.2	1.1	22.4	5.6	311.5	73.2	<1	964.6	3.9	134.4	13.9	58	4.2	316.6	59.5	180.4	416.5
JBIVR-108	Rock	0.95	430	8	2.4	4.1	60.6	58.3	1041	297.4	7	321.5	34.4	61.4	71.4	<8	4.6	2883	44.6	137.9	220.1
JBIVR-109	Rock	0.80	1107	8	13.7	1.5	24.0	5.8	52.5	62.2	9	446.1	0.5	22.4	0.8	282	2.5	183.5	46.3	142.6	231.0
JBIVR-110	Rock	1.03	441	26	11.2	14.3	95.0	50.6	1512	330.3	6	626.1	11.4	848.2	61.3	26	5.5	3857	158.9	383.7	637.0
JBIVR-111	Rock	0.98	588	11	2.3	8.0	68.8	72.9	2005	364.9	5	458.5	71.7	65.0	180.5	<8	5.7	3684	41.9	106.3	181.0
JBIVR-112	Rock	1.38	1710	5	9.4	2.9	47.6	50.8	687.3	171.5	5	379.0	18.8	53.0	32.2	78	4.7	2674	56.9	61.5	117.3
JBIVR-113	Rock	1.78	393	18	2.5	16.5	63.8	68.6	924.4	362.8	6	403.3	30.4	67.2	48.6	<8	3.3	3382	17.2	194.8	304.4
JBIVR-114	Rock	2.45	89	2	0.3	2.7	33.0	1.0	1147	310.8	<1	303.7	53.8	66.6	213.7	<8	8.9	64.0	6.0	169.0	222.5
MGIVR-001	Rock	0.77	1337	4	1.4	1.4	39.2	22.7	160.6	106.3	<1	123.3	1.6	30.7	13.8	21	2.8	1231	15.2	49.3	80.4
MGIVR-002	Rock	1.64	1121	5	3.6	1.9	47.2	7.4	151.2	338.9	1	366.4	3.8	38.8	5.9	<8	9.8	603.8	11.7	56.6	77.4

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CERTIFICATE OF ANALYSIS VAN09004198.1

	Method	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
JBIVR-087	Rock	41.93	168.8	24.02	6.20	14.97	1.34	4.77	0.70	1.78	0.27	1.57	0.20	6.1	57.5	259.3	1017	7.3	54.9	0.4	1.0
JBIVR-088	Rock	56.53	227.6	47.66	15.43	43.97	4.47	17.11	2.22	4.68	0.58	3.54	0.45	1.6	23.6	22.3	63	3.6	4.8	<0.1	<0.1
JBIVR-089	Rock	175.8	718.3	101.6	26.81	80.16	7.09	25.93	3.23	6.93	0.93	6.36	0.84	2.5	137.8	210.0	120	14.7	14.6	0.1	0.5
JBIVR-090	Rock	22.18	88.8	15.00	4.70	14.74	2.03	9.75	1.61	4.05	0.51	3.10	0.42	0.8	2.5	18.2	94	3.4	2.5	<0.1	<0.1
JBIVR-091	Rock	20.12	80.7	15.26	4.43	13.90	1.95	10.25	1.92	5.49	0.78	4.73	0.66	5.5	3.0	14.2	32	1.4	2.0	<0.1	<0.1
JBIVR-092	Rock	9.00	42.5	9.87	3.51	11.02	1.84	10.95	2.52	8.43	1.39	9.90	1.49	1.6	14.7	8.9	6	4.9	10.5	<0.1	<0.1
JBIVR-093	Rock	587.8	2421	264.8	50.44	140.1	8.59	31.32	3.71	7.97	1.11	6.58	0.77	3.0	6.6	1096	290	2.2	3.7	<0.1	0.2
JBIVR-094	Rock	255.5	1013	153.1	44.96	144.4	14.69	69.98	11.10	26.26	3.25	18.00	2.13	28.9	319.0	213.5	519	24.1	34.2	0.3	2.6
JBIVR-095	Rock	481.9	1985	269.8	63.29	162.8	10.91	40.86	5.41	14.06	2.21	14.24	2.02	24.9	32.7	1844	392	4.6	68.9	0.5	0.6
JBIVR-096	Rock	16.01	60.4	10.31	3.07	9.34	1.27	6.58	1.20	3.39	0.47	2.83	0.38	2.0	25.9	21.0	112	29.8	23.7	0.2	8.8
JBIVR-097	Rock	20.98	81.8	12.95	3.12	9.51	1.07	4.97	0.88	2.42	0.34	2.23	0.29	1.8	6.2	56.7	58	15.8	11.8	<0.1	0.5
JBIVR-098	Rock	12.05	45.2	7.42	1.13	3.65	0.47	2.61	0.52	1.73	0.28	1.94	0.29	2.6	175.8	7246	726	13.8	16.5	10.3	3.4
JBIVR-099	Rock	19.04	70.6	10.04	1.81	6.76	0.81	4.26	0.75	2.20	0.33	2.16	0.31	1.2	23.0	48.8	53	22.0	22.2	<0.1	0.9
JBIVR-100	Rock	4.32	15.8	5.19	1.67	4.87	0.73	3.76	0.70	2.20	0.33	2.28	0.33	1.8	37.5	6688	1812	0.9	268.2	6.0	5.0
JBIVR-101	Rock	8.19	31.8	6.70	1.97	8.07	1.52	9.94	2.30	8.24	1.45	10.28	1.55	1.6	9.7	23.6	79	17.9	693.2	0.3	1.9
JBIVR-102	Rock	11.05	41.4	6.37	1.36	4.60	0.67	3.48	0.69	2.01	0.31	2.13	0.29	1.0	147.7	35.1	117	77.2	1867	0.4	1.2
JBIVR-103	Rock	12.56	70.3	37.36	10.50	33.08	3.85	17.19	2.75	7.33	1.03	6.44	0.90	1.5	14.3	54.8	377	1.5	54.6	1.1	0.2
JBIVR-104	Rock	10.65	55.3	15.94	3.94	10.51	1.28	5.95	0.99	2.79	0.45	3.13	0.46	0.9	41.2	7615	1968	1.0	55.5	7.7	1.6
JBIVR-105	Rock	23.37	91.2	19.63	6.33	19.78	2.71	13.54	2.30	5.88	0.75	4.26	0.52	1.4	9.5	9.4	43	17.6	5.1	<0.1	<0.1
JBIVR-106	Rock	14.59	42.6	4.86	1.31	4.16	0.58	3.69	0.86	3.28	0.60	4.62	0.74	1.1	3.4	64.6	451	1.6	8.4	0.3	<0.1
JBIVR-107	Rock	49.08	185.5	26.84	7.38	21.55	2.59	12.44	2.01	4.94	0.64	3.61	0.47	105.3	14.0	191.7	231	4.8	6.8	0.1	<0.1
JBIVR-108	Rock	17.73	51.9	6.87	1.96	6.54	1.15	7.86	1.67	5.36	0.86	6.07	0.91	0.2	0.9	14.5	59	0.8	0.6	0.2	0.2
JBIVR-109	Rock	21.88	74.0	10.74	3.01	9.49	1.31	7.28	1.46	4.62	0.73	5.17	0.77	5.1	84.7	151.7	297	15.0	5.7	0.2	0.1
JBIVR-110	Rock	56.35	177.7	25.22	7.14	24.80	3.61	21.17	4.12	12.09	1.75	10.61	1.26	0.8	1.1	58.6	452	5.2	2.4	1.7	<0.1
JBIVR-111	Rock	15.35	45.2	6.09	1.82	6.20	1.02	6.33	1.36	4.49	0.77	5.22	0.78	0.4	0.8	15.7	167	0.4	<0.5	0.5	<0.1
JBIVR-112	Rock	13.59	54.7	11.40	3.47	11.03	1.63	9.50	1.88	5.92	0.91	6.39	0.95	1.2	7.9	19.8	86	17.8	6.9	0.1	<0.1
JBIVR-113	Rock	23.76	64.2	6.00	1.54	5.25	0.56	2.59	0.51	1.66	0.30	2.28	0.41	0.5	1.1	14.1	56	0.9	<0.5	0.2	<0.1
JBIVR-114	Rock	15.54	37.7	2.92	0.62	2.91	0.23	1.02	0.18	0.41	0.06	0.34	0.04	0.9	1.2	5.3	13	0.2	1.1	<0.1	<0.1
MGIVR-001	Rock	8.13	29.0	3.59	0.87	2.71	0.39	2.24	0.46	1.56	0.27	1.94	0.30	0.6	3.5	7.5	8	0.8	<0.5	<0.1	<0.1
MGIVR-002	Rock	6.61	19.3	3.95	1.07	2.86	0.30	1.55	0.30	0.96	0.17	1.12	0.17	54.0	37.7	34.1	104	1.1	4.1	0.3	<0.1

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Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

Method		1DX	1DX	1DX	1DX	1DX	1DX
Analyte		Bi	Ag	Au	Hg	Tl	Se
Unit		ppm	ppm	ppb	ppm	ppm	ppm
MDL		0.1	0.1	0.5	0.01	0.1	0.5
JBIVR-087	Rock	1.2	<0.1	<0.5	0.02	0.2	<0.5
JBIVR-088	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
JBIVR-089	Rock	0.8	<0.1	<0.5	0.02	0.1	<0.5
JBIVR-090	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
JBIVR-091	Rock	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
JBIVR-092	Rock	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
JBIVR-093	Rock	1.6	<0.1	12.6	0.06	<0.1	<0.5
JBIVR-094	Rock	0.6	0.2	1.9	0.02	<0.1	<0.5
JBIVR-095	Rock	5.1	0.4	0.8	0.05	0.7	<0.5
JBIVR-096	Rock	0.2	<0.1	0.6	0.02	0.2	<0.5
JBIVR-097	Rock	0.2	<0.1	0.8	<0.01	<0.1	<0.5
JBIVR-098	Rock	0.6	0.7	5.0	0.36	0.2	<0.5
JBIVR-099	Rock	<0.1	<0.1	<0.5	<0.01	0.1	<0.5
JBIVR-100	Rock	5.7	3.6	17.5	0.13	0.1	<0.5
JBIVR-101	Rock	0.2	<0.1	8.7	0.02	0.2	<0.5
JBIVR-102	Rock	3.0	<0.1	7.6	<0.01	0.1	0.6
JBIVR-103	Rock	0.5	<0.1	1.2	0.13	<0.1	<0.5
JBIVR-104	Rock	1.0	2.6	3.6	0.11	0.2	<0.5
JBIVR-105	Rock	<0.1	<0.1	1.0	<0.01	0.2	<0.5
JBIVR-106	Rock	0.8	<0.1	0.8	<0.01	0.4	<0.5
JBIVR-107	Rock	5.0	0.2	1.7	<0.01	0.3	0.6
JBIVR-108	Rock	0.2	<0.1	<0.5	<0.01	<0.1	<0.5
JBIVR-109	Rock	0.8	<0.1	0.6	<0.01	0.2	<0.5
JBIVR-110	Rock	0.3	<0.1	<0.5	<0.01	0.1	<0.5
JBIVR-111	Rock	<0.1	<0.1	*	<0.01	<0.1	<0.5
JBIVR-112	Rock	0.1	<0.1	<0.5	<0.01	0.2	<0.5
JBIVR-113	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
JBIVR-114	Rock	<0.1	<0.1	<0.5	<0.01	0.3	<0.5
MGIVR-001	Rock	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-002	Rock	0.4	<0.1	1.5	<0.01	<0.1	<0.5

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Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

		Method	WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
		Analyte	Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
		Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
MGIVR-004	Rock		2.22	1640	6	6.5	0.6	12.6	6.7	25.5	49.8	1	621.2	0.6	36.7	1.8	42	1.5	252.2	57.7	42.0	112.5
MGIVR-005	Rock		1.17	563	13	4.8	0.8	88.6	127.6	1683	92.6	7	280.4	34.5	166.7	78.2	33	12.1	8170	56.5	81.6	153.9
MGIVR-006	Rock		2.72	781	3	7.3	18.9	67.8	64.0	756.8	815.3	2	227.7	22.9	38.2	27.6	20	4.0	3486	19.1	62.3	105.6
MGIVR-007	Rock		1.56	1394	5	3.7	0.7	70.0	89.0	1151	146.6	6	364.2	32.1	62.1	64.7	16	10.0	5000	36.1	192.9	320.6
MGIVR-009	Rock		1.13	702	4	91.0	3.1	22.4	11.6	176.2	84.5	4	477.6	17.8	75.1	5.1	551	6.4	417.7	46.7	233.0	604.7
MGIVR-010	Rock		4.05	5372	2	38.1	13.9	21.8	4.2	141.9	218.8	2	5283	4.6	607.7	2.7	223	2.6	197.4	71.7	446.9	1181
LJIVR-001	Rock		1.96	>50000	<1	26.4	0.6	10.7	0.3	396.1	17.2	10	5245	1.9	136.9	1.2	237	5.0	5.1	26.3	1325	4830
LJIVR-002	Rock		0.84	1856	6	9.6	10.0	20.3	4.0	31.1	127.2	2	774.6	0.9	20.6	1.4	73	6.8	176.0	65.9	624.4	1372
LJIVR-003	Rock		0.66	5180	7	63.7	9.6	24.4	14.2	76.9	162.0	2	659.7	0.9	42.3	6.1	51	3.6	769.8	56.7	860.6	1956
LJIVR-004	Rock		0.82	2623	4	65.6	2.2	20.2	1.3	55.7	73.0	2	214.0	0.6	62.8	5.3	51	2.7	76.0	23.8	408.1	970.0
LJIVR-005	Rock		0.95	2647	7	6.5	6.9	35.0	18.7	136.8	144.2	3	287.4	1.2	41.5	11.6	61	3.5	1126	26.6	124.3	292.7
LJIVR-006	Rock		1.03	984	4	7.4	6.7	12.0	3.9	31.7	88.7	1	528.5	0.6	28.8	1.7	44	4.3	213.5	68.1	270.1	762.1
MGIVR-012	Rock		1.05	20767	1	38.0	1.2	17.7	2.5	686.2	130.7	20	816.0	14.4	422.6	2.6	187	12.5	54.4	74.8	234.5	531.9
MGIVR-013	Rock		1.87	1855	5	29.4	3.7	21.7	9.5	133.6	166.5	3	1085	5.6	35.1	0.8	417	0.9	335.6	86.0	95.4	186.4
MGIVR-014	Rock		1.59	7114	2	4.8	0.4	13.4	6.7	194.3	44.5	2	1852	12.7	127.7	2.1	84	2.4	445.9	69.9	146.5	319.1
MGIVR-015	Rock		2.22	9910	3	5.8	2.0	20.3	6.4	668.5	179.3	3	374.0	28.0	112.9	29.4	65	16.6	404.4	23.1	102.1	191.5
MGIVR-016	Rock		2.10	2163	3	42.2	6.6	20.1	3.5	455.6	123.3	9	471.2	6.3	78.3	2.2	228	2.7	70.3	52.2	42.4	89.6
MGIVR-017	Rock		1.67	43911	1	7.2	0.4	3.2	0.2	73.0	9.2	<1	2869	0.8	1332	3.0	11	3.1	9.1	263.5	924.9	1986
MGIVR-018	Rock		1.81	3162	1	51.9	0.9	17.7	2.7	701.0	138.8	8	540.7	10.1	98.8	10.5	160	2.1	80.9	25.6	41.9	79.1
MGIVR-019	Rock		2.23	4475	4	15.4	0.6	11.7	4.5	171.2	30.7	1	1126	15.2	91.8	2.2	182	1.9	191.2	31.7	336.1	740.2
MGIVR-020	Rock		1.76	5814	1	34.1	1.2	15.1	7.1	697.9	82.1	8	620.1	15.1	79.7	2.4	353	15.0	307.0	64.1	159.8	331.7
MGIVR-021	Rock		2.04	>50000	2	31.7	1.1	18.6	2.6	271.4	88.1	4	1556	5.4	642.9	2.7	148	5.1	80.5	113.1	333.4	812.2
MGIVR-022	Rock		1.70	779	5	10.1	0.7	23.1	15.9	521.8	95.1	4	330.2	37.0	46.7	15.2	347	4.1	393.4	35.4	152.3	266.7
MGIVR-023	Rock		1.91	4120	2	17.0	1.9	14.3	5.0	440.6	87.7	8	786.2	12.8	148.8	1.7	289	4.3	108.4	22.2	172.0	358.1
MGIVR-024	Rock		3.21	809	<1	72.8	0.1	21.7	9.3	30.2	6.9	3	440.4	2.8	5.0	0.7	660	0.5	295.7	39.0	75.9	172.6
MGIVR-025	Rock		1.64	656	2	24.6	1.1	20.9	0.8	50.6	35.1	<1	3047	3.2	6.9	1.3	9	4.5	65.1	6.9	47.2	67.5
MGIVR-031	Rock		1.27	320	5	6.5	10.5	35.6	11.6	973.0	360.8	4	400.8	40.9	187.3	114.1	8	14.8	970.6	27.5	576.6	819.4
MGIVR-032	Rock		1.22	344	5	3.1	3.4	39.4	2.0	214.3	40.1	4	188.8	5.6	165.3	4.2	19	2.8	86.4	8.3	11.9	18.5
MGIVR-033	Rock		1.85	11214	3	3.5	2.7	25.1	1.1	227.6	200.2	<1	557.7	7.0	14.9	19.4	9	2.7	52.8	18.4	16.0	26.8
MGIVR-034	Rock		1.40	909	2	6.7	3.1	25.5	2.5	185.8	275.9	3	397.0	4.1	26.0	5.3	13	4.2	144.8	15.9	117.3	151.7

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CERTIFICATE OF ANALYSIS VAN09004198.1

		Method	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
MGIVR-004	Rock		12.61	49.5	9.52	2.77	10.14	1.63	9.42	1.90	5.38	0.73	4.51	0.64	2.7	4.9	17.3	31	6.8	5.4	<0.1	<0.1
MGIVR-005	Rock		15.50	56.8	9.17	2.60	8.06	1.33	8.82	2.00	7.45	1.35	10.12	1.59	4.3	1.6	131.1	437	2.0	1.3	0.5	0.2
MGIVR-006	Rock		8.39	27.2	4.24	1.24	3.88	0.57	3.27	0.66	2.18	0.41	2.72	0.43	1.3	6.8	7.3	245	7.9	5.0	0.3	0.1
MGIVR-007	Rock		27.49	93.6	12.42	3.17	9.12	1.09	6.20	1.24	4.50	0.79	5.67	0.87	3.4	2.4	66.3	150	1.7	2.9	0.3	0.2
MGIVR-009	Rock		72.21	302.0	40.32	10.14	26.29	3.04	13.21	1.82	4.02	0.49	2.91	0.36	7.9	102.8	5.1	49	11.2	2.3	0.2	<0.1
MGIVR-010	Rock		136.0	504.5	64.38	16.59	38.55	3.94	15.36	2.08	5.44	0.85	5.72	0.78	4.4	258.6	902.8	381	15.4	1.6	0.4	<0.1
LJIVR-001	Rock		613.9	2257	180.8	31.07	53.13	3.32	9.25	0.33	0.70	0.29	2.33	0.28	1.5	2.3	63.3	199	45.4	3.9	<0.1	0.1
LJIVR-002	Rock		150.1	495.5	44.37	9.56	21.56	2.64	12.65	2.12	5.86	0.95	6.52	0.88	6.3	3.9	30.4	44	20.2	40.9	<0.1	1.9
LJIVR-003	Rock		211.4	682.0	57.86	12.60	27.97	3.11	13.48	1.92	4.63	0.63	3.75	0.45	5.7	132.0	91.8	120	25.5	56.6	0.1	1.5
LJIVR-004	Rock		103.0	344.0	30.51	6.36	13.98	1.41	5.68	0.73	1.76	0.26	1.68	0.22	7.8	236.1	235.0	403	29.1	150.1	0.7	1.8
LJIVR-005	Rock		34.50	125.4	13.66	3.01	7.69	0.99	4.66	0.80	2.28	0.35	2.42	0.35	0.7	5.8	13.9	46	10.9	15.3	<0.1	1.4
LJIVR-006	Rock		93.55	372.3	44.28	9.50	25.14	2.79	13.04	2.11	5.92	0.94	6.43	0.88	6.9	19.4	28.9	142	17.2	1498	0.3	8.2
MGIVR-012	Rock		60.83	247.7	53.91	14.51	32.64	3.49	15.52	2.22	5.43	0.63	2.96	0.29	3.3	16.9	21.1	95	10.7	26.3	<0.1	0.2
MGIVR-013	Rock		20.97	79.5	15.84	5.62	17.86	2.87	15.58	2.84	7.44	0.93	5.14	0.61	2.4	4.5	36.9	125	0.6	8.6	0.1	<0.1
MGIVR-014	Rock		34.83	134.6	30.33	10.15	28.56	3.63	16.45	2.39	5.17	0.55	2.94	0.36	2.0	9.9	11.9	21	3.7	0.9	<0.1	<0.1
MGIVR-015	Rock		20.01	70.5	13.47	3.95	8.78	0.99	4.11	0.69	1.85	0.25	1.52	0.20	9.1	12.3	44.4	152	3.6	7.7	0.3	<0.1
MGIVR-016	Rock		11.05	47.0	14.22	4.73	14.06	2.08	10.06	1.66	3.74	0.39	1.79	0.18	3.1	305.0	36.5	127	70.3	16.2	0.2	0.1
MGIVR-017	Rock		196.1	664.1	122.6	41.28	123.6	15.78	70.72	9.68	17.52	1.53	6.58	0.61	0.3	12.8	348.5	60	7.2	11.0	0.2	0.2
MGIVR-018	Rock		9.19	38.0	15.42	5.91	16.67	1.90	7.52	1.00	2.06	0.21	1.08	0.12	8.9	258.7	41.9	78	33.7	18.9	<0.1	<0.1
MGIVR-019	Rock		74.44	266.8	37.93	8.60	18.75	1.80	7.51	1.02	2.33	0.35	2.11	0.26	1.5	31.0	6.3	68	4.3	1.6	0.1	<0.1
MGIVR-020	Rock		34.52	130.0	30.83	10.33	28.97	3.52	14.84	2.15	5.03	0.60	3.51	0.45	0.8	80.3	61.6	147	9.3	11.0	0.2	<0.1
MGIVR-021	Rock		88.23	344.7	72.43	18.32	40.98	4.25	19.48	3.08	8.12	1.12	6.72	0.81	2.7	38.0	66.2	57	28.8	7.3	<0.1	0.2
MGIVR-022	Rock		23.67	69.6	9.97	2.61	6.72	0.97	5.26	0.98	2.52	0.32	1.72	0.24	0.5	13.3	5.8	24	2.5	9.3	<0.1	0.2
MGIVR-023	Rock		39.52	148.7	24.41	5.49	9.90	1.07	4.35	0.55	1.28	0.17	1.06	0.14	1.9	22.6	21.6	74	12.7	1.0	<0.1	<0.1
MGIVR-024	Rock		21.51	91.1	15.36	4.42	13.18	1.79	8.62	1.43	3.42	0.42	2.55	0.36	0.6	135.4	0.7	17	9.6	1.8	<0.1	<0.1
MGIVR-025	Rock		5.71	17.3	2.16	2.20	1.56	0.24	1.23	0.25	0.65	0.09	0.55	0.08	6.6	164.5	6.6	13	4.9	0.6	0.3	<0.1
MGIVR-031	Rock		58.86	139.8	10.00	2.00	4.97	0.79	3.97	0.75	2.22	0.37	2.50	0.35	5.9	39.5	16.7	42	2.0	2.3	<0.1	0.1
MGIVR-032	Rock		1.66	5.2	0.89	0.26	0.63	0.13	0.94	0.22	0.65	0.09	0.58	0.08	6.7	3.2	5.7	76	5.8	7.9	0.1	<0.1
MGIVR-033	Rock		2.83	10.7	3.30	1.44	4.30	0.67	3.19	0.55	1.29	0.18	0.96	0.13	13.0	3.0	11.6	55	4.9	0.9	<0.1	<0.1
MGIVR-034	Rock		11.73	34.1	5.25	1.34	3.29	0.50	2.50	0.44	1.28	0.19	1.39	0.20	2.3	4.7	7.2	81	5.2	2.9	0.1	<0.1

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200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 04, 2009

CERTIFICATE OF ANALYSIS VAN09004198.1

		Method	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Bi	Ag	Au	Hg	Tl	Se
		Unit	ppm	ppm	ppb	ppm	ppm	ppm
		MDL	0.1	0.1	0.5	0.01	0.1	0.5
MGIVR-004	Rock		0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-005	Rock		1.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-006	Rock		0.1	<0.1	<0.5	<0.01	0.4	<0.5
MGIVR-007	Rock		1.0	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-009	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-010	Rock		2.0	0.4	<0.5	0.01	0.6	0.7
LJIVR-001	Rock		0.2	<0.1	28.1	<0.01	<0.1	<0.5
LJIVR-002	Rock		0.3	<0.1	1.8	<0.01	0.2	<0.5
LJIVR-003	Rock		4.4	0.8	32.2	<0.01	0.5	<0.5
LJIVR-004	Rock		7.4	1.6	63.3	0.01	0.2	1.6
LJIVR-005	Rock		0.2	<0.1	4.6	<0.01	0.2	<0.5
LJIVR-006	Rock		0.4	<0.1	5.6	<0.01	<0.1	<0.5
MGIVR-012	Rock		<0.1	<0.1	4.8	<0.01	0.2	<0.5
MGIVR-013	Rock		<0.1	<0.1	0.6	<0.01	0.3	<0.5
MGIVR-014	Rock		<0.1	<0.1	1.1	<0.01	<0.1	0.6
MGIVR-015	Rock		0.2	<0.1	3.8	<0.01	<0.1	<0.5
MGIVR-016	Rock		0.2	<0.1	2.5	<0.01	0.2	0.7
MGIVR-017	Rock		0.6	<0.1	1.7	0.02	<0.1	<0.5
MGIVR-018	Rock		0.2	<0.1	1.8	<0.01	0.1	0.7
MGIVR-019	Rock		<0.1	<0.1	1.0	<0.01	<0.1	<0.5
MGIVR-020	Rock		0.2	<0.1	0.6	<0.01	<0.1	0.6
MGIVR-021	Rock		0.3	<0.1	3.5	0.03	<0.1	<0.5
MGIVR-022	Rock		<0.1	<0.1	0.8	<0.01	0.1	0.5
MGIVR-023	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-024	Rock		<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-025	Rock		<0.1	0.3	1.9	<0.01	<0.1	3.3
MGIVR-031	Rock		0.1	<0.1	*	<0.01	0.3	<0.5
MGIVR-032	Rock		<0.1	<0.1	0.5	<0.01	0.2	<0.5
MGIVR-033	Rock		<0.1	<0.1	3.2	<0.01	0.2	<0.5
MGIVR-034	Rock		<0.1	<0.1	1.3	<0.01	0.2	<0.5

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Project: ICE RIVER
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CERTIFICATE OF ANALYSIS VAN09004198.1

Method		WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
Analyte		Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
MDL		0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
MGIVR-035	Rock	2.43	>50000	1	33.2	10.0	12.2	2.5	135.8	178.6	6	18102	1.4	1208	0.8	90	0.6	64.3	230.1	1587	4073
MGIVR-036	Rock	0.56	29271	<1	18.5	10.2	12.4	0.1	416.8	173.8	1	4575	3.3	304.2	2.1	52	1.1	3.4	166.7	265.2	595.6
MGIVR-037	Rock	1.15	6681	<1	20.6	0.4	14.7	2.3	195.9	18.1	2	3008	2.1	286.4	1.5	27	5.6	129.8	175.1	254.6	504.8
MGIVR-038	Rock	0.74	2862	3	2.8	3.0	18.3	5.3	122.6	95.7	2	734.6	2.8	17.3	1.7	43	1.1	258.2	14.7	76.2	131.7
MGIVR-039	Rock	1.53	397	14	1.7	1.8	41.8	23.4	242.2	233.5	12	2111	10.5	150.6	59.8	<8	4.2	1284	38.9	255.7	418.5
MGIVR-040	Rock	0.70	37200	2	9.2	0.8	24.6	2.0	321.1	54.1	2	3951	13.7	293.9	2.7	40	3.2	57.8	46.2	170.5	411.7
NTIVR-010	Rock	1.30	310	12	7.8	4.4	31.9	7.0	194.0	304.8	4	243.1	5.5	64.5	14.7	<8	10.9	495.4	12.7	135.9	181.4
NTIVR-011	Rock	3.12	357	3	20.0	4.5	30.1	3.9	365.5	313.7	4	257.2	15.2	62.7	50.8	<8	9.3	287.0	9.1	165.0	221.0
NTIVR-012	Rock	1.96	216	3	8.4	5.1	30.8	2.4	352.6	326.0	2	249.8	15.7	35.2	52.5	<8	6.7	170.6	5.9	90.9	122.0
NTIVR-013	Rock	2.43	6032	2	6.0	4.0	25.5	2.7	120.4	196.5	2	346.5	4.3	15.5	8.8	<8	4.0	184.9	8.7	46.7	71.3
NTIVR-014	Rock	2.31	635	3	2.4	6.7	30.9	0.8	121.6	304.9	1	261.8	5.4	10.0	17.4	<8	2.6	56.7	2.7	25.9	33.4
NTIVR-015	Rock	2.71	314	3	3.7	4.9	30.1	2.0	94.1	314.1	1	312.2	3.5	13.7	9.9	<8	3.6	163.8	5.6	20.7	25.2
NTIVR-016	Rock	0.92	579	4	3.3	5.5	29.6	2.2	79.1	323.9	2	394.0	2.2	50.2	6.8	<8	4.0	152.7	9.9	182.8	225.6
NTIVR-017	Rock	1.59	1378	3	2.0	4.9	28.5	0.6	217.4	313.4	1	407.7	8.6	46.3	28.0	<8	3.4	32.4	6.8	35.2	54.5
NTIVR-018	Rock	0.73	2353	2	2.7	4.5	29.3	0.4	337.9	325.2	2	337.3	14.5	92.9	45.5	<8	4.5	18.6	5.1	47.2	73.0
NTIVR-019	Rock	1.62	1648	2	1.4	5.4	27.8	1.4	528.1	293.1	<1	415.1	24.0	79.8	78.6	<8	5.6	90.4	5.1	82.8	110.0
NTIVR-020	Rock	0.93	1074	3	2.1	4.3	28.8	0.9	651.9	338.1	1	402.2	29.7	72.6	99.8	<8	6.3	67.1	7.3	198.2	263.1
NTIVR-021	Rock	2.93	880	2	1.2	4.2	27.3	2.3	293.3	303.2	1	561.9	12.9	77.5	40.6	<8	5.9	172.0	13.9	246.5	315.0
NTIVR-022	Rock	3.93	1356	3	21.5	4.0	24.3	1.5	225.2	221.3	4	674.8	6.2	216.6	10.8	24	3.9	89.2	335.9	162.1	329.8
NTIVR-023	Rock	1.59	370	10	2.4	6.3	33.7	14.7	329.1	362.1	4	247.3	9.1	86.9	27.1	<8	6.8	1148	33.4	236.5	321.1
NTIVR-024	Rock	1.98	262	6	5.3	4.8	33.5	10.8	295.4	358.8	3	219.7	7.7	67.3	14.5	<8	4.4	870.3	23.7	166.8	232.8
NTIVR-025	Rock	1.17	720	2	1.2	5.7	26.4	5.5	115.5	285.9	1	431.3	2.1	125.2	11.4	<8	2.0	409.6	16.7	190.7	256.2
NTIVR-026	Rock	1.08	922	2	1.2	6.5	25.7	2.4	53.1	295.4	1	596.2	1.7	111.1	7.3	<8	2.2	158.3	9.3	190.5	253.8
NTIVR-027	Rock	0.81	355	1	0.9	5.1	28.5	1.8	119.1	360.3	1	194.8	3.4	49.8	22.0	<8	4.5	118.6	5.8	80.2	101.8
NTIVR-028	Rock	0.82	430	3	1.7	4.2	26.5	1.5	35.5	316.4	<1	293.7	0.6	27.3	3.0	<8	5.0	96.7	6.0	66.2	85.5
NTIVR-029	Rock	0.85	607	2	0.5	3.4	26.5	1.1	38.5	308.5	<1	267.0	0.7	14.2	4.2	<8	4.6	83.0	4.1	61.1	80.6

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Project: ICE RIVER
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CERTIFICATE OF ANALYSIS VAN09004198.1

	Method	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
MGIVR-035	Rock	463.3	1698	270.5	70.28	158.5	13.99	51.90	6.49	13.64	1.70	9.82	1.07	56.6	3.0	388.5	209	12.6	13.4	0.2	0.3
MGIVR-036	Rock	65.97	261.0	59.23	18.82	49.08	6.07	28.88	4.73	11.84	1.65	10.54	1.45	5.3	11.9	548.3	282	28.0	3.4	0.3	0.2
MGIVR-037	Rock	50.29	181.5	42.09	12.82	33.75	4.78	26.44	4.87	14.16	2.34	16.31	2.31	3.7	99.0	64.2	104	32.0	76.8	<0.1	9.3
MGIVR-038	Rock	12.10	38.7	5.29	1.40	3.14	0.49	2.50	0.46	1.42	0.24	1.63	0.26	2.2	9.1	37.2	47	3.1	1.0	<0.1	<0.1
MGIVR-039	Rock	36.50	105.4	13.51	2.58	9.39	1.41	7.19	1.29	3.42	0.52	3.25	0.45	1.1	6.4	4.2	3	1.0	4.9	<0.1	1.1
MGIVR-040	Rock	47.79	180.7	34.90	9.58	18.66	1.99	8.19	1.23	3.05	0.41	2.18	0.26	3.2	5.4	55.6	99	3.5	5.3	0.2	<0.1
NTIVR-010	Rock	12.35	26.9	2.59	0.57	1.75	0.30	1.59	0.32	1.05	0.17	1.19	0.18	40.9	8.8	28.7	122	3.1	4.0	0.4	0.2
NTIVR-011	Rock	15.39	35.3	3.19	0.71	1.73	0.28	1.44	0.28	0.75	0.13	0.89	0.13	1.9	5.1	13.4	58	5.3	1.7	0.2	<0.1
NTIVR-012	Rock	8.44	19.8	1.76	0.44	1.06	0.18	0.86	0.16	0.46	0.08	0.52	0.07	2.4	4.6	19.1	56	2.5	1.4	0.2	<0.1
NTIVR-013	Rock	5.93	17.0	2.46	0.77	1.87	0.28	1.55	0.26	0.72	0.11	0.70	0.10	1.6	3.8	18.3	40	3.5	0.9	<0.1	<0.1
NTIVR-014	Rock	2.35	6.4	0.62	0.20	0.63	0.07	0.33	0.06	0.17	0.03	0.20	0.03	1.1	2.3	8.0	26	0.9	1.1	<0.1	<0.1
NTIVR-015	Rock	1.78	4.6	0.75	0.28	0.81	0.12	0.68	0.14	0.46	0.07	0.46	0.07	1.6	2.1	10.3	25	1.6	1.9	0.1	<0.1
NTIVR-016	Rock	15.70	39.7	4.73	1.19	3.97	0.37	1.59	0.27	0.75	0.11	0.75	0.11	1.9	2.5	14.3	44	1.4	1.3	0.2	<0.1
NTIVR-017	Rock	5.02	18.0	4.51	1.28	2.92	0.30	1.23	0.19	0.49	0.06	0.42	0.06	1.5	6.0	52.3	55	16.3	11.8	<0.1	0.4
NTIVR-018	Rock	6.45	22.1	4.73	1.19	2.69	0.24	1.02	0.15	0.39	0.06	0.40	0.06	0.6	3.0	9.5	29	2.4	1.1	<0.1	<0.1
NTIVR-019	Rock	8.31	23.0	3.76	0.98	2.65	0.24	1.01	0.17	0.44	0.07	0.47	0.07	1.1	2.4	12.7	33	2.2	0.8	<0.1	<0.1
NTIVR-020	Rock	18.92	50.9	6.40	1.47	4.72	0.39	1.53	0.23	0.60	0.09	0.50	0.07	1.2	2.1	11.5	45	3.0	1.5	<0.1	<0.1
NTIVR-021	Rock	22.19	54.2	5.30	1.17	4.90	0.50	2.23	0.39	1.23	0.19	1.15	0.18	2.9	3.1	17.9	59	0.9	1.4	0.1	<0.1
NTIVR-022	Rock	43.32	223.9	93.63	34.34	121.9	16.28	76.00	10.54	20.42	2.13	9.32	0.96	5.4	69.9	6.7	33	14.7	6.7	<0.1	<0.1
NTIVR-023	Rock	23.47	58.3	6.03	1.28	6.00	0.78	4.20	0.92	2.94	0.52	3.25	0.47	4.0	7.1	24.9	99	1.1	3.8	0.7	0.1
NTIVR-024	Rock	17.05	41.7	4.29	0.93	4.04	0.54	3.03	0.63	2.10	0.39	2.48	0.36	1.9	3.9	16.7	77	0.7	2.4	0.4	<0.1
NTIVR-025	Rock	19.07	50.4	4.65	1.11	4.15	0.47	2.41	0.50	1.56	0.29	1.84	0.28	2.8	12.5	49.9	124	0.4	0.9	0.4	<0.1
NTIVR-026	Rock	18.49	47.0	4.06	0.99	3.50	0.35	1.57	0.29	0.84	0.13	0.80	0.12	2.4	2.8	35.7	102	0.5	1.0	0.4	<0.1
NTIVR-027	Rock	7.12	18.3	1.83	0.50	1.68	0.19	1.03	0.18	0.58	0.09	0.56	0.08	2.4	6.1	19.7	81	1.3	1.1	0.4	<0.1
NTIVR-028	Rock	6.34	17.4	1.94	0.53	1.70	0.21	1.01	0.19	0.57	0.09	0.53	0.08	2.7	6.4	17.4	50	3.5	1.6	0.4	<0.1
NTIVR-029	Rock	5.54	14.1	1.61	0.45	1.50	0.16	0.77	0.13	0.37	0.06	0.41	0.05	3.2	5.3	17.0	87	0.9	1.1	0.7	<0.1

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Method		1DX	1DX	1DX	1DX	1DX	1DX
Analyte		Bi	Ag	Au	Hg	Tl	Se
Unit		ppm	ppm	ppb	ppm	ppm	ppm
MDL		0.1	0.1	0.5	0.01	0.1	0.5
MGIVR-035	Rock	1.4	0.3	5.8	0.02	0.7	<0.5
MGIVR-036	Rock	0.8	0.2	<0.5	<0.01	0.5	<0.5
MGIVR-037	Rock	0.5	0.1	7.2	<0.01	<0.1	1.1
MGIVR-038	Rock	0.1	<0.1	<0.5	<0.01	<0.1	<0.5
MGIVR-039	Rock	0.1	<0.1	2.6	<0.01	<0.1	<0.5
MGIVR-040	Rock	0.1	<0.1	<0.5	<0.01	0.2	0.5
NTIVR-010	Rock	0.1	<0.1	<0.5	<0.01	0.2	<0.5
NTIVR-011	Rock	<0.1	<0.1	0.6	<0.01	0.4	<0.5
NTIVR-012	Rock	0.2	<0.1	<0.5	<0.01	0.4	<0.5
NTIVR-013	Rock	0.1	<0.1	1.0	<0.01	0.2	<0.5
NTIVR-014	Rock	<0.1	<0.1	<0.5	<0.01	0.4	<0.5
NTIVR-015	Rock	<0.1	<0.1	<0.5	<0.01	0.3	<0.5
NTIVR-016	Rock	<0.1	<0.1	<0.5	<0.01	0.4	<0.5
NTIVR-017	Rock	0.2	<0.1	<0.5	<0.01	0.1	<0.5
NTIVR-018	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
NTIVR-019	Rock	<0.1	<0.1	<0.5	<0.01	0.3	<0.5
NTIVR-020	Rock	<0.1	<0.1	<0.5	<0.01	0.4	<0.5
NTIVR-021	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
NTIVR-022	Rock	<0.1	<0.1	0.8	<0.01	0.2	3.2
NTIVR-023	Rock	0.2	<0.1	<0.5	<0.01	0.3	<0.5
NTIVR-024	Rock	<0.1	<0.1	<0.5	<0.01	0.4	<0.5
NTIVR-025	Rock	<0.1	<0.1	<0.5	<0.01	0.3	<0.5
NTIVR-026	Rock	<0.1	<0.1	1.3	<0.01	0.4	<0.5
NTIVR-027	Rock	<0.1	<0.1	1.3	<0.01	0.3	<0.5
NTIVR-028	Rock	<0.1	<0.1	1.4	0.01	0.2	<0.5
NTIVR-029	Rock	<0.1	<0.1	1.4	<0.01	0.2	<0.5

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200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 04, 2009

QUALITY CONTROL REPORT VAN09004198.1

	Method	WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
	Analyte	Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
Pulp Duplicates																					
BWIVR-008	Rock	0.86	1685	4	14.6	4.9	21.9	2.9	31.1	108.3	1	777.4	1.4	372.1	2.8	44	2.7	138.9	31.4	28.4	55.4
REP BWIVR-008	QC		1720	4	13.8	4.8	20.3	3.1	29.2	108.9	2	776.6	1.3	354.3	2.6	44	3.3	138.1	31.6	26.1	51.3
JBIVR-091	Rock	1.42	3939	3	4.0	0.8	18.2	15.4	378.9	82.1	2	1661	7.7	48.0	6.6	82	6.9	709.1	57.0	76.7	170.9
REP JBIVR-091	QC																				
JBIVR-100	Rock	0.76	640	4	2.3	1.4	34.8	14.3	132.7	92.0	6	199.4	0.9	67.3	12.3	39	4.6	910.5	22.1	47.8	56.1
REP JBIVR-100	QC		633	6	2.2	1.5	34.0	14.3	136.1	91.6	6	197.2	0.9	65.4	12.4	39	4.4	907.1	22.0	46.3	54.6
JBIVR-103	Rock	0.93	2987	6	1.5	1.9	49.5	24.4	232.1	146.7	5	154.9	1.1	77.3	27.7	103	11.3	1504	81.8	85.1	123.4
REP JBIVR-103	QC																				
MGIVR-017	Rock	1.67	43911	1	7.2	0.4	3.2	0.2	73.0	9.2	<1	2869	0.8	1332	3.0	11	3.1	9.1	263.5	924.9	1986
REP MGIVR-017	QC		45086	1	7.2	0.4	2.6	<0.1	61.1	9.2	<1	2850	0.6	1310	3.1	11	3.5	8.6	263.4	913.3	1952
MGIVR-021	Rock	2.04	>50000	2	31.7	1.1	18.6	2.6	271.4	88.1	4	1556	5.4	642.9	2.7	148	5.1	80.5	113.1	333.4	812.2
REP MGIVR-021	QC																				
NTIVR-021	Rock	2.93	880	2	1.2	4.2	27.3	2.3	293.3	303.2	1	561.9	12.9	77.5	40.6	<8	5.9	172.0	13.9	246.5	315.0
REP NTIVR-021	QC		889	2	1.2	4.1	27.5	2.6	301.9	302.6	1	566.0	13.2	84.0	41.9	<8	5.9	177.7	14.3	249.4	322.7
Reference Materials																					
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD OREAS45PA	Standard																				
STD OREAS45PA	Standard																				
STD OREAS45PA	Standard																				
STD OREAS45PA	Standard																				
STD OREAS45PA	Standard																				
STD SO-18	Standard		509	1	27.3	6.9	17.2	9.6	22.2	28.0	15	405.7	7.1	10.1	16.0	209	14.7	289.2	32.1	12.5	27.9
STD SO-18	Standard		506	<1	27.4	6.9	17.0	9.8	21.4	28.0	15	407.0	7.2	10.0	16.1	209	14.7	287.3	32.0	12.4	27.4
STD SO-18	Standard		516	<1	28.0	7.1	17.3	9.8	21.9	28.5	16	410.8	7.3	9.8	16.5	211	14.9	293.3	32.5	12.4	27.7

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QUALITY CONTROL REPORT VAN09004198.1

	Method	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
Pulp Duplicates																					
BWIVR-008	Rock	6.86	26.3	5.70	1.66	5.88	0.99	5.36	1.03	2.87	0.44	2.54	0.37	1.8	22.1	29.1	40	25.8	3.6	<0.1	<0.1
REP BWIVR-008	QC	6.57	25.1	5.74	1.64	5.78	0.99	5.38	1.01	2.82	0.42	2.59	0.35								
JBIVR-091	Rock	20.12	80.7	15.26	4.43	13.90	1.95	10.25	1.92	5.49	0.78	4.73	0.66	5.5	3.0	14.2	32	1.4	2.0	<0.1	<0.1
REP JBIVR-091	QC													5.2	2.9	14.4	33	1.5	2.4	<0.1	<0.1
JBIVR-100	Rock	4.32	15.8	5.19	1.67	4.87	0.73	3.76	0.70	2.20	0.33	2.28	0.33	1.8	37.5	6688	1812	0.9	268.2	6.0	5.0
REP JBIVR-100	QC	4.18	15.1	5.14	1.62	4.77	0.72	3.83	0.73	2.16	0.33	2.21	0.32								
JBIVR-103	Rock	12.56	70.3	37.36	10.50	33.08	3.85	17.19	2.75	7.33	1.03	6.44	0.90	1.5	14.3	54.8	377	1.5	54.6	1.1	0.2
REP JBIVR-103	QC													1.5	14.2	55.5	385	1.4	54.9	1.2	0.2
MGIVR-017	Rock	196.1	664.1	122.6	41.28	123.6	15.78	70.72	9.68	17.52	1.53	6.58	0.61	0.3	12.8	348.5	60	7.2	11.0	0.2	0.2
REP MGIVR-017	QC	196.0	652.8	124.0	42.04	126.4	15.89	71.65	9.65	17.76	1.56	6.63	0.61								
MGIVR-021	Rock	88.23	344.7	72.43	18.32	40.98	4.25	19.48	3.08	8.12	1.12	6.72	0.81	2.7	38.0	66.2	57	28.8	7.3	<0.1	0.2
REP MGIVR-021	QC													3.3	37.9	70.8	58	29.1	7.7	0.1	0.5
NTIVR-021	Rock	22.19	54.2	5.30	1.17	4.90	0.50	2.23	0.39	1.23	0.19	1.15	0.18	2.9	3.1	17.9	59	0.9	1.4	0.1	<0.1
REP NTIVR-021	QC	22.66	55.6	5.43	1.24	4.98	0.49	2.26	0.40	1.12	0.18	1.15	0.17								
Reference Materials																					
STD DS7	Standard													21.8	108.8	68.1	384	54.6	49.8	6.0	4.0
STD DS7	Standard													19.1	104.8	61.4	379	54.2	48.3	5.6	3.5
STD DS7	Standard													20.0	109.6	59.4	376	55.2	47.9	5.9	3.8
STD DS7	Standard													20.5	104.5	68.0	399	55.5	48.7	5.7	4.3
STD DS7	Standard													22.8	109.8	66.0	395	55.1	47.2	6.1	3.8
STD OREAS45PA	Standard													0.9	637.8	22.1	127	314.6	3.9	<0.1	<0.1
STD OREAS45PA	Standard													0.8	589.9	17.7	108	292.6	3.3	<0.1	<0.1
STD OREAS45PA	Standard													1.1	619.9	20.4	118	311.1	4.3	0.1	<0.1
STD OREAS45PA	Standard													0.8	646.8	21.2	127	317.5	3.9	<0.1	<0.1
STD OREAS45PA	Standard													1.0	645.8	19.0	114	323.8	3.8	0.1	<0.1
STD SO-18	Standard	3.44	14.1	2.96	0.87	3.02	0.51	2.97	0.60	1.80	0.27	1.79	0.27								
STD SO-18	Standard	3.40	14.1	2.96	0.86	3.04	0.50	2.96	0.60	1.79	0.27	1.78	0.27								
STD SO-18	Standard	3.46	14.0	2.94	0.88	3.07	0.51	3.01	0.62	1.81	0.28	1.80	0.27								

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QUALITY CONTROL REPORT VAN09004198.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Bi	Ag	Au	Hg	Tl	Se
	Unit	ppm	ppm	ppb	ppm	ppm	ppm
	MDL	0.1	0.1	0.5	0.01	0.1	0.5
Pulp Duplicates							
BWIVR-008	Rock	0.2	<0.1	<0.5	<0.01	0.2	<0.5
REP BWIVR-008	QC						
JBIVR-091	Rock	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
REP JBIVR-091	QC	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
JBIVR-100	Rock	5.7	3.6	17.5	0.13	0.1	<0.5
REP JBIVR-100	QC						
JBIVR-103	Rock	0.5	<0.1	1.2	0.13	<0.1	<0.5
REP JBIVR-103	QC	0.5	<0.1	3.6	0.12	<0.1	0.8
MGIVR-017	Rock	0.6	<0.1	1.7	0.02	<0.1	<0.5
REP MGIVR-017	QC						
MGIVR-021	Rock	0.3	<0.1	3.5	0.03	<0.1	<0.5
REP MGIVR-021	QC	0.3	<0.1	6.0	0.05	0.1	<0.5
NTIVR-021	Rock	<0.1	<0.1	<0.5	<0.01	0.2	<0.5
REP NTIVR-021	QC						
Reference Materials							
STD DS7	Standard	4.5	0.7	50.5	0.18	3.9	3.2
STD DS7	Standard	4.2	0.8	68.3	0.20	3.7	4.0
STD DS7	Standard	3.9	0.8	40.8	0.16	3.4	4.0
STD DS7	Standard	4.7	0.9	47.2	0.20	4.0	3.2
STD DS7	Standard	4.0	0.7	46.7	0.18	3.9	3.6
STD OREAS45PA	Standard	0.2	0.3	41.2	0.03	<0.1	<0.5
STD OREAS45PA	Standard	0.2	0.2	37.1	0.02	<0.1	0.6
STD OREAS45PA	Standard	0.2	0.3	43.0	0.03	<0.1	<0.5
STD OREAS45PA	Standard	0.2	0.3	45.3	0.03	0.1	0.9
STD OREAS45PA	Standard	0.2	0.3	38.3	0.02	<0.1	0.7
STD SO-18	Standard						
STD SO-18	Standard						
STD SO-18	Standard						

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QUALITY CONTROL REPORT VAN09004198.1

		WGHT	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B
		Wgt	Ba	Be	Co	Cs	Ga	Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.01	1	1	0.2	0.1	0.5	0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1
STD SO-18	Standard		515	1	27.9	7.0	17.4	9.7	22.7	28.4	15	408.0	7.2	9.9	16.4	210	14.9	291.8	32.6	12.5	28.1
STD SO-18	Standard		505	1	27.1	7.1	17.0	9.6	21.5	28.0	15	413.4	7.1	10.1	16.2	209	14.7	284.8	32.1	12.2	27.9
STD SO-18	Standard		494	<1	27.4	7.0	17.2	9.7	21.2	28.0	15	407.8	7.0	9.8	16.3	208	14.8	287.5	32.3	12.2	27.2
STD SO-18	Standard		504	1	27.6	7.2	17.6	10.1	21.5	28.6	15	410.7	7.2	9.7	16.4	214	15.0	290.6	32.6	12.3	27.7
STD SO-18	Standard		510	<1	27.6	6.9	17.6	9.6	21.9	28.6	15	413.6	7.2	10.0	16.4	213	14.9	289.8	32.5	12.4	27.8
STD SO-18 Expected			514	1	26.2	7.1	17.6	9.8	21.3	28.7	15	407.4	7.4	9.9	16.4	200	14.8	280	31	12.3	27.1
STD DS7 Expected																					
STD OREAS45PA Expected																					
BLK	Blank		<1	<1	<0.2	<0.1	<0.5	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	0.7	<0.1	<0.1	<0.1
BLK	Blank		<1	<1	<0.2	<0.1	<0.5	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	0.5	<0.1	<0.1	<0.1
BLK	Blank		<1	<1	<0.2	<0.1	<0.5	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	1.2	<0.1	<0.1	<0.1
BLK	Blank		<1	<1	<0.2	<0.1	<0.5	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	<0.1	<0.1	<0.1	<0.1
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	<0.01	1031	3	6.2	5.4	20.2	4.6	27.6	139.7	3	807.2	1.5	10.8	4.0	61	<0.5	156.9	19.8	38.1	76.1
G1	Prep Blank	<0.01	1010	3	5.0	5.0	18.8	4.2	27.3	139.5	2	773.0	1.6	9.6	3.7	56	<0.5	152.0	18.5	31.1	64.1

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QUALITY CONTROL REPORT VAN09004198.1

		4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	4B	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.02	0.3	0.05	0.02	0.05	0.01	0.05	0.02	0.03	0.01	0.05	0.01	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1
STD SO-18	Standard	3.47	13.9	2.93	0.87	3.06	0.52	2.98	0.62	1.80	0.28	1.81	0.28								
STD SO-18	Standard	3.43	14.1	2.91	0.87	2.95	0.51	2.96	0.61	1.82	0.27	1.79	0.27								
STD SO-18	Standard	3.38	14.3	2.89	0.87	2.97	0.50	2.95	0.61	1.83	0.27	1.79	0.27								
STD SO-18	Standard	3.47	14.4	2.86	0.87	2.94	0.50	2.95	0.62	1.83	0.27	1.81	0.27								
STD SO-18	Standard	3.51	14.8	2.93	0.88	3.00	0.51	3.03	0.62	1.89	0.27	1.84	0.27								
STD SO-18 Expected		3.45	14	3	0.89	2.93	0.53	3	0.62	1.84	0.27	1.79	0.27								
STD DS7 Expected														20.5	109	70.6	411	56	48.2	6.4	4.6
STD OREAS45PA Expected														0.9	600	19	119	281	4.2	0.09	0.13
BLK	Blank	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01								
BLK	Blank	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01								
BLK	Blank	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01								
BLK	Blank	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01	<0.05	<0.02	<0.03	<0.01	<0.05	<0.01								
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1
BLK	Blank													<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1
Prep Wash																					
G1	Prep Blank	8.12	29.0	4.85	1.19	3.72	0.55	3.01	0.59	1.89	0.29	1.98	0.32	0.2	3.9	3.4	50	3.3	<0.5	<0.1	<0.1
G1	Prep Blank	7.05	24.9	4.37	1.08	3.30	0.54	3.02	0.58	1.86	0.30	1.87	0.31	0.1	2.8	3.7	48	3.3	<0.5	<0.1	<0.1

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QUALITY CONTROL REPORT VAN09004198.1

		1DX Bi ppm 0.1	1DX Ag ppm 0.1	1DX Au ppb 0.5	1DX Hg ppm 0.01	1DX Tl ppm 0.1	1DX Se ppm 0.5
STD SO-18	Standard						
STD SO-18	Standard						
STD SO-18	Standard						
STD SO-18	Standard						
STD SO-18	Standard						
STD SO-18 Expected							
STD DS7 Expected		4.5	0.9	70	0.2	4.2	3.5
STD OREAS45PA Expected		0.18	0.3	43	0.03	0.07	0.54
BLK	Blank						
BLK	Blank						
BLK	Blank						
BLK	Blank						
BLK	Blank	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BLK	Blank	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BLK	Blank	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BLK	Blank	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
BLK	Blank	<0.1	<0.1	<0.5	<0.01	<0.1	<0.5
Prep Wash							
G1	Prep Blank	<0.1	<0.1	<0.5	<0.01	0.4	<0.5
G1	Prep Blank	<0.1	<0.1	<0.5	<0.01	0.3	<0.5

6.2 - Silt / Soil Samples

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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Submitted By: Jarrod Brown
Receiving Lab: Canada-Vancouver
Received: September 11, 2009
Report Date: October 01, 2009
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN09004199.1

CLIENT JOB INFORMATION

Project: ICE RIVER
Shipment ID:
P.O. Number IV09-001
Number of Samples: 4

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	4	Dry at 60C sieve 100g to -80 mesh			VAN
Dry at 60C	4	Dry at 60C			VAN
1EX	4	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Bootleg Exploration Inc.
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1
Canada

CC: CSG

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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

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Project: ICE RIVER
Report Date: October 01, 2009

CERTIFICATE OF ANALYSIS VAN09004199.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
LJIVS-001	Silt	0.4	5.4	15.8	34	<0.1	7.3	4.4	273	0.81	8	1.3	<0.1	8.3	1088	0.2	0.4	0.1	16	31.83	0.051
BWIVS-001	Silt	1.5	78.6	19.1	123	0.2	22.7	37.0	1917	11.22	6	3.4	<0.1	24.8	822	0.4	0.2	0.2	437	13.27	0.307
BWIVS-002	Silt	1.0	78.0	19.3	95	0.1	23.4	34.4	1524	8.23	5	3.0	<0.1	22.0	819	0.4	0.1	0.2	323	13.22	0.244
BWIVS-003	Silt	1.1	66.3	16.4	93	0.1	20.1	33.1	1729	9.36	4	2.7	<0.1	19.9	829	0.5	0.1	0.2	381	14.21	0.246

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Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 01, 2009

CERTIFICATE OF ANALYSIS VAN09004199.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
	Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
LJIVS-001	Silt	26.7	10	1.16	127	0.095	1.19	0.363	0.18	1.1	16.4	45	0.6	11.3	14.9	0.3	<1	2	12.5	<0.1	9.6
BWIVS-001	Silt	153.8	23	3.40	445	2.446	3.54	0.941	0.62	1.2	419.5	295	0.4	60.6	30.0	0.1	2	19	25.6	<0.1	39.7
BWIVS-002	Silt	137.6	23	3.68	476	1.685	3.70	0.958	0.69	0.5	398.0	261	0.2	56.6	6.6	0.2	3	20	26.4	<0.1	43.7
BWIVS-003	Silt	148.6	25	3.50	373	2.065	3.36	0.864	0.56	0.7	432.5	290	<0.1	61.5	9.4	0.2	2	20	22.6	<0.1	33.4

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200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 01, 2009

CERTIFICATE OF ANALYSIS VAN09004199.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
LJIVS-001	Silt		0.5
BWIVS-001	Silt		11.5
BWIVS-002	Silt		10.7
BWIVS-003	Silt		12.5

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Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 01, 2009

QUALITY CONTROL REPORT VAN09004199.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
Pulp Duplicates																					
LJIVS-001	Silt	0.4	5.4	15.8	34	<0.1	7.3	4.4	273	0.81	8	1.3	<0.1	8.3	1088	0.2	0.4	0.1	16	31.83	0.051
REP LJIVS-001	QC	0.5	5.2	14.8	33	<0.1	8.7	4.7	288	0.82	5	1.1	<0.1	7.6	1094	0.2	0.3	0.1	20	31.99	0.048
Reference Materials																					
STD OREAS24P	Standard	1.4	48.4	2.9	112	<0.1	143.0	45.2	1053	7.54	1	0.7	<0.1	2.8	387	0.2	<0.1	<0.1	162	5.84	0.134
STD OREAS24P	Standard	1.6	48.1	3.1	117	<0.1	142.9	45.6	1158	8.00	<1	0.7	<0.1	2.8	400	0.2	0.3	<0.1	167	5.85	0.141
STD OREAS24P Expected		1.5	52	2.9	118.9	0.06	141	44	1100	7.53	1.2	0.75		2.85	403	0.15	0.09		158	5.83	0.136
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	1.0	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001

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Project: ICE RIVER
Report Date: October 01, 2009

QUALITY CONTROL REPORT VAN09004199.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
	Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
Pulp Duplicates																					
LJIVS-001	Silt	26.7	10	1.16	127	0.095	1.19	0.363	0.18	1.1	16.4	45	0.6	11.3	14.9	0.3	<1	2	12.5	<0.1	9.6
REP LJIVS-001	QC	28.9	11	1.12	129	0.097	1.19	0.366	0.18	1.0	15.7	47	0.6	9.6	11.2	0.3	<1	2	14.3	<0.1	9.3
Reference Materials																					
STD OREAS24P	Standard	18.2	197	3.96	276	1.070	7.74	2.303	0.63	0.5	132.9	34	1.8	21.9	20.5	1.0	<1	18	8.1	<0.1	22.0
STD OREAS24P	Standard	17.8	194	3.99	279	1.053	7.61	2.174	0.68	0.5	140.0	34	1.6	22.2	21.9	1.0	<1	19	9.3	<0.1	20.7
STD OREAS24P Expected		17.4	196	4.13	285	1.1	7.66	2.34	0.7	0.5	141	37.6	1.6	21.3	21	1.04		20	8.7		22.4
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1

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Project: ICE RIVER
Report Date: October 01, 2009

QUALITY CONTROL REPORT VAN09004199.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
Pulp Duplicates			
LJIVS-001	Silt		0.5
REP LJIVS-001	QC		0.5
Reference Materials			
STD OREAS24P	Standard		3.4
STD OREAS24P	Standard		3.5
STD OREAS24P Expected			3.6
BLK	Blank		<0.1

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Submitted By: Jarrod Brown
Receiving Lab: Canada-Vancouver
Received: September 11, 2009
Report Date: September 20, 2009
Page: 1 of 7

CERTIFICATE OF ANALYSIS VAN09004196.1

CLIENT JOB INFORMATION

Project: ICE RIVER
Shipment ID:
P.O. Number IV09-001
Number of Samples: 164

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	164	Dry at 60C sieve 100g to -80 mesh			VAN
Dry at 60C	164	Dry at 60C			VAN
1EX	164	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Bootleg Exploration Inc.
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1
Canada

CC: CSG

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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

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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL001-00+00	Soil		8.6	33.2	65.0	191	0.2	24.3	25.0	2082	5.21	42	2.5	<0.1	21.4	295	0.7	1.2	0.6	118	2.34	0.234
IVL001-00+25E	Soil		5.1	58.8	65.8	184	<0.1	36.3	29.5	1899	5.67	44	3.9	<0.1	28.0	327	0.4	1.4	0.5	134	3.12	0.226
IVL001-00+50E	Soil		4.1	29.9	56.5	150	0.1	21.7	16.3	1338	4.49	20	2.9	<0.1	24.2	265	0.7	1.5	0.5	94	1.76	0.189
IVL001-00+75E	Soil		2.7	22.4	48.2	124	<0.1	23.7	18.6	1415	4.47	14	2.1	<0.1	21.1	371	0.5	1.3	0.4	85	1.75	0.164
IVL001-01+00E	Soil		4.4	29.0	72.6	141	0.2	21.8	20.0	1327	4.50	26	2.2	<0.1	20.5	338	0.7	1.2	0.5	104	2.18	0.191
IVL001-01+25E	Soil		4.6	26.6	74.0	152	0.2	21.6	15.3	1115	5.17	20	3.1	<0.1	25.3	253	0.3	1.2	0.5	108	1.62	0.172
IVL001-01+50E	Soil		4.9	26.2	57.4	144	<0.1	21.7	18.3	1539	4.69	18	2.6	<0.1	22.2	270	0.4	1.0	0.5	100	1.67	0.200
IVL001-01+75E	Soil		4.0	21.8	43.1	116	0.2	18.6	15.6	1410	4.71	13	3.1	<0.1	25.1	269	0.4	1.1	0.4	104	1.40	0.193
IVL001-02+00E	Soil		4.3	22.2	39.0	106	<0.1	16.4	14.5	1370	4.71	11	3.0	<0.1	21.8	272	0.4	1.0	0.4	99	1.54	0.200
IVL002-00+00	Soil		0.3	12.6	22.2	49	<0.1	10.7	6.0	272	1.34	4	1.5	<0.1	6.2	649	0.3	0.4	0.1	39	24.34	0.103
IVL002-00+50N	Soil		0.2	10.5	16.6	41	<0.1	9.4	5.3	240	1.22	4	1.6	<0.1	5.2	547	0.3	0.3	0.1	38	23.47	0.112
IVL002-01+00N	Soil		0.4	19.7	20.8	72	0.1	18.4	11.0	419	2.37	9	2.2	<0.1	11.7	449	0.5	0.4	0.1	74	14.28	0.192
IVL002-01+50N	Soil		1.7	51.6	39.1	119	<0.1	29.3	24.7	1220	4.90	12	5.2	<0.1	42.5	458	0.5	0.9	0.3	138	6.09	0.258
IVL002-02+00N	Soil		2.2	51.8	107.2	253	<0.1	51.3	28.4	1800	4.24	13	5.5	<0.1	75.8	334	0.6	0.7	0.4	71	4.90	0.131
IVL002-02+50N	Soil		2.0	39.6	59.4	202	<0.1	30.0	25.4	1438	3.29	10	3.6	<0.1	31.6	256	0.6	0.6	0.3	69	4.32	0.194
IVL002-03+00N	Soil		1.9	25.6	64.2	178	<0.1	31.7	19.9	1426	3.60	14	3.3	<0.1	44.6	202	0.5	1.0	0.4	82	3.20	0.214
IVL002-03+50N	Soil		1.3	16.9	31.1	107	<0.1	17.4	10.5	990	2.23	12	1.7	<0.1	16.0	590	0.4	0.4	0.2	58	15.71	0.156
IVL002-04+00N	Soil		4.6	21.6	30.1	160	<0.1	11.7	8.2	1707	2.15	7	1.4	<0.1	19.2	580	0.7	0.5	0.3	49	19.84	0.217
IVL002-04+50N	Soil		14.2	42.5	42.8	539	0.1	31.8	14.4	6483	4.64	12	2.2	<0.1	26.7	525	1.9	0.8	0.4	104	6.35	0.360
IVL002-05+00N	Soil		7.1	28.4	48.0	400	0.2	17.3	11.3	4281	3.56	211	2.1	<0.1	22.6	745	2.0	0.9	0.3	83	10.45	0.351
IVL002-05+50N	Soil		2.6	29.4	56.6	211	0.1	19.3	12.9	2996	2.97	11	2.4	<0.1	36.1	192	0.7	0.6	0.5	76	4.08	0.245
IVL002-06+00N	Soil		51.1	36.7	73.6	1524	*	37.3	13.8	>10000	6.57	13	1.8	<0.1	48.6	1745	8.7	1.6	0.6	96	6.27	0.625
IVL002-06+50N	Soil		22.0	35.9	109.1	827	<0.1	37.6	17.2	9535	6.10	19	2.3	<0.1	64.3	523	3.2	0.6	0.7	140	3.28	0.578
IVL002-07+00N	Soil		47.5	24.1	87.5	1043	0.1	23.4	12.5	>10000	6.06	22	1.8	<0.1	61.1	824	1.1	1.0	1.4	106	5.76	0.403
IVL002-07+50N	Soil		78.8	37.2	76.6	685	0.2	22.8	16.0	>10000	6.13	17	1.9	<0.1	39.9	264	0.9	0.6	1.8	120	3.08	0.362
IVL002-08+00N	Soil		2.6	13.8	25.5	78	0.1	11.6	7.0	1413	2.24	7	1.4	<0.1	13.9	647	0.3	0.4	0.3	53	15.52	0.149
IVL002-08+50N	Soil		4.1	19.9	62.8	186	<0.1	22.8	13.9	2338	3.76	16	2.3	<0.1	30.3	165	0.6	0.7	0.6	98	3.12	0.243
IVL002-09+00N	Soil		5.7	11.8	39.1	92	<0.1	27.0	13.7	2217	4.75	14	2.0	<0.1	18.0	147	0.4	0.5	0.5	142	1.80	0.183
IVL002-09+50N	Soil		1.3	19.7	46.3	111	<0.1	27.4	13.6	760	3.84	16	2.3	<0.1	17.7	221	0.2	0.6	0.3	81	2.53	0.225
IVL002-10+00N	Soil		0.8	33.9	43.6	156	<0.1	30.5	12.9	1093	3.32	15	3.5	<0.1	21.4	186	0.5	0.9	0.2	80	2.96	0.286

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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL001-00+00	Soil		47.8	50	1.86	626	0.759	6.29	2.184	1.20	4.6	124.2	108	2.4	23.8	73.4	2.5	4	10	70.4	0.1	88.4
IVL001-00+25E	Soil		86.5	54	2.40	706	0.827	6.74	1.882	1.14	3.8	123.0	176	2.2	33.2	71.0	2.4	4	13	77.5	<0.1	79.6
IVL001-00+50E	Soil		51.9	43	1.62	627	0.645	5.93	2.079	1.26	3.9	117.2	99	2.3	23.3	75.2	2.5	4	9	64.3	<0.1	94.2
IVL001-00+75E	Soil		40.8	50	2.04	585	0.571	6.52	1.986	1.48	4.2	95.8	89	2.0	27.2	57.7	1.8	4	9	56.0	<0.1	95.9
IVL001-01+00E	Soil		45.2	48	1.98	573	0.620	6.22	2.151	1.31	3.3	110.4	84	2.2	23.4	55.8	1.8	4	10	55.4	<0.1	84.9
IVL001-01+25E	Soil		49.6	44	1.60	606	0.727	6.16	2.245	1.18	3.5	128.3	109	2.9	22.5	88.2	3.0	4	8	67.4	<0.1	95.4
IVL001-01+50E	Soil		65.0	44	1.89	637	0.652	6.38	2.244	1.29	3.0	114.9	130	2.5	21.9	71.6	2.4	4	8	69.2	<0.1	88.7
IVL001-01+75E	Soil		49.0	43	1.44	716	0.746	6.13	2.155	1.64	3.3	123.8	99	2.5	19.3	88.3	3.3	3	7	55.4	<0.1	125.4
IVL001-02+00E	Soil		46.9	38	1.22	729	0.760	5.91	2.065	1.67	3.3	132.8	93	2.5	18.2	92.6	3.2	3	7	51.8	<0.1	134.2
IVL002-00+00	Soil		19.0	15	2.69	131	0.182	1.69	0.382	0.36	1.0	46.2	34	0.5	9.4	14.1	0.5	1	3	28.8	<0.1	27.4
IVL002-00+50N	Soil		14.5	14	2.35	145	0.165	1.90	0.505	0.34	0.9	43.2	25	0.6	9.1	12.9	0.4	1	3	25.4	<0.1	26.4
IVL002-01+00N	Soil		30.9	29	4.15	137	0.396	3.36	0.880	0.30	2.0	74.9	54	1.2	16.3	27.5	1.1	2	7	43.4	0.1	28.0
IVL002-01+50N	Soil		109.0	42	2.49	641	0.783	7.62	2.094	1.96	3.7	151.2	183	2.2	40.1	108.9	3.3	5	12	52.2	<0.1	116.4
IVL002-02+00N	Soil		100.2	51	1.95	1354	0.406	8.13	2.562	2.05	4.9	60.1	199	2.6	52.0	95.3	2.8	6	10	124.6	<0.1	137.4
IVL002-02+50N	Soil		58.3	40	1.78	722	0.436	5.04	1.646	1.15	3.6	63.6	114	1.7	25.5	54.6	1.7	3	9	60.6	0.1	90.1
IVL002-03+00N	Soil		58.2	49	2.82	566	0.399	6.44	2.873	1.33	4.8	82.4	138	1.7	36.2	47.8	1.4	6	10	86.6	<0.1	87.3
IVL002-03+50N	Soil		141.8	24	2.76	275	0.250	3.17	1.249	0.32	1.8	55.0	228	1.2	22.6	26.7	0.6	3	5	110.1	<0.1	24.3
IVL002-04+00N	Soil		464.4	17	2.15	416	0.243	2.25	0.934	0.34	1.2	49.8	824	1.1	24.1	31.2	0.8	2	4	60.5	0.1	31.6
IVL002-04+50N	Soil		971.7	56	3.77	776	0.363	3.77	1.887	0.62	1.1	90.2	1380	2.0	56.8	60.3	1.0	6	8	178.8	0.2	64.8
IVL002-05+00N	Soil		1523	29	4.51	517	0.291	3.44	1.271	0.51	1.8	62.4	1804	1.4	42.7	126.7	0.8	4	6	224.6	0.1	57.6
IVL002-05+50N	Soil		212.1	31	2.56	514	0.290	4.14	1.797	0.76	1.2	68.4	387	1.9	36.6	33.9	0.7	5	8	152.1	<0.1	54.6
IVL002-06+00N	Soil		>2000	52	4.27	3303	0.296	3.34	1.282	0.46	1.6	44.4	>2000	4.1	65.8	208.2	1.2	6	8	273.5	<0.1	50.8
IVL002-06+50N	Soil		>2000	59	3.91	1444	0.326	4.88	2.873	0.72	1.3	76.7	>2000	6.0	113.9	102.9	0.8	10	12	273.8	<0.1	46.4
IVL002-07+00N	Soil		>2000	43	3.15	4195	0.292	3.90	1.925	0.63	2.0	54.8	>2000	6.7	90.7	117.7	0.6	6	9	266.5	<0.1	46.2
IVL002-07+50N	Soil		868.1	33	2.67	3145	0.285	5.43	3.316	0.67	1.2	54.4	1892	4.2	79.5	51.5	0.7	8	10	200.2	0.1	41.0
IVL002-08+00N	Soil		72.6	18	2.31	397	0.211	2.65	1.173	0.41	0.7	48.1	137	1.0	18.5	25.4	0.6	3	4	151.4	<0.1	39.0
IVL002-08+50N	Soil		109.5	35	2.68	436	0.309	5.72	3.110	0.81	1.7	91.8	278	1.9	39.9	39.4	0.8	5	8	261.7	<0.1	49.1
IVL002-09+00N	Soil		94.2	41	2.79	345	0.501	7.16	4.077	0.41	4.2	98.7	259	2.3	31.1	75.1	1.5	5	7	340.9	<0.1	14.8
IVL002-09+50N	Soil		59.5	37	2.67	329	0.352	6.11	2.119	0.79	2.2	128.9	107	1.5	29.7	31.0	1.0	5	8	136.5	<0.1	33.2
IVL002-10+00N	Soil		69.6	43	4.08	307	0.316	5.48	1.357	0.54	3.9	105.3	110	1.2	42.0	25.9	0.8	5	11	135.6	<0.1	39.5

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Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL001-00+00	Soil		3.4
IVL001-00+25E	Soil		3.6
IVL001-00+50E	Soil		3.3
IVL001-00+75E	Soil		2.7
IVL001-01+00E	Soil		3.0
IVL001-01+25E	Soil		3.3
IVL001-01+50E	Soil		3.1
IVL001-01+75E	Soil		3.5
IVL001-02+00E	Soil		3.7
IVL002-00+00	Soil		1.3
IVL002-00+50N	Soil		1.1
IVL002-01+00N	Soil		2.0
IVL002-01+50N	Soil		3.3
IVL002-02+00N	Soil		1.6
IVL002-02+50N	Soil		1.8
IVL002-03+00N	Soil		2.1
IVL002-03+50N	Soil		1.4
IVL002-04+00N	Soil		1.3
IVL002-04+50N	Soil		1.6
IVL002-05+00N	Soil		1.8
IVL002-05+50N	Soil		1.9
IVL002-06+00N	Soil		1.5
IVL002-06+50N	Soil		2.8
IVL002-07+00N	Soil		1.9
IVL002-07+50N	Soil		2.0
IVL002-08+00N	Soil		1.2
IVL002-08+50N	Soil		2.8
IVL002-09+00N	Soil		2.7
IVL002-09+50N	Soil		3.3
IVL002-10+00N	Soil		2.6

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL002-10+50N	Soil		0.4	10.2	24.2	70	<0.1	14.5	6.6	246	1.17	7	1.2	<0.1	11.7	1062	0.1	0.5	0.1	30	22.50	0.079
IVL002-11+00N	Soil		1.0	23.1	23.4	220	<0.1	24.0	13.0	1077	3.02	10	2.2	<0.1	20.1	272	0.7	0.6	0.3	75	2.92	0.231
IVL002-11+50N	Soil		1.2	22.3	119.5	95	<0.1	41.0	23.5	601	4.44	12	2.1	<0.1	23.0	1297	0.2	1.3	13.8	69	6.80	0.075
IVL002-12+00N	Soil		2.1	60.7	59.7	113	<0.1	59.2	21.5	678	3.62	10	2.0	<0.1	25.8	741	0.2	0.6	0.3	165	13.39	0.394
IVL002-12+50N	Soil		5.2	61.3	403.4	877	0.2	47.6	21.4	1737	6.58	8	2.0	<0.1	64.1	240	0.2	0.9	1.4	107	0.97	0.109
IVL002-13+00N	Soil		4.6	56.6	61.1	130	0.1	38.8	44.6	2551	5.09	6	2.0	<0.1	55.8	650	0.5	0.9	0.6	101	2.40	0.195
IVL002-13+50N	Soil		3.5	38.6	107.5	410	0.2	58.9	46.3	983	5.88	11	1.8	<0.1	30.9	477	0.5	0.8	0.5	90	4.84	0.104
IVL002-14+00N	Soil		2.8	40.2	70.1	266	<0.1	49.0	44.4	1500	5.23	10	2.1	<0.1	28.5	471	0.5	0.8	0.6	76	5.13	0.144
IVL002-14+50N	Soil		3.4	27.6	57.1	196	<0.1	26.6	16.7	623	4.46	7	1.8	<0.1	23.2	434	0.3	0.9	0.7	98	4.28	0.052
IVL003-00+00	Soil		0.5	11.4	40.1	57	<0.1	12.5	6.0	328	1.35	8	1.5	<0.1	6.7	762	1.0	0.6	0.2	28	25.24	0.099
IVL003-00+50N	Soil		1.1	29.1	31.2	145	<0.1	26.4	18.5	664	3.79	9	3.4	<0.1	24.9	248	0.5	0.4	0.2	88	3.69	0.303
IVL003-01+00N	Soil		1.1	28.5	24.8	97	<0.1	25.4	17.0	1174	3.47	7	1.9	<0.1	26.5	154	0.5	0.4	0.2	80	2.17	0.178
IVL003-02+00N	Soil		3.9	42.4	51.0	260	<0.1	29.2	23.5	2012	5.36	10	2.9	<0.1	32.2	290	1.5	0.5	0.3	131	3.30	0.225
IVL003-02+50N	Soil		6.7	24.7	239.3	532	0.2	18.4	13.1	4677	4.00	101	2.1	<0.1	41.5	416	2.3	0.7	1.7	84	4.47	0.359
IVL003-03+00N	Soil		3.4	49.2	45.6	120	<0.1	23.2	25.3	1395	5.07	8	2.5	<0.1	42.3	235	0.3	0.4	0.3	126	3.68	0.260
IVL003-03+50N	Soil		2.2	14.8	45.0	190	<0.1	18.9	9.8	1110	2.33	13	1.4	<0.1	23.4	863	0.6	0.5	0.2	48	18.56	0.134
IVL003-04+00N	Soil		3.2	19.2	48.7	202	<0.1	20.4	12.6	2388	3.50	15	2.3	<0.1	47.0	206	0.9	0.7	0.3	80	3.49	0.244
IVL003-04+50N	Soil		2.9	27.0	48.7	178	<0.1	28.6	19.2	980	4.26	34	2.3	<0.1	40.6	146	0.4	0.7	0.3	112	2.11	0.215
IVL003-05+00N	Soil		20.1	22.7	59.6	554	<0.1	23.3	14.0	8382	5.28	22	2.2	<0.1	37.9	325	1.3	0.7	0.6	105	3.80	0.372
IVL003-05+50N	Soil		9.3	17.1	67.3	261	0.1	26.8	15.0	3636	4.96	19	2.7	<0.1	45.7	137	1.0	0.5	0.7	122	2.05	0.195
IVL003-06+00N	Soil		8.5	17.1	46.4	212	<0.1	29.7	16.2	2217	4.67	15	2.6	<0.1	52.6	121	0.6	0.5	0.7	108	1.65	0.165
IVL003-06+50N	Soil		4.1	15.3	61.0	261	<0.1	26.3	16.8	864	4.86	13	2.4	<0.1	36.8	142	0.8	0.5	0.6	122	1.49	0.110
IVL003-07+00N	Soil		6.3	35.7	22.9	140	0.1	79.0	25.1	414	6.46	23	2.0	<0.1	19.2	119	0.2	0.2	0.3	229	0.87	0.150
IVL003-07+50N	Soil		38.2	29.2	99.2	879	0.2	25.1	14.1	>10000	6.36	21	2.1	<0.1	55.0	171	1.8	0.5	1.5	119	2.05	0.481
IVL003-08+00N	Soil		28.2	19.6	112.3	946	<0.1	106.4	23.9	3804	6.85	10	0.9	<0.1	28.6	163	0.8	0.3	1.6	191	1.92	0.285
IVL003-09+00N	Soil		37.6	23.8	69.1	1097	<0.1	19.0	12.4	>10000	7.68	20	2.3	<0.1	26.2	221	0.9	0.5	1.4	92	3.04	0.359
IVL003-09+50N	Soil		9.2	17.2	74.8	601	<0.1	25.0	14.1	4602	4.99	23	2.7	<0.1	38.6	201	1.3	0.6	0.9	97	2.17	0.319
IVL003-10+00N	Soil		217.4	16.2	140.2	2948	*	9.5	8.3	>10000	15.71	128	2.6	<0.1	140.4	382	23.0	1.5	0.9	136	1.62	1.065
IVL003-10+50N	Soil		2.9	22.2	50.0	320	<0.1	18.7	11.9	2822	3.41	10	2.6	<0.1	19.6	172	1.2	0.7	0.7	85	2.46	0.283
IVL003-11+00N	Soil		5.5	9.7	36.9	82	<0.1	20.5	7.9	160	3.57	18	1.1	<0.1	13.5	84	0.1	0.3	0.6	90	0.48	0.026

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CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL002-10+50N	Soil		14.6	18	3.81	290	0.110	1.99	0.460	1.23	1.1	32.7	29	0.6	9.4	10.9	0.2	3	3	112.5	<0.1	73.8
IVL002-11+00N	Soil		51.6	48	3.42	235	0.325	4.59	1.622	0.48	4.0	71.8	98	1.3	26.1	33.5	0.9	4	8	87.6	0.1	37.3
IVL002-11+50N	Soil		43.4	50	3.64	350	0.326	7.17	1.363	0.96	7.4	49.0	80	1.6	30.8	44.1	0.8	3	11	45.9	<0.1	49.6
IVL002-12+00N	Soil		112.2	56	3.29	502	0.760	4.71	2.107	0.66	10.8	58.3	214	1.6	38.8	92.9	2.9	5	10	35.9	<0.1	51.1
IVL002-12+50N	Soil		80.2	72	1.64	1002	0.554	7.12	2.572	1.06	13.9	60.8	266	3.7	39.0	104.1	1.4	7	10	142.0	<0.1	67.7
IVL002-13+00N	Soil		45.4	61	1.44	443	0.506	6.37	1.910	0.81	12.2	67.0	99	2.0	39.3	49.2	1.1	5	12	41.6	<0.1	69.6
IVL002-13+50N	Soil		33.9	63	1.69	364	0.521	8.22	1.608	0.94	15.2	84.7	92	2.8	31.8	49.3	1.3	6	11	103.0	<0.1	31.3
IVL002-14+00N	Soil		55.3	55	1.63	370	0.472	7.77	1.229	0.86	9.7	82.1	104	2.0	32.2	38.2	1.2	4	11	121.8	<0.1	43.1
IVL002-14+50N	Soil		37.5	54	1.31	500	0.576	7.33	1.619	1.21	19.4	85.8	76	2.6	29.7	44.8	1.5	4	12	69.3	<0.1	43.2
IVL003-00+00	Soil		21.2	18	2.42	141	0.174	1.78	0.438	0.34	1.0	50.3	38	0.7	9.2	16.1	0.5	1	3	28.6	<0.1	21.9
IVL003-00+50N	Soil		56.2	53	3.36	438	0.543	6.44	1.767	0.80	2.0	107.6	98	1.7	29.8	41.1	1.4	4	10	72.7	<0.1	48.6
IVL003-01+00N	Soil		54.9	42	2.53	571	0.488	6.22	2.390	0.77	2.3	89.8	109	1.5	27.1	45.9	1.4	5	8	79.5	<0.1	52.9
IVL003-02+00N	Soil		207.7	53	2.92	645	0.742	7.30	2.035	0.91	2.9	122.4	347	2.2	30.6	75.5	2.2	6	10	126.4	<0.1	51.3
IVL003-02+50N	Soil		516.4	34	2.99	585	0.373	4.60	2.117	0.77	1.1	100.1	838	1.8	40.6	88.6	1.0	6	7	225.2	0.1	76.8
IVL003-03+00N	Soil		81.1	38	2.48	554	0.834	7.62	2.093	0.98	3.5	142.2	193	2.6	33.8	68.7	2.4	6	10	98.7	<0.1	58.1
IVL003-03+50N	Soil		219.4	36	2.78	280	0.242	3.36	1.468	0.40	2.8	46.4	314	1.3	27.4	35.3	0.6	4	6	61.7	<0.1	33.0
IVL003-04+00N	Soil		311.9	38	2.42	678	0.331	5.74	2.766	0.90	2.2	87.9	489	2.2	46.0	53.7	1.1	5	9	131.1	<0.1	65.6
IVL003-04+50N	Soil		152.5	42	2.19	642	0.581	7.02	2.811	1.06	3.8	128.8	420	2.2	33.8	67.0	1.6	7	9	108.1	<0.1	26.4
IVL003-05+00N	Soil		1361	39	2.83	1099	0.334	5.66	2.912	0.72	1.8	77.5	>2000	2.7	78.7	75.2	1.0	7	10	288.5	<0.1	54.5
IVL003-05+50N	Soil		427.5	40	3.00	496	0.386	6.98	3.458	0.87	1.6	108.9	929	3.1	72.1	47.5	1.0	9	12	313.1	<0.1	47.4
IVL003-06+00N	Soil		299.3	44	2.48	444	0.427	6.52	2.994	0.79	2.6	122.3	739	3.0	51.4	47.6	1.1	8	9	209.9	<0.1	34.2
IVL003-06+50N	Soil		99.8	45	2.19	439	0.473	7.27	3.136	0.96	1.8	113.8	270	2.7	28.6	42.7	1.0	8	9	281.6	<0.1	37.8
IVL003-07+00N	Soil		68.2	157	2.55	371	0.802	6.38	3.763	0.31	3.5	73.2	138	2.8	20.0	53.6	1.9	4	8	166.7	<0.1	17.2
IVL003-07+50N	Soil		>2000	44	2.20	967	0.309	5.62	2.915	0.81	2.4	80.3	>2000	3.6	108.0	74.9	0.9	7	10	230.3	<0.1	54.1
IVL003-08+00N	Soil		>2000	162	6.74	1175	0.338	5.01	3.283	0.59	1.0	67.3	>2000	4.6	105.5	82.6	0.9	18	10	356.6	<0.1	40.3
IVL003-09+00N	Soil		845.4	36	3.06	1642	0.332	5.55	2.533	0.63	1.3	65.8	1589	3.5	102.7	51.0	0.8	7	8	178.0	<0.1	28.1
IVL003-09+50N	Soil		1571	49	2.80	704	0.319	6.60	2.722	0.97	2.5	74.3	>2000	2.8	76.6	63.7	0.9	7	10	278.5	<0.1	47.7
IVL003-10+00N	Soil		>2000	24	1.98	3471	0.228	3.31	1.139	0.64	2.6	42.3	>2000	8.9	106.8	405.6	0.8	7	8	456.2	<0.1	57.5
IVL003-10+50N	Soil		165.6	41	3.17	533	0.280	4.85	2.173	0.92	2.1	79.6	325	1.4	34.5	36.3	0.8	5	7	182.1	<0.1	99.7
IVL003-11+00N	Soil		32.5	57	2.44	257	0.326	5.74	4.623	0.24	4.0	45.1	78	1.7	9.6	59.5	0.8	3	3	54.9	<0.1	11.6

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Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL002-10+50N	Soil		0.8
IVL002-11+00N	Soil		1.9
IVL002-11+50N	Soil		1.6
IVL002-12+00N	Soil		1.1
IVL002-12+50N	Soil		1.7
IVL002-13+00N	Soil		1.7
IVL002-13+50N	Soil		2.3
IVL002-14+00N	Soil		2.3
IVL002-14+50N	Soil		2.5
IVL003-00+00	Soil		1.0
IVL003-00+50N	Soil		2.9
IVL003-01+00N	Soil		2.4
IVL003-02+00N	Soil		3.3
IVL003-02+50N	Soil		2.2
IVL003-03+00N	Soil		3.9
IVL003-03+50N	Soil		1.2
IVL003-04+00N	Soil		2.4
IVL003-04+50N	Soil		3.5
IVL003-05+00N	Soil		2.6
IVL003-05+50N	Soil		3.4
IVL003-06+00N	Soil		3.3
IVL003-06+50N	Soil		3.0
IVL003-07+00N	Soil		1.7
IVL003-07+50N	Soil		2.1
IVL003-08+00N	Soil		2.8
IVL003-09+00N	Soil		2.3
IVL003-09+50N	Soil		2.5
IVL003-10+00N	Soil		1.5
IVL003-10+50N	Soil		2.1
IVL003-11+00N	Soil		1.1

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL003-11+50N	Soil		0.7	6.0	22.1	48	<0.1	13.2	6.1	384	1.88	8	1.4	<0.1	17.1	588	0.1	0.3	0.2	46	14.14	0.097
IVL003-12+00N	Soil		12.9	76.0	93.2	364	0.2	76.8	38.5	2342	5.96	60	2.7	<0.1	44.2	290	0.4	1.4	0.8	96	1.57	0.067
IVL003-12+50N	Soil		9.7	40.8	74.7	303	<0.1	49.5	22.5	834	6.08	10	2.2	<0.1	68.4	274	0.2	1.0	1.0	119	1.11	0.079
IVL003-13+00N	Soil		30.5	33.0	283.5	978	<0.1	35.6	23.4	>10000	9.62	9	2.2	<0.1	58.4	135	0.5	0.6	7.4	117	0.91	0.317
IVL003-13+50N	Soil		10.5	33.0	118.8	391	<0.1	32.2	19.8	3496	5.31	5	2.8	<0.1	65.2	241	0.2	0.5	1.6	103	1.19	0.148
IVL003-14+00N	Soil		6.7	29.3	63.9	152	0.2	35.2	25.2	2509	5.34	6	1.9	<0.1	44.2	434	0.2	0.9	0.7	113	1.57	0.068
IVL003-14+50N	Soil		1.8	32.2	36.4	106	<0.1	43.2	26.4	796	4.97	5	1.9	<0.1	34.1	583	0.2	0.6	0.4	104	3.82	0.043
IVL004-00+00	Soil		4.8	32.4	60.7	200	<0.1	34.5	18.6	952	4.80	6	2.4	<0.1	44.6	158	0.1	0.5	0.9	92	0.71	0.073
IVL004-00+50S	Soil		5.1	29.5	89.0	262	<0.1	33.3	17.8	1030	5.26	5	2.5	<0.1	50.7	154	0.1	0.6	1.2	108	0.70	0.051
IVL004-01+00S	Soil		9.7	24.8	53.6	84	0.1	22.1	10.8	508	4.63	6	1.8	<0.1	42.4	169	<0.1	0.6	1.1	102	0.86	0.134
IVL004-01+50S	Soil		12.0	26.4	68.4	303	<0.1	33.7	16.8	2868	4.87	12	4.4	<0.1	55.1	193	0.1	0.6	1.1	76	1.41	0.076
IVL004-02+00S	Soil		26.4	29.7	85.8	398	0.2	36.9	21.2	2862	6.15	7	2.6	<0.1	48.1	115	0.1	0.6	2.0	94	0.58	0.111
IVL004-02+50S	Soil		38.0	41.7	78.1	311	0.2	36.4	21.7	2531	6.35	6	2.0	<0.1	73.1	97	0.2	0.5	1.9	81	0.50	0.123
IVL004-03+00S	Soil		42.1	73.2	123.0	592	0.4	53.9	37.1	>10000	9.65	10	3.2	<0.1	204.7	452	0.4	0.7	2.5	63	1.50	0.300
IVL004-03+50S	Soil		23.0	28.7	33.7	112	0.2	23.2	10.3	1142	4.88	6	1.8	<0.1	22.1	66	0.2	0.4	0.8	83	0.32	0.128
IVL004-04+00S	Soil		13.8	40.3	72.1	191	0.1	35.3	15.0	993	5.69	14	1.9	<0.1	45.4	120	0.2	0.8	1.2	93	0.63	0.095
IVL004-04+50S	Soil		58.0	22.4	87.9	891	<0.1	32.4	17.1	>10000	6.98	25	1.5	<0.1	46.5	191	0.9	0.4	2.3	76	1.04	0.306
IVL004-05+00S	Soil		54.5	25.8	70.2	1625	0.3	22.5	9.9	>10000	7.94	45	2.7	<0.1	74.5	291	3.6	0.9	1.0	104	1.29	0.603
IVL004-05+50S	Soil		81.3	17.6	81.4	2183	*	23.1	13.5	>10000	9.10	38	1.9	<0.1	82.7	1311	3.9	0.8	1.5	86	2.37	0.714
IVL004-06+00S	Soil		15.3	22.2	60.9	535	0.2	25.5	15.4	7605	5.43	20	2.6	<0.1	41.0	197	0.9	0.5	0.9	113	3.33	0.263
IVL004-06+50S	Soil		10.9	15.6	70.3	393	<0.1	31.3	15.8	5080	5.05	22	3.4	<0.1	39.2	123	0.8	0.7	0.9	118	1.58	0.215
IVL004-07+00S	Soil		2.6	14.1	24.6	132	<0.1	15.8	10.4	1415	2.57	12	2.8	<0.1	24.1	179	0.5	0.7	0.2	61	6.41	0.190
IVL004-07+50S	Soil		1.5	13.8	40.4	154	<0.1	24.9	14.4	582	3.66	28	2.5	<0.1	19.7	186	0.3	0.6	0.4	96	1.48	0.082
IVL004-08+00S	Soil		2.1	12.2	61.4	173	<0.1	23.7	14.4	564	3.93	49	2.4	<0.1	22.9	138	0.5	0.4	0.4	91	1.11	0.106
IVL004-08+50S	Soil		3.9	19.5	63.6	236	<0.1	31.5	17.7	1781	4.69	66	3.8	<0.1	44.6	202	1.1	0.7	0.5	112	1.74	0.167
IVL004-09+00S	Soil		9.9	16.2	47.0	332	<0.1	28.5	12.4	2560	4.29	18	3.2	<0.1	48.1	148	1.5	0.5	0.5	101	1.24	0.244
IVL004-09+50S	Soil		14.1	28.6	66.7	439	<0.1	35.4	16.8	2217	5.11	366	2.2	<0.1	48.6	225	1.4	0.8	0.7	109	1.66	0.232
IVL004-10+00S	Soil		6.3	43.0	47.9	247	<0.1	33.7	21.0	1094	5.05	17	2.1	<0.1	44.3	178	0.6	0.6	0.5	137	2.11	0.197
IVL004-10+50S	Soil		16.8	26.7	67.0	506	<0.1	35.5	17.3	4213	5.86	19	2.7	<0.1	49.3	195	0.7	0.6	0.9	134	1.83	0.205
IVL004-11+00S	Soil		8.7	24.5	56.6	264	<0.1	26.3	15.9	3148	3.97	13	2.0	<0.1	30.6	396	0.8	0.6	0.6	93	6.78	0.217

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Project: ICE RIVER
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CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL003-11+50N	Soil		32.8	33	2.78	283	0.159	3.97	2.059	0.19	1.8	51.0	59	0.7	18.6	21.7	0.4	3	5	50.2	<0.1	11.7
IVL003-12+00N	Soil		61.9	87	1.92	705	0.382	7.73	4.167	1.33	20.0	39.6	137	2.7	49.6	70.5	0.9	10	13	46.4	<0.1	87.3
IVL003-12+50N	Soil		70.9	80	1.24	834	0.524	6.78	3.164	1.02	10.4	44.6	180	3.2	45.0	127.5	1.3	7	12	77.4	<0.1	84.7
IVL003-13+00N	Soil		87.4	61	1.40	4519	0.392	6.74	2.487	1.01	4.0	63.4	801	3.8	42.8	73.4	0.9	7	13	94.1	<0.1	104.9
IVL003-13+50N	Soil		86.8	62	1.15	2135	0.477	7.22	2.534	1.23	6.4	70.5	198	2.4	43.5	76.3	1.0	8	9	97.8	<0.1	59.9
IVL003-14+00N	Soil		75.3	74	1.31	1112	0.519	7.17	3.320	1.01	13.4	59.2	207	3.7	40.7	84.7	1.2	7	11	59.5	<0.1	94.0
IVL003-14+50N	Soil		42.3	84	1.65	454	0.467	8.30	3.106	0.77	10.0	63.8	98	2.8	40.8	63.5	1.1	7	12	76.6	<0.1	21.2
IVL004-00+00	Soil		111.6	78	1.44	1133	0.433	7.63	3.589	1.16	6.0	60.9	258	2.9	43.4	76.6	1.0	8	10	74.2	<0.1	60.1
IVL004-00+50S	Soil		30.9	82	1.40	960	0.521	6.82	3.738	1.26	7.2	62.5	110	2.9	15.5	93.6	1.2	8	6	74.8	<0.1	48.0
IVL004-01+00S	Soil		46.8	59	0.72	665	0.473	5.15	3.455	1.07	6.3	61.0	108	2.9	16.3	63.2	1.0	4	5	28.9	<0.1	70.1
IVL004-01+50S	Soil		68.2	73	1.15	1308	0.406	7.78	3.074	1.20	7.2	52.6	335	2.7	30.7	94.4	1.1	5	9	71.8	<0.1	57.8
IVL004-02+00S	Soil		72.6	78	1.38	1156	0.481	6.76	2.986	1.19	5.7	46.7	354	2.7	15.7	119.9	1.2	4	6	83.0	<0.1	70.0
IVL004-02+50S	Soil		65.0	75	1.29	829	0.454	6.26	3.122	0.98	5.3	47.1	352	3.1	19.8	130.9	1.2	4	6	54.7	<0.1	52.5
IVL004-03+00S	Soil		766.7	75	2.17	>10000	0.347	6.72	1.943	1.22	8.4	21.0	>2000	3.2	105.8	130.1	0.9	4	20	57.4	0.1	115.2
IVL004-03+50S	Soil		41.5	67	0.74	681	0.477	4.26	2.664	1.37	6.1	45.8	188	2.7	6.1	105.8	1.2	2	4	36.7	0.1	65.8
IVL004-04+00S	Soil		110.3	80	1.28	1026	0.496	6.27	3.242	1.23	6.3	55.8	368	2.9	16.3	102.2	1.2	6	7	65.3	<0.1	64.9
IVL004-04+50S	Soil		1477	56	2.54	4051	0.320	6.52	2.796	1.35	3.5	42.8	>2000	2.7	63.5	86.6	0.8	4	7	185.5	<0.1	158.7
IVL004-05+00S	Soil		>2000	42	2.38	890	0.294	6.41	2.221	0.86	2.2	79.9	>2000	5.1	88.3	177.4	0.8	7	9	314.4	<0.1	65.1
IVL004-05+50S	Soil		>2000	50	2.33	7904	0.290	5.73	2.437	0.74	2.1	55.4	>2000	6.5	65.4	314.5	0.7	5	7	241.0	<0.1	50.0
IVL004-06+00S	Soil		732.2	48	2.10	1155	0.387	6.08	2.921	0.88	1.9	89.3	1364	3.1	57.9	58.6	0.9	6	9	266.7	<0.1	59.9
IVL004-06+50S	Soil		520.8	54	2.93	729	0.411	6.42	2.477	0.77	2.4	155.6	1262	2.9	61.1	59.4	1.1	6	9	176.5	<0.1	44.9
IVL004-07+00S	Soil		192.0	34	3.16	509	0.303	4.98	1.302	0.96	1.6	92.0	312	1.4	29.1	43.0	1.0	3	6	70.4	<0.1	55.9
IVL004-07+50S	Soil		119.5	50	2.94	503	0.529	7.41	1.754	0.88	2.4	104.4	244	2.3	20.6	59.7	1.5	4	7	95.6	<0.1	39.7
IVL004-08+00S	Soil		124.3	48	2.57	428	0.458	6.48	1.606	0.81	2.2	98.5	328	2.0	18.3	50.5	1.2	5	5	107.9	<0.1	32.2
IVL004-08+50S	Soil		1194	55	3.11	543	0.574	7.34	1.935	0.86	4.2	146.7	1134	2.3	57.6	78.4	1.8	5	12	97.3	<0.1	62.1
IVL004-09+00S	Soil		1070	51	3.39	705	0.373	7.65	2.304	1.29	2.7	101.2	>2000	3.1	42.7	76.5	1.1	7	11	169.1	<0.1	62.1
IVL004-09+50S	Soil		743.7	58	2.49	691	0.381	7.70	2.752	1.16	3.8	93.2	>2000	3.1	37.9	79.1	1.0	8	11	155.4	<0.1	44.1
IVL004-10+00S	Soil		277.4	45	2.61	548	0.636	7.40	2.587	1.13	3.2	127.4	884	2.9	35.8	74.7	1.6	6	11	148.5	<0.1	44.5
IVL004-10+50S	Soil		1470	55	2.82	778	0.468	7.28	2.824	1.09	3.3	88.9	1622	3.4	94.0	76.8	1.6	6	13	165.2	<0.1	64.5
IVL004-11+00S	Soil		496.8	50	2.55	699	0.362	5.75	1.938	0.97	2.6	73.3	862	2.2	50.3	49.3	0.9	5	9	134.9	<0.1	68.0

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		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL003-11+50N	Soil		1.2
IVL003-12+00N	Soil		1.1
IVL003-12+50N	Soil		1.2
IVL003-13+00N	Soil		2.0
IVL003-13+50N	Soil		1.8
IVL003-14+00N	Soil		1.6
IVL003-14+50N	Soil		1.7
IVL004-00+00	Soil		1.8
IVL004-00+50S	Soil		1.8
IVL004-01+00S	Soil		1.6
IVL004-01+50S	Soil		1.6
IVL004-02+00S	Soil		1.4
IVL004-02+50S	Soil		1.4
IVL004-03+00S	Soil		0.6
IVL004-03+50S	Soil		1.4
IVL004-04+00S	Soil		1.6
IVL004-04+50S	Soil		1.1
IVL004-05+00S	Soil		2.8
IVL004-05+50S	Soil		1.4
IVL004-06+00S	Soil		2.6
IVL004-06+50S	Soil		2.8
IVL004-07+00S	Soil		2.2
IVL004-07+50S	Soil		2.9
IVL004-08+00S	Soil		2.7
IVL004-08+50S	Soil		3.8
IVL004-09+00S	Soil		2.9
IVL004-09+50S	Soil		2.7
IVL004-10+00S	Soil		3.5
IVL004-10+50S	Soil		2.9
IVL004-11+00S	Soil		2.1

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Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL004-11+50S	Soil		2.8	29.9	39.0	106	<0.1	22.5	17.4	1524	3.91	11	2.3	<0.1	27.0	173	0.4	0.6	0.3	114	2.00	0.183
IVL004-12+00S	Soil		3.8	25.5	75.9	310	<0.1	28.9	16.5	2701	3.95	16	2.2	<0.1	36.3	404	1.1	0.6	0.3	103	4.15	0.298
IVL004-12+50S	Soil		3.8	20.9	45.2	366	<0.1	23.2	15.1	3245	3.79	10	2.7	<0.1	41.3	399	1.6	0.6	0.3	96	3.48	0.346
IVL004-13+00S	Soil		2.1	24.9	31.6	83	<0.1	20.2	16.4	744	4.27	9	2.8	<0.1	23.1	162	0.3	0.5	0.3	114	2.21	0.235
IVL004-13+50S	Soil		2.5	49.2	86.8	195	0.2	31.2	27.1	1776	5.09	14	5.0	<0.1	78.1	596	0.7	0.6	0.3	116	9.04	0.234
IVL004-14+00S	Soil		1.8	13.1	27.9	58	<0.1	19.2	10.5	492	3.54	9	2.9	<0.1	20.2	116	0.3	0.5	0.3	111	0.87	0.149
IVL004-14+50S	Soil		0.7	17.6	27.0	60	<0.1	14.9	9.6	594	2.11	8	2.8	<0.1	11.5	351	0.6	0.6	0.1	56	8.22	0.236
IVL004-15+00S	Soil		0.4	11.1	38.9	63	<0.1	10.5	6.8	293	1.42	3	1.5	<0.1	7.7	803	0.6	0.5	0.2	33	25.32	0.106
IVL004-15+50S	Soil		1.2	12.6	29.2	99	<0.1	14.0	10.0	629	2.59	6	2.2	<0.1	12.9	202	0.4	0.4	0.2	69	1.73	0.213
IVL004-16+00S	Soil		0.8	17.9	25.3	108	<0.1	17.2	11.6	608	2.27	10	2.8	<0.1	13.1	308	0.7	0.6	0.2	63	8.54	0.244
IVL004-16+50S	Soil		0.8	18.4	32.8	74	<0.1	19.2	11.6	310	3.45	11	3.2	<0.1	17.4	125	0.3	0.4	0.2	90	0.78	0.086
IVL004-17+00S	Soil		1.0	16.1	35.8	83	<0.1	22.8	14.5	1207	3.49	14	2.6	<0.1	19.4	149	0.4	0.6	0.2	101	1.79	0.192
IVL005-00+00	Soil		0.4	10.9	20.8	51	<0.1	13.4	7.3	527	1.87	6	2.2	<0.1	9.4	550	0.3	0.5	0.1	50	18.63	0.141
IVL005-00+50S	Soil		0.6	22.2	38.9	107	<0.1	29.5	16.7	767	3.95	18	4.3	<0.1	23.1	183	0.5	0.8	0.2	110	3.15	0.175
IVL005-01+00S	Soil		1.2	28.5	188.0	237	<0.1	22.0	16.4	1388	4.06	18	3.1	<0.1	30.0	170	0.8	1.2	0.3	114	1.91	0.233
IVL005-01+50S	Soil		0.4	16.6	26.6	104	<0.1	24.8	13.5	770	3.80	14	4.4	<0.1	20.0	125	0.4	0.6	0.2	107	1.49	0.183
IVL005-02+00S	Soil		0.6	21.8	35.5	126	<0.1	29.2	13.3	925	3.59	14	3.7	<0.1	18.5	147	0.7	0.8	0.2	100	1.84	0.192
IVL005-02+50S	Soil		0.7	22.1	41.0	132	<0.1	21.4	12.5	1010	3.01	12	3.8	<0.1	15.9	188	0.9	0.8	0.3	86	2.73	0.304
IVL005-03+00S	Soil		0.8	9.2	20.8	54	<0.1	8.9	5.9	468	1.44	9	1.6	<0.1	10.1	666	0.4	0.4	0.2	35	20.47	0.132
IVL006-00+00	Soil		0.5	8.6	31.0	52	<0.1	10.9	6.8	348	1.32	9	1.4	<0.1	20.2	812	0.4	0.5	0.2	29	25.48	0.080
IVL006-00+50N	Soil		0.5	8.9	31.5	67	<0.1	15.4	9.1	412	2.23	13	2.2	<0.1	13.7	371	0.3	0.6	0.2	59	14.32	0.096
IVL006-01+00N	Soil		0.6	11.4	28.3	87	<0.1	24.0	12.8	555	3.68	20	3.6	<0.1	22.8	125	0.4	0.6	0.2	96	2.32	0.046
IVL006-01+50N	Soil		0.7	11.4	80.4	109	<0.1	28.5	14.4	331	4.01	12	2.9	<0.1	17.5	120	0.5	0.6	0.2	107	1.27	0.030
IVL006-02+00N	Soil		0.9	10.4	41.0	100	0.1	26.5	14.4	279	4.08	10	2.5	<0.1	12.3	137	0.4	0.5	0.3	117	1.22	0.047
IVL006-02+50N	Soil		0.4	6.9	22.0	52	<0.1	8.3	5.1	527	1.21	5	1.4	<0.1	6.6	396	0.3	0.4	0.1	32	19.35	0.093
IVL006-03+00N	Soil		0.8	14.2	39.6	90	<0.1	32.2	17.4	310	4.22	15	3.6	<0.1	22.8	148	0.4	0.6	0.3	105	1.31	0.066
IVL006-03+50N	Soil		0.5	8.7	17.8	42	<0.1	13.9	7.4	419	1.82	8	1.7	<0.1	13.7	296	0.1	0.4	0.1	51	11.14	0.115
IVL006-04+00N	Soil		0.5	11.8	34.9	52	<0.1	17.1	9.4	539	2.37	8	2.5	<0.1	13.9	203	0.3	0.4	0.2	67	6.33	0.159
IVL006-04+50N	Soil		0.4	6.3	20.3	26	<0.1	7.4	4.6	256	0.82	8	1.1	<0.1	7.9	474	<0.1	0.5	<0.1	26	24.54	0.099
IVL006-05+00N	Soil		0.6	16.8	21.3	55	<0.1	16.9	10.5	491	2.06	7	2.1	<0.1	15.2	284	0.2	0.4	0.1	50	8.14	0.273

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CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL004-11+50S	Soil		144.3	44	2.26	571	0.605	6.20	1.541	1.04	2.7	105.6	245	2.0	25.0	55.6	1.5	3	8	68.6	<0.1	68.2
IVL004-12+00S	Soil		456.5	59	3.59	547	0.450	5.51	2.275	0.83	3.4	82.2	717	2.5	45.4	78.3	1.1	6	9	117.9	<0.1	102.2
IVL004-12+50S	Soil		880.3	46	4.13	448	0.407	5.83	2.514	0.79	3.8	80.5	1117	2.2	49.9	74.8	1.2	6	10	127.2	<0.1	63.0
IVL004-13+00S	Soil		45.3	42	1.69	417	0.644	5.58	1.184	0.90	2.5	121.6	102	2.0	18.7	56.5	2.0	3	8	56.5	0.1	52.1
IVL004-13+50S	Soil		122.3	41	2.37	1495	0.749	7.07	2.074	1.90	3.7	109.3	226	2.2	43.3	110.7	3.6	4	10	78.7	<0.1	132.3
IVL004-14+00S	Soil		31.2	44	2.19	522	0.522	6.05	2.236	1.38	2.9	122.2	68	1.9	12.1	44.5	1.4	4	5	55.3	<0.1	69.9
IVL004-14+50S	Soil		29.4	34	3.25	257	0.284	3.39	1.041	0.55	1.7	73.0	53	1.0	17.8	24.5	0.8	2	6	42.8	0.2	36.5
IVL004-15+00S	Soil		23.2	19	2.11	161	0.213	1.89	0.462	0.38	1.3	48.4	42	0.8	11.1	18.2	0.6	<1	3	26.1	<0.1	23.1
IVL004-15+50S	Soil		30.0	40	2.02	445	0.387	5.31	1.219	0.90	1.6	96.3	65	1.1	16.5	29.5	1.1	2	6	41.8	0.2	41.4
IVL004-16+00S	Soil		42.5	39	3.07	249	0.308	3.52	0.898	0.61	1.9	81.8	74	0.9	19.4	28.3	0.8	2	6	46.9	0.2	49.0
IVL004-16+50S	Soil		32.8	43	1.80	492	0.444	5.44	1.774	1.20	2.0	102.3	85	1.8	13.3	44.3	1.1	3	5	69.2	<0.1	57.4
IVL004-17+00S	Soil		41.1	51	2.36	456	0.435	6.60	2.061	0.99	2.9	118.2	80	1.6	25.8	38.9	1.1	4	8	75.0	<0.1	46.1
IVL005-00+00	Soil		21.9	31	2.47	240	0.227	2.99	0.720	0.50	1.4	63.3	39	0.9	12.6	17.3	0.6	2	4	40.4	<0.1	35.7
IVL005-00+50S	Soil		57.4	55	3.12	351	0.507	6.47	1.772	0.75	2.9	137.9	99	2.1	37.6	48.5	1.6	4	11	87.3	<0.1	57.0
IVL005-01+00S	Soil		48.1	44	2.56	438	0.529	6.39	2.149	0.81	2.9	130.4	95	1.5	35.5	60.9	1.8	4	11	99.9	0.1	53.2
IVL005-01+50S	Soil		57.2	50	4.67	299	0.513	7.03	1.416	0.72	2.4	138.3	106	1.8	31.4	37.9	1.4	3	10	95.9	<0.1	44.7
IVL005-02+00S	Soil		45.6	63	3.26	349	0.423	6.12	1.295	0.94	2.0	120.7	85	1.5	27.7	31.2	1.2	3	9	73.4	<0.1	60.4
IVL005-02+50S	Soil		36.3	54	3.26	379	0.444	5.13	1.098	0.99	2.6	108.5	64	1.6	22.6	36.7	1.3	3	8	55.2	0.1	83.9
IVL005-03+00S	Soil		20.4	18	2.24	166	0.142	2.60	0.818	0.40	1.0	48.6	33	0.5	10.8	18.1	0.5	3	4	29.6	<0.1	24.9
IVL006-00+00	Soil		34.0	17	1.80	161	0.146	1.85	0.496	0.25	1.5	28.2	60	0.6	12.1	15.8	0.5	1	3	19.6	<0.1	13.7
IVL006-00+50N	Soil		34.6	28	2.06	251	0.252	3.74	0.898	0.55	1.3	68.8	64	0.8	17.3	21.7	0.7	2	6	47.3	<0.1	34.4
IVL006-01+00N	Soil		44.2	47	2.94	401	0.391	6.18	1.712	0.84	2.1	115.3	90	1.5	26.0	54.4	1.1	4	8	90.5	<0.1	45.8
IVL006-01+50N	Soil		37.2	50	3.16	342	0.435	6.70	1.314	0.87	2.1	122.0	88	1.7	23.8	39.6	1.3	4	8	80.2	<0.1	40.1
IVL006-02+00N	Soil		19.7	50	2.84	316	0.516	6.52	1.319	0.81	1.8	114.1	48	2.0	10.8	40.9	1.4	3	6	85.1	<0.1	28.1
IVL006-02+50N	Soil		12.6	16	1.12	126	0.120	1.88	0.579	0.23	0.8	36.0	24	0.4	7.9	10.4	0.4	1	3	24.6	<0.1	17.6
IVL006-03+00N	Soil		49.8	60	2.11	352	0.452	7.81	1.919	0.98	2.6	114.1	117	3.4	23.5	76.6	1.2	4	9	75.7	<0.1	55.2
IVL006-03+50N	Soil		24.4	26	1.98	419	0.236	4.24	1.306	0.71	1.3	66.2	52	0.7	15.2	25.9	0.7	3	5	40.0	<0.1	38.1
IVL006-04+00N	Soil		29.8	40	2.60	414	0.267	4.73	0.950	0.70	1.6	108.5	55	1.0	18.5	25.1	0.9	2	6	44.7	<0.1	44.7
IVL006-04+50N	Soil		12.3	15	1.28	261	0.124	1.56	0.382	0.37	1.0	34.0	26	0.3	6.9	11.6	0.3	1	2	19.7	<0.1	21.4
IVL006-05+00N	Soil		29.6	34	2.47	449	0.255	3.81	0.698	0.74	1.2	78.0	57	0.9	13.7	24.0	0.8	2	5	38.1	<0.1	50.9

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CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL004-11+50S	Soil		2.9
IVL004-12+00S	Soil		2.0
IVL004-12+50S	Soil		2.2
IVL004-13+00S	Soil		3.0
IVL004-13+50S	Soil		2.9
IVL004-14+00S	Soil		3.2
IVL004-14+50S	Soil		1.8
IVL004-15+00S	Soil		1.1
IVL004-15+50S	Soil		2.5
IVL004-16+00S	Soil		1.9
IVL004-16+50S	Soil		2.5
IVL004-17+00S	Soil		3.1
IVL005-00+00	Soil		1.6
IVL005-00+50S	Soil		3.3
IVL005-01+00S	Soil		2.7
IVL005-01+50S	Soil		3.5
IVL005-02+00S	Soil		3.2
IVL005-02+50S	Soil		2.8
IVL005-03+00S	Soil		1.3
IVL006-00+00	Soil		0.7
IVL006-00+50N	Soil		1.9
IVL006-01+00N	Soil		3.0
IVL006-01+50N	Soil		3.2
IVL006-02+00N	Soil		2.9
IVL006-02+50N	Soil		1.1
IVL006-03+00N	Soil		3.0
IVL006-03+50N	Soil		1.7
IVL006-04+00N	Soil		2.5
IVL006-04+50N	Soil		0.8
IVL006-05+00N	Soil		1.9

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL006-05+50N	Soil		0.9	14.2	21.2	49	0.2	27.3	12.4	473	2.55	10	2.3	<0.1	13.7	227	0.3	0.4	0.2	68	6.98	0.115
IVL006-06+00N	Soil		0.6	9.8	14.7	50	<0.1	13.7	6.8	269	1.49	7	1.9	<0.1	10.0	430	0.2	0.2	<0.1	44	15.62	0.136
IVL006-06+50N	Soil		0.5	8.2	19.3	51	<0.1	11.4	6.9	418	1.61	7	1.8	<0.1	8.3	424	0.2	0.4	<0.1	43	15.58	0.122
IVL006-07+00N	Soil		0.4	9.6	19.5	35	<0.1	10.4	6.4	221	1.36	5	1.4	<0.1	8.7	693	0.2	0.3	0.1	37	20.81	0.081
IVL006-07+50N	Soil		0.8	16.0	23.8	112	0.1	12.4	8.6	499	1.83	10	1.8	<0.1	9.0	313	0.9	0.5	0.2	46	10.71	0.177
IVL006-08+00N	Soil		0.7	13.2	21.8	76	0.1	12.4	8.7	447	1.78	8	2.7	<0.1	10.9	453	0.3	0.4	0.1	51	17.36	0.164
IVL007-00+00	Soil		1.4	17.9	33.4	31	<0.1	9.5	4.1	161	1.86	7	2.9	<0.1	13.1	108	0.1	0.4	0.3	85	0.49	0.074
IVL007-00+50S	Soil		0.4	12.9	20.3	60	<0.1	19.4	11.5	508	3.06	25	1.2	<0.1	13.9	138	0.2	0.3	0.2	75	3.06	0.131
IVL007-01+00S	Soil		0.3	7.4	17.6	34	<0.1	16.4	10.8	472	2.29	17	1.7	<0.1	15.1	410	0.1	0.2	0.1	54	13.40	0.136
IVL007-01+50S	Soil		0.7	10.3	41.5	73	<0.1	23.8	13.1	902	3.39	15	2.3	<0.1	16.9	100	0.4	0.5	0.2	88	1.42	0.136
IVL007-02+00S	Soil		0.5	9.3	65.3	231	0.1	17.7	12.0	424	3.54	11	3.1	<0.1	36.7	77	0.4	0.3	0.2	68	0.87	0.105
IVL007-02+50S	Soil		0.4	9.0	20.9	43	<0.1	20.0	11.4	293	2.71	9	2.0	<0.1	17.5	293	0.2	0.4	0.2	66	8.84	0.071
IVL007-03+00S	Soil		0.7	9.5	34.5	64	0.2	24.2	11.9	358	3.48	9	3.5	<0.1	20.9	99	0.2	0.5	0.2	92	1.47	0.069
IVL007-03+50S	Soil		0.5	10.2	28.6	42	<0.1	20.3	10.7	367	2.42	12	2.3	<0.1	15.1	335	0.1	0.4	0.1	65	12.50	0.098
IVL007-04+00S	Soil		0.3	10.6	13.0	32	<0.1	10.6	7.0	320	1.34	9	1.4	<0.1	9.4	585	<0.1	0.3	<0.1	37	23.30	0.087
IVL008-00+00	Soil		1.8	30.0	26.9	77	0.5	18.7	21.1	1334	7.85	25	2.9	<0.1	22.0	339	0.3	1.0	0.3	297	7.14	0.351
IVL008-00+50S	Soil		1.2	45.3	31.1	77	0.3	25.3	26.3	1361	9.06	25	2.5	<0.1	22.7	431	0.3	1.0	0.2	348	9.00	0.478
IVL008-01+00S	Soil		2.7	39.5	35.1	101	0.4	25.4	34.3	1770	8.88	50	3.8	<0.1	24.7	365	0.2	1.2	0.3	307	7.54	0.423
IVL008-01+50S	Soil		2.3	118.9	75.6	150	0.2	24.0	23.4	1972	3.96	140	22.5	<0.1	48.5	340	0.6	2.1	0.6	111	4.69	0.331
IVL008-02+00S	Soil		1.6	54.5	34.8	101	0.2	25.9	27.3	1353	8.54	14	3.7	<0.1	29.9	498	0.2	0.8	0.2	304	8.36	0.553
IVL008-02+50S	Soil		1.3	34.9	26.8	85	0.4	21.3	23.6	1291	8.30	16	3.6	<0.1	22.5	351	0.2	1.0	0.2	332	8.60	0.361
IVL008-03+00S	Soil		1.2	86.7	27.8	132	0.3	25.1	40.7	1739	8.86	41	7.3	<0.1	39.8	449	0.3	0.9	0.1	334	10.29	0.576
IVL008-03+50S	Soil		2.7	49.4	42.4	243	0.2	24.6	34.1	2370	6.92	37	5.6	<0.1	25.9	298	0.5	0.7	0.3	205	5.28	0.549
IVL008-04+00S	Soil		1.6	22.0	31.8	94	0.1	16.5	17.1	1553	6.37	12	3.2	<0.1	22.6	350	0.2	1.0	0.3	232	5.99	0.276
IVL008-04+50S	Soil		1.9	26.6	49.5	92	0.2	21.3	18.1	1182	6.03	15	2.6	<0.1	20.7	321	0.2	1.2	0.4	186	4.36	0.193
IVL008-05+00S	Soil		1.6	22.7	33.6	63	0.2	15.4	12.7	803	6.19	13	3.2	<0.1	18.0	302	0.3	1.2	0.4	207	5.00	0.185
IVL008-05+50S	Soil		1.6	24.7	34.5	73	<0.1	15.6	14.2	935	6.24	15	3.0	<0.1	23.1	298	0.2	1.3	0.4	202	4.69	0.249
IVL008-06+00S	Soil		1.1	74.7	39.0	130	0.2	31.8	28.4	1622	7.93	15	3.4	<0.1	72.0	592	0.2	1.5	0.3	286	10.33	0.413
IVL009-00+50N	Soil		1.8	25.9	43.4	105	<0.1	20.7	18.5	1070	6.10	19	2.6	<0.1	45.9	306	0.3	1.7	0.4	169	4.07	0.193
IVL009-01+00N	Soil		2.0	33.1	51.1	126	0.2	23.7	25.5	1755	6.72	17	2.8	<0.1	24.3	341	0.3	1.4	0.3	198	4.89	0.297

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Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL006-05+50N	Soil		38.1	55	2.46	365	0.339	4.40	1.278	0.53	1.4	83.2	73	1.0	15.3	25.4	1.0	2	6	49.5	<0.1	28.3
IVL006-06+00N	Soil		18.7	30	2.52	309	0.228	3.25	0.523	0.42	1.3	70.8	35	0.5	9.8	18.5	0.8	2	4	28.6	<0.1	23.2
IVL006-06+50N	Soil		21.2	24	2.08	239	0.206	2.82	0.633	0.40	0.9	60.6	40	0.6	12.8	19.1	0.6	1	4	38.9	<0.1	23.4
IVL006-07+00N	Soil		17.2	17	2.68	285	0.194	2.91	0.619	0.40	1.4	53.9	30	0.8	8.5	15.3	0.7	1	3	20.1	<0.1	18.7
IVL006-07+50N	Soil		22.2	23	2.21	216	0.208	2.40	0.730	0.36	0.9	51.7	45	0.7	13.2	17.4	0.6	1	4	33.1	<0.1	25.9
IVL006-08+00N	Soil		27.0	25	2.75	219	0.203	2.57	0.788	0.42	1.3	54.8	47	0.6	15.4	26.2	0.7	2	4	42.1	<0.1	29.4
IVL007-00+00	Soil		23.6	35	0.69	496	0.477	4.61	2.144	1.51	1.9	128.9	50	2.3	8.4	35.9	1.2	2	4	43.0	<0.1	58.2
IVL007-00+50S	Soil		34.6	48	2.08	448	0.319	6.42	1.646	1.27	1.8	89.3	65	1.6	18.5	28.1	0.8	3	7	48.3	<0.1	46.9
IVL007-01+00S	Soil		38.1	32	2.02	358	0.209	4.74	1.032	1.05	1.3	78.2	64	1.1	25.0	14.7	0.6	2	8	40.2	<0.1	56.6
IVL007-01+50S	Soil		42.0	49	2.68	450	0.334	6.53	1.950	1.02	2.1	102.4	78	1.1	25.4	31.7	1.0	4	8	64.7	<0.1	44.0
IVL007-02+00S	Soil		46.3	44	1.41	418	0.242	6.61	1.370	1.46	1.2	93.0	152	1.2	21.6	32.3	0.6	3	5	55.8	<0.1	59.1
IVL007-02+50S	Soil		51.2	36	1.82	421	0.253	6.00	1.342	1.35	1.3	97.0	89	1.2	29.3	20.0	0.7	3	9	45.2	<0.1	68.2
IVL007-03+00S	Soil		50.6	48	1.96	512	0.439	8.36	1.959	1.48	1.8	123.3	96	1.5	28.1	33.4	1.3	4	8	72.6	<0.1	82.5
IVL007-03+50S	Soil		43.8	36	2.08	355	0.240	5.12	1.328	1.09	1.3	87.9	70	0.9	25.1	32.6	0.7	2	8	54.4	<0.1	51.9
IVL007-04+00S	Soil		28.6	24	1.32	239	0.145	2.46	0.528	0.69	0.7	39.7	52	0.6	10.1	14.4	0.4	1	4	21.3	<0.1	33.3
IVL008-00+00	Soil		84.3	45	2.48	432	2.664	4.70	1.368	0.89	2.2	398.6	189	4.5	36.9	140.4	6.9	2	16	39.1	<0.1	64.9
IVL008-00+50S	Soil		95.4	48	3.14	495	3.025	4.06	1.138	0.69	2.1	417.4	215	4.4	40.2	145.0	5.5	3	19	35.1	<0.1	40.9
IVL008-01+00S	Soil		91.5	49	2.75	436	2.709	4.83	1.261	0.85	2.3	370.3	210	4.4	38.6	136.4	6.7	3	17	46.3	<0.1	73.7
IVL008-01+50S	Soil		229.7	58	1.41	391	0.747	5.14	1.792	0.90	7.1	122.2	136	1.8	141.2	89.1	2.1	19	11	44.7	0.1	76.4
IVL008-02+00S	Soil		108.6	42	2.76	572	2.590	5.10	1.319	0.95	6.7	408.5	235	3.9	40.4	144.8	7.2	3	15	43.1	<0.1	53.8
IVL008-02+50S	Soil		101.3	38	3.05	492	3.337	4.48	1.223	0.82	2.2	417.0	228	4.6	37.3	152.8	8.5	3	19	33.5	<0.1	59.4
IVL008-03+00S	Soil		132.4	33	3.24	410	2.933	4.00	0.938	0.54	2.0	469.9	252	4.1	59.4	119.7	3.0	3	16	42.6	<0.1	44.9
IVL008-03+50S	Soil		80.9	41	2.25	545	1.728	6.42	1.298	0.99	2.1	276.5	176	2.3	38.0	71.7	3.6	4	14	58.4	<0.1	86.7
IVL008-04+00S	Soil		80.2	45	1.94	622	2.153	5.96	1.756	1.37	2.3	293.7	172	3.7	29.1	124.5	5.8	2	14	38.8	<0.1	127.6
IVL008-04+50S	Soil		65.2	51	1.79	585	1.449	5.95	1.671	1.36	2.7	228.8	129	3.4	24.5	89.8	3.7	3	12	52.8	<0.1	88.5
IVL008-05+00S	Soil		63.1	42	1.67	481	1.771	5.68	1.641	1.26	3.1	268.1	129	3.5	24.7	104.0	4.6	3	12	32.5	<0.1	57.5
IVL008-05+50S	Soil		69.5	43	1.59	506	1.743	5.70	1.621	1.27	3.3	258.9	143	3.9	27.7	109.8	4.8	2	11	34.9	<0.1	73.1
IVL008-06+00S	Soil		121.0	32	2.62	673	2.507	4.84	1.608	1.01	2.3	287.7	253	1.9	48.6	107.1	4.1	4	18	49.4	<0.1	67.1
IVL009-00+50N	Soil		62.1	44	1.55	498	1.414	5.83	1.604	1.24	2.6	224.9	131	3.4	24.6	95.9	3.7	4	11	48.7	<0.1	74.3
IVL009-01+00N	Soil		74.0	42	1.70	576	1.648	5.74	1.579	1.06	2.6	256.3	159	3.3	27.4	105.0	4.1	3	12	50.6	<0.1	73.6

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CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL006-05+50N	Soil		2.1
IVL006-06+00N	Soil		1.9
IVL006-06+50N	Soil		1.5
IVL006-07+00N	Soil		1.5
IVL006-07+50N	Soil		1.3
IVL006-08+00N	Soil		1.4
IVL007-00+00	Soil		3.5
IVL007-00+50S	Soil		2.4
IVL007-01+00S	Soil		2.1
IVL007-01+50S	Soil		2.7
IVL007-02+00S	Soil		2.5
IVL007-02+50S	Soil		2.6
IVL007-03+00S	Soil		3.4
IVL007-03+50S	Soil		2.4
IVL007-04+00S	Soil		1.1
IVL008-00+00	Soil		12.6
IVL008-00+50S	Soil		13.7
IVL008-01+00S	Soil		11.7
IVL008-01+50S	Soil		3.5
IVL008-02+00S	Soil		11.9
IVL008-02+50S	Soil		13.7
IVL008-03+00S	Soil		14.6
IVL008-03+50S	Soil		8.6
IVL008-04+00S	Soil		9.5
IVL008-04+50S	Soil		7.4
IVL008-05+00S	Soil		8.3
IVL008-05+50S	Soil		8.1
IVL008-06+00S	Soil		9.3
IVL009-00+50N	Soil		6.5
IVL009-01+00N	Soil		7.5

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL009-01+50N	Soil		4.8	40.2	49.5	236	0.1	31.7	28.3	1654	5.42	140	10.2	<0.1	24.2	299	0.4	2.1	0.4	143	4.24	0.340
IVL009-02+00N	Soil		2.1	29.0	29.0	121	<0.1	18.1	17.4	2101	5.26	12	3.6	<0.1	25.7	289	0.3	1.3	0.4	166	3.97	0.221
IVL009-02+50N	Soil		2.3	25.7	37.6	98	0.2	14.1	14.4	1962	4.40	10	2.5	<0.1	16.9	254	0.3	1.0	0.6	132	2.52	0.187
IVL009-03+00N	Soil		2.4	19.9	40.8	113	0.1	14.1	12.7	1675	4.41	14	2.2	<0.1	16.4	246	0.1	0.8	0.6	126	2.31	0.149
IVL009-03+50N	Soil		2.4	26.2	54.8	184	<0.1	24.4	20.7	1575	5.13	18	2.5	<0.1	22.3	325	0.3	1.1	0.5	112	3.34	0.284
IVL009-04+00N	Soil		1.8	20.2	40.7	161	<0.1	20.1	17.8	1890	3.94	18	4.1	<0.1	31.9	424	0.3	1.6	0.4	96	4.69	0.247
IVL009-04+50N	Soil		2.7	20.5	103.1	222	<0.1	29.4	24.9	1841	5.02	26	3.9	<0.1	44.2	322	0.6	2.3	0.6	121	4.11	0.198
IVL009-05+00N	Soil		2.4	24.6	86.6	232	0.1	40.3	31.8	1990	5.03	31	4.4	<0.1	38.8	317	0.6	2.9	0.6	119	4.33	0.165
IVL009-05+50N	Soil		1.9	18.7	70.4	264	0.1	25.0	25.7	2099	5.30	20	2.5	<0.1	30.5	282	0.3	1.4	0.7	104	3.75	0.308
IVL009-06+00N	Soil		2.6	22.8	48.7	169	0.1	33.6	19.6	1264	5.65	22	1.9	<0.1	25.7	348	0.2	2.2	0.5	132	3.74	0.107
IVL009-06+50N	Soil		3.1	21.7	44.2	118	<0.1	17.6	15.2	1224	4.71	12	2.3	<0.1	21.0	247	0.3	1.2	0.5	114	2.36	0.127
IVL009-07+00N	Soil		2.9	29.1	80.1	221	<0.1	33.6	25.2	1725	4.65	23	2.5	<0.1	69.2	387	0.6	1.7	0.4	99	2.11	0.204
IVL009-07+50N	Soil		2.1	37.4	94.5	149	<0.1	30.9	24.4	1539	4.59	15	2.6	<0.1	22.9	241	0.4	1.1	0.4	103	3.53	0.249
GHIVD-048	Soil		1.3	93.1	174.4	270	0.1	50.4	42.9	1608	6.84	54	2.6	<0.1	40.9	251	1.0	2.8	0.4	200	4.93	0.315

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL009-01+50N	Soil		67.3	52	1.75	510	1.056	6.28	1.404	1.15	5.4	208.8	135	2.4	35.6	71.9	2.7	5	11	83.8	<0.1	96.6
IVL009-02+00N	Soil		64.1	47	1.39	616	1.485	6.53	1.795	1.45	3.2	239.2	128	3.3	26.0	100.9	4.3	3	11	48.6	<0.1	98.3
IVL009-02+50N	Soil		39.8	40	0.89	676	1.045	5.70	2.073	1.58	3.6	191.4	79	3.2	19.2	70.8	2.7	3	9	32.8	<0.1	84.3
IVL009-03+00N	Soil		35.0	41	0.98	615	0.958	6.11	2.204	1.55	2.8	187.2	71	2.9	18.2	64.3	2.2	3	9	38.5	<0.1	69.2
IVL009-03+50N	Soil		44.5	44	1.33	515	0.762	6.21	1.975	1.18	7.3	153.1	85	2.2	23.6	54.8	2.1	4	9	40.7	<0.1	83.0
IVL009-04+00N	Soil		73.0	42	1.43	464	0.659	5.70	1.982	1.13	4.5	158.3	135	2.4	34.3	84.8	1.8	6	10	46.7	<0.1	63.8
IVL009-04+50N	Soil		77.5	77	1.56	548	0.802	6.79	2.393	1.35	4.2	143.4	147	2.1	29.8	92.2	2.2	7	11	61.4	<0.1	94.8
IVL009-05+00N	Soil		65.0	107	1.68	680	0.827	6.39	2.143	1.30	4.6	134.9	133	2.7	28.3	96.8	2.5	11	11	70.9	<0.1	86.9
IVL009-05+50N	Soil		52.7	47	1.18	689	0.743	5.70	1.628	1.13	2.5	132.3	114	2.1	25.8	53.4	1.9	5	9	45.2	<0.1	74.5
IVL009-06+00N	Soil		47.0	72	1.35	562	0.826	6.47	1.888	1.39	4.1	122.0	105	2.3	24.1	66.8	2.1	4	9	62.5	<0.1	53.1
IVL009-06+50N	Soil		42.5	45	1.01	500	0.813	6.01	2.023	1.30	3.0	167.2	83	2.5	20.0	50.9	1.8	3	8	46.4	<0.1	67.8
IVL009-07+00N	Soil		187.2	68	1.61	488	0.559	6.74	2.823	1.21	3.1	87.1	324	2.1	38.3	58.2	1.4	7	9	65.1	<0.1	62.1
IVL009-07+50N	Soil		60.0	50	1.42	637	0.732	6.12	1.368	1.05	2.3	154.7	125	2.1	26.9	47.3	1.8	4	9	40.8	<0.1	60.0
GHIVD-048	Soil		128.3	53	3.34	533	1.640	7.68	1.356	1.35	5.9	204.7	263	2.4	41.7	78.3	3.4	3	21	89.0	<0.1	77.8

Acme Analytical Laboratories (Vancouver) Ltd.
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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: September 20, 2009

CERTIFICATE OF ANALYSIS VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL009-01+50N	Soil		5.7
IVL009-02+00N	Soil		6.9
IVL009-02+50N	Soil		5.6
IVL009-03+00N	Soil		5.1
IVL009-03+50N	Soil		4.3
IVL009-04+00N	Soil		3.9
IVL009-04+50N	Soil		3.8
IVL009-05+00N	Soil		3.7
IVL009-05+50N	Soil		3.9
IVL009-06+00N	Soil		3.4
IVL009-06+50N	Soil		4.5
IVL009-07+00N	Soil		2.4
IVL009-07+50N	Soil		4.5
GHIVD-048	Soil		6.7

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QUALITY CONTROL REPORT VAN09004196.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
Pulp Duplicates																					
IVL002-08+50N	Soil	4.1	19.9	62.8	186	<0.1	22.8	13.9	2338	3.76	16	2.3	<0.1	30.3	165	0.6	0.7	0.6	98	3.12	0.243
REP IVL002-08+50N	QC	4.2	19.9	62.7	190	<0.1	21.6	14.3	2362	3.92	16	2.4	<0.1	43.5	176	0.8	0.6	0.7	96	3.11	0.263
IVL003-05+00N	Soil	20.1	22.7	59.6	554	<0.1	23.3	14.0	8382	5.28	22	2.2	<0.1	37.9	325	1.3	0.7	0.6	105	3.80	0.372
REP IVL003-05+00N	QC	19.0	24.1	62.0	559	0.1	23.4	14.3	8900	5.60	22	2.4	<0.1	37.9	315	1.6	0.6	0.7	117	3.79	0.398
IVL005-00+50S	Soil	0.6	22.2	38.9	107	<0.1	29.5	16.7	767	3.95	18	4.3	<0.1	23.1	183	0.5	0.8	0.2	110	3.15	0.175
REP IVL005-00+50S	QC	0.7	21.3	39.6	107	<0.1	27.8	16.0	754	3.86	18	4.1	<0.1	24.4	182	0.6	0.8	0.2	112	3.28	0.183
IVL007-03+00S	Soil	0.7	9.5	34.5	64	0.2	24.2	11.9	358	3.48	9	3.5	<0.1	20.9	99	0.2	0.5	0.2	92	1.47	0.069
REP IVL007-03+00S	QC	0.6	9.9	37.5	64	<0.1	25.2	11.8	363	3.51	9	2.8	<0.1	17.7	96	0.3	0.5	0.2	95	1.35	0.067
IVL009-04+50N	Soil	2.7	20.5	103.1	222	<0.1	29.4	24.9	1841	5.02	26	3.9	<0.1	44.2	322	0.6	2.3	0.6	121	4.11	0.198
REP IVL009-04+50N	QC	2.8	22.1	106.1	232	<0.1	30.1	25.8	1861	5.11	26	4.0	<0.1	45.7	328	0.6	2.2	0.7	126	4.23	0.217
Reference Materials																					
STD OREAS24P	Standard	1.4	46.8	2.6	106	<0.1	138.7	44.1	1068	7.36	1	0.6	<0.1	2.7	349	0.3	<0.1	<0.1	159	5.44	0.126
STD OREAS24P	Standard	1.2	51.8	2.7	116	<0.1	150.8	48.8	1123	8.03	<1	0.6	<0.1	2.8	366	0.2	<0.1	<0.1	172	5.89	0.138
STD OREAS24P	Standard	1.7	49.6	2.7	119	<0.1	140.0	44.2	1039	7.48	2	0.7	<0.1	2.7	370	0.2	<0.1	<0.1	148	5.33	0.141
STD OREAS24P	Standard	1.3	49.4	2.7	119	<0.1	140.5	45.8	1060	7.55	<1	0.7	<0.1	2.7	383	0.2	<0.1	<0.1	165	5.68	0.140
STD OREAS24P	Standard	1.4	48.9	2.8	107	<0.1	138.9	46.9	1065	7.63	<1	0.7	<0.1	2.7	395	0.2	<0.1	<0.1	158	5.86	0.135
STD OREAS24P	Standard	1.4	53.2	2.8	118	<0.1	147.9	46.4	1106	7.60	<1	0.7	<0.1	2.7	398	0.3	<0.1	<0.1	164	5.82	0.139
STD OREAS24P	Standard	1.4	49.5	2.6	114	<0.1	139.2	44.6	1047	7.39	<1	0.6	<0.1	2.7	378	0.2	<0.1	<0.1	160	5.27	0.127
STD OREAS24P	Standard	1.5	49.5	2.6	115	<0.1	140.1	44.5	1097	7.59	<1	0.7	<0.1	2.7	378	0.2	<0.1	<0.1	160	5.73	0.134
STD OREAS24P	Standard	1.6	51.4	2.8	114	<0.1	146.7	46.6	1134	7.89	<1	0.7	<0.1	2.7	379	0.2	0.1	<0.1	159	5.92	0.132
STD OREAS24P	Standard	1.5	49.2	2.8	114	<0.1	145.0	47.6	1116	7.83	<1	0.7	<0.1	2.8	373	0.1	<0.1	<0.1	163	5.99	0.133
STD OREAS24P Expected		1.5	52	2.9	118.9	0.06	141	44	1100	7.53	1.2	0.75		2.85	403	0.15	0.09		158	5.83	0.136
BLK	Blank	<0.1	<0.1	1.0	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.25	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001

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200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: September 20, 2009

QUALITY CONTROL REPORT VAN09004196.1

	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
	Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
Pulp Duplicates																					
IVL002-08+50N	Soil	109.5	35	2.68	436	0.309	5.72	3.110	0.81	1.7	91.8	278	1.9	39.9	39.4	0.8	5	8	261.7	<0.1	49.1
REP IVL002-08+50N	QC	112.5	35	2.71	443	0.326	5.85	3.207	0.82	1.9	92.3	282	2.1	39.8	42.1	0.9	5	9	253.9	<0.1	50.7
IVL003-05+00N	Soil	1361	39	2.83	1099	0.334	5.66	2.912	0.72	1.8	77.5	>2000	2.7	78.7	75.2	1.0	7	10	288.5	<0.1	54.5
REP IVL003-05+00N	QC	1464	43	2.89	1153	0.343	5.83	3.032	0.71	1.7	76.6	>2000	2.5	75.8	81.6	1.0	8	10	280.2	<0.1	59.2
IVL005-00+50S	Soil	57.4	55	3.12	351	0.507	6.47	1.772	0.75	2.9	137.9	99	2.1	37.6	48.5	1.6	4	11	87.3	<0.1	57.0
REP IVL005-00+50S	QC	55.8	55	3.19	346	0.515	6.51	1.751	0.78	3.3	147.8	99	1.8	35.8	51.6	1.7	4	11	88.2	<0.1	54.9
IVL007-03+00S	Soil	50.6	48	1.96	512	0.439	8.36	1.959	1.48	1.8	123.3	96	1.5	28.1	33.4	1.3	4	8	72.6	<0.1	82.5
REP IVL007-03+00S	QC	40.3	46	1.95	510	0.370	6.99	1.993	1.47	1.4	111.7	80	1.6	25.5	32.5	1.0	4	8	76.5	<0.1	57.5
IVL009-04+50N	Soil	77.5	77	1.56	548	0.802	6.79	2.393	1.35	4.2	143.4	147	2.1	29.8	92.2	2.2	7	11	61.4	<0.1	94.8
REP IVL009-04+50N	QC	86.5	76	1.62	560	0.822	6.84	2.328	1.42	6.1	141.4	165	2.5	31.7	98.3	2.2	8	11	62.7	<0.1	100.7
Reference Materials																					
STD OREAS24P	Standard	16.7	194	3.83	261	1.019	7.28	2.138	0.60	0.4	131.5	33	1.3	19.5	19.5	1.0	1	16	7.3	<0.1	19.8
STD OREAS24P	Standard	18.1	212	4.08	272	1.086	7.85	2.295	0.67	0.4	137.6	35	1.3	21.2	20.7	1.1	<1	17	7.2	<0.1	21.7
STD OREAS24P	Standard	18.1	189	3.96	274	0.989	7.94	2.307	0.61	0.5	138.8	35	1.8	21.1	20.7	1.0	1	16	7.6	<0.1	21.3
STD OREAS24P	Standard	19.0	199	3.93	274	1.060	7.34	2.190	0.66	0.5	138.3	37	1.6	20.9	21.4	1.1	<1	17	7.7	<0.1	21.6
STD OREAS24P	Standard	18.4	198	3.86	278	1.079	7.41	2.165	0.66	0.4	136.5	35	1.4	20.9	21.1	1.0	<1	17	7.7	<0.1	23.3
STD OREAS24P	Standard	18.7	212	4.00	288	1.093	7.42	2.193	0.66	0.4	135.1	38	1.7	22.0	21.3	1.0	1	17	7.8	<0.1	21.6
STD OREAS24P	Standard	17.9	184	3.84	267	0.975	7.43	2.184	0.61	0.4	131.5	35	1.7	21.7	21.4	1.0	1	16	8.2	<0.1	24.1
STD OREAS24P	Standard	18.7	191	3.83	281	1.045	7.36	2.181	0.65	0.4	136.9	37	1.4	21.3	20.2	1.0	1	17	7.9	<0.1	22.6
STD OREAS24P	Standard	18.6	187	4.01	276	1.117	7.56	2.327	0.64	0.5	144.0	36	1.5	21.6	22.2	1.1	1	18	9.2	<0.1	21.8
STD OREAS24P	Standard	18.5	192	4.07	271	1.121	7.47	2.262	0.67	0.5	141.0	36	1.5	21.4	22.1	1.1	1	18	8.6	<0.1	22.4
STD OREAS24P Expected		17.4	196	4.13	285	1.1	7.66	2.34	0.7	0.5	141	37.6	1.6	21.3	21	1.04		20	8.7		22.4
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	0.005	<0.01	<0.1	0.6	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1

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Project: ICE RIVER
Report Date: September 20, 2009

QUALITY CONTROL REPORT VAN09004196.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
Pulp Duplicates			
IVL002-08+50N	Soil		2.8
REP IVL002-08+50N	QC		2.5
IVL003-05+00N	Soil		2.6
REP IVL003-05+00N	QC		2.6
IVL005-00+50S	Soil		3.3
REP IVL005-00+50S	QC		3.4
IVL007-03+00S	Soil		3.4
REP IVL007-03+00S	QC		2.9
IVL009-04+50N	Soil		3.8
REP IVL009-04+50N	QC		4.0
Reference Materials			
STD OREAS24P	Standard		3.4
STD OREAS24P	Standard		3.5
STD OREAS24P	Standard		3.6
STD OREAS24P	Standard		3.6
STD OREAS24P	Standard		3.7
STD OREAS24P	Standard		3.5
STD OREAS24P	Standard		3.3
STD OREAS24P	Standard		3.5
STD OREAS24P	Standard		3.6
STD OREAS24P	Standard		3.7
STD OREAS24P Expected			3.6
BLK	Blank		<0.1
BLK	Blank		<0.1
BLK	Blank		<0.1
BLK	Blank		<0.1
BLK	Blank		<0.1

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Cranbrook BC V1C 2P1 Canada

Submitted By: Jarrod Brown
Receiving Lab: Canada-Vancouver
Received: October 05, 2009
Report Date: October 25, 2009
Page: 1 of 5

CERTIFICATE OF ANALYSIS VAN09004688.1

CLIENT JOB INFORMATION

Project: ICE RIVER
Shipment ID:
P.O. Number IV09-002
Number of Samples: 109

SAMPLE DISPOSAL

RTRN-PLP Return
DISP-RJT Dispose of Reject After 90 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	106	Dry at 60C sieve 100g to -80 mesh			VAN
Dry at 60C	106	Dry at 60C			VAN
1EX	106	4 Acid digestion ICP-MS analysis	0.25	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Bootleg Exploration Inc.
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1
Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

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

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Project: ICE RIVER
Report Date: October 25, 2009

CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL20+00E 2+00N	Soil		2.6	22.0	52.8	105	0.1	27.8	16.4	779	5.16	45	2.2	<0.1	21.5	333	0.2	2.2	0.5	104	1.28	0.094
IVL20+00E 1+50N	Soil		2.6	23.9	54.8	112	0.2	26.7	15.2	834	5.41	41	2.1	<0.1	24.6	348	0.1	2.2	0.5	110	1.36	0.121
IVL20+00E 1+00N	Soil		2.1	21.4	48.1	124	<0.1	27.6	19.3	1481	5.11	27	2.2	<0.1	18.2	372	0.2	1.9	0.4	99	1.52	0.116
IVL20+00E 0+50N	Soil		2.4	19.4	47.1	111	<0.1	22.2	14.0	943	5.21	26	2.4	<0.1	18.5	313	0.3	1.7	0.5	109	1.33	0.100
IVL20+00E 0+00	Soil		2.6	17.8	38.1	95	<0.1	23.3	13.8	762	5.27	23	2.6	<0.1	20.5	309	0.2	1.6	0.5	116	1.33	0.094
IVL20+00E 0+50S	Soil		2.6	18.3	42.3	122	<0.1	20.3	12.0	1050	4.61	19	2.4	<0.1	23.5	274	0.3	1.4	0.5	116	1.87	0.123
IVL20+00E 1+00S	Soil		2.6	27.9	43.9	149	0.1	33.2	15.8	600	5.45	24	2.2	<0.1	15.4	244	0.3	1.6	0.5	106	1.40	0.102
IVL20+00E 1+50S	Soil		2.2	34.1	76.3	156	0.2	26.0	16.6	600	4.67	64	3.2	<0.1	20.3	277	0.6	2.1	0.4	82	1.73	0.062
IVL20+00E 2+00S	Soil		2.9	22.5	59.8	150	0.1	26.3	13.2	994	4.54	28	4.1	<0.1	45.2	353	0.3	1.5	0.4	73	1.83	0.122
IVL10+00E 2+00N	Soil		3.4	43.9	23.1	130	<0.1	38.6	22.3	1407	5.07	8	1.7	<0.1	22.2	326	0.5	0.9	0.3	110	2.86	0.142
IVL10+00E 1+50N	Soil		3.4	32.5	32.1	205	<0.1	35.5	25.2	1538	6.25	9	2.8	<0.1	28.7	769	0.5	1.0	0.2	126	4.47	0.182
IVL10+00E 1+00N	Soil		4.9	34.9	28.3	184	<0.1	34.9	21.9	1484	6.28	28	4.2	<0.1	25.6	389	0.4	0.8	0.4	140	3.02	0.180
IVL10+00E 0+50N	Soil		4.0	137.3	82.1	211	<0.1	65.8	54.7	1830	7.15	42	10.0	<0.1	39.7	719	0.9	1.3	0.5	161	5.82	0.180
IVL10+00E 0+00	Soil		5.7	90.1	140.9	234	0.1	69.2	36.1	1918	7.34	424	4.7	<0.1	52.9	454	0.3	5.8	0.6	108	4.14	0.145
IVL10+00E 0+50S	Soil		4.5	183.6	69.9	223	<0.1	79.8	68.1	2351	9.00	40	3.9	<0.1	37.8	384	0.6	1.4	0.3	284	7.44	0.314
IVL10+00E 1+00S	Soil		4.5	88.1	106.7	243	0.2	40.4	45.0	2071	7.87	82	3.6	<0.1	43.3	299	0.4	7.9	0.9	205	3.71	0.460
IVL10+00E 1+50S	Soil		10.3	67.4	160.5	294	0.3	59.4	38.1	2579	6.96	101	6.4	<0.1	57.9	388	0.4	5.9	2.2	130	2.33	0.163
IVL11+00E 2+00N	Soil		1.7	50.1	74.6	158	<0.1	43.4	27.7	1834	4.86	143	2.2	<0.1	33.3	467	0.7	1.9	0.3	81	3.95	0.157
IVL11+00E 1+50N	Soil		2.1	53.1	70.1	207	0.1	41.5	33.4	1834	5.16	34	2.6	<0.1	34.0	512	0.5	1.4	0.5	92	4.24	0.159
IVL11+00E 1+00N	Soil		2.2	81.4	96.7	129	0.2	48.3	29.9	1286	5.33	35	2.7	<0.1	33.2	825	0.3	2.5	0.5	78	4.13	0.089
IVL11+00E 0+50N	Soil		1.8	80.8	80.8	109	0.1	73.6	37.4	1072	5.98	44	2.4	<0.1	29.0	696	0.1	2.5	0.5	89	4.23	0.071
IVL11+00E 0+00	Soil		4.2	39.7	249.6	376	0.3	32.0	22.0	1984	4.92	35	2.3	<0.1	27.6	476	0.8	1.5	1.8	98	2.32	0.117
IVL11+00E 0+50S	Soil		4.1	46.2	67.9	159	<0.1	24.4	20.9	1126	3.84	23	6.9	<0.1	29.4	574	0.7	2.3	0.4	98	4.82	0.173
IVL11+00E 1+00S	Soil		4.9	55.5	128.5	257	<0.1	47.2	30.5	1999	6.28	85	2.7	<0.1	44.4	268	0.4	5.7	1.5	126	2.13	0.192
IVL11+00E 1+50S	Soil		6.3	99.6	105.2	289	0.1	96.1	65.4	2311	6.54	68	19.6	<0.1	51.0	380	0.7	3.0	1.0	141	3.61	0.221
IVL12+00E 2+00N	Soil		2.6	33.2	111.3	200	<0.1	36.7	25.9	1440	4.97	28	1.9	<0.1	23.5	503	0.1	1.9	0.6	94	2.48	0.172
IVL12+00E 1+50N	Soil		1.5	35.9	121.9	167	<0.1	32.4	20.8	1126	4.39	15	2.4	<0.1	22.6	328	0.4	1.8	0.5	85	2.64	0.144
IVL12+00E 1+00N	Soil		1.9	35.4	30.3	149	<0.1	33.5	24.3	1269	4.85	18	1.6	<0.1	22.4	377	0.2	1.3	0.4	120	2.21	0.153
IVL12+00E 0+50N	Soil		3.6	44.8	78.9	174	<0.1	41.2	26.5	1577	5.07	45	3.7	<0.1	27.7	623	0.5	1.5	0.4	100	3.88	0.144
IVL12+00E 0+00	Soil		4.3	51.7	110.3	216	<0.1	43.4	31.3	1630	5.54	54	3.5	<0.1	29.1	478	0.3	2.6	0.6	106	3.18	0.152

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Project: ICE RIVER
Report Date: October 25, 2009

CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL20+00E 2+00N	Soil		35.9	59	1.41	575	0.495	7.28	2.134	1.73	3.9	89.6	84	2.6	17.6	50.9	1.7	3	9	51.2	<0.1	106.9
IVL20+00E 1+50N	Soil		30.8	62	1.38	582	0.626	7.17	1.833	1.78	3.3	95.0	73	2.4	15.6	49.9	1.8	3	9	55.7	<0.1	121.9
IVL20+00E 1+00N	Soil		37.5	59	1.64	667	0.521	7.36	2.043	1.73	3.8	92.2	88	2.4	17.9	49.6	1.9	5	9	54.6	<0.1	121.3
IVL20+00E 0+50N	Soil		36.1	57	1.41	604	0.697	7.31	2.163	1.76	3.2	113.2	79	2.6	15.2	58.3	2.2	4	9	55.7	<0.1	104.8
IVL20+00E 0+00	Soil		43.0	54	1.53	672	0.710	7.79	2.441	1.84	3.6	116.6	95	2.9	15.8	63.8	2.2	4	9	56.9	<0.1	115.3
IVL20+00E 0+50S	Soil		31.5	47	1.81	699	0.809	7.23	2.107	1.73	3.0	137.0	70	2.7	13.9	63.6	2.4	3	9	75.1	<0.1	105.7
IVL20+00E 1+00S	Soil		32.4	55	2.63	612	0.638	7.56	1.909	1.51	2.8	110.2	76	2.1	14.1	66.5	2.1	3	8	95.1	<0.1	50.1
IVL20+00E 1+50S	Soil		47.3	39	1.47	516	0.465	10.75	1.891	1.29	2.3	171.8	125	2.1	25.3	34.2	1.3	4	10	77.3	<0.1	76.3
IVL20+00E 2+00S	Soil		96.5	31	1.47	1261	0.640	9.88	2.286	2.35	3.6	146.4	182	2.3	28.0	134.0	5.1	4	7	82.3	<0.1	127.8
IVL10+00E 2+00N	Soil		41.2	58	2.80	730	0.513	8.49	3.110	1.59	3.3	133.3	88	2.4	37.2	57.6	1.7	4	12	63.9	<0.1	40.0
IVL10+00E 1+50N	Soil		62.5	64	2.99	510	0.789	8.54	2.505	0.90	5.2	118.0	163	2.3	34.7	59.8	2.2	4	14	86.4	<0.1	55.0
IVL10+00E 1+00N	Soil		65.2	59	2.70	746	0.889	8.20	2.917	1.05	4.6	172.6	156	2.7	41.6	97.6	3.3	7	12	85.6	<0.1	40.1
IVL10+00E 0+50N	Soil		90.8	61	3.38	1303	0.976	6.85	1.238	1.21	3.4	184.3	188	1.9	39.6	64.6	2.3	3	17	71.1	0.1	111.3
IVL10+00E 0+00	Soil		728.4	75	1.97	942	0.489	7.72	2.628	0.97	8.4	77.1	1124	2.4	54.9	81.4	1.5	6	15	79.1	<0.1	64.9
IVL10+00E 0+50S	Soil		103.1	74	4.09	943	1.697	6.75	1.208	1.06	3.9	204.9	236	2.1	39.5	94.3	3.5	4	26	59.7	<0.1	117.8
IVL10+00E 1+00S	Soil		227.3	50	3.29	788	1.153	7.75	2.843	1.54	5.5	178.0	365	2.7	74.9	97.2	1.6	6	20	147.9	<0.1	119.6
IVL10+00E 1+50S	Soil		460.7	76	3.08	696	0.629	7.27	3.282	1.21	5.0	70.3	701	2.2	94.0	90.9	1.7	7	16	147.8	<0.1	75.4
IVL11+00E 2+00N	Soil		62.8	54	3.06	374	0.509	7.21	2.632	0.80	3.1	91.0	113	1.4	50.8	47.7	1.3	5	15	79.3	<0.1	68.0
IVL11+00E 1+50N	Soil		74.0	51	2.30	473	0.606	7.21	1.987	1.06	4.0	111.2	137	2.1	48.3	50.1	1.7	4	13	55.3	<0.1	76.6
IVL11+00E 1+00N	Soil		71.4	62	3.06	622	0.420	8.00	2.080	1.82	15.5	73.2	133	1.8	55.8	42.8	1.2	4	13	59.8	<0.1	63.4
IVL11+00E 0+50N	Soil		48.1	61	2.41	675	0.371	8.02	3.048	1.37	7.2	55.6	88	2.5	60.5	34.9	0.9	6	11	42.6	<0.1	27.2
IVL11+00E 0+00	Soil		70.8	60	2.61	636	0.574	7.62	3.575	0.93	4.8	103.2	147	2.7	47.7	56.8	1.5	6	11	92.5	<0.1	48.6
IVL11+00E 0+50S	Soil		194.1	44	2.02	906	0.660	4.49	1.705	0.66	2.7	89.6	221	1.5	45.0	45.2	1.4	3	12	51.1	0.1	46.0
IVL11+00E 1+00S	Soil		262.6	67	2.78	821	0.622	7.55	3.573	1.42	4.4	87.6	366	2.2	81.3	90.6	1.6	7	14	152.9	<0.1	77.6
IVL11+00E 1+50S	Soil		176.3	88	2.77	610	0.752	6.75	2.440	1.10	9.1	89.5	298	2.8	80.6	122.2	2.0	6	16	87.1	<0.1	86.0
IVL12+00E 2+00N	Soil		52.6	62	2.40	522	0.565	7.39	1.755	1.50	3.3	95.6	119	2.1	35.3	45.7	1.6	5	11	55.1	<0.1	43.4
IVL12+00E 1+50N	Soil		57.2	61	3.45	718	0.538	7.90	1.796	1.73	3.6	91.5	100	2.0	32.4	39.9	1.5	4	12	82.0	<0.1	74.5
IVL12+00E 1+00N	Soil		51.7	60	2.77	793	0.592	7.81	2.270	1.74	3.5	106.4	101	2.3	27.8	43.3	1.6	5	11	74.2	<0.1	46.9
IVL12+00E 0+50N	Soil		76.3	56	2.68	539	0.595	8.02	2.471	1.13	3.7	92.9	138	2.5	42.2	49.8	1.7	4	13	83.1	<0.1	49.4
IVL12+00E 0+00	Soil		79.3	60	2.71	553	0.638	7.61	2.313	1.29	3.8	99.6	143	2.6	45.5	54.8	1.7	5	14	93.7	<0.1	50.5

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CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL20+00E 2+00N	Soil		2.5
IVL20+00E 1+50N	Soil		2.5
IVL20+00E 1+00N	Soil		2.5
IVL20+00E 0+50N	Soil		2.9
IVL20+00E 0+00	Soil		3.1
IVL20+00E 0+50S	Soil		3.5
IVL20+00E 1+00S	Soil		3.0
IVL20+00E 1+50S	Soil		4.8
IVL20+00E 2+00S	Soil		3.6
IVL10+00E 2+00N	Soil		3.4
IVL10+00E 1+50N	Soil		3.2
IVL10+00E 1+00N	Soil		4.2
IVL10+00E 0+50N	Soil		3.6
IVL10+00E 0+00	Soil		2.1
IVL10+00E 0+50S	Soil		5.8
IVL10+00E 1+00S	Soil		5.2
IVL10+00E 1+50S	Soil		2.0
IVL11+00E 2+00N	Soil		2.1
IVL11+00E 1+50N	Soil		2.8
IVL11+00E 1+00N	Soil		2.0
IVL11+00E 0+50N	Soil		1.4
IVL11+00E 0+00	Soil		2.6
IVL11+00E 0+50S	Soil		2.5
IVL11+00E 1+00S	Soil		2.3
IVL11+00E 1+50S	Soil		2.3
IVL12+00E 2+00N	Soil		2.5
IVL12+00E 1+50N	Soil		2.7
IVL12+00E 1+00N	Soil		2.6
IVL12+00E 0+50N	Soil		2.6
IVL12+00E 0+00	Soil		2.8

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL12+00E 0+50S	Soil		5.2	21.4	132.5	248	<0.1	33.1	19.7	1549	4.93	39	2.6	<0.1	26.9	295	0.8	3.2	0.9	106	1.91	0.136
IVL12+00E 1+00S	Soil		4.3	155.7	78.6	196	0.3	53.9	52.7	2057	8.19	50	5.9	<0.1	56.4	530	0.6	3.7	0.5	239	6.51	0.374
IVL12+00E 1+50S	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL12+00E 2+00S	Soil		7.0	70.8	98.2	283	<0.1	63.9	38.4	2231	5.91	19	4.1	<0.1	46.7	411	0.4	1.5	1.1	120	3.56	0.155
IVL13+00E 2+00N	Soil		2.5	69.1	120.7	230	<0.1	44.1	33.4	1693	5.79	53	2.6	<0.1	30.2	542	0.8	2.4	0.7	129	3.62	0.244
IVL13+00E 1+50N	Soil		1.1	34.5	75.4	175	<0.1	34.7	19.1	1109	4.40	20	2.3	<0.1	18.0	712	0.2	1.9	0.4	90	3.31	0.171
IVL13+00E 1+00N	Soil		1.6	51.0	71.0	179	<0.1	39.4	23.2	1519	5.64	20	2.0	<0.1	22.1	484	0.5	1.9	0.5	95	3.04	0.166
IVL13+00E 0+50N	Soil		2.0	28.2	96.4	213	<0.1	32.7	27.1	1944	4.90	26	1.8	<0.1	21.8	579	0.7	1.8	0.5	96	3.08	0.174
IVL13+00E 0+00	Soil		3.8	38.9	75.8	223	<0.1	34.4	41.2	2608	6.05	53	2.5	<0.1	26.0	308	0.8	3.3	0.6	125	2.58	0.205
IVL13+00E 0+50S	Soil		5.2	35.7	123.7	282	<0.1	34.9	30.4	2239	5.53	51	2.4	<0.1	24.8	456	0.7	2.2	0.7	114	3.07	0.154
IVL13+00E 1+00S	Soil		4.7	75.3	54.7	141	0.1	39.2	40.0	1830	6.09	39	2.7	<0.1	29.7	379	0.6	2.0	0.3	180	5.50	0.289
IVL13+00E 1+50S	Soil		3.6	68.7	77.8	175	<0.1	48.9	31.7	1825	5.80	48	4.5	<0.1	34.3	458	0.4	1.8	0.5	133	3.77	0.177
IVL13+00E 2+00S	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL14+00E 2+00N	Soil		2.5	59.5	128.3	222	<0.1	54.1	36.2	2030	5.40	90	2.8	<0.1	28.7	367	0.6	4.5	0.9	94	1.61	0.164
IVL14+00E 1+50N	Soil		1.5	51.4	126.9	207	<0.1	40.4	22.6	1717	4.94	27	2.8	<0.1	30.7	454	0.5	2.2	0.5	94	2.93	0.153
IVL14+00E 1+00N	Soil		4.0	55.9	141.1	213	0.2	42.0	29.1	2298	5.48	50	3.1	<0.1	34.6	306	0.5	2.9	0.9	101	2.04	0.198
IVL14+00E 0+50N	Soil		4.4	44.1	123.4	275	<0.1	37.7	28.3	1658	5.40	105	5.2	<0.1	30.7	507	0.7	2.1	0.8	104	2.85	0.170
IVL14+00E 0+00	Soil		26.7	537.8	3803	1587	7.0	110.8	28.7	3443	9.78	485	4.3	0.2	66.8	204	0.9	44.3	674.8	162	0.79	0.296
IVL14+00E 0+50S	Soil		2.7	39.0	66.0	231	<0.1	34.2	21.8	1391	4.35	196	3.7	<0.1	24.1	463	0.7	2.2	<0.1	81	3.21	0.214
IVL14+00E 1+00S	Soil		3.6	50.1	132.1	216	0.1	39.4	24.5	1133	4.84	99	4.4	<0.1	36.0	615	0.3	2.5	1.1	94	3.42	0.128
IVL14+00E 1+50S	Soil		4.6	100.7	73.1	189	0.1	49.0	45.8	2152	7.02	38	4.1	<0.1	31.5	349	0.9	2.0	0.6	201	6.18	0.330
IVL14+00E 2+00S	Soil		5.3	37.8	62.8	208	<0.1	32.0	28.9	1754	5.34	36	2.5	<0.1	26.0	362	0.7	1.5	0.7	125	2.61	0.192
IVL15+00E 2+00N	Soil		1.7	29.0	133.6	219	0.1	34.8	27.2	1691	4.40	41	1.8	<0.1	21.1	355	0.6	2.7	0.6	76	1.86	0.175
IVL15+00E 1+50N	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL15+00E 1+00N	Soil		2.6	26.8	90.7	206	<0.1	27.2	24.7	2584	4.91	29	2.6	<0.1	26.8	325	0.6	2.0	0.6	91	2.21	0.198
IVL15+00E 0+50N	Soil		2.7	23.6	93.2	196	<0.1	26.2	25.9	1918	4.77	26	2.0	<0.1	26.0	270	0.7	1.7	0.6	102	1.78	0.180
IVL15+00E 0+00	Soil		2.3	34.8	111.4	195	0.2	36.4	27.1	1916	4.94	47	2.1	<0.1	29.9	574	0.5	2.2	0.5	87	3.28	0.156
IVL15+00E 0+50S	Soil		1.9	18.7	30.4	126	<0.1	30.0	20.8	1410	4.54	30	1.9	<0.1	23.6	140	0.4	5.7	0.4	96	0.76	0.147
IVL15+00E 1+00S	Soil		4.0	28.4	118.2	213	<0.1	30.0	24.2	1845	4.72	46	2.2	<0.1	20.9	394	0.8	2.0	0.6	94	2.53	0.175
IVL15+00E 1+50S	Soil		3.3	45.1	86.8	201	<0.1	42.1	28.9	1486	5.61	57	2.9	<0.1	28.0	462	0.6	1.6	0.5	112	3.38	0.152

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Project: ICE RIVER
Report Date: October 25, 2009

CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL12+00E 0+50S	Soil		51.0	69	3.33	693	0.539	7.97	2.971	1.67	5.1	95.3	132	2.4	33.1	59.4	1.5	6	10	107.0	<0.1	48.6
IVL12+00E 1+00S	Soil		156.9	64	3.63	933	1.448	6.90	1.892	1.29	4.5	197.9	255	2.8	56.7	94.9	3.1	5	23	102.1	<0.1	105.0
IVL12+00E 1+50S	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL12+00E 2+00S	Soil		206.2	67	3.04	665	0.497	7.91	3.567	1.14	7.0	68.8	352	2.6	81.4	86.4	1.2	8	15	76.6	<0.1	88.3
IVL13+00E 2+00N	Soil		78.6	56	2.65	499	0.857	7.87	2.103	1.25	3.4	120.2	142	2.9	46.4	59.4	2.4	4	14	62.6	<0.1	52.2
IVL13+00E 1+50N	Soil		48.4	59	2.31	555	0.543	7.27	1.524	1.50	2.2	87.3	86	2.3	31.2	39.7	1.5	3	12	53.1	<0.1	43.4
IVL13+00E 1+00N	Soil		66.9	63	2.68	719	0.662	7.76	1.939	1.92	3.1	124.9	125	3.1	36.0	81.3	2.9	4	11	102.4	<0.1	69.2
IVL13+00E 0+50N	Soil		43.3	59	2.52	570	0.569	7.76	2.089	1.60	3.6	99.1	102	2.2	28.4	45.4	1.6	4	11	73.8	<0.1	58.3
IVL13+00E 0+00	Soil		36.8	51	1.76	514	0.821	6.31	1.576	1.40	4.5	147.5	86	2.9	23.9	61.4	2.2	3	10	63.0	<0.1	110.1
IVL13+00E 0+50S	Soil		45.6	57	2.29	540	0.671	7.51	1.975	1.30	3.9	107.2	108	2.4	32.5	55.9	1.8	5	12	71.3	<0.1	67.9
IVL13+00E 1+00S	Soil		97.4	59	2.81	697	1.131	5.28	1.370	0.91	3.3	156.1	186	2.2	40.9	78.5	2.8	3	18	55.1	<0.1	101.3
IVL13+00E 1+50S	Soil		143.4	67	3.08	692	0.765	7.77	2.644	1.33	5.1	108.3	230	1.9	50.1	68.0	2.2	6	15	96.3	<0.1	67.2
IVL13+00E 2+00S	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL14+00E 2+00N	Soil		64.2	67	2.19	547	0.533	7.04	1.803	1.61	4.0	122.2	147	2.8	49.4	45.7	1.6	5	13	95.6	<0.1	59.8
IVL14+00E 1+50N	Soil		90.6	56	2.85	592	0.532	7.49	2.089	1.31	3.0	110.0	153	2.5	45.6	64.9	1.9	5	11	112.0	<0.1	35.1
IVL14+00E 1+00N	Soil		53.5	44	1.63	707	0.693	6.53	1.650	1.66	3.0	135.9	155	2.7	28.2	93.1	3.2	4	9	75.2	<0.1	87.0
IVL14+00E 0+50N	Soil		70.2	60	2.51	735	0.581	7.62	2.196	1.28	3.6	120.4	127	2.6	46.5	57.6	1.8	5	12	103.4	<0.1	52.5
IVL14+00E 0+00	Soil		84.2	175	2.73	455	0.940	6.49	2.748	1.39	6.5	84.2	182	5.2	47.3	109.4	3.3	7	18	156.9	0.2	85.7
IVL14+00E 0+50S	Soil		57.9	51	2.23	620	0.523	6.94	1.923	1.35	3.9	97.5	114	2.4	40.4	48.0	1.7	4	11	84.1	<0.1	64.8
IVL14+00E 1+00S	Soil		72.6	54	2.79	803	0.506	7.63	3.056	1.22	4.7	80.1	140	2.5	57.2	46.5	1.3	6	13	73.7	<0.1	50.2
IVL14+00E 1+50S	Soil		117.9	70	3.49	654	1.230	6.26	1.558	1.01	3.9	166.6	206	2.3	40.2	84.1	3.1	4	22	66.3	<0.1	97.5
IVL14+00E 2+00S	Soil		70.2	58	2.39	627	0.715	7.13	2.774	1.36	7.0	112.0	141	2.3	31.5	62.5	1.9	5	12	73.1	<0.1	82.8
IVL15+00E 2+00N	Soil		47.5	60	2.63	526	0.418	6.80	1.570	1.67	2.9	77.2	91	2.3	33.1	29.8	1.0	4	12	69.6	<0.1	60.7
IVL15+00E 1+50N	Soil		I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
IVL15+00E 1+00N	Soil		44.0	47	1.87	762	0.658	6.68	1.993	1.86	3.0	116.1	117	2.5	25.2	92.2	3.0	4	8	80.2	<0.1	104.4
IVL15+00E 0+50N	Soil		37.0	51	1.89	512	0.602	6.44	1.565	1.40	3.5	119.5	94	2.1	20.2	54.7	2.1	3	9	69.3	<0.1	100.0
IVL15+00E 0+00	Soil		60.2	55	1.82	621	0.478	7.40	1.509	1.33	3.1	102.1	163	2.5	33.6	67.0	2.6	4	11	56.1	<0.1	65.2
IVL15+00E 0+50S	Soil		41.1	61	1.71	788	0.362	7.09	1.550	2.28	3.0	92.0	100	1.7	19.1	39.9	1.4	4	8	68.7	<0.1	119.7
IVL15+00E 1+00S	Soil		45.1	54	2.40	671	0.454	7.17	1.874	1.47	3.1	94.4	106	1.8	25.4	43.8	1.5	3	10	77.9	<0.1	82.5
IVL15+00E 1+50S	Soil		71.5	57	2.65	560	0.656	8.03	2.433	1.13	3.9	105.3	165	2.0	40.7	56.3	1.8	5	13	93.6	<0.1	61.6

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CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL12+00E 0+50S	Soil		2.5
IVL12+00E 1+00S	Soil		5.7
IVL12+00E 1+50S	Soil		I.S.
IVL12+00E 2+00S	Soil		1.8
IVL13+00E 2+00N	Soil		3.0
IVL13+00E 1+50N	Soil		2.5
IVL13+00E 1+00N	Soil		3.6
IVL13+00E 0+50N	Soil		2.5
IVL13+00E 0+00	Soil		3.6
IVL13+00E 0+50S	Soil		2.9
IVL13+00E 1+00S	Soil		4.3
IVL13+00E 1+50S	Soil		3.1
IVL13+00E 2+00S	Soil		I.S.
IVL14+00E 2+00N	Soil		2.7
IVL14+00E 1+50N	Soil		2.9
IVL14+00E 1+00N	Soil		3.6
IVL14+00E 0+50N	Soil		2.9
IVL14+00E 0+00	Soil		2.2
IVL14+00E 0+50S	Soil		2.4
IVL14+00E 1+00S	Soil		2.3
IVL14+00E 1+50S	Soil		4.6
IVL14+00E 2+00S	Soil		3.1
IVL15+00E 2+00N	Soil		2.0
IVL15+00E 1+50N	Soil		I.S.
IVL15+00E 1+00N	Soil		3.2
IVL15+00E 0+50N	Soil		3.3
IVL15+00E 0+00	Soil		2.9
IVL15+00E 0+50S	Soil		2.5
IVL15+00E 1+00S	Soil		2.7
IVL15+00E 1+50S	Soil		2.8

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		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL15+00E 2+00S	Soil		5.2	124.3	58.8	170	0.1	57.5	49.3	1839	7.51	44	4.8	<0.1	32.2	440	0.5	1.8	0.5	224	6.22	0.283
IVL16+00E 2+50N	Soil		2.7	49.3	70.9	186	<0.1	57.5	45.9	2717	5.87	62	2.9	<0.1	28.6	156	0.6	6.5	0.8	110	1.24	0.137
IVL16+00E 2+00N	Soil		3.2	36.9	151.3	258	<0.1	44.0	35.3	2136	5.66	67	3.3	<0.1	25.9	240	0.4	4.8	0.8	115	1.47	0.138
IVL16+00E 1+50N	Soil		2.7	25.4	74.6	166	<0.1	32.1	19.7	1450	5.20	35	2.5	<0.1	27.7	295	0.4	2.3	0.5	99	1.65	0.108
IVL16+00E 1+00N	Soil		3.2	27.9	120.8	206	<0.1	27.4	30.2	3117	5.22	27	2.2	<0.1	20.2	242	0.7	1.8	0.7	117	1.91	0.234
IVL16+00E 0+50N	Soil		3.0	22.6	127.1	213	<0.1	27.6	27.8	2553	4.93	29	2.4	<0.1	21.7	255	0.9	2.5	0.5	106	1.62	0.214
IVL16+00E 0+00	Soil		2.7	23.3	123.5	210	<0.1	27.9	24.1	1938	4.76	27	2.1	<0.1	22.7	269	0.6	2.1	0.5	97	1.60	0.199
IVL16+00E 0+50S	Soil		3.1	18.8	47.6	133	<0.1	26.1	23.3	1655	4.83	20	1.8	<0.1	18.6	453	0.7	1.7	0.4	91	2.66	0.168
IVL16+00E 1+00S	Soil		4.6	20.6	65.6	178	<0.1	24.1	21.4	1857	4.79	33	2.2	<0.1	19.7	346	0.8	1.4	0.4	106	2.00	0.221
IVL16+00E 1+50S	Soil		5.5	29.0	53.4	171	<0.1	23.1	21.5	1968	5.22	24	2.5	<0.1	20.5	303	0.4	1.0	0.5	112	2.47	0.239
IVL16+00E 2+00S	Soil		5.5	61.2	68.2	186	<0.1	40.5	36.4	1998	6.69	43	3.7	<0.1	28.5	384	0.6	1.4	0.4	182	4.91	0.251
IVL17+00E 2+50N	Soil		2.2	21.9	43.0	152	<0.1	30.9	22.5	1528	5.22	18	1.7	<0.1	16.3	412	0.3	1.4	0.5	110	2.04	0.092
IVL17+00E 2+00N	Soil		2.1	23.8	53.6	151	<0.1	31.0	19.1	1355	4.77	32	2.0	<0.1	18.5	320	0.3	2.5	0.5	103	1.30	0.078
IVL17+00E 1+50N	Soil		2.3	18.9	80.9	162	<0.1	29.6	20.2	976	4.94	36	2.3	<0.1	27.6	204	0.3	2.1	0.5	100	1.04	0.086
IVL17+00E 1+00N	Soil		2.4	15.9	56.2	158	<0.1	29.8	18.0	1387	4.85	25	2.2	<0.1	19.4	204	0.3	2.1	0.5	111	0.90	0.096
IVL17+00E 0+50N	Soil		2.6	17.7	62.2	146	<0.1	27.3	15.9	955	4.82	30	2.1	<0.1	18.9	219	0.2	2.4	0.5	109	0.95	0.075
IVL17+00E 0+00	Soil		2.8	27.8	101.4	169	<0.1	38.0	21.8	1150	4.94	46	2.5	<0.1	27.8	207	0.4	3.6	0.7	96	0.90	0.090
IVL17+00E 0+50S	Soil		2.3	24.4	85.0	172	<0.1	30.8	20.6	1233	4.66	37	2.4	<0.1	21.9	192	0.4	3.1	0.5	90	0.92	0.195
IVL17+00E 1+00S	Soil		4.8	22.3	55.9	150	<0.1	22.3	22.2	1763	4.69	21	2.3	<0.1	16.6	320	0.7	1.3	0.5	100	1.72	0.211
IVL17+00E 1+50S	Soil		3.7	26.2	73.5	172	<0.1	32.5	21.2	1359	4.74	24	2.4	<0.1	26.7	340	0.6	1.2	0.4	95	1.49	0.181
IVL17+00E 2+00S	Soil		4.6	21.7	59.2	161	<0.1	26.1	22.1	1898	5.02	24	2.4	<0.1	21.4	311	0.4	1.1	0.4	109	1.98	0.198
IVL18+00E 2+00N	Soil		1.7	18.0	71.0	154	<0.1	32.3	21.7	1099	4.62	32	2.2	<0.1	23.4	319	0.3	1.9	0.4	91	1.30	0.117
IVL18+00E 1+50N	Soil		2.7	18.0	41.5	130	<0.1	24.6	14.7	1075	5.07	26	2.0	<0.1	17.9	359	0.2	1.7	0.6	115	1.59	0.107
IVL18+00E 1+00N	Soil		2.9	16.4	46.1	129	<0.1	23.8	12.9	707	4.89	32	2.0	<0.1	17.1	392	0.1	1.9	0.6	120	1.47	0.060
IVL18+00E 0+50N	Soil		3.1	19.0	35.2	111	<0.1	21.6	15.0	896	5.30	22	2.2	<0.1	16.7	307	0.3	1.5	0.4	113	1.38	0.102
IVL18+00E 0+00	Soil		2.7	19.6	44.1	129	<0.1	25.6	20.4	3076	5.10	24	2.0	<0.1	16.1	330	0.2	1.9	0.5	111	1.66	0.128
IVL18+00E 0+50S	Soil		2.5	17.3	43.1	140	<0.1	25.0	15.6	1489	4.99	21	2.1	<0.1	14.4	314	0.3	1.6	0.4	106	1.51	0.166
IVL18+00E 1+00S	Soil		2.7	19.2	51.3	164	<0.1	25.6	17.8	1895	5.05	17	2.0	<0.1	15.9	342	0.3	1.5	0.4	109	2.31	0.095
IVL18+00E 1+50S	Soil		2.4	44.7	87.4	206	<0.1	49.5	29.7	1888	6.49	77	3.6	<0.1	44.3	379	0.7	2.2	0.5	158	3.59	0.245
IVL18+00E 2+00S	Soil		5.8	33.0	64.3	180	<0.1	29.7	25.3	1792	6.38	55	3.2	<0.1	26.6	325	0.3	1.5	0.5	153	3.06	0.225

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Project: ICE RIVER
Report Date: October 25, 2009

CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL15+00E 2+00S	Soil		127.7	67	3.55	823	1.333	6.67	1.701	1.08	4.0	168.7	244	2.2	39.6	80.3	2.9	4	20	72.4	<0.1	102.4
IVL16+00E 2+50N	Soil		52.3	52	1.61	552	0.482	7.24	1.309	1.61	2.9	108.3	209	2.3	27.5	41.7	1.5	4	11	83.4	<0.1	87.5
IVL16+00E 2+00N	Soil		41.2	52	1.53	621	0.568	7.38	1.724	1.53	3.1	116.0	166	2.1	21.8	57.1	2.1	4	10	88.6	<0.1	90.6
IVL16+00E 1+50N	Soil		56.3	50	1.94	770	0.650	7.70	2.449	1.74	3.8	117.7	185	2.3	22.9	89.6	3.0	4	8	102.3	<0.1	87.4
IVL16+00E 1+00N	Soil		40.7	47	1.54	606	0.756	6.55	1.572	1.55	2.6	146.0	110	2.1	21.8	54.2	2.0	3	10	63.3	<0.1	101.3
IVL16+00E 0+50N	Soil		43.7	53	1.88	622	0.615	6.90	1.747	1.85	3.3	117.8	100	1.9	21.7	54.1	2.0	3	10	77.5	<0.1	112.4
IVL16+00E 0+00	Soil		42.5	52	2.19	582	0.458	7.30	1.771	1.72	3.1	112.9	101	1.9	22.3	48.1	1.8	4	9	81.0	<0.1	91.8
IVL16+00E 0+50S	Soil		34.4	52	2.36	449	0.452	7.45	2.049	1.29	3.1	100.2	83	2.1	21.4	40.2	1.6	3	9	66.7	<0.1	71.1
IVL16+00E 1+00S	Soil		35.3	49	2.13	633	0.651	7.22	2.134	1.55	2.9	117.9	78	1.8	18.3	57.2	2.0	3	8	67.2	<0.1	94.4
IVL16+00E 1+50S	Soil		46.3	43	1.73	612	0.799	6.80	1.879	1.39	3.3	161.5	98	2.4	21.3	87.7	3.3	4	9	51.9	<0.1	94.6
IVL16+00E 2+00S	Soil		78.6	64	3.11	677	1.111	7.34	1.925	1.13	3.7	154.4	199	2.3	34.3	77.2	2.9	4	17	71.7	<0.1	104.6
IVL17+00E 2+50N	Soil		37.4	57	1.95	734	0.677	7.58	1.806	1.51	2.9	99.7	79	2.3	18.7	48.1	1.8	4	9	64.7	<0.1	99.7
IVL17+00E 2+00N	Soil		40.5	62	2.06	610	0.471	7.54	1.983	1.62	4.8	90.3	88	2.0	17.0	43.7	1.5	4	9	81.5	<0.1	84.0
IVL17+00E 1+50N	Soil		53.2	61	2.08	752	0.425	9.65	2.548	1.57	4.6	115.9	111	2.0	24.9	37.2	1.1	4	10	80.8	<0.1	88.6
IVL17+00E 1+00N	Soil		36.5	61	1.84	797	0.476	8.43	2.248	2.05	4.8	111.7	79	2.5	14.6	42.6	1.5	4	8	82.7	<0.1	129.8
IVL17+00E 0+50N	Soil		40.2	57	1.82	658	0.463	7.79	2.200	1.84	3.6	105.4	84	2.1	15.6	43.2	1.4	4	8	85.4	<0.1	97.4
IVL17+00E 0+00	Soil		58.7	55	2.00	642	0.386	7.60	2.439	1.95	3.9	109.8	116	2.1	28.7	45.4	1.5	4	10	107.0	<0.1	88.8
IVL17+00E 0+50S	Soil		41.2	51	1.68	628	0.412	6.79	1.919	1.82	3.4	101.3	97	2.0	17.1	47.1	1.7	4	8	82.6	<0.1	95.5
IVL17+00E 1+00S	Soil		33.3	46	1.64	588	0.636	6.48	1.668	1.52	4.0	123.1	73	2.3	16.5	47.4	1.8	4	8	51.7	<0.1	106.0
IVL17+00E 1+50S	Soil		49.6	52	2.19	677	0.507	7.04	1.924	1.70	4.6	113.4	114	2.1	22.9	56.2	2.0	4	9	70.8	<0.1	90.2
IVL17+00E 2+00S	Soil		41.7	49	1.79	710	0.671	6.81	1.991	1.52	3.5	110.8	102	2.2	20.5	60.3	2.1	3	9	70.6	<0.1	108.7
IVL18+00E 2+00N	Soil		59.7	54	2.08	594	0.436	7.89	2.885	1.50	3.2	91.0	113	2.2	18.7	47.8	1.7	3	8	81.0	<0.1	71.8
IVL18+00E 1+50N	Soil		42.2	56	1.70	667	0.713	7.40	2.208	1.69	3.4	107.9	82	2.8	17.5	54.3	1.9	3	9	70.3	<0.1	104.2
IVL18+00E 1+00N	Soil		78.4	54	1.66	611	0.720	7.50	2.250	1.47	4.6	102.7	150	2.9	18.5	62.0	2.1	3	9	63.9	<0.1	94.7
IVL18+00E 0+50N	Soil		42.8	51	1.57	583	0.675	7.45	2.017	1.61	3.4	115.3	81	2.4	15.9	46.6	1.7	3	8	69.2	<0.1	98.6
IVL18+00E 0+00	Soil		39.6	54	1.63	687	0.681	7.26	2.126	1.62	6.5	108.8	79	2.4	16.0	52.0	1.9	4	9	66.1	<0.1	108.2
IVL18+00E 0+50S	Soil		29.2	56	1.91	647	0.623	7.23	2.070	1.79	3.6	112.0	64	2.4	14.7	41.0	1.6	3	8	72.6	<0.1	112.1
IVL18+00E 1+00S	Soil		32.4	52	1.92	756	0.697	7.60	2.270	1.58	3.3	113.6	79	2.6	16.4	64.6	2.4	4	8	77.2	<0.1	98.9
IVL18+00E 1+50S	Soil		150.3	52	2.98	1436	1.189	8.49	2.191	2.00	4.1	195.2	274	3.1	46.4	127.0	5.0	5	12	103.4	<0.1	113.6
IVL18+00E 2+00S	Soil		60.1	54	2.23	808	1.028	7.42	2.043	1.46	3.7	154.4	162	2.4	23.7	91.8	3.6	4	11	94.1	<0.1	81.6

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CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL15+00E 2+00S	Soil		5.0
IVL16+00E 2+50N	Soil		3.0
IVL16+00E 2+00N	Soil		3.2
IVL16+00E 1+50N	Soil		3.1
IVL16+00E 1+00N	Soil		3.9
IVL16+00E 0+50N	Soil		3.1
IVL16+00E 0+00	Soil		2.9
IVL16+00E 0+50S	Soil		2.8
IVL16+00E 1+00S	Soil		3.1
IVL16+00E 1+50S	Soil		4.1
IVL16+00E 2+00S	Soil		4.5
IVL17+00E 2+50N	Soil		2.6
IVL17+00E 2+00N	Soil		2.4
IVL17+00E 1+50N	Soil		2.8
IVL17+00E 1+00N	Soil		3.1
IVL17+00E 0+50N	Soil		2.8
IVL17+00E 0+00	Soil		2.8
IVL17+00E 0+50S	Soil		2.9
IVL17+00E 1+00S	Soil		3.3
IVL17+00E 1+50S	Soil		2.9
IVL17+00E 2+00S	Soil		3.0
IVL18+00E 2+00N	Soil		2.4
IVL18+00E 1+50N	Soil		2.9
IVL18+00E 1+00N	Soil		2.8
IVL18+00E 0+50N	Soil		3.1
IVL18+00E 0+00	Soil		2.9
IVL18+00E 0+50S	Soil		2.9
IVL18+00E 1+00S	Soil		3.1
IVL18+00E 1+50S	Soil		5.3
IVL18+00E 2+00S	Soil		4.1

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CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
IVL19+00E 2+00N	Soil		1.7	23.9	46.7	140	<0.1	33.9	19.4	704	5.05	44	1.8	<0.1	18.2	455	0.2	1.7	0.4	99	1.51	0.095
IVL19+00E 1+50N	Soil		2.4	32.9	42.3	170	<0.1	34.4	23.1	1366	5.51	61	1.8	<0.1	25.4	342	0.3	2.1	0.5	123	1.79	0.160
IVL19+00E 1+00N	Soil		2.7	21.6	36.0	85	<0.1	19.0	11.9	828	4.53	29	2.1	<0.1	17.7	334	0.2	2.0	0.5	100	1.41	0.116
IVL19+00E 0+50N	Soil		2.4	23.5	74.4	147	<0.1	26.4	17.7	1371	4.85	34	2.5	<0.1	20.9	278	0.2	2.5	0.6	97	1.00	0.121
IVL19+00E 0+00	Soil		2.2	24.5	70.1	187	<0.1	28.9	22.0	2020	5.30	45	2.1	<0.1	22.4	279	0.2	2.6	0.5	103	1.33	0.095
IVL19+00E 0+50S	Soil		2.8	24.5	57.7	190	<0.1	28.5	19.9	2070	5.13	31	1.9	<0.1	18.3	285	0.4	1.6	0.5	112	1.90	0.077
IVL19+00E 1+00S	Soil		2.6	22.6	46.8	177	<0.1	21.4	14.6	1147	4.68	30	2.6	<0.1	15.2	253	0.3	1.3	0.5	98	1.38	0.141
IVL19+00E 1+50S	Soil		3.2	21.0	78.9	165	<0.1	25.4	15.9	705	4.87	33	3.1	<0.1	23.6	245	0.4	1.8	0.5	102	1.90	0.099
IVL19+00E 2+00S	Soil		3.8	21.0	57.1	174	<0.1	24.2	19.2	1704	4.67	32	4.3	<0.1	29.7	275	0.4	1.2	0.5	109	2.29	0.263
IVL10+50E 00+00	Soil		2.3	37.4	173.3	257	<0.1	39.9	23.6	1744	5.28	27	3.8	<0.1	28.2	538	0.5	1.3	0.5	105	4.35	0.138
IVL11+50E 00+00	Soil		7.3	44.3	318.9	468	0.2	44.0	24.7	1727	5.14	186	3.3	<0.1	46.6	325	0.8	2.9	1.5	98	1.99	0.149
IVL12+50E 00+00	Soil		4.1	39.0	88.2	275	<0.1	40.5	33.3	2078	5.40	255	2.8	<0.1	25.3	461	0.5	3.5	0.7	113	3.26	0.200
IVL13+50E 00+00	Soil		1.8	31.3	60.0	172	<0.1	30.2	26.8	1882	4.62	22	2.9	<0.1	28.8	653	0.8	1.8	0.8	92	3.87	0.222
IVL14+50E 00+00	Soil		3.1	40.6	83.5	236	<0.1	33.8	32.4	2555	6.07	33	2.9	<0.1	26.4	237	0.5	1.7	0.7	121	2.13	0.264
IVL15+50E 00+00	Soil		2.9	28.9	87.1	247	<0.1	29.8	26.6	2167	5.04	36	2.1	<0.1	25.8	323	0.6	1.9	0.6	99	2.18	0.219
IVL16+50E 00+00	Soil		2.7	20.9	103.1	178	<0.1	26.3	22.9	1955	4.86	35	2.3	<0.1	22.8	190	0.7	3.2	0.6	106	1.03	0.213
IVL17+50E 00+00	Soil		2.3	24.4	66.0	145	<0.1	32.4	16.3	795	4.62	40	2.2	<0.1	21.2	281	0.3	3.0	0.5	96	1.21	0.091
IVL18+50E 00+00	Soil		2.6	18.7	51.4	175	<0.1	25.5	14.6	1634	4.53	28	2.0	<0.1	16.1	273	0.2	1.8	0.5	109	1.33	0.108
IVL19+50E 00+00	Soil		2.4	28.2	52.7	123	<0.1	30.7	17.4	914	5.04	37	2.3	<0.1	22.0	318	0.3	2.5	0.5	105	1.39	0.102

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CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
		Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
		Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
IVL19+00E 2+00N	Soil		29.8	62	2.40	489	0.440	7.92	1.609	1.75	2.7	83.3	66	2.3	17.4	34.6	1.4	3	10	84.6	<0.1	65.6
IVL19+00E 1+50N	Soil		36.5	61	1.73	523	0.804	6.67	1.598	1.45	4.4	84.8	81	2.9	20.9	63.8	2.5	3	11	56.8	<0.1	103.3
IVL19+00E 1+00N	Soil		33.8	64	1.16	584	0.627	6.92	1.872	1.69	3.5	95.4	67	2.5	15.2	48.0	1.7	4	9	46.0	<0.1	112.2
IVL19+00E 0+50N	Soil		43.2	58	1.58	600	0.553	6.74	2.054	1.65	3.2	101.7	89	2.8	15.3	46.8	1.7	3	9	73.4	<0.1	93.3
IVL19+00E 0+00	Soil		40.1	63	1.80	582	0.550	7.22	1.960	1.72	2.7	101.7	88	2.5	16.0	44.6	1.5	3	9	89.6	<0.1	80.4
IVL19+00E 0+50S	Soil		29.7	60	2.25	581	0.655	7.07	1.792	1.42	2.7	102.1	75	2.1	15.2	53.0	1.8	4	9	83.4	<0.1	78.6
IVL19+00E 1+00S	Soil		30.9	53	1.70	530	0.546	7.33	2.007	1.53	2.5	103.1	70	2.6	14.3	45.6	1.7	3	8	72.6	<0.1	62.1
IVL19+00E 1+50S	Soil		45.3	54	3.21	505	0.589	6.97	1.968	1.21	2.7	110.6	107	2.4	18.5	59.5	2.2	4	8	99.2	<0.1	50.5
IVL19+00E 2+00S	Soil		77.3	52	3.08	680	0.790	7.53	2.270	1.14	3.3	133.3	164	2.5	28.0	88.8	3.1	4	9	99.5	<0.1	70.4
IVL10+50E 00+00	Soil		68.0	68	3.46	515	0.569	8.28	2.662	0.81	4.5	96.9	138	2.0	43.8	55.6	1.7	6	12	107.1	<0.1	82.2
IVL11+50E 00+00	Soil		116.3	65	2.86	722	0.399	8.12	3.698	1.02	5.5	72.9	198	2.5	63.6	60.3	1.0	6	14	124.9	<0.1	48.7
IVL12+50E 00+00	Soil		52.9	57	1.96	449	0.618	7.25	1.566	1.20	3.3	103.2	110	2.4	33.9	50.6	1.6	4	13	75.7	<0.1	64.0
IVL13+50E 00+00	Soil		64.4	60	2.53	523	0.529	7.60	1.532	1.57	2.4	97.8	126	2.0	33.0	43.5	1.5	4	13	52.3	<0.1	122.7
IVL14+50E 00+00	Soil		52.8	47	1.47	535	0.849	6.01	1.315	1.37	3.3	143.2	147	2.8	24.1	91.3	3.0	3	10	59.6	<0.1	95.5
IVL15+50E 00+00	Soil		54.1	57	2.23	620	0.625	7.49	1.953	1.64	3.5	120.0	125	2.5	24.6	71.7	2.4	5	10	92.0	<0.1	86.5
IVL16+50E 00+00	Soil		41.4	54	1.47	625	0.526	6.29	2.029	1.79	3.0	106.8	85	2.1	15.1	47.6	1.5	4	8	83.5	<0.1	104.0
IVL17+50E 00+00	Soil		51.6	60	1.77	636	0.489	7.30	2.308	1.60	3.0	80.4	109	2.1	16.6	47.8	1.5	4	8	85.6	<0.1	83.7
IVL18+50E 00+00	Soil		38.9	58	1.68	644	0.618	6.87	2.050	1.65	3.4	104.6	73	2.6	15.8	48.3	1.7	3	9	69.4	<0.1	113.1
IVL19+50E 00+00	Soil		54.8	59	1.55	581	0.612	7.20	2.087	1.74	2.8	111.6	112	2.4	19.2	65.0	2.3	4	9	75.2	<0.1	91.2

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Client: **Bootleg Exploration Inc.**
200 - 16 - 11th Ave S.
Cranbrook BC V1C 2P1 Canada

Project: ICE RIVER
Report Date: October 25, 2009

CERTIFICATE OF ANALYSIS VAN09004688.1

		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
IVL19+00E 2+00N	Soil		2.4
IVL19+00E 1+50N	Soil		2.1
IVL19+00E 1+00N	Soil		2.5
IVL19+00E 0+50N	Soil		2.5
IVL19+00E 0+00	Soil		2.6
IVL19+00E 0+50S	Soil		2.7
IVL19+00E 1+00S	Soil		2.9
IVL19+00E 1+50S	Soil		3.0
IVL19+00E 2+00S	Soil		3.6
IVL10+50E 00+00	Soil		2.6
IVL11+50E 00+00	Soil		1.9
IVL12+50E 00+00	Soil		2.7
IVL13+50E 00+00	Soil		2.9
IVL14+50E 00+00	Soil		4.1
IVL15+50E 00+00	Soil		3.4
IVL16+50E 00+00	Soil		2.8
IVL17+50E 00+00	Soil		2.1
IVL18+50E 00+00	Soil		2.8
IVL19+50E 00+00	Soil		2.9

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	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.2	1	0.01	1	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.001
Pulp Duplicates																					
IVL10+00E 2+00N	Soil	3.4	43.9	23.1	130	<0.1	38.6	22.3	1407	5.07	8	1.7	<0.1	22.2	326	0.5	0.9	0.3	110	2.86	0.142
REP IVL10+00E 2+00N	QC	3.0	42.8	21.9	126	<0.1	38.6	21.3	1393	5.00	8	1.7	<0.1	19.8	328	0.4	1.0	0.3	109	2.85	0.138
IVL12+00E 0+00	Soil	4.3	51.7	110.3	216	<0.1	43.4	31.3	1630	5.54	54	3.5	<0.1	29.1	478	0.3	2.6	0.6	106	3.18	0.152
REP IVL12+00E 0+00	QC	3.9	51.7	109.9	216	<0.1	42.9	31.2	1654	5.51	51	3.7	<0.1	33.2	467	0.4	2.4	0.6	109	3.16	0.156
IVL19+00E 2+00N	Soil	1.7	23.9	46.7	140	<0.1	33.9	19.4	704	5.05	44	1.8	<0.1	18.2	455	0.2	1.7	0.4	99	1.51	0.095
REP IVL19+00E 2+00N	QC	1.7	22.7	46.2	136	<0.1	31.3	18.6	690	5.01	42	1.7	<0.1	17.1	460	0.1	1.8	0.4	99	1.55	0.095
IVL17+50E 00+00	Soil	2.3	24.4	66.0	145	<0.1	32.4	16.3	795	4.62	40	2.2	<0.1	21.2	281	0.3	3.0	0.5	96	1.21	0.091
REP IVL17+50E 00+00	QC	2.5	25.0	70.1	144	<0.1	32.2	16.6	807	4.67	41	2.4	<0.1	20.8	287	0.2	3.0	0.6	93	1.23	0.090
Reference Materials																					
STD OREAS24P	Standard	1.5	50.2	2.8	116	<0.1	150.8	48.4	1147	7.79	<1	0.8	<0.1	3.0	405	<0.1	<0.1	<0.1	165	6.02	0.139
STD OREAS24P	Standard	1.4	49.1	3.0	105	<0.1	147.4	46.8	1105	7.65	2	0.7	<0.1	2.9	394	<0.1	0.1	<0.1	166	5.70	0.136
STD OREAS24P	Standard	1.6	43.6	2.9	110	<0.1	145.1	46.3	1080	7.60	<1	0.6	<0.1	2.5	370	0.1	<0.1	<0.1	159	5.59	0.126
STD OREAS24P	Standard	1.6	46.7	2.7	112	<0.1	156.2	50.6	1186	8.38	<1	0.7	<0.1	2.7	409	0.1	<0.1	<0.1	172	6.34	0.139
STD OREAS24P	Standard	1.5	50.6	2.6	112	<0.1	153.3	47.0	1155	7.97	3	0.6	<0.1	2.6	392	0.2	<0.1	<0.1	169	5.67	0.138
STD OREAS24P	Standard	1.4	47.7	2.6	108	<0.1	145.3	44.8	1118	7.60	2	0.6	<0.1	2.6	375	0.2	<0.1	<0.1	164	5.66	0.140
STD OREAS24P	Standard	1.5	46.3	2.7	113	<0.1	154.2	47.3	1203	7.97	<1	0.6	<0.1	2.6	387	0.1	<0.1	<0.1	164	6.01	0.134
STD OREAS24P	Standard	1.6	47.9	2.7	114	<0.1	160.2	49.4	1186	8.28	<1	0.6	<0.1	2.9	410	0.2	<0.1	<0.1	172	6.34	0.141
STD OREAS24P Expected		1.5	52	2.9	118.9	0.06	141	44	1100	7.53	1.2	0.75		2.85	403	0.15	0.09		158	5.83	0.136
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	6	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.2	<1	<0.01	<1	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001

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	Method	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX	1EX
	Analyte	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Ce	Sn	Y	Nb	Ta	Be	Sc	Li	S	Rb
	Unit	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	MDL	0.1	1	0.01	1	0.001	0.01	0.001	0.01	0.1	0.1	1	0.1	0.1	0.1	0.1	1	1	0.1	0.1	0.1
Pulp Duplicates																					
IVL10+00E 2+00N	Soil	41.2	58	2.80	730	0.513	8.49	3.110	1.59	3.3	133.3	88	2.4	37.2	57.6	1.7	4	12	63.9	<0.1	40.0
REP IVL10+00E 2+00N	QC	39.5	56	2.79	723	0.499	8.34	3.094	1.58	3.4	132.4	85	2.5	37.6	57.2	1.6	5	11	58.5	<0.1	37.8
IVL12+00E 0+00	Soil	79.3	60	2.71	553	0.638	7.61	2.313	1.29	3.8	99.6	143	2.6	45.5	54.8	1.7	5	14	93.7	<0.1	50.5
REP IVL12+00E 0+00	QC	77.9	61	2.70	548	0.651	7.85	2.373	1.22	4.2	101.7	138	2.3	45.3	56.2	1.6	4	13	97.8	<0.1	46.8
IVL19+00E 2+00N	Soil	29.8	62	2.40	489	0.440	7.92	1.609	1.75	2.7	83.3	66	2.3	17.4	34.6	1.4	3	10	84.6	<0.1	65.6
REP IVL19+00E 2+00N	QC	30.8	61	2.41	491	0.438	7.97	1.605	1.74	2.8	85.0	69	2.4	17.6	36.4	1.3	4	10	83.1	<0.1	71.8
IVL17+50E 00+00	Soil	51.6	60	1.77	636	0.489	7.30	2.308	1.60	3.0	80.4	109	2.1	16.6	47.8	1.5	4	8	85.6	<0.1	83.7
REP IVL17+50E 00+00	QC	49.4	61	1.81	674	0.507	7.34	2.259	1.59	3.3	84.7	107	2.2	16.7	52.1	1.7	3	8	89.4	<0.1	83.7
Reference Materials																					
STD OREAS24P	Standard	19.3	199	4.18	283	1.114	7.99	2.530	0.69	0.4	145.7	37	1.8	24.4	20.3	1.0	<1	18	9.0	<0.1	22.0
STD OREAS24P	Standard	19.3	196	4.02	278	1.063	7.57	2.409	0.66	0.4	148.7	37	1.5	23.9	21.3	1.0	1	17	7.4	<0.1	21.0
STD OREAS24P	Standard	15.5	179	3.86	273	1.051	7.50	2.223	0.62	0.4	133.9	33	1.3	19.2	19.3	1.0	1	16	8.0	<0.1	20.5
STD OREAS24P	Standard	17.7	197	4.20	299	1.160	8.13	2.443	0.70	0.5	146.7	36	1.6	20.2	21.8	1.1	1	17	8.6	<0.1	21.9
STD OREAS24P	Standard	17.5	194	3.97	269	1.054	7.20	2.231	0.66	0.4	136.5	33	1.5	20.6	20.9	1.0	1	18	8.5	<0.1	20.8
STD OREAS24P	Standard	17.2	194	3.77	256	1.026	7.29	2.214	0.65	0.5	129.0	32	1.2	19.3	20.4	0.9	1	17	6.7	<0.1	19.8
STD OREAS24P	Standard	17.0	190	3.97	290	1.103	7.66	2.260	0.67	0.5	140.0	35	1.4	19.7	20.8	1.0	1	17	7.7	<0.1	23.2
STD OREAS24P	Standard	18.2	194	4.21	298	1.173	8.22	2.420	0.71	0.4	148.6	38	1.5	21.1	22.2	1.1	1	19	8.8	<0.1	23.1
STD OREAS24P Expected		17.4	196	4.13	285	1.1	7.66	2.34	0.7	0.5	141	37.6	1.6	21.3	21	1.04		20	8.7		22.4
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	0.05	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1
BLK	Blank	<0.1	<1	<0.01	<1	<0.001	<0.01	<0.001	<0.01	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	<0.1	<0.1

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		Method	1EX
		Analyte	Hf
		Unit	ppm
		MDL	0.1
Pulp Duplicates			
IVL10+00E 2+00N	Soil		3.4
REP IVL10+00E 2+00N	QC		3.4
IVL12+00E 0+00	Soil		2.8
REP IVL12+00E 0+00	QC		2.8
IVL19+00E 2+00N	Soil		2.4
REP IVL19+00E 2+00N	QC		2.2
IVL17+50E 00+00	Soil		2.1
REP IVL17+50E 00+00	QC		2.2
Reference Materials			
STD OREAS24P	Standard		3.7
STD OREAS24P	Standard		3.6
STD OREAS24P	Standard		3.4
STD OREAS24P	Standard		3.8
STD OREAS24P	Standard		3.4
STD OREAS24P	Standard		3.3
STD OREAS24P	Standard		3.6
STD OREAS24P	Standard		3.7
STD OREAS24P Expected			3.6
BLK	Blank		<0.1
BLK	Blank		<0.1
BLK	Blank		<0.1
BLK	Blank		<0.1

Appendix VII – Bedrock Geologic Mapping

7.1Stations Locations
7.2 Litholigy
7.3Structure

7.1Station Locations

Station Number	Station Date	Station Type	Location Method	UTM Datum	UTM Zone	Elevation (m)	UTM East	UTM North	GPS Accuracy (m)	Station Notes
AGIVG001	18/08/2009	outcrop	GPS	NAD83	11N		542726	5668979	17	Immediately [15m] w of well bedded but fubar'ed limestone.
AGIVG002	19/08/2009	outcrop	GPS	NAD83	11N	2391	542958	5667315	38	
AGIVG003	19/08/2009	outcrop	GPS	NAD83	11N	2385	542826	5667421	46	
AGIVG004	20/08/2009	outcrop	GPS	NAD83	11N	2557	542644	5666186	17	S
AGIVG005	21/08/2009	outcrop	GPS	NAD83	11N	2554	542700	5666103	18	
AGIVG006	22/08/2009	outcrop	GPS	NAD83	11N	2236	544000	5666678	10	Below station is continuous outcrop whi e above it is patchy.
AGIVG007	22/08/2009	outcrop	GPS	NAD83	11N	2231	543991.99	5666751.3	1	
AGIVG008	22/08/2009	outcrop	GPS	NAD83	11N	2238	543957.2	5666804.6	3	Each of last three stations have been sequentially stratigraphically higher.
AGIVG009	22/08/2009	outcrop	GPS	NAD83	11N	2287	543905.89	5666874	2	Small dyke along gulley on mt buttress. Strong green diopside alteration along margins on wall rock and interior is stained red with hematite or perhaps rhodocrosite? Hosted in blocky unit 3.
AGIVG010	22/08/2009	outcrop	GPS	NAD83	11N	2004	544234.58	5666928.6	3	
AGIVG011	22/08/2009	outcrop	GPS	NAD83	11N	1989	544314.33	5666944.3	3	
AGIVG012	22/08/2009	outcrop	GPS	NAD83	11N	1930	544459.67	5666919.4	4	
AGIVG013	22/08/2009	outcrop	GPS	NAD83	11N	1849	544503.62	5666892.5	5	
AGIVG014	22/08/2009	outcrop	GPS	NAD83	11N	1762	544679.19	5666867.8	4	
AGIVG015	23/08/2009	outcrop	GPS	NAD83	11N	2292	543157.86	5666128.7	2	
AGIVG016	23/08/2009	outcrop	GPS	NAD83	11N	2293	542851.07	5665797.4	3	
AGIVG017	23/08/2009	outcrop	GPS	NAD83	11N	2542	542878.13	5665756.6	2	
AGIVG018	23/08/2009	outcrop	GPS	NAD83	11N	2638	542800.52	5665650.5	2	
AGIVG019	23/08/2009	outcrop	GPS	NAD83	11N	2619	542766.29	5665686.4	2	
AGIVG020	23/08/2009	outcrop	GPS	NAD83	11N	2649	542609.97	5665825.5	2	
AGIVG021	24/08/2009	outcrop	GPS	NAD83	11N	2189	543496.02	5670395.5	2	
AGIVG022	24/08/2009	outcrop	GPS	NAD83	11N	2171	543541.66	5670304.9	2	
AGIVG023	24/08/2009	outcrop	GPS	NAD83	11N	2162	543542.17	5670178.3	2	
AGIVG024	24/08/2009	outcrop	GPS	NAD83	11N	2217	543539.97	5670149.7	3	
AGIVG025	24/08/2009	outcrop	GPS	NAD83	11N	2145	543499.82	5669946.2	2	
AGIVG026	24/08/2009	outcrop	GPS	NAD83	11N	2146	543623.39	5670417.1	3	
AGIVG027	24/08/2009	outcrop	GPS	NAD83	11N	2348	543603.18	5670897.1	2	
AGIVG028	25/08/2009	outcrop	GPS	NAD83	11N	2370	543594.38	5665459.4	3	
AGIVG029	25/08/2009	outcrop	GPS	NAD83	11N	2353	543570.11	5665458.2	2	
AGIVG030	25/08/2009	outcrop	GPS	NAD83	11N	2424	543510.23	5665614.5	2	
AGIVG031	25/08/2009	outcrop	GPS	NAD83	11N	2514	543443.82	5665682.6	1	
AGIVG032	25/08/2009	outcrop	GPS	NAD83	11N	2508	543418.57	5665657.1	2	
AGIVG033	25/08/2009	outcrop	GPS	NAD83	11N	2226	543978.98	5665467.2	2	
BWIVG001	19/08/2009	outcrop	GPS	NAD83	11N	2338	543021.72	5667300.2	4	15m x 10m elongate NW
BWIVG002	19/08/2009	outcrop	GPS	NAD83	11N	2358	542963.51	5667345.6	2	5m wide tongue joins cliffs, subcrop + talus below (N)
BWIVG003	20/08/2009	outcrop	GPS	NAD83	11N	2692	542514.07	5666720.6	3	Outcrop spans 50m up to ridge and +100m wide with dirt shelves throughout.
BWIVG004	20/08/2009	outcrop	GPS	NAD83	11N	2695	542524.75	5666740.6	3	2 x 4m outcrop. Surrounding rocks are medium grained mesocratic syenite
BWIVG005	20/08/2009	outcrop	GPS	NAD83	11N	2665	542526.75	5666794.6	4	Base of cliff, outcrop extent 100m up
BWIVG006	20/08/2009	outcrop	GPS	NAD83	11N	2661	542546.56	5666810	1	Ijolite varies greatly in grain size. Very minor ilmenite and Cu staining present.

Station Number	Station Date	Station Type	Location Method	UTM Datum	UTM Zone	Elevation (m)	UTM East	UTM North	GPS Accuracy (m)	Station Notes
BWIVG007	20/08/2009	outcrop	GPS	NAD83	11N	2670	542526.36	5666842.3	2	
BWIVG008	20/08/2009	outcrop	GPS	NAD83	11N	2655	542637.74	5666965.1	2	Outcrop 50cm high, 15m long across slope
BWIVG009	20/08/2009	outcrop	GPS	NAD83	11N	2635	542819.09	5667026.1	2	Outcrop broken by extensive dirt cover
BWIVG010	21/08/2009	outcrop	GPS	NAD83	11N		543398	5666401	10	Outcrop40 x 80m long axis 185°
BWIVG011	21/08/2009	outcrop	GPS	NAD83	11N		543401	5666402	10	10cm skarn zone in hanging wall of sill with coarse disseminated pyr to 5%
BWIVG012	21/08/2009	outcrop	GPS	NAD83	11N		543379	5666415	10	Walking up continuous exposure in creek, orientation 340.
BWIVG013	21/08/2009	outcrop	GPS	NAD83	11N		543340	5666466		25m into unit 3 up creek
BWIVG014	21/08/2009	outcrop	GPS	NAD83	11N		543355	5666459	8	
BWIVG015	21/08/2009	outcrop	GPS	NAD83	11N		543329	5666320	12	5 x 5m outcrop, outcrop blobs continue along hillside SW
BWIVG016	22/08/2009	outcrop	GPS	NAD83	11N	2330	543854.46	5666736.7	3	Continuous exposure up creek/cliff face
BWIVG017	23/08/2009	outcrop	GPS	NAD83	11N	2269	543173.34	5666201.7	1	10 x 50 m, long axis 340°, outcrop exposure rubbly on hillside
BWIVG018	23/08/2009	subcrop	GPS	NAD83	11N	2401	543053.25	5665881.5	2	5 x 4 m subcrop block
BWIVG019	23/08/2009	outcrop	GPS	NAD83	11N	2427	543057.31	5665813.4	2	100 x 100m outcrop, N of and above glacier
BWIVG020	23/08/2009	outcrop	GPS	NAD83	11N	2443	543045.37	5665793.8	2	Base of cliff above glacier, outcrop continues as cliff to ridge
BWIVG021	23/08/2009	outcrop	GPS	NAD83	11N	2496	542949.94	5665761.5	2	Outcrop continuous to ridge
BWIVG022	23/08/2009	outcrop	GPS	NAD83	11N	2610	542855.54	5665546.1	2	Point on ridge, outcrop is continuous
BWIVG023	23/08/2009	outcrop	GPS	NAD83	11N	2622	542792.28	5665673.5	2	Outcrop continuous to ridge
BWIVG024	23/08/2009	outcrop	GPS	NAD83	11N	2597	542650.38	5665803.3	5	Continuous outcrop to ridge
BWIVG025	24/08/2009	outcrop	GPS	NAD83	11N	2280	543382.46	5670673.9	2	Outcrop is 100x100m with some grassy patches.
BWIVG026	24/08/2009	outcrop	GPS	NAD83	11N	2412	543217.22	5670816.8	2	Base of outcrop which continues to ridge
BWIVG027	24/08/2009	outcrop	GPS	NAD83	11N	2512	543250.59	5670986.7	4	Continuous in gully
BWIVG028	24/08/2009	outcrop	GPS	NAD83	11N	2522	543258.18	5670990.1	3	Continuous outcrop
BWIVG029	25/08/2009	outcrop	GPS	NAD83	11N	2229	543869.23	5665209.9	3	Base of outcrop which is continuous to ridge
BWIVG030	25/08/2009	outcrop	GPS	NAD83	11N	2240	543848.33	5665174.2	2	Continuous outcrop up gully sides
BWIVG031	25/08/2009	outcrop	GPS	NAD83	11N	2226	543888.72	5665180.6	2	Continuous outcrop
BWIVG032	25/08/2009	outcrop	GPS	NAD83	11N	2233	543921.37	5665191.7	2	Continuous outcrop to ridge
BWIVG033	25/08/2009	outcrop	GPS	NAD83	11N	2138	544027.15	5665209.3	2	Base of cliff
BWIVG034	25/08/2009	outcrop	GPS	NAD83	11N	2049	544240.8	5665220.3	2	Base of cliff, forest to the east
BWIVG035	25/08/2009	outcrop	GPS	NAD83	11N	2059	544142.7	5665302.6	2	20m x 10m elongate 100°
BWIVG036	25/08/2009	outcrop	GPS	NAD83	11N	2105	544022.68	5665387.8	5	200m x 50m elongate 160°
BWIVG037	25/08/2009	outcrop	GPS	NAD83	11N	2105	543908.79	5665312.5	3	200x200m of spotty outcrop, station at SW edge
GHIVG001	08/07/2009	float	GPS	NAD83	11N		542723	5668733		Xrf reading 2, float boulder
GHIVG002	09/07/2009	outcrop	GPS	NAD83	11N	2207	543496	5668914	7	possible bedded limestone/massive limestone contact (2b/2c)
GHIVG003	18/07/2009	outcrop	GPS	NAD83	11N		542804	5668592	18	
GHIVG004	05/08/2009	outcrop	GPS	NAD83	11N	2562	543309	5665489	9	at headwall contact of 2b/2c, near anticline hindge
GHIVG005	25/08/2009	outcrop	GPS	NAD83	11N	2556	543319	5665511	17	dike rx with hcl, near 2b/2c contact, cuts through 2b and then follows contact
JBIV250	07/07/2009	outcrop	GPS	NAD83	11N	2282	542899.06	5668716.4	6	
JBIV251	08/07/2009	outcrop	GPS	NAD83	11N	2610	542667.68	5669813.6	1	Ridge top near zeolite sy
JBIV252	08/07/2009	outcrop	GPS	NAD83	11N	2609	542674.2	5669819.2	2	=ore zone!? Carb-swarm assoc w base of zeo unit 15
JBIV253	08/07/2009	outcrop	GPS	NAD83	11N	2639	542625.47	5669753.2	2	
JBIV254	08/07/2009	outcrop	GPS	NAD83	11N	2677	542568.75	5669645.9	2	
JBIV255	08/07/2009	outcrop	GPS	NAD83	11N	2570	542720.67	5669821.2	1	
JBIV256	09/07/2009	outcrop	GPS	NAD83	11N	2167	543055.97	5668723.8	1	Near bottom old trench?
JBIV257	09/07/2009	outcrop	GPS	NAD83	11N	2221	543028.1	5668753.4	1	Near top of trench

Station Number	Station Date	Station Type	Location Method	UTM Datum	UTM Zone	Elevation (m)	UTM East	UTM North	GPS Accuracy (m)	Station Notes
JBIV258	09/07/2009	outcrop	GPS	NAD83	11N	2248	543008.26	5668743.2	2	
JBIV259	09/07/2009	outcrop	GPS	NAD83	11N	2228	542989.69	5668747.9	2	Alt oc dn hill of soil anom
JBIV260	09/07/2009	outcrop	GPS	NAD83	11N	2230	542973.99	5668727.8	2	In creek below soil anom.
JBIV261	09/07/2009	outcrop	GPS	NAD83	11N	2232	542954.8	5668739.3	2	In creek
JBIV262	10/07/2009	outcrop	GPS	NAD83	11N	2263	543308.49	5669914	4	Trav w glen north of camp lk; follow up soil geochem with XRF. Good oc here
JBIV263	10/07/2009	soil	GPS	NAD83	11N	2265	543327.11	5669910.8	2	XRD and scint surv of NTIVD110
JBIV264	10/07/2009	soil	GPS	NAD83	11N	2253	543338.75	5669939.7	2	See XRF RESULT. Soil=347 ppm Zr. Lst host=130ppm zr. Sy is rare here, but we are at 2b-2c contact
JBIV265	10/07/2009	soil	GPS	NAD83	11N	2253	543346.38	5669962.6	2	XRF & SCINT SOIL TEST
JBIV266	10/07/2009	soil	GPS	NAD83	11N	2246	543337.25	5669993.2	2	Xrd and scint
JBIV267	10/07/2009	soil	GPS	NAD83	11N	2250	543324.43	5670012.6	2	
JBIV268	10/07/2009	outcrop	GPS	NAD83	11N	2234	543333	5669999.7	1	
JBIV269	10/07/2009	outcrop	GPS	NAD83	11N	2254	543266.7	5669853.5	1	
JBIV270	10/07/2009	outcrop	GPS	NAD83	11N	2242	543303.6	5669830	2	In creek
JBIV271	10/07/2009	outcrop	GPS	NAD83	11N	2271	543278.32	5669761.1	1	
JBIV272	10/07/2009	subcrop	GPS	NAD83	11N	2289	543235.89	5669760.5	1	
JBIV276	12/08/2009	outcrop	GPS	NAD83	11N	2014	544005.91	5667553.3	4	Good min stat see notes.
JBIV277	12/08/2009	outcrop	GPS	NAD83	11N	2011	543939.02	5667524.4	2	
JBIV278	12/08/2009	outcrop	GPS	NAD83	11N	2008	543971.68	5667523.5	3	
JBIV279	12/08/2009	outcrop	GPS	NAD83	11N	2027	543985.84	5667553	2	
JBIV280	12/08/2009	outcrop	GPS	NAD83	11N	1998	543948.17	5667681.1	2	
JBIV281	18/08/2009	outcrop	GPS	NAD83	11N	2434	542723.2	5668978.2	2	100m dyke?
JBIV282	18/08/2009	outcrop	GPS	NAD83	11N	2408	542685.05	5668815.8	2	20x30m Oc
JBIV283	22/08/2009	outcrop	GPS	NAD83	11N	2255	543960	5666920		Top of central main creek = target for pm
JBIV284	22/08/2009	outcrop	GPS	NAD83	11N	2117	544128	5666879		
JBIV285	22/08/2009	outcrop	GPS	NAD83	11N	2072	544185	5666930		Beautiful 2b-2c cntct in central creek east of buttres pk. GPS106. Just above soil IVL002 12+00 N which is right on cntct.
JBIV286	25/08/2009	outcrop	GPS	NAD83	11N		543336	5666677		
JBIV287	25/08/2009	outcrop	GPS	NAD83	11N		543335	5666660		
JBIV288	26/08/2009	outcrop	GPS	NAD83	11N		542818	5668897		IP checks with Lewis on last day starting grid L10E 2+25N
JBIV289	26/08/2009	outcrop	GPS	NAD83	11N		542765	5668917		LJIVD001 XRF
JBIV290	26/08/2009	outcrop	GPS	NAD83	11N		542835	5668761		2b/2c contact
JBIV291	26/08/2009	outcrop	GPS	NAD83	11N		542810	5668713		see XRF JAB112
JBIV292	26/08/2009	outcrop	GPS	NAD83	11N	2340	542780	5668590		2c/2c contact lower down because of structure repeat
JBIV293	26/08/2009	outcrop	GPS	NAD83	11N	2324	542779	5668635		2b lst near creek
JBIV294	26/08/2009	outcrop	GPS	NAD83	11N	2313	542809	5668683		near L10E 0+25S. good outcrop exposure everywhere hear and above
JBIV295	26/08/2009	outcrop	GPS	NAD83	11N	2277	542910	5668734		L11E 0+25N - looking for conductivity high; see XRF JAB116
LJIVG001	22/08/2009	outcrop	GPS	NAD83	11N	1846	544505	5666892	11	
MGIVG001	09/07/2009	outcrop	GPS	NAD83	11N	2147	543277.7	5668721.8	2	Length of oc 310 N --> 16m width 12m @middle; pseudo elipse
MGIVG003	09/07/2009	outcrop	GPS	NAD83	11N	2121	543321.59	5668690.1	3	E-w running 4 sets of 1m wide outcrops; length 10m; starting fro gps -> west
MGIVG004	09/07/2009	outcrop	GPS	NAD83	11N	2142	543126.52	5668423.2	2	

Station Number	Station Date	Station Type	Location Method	UTM Datum	UTM Zone	Elevation (m)	UTM East	UTM North	GPS Accuracy (m)	Station Notes
MGIVG005	10/07/2009	outcrop	GPS	NAD83	11N		543373	5668901	7	
MGIVG006	10/07/2009	outcrop	GPS	NAD83	11N		543373	5668901	7	
MGIVG007	10/07/2009	outcrop	GPS	NAD83	11N		543428	5668964	16	
MGIVG008	10/07/2009	outcrop	GPS	NAD83	11N		543416	5668963	10	
MGIVG009	10/07/2009	outcrop	GPS	NAD83	11N					
MGIVG010	10/07/2009	outcrop	GPS	NAD83	11N		543455	5668947	14	
MGIVG011	10/07/2009	outcrop	GPS	NAD83	11N		543410	5668999	13	
MGIVG012	10/07/2009	outcrop	GPS	NAD83	11N		543383	5668997	16	Fracturesr running through ~ 44/66
MGIVG013	11/08/2009	outcrop	GPS	NAD83	11N	2271	543415	5668923	12	
MGIVG014	11/08/2009	outcrop	GPS	NAD83	11N	2224	543417	5668933	12	
MGIVG015	11/08/2009	outcrop	GPS	NAD83	11N		543415	5668941	10	
MGIVG016	11/08/2009	outcrop	GPS	NAD83	11N		543485	5668920	15	
MGIVG017	12/08/2009	outcrop	GPS	NAD83	11N	2036	544024.88	5667559.6	3	Also dull black mineral, similar to perovskite
MGIVG018	12/08/2009	outcrop	MAP	NAD83	11N	2046	544024	5667549		
MGIVG019	12/08/2009	outcrop	GPS	NAD83	11N	1977	544062.78	5667510.9	7	
MGIVG020	12/08/2009	outcrop	GPS	NAD83	11N	1973	544103.4	5667667.2	25	
MGIVG021	12/08/2009	outcrop	GPS	NAD83	11N	2046	544095.85	5667561	3	
MGIVG022	12/08/2009	outcrop	GPS	NAD83	11N	2090	544068.27	5667482.3	1	
MGIVG024	18/08/2009	outcrop	GPS	NAD83	11N	2440	542731.53	5668960.7	2	
MGIVG025	19/08/2009	outcrop	GPS	NAD83	11N	2391	542892.34	5667392	3	2 xrf 'first two-]
MGIVG026	20/08/2009	outcrop	GPS	NAD83	11N	2605	542464.04	5666256.9	1	Mafic is dargrey; fresh purplish grey; slivers of syn. In dike [pegmatitic] enriched in Cr [around 1000ppm] Y=350
MGIVG027	20/08/2009	outcrop	GPS	NAD83	11N	2616	542459.82	5666387	2	
MGIVG028	20/08/2009	outcrop	GPS	NAD83	11N	2649	542447.51	5666479.7	2	Syn cooked up at contact; ijolite w/ px and mag
MGIVG029	20/08/2009	outcrop	GPS	NAD83	11N	2656	542488.48	5666626.8	2	
MGIVG030	20/08/2009	outcrop	GPS	NAD83	11N	2710	542502.28	5666708.8	1	
MGIVG031	20/08/2009	outcrop	GPS	NAD83	11N	2697	542514.49	5666687.1	1	
MGIVG032	20/08/2009	outcrop	GPS	NAD83	11N	2687	542525.07	5666676.9	1	
MGIVG033	20/08/2009	outcrop	GPS	NAD83	11N	2676	542544.09	5666685.4	1	
MGIVG034	20/08/2009	outcrop	GPS	NAD83	11N	2650	542548.86	5666641.2	1	
MGIVG035	20/08/2009	outcrop	GPS	NAD83	11N	2646	542567.04	5666641.9	7	
MGIVG036	20/08/2009	outcrop	GPS	NAD83	11N	2638	542563.03	5666653.3	2	
MGIVG037	20/08/2009	outcrop	GPS	NAD83	11N	2620	542568.59	5666666.5	2	
MGIVG038	20/08/2009	outcrop	GPS	NAD83	11N	2614	542602.89	5666638.3	2	Syn around it hem-zeo and diops alt
MGIVG039	20/08/2009	outcrop	GPS	NAD83	11N	2597	542637.54	5666652	2	
MGIVG040	20/08/2009	outcrop	GPS	NAD83	11N	2600	542649.78	5666652.1	2	Co tact
MGIVG041	20/08/2009	outcrop	GPS	NAD83	11N	2583	542651.84	5666656.9	2	
MGIVG042	20/08/2009	outcrop	GPS	NAD83	11N	2574	542671.27	5666657.8	4	
MGIVG043	21/08/2009	outcrop	GPS	NAD83	11N	2611	542479.7	5666207.2	2	Syn has clasts of mafic unit, which fractured and veined w/vcarbonate
MGIVG044	21/08/2009	outcrop	GPS	NAD83	11N	2605	542489.42	5666190.3	2	Hem-zeol alt
MGIVG045	21/08/2009	outcrop	GPS	NAD83	11N	2608	542510.2	5666173.2	2	
MGIVG046	21/08/2009	outcrop	GPS	NAD83	11N	2607	542506.76	5666191.3	2	Geost. For picture, facing 323
MGIVG047	21/08/2009	outcrop	GPS	NAD83	11N	2583	542523.1	5666195.7	2	Whitie syn w/ med-grained px
MGIVG048	21/08/2009	outcrop	GPS	NAD83	11N	2554	542539.69	5666218.9	1	

Station Number	Station Date	Station Type	Location Method	UTM Datum	UTM Zone	Elevation (m)	UTM East	UTM North	GPS Accuracy (m)	Station Notes
MGIVG049	21/08/2009	outcrop	GPS	NAD83	11N	2565	542488.75	5666314.4	2	
MGIVG050	21/08/2009	outcrop	GPS	NAD83	11N	2539	542632.95	5666150.1	3	
MGIVG051	21/08/2009	outcrop	GPS	NAD83	11N	2509	542718.46	5666088.3	2	Coh massive in melanocrat syn or ijolite
MGIVG052	21/08/2009	outcrop	GPS	NAD83	11N	2541	542674.76	5666043.5	4	Between jacu and syn mafic unit px+mag veined w.]/ carb
MGIVG053	21/08/2009	outcrop	GPS	NAD83	11N	2605	542829.87	5665940.5	2	
MGIVG054	21/08/2009	outcrop	GPS	NAD83	11N	2468	542855.97	5665897.3	2	
MGIVG055	22/08/2009	outcrop	GPS	NAD83	11N	2309	543869.63	5666746.3	3	
MGIVG056	22/08/2009	outcrop	GPS	NAD83	11N	2324	543876.41	5666746.9	4	
MGIVG057	22/08/2009	outcrop	GPS	NAD83	11N	4141	544809.23	5666376.6	4	
MGIVG058	22/08/2009	outcrop	GPS	NAD83	11N	2238	543979.52	5666648	4	
MGIVG059	22/08/2009	outcrop	GPS	NAD83	11N	2188	544070.41	5666661	2	
MGIVG060	22/08/2009	outcrop	GPS	NAD83	11N	1894	544483.46	5666530.9	8	
MGIVG061	22/08/2009	outcrop	GPS	NAD83	11N	1809	544582.65	5666514	3	
MGIVG062	22/08/2009	outcrop	GPS	NAD83	11N	1799	544583.11	5666517.3	3	
MGIVG063	23/08/2009	outcrop	GPS	NAD83	11N	2401	543329.35	5666631.6	2	
MGIVG064	23/08/2009	outcrop	GPS	NAD83	11N	2370	543325.79	5666623	2	
MGIVG065	23/08/2009	outcrop	GPS	NAD83	11N	2389	543318.54	5666603.3	3	75/10 little syn dikelets; fg to coarse
MGIVG066	23/08/2009	outcrop	GPS	NAD83	11N	2374	543318.6	5666604.4	4	Dike orientation variable; somewhat with avg dikelet swarm
MGIVG067	23/08/2009	outcrop	GPS	NAD83	11N	2419	543327.06	5666653.9	5	Fg whitish chillmargin
MGIVG068	23/08/2009	outcrop	GPS	NAD83	11N	2368	543312.63	5666649	3	
MGIVG069	23/08/2009	outcrop	GPS	NAD83	11N	2414	543332.45	5666662.5	2	
MGIVG070	23/08/2009	outcrop	GPS	NAD83	11N	2112	543600.15	5666974.9	3	
MGIVG071	23/08/2009	outcrop	GPS	NAD83	11N	2442	543343.31	5666676.5	2	
MGIVG072	23/08/2009	outcrop	GPS	NAD83	11N	2506	543361.49	5666735.3	2	Yellow min ->xrd
MGIVG073	23/08/2009	outcrop	GPS	NAD83	11N	2497	543368.82	5666737.6	3	
MGIVG074	23/08/2009	outcrop	GPS	NAD83	11N	2499	543284.84	5666792.8	2	Above is a leucocratic pale green syn.
MGIVG075	24/08/2009	outcrop	GPS	NAD83	11N	2312	543469.57	5670621.5	3	Creek running over it; 20x10m body
MGIVG076	24/08/2009	outcrop	GPS	NAD83	11N	2360	543320.41	5670788.7	3	
MGIVG077	24/08/2009	outcrop	GPS	NAD83	11N	2404	543293.41	5670774.6	2	
MGIVG078	24/08/2009	outcrop	GPS	NAD83	11N	2378	543274.6	5670783.3	2	
MGIVG079	24/08/2009	outcrop	GPS	NAD83	11N	2434	543190.39	5670824.6	1	
MGIVG080	24/08/2009	outcrop	GPS	NAD83	11N	2434	543256.22	5670850	2	Fresh: pinkish green grey;Zr around 5000ppm
MGIVG081	24/08/2009	outcrop	GPS	NAD83	11N	2473	543245.32	5670908.2	2	Scint and xrf boring
MGIVG082	24/08/2009	outcrop	GPS	NAD83	11N	2502	543255.25	5670932.3	8	
MGIVG083	24/08/2009	outcrop	GPS	NAD83	11N	2531	543212.57	5671036.9	3	
MGIVG084	24/08/2009	outcrop	GPS	NAD83	11N	2670	543117.07	5671240.8	3	
MGIVG085	24/08/2009	outcrop	GPS	NAD83	11N	2777	542889.63	5671169.9	5	Xrf boring; syn looks a bit sheared
MGIVG086	24/08/2009	outcrop	GPS	NAD83	11N	2786	542888.7	5671197.4	1	
MGIVG087	26/08/2009	outcrop	GPS	NAD83	11N	2451	543266.72	5666776.5	5	
MGIVG088	26/08/2009	outcrop	GPS	NAD83	11N	2504	543254.47	5666827.6	4	
MGIVG089	26/08/2009	outcrop	GPS	NAD83	11N	2304	543246.68	5666505.8	2	

7.2Lithology

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
AGIVG001		lamprophyre		grey	greenish	very fine	massive		Vfg, v. Altered, 'mafic rock' / dyke/lamprophyre. Small white carbonite veins are seen throughout
AGIVG002		zeolite syenite		white	grey	coarse	crystalline		Rock is >90% zeolite, zeolite is euhedral and xtals avg 0.6x1-2cm, xtals are white-lt grey/tan, original rock maybe carbonatite?
AGIVG003		mafic dyke		grey	brownish	fine-medium	massive		Mafic dyke, lamprophyre?? Fg, min= pyroxene, mt, plagg? This is miike's stn.
AGIVG004		syenite		reddish	pinkish	medium-coarse	massive		Syenitic horizon with strong hem. Alt. Identical to overlying fresh syenite save for strong hem, diopside and carbonate alteration.
AGIVG005		syenite		reddish	pinkish	medium-coarse	massive		Same as previous; iinferred to b along same horizon. Syenitic with strong hm, diop, calcite and maybe zeol alt?
AGIVG006		mafic dyke		grey	brownish	fine	massive		Looks v similar to limmestone, but small xtals are visible near margin. No carbonate, non-magnetic.
AGIVG007	2	limestone		grey	grey	very fine	bedded		At n end of 100m o/c trending 190, all siltstone. Vfg hornfels siltstone? Fresh=med grey/blue/maroon; weathered = grey + sllightly rusty. Some pkaces have great cleavage // too bedding.
AGIVG008		mafic dyke		grey	orangish	fine			Still in mafic dyke unit? 1m thick fg greenish-grey syenite dyke with trace fluorite and pyrite.
AGIVG009		carbonatite		reddish	brownish				Calcite-ankerite-diopside 'carbono-thermal?' aka carbonatite dyke. 1m chip sample taken inccludes diopside margin.
AGIVG010	2b	limestone		grey	grey	very fine			2b immediately below contact with 2c
AGIVG011	2c	limestone2c		grey	grey	very fine			Unit 2c just above contact with 2b, near 1m thick syenite dyke. Xrf'd, nothing too interesting.
AGIVG012		limestone							Tan weathering, blocky silty limestone, grey fresh 2c
AGIVG013	2	limestone		grey	grey	very fine			Occ. 5-15cm syenite sills w/ elevatedd nb, ba; see xrf. Massive to thickly bedded limey to slightly silty limestone.
AGIVG014	2b	limestone		grey					Lower 2c/upper 2b ctc. Sample of syenite dike at ctc
AGIVG015		syenite	ijolite	grey	grey	medium-coarse			Ijolite near bottomof outcrop, brecciated by fluorite-bearing sy. Large [1m] rafts of vfg mafic or sediment also in dyke corridor
AGIVG016		syenite		grey	greyish	coarse			2 rusty bands in syenite,about .3m thick. Thought were dykes,but are horizons wtrh ilmenite & local magnetie & lcl sodalite. There are several discontinuous ~1mx2m pods of mafics [ijo + jac] below.
AGIVG017	5	jacupirangite	urtite	rusty	black	medium	massive		Jac x-cut by numerous syen dykes. Dykes vary in size between .2-.6m
AGIVG018		carbonatite		brownish	brownish	medium	massive		Equigranular carbonatite; pyroxene, calcite,, minor diopside and pyrite, plag? Part of a dyke on the ridge but it iiss hard to tell which way it iss trending.
AGIVG019		carbonatite		greyish	brownish	medium			Var grainsize; calcite, pyroxene, plag[?],.
AGIVG020		syenite		white	rusty	coarse			Contains py, illmenite, and possibly pyrrhotite? Small mnzed dyke 30 cm thick
AGIVG021	2c	limestone		grey	grey	very fine			Layers of thick +massive+cherty-dolo ls and layers of thinner [1-3cm] bedded stuff.
AGIVG022	2c	limestone		grey	grey	medium			Sample from rusty horizon in limestone. Limestone very poorly bedded, a
AGIVG023	2	limestone		grey	grey				
AGIVG024	2	limestone		grey	grey				Possible 2b/2c ctc; massive layers here and below but none above.
AGIVG025	2	limestone		grey	grey				Well -bedded limesrone, weathers rusty in places.

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
AGIVG026	2b	limestone		grey	greyish				Same limestone we've been seeing all day. Wavy/poor beding; brown&grey weathering. Minor lclcubes of py.
AGIVG027		syenite		white	milky	fine	massive		Syenite dyke? Vfg, contains carbonate. Maybe not a dyke but a fault with a dyke running thru it? See photo! On bottom, definitely ls, unit 4? But above appears to be jac? Can't access it.
AGIVG028	2b	limestone		brownish	brownish	fine-medium			? Lots of biotite and iron staining in 2 // dykes, 1m apart, each 30cm wide. Southern one is slightly boudined.
AGIVG029		lamprophyre		grey	brownish	medium			Lamp. Dyke with phenocrysts [5mm] of biotite. Contains carbonate, but intrudes 2b so o surprise.
AGIVG030		lamprophyre		dark	brownish	fine-medium			Lamprophyre; small [1-3mm]biotite phenos. Dyke is recessive and under some dirt, bot appears to be 30ish cm thick.
AGIVG031	2b	limestone2b		grey	grey	very fine			Limestone at top of ridge. Possibly east arm of anticline?
AGIVG032		lamprophyre		black	brownish	fine-medium			Sobcrop is .5m wide and traceable for at east 5m along strike. Biotite phenocrysts, fg black groundmass with a few disseminated sulfides. ! Lamp outcrops at very bottom of south tunnel wall.
AGIVG033	2b	limestone2b		grey	grey	very fine			Galena-bearing veins in ls
BWIVG001	15	zeolite syenite	leucocratic syenite	greyish	beige	medium-coarse	massive		Xenoliths of jacopirangite throughout. Natrolite + eddingtonite
BWIVG002	15	zeolite syenite	leucocratic syenite	greenish	greyish	medium-coarse	massive		Unit 13 and 15. Diopside + minor pyr, ilm, flu. Size to pegmatitic
BWIVG002	15	zeolite syenite	leucocratic syenite	greenish	greyish	medium-coarse	massive		Unit 13 and 15. Diopside + minor pyr, ilm, flu. Size to pegmatitic
BWIVG003	13	leucocratic syenite	ijolite	greyish	grey	medium-coarse	brecciated		Area has many rock types mixed in, 12 and 13 sye, mafic dykes, ijolite at top of ridge and throughout. Breccia common, fits with messed up area.
BWIVG004		zeolite syenite	mesocratic syenite	dark	milky	fine-medium			In place eddingtonite crystals up to 20cm length. Top of area is black fine grained with diopside, edd, phlogopite maybe. Adjacent rocks are hem + dio alt sye
BWIVG005		leucocratic syenite	mafic dyke	greyish	grey	medium-coarse			Pink + green alteration of sye, some zeolites, most rock is breccia of leuco sye matrix + mafic rock clasts
BWIVG006		zeolite syenite	ijolite	greyish	white	medium-coarse			Zeo + hem sye dykes cut ijolite rock, dykes are 20 to 50cm thick and have varying orientations
BWIVG007		limestone	nepheline syenite	grey	brown	fine	bedded		Limestone raft in sye, above is breccia of mafic clasts in sye matrix then fine grained sye to ridge.
BWIVG008	13	leucocratic syenite		beige	pink	medium-coarse			From BWIVG007 to here rock is leuco sye and jacopirangite
BWIVG009		sodalite syenite	jacupirangite	beige	pinkish	medium			Mixed mafic and sye
BWIVG010	2c	limestone2c	limestone2c	grey	grey	fine	bedded		Contact between lmst 2b and 2c. B is powdery in appearance and thinly bedded but bedding is weakly defined. C has more defined bedding which is 2 to 3 cm.
BWIVG011	2c	syenite	limestone	grey	light	fine-medium			Sye sill at 2B/2C contact, light grey with salmon orange specks (maybe P rich mineral) and green wispy xenoliths.
BWIVG012		mafic dyke		dark	grey	fine	massive		21m mafic dyke, concoidal fracture/weathering. Sodalite(30%) + calcite/other white mineral(70%).

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
BWIVG013		limestone3		grey	dark	fine	laminated		Dark grey and tan layers, 5m thick, alternate. Grey is very hard, ibternally featureless. Tan is slightly softer, with mm scale laminations of green - pinker, some m size rusty patches.
BWIVG014		limestone2c	limestone3	grey	grey	fine			Contact between 2c and 3
BWIVG015	2c	limestone2c		grey	grey	fine	veined		Close to 2b contact, extensively altered, veining is almost stockwork - sye dykelet swarn. Veins mm size, 100+/m
BWIVG016	2c	limestone2c		purplish	brownish	fine	bedded		Lmst is moderately skarnified, has a vuggy-hackly appearance when weathered, large qtz vein - descript in veining
BWIVG017	5	jacupirangite	leucocratic syenite	dark	rusty	fine-medium	massive		Sye dyke in jac, jac is crystalline/flaky uniform dark grey/black. Sye is equigranular with dio, nep, mag, pyx. *outcrop is riddled with sye dykes, 0.5m up to 4m wide approx every 5m in jac.
BWIVG018	4	skarn	limestone2c	grey	tan	fine	bedded		Sed raft with cm sye dykea/veins. Skarnified lmst 2c. Skarn has remenant layering - mm size green, purple, tan layers - with deferential weathering.
BWIVG019	13	leucocratic syenite	limestone	grey	grey	medium-coarse	massive		Sye is med grey with feld, nep, dio, mag. Hostsva raft of lmst which is light tan. Lower half of ourcrop is jac with m scale sye dykew
BWIVG020	12	mesocratic syenite	mafic dyke	greenish	grey	medium-coarse	massive		2m thick mafic dyke in meso sye, fingers ~10cm branch off, 40m in length, dyke highly magnetic, pyx, fine grained. Sye has no magnetite but has sphene and minor soda veins, nep and dio rich
BWIVG021	13	leucocratic syenite	jacupirangite	grey	grey	medium-coarse	massive		Melange of sye, jac, and mafic dyke. Some breccia and disordered veins/dykes. No alteration apparent
BWIVG022	13	mesocratic syenite	jacupirangite	grey	grey	medium-coarse			Contact between jac with abundant sye veins and sye with jac veining. Sye is cliff forming while jac follows slope. Grain size varies fine to very coarse i n sye.
BWIVG023		syenite	jacupirangite	grey	grey	medium-coarse			Sye dyke with nep, plag, dio, bio, pyr, grey and pink and green and brown. See structure for dyke decscription. Within sye are jac pods and cm size white plag veins.
BWIVG024	5	jacupirangite	leucocratic syenite	dark	rusty	fine-medium	massive		Jac host, each dyke has breccia at the lower contact then leuco-sye, sequence is repeated
BWIVG025	4	skarn		greenish	beige	fine	bedded		Skarnified 2C, pink, green, and ten laminations. Bedding is well developed in some places but very poor in others
BWIVG026	4	skarn	syenite	brownish	rusty	fine	laminated		2c skarn with sye dyke. Dyke is fine to coarse grained, grey. pyrox, neph, plag.
BWIVG027	4	skarn	syenite	greenish	tan	fine	laminated		Sye dyke again, 2m thick, Nb and Zr to 700ppm.
BWIVG028	4	skarn		green	green	fine-medium	laminated		2m thick section of dark green skarning
BWIVG029	2	lithologic contact	limestone	grey	brownish	fine	bedded		2b 2c contact. 2b is grey, relatively massive. 2c has cm size layers of grey and brown weathering
BWIVG030	2c	mafic dyke		dark	rusty	fine-medium	massive		20cm thick dyke crosscutting lmst 2c, extends to 2b contact and to gully, about 30m. Mafic dyke has some magnitite. Also a 5cm fine grained sye dyke on opposide side of gully. Low radiation from both.
BWIVG031	2c	limestone		dark	rusty	fine	bedded		Not lmst! Siltstone layer 10m thick, dark colour, concoidal fracture, not calcarious

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
BWIVG032	2c	limestone2c		brownish	brownish	fine-medium	laminated		Sill?/altered layer, 1.5m thick, with bedding. Has cal, mag, ank, possibly gal and other fine grained phases. It is brown, dark grey, and white fresh.
BWIVG033	2c	limestone2c	syenite	greyish	brownish	fine	bedded		2c limestone, blocky, brown and rusty. Many places are silty to cherty
BWIVG034	2c	limestone2c		grey	brownish	fine	bedded		2c, still often silty
BWIVG035	2	lithologic contact	limestone2b	greyish	brown	fine	bedded		2b-2c contact, convoluted bedding
BWIVG036	2b	limestone2b	limestone2c	grey	grey	fine-medium	bedded		Tight z folding, some 2c appears to be in the folding
BWIVG037	2b	lithologic contact	limestone2c	grey	grey	fine	bedded		2b-2c contact, 2c rafts are folded into 2b in places. 2c maybe thinly covering 2b
GHIVG002		limestone		grey	orangish	fine	bedded		
GHIVG003	2b	limestone	dolomite	grey	black	medium-coarse	altered		Black and rust weather
GHIVG004		limestone 2c		grey	orange	medium	wavy bedded		10-12m of 2c then 4m rusty blocky limestone above
GHIVG005	2b	syenite dike		white	black	medium			cuts through 2b then follows 2c contact, rusty to black weathering, has altered wallrock to be white in colour
LJIVG001	2b	limestone2b		grey	bluish	fine			found magnitite,pyrrhotite, sphaerite, quartz vein in blueish grey limestone. Veins range 2mm-45mm in width. There are 3 veins/m for aprox 10m along the outcrop in the creek bed. Veins appear to follow bedding.
MGIVG001		limestone2b		bluish	grey green	fine	banded		Med-thick banded; same composition
MGIVG003		limestone2a		greyish	tan	fine	bedded		Well bedded; thin brown interlayers
MGIVG004		syenite		greenish	white	fine			50 cm wide dyke
MGIVG004		syenite			white	fine			Dike in 2b
MGIVG005	2b	limestone2b		greyish	tan	fine			Bedding not as well defined as in a 2a-unit
MGIVG006		syenite		greenish	white	fine-medium			30 cm dyke
MGIVG007	2b	limestone2b		greyish	grey green	fine			Bedding not well defined
MGIVG008	2b	limestone2b	dolomite	grey green	grey	fine			
MGIVG010	2	limestone		greyish	rusty	fine			Well developed bedding (similar to 2a but its strat. higher)
MGIVG011		syenite		greenish	white	medium			Oc but strike&dip were not obtainable, grass&vegetation
MGIVG012	2b	limestone2b		greenish	greyish	fine			
MGIVG013	2b	limestone2b		grey	greyish	fine			Weathered: greenish brown
MGIVG014	2	limestone		greenish	tan	fine			
MGIVG015	2	limestone		greyish	tan	fine			Same as mgivr0014
MGIVG016	2	limestone		greyish	brown	fine			Same as mgivr014 and 15, but oxidized
MGIVG017	2	limestone		greenish	tan	fine			Weathered color is tan-greenish with a blue tint
MGIVG018	2	limestone		green	tan	fine			Limestone with synitevein/blanket along bedding. Bedding very disturbed.
MGIVG019		syenite		grey green	brownish	medium-coarse			Weathered color tan-green-white-grey... Mess books of biotite/phlogopite
MGIVG020		syenite		green	brownish	fine-medium			Weathered brownish-greenish

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
MGIVG021	2	limestone		green	grey green		bedded		
MGIVG022	2	limestone		dark	white	fine	bedded		Poorly to mod bedded
MGIVG024	16	lamprophyre		green	green	cobble	massive		Agivr001
MGIVG025	16	mafic dyke		purplish	brown	medium-coarse			Fg-cg; mag and bt
MGIVG026	12	syenite	mafic dyke	greenish	greenish				Hem/zeolite, diop alt; named ivr010
MGIVG027		ijolite		black	black	medium-coarse			Weath 70 black to 30 white; fresh 85 black to 15 white
MGIVG028		syenite	ijolite	white	brownish				Ijolite w/ opx and diopside-alt
MGIVG029	13	syenite		greenish	greyish				Dike; fresh blueisg-greenish
MGIVG030	13	syenite							No sodalitesame as mgivg029
MGIVG031		syenite		grey green	grey				2m wide w/ px neph diop
MGIVG032		syenite							Dike
MGIVG033		syenite		reddish	white				Diop alt; hem&zeol alt; black px; w/ pegmatitic veins; Zr above 7000ppm
MGIVG034		syenite		greenish	brownish				
MGIVG035		syenite		greyish	white				Diop, sodalite; sandwiched btbtwo fg mafic units w/ fg mag and opx
MGIVG036		syenite		bluish	grey	medium			Fg; 40 cm wide
MGIVG037		syenite		grey	bluish	fine			Fg; 50cm wide
MGIVG038		mafic dyke							
MGIVG039		syenite							
MGIVG040		syenite							Fresh: whitish; w athered: lightbgrey w/ red/green/white [hem-zeol and diopside]
MGIVG041		syenite				medium-coarse			Sod and neph
MGIVG042		fennite							
MGIVG043	12	syenite		white	pinkish	fine-medium			Whitish syn @ contact w/ mag+px mafic unit [and sphene]; fresh syn is greenish, redish and black
MGIVG044		syenite		white	white	medium			
MGIVG045		syenite		white	greyish	fine-medium			Just below mgivg044
MGIVG047		syenite		white	white	fine-medium			Leucocrat syn; baked @bcontact with mag+px rich mafic unit
MGIVG048		syenite		greenish	brownish	medium			Brownish alt ?; and hem-zeol and diopside alt;fresh green and red
MGIVG049		syenite		brownish	brownish	fine-medium			Hem-zeol, diops alt; also mica and px; could be continuation of station 46, 47, 48, just above unit15 on map
MGIVG050		syenite		greenish	greenish	medium-coarse			Fresh red to green. Abovevdike leuco [right from gps] ang melano [left] syn
MGIVG051		syenite		white	greenish				Dirty white; alt is hem-zeol and diop; also mica and px
MGIVG052		jacupirangite		black	purplish	fine-medium			20m below mg syn white syn-dike
MGIVG053		syenite		white	rusty	fine-medium			Gossan
MGIVG054		syenite		grey	grey green	medium-coarse			Fg-cg; in a mafic mag+px rich unit; widens at bottom; incorp mafic mag and px clasts
MGIVG055		skarn		bluish	rusty	fine			Cherty dike in skarned 2c

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
MGIVG056	4	skarn		purplish	tan	fine			Skarned 2c; thin pale green beds and thicker purplish beds; together tan-greyish weathered
MGIVG057		carbonatite		white	white	fine-medium			
MGIVG058	2	limestone							
MGIVG059	2b	limestone2b							Sinistral fault; thrust
MGIVG060		syenite		white	brownish	medium			Fresh cream-orangy
MGIVG061		syenite		black	brown	fine			Fg dark syn; scint below 300
MGIVG062	2b	limestone2b		greyish	grey	fine			
MGIVG063		syenite		bluish	rusty	medium-coarse			Rusty syn striking w/ bedding
MGIVG064		syenite		bluish	greyish	very coarse			
MGIVG065		limestone		greenish	tan				Possibly 2b
MGIVG066		syenite		white	rusty	medium-coarse			
MGIVG067		syenite		greyish	greyish	coarse			Sod syn dike; fresh bluish,greenish, blackish;; weathered yellowish-green-bluish...2m wide
MGIVG068		limestone		greenish	tan	fine			Fine bedded1-10cm, weathered tan-greenish
MGIVG069		syenite							Same as the one below, ivg067
MGIVG070		syenite		bluish	bluish	medium-coarse			Fresh blue-green-grey, high y [682]
MGIVG071		syenite		pinkish	dark	medium			
MGIVG072		carbonatite			black	fine-medium			Fresh full color spectrum
MGIVG073		carbonatite			brown				Same area as prev. Sample
MGIVG074		carbonatite		brown	brown	fine-medium			
MGIVG075		syenite		dark	grey	fine-medium			Weathered col is tan-pale green-grey; Zr around 900ppm
MGIVG076	2	limestone		greenish	beige	fine	bedded		Thin bedded, bedding well developed; pervasivly veined w/ syn [0.1-1cm]; fizzes just a bit
MGIVG077		limestone	limestone2c	grey	rusty	fine	bedded		Possibly skarnrd 2c
MGIVG078		syenite		grey	rusty	fine-medium			Dike
MGIVG079		syenite		grey	beige	medium-coarse			Scint below 500
MGIVG080		syenite		greyish	white	medium			3m wide, exposed length 30m in creek
MGIVG081		syenite		grey	grey	fine-medium			
MGIVG082		syenite		grey	tan	medium			
MGIVG083		syenite		greyish	tan	fine-medium			Max zr 500, nb 300; 25cm dike
MGIVG084		ijolite							
MGIVG085		syenite		greyish	grey	medium			
MGIVG086		syenite		grey	dark	coarse			Xrf boring; drker than syn before/ majority ilm or prvskite [40%]

Station Number	Map Unit	Major Rock Type	Minor Rock Type	Colour Fresh	Colour Weathered	Grainsize	Texture	Metamorphic Indicatiors	Lithology Notes
MGIVG087		limestone2		grey	brownish	fine			Hornfelsed 2c bulges into syn-complex
MGIVG088		syenite		greyish	grey green	medium-coarse			Pale green weathering; green-red alt halo around zeolite w/ 800 ppm Th; zone of intense alt no coherent direction
MGIVG089		syenite		greyish	greenish	medium-coarse			Chip sample station; gps at bottom; 1m interva,ls
JBIV250		limestone		grey	beige		banded		Cse banded bl-gry
JBIV250		syenite			white	fine			
JBIV251		carbonatite		brownish	brown	fine-medium			3m rusty carbon in middle of 15+m gry fn carb or sy. Allot of cb!
JBIV252		syenite		light	light	medium-coarse		diopside	Skarned? Syenite w ff of cb-diop-melilite?-perovskite?-ilmenite
JBIV252		carbonatite				very coarse			
JBIV253		syenite		light	light	medium			Cb-zeolite-sodalite-diopside ff-alt w carbonatite dykes with skarny haloes
JBIV254		zeolite syenite		orangish	orangish		porphyritic		Prx-phrc dyke- in zeolite sy (unit 15). = top of unit 15.
JBIV255		zeolite syenite							Syenite-rusty host to pod of radioactive carb
JBIV255		carbonatite		orangish	brownish	coarse			
JBIV256	2b	limestone2b		bluish					Cse banded near bottom poss trench on az316
JBIV257	2a	limestone2a	syenite		orangish				Fn bedded
JBIV258	2a	limestone2a							
JBIV259	2a	limestone2a		light	orange	very fine			Good alt
JBIV260		limestone2a	syenite	light	orange	very fine	banded		Orng unit typ of last two stations. Good exp in creek w 2.5m true thick
JBIV261		limestone2a		light	orange	very fine			
JBIV262	2	limestone	syenite	grey	orangish				Wl foliated, thin banded .altered LST
JBIV264	2b	limestone2b	limestone2c	bluish	greenish				Good oc. Checking soil anom. No obvios features to explain Zr anom. Just below 2b-2c contact.
JBIV265	2b	limestone2b							Some fe-stain
JBIV266	2c	limestone2c		light	tan				Wl bedded
JBIV267	2c	limestone2c							
JBIV268	2c	limestone2c			tan				
JBIV268	2b	limestone2b	syenite	bluish	grey	very fine			Sy dyke here too
JBIV269		limestone2b	limestone2c						Contact w sy sill=JBIVR101
JBIV269		syenite		light	orange	fine-medium	boudinage		1m sy sill just into 2b below cntctw 2c
JBIV270	2bf	limestone2b	limestone2b	greyish	tan	fine-medium	fragmental		Bottom of 2b proper into top of 2bf which has interbeds of fn-grnd buff coloured sandpaper unit and 2bf for 30+ m, then bk to frac 2b+- 2bf.
JBIV270	2b	limestone2b		greyish	bluish	very fine			Rusty altered contact w 2bf
JBIV270		syenite							Rusty sy dyke
JBIV271	2c	limestone2c							
JBIV271	2b	limestone2b							2b-2c contact
JBIV272		syenite			orange				
JBIV276	13	syenite	skarn	grey	greenish	fine-medium		diopside	5m sy dyke. Folded and 8m offset on cross struc. See notes
JBIV276		limestone2b	limestone2c						2b-2c contact w 5m mineralzed sy dyke. See notes
JBIV277	2b	limestone2b		bluish	tan	very fine			Thick bedded. No interbeds

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JBIV277		syenite		greenish	grey	fine-medium		diopside	W Limit of exposed 5m sy dyke. Very close to complex contact.
JBIV278		fennite	limestone	greenish	brown				Just uphill of dyke. Has distinct polished mn surface
JBIV279		sodalite syenite	skarn	bluish	green	fine	banded		Sy-skarn transition in footwall of dyke
JBIV279		sodalite syenite		grey green	grey	fine-medium			5m dyke continuation.
JBIV280	14	sodalite syenite		grey	bluish	fine			Angular Subcrop in talus field. Difficult to say if boulder.
JBIV281		lamprophyre		green	dark	fine			Dk green bt-phyric mafic lamp with 10% cb and abndt cpy
JBIV282		limestone2c		greenish	brownish				Contact mm altered lst. Needs chip sample
JBIV283		limestone2				very fine		biotite	10m dn from coords is start of tn weathering thick massive bl-gry frsh lst. Weath=2c; posible intercalated 5m MDs.
JBIV283	3	limestone3		dark					V thick bedded dark and lt siltstone/dolomite. V hard. With cherty fracture. 10m below = cntct w 2c
JBIV284	2b	limestone2b		bluish					2b-2c contact
JBIV284		limestone2c		grey	tan				=2b-2c contact
JBIV285	2b	limestone2b		bluish					2b-2c contact is close to hill slope. Lower 2b panel exposed in ck
JBIV286	3	limestone3	skarn	purplish	tan				3m broad beds alt lt-dk. Some skarny alt
JBIV286	13	nepheline syenite							11m dyke w 2% ds fluorite. Med grnd with dyke parallel peg segregations. 5% cancrinite altered sodalite.
JBIV287		nepheline syenite							2.5m dyke w sodalite.
JBIV288	2c	limestone2c	syenite						Thin, well bedded, olive grn weathering with chalky wht interbeds. Riddled with boudined sy-dykes. Mod skarn alt, no garnet.
JBIV289	2c	limestone2c							very fractured more than previous, with ankerite haloes on S2 crosstructures. Intense Mn-Fe staining.
JBIV290	2c	limestone2c							2b/2c contact. Well bedded above(2c), massive, hard, blocky below (2b). Spotty rust, only minor skarn alt visible in 2c
JBIV290	2b	limestone2b							2b/2c contact. Well bedded above(2c), massive, hard, blocky below (2b).
JBIV291	2b	limestone2b							very hard and blocky. Minor qtz-cb veins with ankerite alt haloes
JBIV292	2b	limestone2b	limestone2c						2b/2c contact again. = strutural stacking. See crazy minor folds in pics for this area. Mod pink and olive skarn alt visible in 2c
JBIV293	2b	limestone2b	veins						increasing fracture density of S2 structures while nearing creek. Bed parll albite alt+- ds py high in creek and cut by S2 qtz veins
JBIV294	2b	limestone2b	veins						best alt and min in area. Special because high fract density of Az282-300 qtz veins (=S2 hinge zone?). Min is gen bed specific at intersect with veins so S0=S1 +S2. See samps LJIVR002-006
JBIV295	2b	limestone2b	limestone2c						2b/2c contact again. = strutural stacking with 2b above and 2c below. See crazy recumbant minor folds in pics for this area. Creek def has intestified alt, but min is poor

7.3Structure

Station Number	Structure Name	Plan Lineation	Azimuth	Dip/Plunge	Measurement Quality	Structure Notes
AGIVG004	dike		305	50	POOR	Not a dyke, but an altered horizon iferred to be adjacent to dyke.
AGIVG006	bedding		346	30	GOOD	Top of 2b limestone- 544005/5666668, contact concordant with above measurement. About 5m of 2c before this thick mafic dyke/sill.
AGIVG007	joint		150	75		Blocky 30cm spacing.
AGIVG007	joint		50	70	GOOD	Rusty jointing
AGIVG007	bedding		335	12	GOOD	
AGIVG008	fracture		70	68	MODERATE	High scint countss in rock and along fracture, frac is rusty and 1m in thickness.
AGIVG009	bedding		220	24	MODERATE	
AGIVG009	dike		120	62		
AGIVG010	bedding		155	55		
AGIVG011	bedding		17	38		
AGIVG012	fold axis		178	9		F1 (1st generation) tight recumbent minor folds.
AGIVG012	bedding		73	12	MODERATE	
AGIVG013	bedding		135	62	MODERATE	
AGIVG014	bedding		65	25	MODERATE	
AGIVG016	fracture		140	60	POOR	General trend of rusty horizon upon which this station is located.
AGIVG019	dike		210	65	MODERATE	Orientation of carbonatite dyke
AGIVG021	bedding		200	22	MODERATE	Bedding at centre of o/c; o/c has a large [10mm wavelength?] fold, see sketch in fieldbook.
AGIVG023	bedding		12	22	MODERATE	Thin [2-5cm] interbeds of silty or herty ls and clean, banded [lt-dk] ls.
AGIVG024	bedding		220	8	MODERATE	Ctc // 2 bedding
AGIVG026	bedding		200	6	POOR	Very hard to get accurate bedding measurement as bedding is wavy.
AGIVG027	dike		26	82	GOOD	Orientation of syenite dyke.
AGIVG028	dike		240	0		Dip was not possible to determine
AGIVG029	dike		220	0	MODERATE	Impossible to determine dip; dyke is boudined and boudins are ~ 1m long.
AGIVG031	bedding		218	48	GOOD	
AGIVG032	dike		270	0	MODERATE	Dip imposible to measure.
AGIVG033	bedding		195	65	MODERATE	
BWIVG010	joint		61	71	GOOD	20 to 30cm spacing, blocky
BWIVG010	bedding		216	40	GOOD	
BWIVG012	sill		228	48	GOOD	Lower contact, undulating
BWIVG012	sill		252	66	POOR	21m thick, in limestone 2C, upper contact
BWIVG013	fracture		330	62	GOOD	Possibly sheeted dikelets, 15-25/m, mm to 1cm thick
BWIVG013	bedding		230	74	GOOD	Bedding steepens up creek
BWIVG015	fracture		340	60	GOOD	Fractures often with sye veins within
BWIVG017	dike		226	0	MODERATE	40cm wide, length of whole outcrop (10m). Dip not available
BWIVG020	dike		15	28	MODERATE	
BWIVG023	dike		110	42	GOOD	2m thick rusty dyke, traceable for 400m, crosses jac and meso-sye
BWIVG024	dike		40	42	MODERATE	
BWIVG025	bedding		150	68	MODERATE	Bedding is similar for 20m then becomes tightly folded.

Station Number	Structure Name	Plan Lineation	Azimuth	Dip/Plunge	Measurement Quality	Structure Notes
BWIVG026	bedding		101	75	GOOD	
BWIVG026	dike		305	61	GOOD	Similar orientation to nearby dykes
BWIVG027	dike		269	78	GOOD	
BWIVG027	bedding		101	57	GOOD	Same as rest of seds up creek so far
BWIVG028	bedding		101	63	GOOD	
BWIVG029	bedding		5	51	GOOD	Bedding at contact, up section there is some folding
BWIVG030	dike		40	22	MODERATE	
BWIVG031	bedding		19	41	GOOD	
BWIVG032	bedding		354	42	GOOD	Same measurement for sill/altered layer
BWIVG034	fold axis		165	48	MODERATE	Gentle fold, 100m scale
BWIVG034	bedding		24	25	GOOD	West limb
BWIVG037	bedding		60	38	GOOD	
GHIVG004	contact - lithologic	Linear	184	86	MODERATE	contact is wavy 2b/2c
JBIV250	intersection lineation		136	14		Pencil cleavage
JBIV256	bedding (overturned)		8	17	GOOD	Nose closure close to SW: SHOULD BE in struc footwall of 2a = overturned.
JBIV256	foliation (late)		303	79	GOOD	=near F2 anticline? Brings lower 2b up to surface here.
JBIV256	joint		210	65	GOOD	Rusty halo
JBIV258	bedding		38	19	GOOD	Laminar
JBIV264	bedding		300	40	GOOD	
JBIV268	dike		89	56	GOOD	JBIVR100
JBIV268	joint		204	50	GOOD	10 cm spcing
JBIV269	bedding		302	22	MODERATE	
JBIV269	foliation (late)		106	65	GOOD	Cm-scale
JBIV269	joint		210	85	GOOD	5-10 cm spcing
JBIV276	fold axis		84	30	GOOD	Nice bedding fold hinge.
JBIV276	fault plane		9	74	MODERATE	8m RL offset folding
JBIV276	bedding		299	71	GOOD	Also host to 5m sy dyke
JBIV276	bedding		307	19	GOOD	Host to 5m dyke
JBIV277	bedding		287	78	GOOD	Steep bedding uniform predominates here.
JBIV279	dike		327	29	GOOD	5m feld-sodalite dyke
JBIV282	bedding		310	85	GOOD	
JBIV283	bedding		20	18	GOOD	
JBIV284	bedding		290	40	MODERATE	In 2b near 2c contact
JBIV286	bedding		219	72	GOOD	Lst host to 11m sy dyke.
JBIV286	dike		213	45	GOOD	11m dyke channel samped by NT.
JBIV289	joint		121	73	GOOD	possible equivalent to S2
JBIV290	bedding		39	24	GOOD	at 2b/2c contact
JBIV291	vein		293	52	GOOD	brittle veinlets with ankerite alt halos see XRFJAB112
JBIV292	bedding		25	43	GOOD	
JBIV292	vein		340	37	GOOD	brittle veinlets with ankerite alt halos.

Station Number	Structure Name	Plan Lineation	Azimuth	Dip/Plunge	Measurement Quality	Structure Notes
JBIV292	dike		208	80	GOOD	sy dyke, 30 cm, fn grnd, contorted and boudined visible in 2c
JBIV292	vein		284	63	GOOD	calcite-qtz-ankerite-po veins with massive po cut by Az340 vein set.
JBIV292	foliation (late)		288	59	GOOD	prominent blocky S2
JBIV294	bedding		8	20	GOOD	good bedding in 2b
JBIV294	foliation (early)		6	13	GOOD	good to mod first degree foliation!
JBIV294	joint		290	67	GOOD	good blocky jointing
JBIV294	fracture		350	83	GOOD	good cm scale white fracture fill cut by above joint set
JBIV294	joint		200	70	GOOD	cliff forming contouring joint set with 10-20m spacing
JBIV294	vein		261	63	GOOD	one of two qtz-cb-py veins included in sample LJIVR006
JBIV295	dike		20	20	GOOD	3-20 cm boudined dyke(sill) in So
JBIV295	bedding		20	20	GOOD	3-20 cm boudined dyke(sill) in So
MGIVG001	intersection lineation		290	6	MODERATE	Disturbed bedding; f2 folded
MGIVG003	bedding		96	60	GOOD	F1 ll bedding [hinges of f1 folds ll bedding]
MGIVG005	bedding		66	36	GOOD	Bedding not well developed
MGIVG005	foliation (dominant)		144	44	MODERATE	
MGIVG005	intersection lineation		342	39	MODERATE	
MGIVG006	dike		220	77	GOOD	
MGIVG007	bedding		71	25		
MGIVG008	bedding		20	17		
MGIVG008	foliation (dominant)		318	78	MODERATE	
MGIVG009	contact - lithologic		180	0		0543404,5668974 to 0543455,5668947 (acc. 14m)
MGIVG010	bedding		30	29	MODERATE	
MGIVG012	bedding		76	45	GOOD	
MGIVG012	foliation (dominant)		318	79	MODERATE	
MGIVG012	foliation (early)		238	40		Not well developed
MGIVG013	bedding		320	59	MODERATE	Bedding not well developed
MGIVG014	foliation (dominant)		100	6		Hinges of f1 folds
MGIVG014	bedding		42	36	GOOD	Well developed bedding; also disturbed
MGIVG015	foliation (dominant)		55	54	MODERATE	F1 ll bedding
MGIVG015	bedding		55	54	GOOD	F1 ll to bedding
MGIVG016	bedding		102	62	POOR	Bedding obvious
MGIVG017	bedding		279	74	GOOD	
MGIVG019	dike		180	0	POOR	Eyeballed bedding above... Dyke somewhat perpendicular to bedding [suspicious] disregard t e numbers
MGIVG021	bedding		285	89	GOOD	
MGIVG021	fracture		181	1	POOR	Fracture; carb veins along fracture planes, no actual strike or dip measured

Geology ***

QUATERNARY

17 glacial and fluvial sediments, talus rock flour and related materials

DEVONIAN OR CARBONIFEROUS

16 lamprophyre dykes; melanocratic rocks occasionally ocellar, with phenocrysts of pyroxene, kaersdutite, and sometimes olivine in a feldspar-bearing matrix

15 zeolite-rich syenite; buff-weathering rocks rich in secondary natrolite with minor carbonate and acmite

SYENITE GNEISS COMPLEX

14 sodalite-rich syenite; massive to faintly gneissic leucocratic green to blue rocks, including veins and dykes

SYENITE GNEISS COMPLEX

13 leucocratic nepheline syenite; pale greenish, distinctly gneissic rock commonly bearing kaersutite and sodalite

SYENITE GNEISS COMPLEX

12 mesocratic to melanocratic nephaline syenite; migmatite and agmatite gneiss

SYENITE GNEISS COMPLEX

11 contact syenite and agmatite; pale-coloured, fine-grained hybrid rocks, commonly saturated with metasediment blocks, includes minor amounts of units 12, 13

10 carbonitite; white to buff foliated carbonate, and massive, altered, melanocratic silicocarbonatite

LAYERED MAFIC COMPLEX

9 urtite and wollastonite urtite; coarse-grained to pegmatitic pale green rocks

LAYERED MAFIC COMPLEX

8 ijolite; medium- to coarse-grained bluish rocks with cubic nepheline set in euhedral pyroxene lathes

LAYERED MAFIC COMPLEX

6 mela-ijolite; coarse-grained blue-black rocks with prominent biotite phenocrysts and clumps

LAYERED MAFIC COMPLEX

5 jacupirangite; black to greenish pyroxenite with small cubes of nepheline, and minor biotite

4 hornfels, banded skarn and calc-silicate rocks, contact-altered sedimentary rocks

CAMBRO-ORDOVICIAN

3 limy shales with interbanded thin limestones generally grey-green with local brownish stripings

CAMBRIAN

2 Undifferentiated massive grey-blue limestone, shaly horizons toward the base and top

2a Tannish - grey, medium to finely well bedded, fine to very fine

2b Brown to grey weathering, light bluish-grey to greenish-grey fresh, hard blocky, medium to finely laminated, poorly bedded,

2bf Grey-poorly bedded, fragmental limestone. Common on the east aspect at the nothern limit of mapping fragmental textures

2c Grey and light grey, thin and thick interbedded, well bedded limestone

2r Orange weathering, tannish grey, thin-well bedded limestone with

1 reddish slaty shale, commonly thinly fissile, minor limy horizons

Fold

Syncline - approximate

Overturned - approximate

Anticline - approximate

Geologic Contact

Approximate

Assumed

Defined

Fault - Inclined

*** Geology After:
Currie, K.L.
1979: The Geology and Petrology of the Ice River Alkaline Complex, British Columbia; Geological Survey of Canada., Bulletin 245, Figure 1.
Unit 2 subdivisions defined by Brown (2006)

Magnetic Declination
for 2005: 17° 33' East

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Eagle Plains Resources Ltd.

Ice River Property

Figure 4 - 2009 Geologic Mapping

Projection - NAD 83 UTM Zone 11N
Scale - 1: 7,000 10/11

542000 544000 546000

5570000 5568000 5566000

0 500 1,000 1,500
Meters

N

Legend

Geologic Station
Geologic Structure
Bedding
Dyke
2009 Outcrop
2007 Dyke cooridors
Claim Boundary

Station Number	Structure Name	Plan Lineation	Azimuth	Dip/Plunge	Measurement Quality	Structure Notes
MGIVG022	bedding		285	15	MODERATE	
MGIVG025	dike		70	70	MODERATE	
MGIVG026	contact - lithologic		145	45	MODERATE	Strike 325, dip undeterm.
MGIVG031	dike		185	22	GOOD	
MGIVG034	dike		235	66		Sodalite; reddish hem-zeol alt
MGIVG047	dike		108	45	POOR	Dip not determin. [disregard 45]
MGIVG048	dike		128	65	POOR	Dip suspect; dike goes until 542521, 5666261 @ 2564m alt
MGIVG050	dike		165	45		
MGIVG052	dike		188	45	POOR	Disregard dip
MGIVG054	dike		235	45	POOR	Disregard dip; was quite steep
MGIVG055	dike		300	77	GOOD	Crossing b4dding of 2c
MGIVG056	foliation (dominant)		35	85	GOOD	
MGIVG056	bedding		313	30	GOOD	
MGIVG057	sill		318	30	GOOD	
MGIVG058	contact - lithologic		181	1		No dip or strike
MGIVG059	bedding		322	25	GOOD	
MGIVG060	sill		275	35	GOOD	With bedding
MGIVG061	dike		170	70	GOOD	2x 0.5m thick dikes, have very fg 1m thick carb-calc unit
MGIVG062	bedding		120	62	GOOD	
MGIVG063	dike		228	89	GOOD	
MGIVG064	dike		235	45	POOR	Dip poor, estimate, way shallower than bedding
MGIVG067	dike		235	45	MODERATE	Strike good, dip mod. Creek carved a boomerang into the dike
MGIVG068	bedding		210	77	GOOD	
MGIVG069	dike		240	75		Steeper than dike 5m below
MGIVG070	dike		240	45	GOOD	45ish dip
MGIVG076	bedding		92	72	GOOD	
MGIVG077	foliation (early)		210	18	MODERATE	
MGIVG077	foliation (dominant)		8	58	GOOD	
MGIVG077	bedding		282	72	GOOD	
MGIVG079	dike		85	80	GOOD	50cm wide, and a parallel one [25cm thick] 2m away
MGIVG080	dike		342	38	MODERATE	
MGIVG081	dike		280	45	GOOD	Azi good, dip poor
MGIVG082	dike		220	50	MODERATE	Scint and xrf boring
MGIVG083	dike		280	37	GOOD	

Legend

- 2009 Silt Sample
- 2009 Rock Sample
- 2009 Soil Sample
- Stream
- Index Contour (100m)
- Contour (20m)
- Claim Boundary

EPL:TSX-V

Eagle Plains Resources Ltd.

Ice River Property

Figure 5a - Geochemistry Results - 2009 Sample Locations

Projection - NAD 83 UTM Zone XXN

Scale - 1: 8,000

04/11/2009

See Inset A for Soil Sample Locations

See INSET E

See INSET C

See INSET D

INSET A
Scale 1:4000

INSET B
Scale 1:8,000

INSET C
Scale 1:200

INSET D
Scale 1:100

INSET E
Scale 1:400

0 200 400 600 800 1,000
Meters

0 100 200 300 400
Meters

0 100 200 300 400 500
Meters

N

Legend

* NR = no result, NS = no sample, LS = lost sample

- 2009 Soil Sample - Pb / Zn (ppm)
- 2009 Silt Sample - Pb / Zn (ppm)
- 2009 Rock Sample - Pb / Zn (ppm)
- Stream
- Index Contour (100m)
- Contour (20m)
- Claim Boundary

Eagle Plains Resources Ltd. (EPL:TSX-V)

Ice River Property

Figure 5b - Geochemistry Results - Pb / Zn

Projection - NAD 83 UTM Zone 11N

Scale - 1: 8,000

04/11/2009

See Inset A for Soil Sample Geochemistry

INSET A
Scale 1:4000

INSET B
Scale 1:8,000

INSET C
Scale 1:200

INSET D
Scale 1:100

INSET E
Scale 1:400

0 200 400 600 800 1,000
Meters

0 100 200 300 400 500
Meters

Legend

* NR = no result, NS = no sample, LS = lost sample

- 2009 Soil Sample - Y / La (ppm)
- 2009 Silt Sample - Y / La (ppm)
- 2009 Rock Sample - Y / La (ppm)
- Stream
- Index Contour (100m)
- Contour (20m)
- Claim Boundary

EPL:TSX-V

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Ice River Property

Figure 5c - Geochemistry Results - Y / La

Projection - NAD 83 UTM Zone 11N

Scale - 1: 8,000

05/11/2009

See Inset A for Soil Sample Geochemistry

INSET A
Scale 1:4000

INSET B
Scale 1:8,000

INSET C
Scale 1:200

INSET D
Scale 1:100

INSET E
Scale 1:400

0 200 400 600 800 1,000
Meters

0 100 200 300 400 500
Meters

Legend

- 2009 Soil Sample - Nb (ppm)
- 2009 Silt Sample -Nb (ppm)
- 2009 Rock Sample -Nb (ppm)
- Stream
- Index Contour (100m)
- Contour (20m)
- Claim Boundary

EPL:TSX-V

Eagle Plains Resources Ltd.

Ice River Property

Figure 5d - Geochemistry Results - Nb

Projection - NAD 83 UTM Zone 11N

Scale - 1: 8,000

05/11/2009

See Inset A for Soil Sample Geochemistry

See INSET E

See INSET C

See INSET D

INSET A
Scale 1:4000

INSET B
Scale 1:8,000

INSET C
Scale 1:200

INSET D
Scale 1:100

INSET E
Scale 1:400

0 100 200 300 400 500
Meters

0 200 400 600 800 1,000
Meters

EPL:TSX-V

Eagle Plains Resources Ltd.

Ice River Property

Figure 5e - Geochemistry Results - Y / La

Projection - NAD 83 UTM Zone 11N

Scale - 1: 8,000 05/11/2009

Legend

- 2009 Rock Sample - K % / U ppm / Th ppm
- Stream
- Index Contour (100m)
- Contour (20m)
- Claim Boundary

543000 544000 545000 546000

5670000 5669000 5668000 5667000 5666000 5665000

5.1 / 34 / 126.4
7 / 16 / 75.3
4.6 / 14 / 145
4.2 / 1 / 35
4.7 / 2 / 18.2
3.1 / 914 / 168.3
2.5 / 13 / 284.8
8.5 / 199 / 93.4
0.5 / 17 / 458.4
0.9 / 20 / 262.4
4.1 / 32 / 881.4
6.7 / 28 / 445.2
2.7 / 47 / 2679
2.3 / 34 / 0
3.3 / 0 / 946.8
See INSET A
NTIVR023 7.7 / 27 / 124.6
NTIVR024 6.8 / 16 / 92.6
See INSET B
1 / 11 / 56.6
2.8 / 5 / 329.3
1.8 / 45 / 70.8
2.9 / 53 / 1580
BWIVR009 0.9 / 2 / 621.9
1.6 / 4 / 361.7
5 / 29 / 1056
7.2 / 16 / 70.6
0 / 0 / 2121

2400 2300 2200 2000 1900 1800 1600 1500 2500 2600 2700 2800 3000 3400

N

0 200 400 600 800 1,000

Meters

INSET A
Scale 1:200

543340 543350 5666570

6.9 / 25 / 92.4
7.8 / 71 / 72.1
8.3 / 44 / 44.9
7.6 / 11 / 19.4
7.2 / 22 / 39.4
8.9 / 14 / 27
7.5 / 29 / 75.1
7.8 / 63 / 83
6 / 88 / 99
7.4 / 114 / 104.5
10.2 / 188 / 185.5
6.4 / 20 / 114.4
7.4 / 17 / 132.8

0 1 2 3 4 5 Meters

INSET B
Scale 1:100

543245 543250 5665510 5665505

8.5 / 5 / 45.8
7.9 / 11 / 54.4
6.8 / 13 / 50
6.7 / 17 / 124.5
7.8 / 19 / 169.4

0 0.5 1 1.5 2 2.5 Meters

Appendix VII - Geophysical Report on IP Survey

LOGISTICAL REPORT

INDUCED POLARIZATION AND MAGNETOMETER SURVEYS

ICE RIVER PROJECT
GOLDEN AREA, B.C.

on behalf of

BOOTLEG .EXPLORATION INC.
Suite 200, 16 11th Avenue
Cranbrook, B.C. V1C 2P1

Survey performed: August 7-12, 2009

by

Brad Scott, Geologist (GIT)
SCOTT GEOPHYSICS LTD.
4013 West 14th Avenue
Vancouver, B.C. V6R 2X3

August 16, 2009

TABLE OF CONTENTS

Appendix

Accompanying Maps (all 1:2500 scale)

Map roll and CD

Chargeability/resistivity pseudosections
Lines 1000E, 1100E, 1200E, 1300E, 1400E, 1500E
Lines 1600E, 1700E, 1800E, 1900E, 2000E
Chargeability contour plan – Triangular-Filtered Values (UTM coordinates)
Resistivity contour plan – Triangular-Filtered Values (UTM coordinates)
Magnetometer contour plan (UTM coordinates)
Magnetometer profiles (idealized grid coordinates)

Accompanying Data Files

One (1) CD-ROM with all survey data and plots in Surfer 8 and pdf formats
rear of report

1. INTRODUCTION

Induced polarization (IP) and total field magnetometer surveys were performed at the Ice River Project, Golden area, B.C. within the period August 7-12, 2009. In addition, non-differential GPS readings were taken at each station and at all remote ("infinite") current locations.

The survey was performed by Scott Geophysics Ltd. on behalf of Bootleg Exploration Inc.. This report describes the instrumentation and procedures, and presents the results of the survey.

2. SURVEY COVERAGE AND PROCEDURES

The pole-dipole array was used. Readings were taken with an "a" spacing of 25 metres and "n" separations of 1-5. The on line current electrode was located to the south of the potential electrodes.

Total field magnetometer readings were taken at 12.5 metre intervals and corrected for diurnal variation against a fixed base station cycling at 10 second intervals.

GPS readings were taken at each station subject to satellite reception. Elevation measurements are barometric altimeter readings, calibrated to GPS altitude at the beginning of each line.

A total of 4.525 kilometres of IP and magnetometer survey were performed.

The chargeability and resistivity results are presented on the accompanying pseudosections and triangular-filtered plan maps. The magnetometer survey results are presented on the accompanying profiles and plan maps. All survey data are archived to the accompanying CD-ROM.

3. PERSONNEL

Brad Scott was the crew chief on the survey on behalf of Scott Geophysics Ltd. Jarrod Brown was the representative on behalf of Bootleg Exploration Inc.

4. INSTRUMENTATION

A GDD GRx8 receiver and a GDD TxII-5000W transmitter were used for the IP survey. Readings were taken in the time domain using a 2 second on/2 second off alternating square wave. The chargeability values plotted on the accompanying pseudosections and plan maps are for the interval 690 to 1050 msec after shutoff.

Scintrex ENVI proton precession magnetometers were used for both field and base units for the magnetometer survey.

GPS readings were taken with a Garmin GPSMap 60CSx GPS receiver.

Respectfully Submitted,

Brad Scott, Geologist (GIT)

Statement of Qualifications

for

Brad Scott, Geologist (GIT)

of

1230 Harrison Way,
Gabriola, B.C. V0R 1X2

I, Brad Scott, hereby certify the following statements regarding my qualifications and involvement in the program of work on behalf of Bootleg Exploration Inc. at the Ice River Project, Golden area, B.C. as presented in this report August 16, 2009:

The work was performed by individuals trained and qualified for its performance.

I have no material interest in the property under consideration in this report.

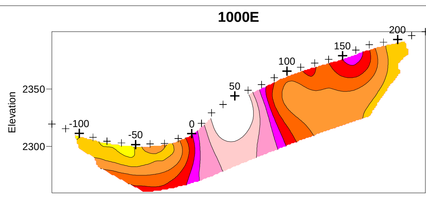
I graduated from the University of British Columbia with a Bachelor of Science degree (Geology) in 2000.

I am a member-in-training of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

I have been practising my profession in the field of Mineral Exploration since 2000.

Respectfully submitted,

Brad Scott



Survey Specifications

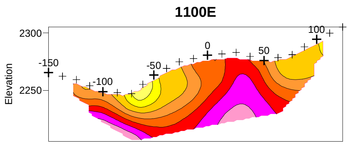
Survey performed: August 2009

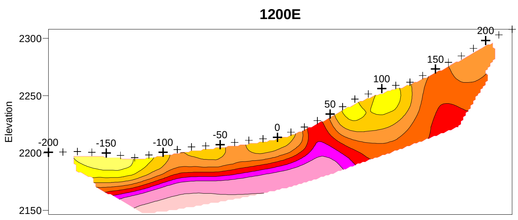
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec

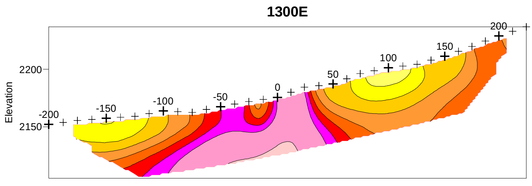
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5

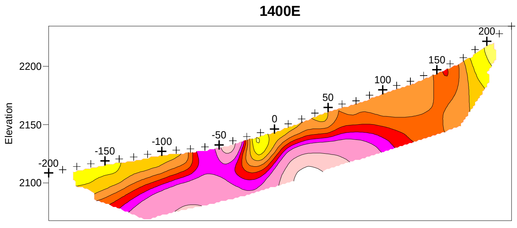
Current electrode south of potential electrodes

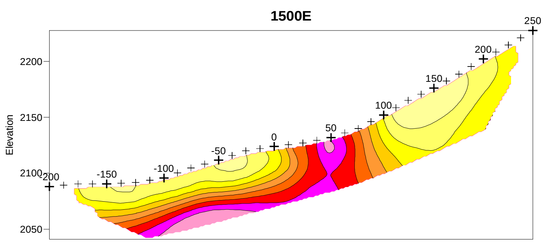
RES2DINV true depth inverted sections

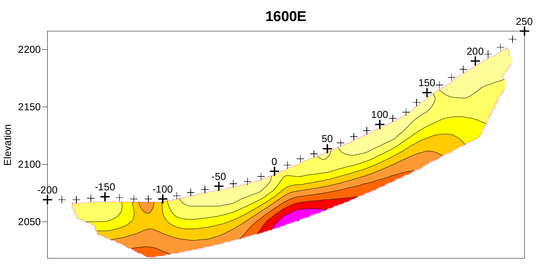


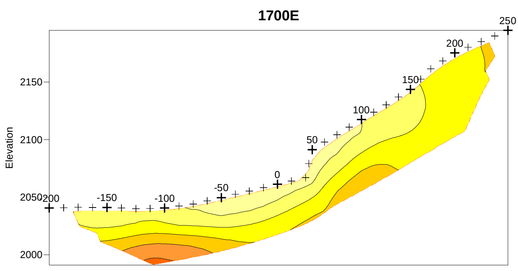


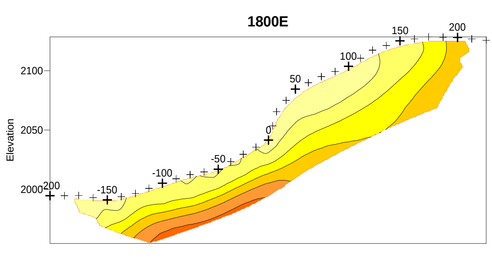


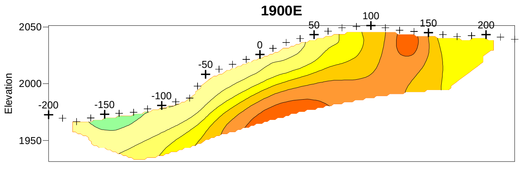


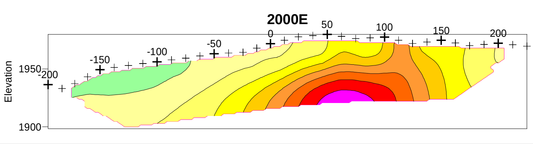


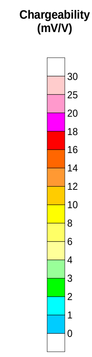


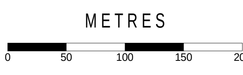






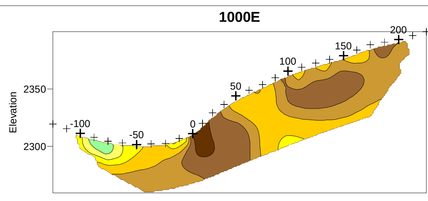






Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
Induced Polarization Survey
RES2DINV inverted chargeability model sections

Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.



Survey Specifications

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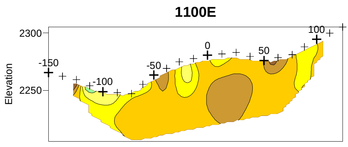
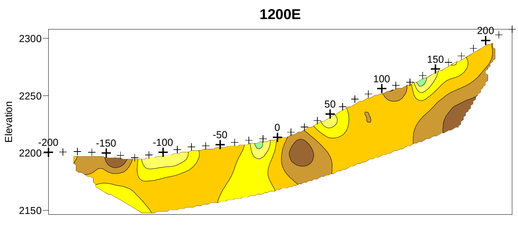
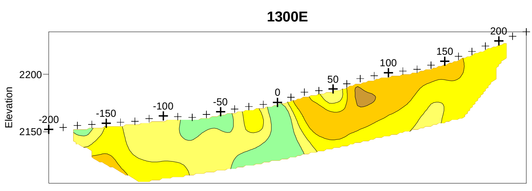
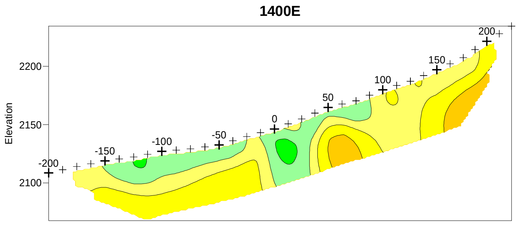
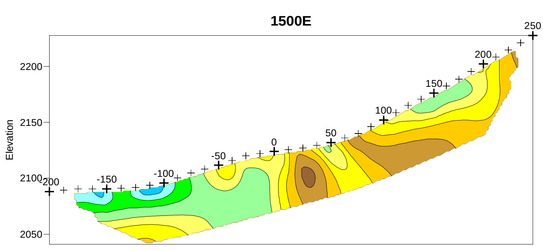
RES2DINV true depth inverted sections





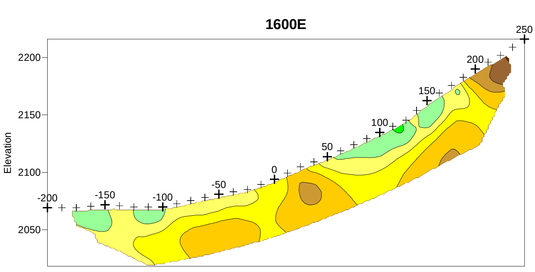


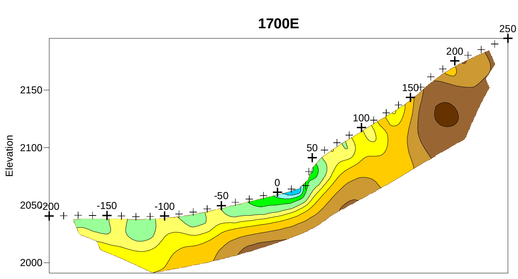


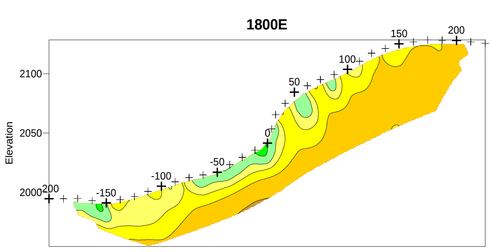


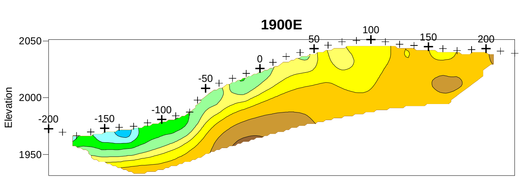
Resistivity
(Ωm)

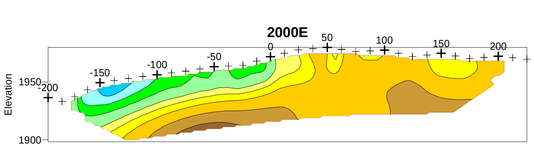
50000
30000
20000
15000
10000
7000
5000
3000
2000
1500
1000
700











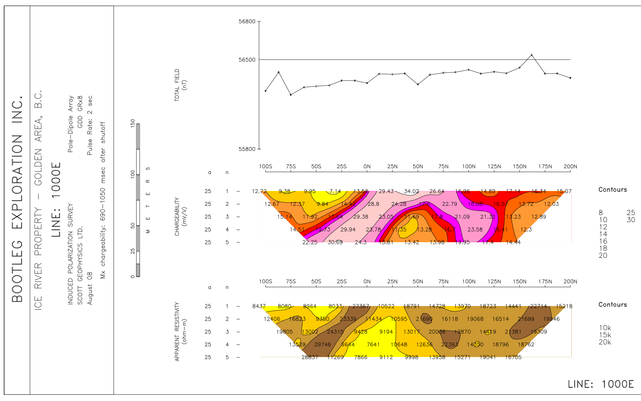
METRES

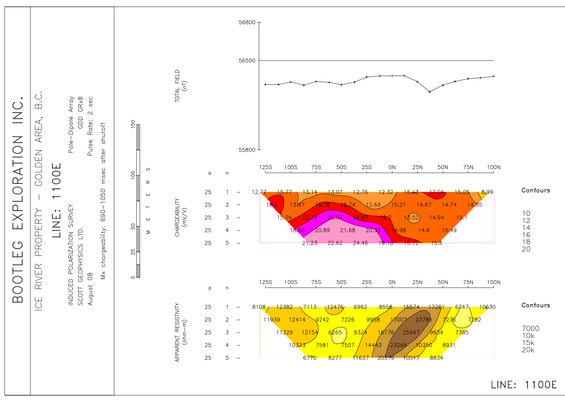
0 50 100 150 200

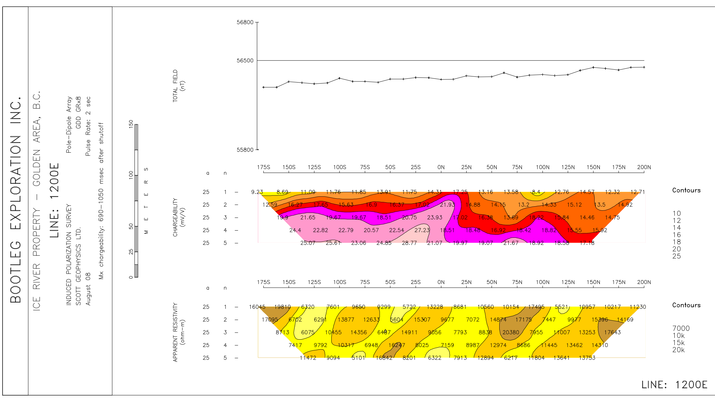
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
Induced Polarization Survey
RES2DINV inverted resistivity model sections

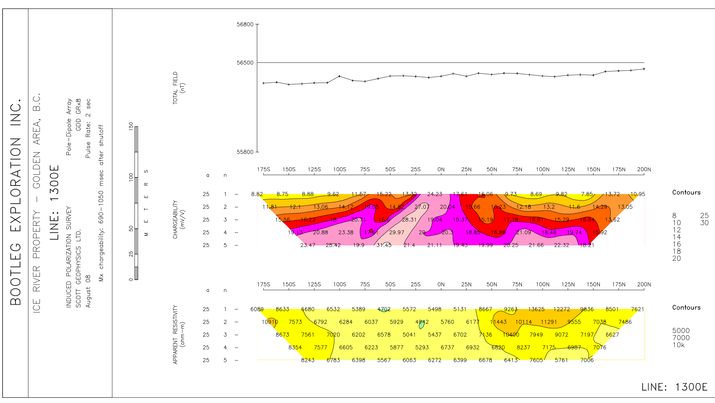
Drawn By: B Scott Date: August 2009

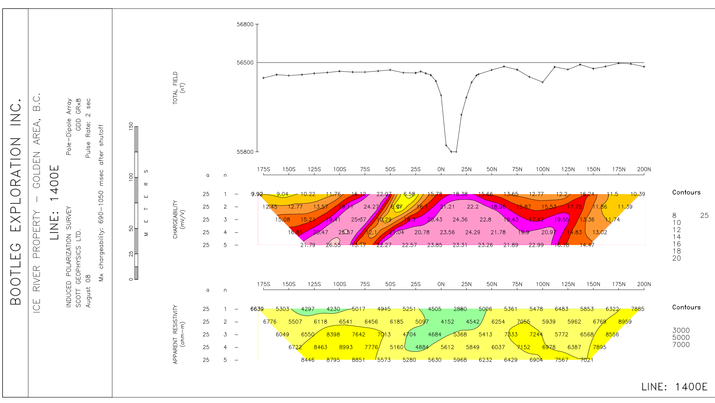
Scott Geophysics Ltd.

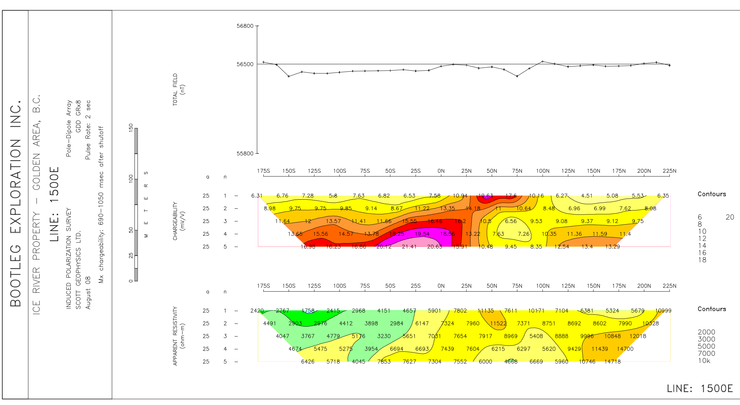

BOOTLEG EXPLORATION INC.
ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1000E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1000E


BOOTLEG EXPLORATION INC.
ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1100E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1100E
Resistivity (Ωm)
50000
30000
20000
15000
10000
7000
5000
3000
2000
1500
1000
700
Chargeability (mV/V)
25
20
18
16
14
12
10
8
6
4
3
2
1
0


BOOTLEG EXPLORATION INC.
ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1200E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1200E


BOOTLEG EXPLORATION INC.
ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1300E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1300E


BOOTLEG EXPLORATION INC.
ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1400E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1400E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ICE RIVER PROPERTY – GOLDEN AREA, B.C.
LINE: 1500E
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08
Pole–Dipole Array
GDD GRx8
Pulse Rate: 2 sec
Mx chargeability: 699–1050 msec after shutoff
METERS
TOTAL FIELD (nT)
CHARGEABILITY (mV/V)
APPARENT RESISTIVITY (ohm-m)
Contours
LINE: 1500E

BOOTLEG EXPLORATION INC.

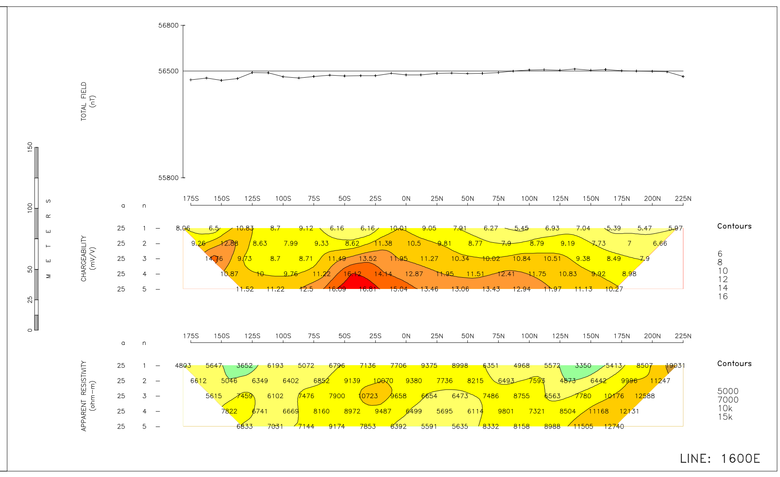
ICE RIVER PROPERTY – GOLDEN AREA, B.C.

LINE: 1600E

INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08

Pole-Dipole Array
GDD GRx8
Pulse Rate: 2 sec

Mx chargeability: 690-1050 msec after shutoff



LINE: 1600E

BOOTLEG EXPLORATION INC.

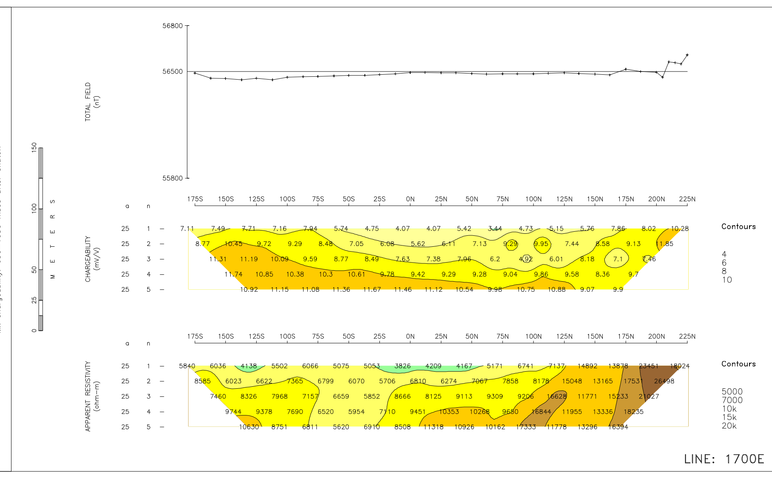
ICE RIVER PROPERTY – GOLDEN AREA, B.C.

LINE: 1700E

INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08

Pole-Dipole Array
GDD GRx8
Pulse Rate: 2 sec

Mx chargeability: 690-1050 msec after shutoff



LINE: 1700E

BOOTLEG EXPLORATION INC.

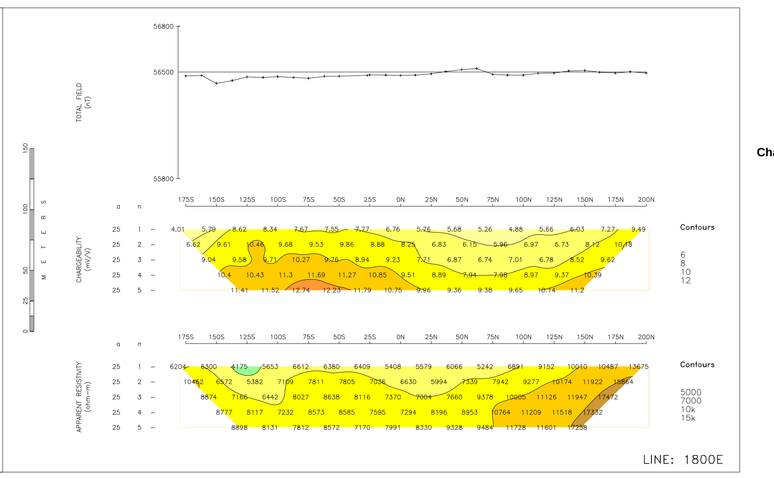
ICE RIVER PROPERTY – GOLDEN AREA, B.C.

LINE: 1800E

INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08

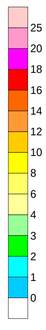
Pole-Dipole Array
GDD GRx8
Pulse Rate: 2 sec

Mx chargeability: 690-1050 msec after shutoff



LINE: 1800E

Chargeability (mV/V)



BOOTLEG EXPLORATION INC.

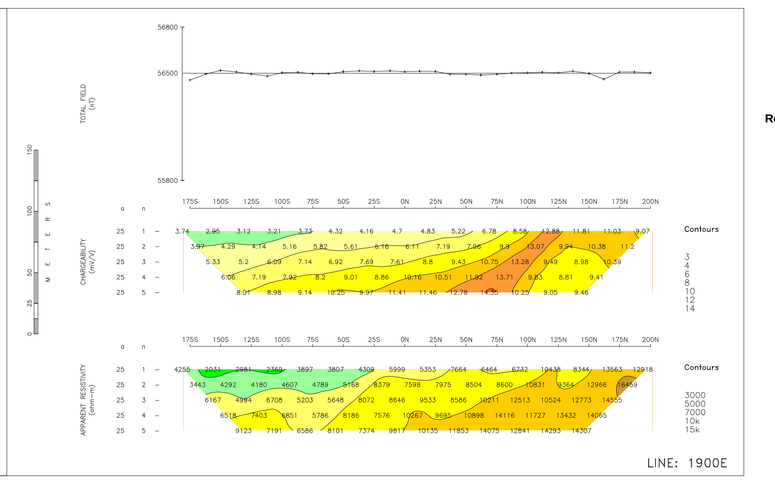
ICE RIVER PROPERTY – GOLDEN AREA, B.C.

LINE: 1900E

INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08

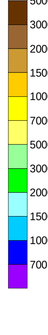
Pole-Dipole Array
GDD GRx8
Pulse Rate: 2 sec

Mx chargeability: 690-1050 msec after shutoff



LINE: 1900E

Resistivity (Ωm)



BOOTLEG EXPLORATION INC.

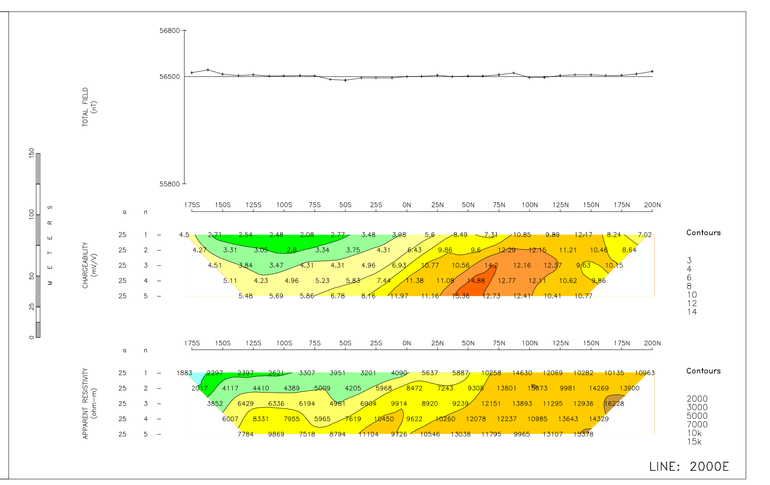
ICE RIVER PROPERTY – GOLDEN AREA, B.C.

LINE: 2000E

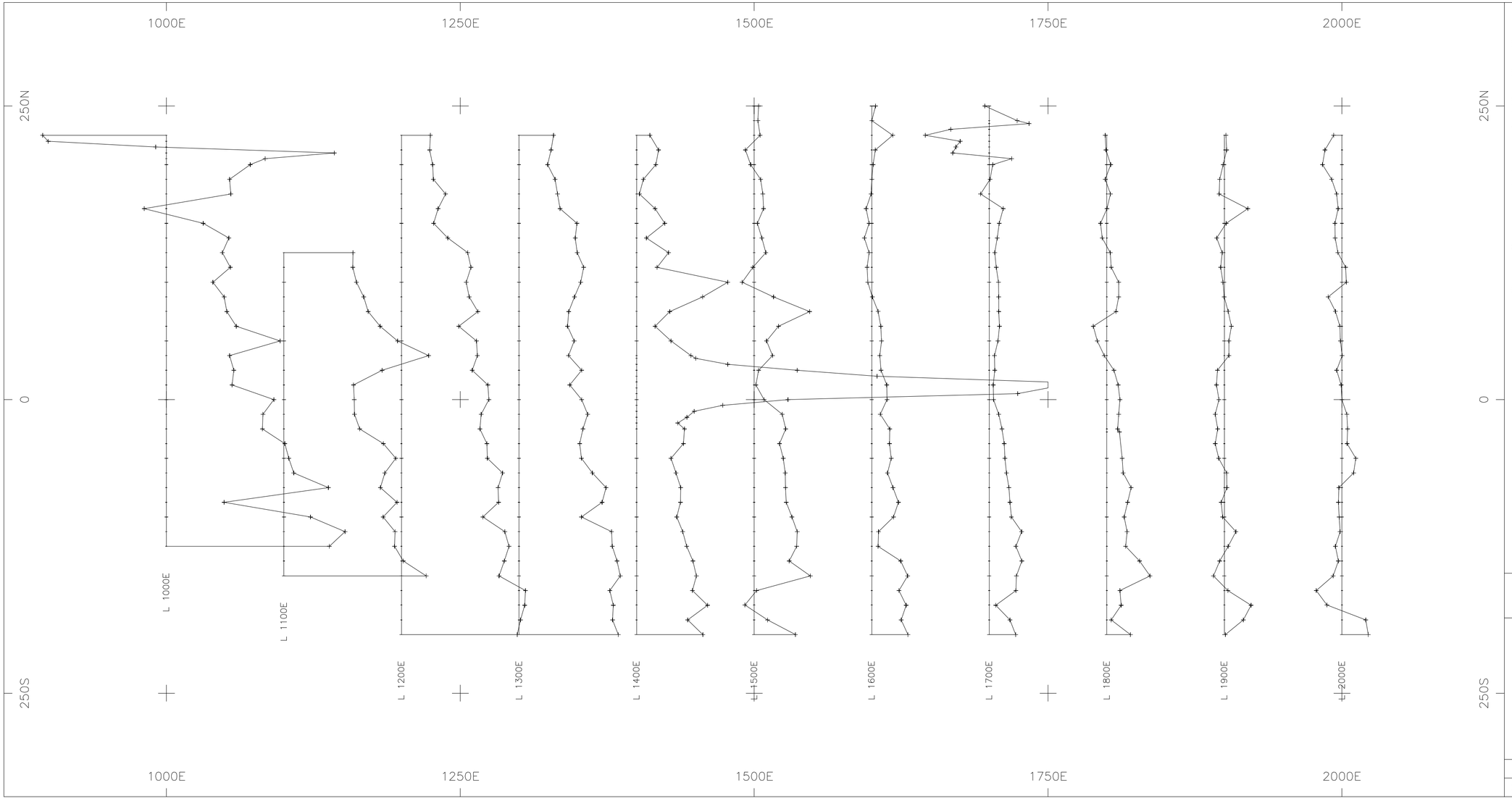
INDUCED POLARIZATION SURVEY
SCOTT GEOPHYSICS LTD.
August 08

Pole-Dipole Array
GDD GRx8
Pulse Rate: 2 sec

Mx chargeability: 690-1050 msec after shutoff



LINE: 2000E



Survey Specifications

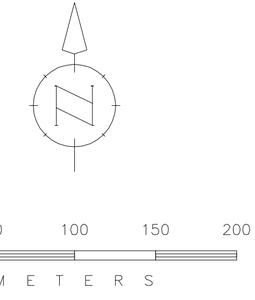
Survey performed: August 2009

Survey magnetometer: Scintrex ENVI
Base magnetometer: Scintrex ENVI
Type: proton precesion

Measurment: total field
Data interval: 12.5 m
Diurnal corrections: base station

profile base: 56500 nT
profile scale: 50 nT/cm
(at 1:2500 scale)
profile minimum: 55800 nT

Coordinates: idealized grid

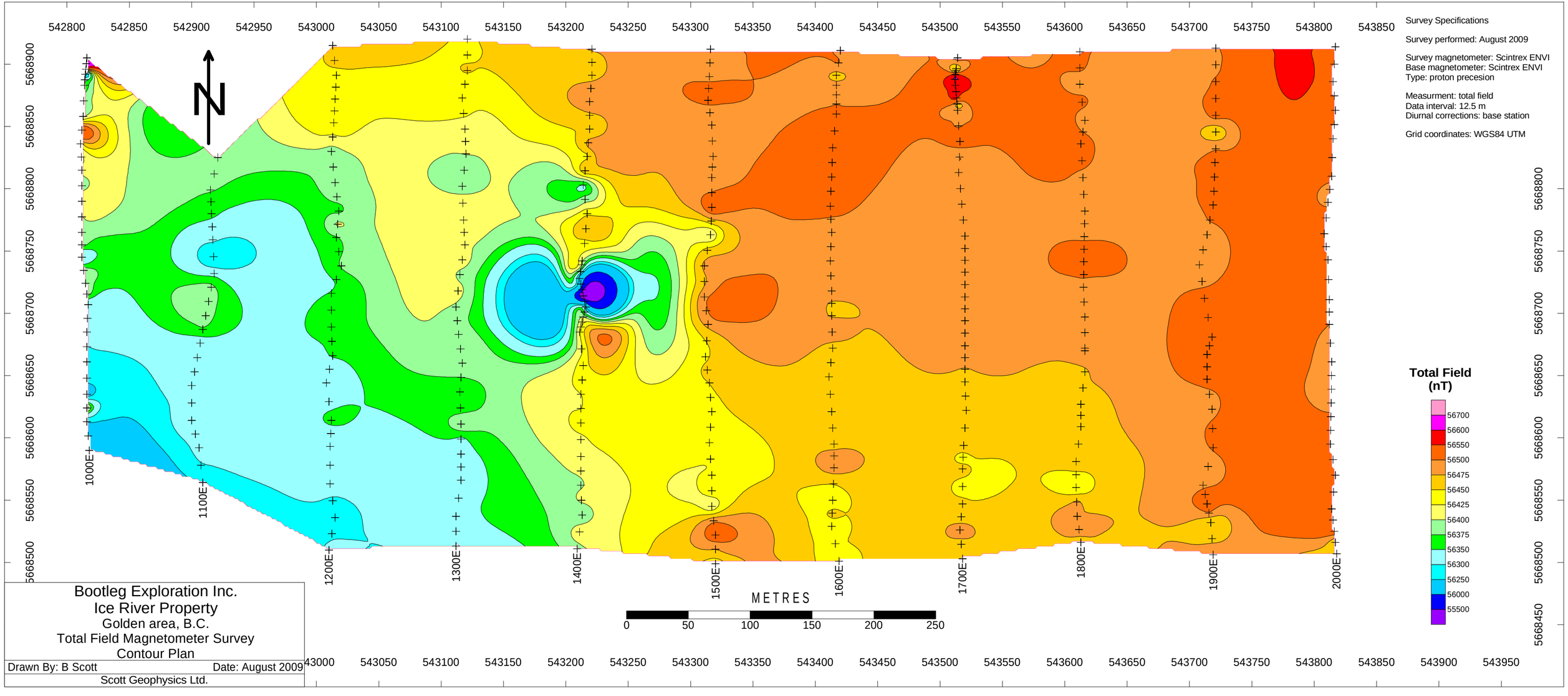


Bootleag Exploration Inc.

Ice River Property

Golden area, B.C.
Total Field Magnetometer Survey
Stacked Profiles

DRAWN BY: B Scott	DATE: August 2009
SCOTT GEOPHYSICS LTD.	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5668500
5668450
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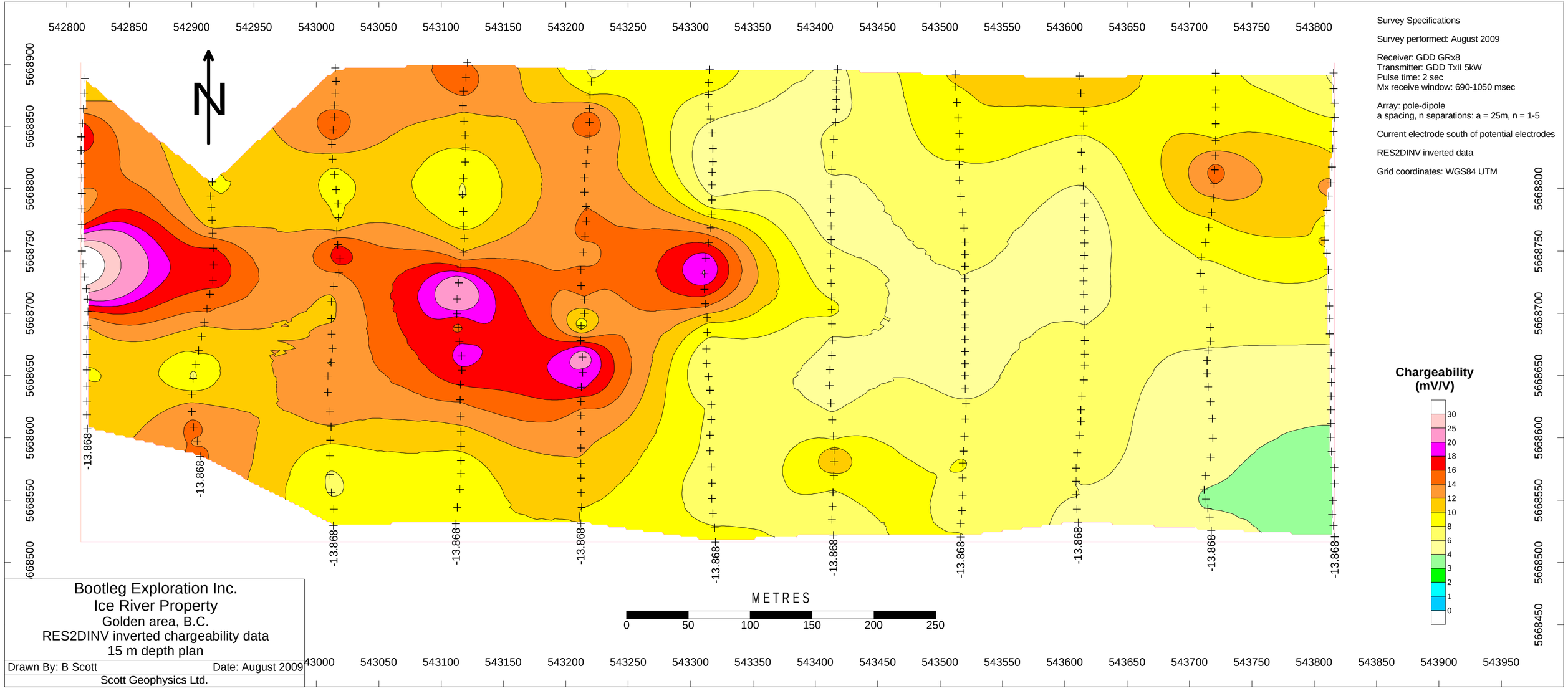
1100E
1200E
1300E
1400E
1500E
1600E
1700E
1800E
1900E
2000E
N
METRES
0
50
100
150
200
250
Survey Specifications
Survey performed: August 2009
Survey magnetometer: Scintrex ENVI
Base magnetometer: Scintrex ENVI
Type: proton precesion
Measurment: total field
Data interval: 12.5 m
Diurnal corrections: base station
Grid coordinates: WGS84 UTM
Total Field (nT)
56700
56600
56550
56500
56475
56450
56425
56400
56375
56350
56300
56250
56000
55500
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
Total Field Magnetometer Survey
Contour Plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.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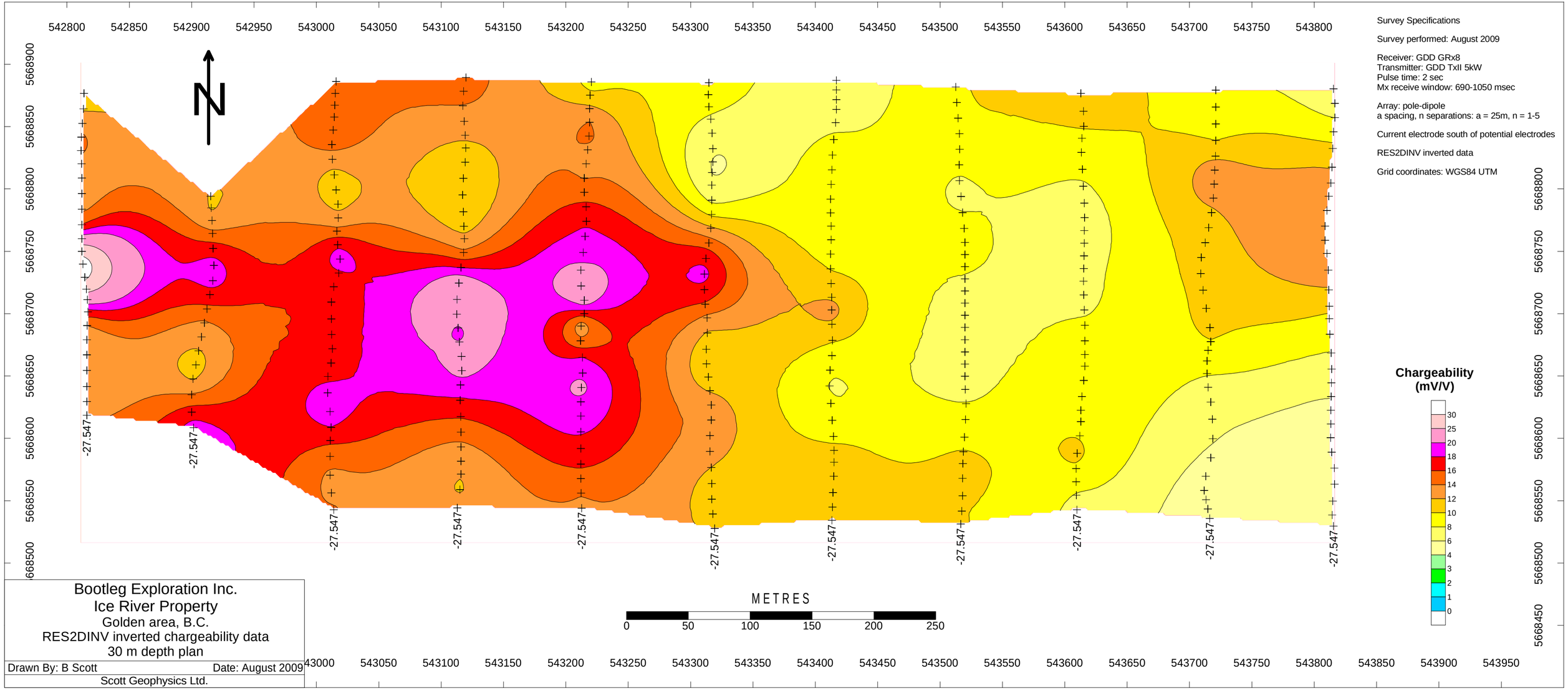
5668750
5668700
5668650
5668600
5668550
5668500
5668450
-13.868
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Chargeability
(mV/V)
30
25
20
18
16
14
12
10
8
6
4
3
2
1
0
METRES
0
50
100
150
200
250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted chargeability data
15 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.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5668900 5668850 5668800 5668750 5668700 5668650 5668600 5668550 5668500
N
-27.547
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Chargeability (mV/V)
30 25 20 18 16 14 12 10 8 6 4 3 2 1 0
METRES
0 50 100 150 200 250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted chargeability data
30 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.
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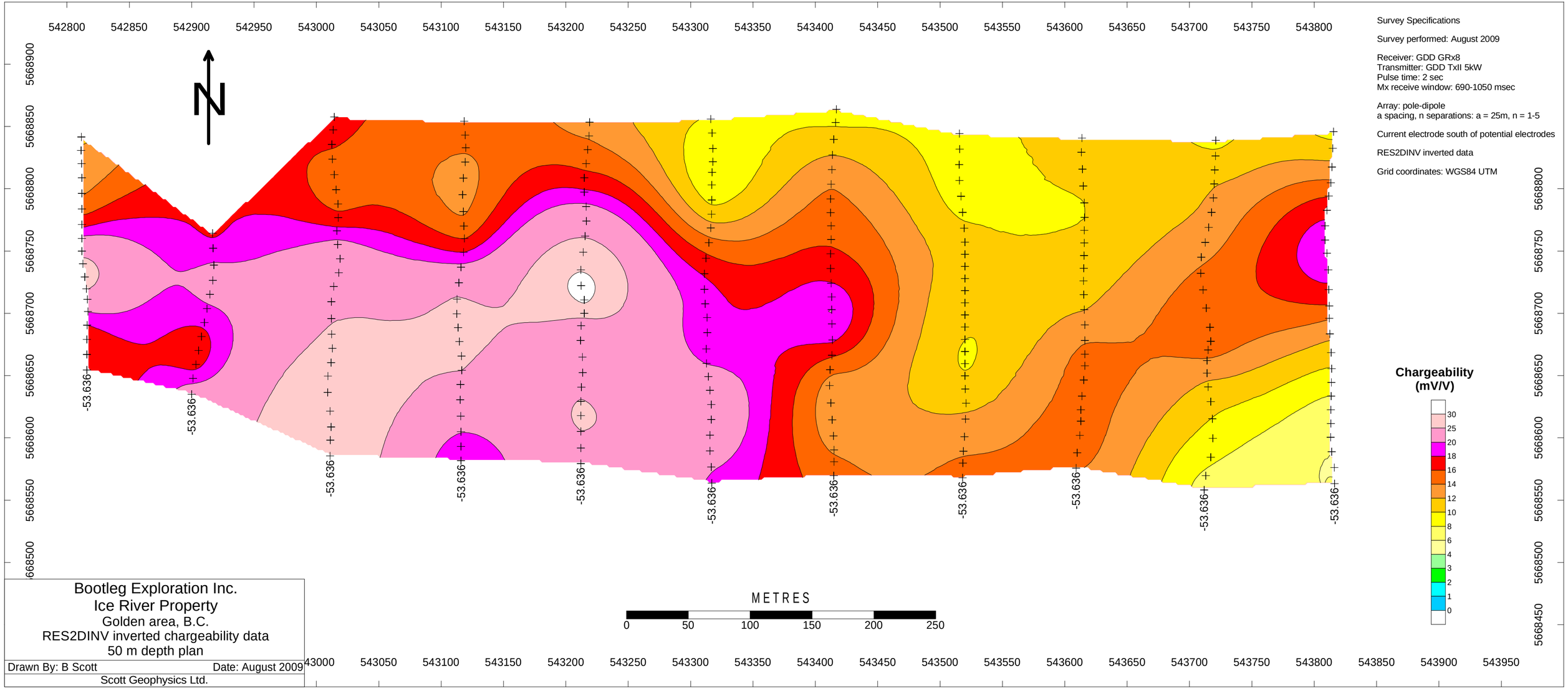
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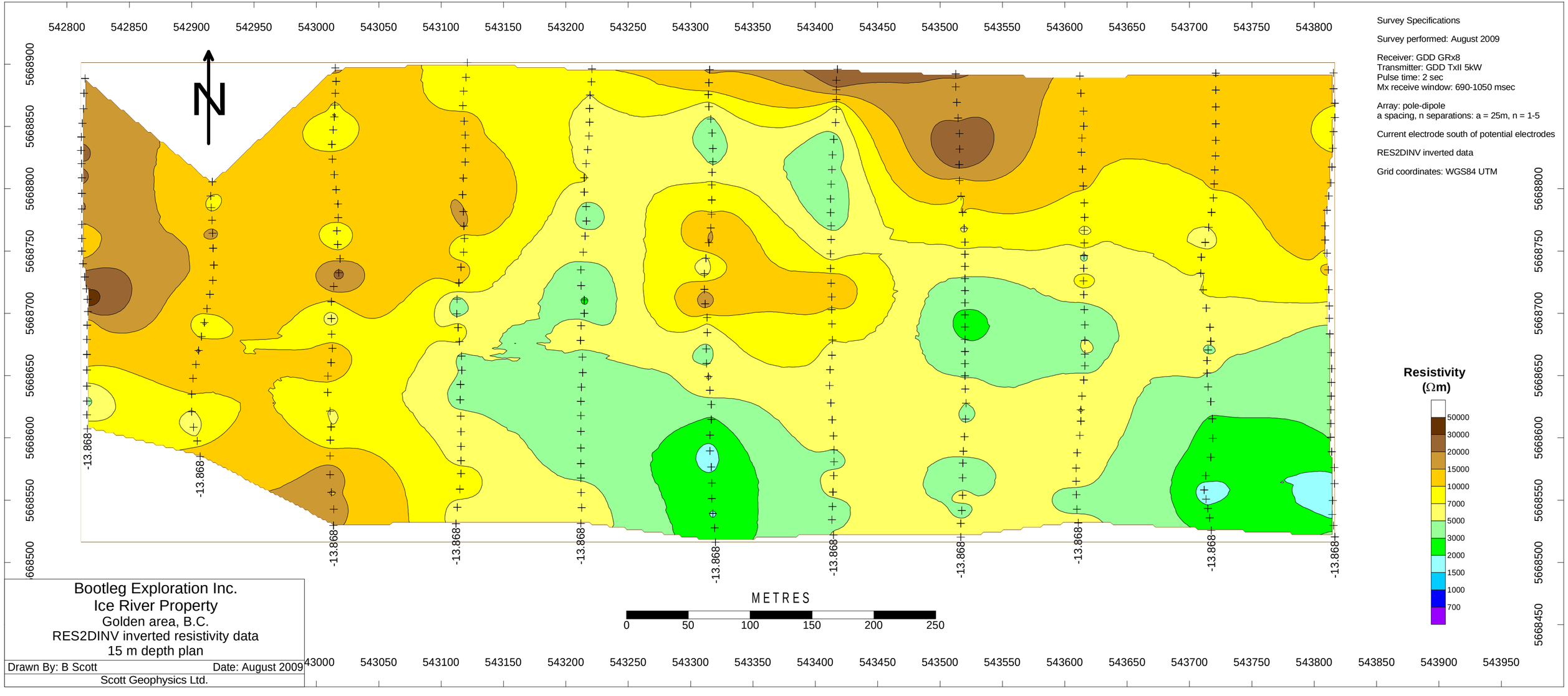
5668900 5668850 5668800 5668750 5668700 5668650 5668600 5668550 5668500
N
-53.636
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Chargeability (mV/V)
30
25
20
18
16
14
12
10
8
6
4
3
2
1
0
METRES
0 50 100 150 200 250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted chargeability data
50 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.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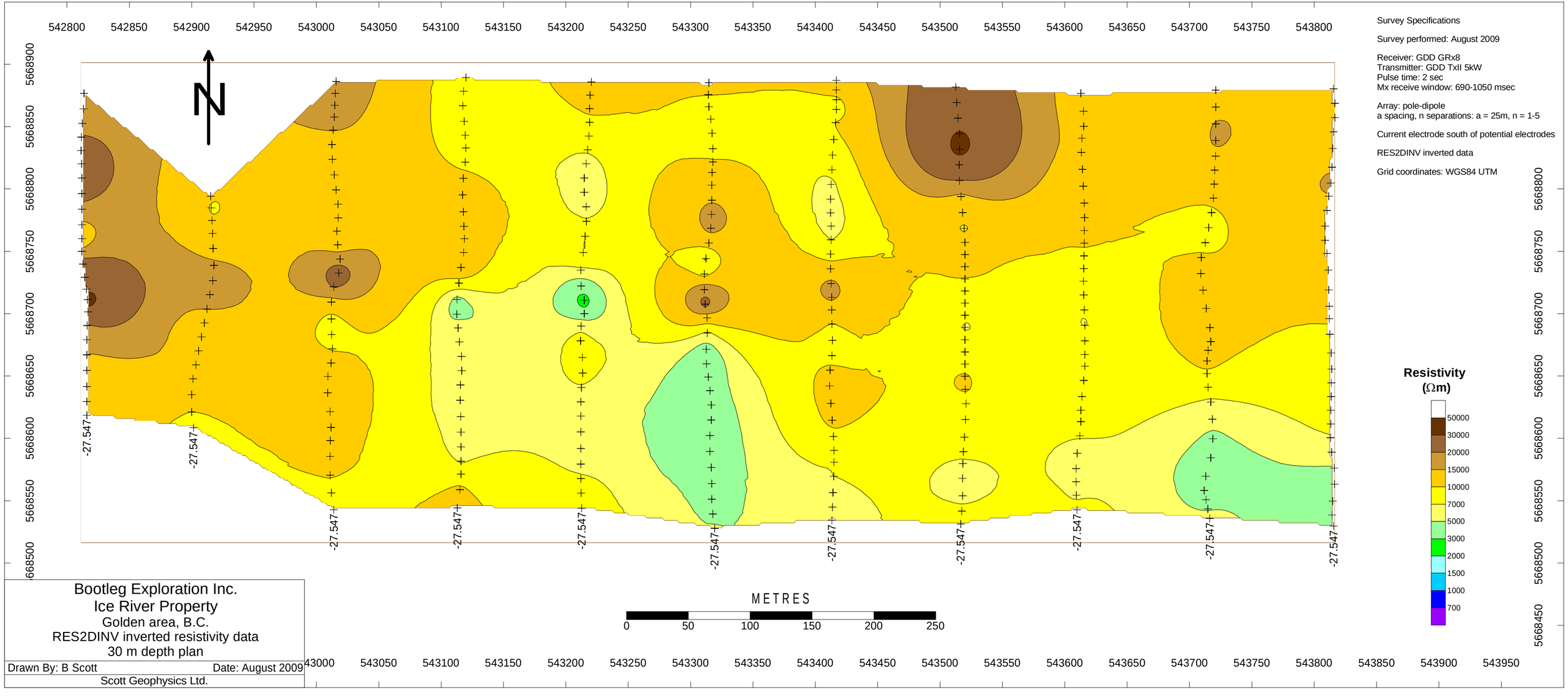
5668900 5668850 5668800 5668750 5668700 5668650 5668600 5668550 5668500
N
-13.868
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Resistivity (Ωm)
50000
30000
20000
15000
10000
7000
5000
3000
2000
1500
1000
700
METRES
0 50 100 150 200 250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted resistivity data
15 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.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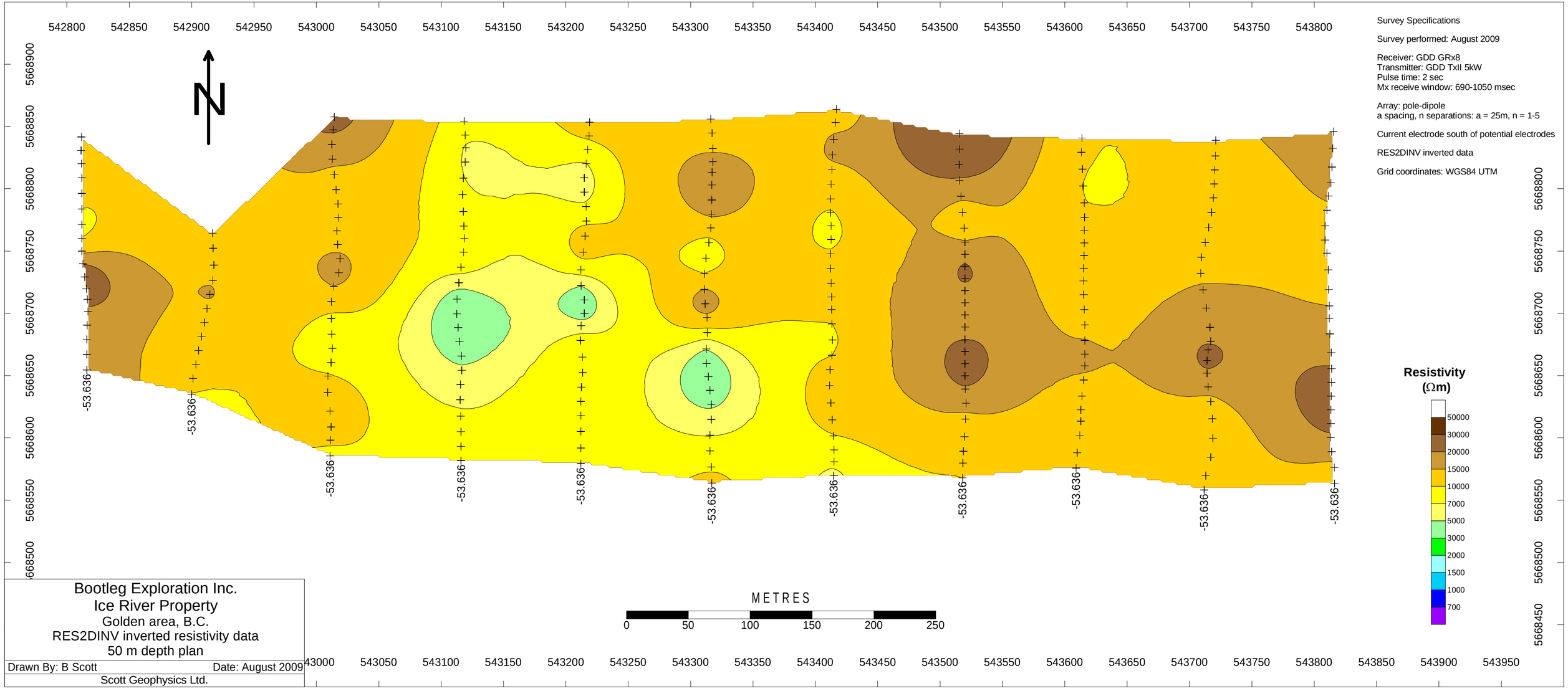
5668900 5668850 5668800 5668750 5668700 5668650 5668600 5668550 5668500
-27.547
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Resistivity (Ωm)
50000
30000
20000
15000
10000
7000
5000
3000
2000
1500
1000
700
METRES
0 50 100 150 200 250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted resistivity data
30 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.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5668900 5668850 5668800 5668750 5668700 5668650 5668600 5668550 5668500
N
-53.636
Survey Specifications
Survey performed: August 2009
Receiver: GDD GRx8
Transmitter: GDD TxII 5kW
Pulse time: 2 sec
Mx receive window: 690-1050 msec
Array: pole-dipole
a spacing, n separations: a = 25m, n = 1-5
Current electrode south of potential electrodes
RES2DINV inverted data
Grid coordinates: WGS84 UTM
Resistivity (Ωm)
50000
30000
20000
15000
10000
7000
5000
3000
2000
1500
1000
700
METRES
0 50 100 150 200 250
Bootleg Exploration Inc.
Ice River Property
Golden area, B.C.
RES2DINV inverted resistivity data
50 m depth plan
Drawn By: B Scott
Date: August 2009
Scott Geophysics Ltd.

Appendix IX – Masters Thesis by Thomas Mumford

The Full Thesis can be found at:

http://dspace.hil.unb.ca:8080/handle/1882/1085

Dykes of the Moose Creek Valley, Ice River Alkaline Complex, southeastern BC

by

Thomas Mumford

B.Sc. Geology, University of New Brunswick, 2007

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Masters of Science

In the Graduate Academic Unit of Geology

Co-Supervisors: Cliff S. J. Shaw, Ph.D., Department of Geology
David R. Lentz, Ph.D., Department of Geology

Examining Board: Dave Keighley, Ph.D., Department of Geology, Chair
Chris R. M. McFarlane, Ph.D., Department of Geology

External Examiner: Jennifer Pell, Ph.D., Geologist, Peregrine Diamonds Ltd.

This thesis is accepted by the

Dean of Graduate Studies

THE UNIVERSITY OF NEW BRUNSWICK

June, 2009

ABSTRACT

The multiphase Ice River Alkaline Complex is located in the Main Ranges of the Rocky Mountains about 40 km east-southeast of Golden, BC, and comprises, in order of decreasing age: (1) a rhythmically-layered mafic complex; (2) carbonatite (concentrated as a plug in the centre of the complex); (3) a zoned nepheline syenite complex, and; (4) a dyke suite consisting of syenitic dykes, late alkaline lamprophyres, and carbonatites.

Petrographic, geochemical, and isotopic analysis of the dykes occurring along the eastern margin of the Ice River Alkaline Complex indicates that the syenitic dykes are the product of extensive fractional crystallization (Zr/Hf = 39 – 80; Nb/Ta = 19 – 305). These syenitic dykes can be subdivided based on mineralogy and composition into a nepheline syenite – nephelinolite group, a syenite – monzodiorite group, and an alkali feldspar granite dyke. The calculated Sm-Nd isochron age of the syenitic dykes (369 ± 15 Ma) is consistent with the accepted age of the complex (359 ± 3 Ma), and is supported by the Rb-Sr errorchron for the same samples, as well as preliminary U-Pb zircon dating. A solidification front (fractional crystallization) model has been described for the development of the Ice River Alkaline Complex, where the syenitic dykes represent structurally controlled periodic discharges from an evolving magma chamber.

Isotopic evidence coupled with a U-Th-Pb EPMA date of 165 ± 8 Ma for one of the examined discordant REE-rich carbonatite dykes, indicates that at least some of the carbonatites within the Moose Creek Valley are temporally and magmatically isolated from the Ice River Alkaline complex.

Chapter 8 – Conclusions

(1) Three distinct alkaline dyke suites occur within the western flank of the Moose Creek Valley: syenitic, lamprophyric, and carbonatitic dykes.

(2) The syenitic dykes of the western flank of the Moose Creek Valley can be subdivided into three groups based on mineralogy and geochemistry. These groups are the nepheline syenite – nephelinolite group, the syenite – monzodiorite group, and an alkali feldspar granite dyke. Mineralogically and compositionally the lamprophyres are all sannaites, with the exception of a damtjernite that occurs as a diatreme.

(3) The NNW-trend of the syenitic dyke swarm suggests that they were influenced by far-field stresses, and that their emplacement is linked to decompression of the magma chamber and subsequent caldera collapse.

(4) Monazite crystals in ferrocarbonatite sample TMIVR003 were dated using a U-Th-Pb microprobe technique, and an age of 165 ± 8 Ma was calculated. This sample exhibits an isotopically distinct signature in comparison to the syenitic dykes, lamprophyres, and units of the layered mafic sub-complex and zoned syenite sub-complex, as well as carbonatite samples of the Ice River Alkaline Complex analysed by Locock (1994). Isotopic evidence also suggests that this sample was not derived from volatile fluxing and (or) a limestone syntectic process. Indicating that at least some of the carbonatites within the Moose Creek Valley are both temporally and magmatically

isolated from the Ice River Alkaline Complex. The emplacement age determined for ferrocarbonatite TMIVR003 is prior to the décollement, indicating that its source could be undiscovered.

(5) The syenitic dykes ($^{87}Sr/^{86}Sr_{368}$ = 0.70291 – 0.70431; εNd = + 3.3 to + 4.0 based on an age of 368 Ma) are isotopically indistinguishable from the sannaite lamprophyres ($^{87}Sr/^{86}Sr_{368}$ = 0.70334 – 0.70392; εNd = + 2.5 to + 4.0 based on an age of 368 Ma), and are similar to samples of the syenite and layered mafic sub-complexes: indicating that they are all derived from the same isotopically depleted LILE enriched source.

(6) The isochron calculated using the whole-rock Sm-Nd isotopic data of samples from the nepheline syenite – nephelinolite and syenite – monzodiorite groups (369 ± 15 Ma) is within error of the accepted age of the complex (359 ± 3 Ma; Frei et al. 2008). This age for the syenitic dykes is supported by the Rb-Sr errorchron (375 ± 19 Ma) for the same samples, and is consistent with preliminary LA-ICP-MS zircon U-Pb dating of samples from the nepheline syenite – nephelinolite and syenite – monzodiorite groups.

(7) The development of the Ice River Alkaline Complex can be described using a solidification front model. In this model the zoned syenite sub-complex is related to the layered mafic sub-complex by extensive fractional crystallization. The sannaite lamprophyres, nepheline syenite – nephelinolite dyke group, and the syenite – monzodiorite dyke group are derived from the periodic tapping of distinct melt compositions during the differentiation of the Ice River Alkaline Complex.

(8) Closed system fractionation using the Rayleigh equation was used to model the fractionating mineral assemblage. Fractionation of clinopyroxene with subordinate amphibole is consistent with the compositional data distribution of syenitic and lamprophyric dykes.