

2011 Technical Assessment Report for the Hartless Joe Property, Yukon Territory

Whitehorse Mining District

Claims: Hart 1-28, Les 1-10, Joe 1-10

NTS Map Sheet: 105D/15

Centre of Property: 60° 55' N, 134° 50' W

May-July, 2011

Owner:

Alix Resources Corporation, Vancouver, BC

(claims held in trust by Archer-Cathro)

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1. SUMMARY

This report describes the Hartless Joe epithermal Au-Ag prospect located in the Whitehorse Mining District of southern Yukon Territory. Deemed to lie within a prolific metallogenic belt, the property and its immediate vicinity have gone through various modes and stages of exploration by several groups since the 1960s. Currently, the rights to the property are held by Archer-Cathro and the claims are under an option agreement with Alix Resources.

The Hartless Joe prospect is located about 28 aerial kilometers from Whitehorse, the capital city of the Yukon Territory (Figure 1.) It covers forty-eight (48) claim blocks with an aggregate area of about 960 hectares (Figure 2). Thus far, there are no direct road links to the property and the prospect area can only be accessed by helicopter.

The prospect area lies within the northern end of the Stikinia Terrane, an accreted belt that extends from the southern Yukon to northern British Columbia. Locally, it is mainly underlain by intercalations of various andesitic to basaltic flows and associated minor metamorphosed clastics (Figure 3). Gold-silver and the associated base metal mineralization are hosted by this Mid-Triassic age basement rock assemblage. Mineralization occurs as distinct quartz-sulfide veins and/or lenticular-shaped massive sulfide masses. On rock outcrops, the conspicuous but localized limonite stains and coatings serve as effective guides in locating and delineating possible ore zones. Three (3) younger and distinctive intrusive rock units cut the basement volcanics. These Mid-Cretaceous and intermediate to silicic plutons occur as narrow dikes and stock that sharply cut the basement rocks. The intrusive units crop up largely unaltered and are not associated with any of the mineralization observed in the prospect area.

Previous ground surveys done in the area from 2005 to 2008 had discovered high-grade Au-Ag vein materials mainly in talus materials. Samples of mineralized outcrops were very limited although possible zones of significant mineralization could have been covered by the extensive blanket of talus materials in the area. It was observed that most of the precious and base metal showings occur close to faults but continuities and/or possible sources of the mineralized rock floats could not be ascertained due to the thick overburden.

The soil geochemical sampling that was conducted in the area in 2005 and 2007 had delineated anomalous results for Au, Ag and several other indicator elements. This survey, in conjunction with the rock sampling completed, had identified six (6) target areas for more detailed follow-up investigation (Figure 4). Further on, Variable Time-Domain Electromagnetic (VTEM), magnetic and Induced Polarization (IP) surveys had also been completed in the fall of 2007. These surveys had delineated magnetic anomalies near and/or along faults and intrusive units. Likewise, two (2) chargeability anomalies roughly define zones where well-mineralized vein materials had been discovered and where soil geochemical anomalies had been traced out.

In the summer of 2008, three (3) holes with an aggregate length of 612.20m were drilled in the area (Figure 4). One hole that probed the VTEM anomaly (HJ08-01) did not return significant results and it was reported that the anomaly generated likely could have been caused by graphite in fractures. The other two (2) holes (HJ08-02 and 03) were drilled within and/or close to the contact zones of the steeply dipping felsic dikes and veins with the basement volcanics. Multi-element soil anomalies had been picked up in this area as well. As in the first hole, these next two holes came out barren.

The latest groundwork conducted in the Hartless Joe property was in June 2011 by UTM Exploration Services, Ltd. on behalf of Alix Resources. Recognizing the need for a closer look into the local geology of the area, the activities undertaken during this latest investigation were mainly field mapping and sampling. Semi-detailed examination was carried out within the entire claims block while putting more emphasis on the six (6) previously delineated targets: Joe Creek, HART 13, LES 7, LES 2, Ace, and Grumpy (Figure 5). The results of this most recent survey show that the best target seems to be the LES 2 area although mineralized showings appear to be narrow and localized zones of quartz-sulfide vein and/or pods.



Figure 1. Location Map.

It was discovered that the mineralized showings in the other target zones occur as less distinct and more localized than LES 2. On the ground, it was likewise recognized that the electromagnetic anomalies at the Grumpy target area were most likely the signals generated from the largely unaltered and barren but relatively magnetite-laden diorite and felsic dikes. In terms of the abundance of mineralized floats and/or frequency of interesting outcrops, this area also appears subordinate compared to the LES 2 area.

A follow-up survey is recommended in the area to define in more detail the potential of the LES 2 area. More detailed mapping and closer-spaced sampling combined with

ground electro-magnetic surveys are suggested to define possible drilling targets. Although mineralized showings occur as localized zones based on the just-concluded investigation, it could not be discounted that possible wider and separate zones could be traced out at depths. Three (3) drillholes with an aggregate length of 1,000 meters are recommended, after the completion of the follow-up groundwork. Subsequently, 1,000 meters more drilling could be pursued if the initial drilling results prove successful.

2.0 Terms of Reference

The Hartless Joe property, located in southern Yukon Territory, consists of forty-eight contiguous (48) claim blocks which cover an area of about 960 hectares. It has always been regarded as prospective for “bonanza type” Au-Ag mineralization. The latest field findings however, indicate that the area could be a host to possible volcanogenic massive sulfide deposits.

During the summer of 2011, UTM Exploration Services Ltd. conducted a semi-detailed mapping and sampling program on the property, focusing on the six (6) delineated target areas by the previous workers, particularly Archer, Cathro & Associates (1981) Ltd.

This report includes data and information that had been acquired from historical work records that had been made public prior to the implementation of National Instrument (NI) 43-101. Deficiencies in the records are aptly acknowledged whenever necessary. The author of this report is a qualified person as outlined in the NI 43-101 guidelines and the Author’s Certificate appears in Section 18.0.

All geological terms used in this report are those of standard usage and can be referred to in published geological dictionaries. Technical information is all presented in the metric system and currency is in Canadian dollars.

3.0 Property Description and Location

The Hartless Joe Property is located in southern Yukon Territory (Figure 1) and is covered within forty-eight (48) contiguous claim blocks with a total area of about 960 hectares. The block is centered at latitude 60° 55’N and longitude 134° 50’W on the National Topographic Survey (NTS) sheet 105D/15. Claim tenure details are described in Table 1 while the individual claim locations are shown in Figure 2.

Table 1. Claim Tenure Data

Claim Block	Claim Name	Grant Number	Expiry Date
HJ	Hart 1	YC26563	March 1, 2015
HJ	Hart 2-4	YC30012-YC30014	March 1, 2015
HJ	Hart 5-28	YC37051-YC37080	March 1, 2014
HJ	Les 1-10	YC37081-YC37090	March 1, 2014
HJ	Joe 1-10	YC37091-YC37100	March 1, 2014

Note: The expiry date does not include assessment credit for work done in 2011 that has not yet been filed with the Mining Recorder.

All the claims were staked under the terms of the Yukon Quartz Mining Act and are registered with the Whitehorse Mining Recorder in the name of Archer-Cathro.

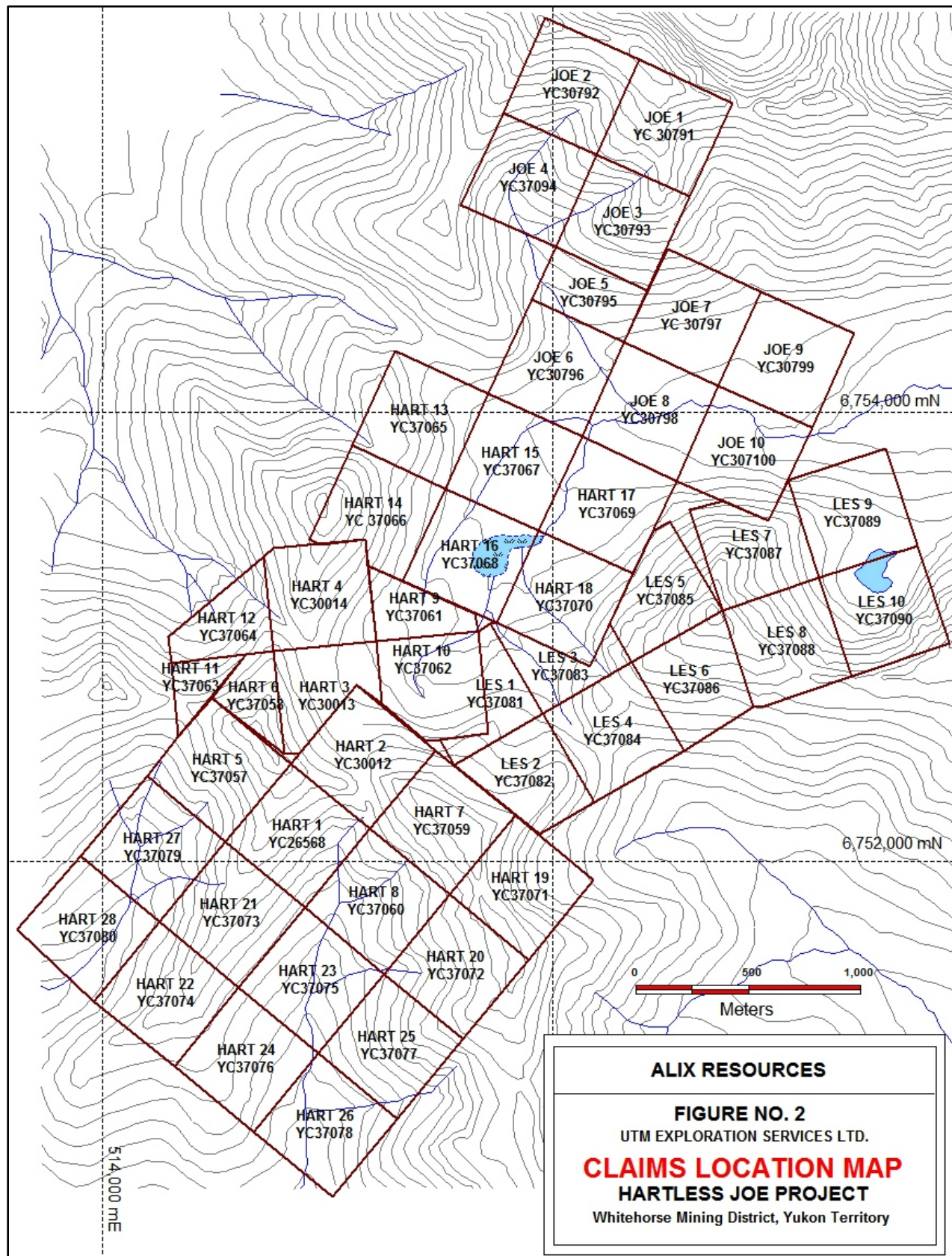


Figure 2. Claims Location Map.

4.0 Accessibility, Infrastructure, Local Resources, Climate and Physiography

Whitehorse, the capital city of the Yukon Territory, can be reached through a 2-hour daily commercial flight or about 24-hours of land travel using a private vehicle from the city of Vancouver. Airline services from all other city centers in the country are also available but on lesser frequency. From Whitehorse, there are still no existing road networks towards the Hartless Joe property and current access to the area is only through helicopter. Located about 28 aerial kilometers from Whitehorse, it only takes about 15 minutes to reach the prospect site by helicopter. Several companies based at the Whitehorse Airport offer year-round helicopter charter services.

Whitehorse, which has a population of about 20,000 people, is the nearest trading center to the concession area. A significant sector of the city's inhabitants is involved in one way or another with the mineral exploration and mining industry. Being so, most of the services and the supply requirements for this industry are likewise available in the city. Although there is no assay laboratory yet, a sample preparation facility now exists and this creates more efficiency in terms of sample reduction and transport to Vancouver where most of the laboratory analyses are done. The city also hosts a hydroelectric dam that supplies its power requirements.

There are several places in the property which are suitable as campsites although the best spots are along the valley area in the north-central section where ample water supply can be tapped for domestic and/or even for exploration work requirements. Most of the area coverage lies above treeline and there are no trees of commercial value.

The prospect area typifies the northern continental regions climate with long cold winters, shortened fall and spring seasons and distinctly short but cool summers. The nearest weather station is also located in Whitehorse where average temperature records show -13.3 degrees C in January and 20.5 degrees C in July (Yukon Community Profiles, 2007). Rainfall, which is generally experienced during the summer months, accounts for most of the precipitation, with has an annual average of 267mm. The maximum snow pack average was recorded at 145 cm although the area is generally snow-free during early June to mid-September.

Hartless Joe's terrain is undulating to moderately steep with valleys being cut by sub-dendritic drainage patterns that form part of the Yukon River system. The area is located between the Big Salmon Range to the northeast and Coast Range to the southwest. The terrain is alpine to sub-alpine and the elevation ranges from about 1400 to 2,000 m above sea level. More rugged topography is generally carved out along the N-NE faces of the ridgelines while a prominent glacial lake occurs at the northeastern section of the claims (Figure 3).

Rock exposures are generally found along ridge tops and along cirque walls, and the immediate base slopes are largely covered by highly angular pebble- to boulder-size talus materials. Soil development is very poor in all areas and where present, it is

normally covered with thick growths of lichen and/or grass. The treeline elevation is about 1,500m, and vegetation in the area consists mainly of shrubs and grasses along the creek lines associated with sparse and still short spruce trees.

5.0 Exploration History

On record, the earliest exploration work within the Hartless Joe property was conducted in 1967 when Mr. J. Smith staked 22 blocks of claims (Ben 1-22) to cover the Ace Target (Figure 5) and its immediate vicinity. The limited information indicated high-grade Au and Ag assays with associated significant grades of lead and zinc in rock float and hand trench samples. In 1968, Esanee Exploration covered parts of this same claims block with geochemical soil sampling as well as ground magnetic and electromagnetic surveys. The work concluded with the identification of two (2) possibly mineralized structures (Deklerk and Traynor, 2005), and no follow-up investigation was pursued until the validity of the claims expired.

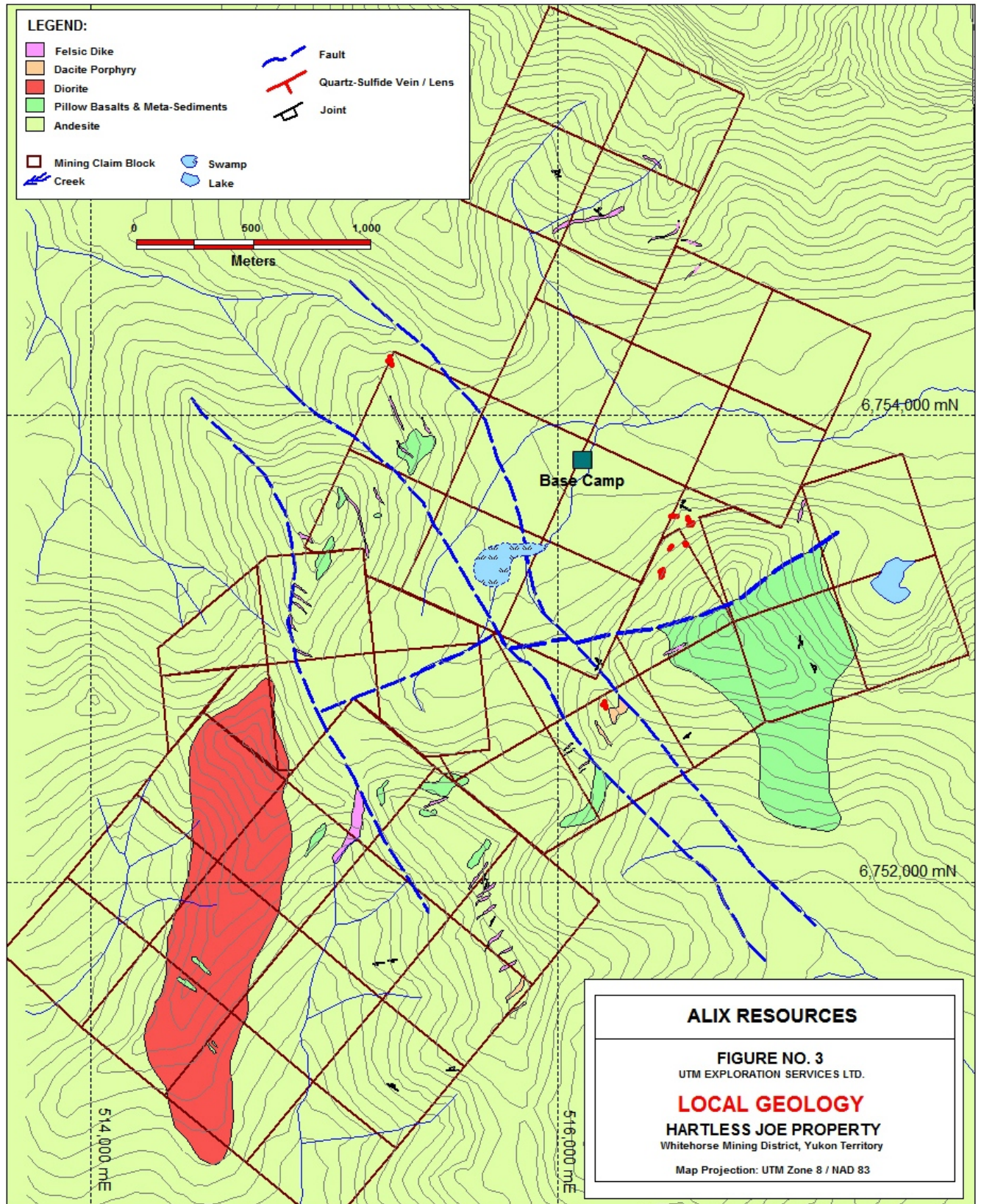


Figure 3. Local Geology.

The Geological Survey of Canada carried out reconnaissance-scale stream sediment and water geochemical sampling surveys in 1985 within areas covered by NTS Map Sheet 105D. The Hartless Joe area, which forms part of the coverage, came out anomalous for gold and other associated indicator elements. Assay values came out as high as 1810 ppb Au, 0.40 ppm Ag, 120 ppm Cu and 244 ppb Hg (Heon, 2003).

The Grumpy showing (Figure 5), the biggest target in Hartless Joe, was discovered in 1997 by Mr. C. Hart of the Yukon Geological Survey during the course of a region-wide reconnaissance-scale geologic investigation. As described, the most significant mineralization was a quartz stringer and vein associated with a 0.50 to 1.0 m-wide siliceous felsic dyke within a north-trending fault zone. A sample of the material assayed 10.60 g/t Au (Hart, 1997).

With the discovery of Grumpy, the area was staked in February 2004 (Hart 1 claim) by Mr. R. Hamel, a prospector. Subsequently, ATAC purchased the claim from Hamel in August 2004. During the autumn of that same year, quick walkover ground checks and limited-scale soil geochemical sampling were immediately carried out by ATAC. Samples of vein material rock floats collected during this survey yielded assays of 1 to 250 g/t Au and 13.5 to 4,540 g/t Ag. The very encouraging results prompted ATAC to stake additional claims within the immediate vicinity of Grumpy (Wenzynowski, 2006).

In the summer of 2005, ATAC resumed the field assessment of the now bigger claim block with contour and grid controlled geochemical soil sampling, prospecting and geologic mapping. This investigation delineated in greater detail the Ace and Grumpy targets and further traced out four (4) additional mineralized zones mainly based on the soil anomalies generated.

ATAC eventually optioned out the property to New Shoshoni Ventures Ltd. in 2006. This new group reportedly conducted airborne electromagnetic surveys but no available records could be retrieved from this work. The short-lived option agreement was terminated during the spring season of the following year.

ATAC continued with the groundwork in the summer of 2007 by extending as well as doing in-fill sampling in the previously completed soil geochemical grid. In addition, helicopter-borne VTEM and magnetic surveys were flown covering the entire property. On the ground, two (2) trial IP survey lines were also undertaken within the Grumpy area to define chargeability signatures of the mineralized targets. The 2007 surveys are briefly described as follows:

1. **Soil Geochemical Survey** – Except for the Grumpy and Ace targets where closely-spaced grid sampling was carried out, most of the areas in the Hartless Joe property were subjected to wider-spaced, reconnaissance-scale and topographic contour-based soil sampling. Approximately, the survey coverage measures 470 hectares (Figure 4).

The survey results generally show isolated point anomalies for Au across the entire coverage with the widest cluster of elevated values occurring within the Grumpy area. Roughly, a 1200m X 600m anomalous zone was delineated at Grumpy where gold values recorded more than 100 ppb.

The gold values at Ace were relatively subdued although a smaller 450m X 200m anomalous zone containing 20 to 100 ppb Au was likewise outlined. The highest gold value detected in soil was from a reconnaissance sample collected along a hillside 2 km. north of Grumpy. In general, soil development is poor and patchy across Hartless Joe and this could possibly explain the less than conclusive geochemical signatures generated in the soil survey.

Other than gold, other elements which exhibited distinct clustering of values albeit smaller in extent include silver, copper and lead. Arsenic and antimony also showed weak to moderately elevated values within the vicinity of Grumpy and LES 2 target areas, while zinc values are largely insignificant throughout the entire area of coverage.

2. **VTEM and Magnetic Surveys** – Geotech Ltd. of Aurora, Ontario completed the helicopter-borne VTEM and magnetic surveys across the entire property in September 2007. The survey involved flying a total of 159.9 line kilometers and covering an area of about 13 sq. km.

The total field magnetic readings range from 56,900 nT to 58,400 nT, regarded as a high activity signature (Geotech, 2008). In general, the elevated readings coincide with the intermediate to mafic volcanic units along the northern and eastern portions of the claim area. Magnetic highs were also picked up over the southwest section of the property wherein a perceived intrusive body lies. In addition, distinct magnetic lineaments were also traced out along zones where the inferred major faults cut through (Figure 4).

3. **Induced Polarization (IP) Survey** – Aurora Geosciences Ltd. conducted ground IP and resistivity survey of the property in September 2008. One (1) 600 m. and one (1) 700 m. long IP lines spaced 520 m apart were completed in the Grumpy target area (Figure 4).

Three (3) chargeability/conductive sub-surface zones had been traced out along the areas where distinct soil geochemical anomalies for Au had been delineated. Some of the distinct changes in chargeability features indicated zones of possible structures and/or stratigraphic/lithologic contacts. As perceived in the models generated, stronger chargeability anomalies remain open to depth (Lebel and Hildes, 2007).

Archer, Cathro & Associates (1981) Ltd. pursued more detailed exploration work in 2008 by drilling three (3) holes in the area. Drilling, which was undertaken by Beaudoin Diamond Drilling Ltd. of Courtenay, BC, was implemented during the period of June 25 to July 10, 2008. The three drill holes are shown in Figure 4.

The drill plan for the three completed holes was largely based on the results of the earlier-completed electro-magnetic surveys. While the IP anomalies generated were likewise significantly considered, drilling the target areas based on these was not carried out due to unsafe weather conditions at the time. The drill hole specifics are as follows:

Hole	Easting (m)	Northing (m)	Elevation (m)	Azimuth	Dip	Depth (m)
HJ08-01	514903	6751989	1615	270	-45	246.89
HJ08-02	515127	6752234	1707	290	-45	197.81
HJ08-03	515127	6752234	1707	110	-45	167.34

HJ08-01 served to probe the VTEM anomaly that was generated in the 2007 survey. However, this hole intersected in most parts a dark gray limestone body that is cut by numerous dikes of feldspar+/- quartz porphyry and diorite. The intrusions did not substantially alter the wallrocks nor did it introduce any significant mineralization. Except for pyrite that was noted in localized sections within a feldspar porphyry dike and its immediate walls, no other sulfides had been observed. These pyritic sections did not show any significant assay results.

The two other holes, HJ08-02 and HJ08-03, were drilled in the Grumpy area. These holes were drilled from the same pad but were oriented in opposite directions. Numerous felsic dikes cutting volcano-sedimentary units were encountered in both holes with the longest dike intercept extending to about 30m. As in the first hole, minor disseminated pyrite was the only sulfide noted in these intrusives. Quartz-carbonate veinlets (1-10 cm in width) containing up to 15% pyrite disseminations were also observed in the holes, but these are also barren in terms of Au-Ag and base metal mineralization. HJ08-02 was completed down to its target depth while HJ08-03 had to be terminated still 50m short of target when the hole intersected a gougy fault zone. Both holes did not intersect any significant mineralization.

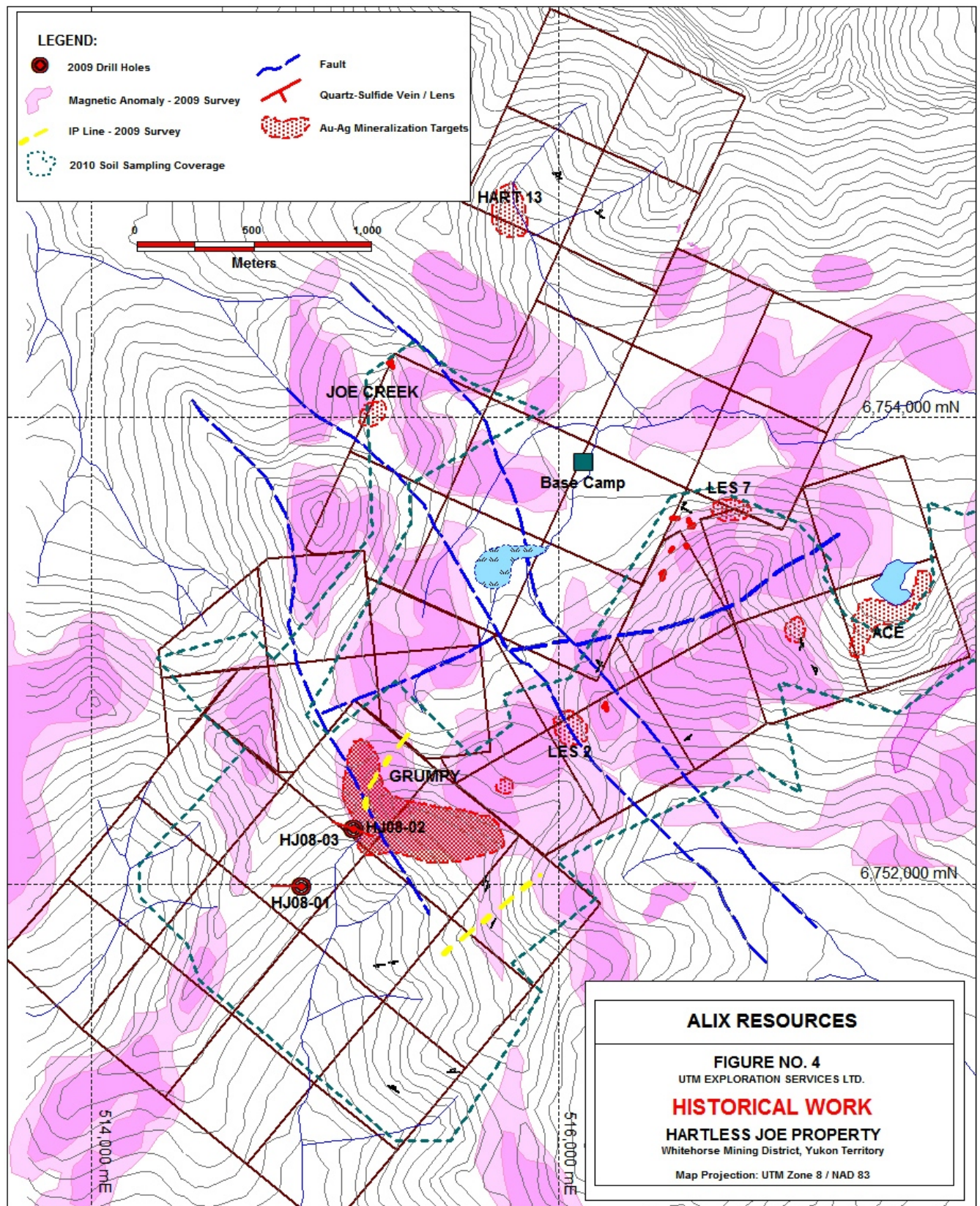


Figure 4. Historical Work.

6.0 Geology

6.1 Regional Geology

The entire Hartless Joe concession lies within the northern end of the Stikinia Terrain, regarded as the largest of the accreted terrains in the Canadian Cordillera. As traced out along the southern Yukon section, this terrain is about 80 km. wide and it consists of four (4) tectonic elements: the Paleozoic Stikine Assemblage, Mid-Triassic Joe Mountain Volcanics, Late Triassic Lewes River Arc and the Late Triassic to Mid-Jurassic Whitehorse Trough (Hart, 1997).

The mafic volcanic flow units that generally underlie the vicinity of the Hartless Joe prospect area form part of the Joe Mountain Formation, a 40km X 20 km wide volcanic complex. This thick volcanic pile is overlain by a sedimentary rock suite of the Whitehorse Trough Supergroup, a 7-km. column of largely arc-derived clastic rocks that were deposited within a fault-bounded marginal basin that was formed off the west coast of North America. About 600 km long, this clastic rock assemblage extends from Carmacks, YT from the north to Dease Lake in BC to the south. The Whitehorse Trough Supergroup is divided into two (2) main stratigraphic components: the Late Triassic Aksala Formation of the Lewes River Group and the Late Triassic to Mid-Jurassic formations of the Laberge Group. At Hartless Joe, the Aksala Formation overlies the Joe Mountain Formation (Hart, 1997).

Several Mid-Cretaceous plutons of the Teslin, Whitehorse and Mount McIntyre intrusive complexes cut the older volcanic flows and sedimentary units. The intrusive units are mafic to silicic in composition and occur mainly as stocks and dikes. At Hartless Joe, the intrusive bodies appear to be disposed along NNW directions and are largely structurally-controlled.

N-NW-trending fault lines had been outlined as possible splays or direct resultant compressional and/or tensional structures from the movement of the two (2) right lateral structures that bound the region, namely the Tintina Fault and the Denali Fault systems. Right and left-lateral faults of smaller magnitudes also show mutually abutting and crosscutting relationships. It is possible that some of the mineralized faults and veins in the region occur as strands of the two (2) main fault systems.

6.2 Local Geology of Hartless Joe

The Hartless Joe property is largely underlain by andesitic to basaltic flow units of the Joe Mountain Formation (Figure 3). The andesites occur as light to dark greenish gray, fine-grained to porphyritic and variably altered mainly to chlorite and silica. To lesser extents, carbonate and epidote alteration mainly as fracture fills and veinlets have also been observed. Some sections, particularly those within the immediate vicinity of the main structures, are weak to moderately-foliated while weakly fractured to massive

zones are normally lined with tight veinlets of white quartz associated with subordinate calcite and epidote. The foliated zones could probably be the meta-sedimentary intercalations of the entire volcano-sedimentary assemblage that characterize the rock formation.

Observed mainly as intercalations and/or in fault contacts with the andesite units are basaltic flows that are generally finer grained and darker gray in color. Distinct pillow structures characterize most of the outcrops noted and some are associated with maroon-colored, hematite-altered and cherty intercalations. Generally, this unit is less altered to chlorite and silica compared to the andesite flows.

Numerous silicic to intermediate intrusive dikes cut the andesite rocks. The rocks occur mainly as med-grained granodiorite or porphyritic (dacite porphyry), becoming less distinct in grain composition and generally termed as felsic dikes. A number of more distinct and coarser-grained granodiorite boulder floats had been observed in the field but no outcrops of this unit were mapped out. The plutons that are normally 2 to 10 m wide on outcrops are generally fresh or weakly altered to silica and/or chlorite. Limonite disseminations are conspicuous in the rock matrix but only minimal fresh pyrite grains had been noted.

The most prominent intrusive that was mapped out is a 2km X 0.40km diorite body along the NW section of the property (Figure 3). This unit, which roughly follows the ridgeline, is generally medium-coarse grained to porphyritic, light gray in color and with very distinct hornblende grains and/or phenocrysts. It is commonly fresh although minor sections are slight to weakly altered to chlorite and silica. Except for some rare specks of pyrite, no other significant mineralization had been noted.

Several NW-trending faults cut the claim area (Figure 3). These structures had been observed in the field to be closely following the sharp breaks in topography like the saddles and/or along the depressions lined by some of the creeks. An apparently younger ENE-trending fault was also observed and this clearly defines a sheared andesite-basalt contact along the eastern section of the concession area. Field relationships indicate that the NW structures are more likely right lateral strike slip faults in nature although possible extent of displacements could not be ascertained. The quartz-sulfide veins and/or pods that typify the Hartless Joe mineralization also occur as NE and NW trending zones.

7.0 Deposit Type

The Hartless Joe prospect area has always been regarded as a low sulphidation style of epithermal Au-Ag mineralization. However, recent findings derived from relatively limited mineralized exposures indicate localized quartz-sulfide or massive sulfide veins and/or pods that characterize gold-rich volcanogenic massive sulfide type of mineralization. Should the deposit be of an epithermal type, it is more likely that the zone of formation

is deemed relatively deeper, closer to the porphyry intrusion/s and is very much associated with polymetallic base metal sulfide mineralization.

Low sulphidation deposits are generally hosted by a predominantly volcanic suite of calc-alkaline andesitic to basaltic rocks in a broad spectrum of extensional tectonic settings including, intra-, near-, and back-arc, as well as post-collisional rifts (J. Bruce Gemmel, 2009). A lot of the now-known deposits are primarily located in modern and ancient subduction-related environments principally throughout the circum-Pacific region.

Low sulphidation epithermal Au + Cu + Ag deposits develop from dilute near neutral pH fluids and are classified into two (2) groups: the Arc Low Sulphidation which display mineralogies derived dominantly from magmatic source rocks and the Rift Low Sulphidation which have mineralogies drawn out dominantly from circulating geothermal fluid sources (Corbet, 2002). The former are classed with decreasing crustal level as: quartz sulphide gold + copper, passing to polymetallic gold-silver veins, carbonate-base metal gold and shallowest epithermal quartz gold-silver. These ore types are zoned in time and space with shallower styles overprinting the deeper levels. Metal contents vary as high Cu at depth to Ag and Au dominant in elevated crustal settings.

Low sulphidation adularia-sericite epithermal gold-silver systems comprise the rift low sulphidation style. These are dominated by gangue mineralogies deposited from meteoric water rich circulating geothermal fluids, typically formed in rift settings. Sediment hosted replacement gold deposits are interpreted to develop from low sulphidation fluids in reactive carbonate bearing rocks. Mineralization comprises mainly of iron sulfides and quartz and in forms of veins and vein/breccias (Corbett, 2002). Within the system, mineralization is commonly associated with subordinate amounts of chalcopyrite, galena and sphalerite.

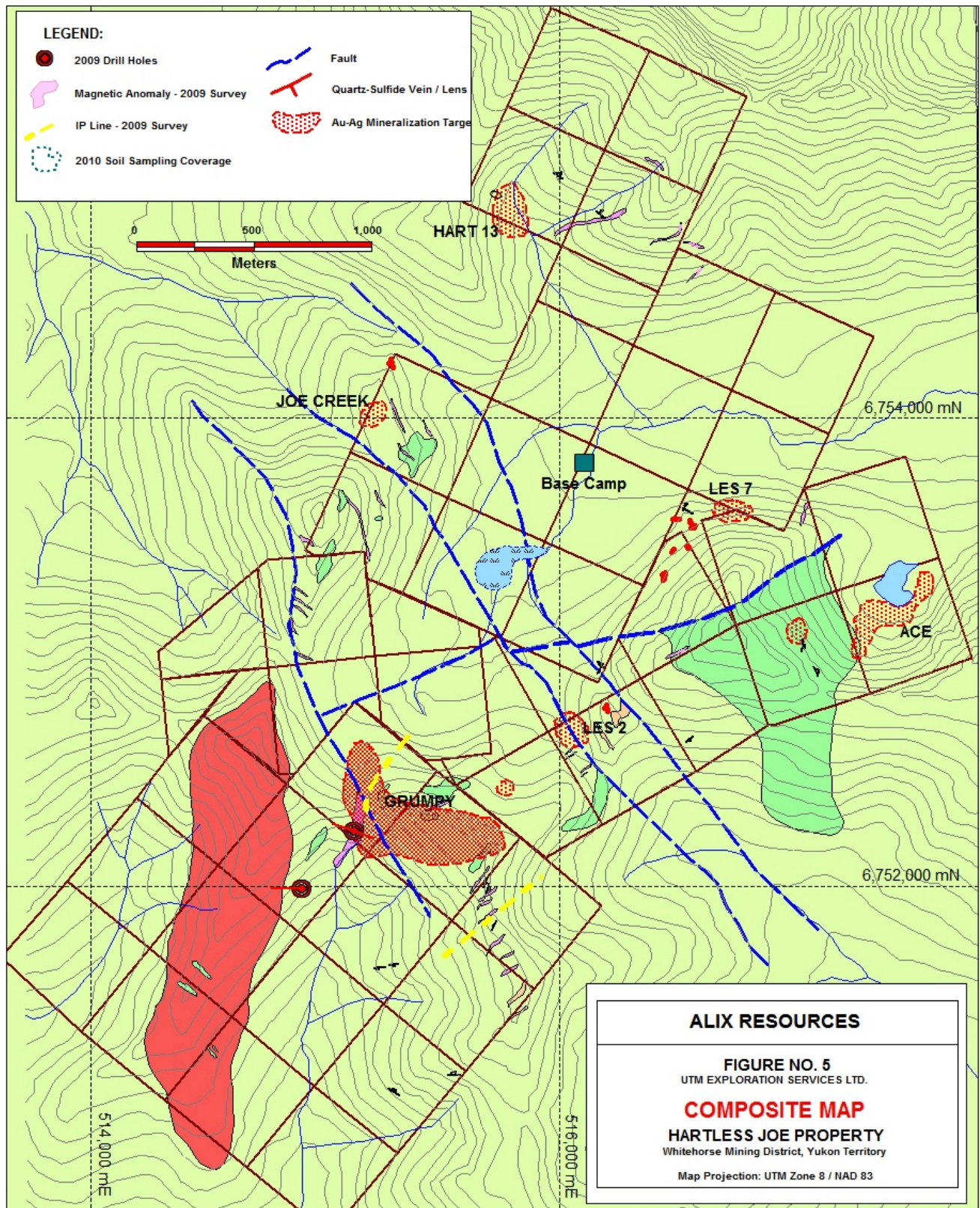


Figure 5. Composite Map.

Although it is generally considered that epithermal mineralization forms in sub-aerial environments, there are also known deposits which occur in sub-marine environments (Hannington et.al, 1999). One notable deposit is the submarine gold rich Conical Seamount in Papua New Guinea that is associated with polymetallic (Zn, Pb, Ag, Au, As, Sb) vein and associated pyrite stockwork mineralization. The alteration and mineralization assemblage observed in this system appears to be the same as the more known epithermal deposits in the sub-aerial environment while the pyritic Au-Ag and base metal zones may also manifest the features of volcanogenic massive sulfide deposits which are likewise sub-marine in origin.

Volcanogenic massive sulfide (VMS) deposits are strata-bound to discordant, volcanic-hosted massive sulphide lenses or pods with associated discordant stockwork feeder zones. It is regarded as gold rich when gold grades exceed the associated combined Cu-Pb-Zn grades. These deposits are present in both recent seafloor and deformed and metamorphosed submarine volcanic settings. They occur in a variety of volcanic terranes from mafic bimodal through felsic bimodal to bimodal siliciclastic in greenstone belts of all ages, typically metamorphosed to greenschist and lower amphibolite facies, and cut by sub-volcanic intrusions and dike sill complexes (B. Dube et. al, 2007). Normally, the deposits lie close to intermediate to felsic volcanic centers, at or close to the interface between intermediate to felsic volcanic domes and basalt-andesite or clastic sediments.

The associated minerals are mainly pyrite and base-metal sulphides with a complex assemblage of minor phases including bornite, tennantite, sulphosalts, arsenopyrite, mawsonite, and tellurides. Gold has most commonly an uneven distribution within the deposit due to both primary depositional controls and subsequent tectonic remobilization. The chemical signature of the ore is diverse, and dominated by Au, Ag, and Cu, Pb or Zn with locally high concentrations of As, Sb, Bi, Pb, Se, Te, and Hg. At Hartless Joe, the Au-Ag mineralization appears to be concentrated within silica-sulfide and/or massive pyrite zones with associated base metal sulfides.

8.0 Mineralization

No less than six (6) mineralization target areas had been identified in the course of the previous exploration work done in the area through 2008. During the mapping and sampling work done in 2011 however, only two (2) of these 6 areas, LES 7 and LES 2 (Figure 5), came out as the more prospective areas. As regards the types of mineralization, the previous surveys recognized three (3), namely Vein, Stratigraphic and Breccia (W.A. Wengzynowski, 2008).

Vein mineralization was described as normally consisting of quartz and pyrite (1-10%) and with minor amounts of galena, arsenopyrite, chalcopyrite and sphalerite. Although fluid inclusion studies done on some samples were inconclusive, it was reported that

growth zonings typical of epithermal systems were noted in the textural observations (W.A. Wengzynowski, 2008) of the vein materials. This type of mineralization was noted in all of the six (6) target areas, and thirty-eight (38) of the more significant representative samples taken from these prospects yielded the following grade ranges:

Au g/t	Ag g/t	As ppm	Sb ppm	Cu %	Pb %	Zn %
0.02 – 251.00	<0.2 – 5,780	1 – 5,310	1 – 2,540	Trace – 1.91	0.00 – 2.95	0.00 – 0.76

Stratigraphic mineralization was reported to be either quartz floods roughly parallel to bedding/foliation in the volcano-sedimentary rock units or as controlled mineralization in jasper developed within the basaltic flows. Associated with quartz, the former consists predominantly of fine-grained pyrite with subordinate amounts of sphalerite, galena and chalcopryrite. The latter, which is considered as a hydrothermal precipitate, is typically reddish in color, texturally amorphous, highly pyritic and sometimes associated with fine disseminations of magnetite and clear or glassy secondary silica. Five samples of this type were collected in Grumpy, Ace and LES 2 and contained the following grade ranges:

Au g/t	Ag g/t	As ppm	Sb ppm	Cu %	Pb %	Zn %
0.07 – 9.15	9.40 – 317.00	11 – 5,310	1 – 80	Trace – 0.05	Trace – 0.66	Trace – 0.76

Breccia mineralization is essentially fragmented volcanic rocks that were cemented by varying amounts of silica and calcite, and containing disseminated pyrite, pyrrhotite and chalcopryrite. This material was rarely observed in the area and is the least significant in terms of mineralization. The two (2) samples collected yielded the following assay ranges:

Au g/t	Ag g/t	As ppm	Sb ppm	Cu %	Pb %	Zn %
0.17 – 0.58	22.40 – 16.40	5 – 10	5 – 8	0.01 – 1.81	0.01 – 0.03	Trace – 0.01

Most of the samples were collected in the Grumpy and Ace areas where the bulk of the mineralization had been observed in the 2008 exploration work. Although representative rock samples had been significant in numbers, it could not be ascertained from the reports which of these samples are rock outcrops or floats.

In the 2011 field investigation, the observed mineralization was simply classified into two (2) types: the strongly silicified and limonitic zones, and the quartz-sulfide veins and/or massive sulfide pods/lens. On limited outcrops, the former is about 0.20m to 5 m wide while the latter is only 0.50 m wide, at most. Largely, the mineralized materials that were sampled during the 2011 field assessment are rock floats. The sample location map as well as the multi-element rock geochemistry maps are shown in Figures 6 to 16.

9.0 2011 Exploration

The Hartless Joe property was explored by UTM Exploration Services, Ltd. during the summer of 2011. The work mainly involved semi-detailed geologic mapping and rock sampling. The activities and the findings are discussed in the sections below.

10.0 Geologic Mapping and Sampling

Semi-detailed geologic mapping and rock sampling in the property was conducted during the period of June 11 to July 1, 2011 by UTM Exploration Service, Ltd. The work program covered the entire concession although more emphasis was given to the six (6) target areas that were delineated by previous workers, namely Grumpy, LES 2, LES 7, Ace, Joe Creek and HART 13. During the entire field exercise, an aggregate area of about 776 hectares of ground was covered through a total almost 57 line kilometers of geologic mapping traverses.

Figure 6 shows field sample locations and Table 2 summarizes the major elements found at each site.

The sample collection undertaken is summarized in the following table:

Type of Sample	Number of Samples Collected
Rock Outcrop	50
Rock Float	43
Standard	4
Blank	2

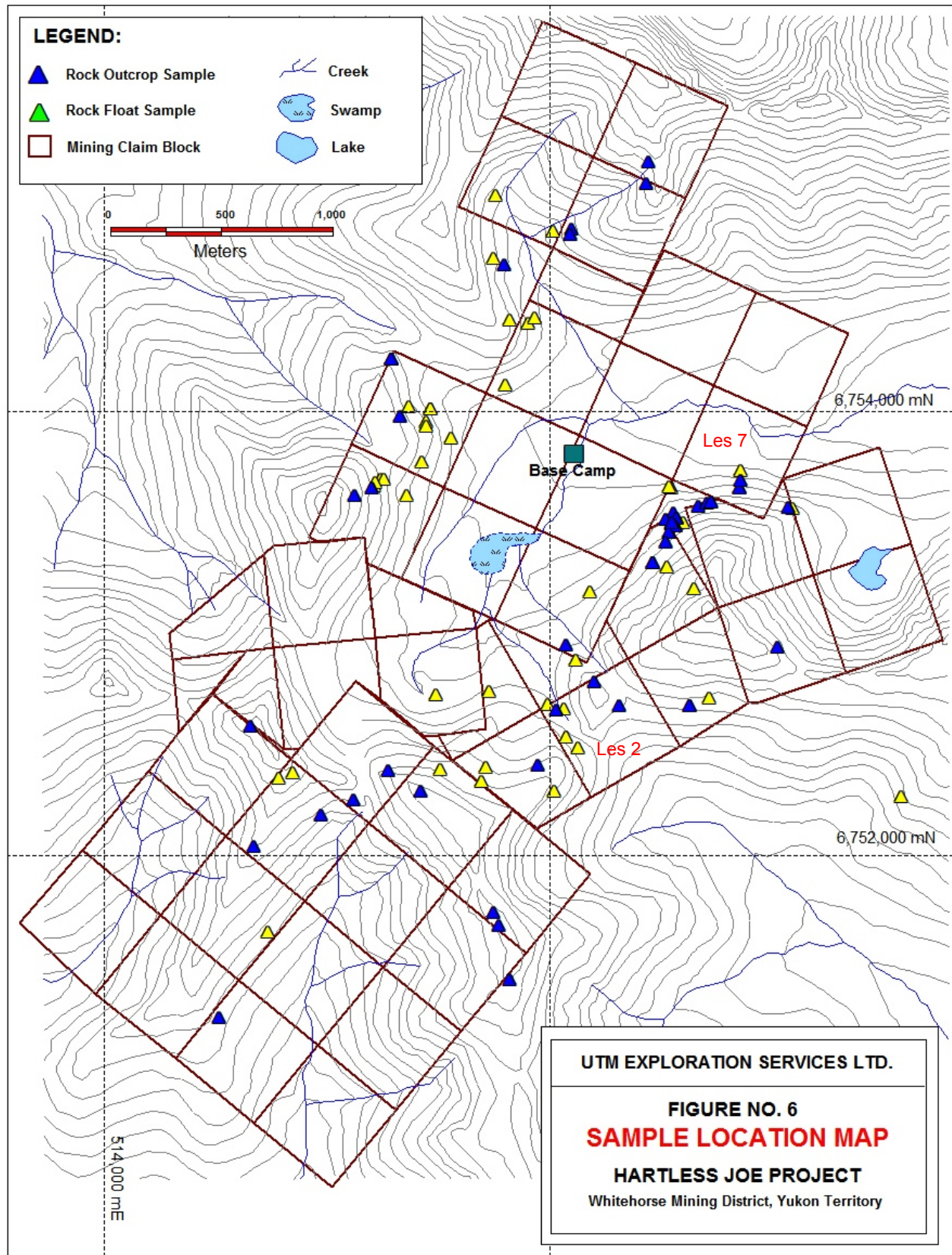


Figure 6. Sample Location Map.

Table 2. Sample Site Locations and Selected Assay Results.

TABLE 2: HARTLESS JOE PROPERTY LABORATORY ANALYTICAL RESULTS										
Sample Code	Rock Type	East	North	Au ppm	Cu ppm	Ag ppm	Pb ppm	Zn ppm	As ppm	Sb ppm
5213310	Float	516536	6753663	4.420	423.00	77.10	10300.00	547.00	363.00	24.90
5213311	Outcrop	516666	6753573	0.046	782.00	0.81	33.60	181.00	3.40	0.14
5213312	Float	515556	6753879	0.021	67.80	0.12	4.60	70.00	9.60	-0.05
5213313	Float	515426	6753773	0.012	11.30	0.10	5.40	58.30	2.60	-0.05
5213314	Float	515356	6753621	0.014	26.90	0.08	4.00	33.10	1.00	0.13
5213315	Float	516062	6752666	0.013	8.80	3.30	114.00	80.20	2.60	-0.05
5213316	Outcrop	516200	6752786	0.027	175.00	0.32	8.00	424.00	4.70	0.21
5213317	Float	516115	6752881	0.005	320.00	0.23	10.00	125.00	11.30	0.16
5213318	Outcrop	516074	6752949	0.033	123.00	0.12	1.60	97.20	2.60	0.18
5213319	Float	516178	6753189	0.011	748.00	0.37	2.60	126.00	3.30	-0.05
5213320	Float	515710	6752399	0.005	186.00	0.42	1.60	32.60	2.50	0.23
5213321	Float	515692	6752340	0.165	42.40	0.09	1.90	55.80	12.10	8.79
5213322	Outcrop	515271	6752386	0.013	32.60	0.08	1.40	60.90	0.40	0.24
5213323	Float	516857	6753733	0.005	6010.00	0.82	0.50	141.00	1.60	0.10
5213324	Outcrop	515286	6754237	0.079	39.40	0.24	3.60	11.20	25.30	0.25
5213325	Outcrop	515286	6754237	0.037	39.10	0.24	2.90	15.50	18.70	0.33
5213326	Outcrop	515286	6754237	0.010	141.00	0.14	1.40	81.00	7.30	0.06
5213328	Float	515255	6753695	0.041	6.80	0.22	5.40	15.80	11.70	0.26
5213329	Float	515210	6753666	0.008	3.80	0.08	11.50	27.10	5.40	0.13
5213330	Outcrop	515198	6753657	0.003	28.20	0.06	0.60	69.60	0.30	0.09
5213331	Outcrop	515123	6753621	<0.001	2.70	0.04	3.60	40.70	1.40	0.27
5213332	Float	515901	6754395	0.005	134.00	0.15	1.10	86	0.90	0.06
5213333	Float	515820	6754410	0.005	55.60	0.12	0.90	47	2.10	-0.05
5213334	Float	515747	6754689	0.006	161.00	0.12	0.90	54	4.90	0.05
5213335	Float	515756	6754972	0.006	46.30	0.11	2.00	24	2.40	0.12
5213336	Outcrop	516095	6754822	0.002	11.80	0.05	10.60	34	1.50	-0.05
5213337	Outcrop	514671	6752046	0.001	8.40	0.05	10.80	43	1.40	0.07
5213338	Outcrop	514656	6752585	0.003	1.80	0.10	9.00	31	0.70	0.07
5213339	Float	514781	6752354	0.003	12.20	0.08	2.30	35	13.00	0.25
5213340	Float	514845	6752378	0.001	-0.10	0.03	0.60	14	0.50	0.17
5213341	Float	517577	6752271	0.003	71.40	0.04	0.90	52	6.20	0.27
5213343	Outcrop	516555	6753546	0.002	7.30	0.07	0.40	86	1.20	0.07
5213344	Outcrop	516567	6753520	0.003	120.00	0.11	0.40	94	1.30	-0.05
5213345	Outcrop	516567	6753520	0.003	74.80	0.10	2.00	83	1.50	-0.05
5213346	Float	516597	6753502	0.004	1170.00	0.63	1.90	91	5.90	0.28
5213347	Outcrop	516543	6753496	0.002	68.20	0.08	0.60	75	2.40	-0.05
5213349	Outcrop	516565	6753487	0.002	438.00	0.14	0.30	101	1.00	0.09
5213350	Outcrop	516536	6753456	0.014	369.00	0.38	5.00	93	25.60	0.33
5213351	Outcrop	516520	6753413	0.004	103.00	0.09	2.00	110	3.20	-0.05
5213352	Float	516646	6753203	8.610	181.00	97.40	5370.00	98	69.70	50.20
5213353	Float	516523	6753302	0.011	89.10	0.18	8.10	50	3.30	0.08
5213354	Outcrop	516459	6753320	0.034	6270.00	2.13	16.50	89	2.60	0.14
5213355	Outcrop	516459	6753320	0.003	144.00	0.33	3.70	141	6.80	-0.05
5213356	Outcrop	516459	6753320	0.043	720.00	4.87	15.60	221	49.30	0.20
5213357	Outcrop	516430	6755024	0.003	94.50	0.10	1.60	67	1.10	-0.05
5213358	Outcrop	516443	6755123	0.002	2.40	0.05	0.80	40	0.40	-0.05
5213161	Float	516545	6753657	3.040	275.00	15.50	1740.00	2270.00	156.00	6.21
5213162	Outcrop	516705	6753590	0.036	1450.00	0.72	19.10	112.00	2.70	0.12
5213163	Outcrop	516722	6753594	0.007	28.40	0.11	8.80	36.20	0.50	0.07
5213164	Float	515798	6754121	0.009	41.60	0.18	5.10	103.00	10.30	0.43
5213165	Float	515462	6754011	0.008	33.90	0.14	18.40	85.20	14.10	0.48
5213166	Float	515462	6754011	0.003	31.20	0.16	2.60	70.50	16.90	0.88
5213167	Float	515443	6753956	0.093	18.00	2.70	10.10	11.50	51.40	17.80
5213168	Float	515443	6753935	0.005	4.20	0.09	1.10	53.10	1.80	0.12
5213169	Float	515238	6753695	0.017	3.20	0.03	1.00	13.30	5.20	0.10
5213170	Float	515990	6752682	<0.001	58.70	0.10	0.50	86.10	0.10	0.05

Sample Code	Rock Type	East	North	Au ppm	Cu ppm	Ag ppm	Pb ppm	Zn ppm	As ppm	Sb ppm
5213171	Outcrop	516026	6752660	0.010	10.00	0.34	482.00	147.00	6.40	0.14
5213172	Float	516070	6752537	0.003	69.80	0.22	7.80	83.20	23.70	0.40
5213173	Float	516124	6752491	1.080	80.80	100.00	29500.00	17.00	34.90	0.32
5213174	Float	516019	6752296	0.016	22.40	2.62	169.00	64.00	1.60	0.12
5213175	Outcrop	515946	6752413	0.006	30.20	0.51	52.10	116.00	6.10	0.85
5213176	Float	515727	6752742	0.003	54.40	0.20	9.30	76.00	1.20	0.09
5213177	Float	515489	6752729	0.005	217.00	0.39	8.20	40.40	9.90	1.48
5213178	Float	515508	6752390	0.002	50.30	0.14	2.70	141.00	5.80	0.22
5213179	Outcrop	515418	6752293	0.002	66.00	0.13	3.00	125.00	0.40	0.11
5213180	Outcrop	516851	6753658	0.006	81.60	0.10	1.60	58.80	0.60	0.08
5213181	Subcrop	516851	6753658	0.001	92.70	0.08	2.10	65.90	0.70	-0.05
5213182	Outcrop	517069	6753569	0.004	74.40	0.25	4.60	97.70	1.20	0.07
5213183	Float	517089	6753564	15.600	368.00	23.80	10400.00	5830.00	271.00	7.10
5213184	Outcrop	516853	6753693	0.148	602.00	0.38	157.00	268.00	3.40	0.23
5213185	Float	515364	6754022	0.126	35.10	0.46	32.80	36.40	41.50	0.38
5213186	Outcrop	515325	6753976	0.024	5.20	2.08	204.00	55.00	3.20	0.06
5213188	Float	515215	6753679	0.050	14.70	0.24	11.00	20.40	30.40	0.81
5213189	Float	515931	6754419	0.004	64.10	0.06	0.70	63	0.90	-0.05
5213190	Outcrop	515793	6754660	0.004	55.50	0.10	1.60	82	1.90	0.10
5213191	Float	516013	6754810	0.031	243.00	0.13	1.50	52	2.80	0.19
5213192	Outcrop	516093	6754795	0.002	189.00	0.12	1.60	34	1.70	0.18
5213193	Outcrop	514512	6751277	0.002	6.90	0.07	13.40	45	1.10	0.06
5213194	Float	514735	6751659	0.004	-0.10	0.01	0.50	17	-0.10	0.10
5213195	Outcrop	514971	6752186	0.003	100.00	0.25	3.90	57	7.40	0.14
5213196	Outcrop	515119	6752256	0.001	5.90	0.06	7.90	9	1.90	0.06
5213197	Outcrop	516310	6752680	0.006	1.90	0.04	5.20	18	1.30	-0.05
5213198	Outcrop	516628	6752679	0.002	11.80	0.11	0.30	24	4.10	0.09
5213199	Outcrop	516628	6752679	0.001	62.20	0.08	0.40	47	1.00	-0.05
5213200	Float	516713	6752715	0.004	17.00	0.02	0.80	20	7.00	20.70
5213202	Outcrop	516521	6753514	0.009	27.70	0.06	0.60	113	1.30	0.14
5213203	Outcrop	516565	6753487	0.004	3160.00	0.83	1.20	155	5.10	0.12
5213204	Outcrop	516549	6753503	0.013	6380.00	1.27	2.40	121	5.90	0.06
5213205	Outcrop	516549	6753503	0.002	106.00	0.04	0.80	101	4.80	0.10
5213206	Outcrop	517023	6752940	0.003	75.30	0.05	0.40	55	1.80	0.14
5213208	Outcrop	515818	6751446	0.004	3.40	0.03	14.00	25	1.90	0.39
5213209	Outcrop	515772	6751690	0.002	135.00	0.08	0.40	42	4.40	0.12
5213210	Outcrop	515745	6751748	0.003	19.00	0.06	0.70	31	2.40	0.22

The general geologic findings during this recently concluded field assessment are discussed in Section 6.2 of this report. In terms of local geology, the current findings are largely more detailed than the work done prior to 2011. The findings on the nature of the area's mineralization are as follows:

The silica-pyrite/limonite zones are the most common mineralized outcrops in the area. At a distance, these are the more easily recognizable sections due to the conspicuous limonite stains and coatings that commonly spread out into wider zones from the narrow sources due to the action of run-off water. At most, only 10% fresh pyrite as disseminations and fracture fills had been noted in these structures. Chalcopyrite occurs rarely as fine specks associated with the pyrite. On some narrower exposures ($\leq 10\text{cm}$), these zones occur as strongly oxidized and sheared or brecciated faults containing minor fragments of quartz and/or silicified andesite.

On outcrops, the quartz-sulfide veins have widths of less than 1m and are normally in sharp contact with a narrow zone of variably silicified andesite wallrocks. Farther away from the contact, the walls are distinctively mainly altered to chlorite with minor calcite and epidote as fracture fills. Quartz is white to crystalline and normally massive with fractures and tiny vugs filled with limonite. Some gray-colored sections appear like pervasively silicified andesite and are lined with crosscutting fine quartz veinlets. Fresh pyrite content is only up to 5% at most although limonite coatings are strong to pervasive. The zones do not extend to more than 10 meters along strike as observed on the ground and pinch and swell features are normally observed. Clearly, some exposures appear more like pods and lenses. The best rock float sample of this type that was found in the LES 7 area was a boulder (less than 1 meter diameter) containing specks of chalcopyrite, bornite, azurite and malachite. One float sample at LES 2 contained specks of galena and is also associated with pyrite and minor chalcopyrite.

One boulder rock float sample (30 cm diameter) at the LES 7 area contains up to 60% pyrite with the rest of the rock mainly composed of quartz. The distinctly brass yellow colored and lumpy pyrite is in large parts enveloped in a brownish orange goossannous layer. No outcrop of this type of massive sulfide of mineralization had been encountered in the field.

The laboratory analytical results of the rock samples collected in the 2011 field assessment can be found in Appendix I.

11.0 Sampling Methods and Approach

Rock Samples were usually taken if a specimen was strongly enriched in silica or if it contained minerals such as galena, chalcopyrite, pyrite or arsenopyrite, which are commonly associated with gold and silver, or any of the weathering products of those minerals. Rock samples are usually not representative of the average grade of a mineral occurrence but serve to establish the presence or absence of mineralization

with grades of economic interest. Rock samples were described in detail before being placed in plastic bags together with individually pre-numbered assay tags. The sample sites were determined using topographic maps and GPS readings.

12.0 Sample Preparation, Analysis and Security

All samples were shipped directly to AGAT labs in Whitehorse for preparation, and then the prepared samples were sent on to the main lab in Calgary for analysis. Samples were tested for a multi-element ICP (the aqua-regia preparation noted below) and then tested via fire assay for accurate gold content.

Aqua Regia: Aqua Regia digestions are used in the digestion of certain geological samples and are effective for most base metal sulphates, sulphides, oxides, and carbonates. It is noted that aqua regia only provides a partial digestion for most rock forming elements and elements of a refractory nature. Each sample of ~1.0g is digested with a 3:1 hot mixture of hydrochloric and nitric acids for one hour. The resultant product is dissolved and diluted to 50mL with deionized water. An aliquot is measured by a suitable spectrometry instrument (ICPMS in 201074).

Fire Assay: A pulverized sample is weighed and mixed with a fluxing agent. The flux assists in melting, helps fuse the sample at a reasonable temperature and promotes separation of the gangue (waste) material from the precious metals. For fire assaying, fluxes are materials such as borax, soda ash, and silica which are added to the ore. Usually lead, in the form of Litharge (PbO) with Ag is also added as a collector. The lead flux is added to the sample, placed in a fire clay crucible and put into a fusion furnace at 1080 degrees Celsius for about an hour. When heated in the furnace the product is molten and the PbO compound is reduced by other constituents of the flux or sample to metallic lead; such process usually requires 45 to 60 minutes including oven deadtime. Every assay fusion should show two products, a lead button and, above it, a glassy slag. The lead button should be bright, soft and malleable and should separate easily from the slag. Cupels with the lead buttons are placed in a Cupellation furnace and heated at 950 degrees Celsius. At this temperature, the lead melts and is simultaneously oxidized: $2\text{Pb} + \text{O}_2 \rightarrow 2\text{PbO}$. Part of the lead is volatilised and part is drawn into the cupel by capillary attraction, along with any remaining base metal impurities, leaving only a silver Dore bead that represents the entire precious metal content of the original sample. This bead can then be analysed by a variety of methods.

13.0 Data Verification

Standards and blanks were entered into the sample stream to validate the lab's own QA/QC procedures.

14.0 Interpretation and Conclusion

The Hartless Joe property remains prospective to host significant deposits of Au-Ag and the associated base metals. Although mineralization as observed in all the exploration work that had been completed so far appear very limited in scope, mineralization extension at depths could still be possible. Based on the recently concluded geologic survey however, the more promising targets are now trimmed down to just two namely, LES 7 and LES 2. Between these two, LES 7 looms as the higher priority target.

The soil sampling survey which was undertaken in 2007 could not be fully relied on as regards the mineralization target delineation due to the inconsistencies of the sample media. As noted in the sample stations during the 2011 field work, samples were collected even in areas of clear talus cover, drainage areas, glacial till areas and along swamps. In some stations, the thin soil covers are also very evident. In all likelihood, the samples which were collected could range from soil, silt, gravel or to even soil with highly organic materials. Likewise, the highly disturbed nature of the soil/silt in some areas sampled like those in the till and drainage areas are important concerns as regards the metal source or the mechanics of the primary migration of metals in solution. In effect, the geochemical anomaly generation using the soil survey results looks doubtful and unreliable with respect to the delineation of targets.

It is also uncertain why the 2008 drilling targets were based too much if not solely on the VTEM/Magnetics survey results. The 2011 geologic mapping findings indicate that the highly magnetic zones which were drilled are the areas underlain by the felsic dikes and the relatively larger diorite body SW of the claims area. These are the same areas where magnetite disseminations in both country rocks and the intrusives are relatively higher. However, the intrusives as well as the immediate wallrocks are devoid of any significant mineralization. In terms of more significant floats and outcrops, the drilled areas also remain inferior compared to the samples which were collected in the LES 7 and LES 2 areas. Thus, drill target definition should have also considered in greater detail the geology and observed mineralization other than just the magnetic anomalies. This could explain why the 3 holes drilled in 2008 all came out with discouraging results.

The results of the 2011 geologic mapping and sampling survey evidently show that LES 7 has the best mineralization potential in Hartless Joe. More consistently, this area is where mineralized and rock floats had been observed and traced out. Although the exposures show very limited extents and appear to be more like lenticular masses rather than veins with longer lateral as well as vertical continuities, other distinct and separate mineralized zones could still be discovered at depths. The Au-Ag and the associated base metal mineralization which is very evident in most of the rock samples collected and analyzed evidently indicate a strong affinity to stratigraphic-controlled massive sulfide deposits. More detailed surface mapping and sampling, ground electro-magnetics survey and eventually, sub-surface investigation through drilling would be necessary to further examine the nature of the deposit and advance the understanding of the property's mineralization potential.

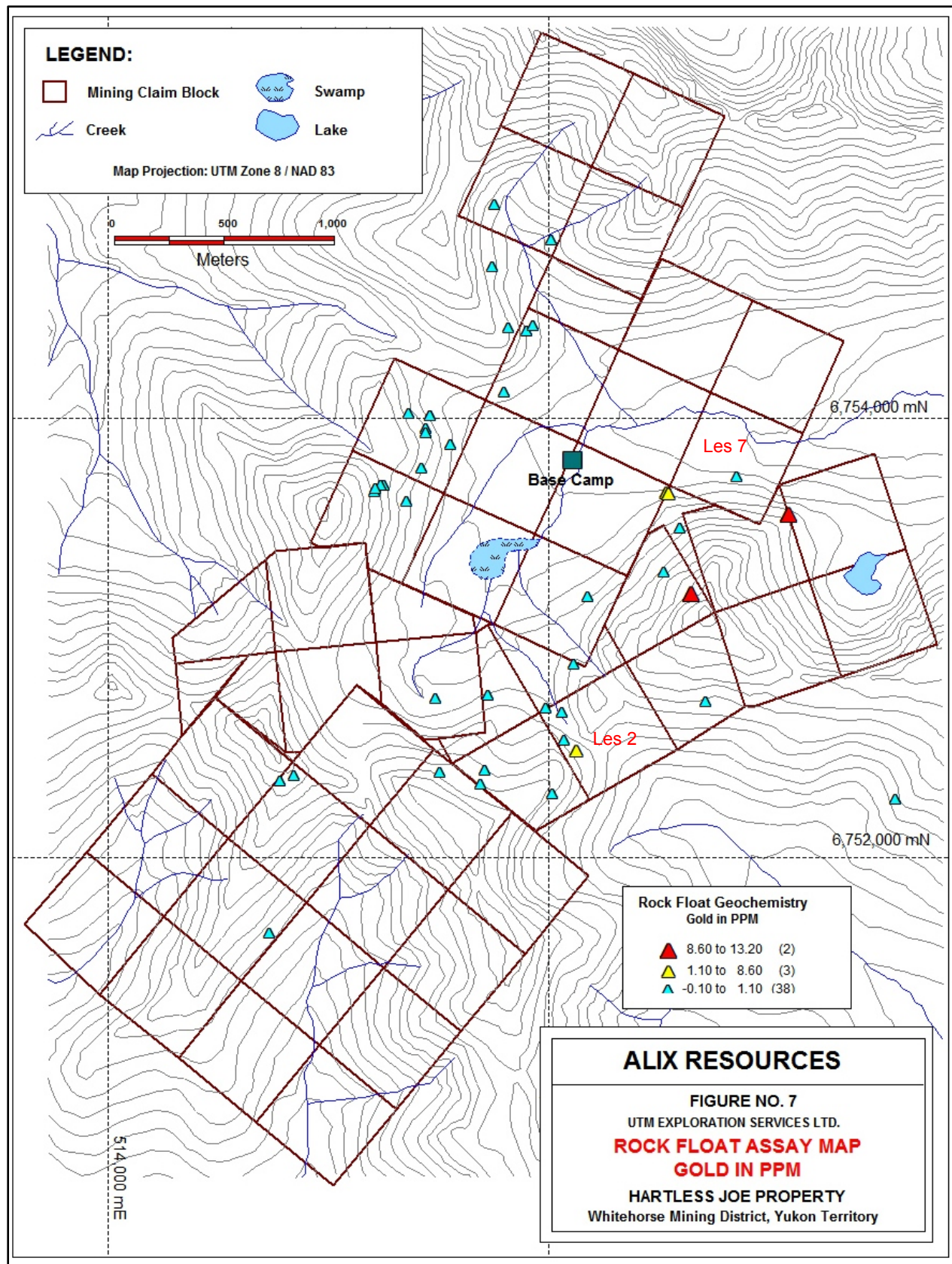


Figure 7. Rock Float Assay Map: Gold in PPM.

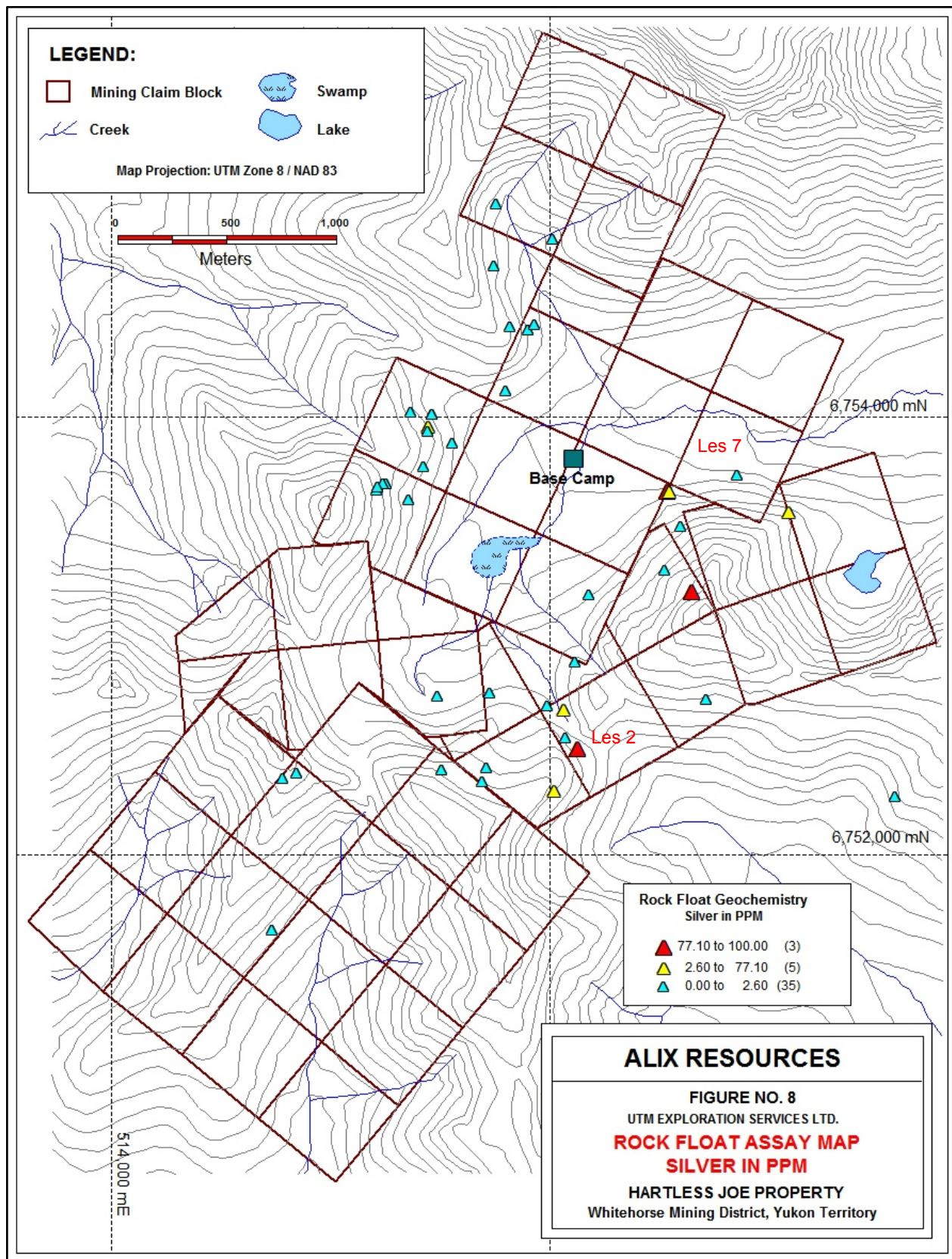


Figure 8. Rock Float Assay Map: Silver in PPM.

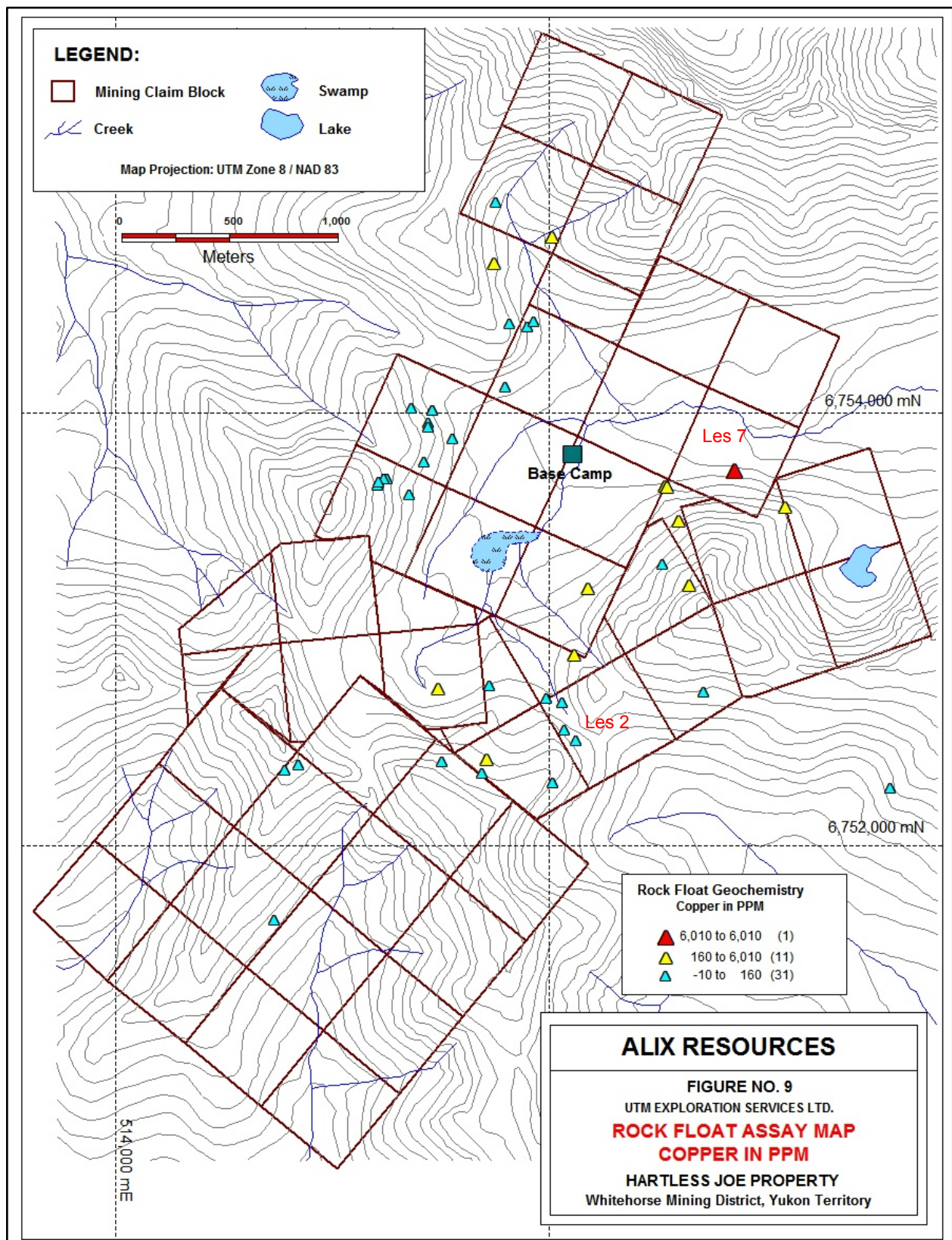


Figure 9. Rock Float Assay Map: Copper in PPM.

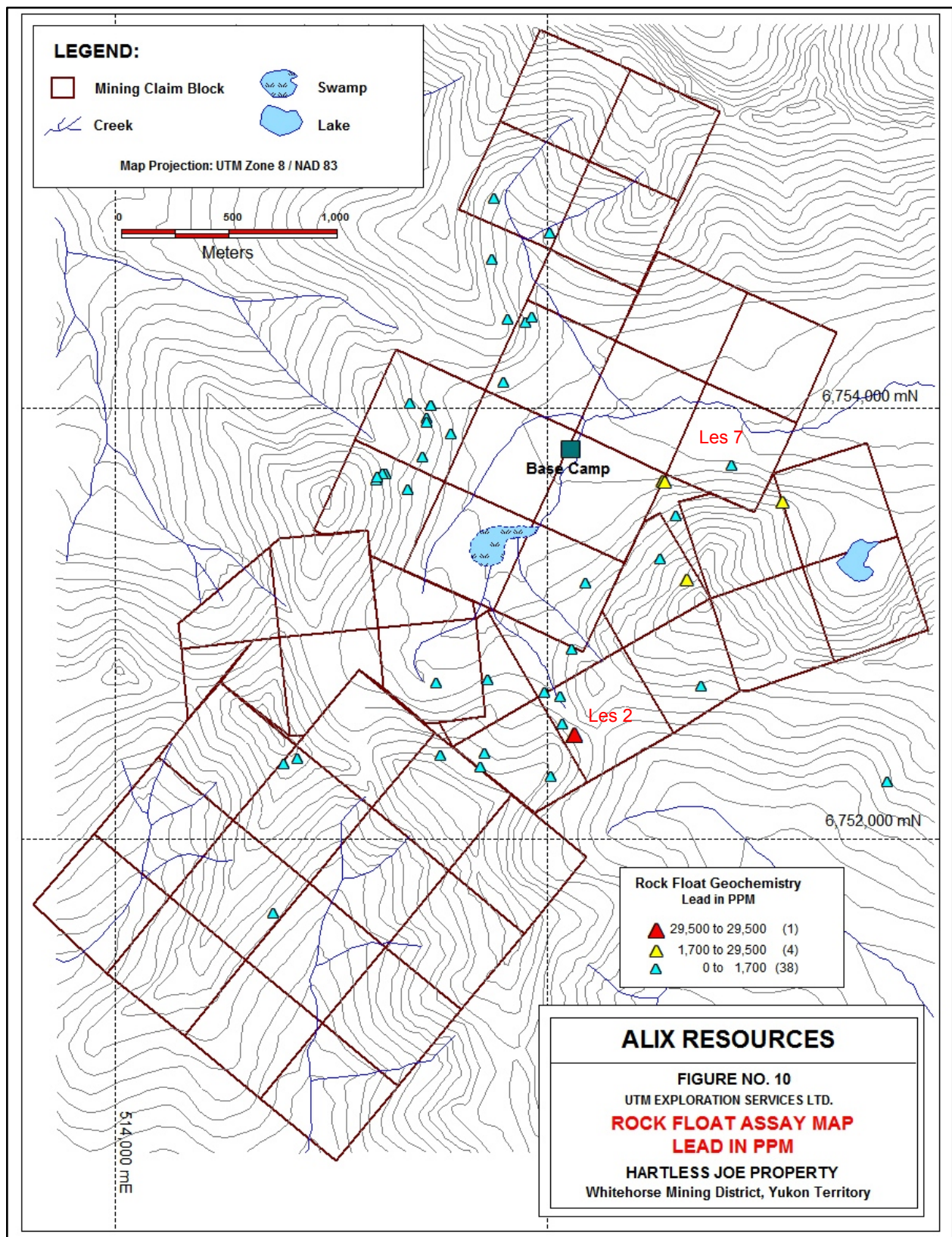


Figure 10. Rock Float Assay Map: Lead in PPM

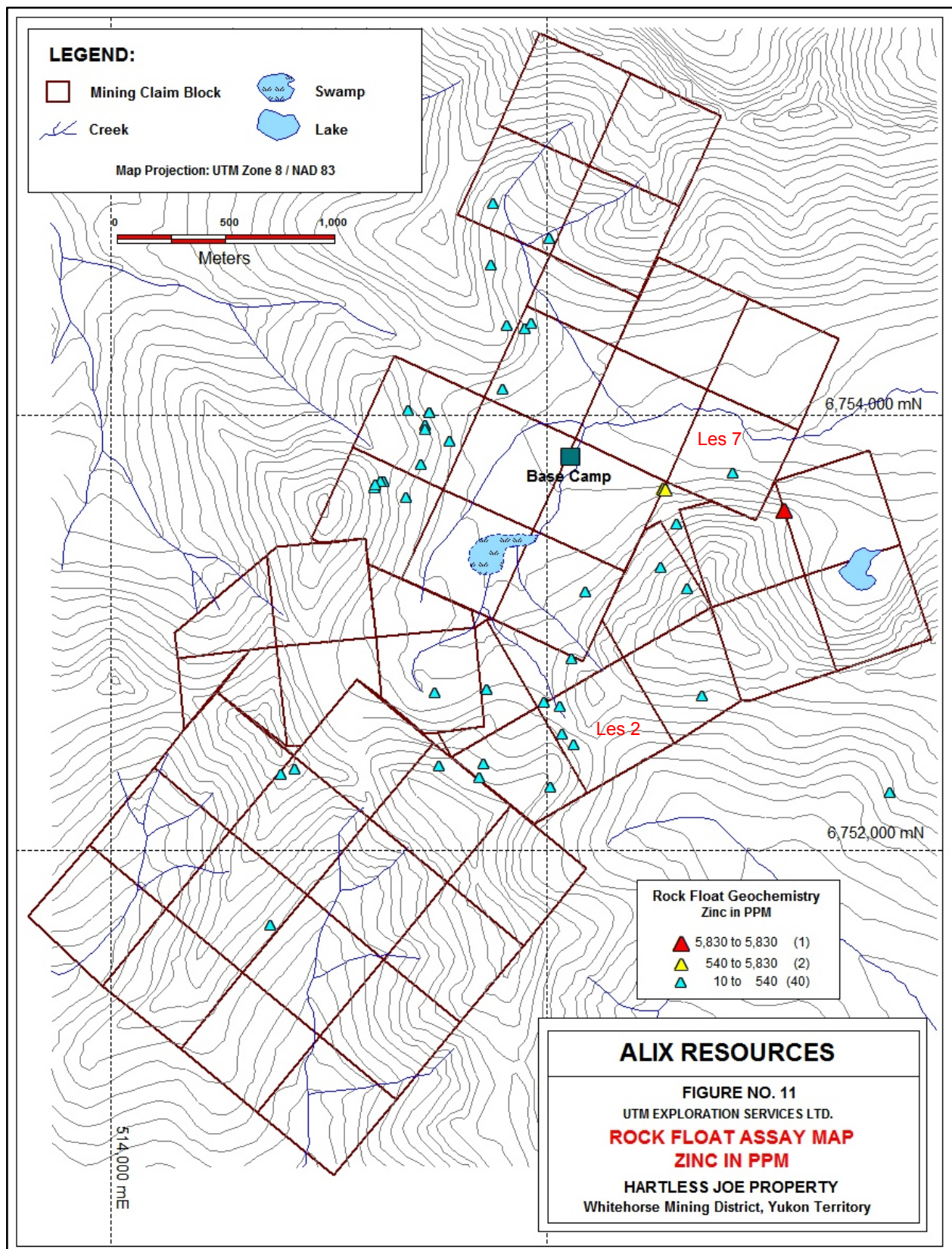


Figure 11. Rock Float Assay Map: Zinc in PPM

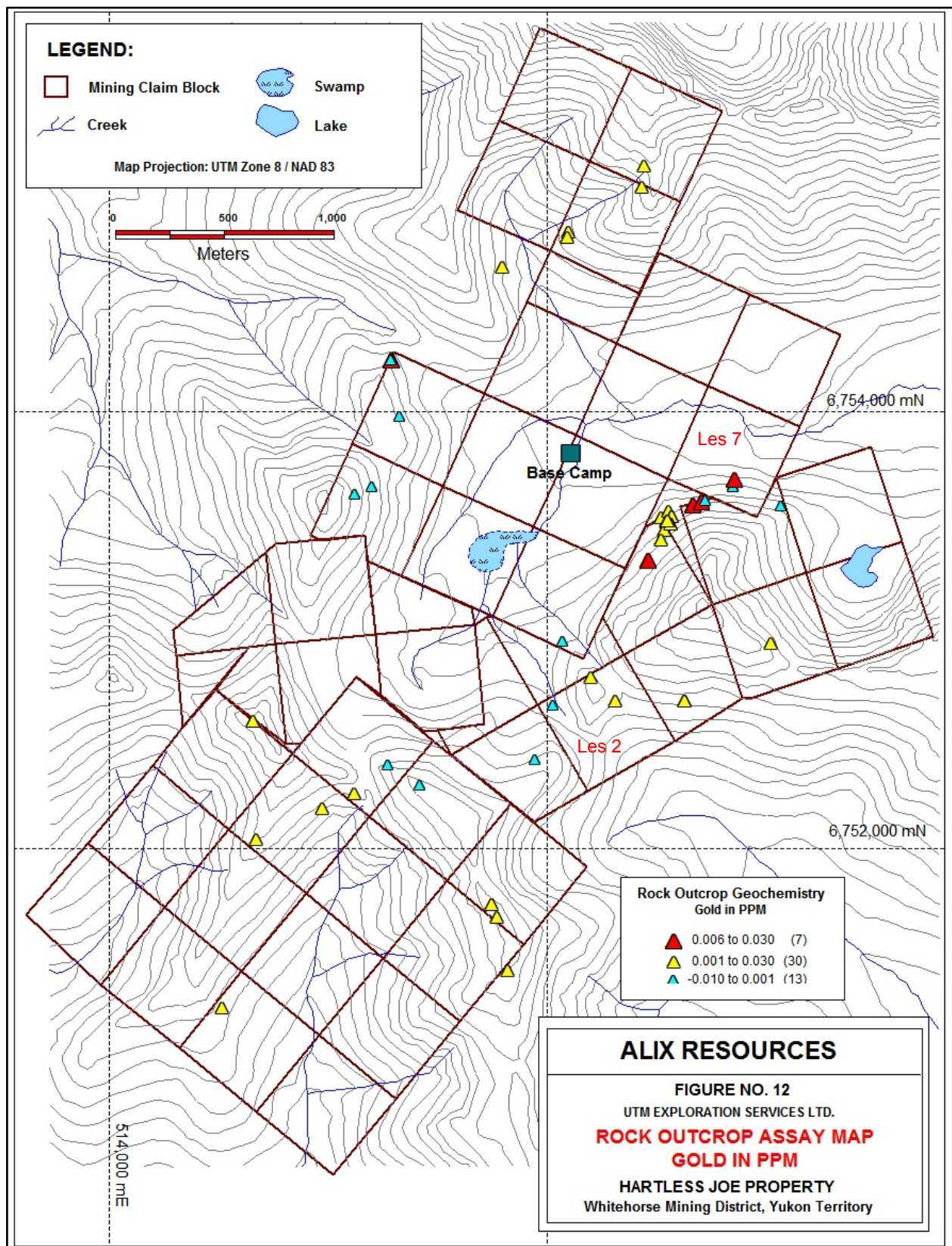


Figure 12 Rock Outcrop Assay Map: Gold in PPM

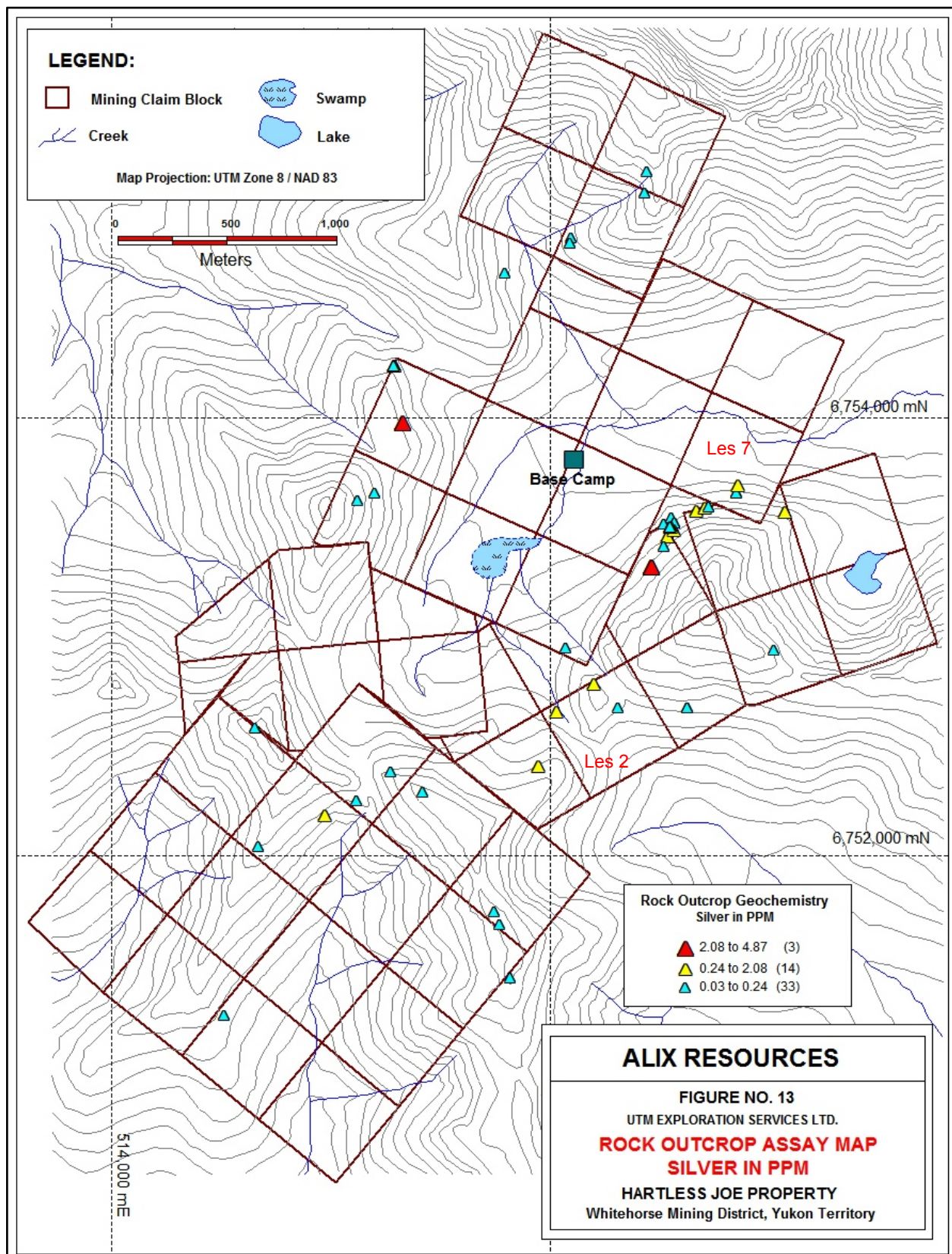


Figure 13. Rock Outcrop Assay Map: Silver in PPM

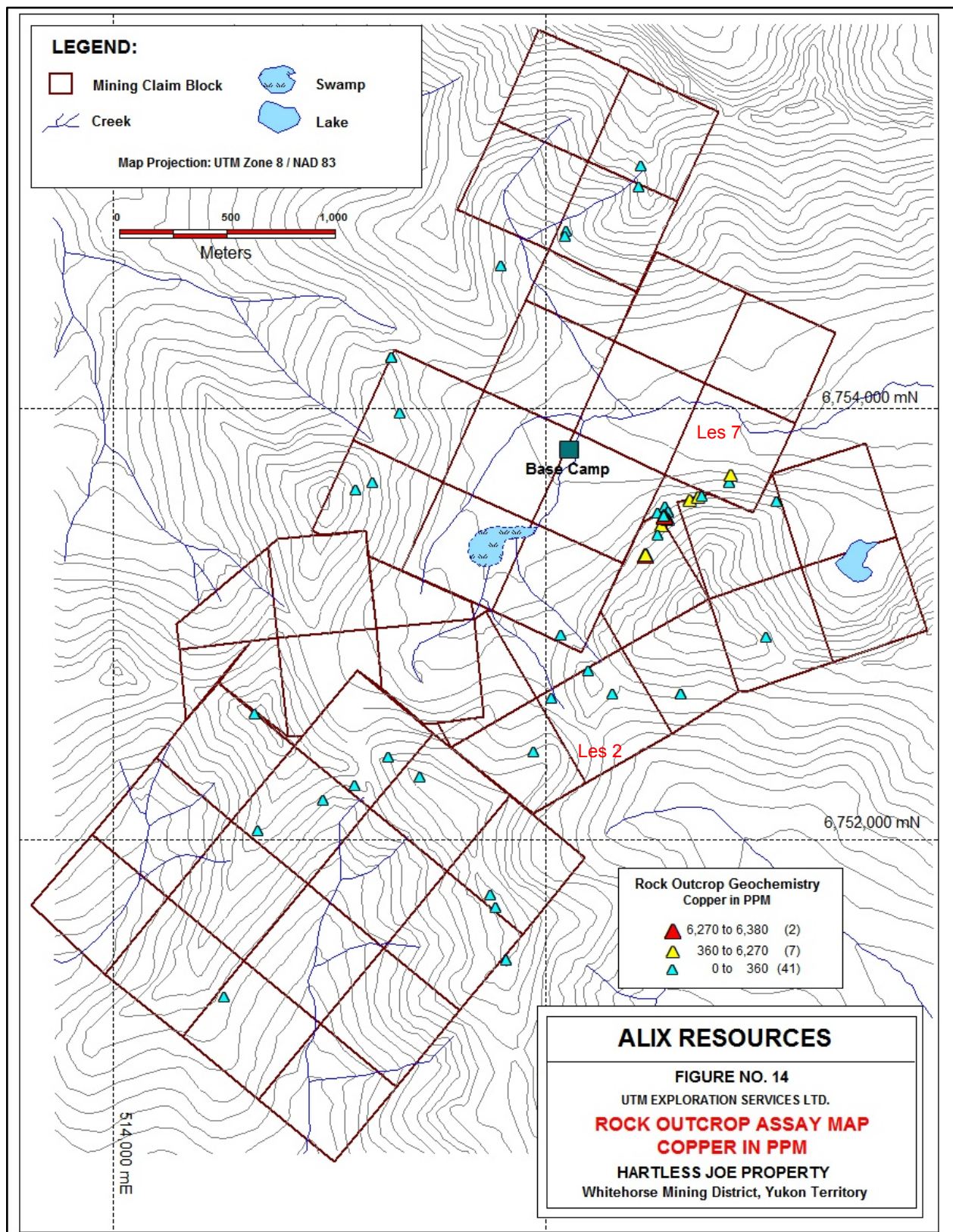


Figure 14. Rock Outcrop Assay Map: Copper in PPM

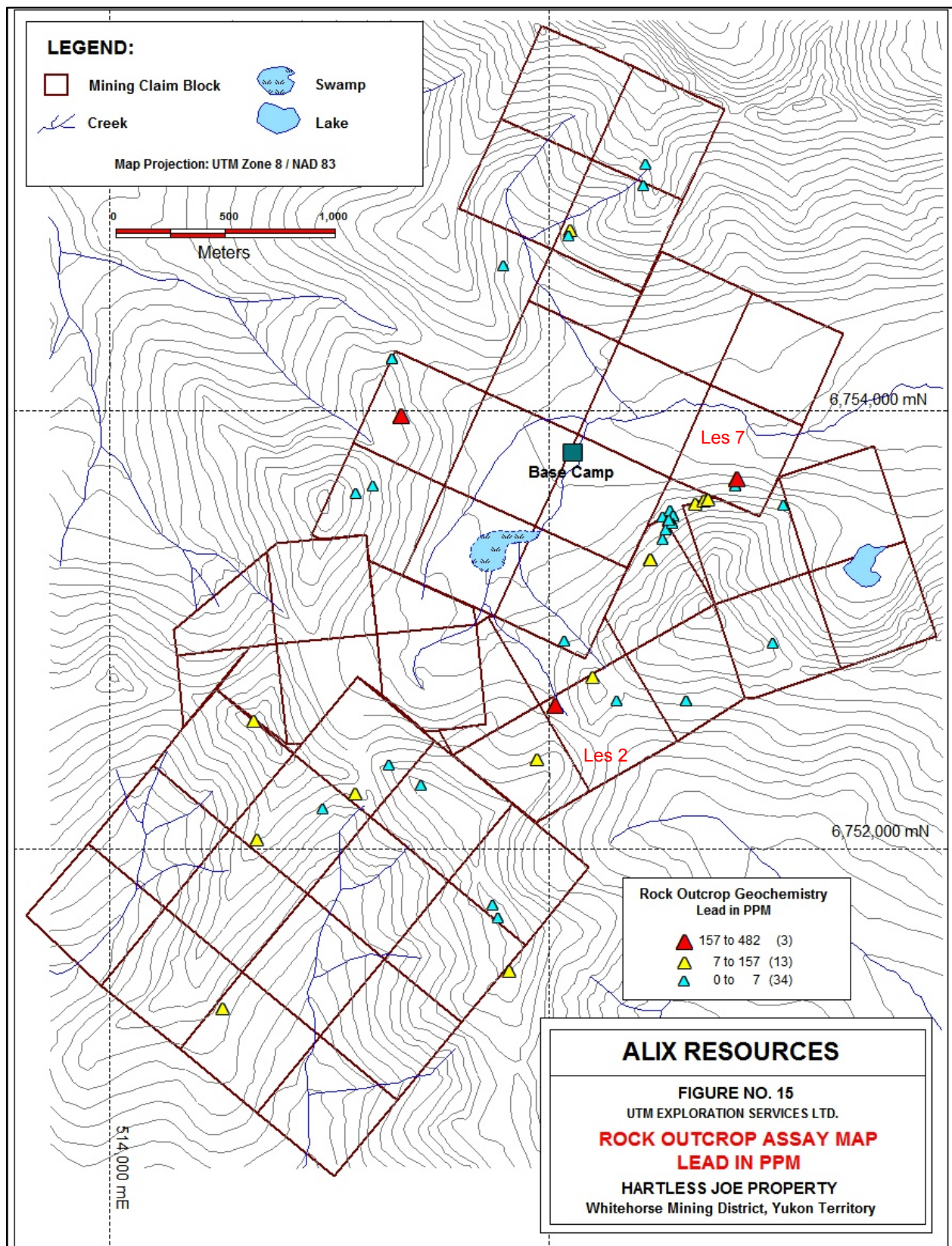


Figure 15. Rock Outcrop Assay Map: Lead in PPM

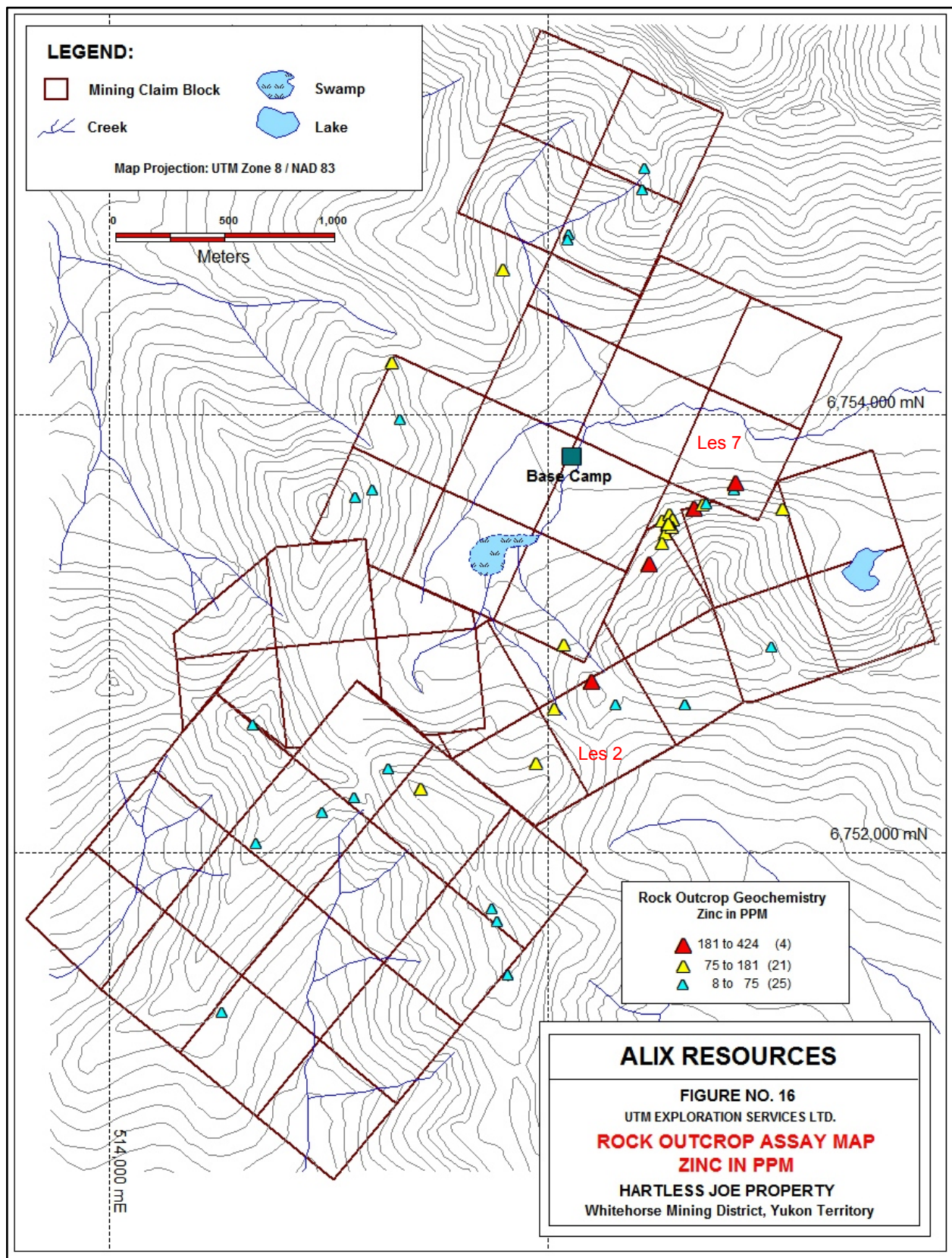


Figure 16. Rock Outcrop Assay Map: Zinc in PPM

15.0 Recommendation

Following the completion of the surface mapping and sampling in 2011, it is recommended that follow-up more detailed mapping and additional sampling activities be carried out on the property during the next field season. The focus of the undertaking would greatly be on the LES 7 area, and to a lesser degree extend the investigation towards the LES 2 area. Simultaneously, the area should also be covered by ground IP and EM surveys in order to define possible sub-surface geophysical signatures that could supplement the geological and mineralogical findings. Possible targets could be defined during this first stage of the exploration program and eventually, core drilling should be pursued.

An initial drilling program with an aggregate length of 1,000 meters or three (3) holes with target depths of at least 300 m. each is proposed. If the results of this initial phase come out encouraging, a follow-up drilling program involving an additional 1,000 meters of aggregate drilling length is also recommended.

16.0 Statement of Costs

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position	Field Days (list actual days)	Days	Rate	Subtotal*	
A. Ledwon - Geo	May/June	0.35	\$550.00	\$192.50	
K. Mackenzie - Geo	June	0.65	\$550.00	\$357.50	
K. Mackenzie - Geo	June	12	\$550.00	\$6,600.00	
S. Mah - Geo	June	3	\$550.00	\$1,650.00	
S. Mah - Geo	June 7-18	12	\$425.00	\$5,100.00	
S. Mah - Geo	June 19-July2	14	\$425.00	\$5,950.00	
S. Mah - Geo	July 3-4	2	\$425.00	\$850.00	
R. Victorino - PM	June	4	\$700.00	\$2,800.00	
R. Victorino - PM	June 7-18	12	\$700.00	\$8,400.00	
R. Victorino - PM	June 19-July2	14	\$700.00	\$9,800.00	
R. Victorino - PM	July 3-4	2	\$700.00	\$1,400.00	
C. Martens - Labourer	May/June	1	\$350.00	\$350.00	
C. Martens - Labourer	June 6-10	3	\$350.00	\$1,050.00	
N. Heeley - Labourer	May/June	1	\$350.00	\$350.00	
N. Heeley - Labourer	June 6-10	3	\$350.00	\$1,050.00	
T. Smith	June 7-18	12	\$350.00	\$4,200.00	
T. Smith	June 19-July2	14	\$350.00	\$4,900.00	
T. Smith	July 3-10	8	\$350.00	\$2,800.00	
T. Innes	June 7-18	12	\$422.00	\$5,064.00	
T. Innes	June 19-July2	14	\$422.00	\$5,908.00	
T. Innes	July 3-8	8	\$422.00	\$3,376.00	
P. Granlin - Forman/ Construction	July 8-10	3	\$550.00	\$1,650.00	
Wade - P. Granlin's Assistant	July 8-10	3	\$350.00	\$1,050.00	
J. Hardy - Labourer	July 8-10	3	\$350.00	\$1,050.00	
S. Hardy - Logistics	May/June	10	\$55.00	\$550.00	
D. Holland - Forman/Construction	May/June	40	\$55.00	\$2,200.00	
			\$0.00	\$0.00	
				\$78,648.00	\$78,648.00
Office Studies	List Personnel (note - Office only, do not include field days)				
Literature search			\$0.00	\$0.00	
Database compilation			\$0.00	\$0.00	
Computer modelling			\$0.00	\$0.00	
Reprocessing of data			\$0.00	\$0.00	
General research			\$0.00	\$0.00	
Report preparation			\$0.00	\$0.00	
GIS	Tara Holmes May/June	5.0	\$60.00	\$300.00	
Other (specify)	Permit Application			\$250.00	
Other (specify)					
				\$550.00	\$550.00
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Drill (cuttings, core, etc.)			\$0.00	\$0.00	
Stream sediment			\$0.00	\$0.00	
Soil	<i>note: This is for assays or</i>		\$0.00	\$1,717.30	
Soil				\$922.15	
Rock	<i>laboratory costs</i>		\$0.00	\$0.00	
Water			\$0.00	\$0.00	
Biogeochemistry			\$0.00	\$0.00	
Whole rock			\$0.00	\$0.00	
Petrology			\$0.00	\$0.00	
Other (specify)	standards		\$0.00	\$189.15	
				\$2,828.60	\$2,828.60
Reclamation	Clarify	No.	Rate	Subtotal	
After drilling			\$0.00	\$0.00	
Monitoring			\$0.00	\$0.00	
Other (specify)			\$0.00	\$0.00	

Transportation		No.	Rate	Subtotal	
Airfare	June 7-18			\$13,252.81	
Airfare	july			\$25,787.50	
Taxi			\$0.00	\$0.00	
truck rental	June	12.00	\$90.00	\$1,080.00	
truck rental	June	14.00	\$90.00	\$1,260.00	
truck rental	june	14.00	\$90.00	\$1,260.00	
truck rental	Construction Crew - June	3.00	\$90.00	\$270.00	
kilometers	June 7-18	1358.00	\$0.75	\$1,018.50	
kilometers	Construction Crew - June 7-18	1048.50	\$0.75	\$786.38	
ATV			\$0.00	\$0.00	
fuel			\$0.00	\$1,155.00	
fuel				\$514.48	
Helicopter (hours)			\$0.00	\$0.00	
Fuel (litres/hour)			\$0.00	\$0.00	
Other	Shipping			\$3,744.00	
Other	Travel Expence			\$222.65	
				\$50,351.32	\$50,351.32
Accommodation & Food	Rates per day				
Hotel	June 7-18			\$1,806.83	
Accommodation & Food	July			\$2,512.94	
Camp	June 7-18 5ppl		\$60.00	\$6,900.00	
Camp	June 4 ppl	56.00	\$115.00	\$6,440.00	
Camp		16.00	\$115.00	\$1,840.00	
Meals	June		\$0.00	\$451.39	
Meals	July			\$1,562.93	
				\$21,514.09	\$21,514.09
Miscellaneous					
Telephone	Sat Phone - June 7-18	0.40	\$360.00	\$144.00	
Telephone	Sat Phone - June 7-18	0.50	\$360.00	\$180.00	
Telephone	Sat Phone - June 7-18	0.50	\$360.00	\$180.00	
Management Fee	June 7-18			\$5,592.23	
Management Fee	June 19-July 2			\$1,366.56	
Management Fee	july 3-10			\$4,853.57	
Other (Specify)	Computer June 7-18	12.00	\$25.00	\$300.00	
Other (Specify)	Computer June 7-18	14.00	\$25.00	\$350.00	
Other (Specify)	Computer June 7-18	2.00	\$25.00	\$50.00	
Other (Specify)					
Other (Specify)	Hand held Radios June 7-18	2.00	\$56.00	\$112.00	
Other (Specify)	Hand held Radios June 7-18			\$130.37	
Other (Specify)	Hand held Radios June 7-18			\$48.50	
Other	Truck radio June 7-18	0.40	\$100.00	\$40.00	
Other	Truck radio June 7-18	0.50	\$100.00	\$50.00	
Other	Truck radio June 7-18	0.50	\$100.00	\$50.00	
Other (Specify)	Camp Construction Supplies			\$1,843.03	
Other (Specify)	Camp Construction Supplies			\$220.09	
Other	Fist Nations Consulting			\$438.48	
Other	Expediting			\$271.26	
Other	Expediting			\$2,207.83	
				\$18,427.92	\$18,427.92
Equipment Rentals					
Field Gear (Specify)	Prospecting Kit - June 7-18	18.00	\$25.00	\$450.00	
Field Gear (Specify)	Prospecting Kit - June 7-18	28.00	\$25.00	\$700.00	
Field Gear (Specify)	Prospecting Kit - June 7-18	8.00	\$25.00	\$200.00	
Field Gear (Specify)					
Other (Specify)					
				\$1,350.00	\$1,350.00
TOTAL Expenditures					\$173,669.93

17.0 Selected References

Benoit, D. et. al.

- 2007 Gold-Rich Volcanogenic Massive Sulphide Deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 75-94.

Corbett, C.

- 2002 Epithermal Gold for Explorationists, AIG Journal – Applied Geoscientific Practice and Research in Australia.

Eaton, D.

- 2008 Assessment Report Describing Diamond Drilling at the Hartless Joe Property; report prepared by Archer, Cathro & Associates (1981) Limited.

Galley, A. et. al.

- 2007 Volcanogenic Massive Sulphide Deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 141-161.

Taylor, B. E.

- 2007 Epithermal Gold Deposits, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 113-139.

Wengzynowski, W.A.

- 2008 Technical Report describing Diamond Drilling at the Hartless Joe Property located in the Whitehorse Mining District, Southern Yukon Territory; report prepared by Archer, Cathro & Associates (1981) Limited.

18.0 Certificate of Author

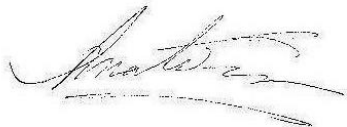
I, Anastasia Ledwon, residing in Smithers, British Columbia, do hereby certify that:

- a. I am part owner and am currently employed as a consulting geologist by:

UTM Exploration Services Ltd.
PO Box 5037
Smithers, British Columbia, Canada
V0J 2N0

- b. I graduated from the University of Victoria in 1997 with a B.Sc (With Honours) (With Distinction) in Earth and Ocean Sciences;
- c. I am a Professional Geoscientist (P.Geo) registered with the Association of Professional Engineers and Geoscientists of British Columbia, license #33898, and have been a member in good standing since 2009;
- d. Between 1997 and 2001 I was continuously employed as a geoscientist in research geology and from 2005 until present I have been continuously employed as a geologist in the mineral exploration sector;
- e. I have not yet visited this property and am not responsible for the data collected herein; the project was overseen by Mr. Tom McCandless, P.Geo of Alix.

Dated at Smithers, British Columbia, this 25th day of November, 2011.



STATEMENT OF QUALIFICATIONS

I, Renato S. Victorino, geologist, with business address in Smithers, British Columbia and residential address at #1 - 9077 150th Street, Surrey, British Columbia, V3R7Z2 do hereby certify that:

1. I graduated from the University of the Philippines in 1985 with a Bachelor of Science Degree in Geology.
2. From 1986 to present, I have been actively engaged in mineral exploration in the Philippines, Indonesia, Mongolia, Canada and East Africa.
3. On May 30, 2011, I joined UTM Exploration Services Ltd. as an Exploration Project Manager-Geologist.
4. I have personally participated in and supervised the field work reported herein and was part of the team that processed and interpreted all the data resulting from this work.

Renato S. Victorino
B.Sc., MBA

Appendix I: Field Rock Sample Assays



CLIENT NAME: UTM EXPLORATION SERVICES
PO BOX 5037
SMITHERS, BC V0J2N0

ATTENTION TO: RICHARD BECK

PROJECT NO: Hartless Joe

AGAT WORK ORDER: 11Y503626

SOLID ANALYSIS REVIEWED BY: Ron Cardinali, General Manager

DATE REPORTED: Jul 07, 2011

PAGES (INCLUDING COVER): 17

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

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5	0.05
E5213161	15.5	1.95	156	3.04	<5	44	0.16	0.07	7.55	15.7	1.85	22.1	130	3.99
E5213162	0.72	3.62	2.7	0.04	<5	5	<0.05	0.09	0.79	0.37	4.54	31.6	125	1.02
E5213163	0.11	0.98	0.5	<0.01	<5	107	0.13	0.08	0.79	0.06	10.8	4.6	66.8	0.78
E5213164	0.18	3.67	10.3	<0.01	<5	24	0.18	0.01	0.61	0.05	6.52	12.3	32.2	0.33
E5213165	0.14	3.25	14.1	<0.01	<5	14	0.21	<0.01	5.08	0.12	7.56	30.6	251	1.12
E5213166	0.16	2.71	16.9	<0.01	<5	26	0.26	0.01	3.22	0.13	5.37	28.8	235	1.51
E5213167	2.70	0.14	51.4	0.06	<5	4	0.09	<0.01	14.4	0.41	3.94	3.9	20.7	0.08
E5213168	0.09	0.19	1.8	<0.01	<5	19	0.24	<0.01	17.1	0.33	8.15	17.1	43.4	0.94
E5213169	0.03	0.28	5.2	0.01	<5	13	0.07	<0.01	3.22	0.08	1.90	2.4	172	0.12
E5213170	0.10	3.59	0.1	<0.01	<5	20	0.20	<0.01	6.56	0.14	8.88	35.0	53.4	1.49
E5213171	0.34	0.96	6.4	<0.01	<5	105	0.24	0.48	1.68	2.25	25.7	6.1	47.7	1.36
E5213172	0.22	4.79	23.7	<0.01	<5	12	0.26	<0.01	6.13	0.09	6.11	29.8	528	2.26
E5213173	>100	0.16	34.9	1.10	<5	2	<0.05	870	0.09	9.19	0.35	8.1	244	<0.05
E5213174	2.62	0.86	1.6	<0.01	<5	8	0.06	5.67	0.24	0.11	3.84	9.6	213	0.24
E5213175	0.51	0.64	6.1	<0.01	<5	19	0.08	0.64	0.11	0.13	7.28	4.4	138	0.25
E5213176	0.20	3.12	1.2	<0.01	<5	15	0.22	0.27	3.89	0.19	16.1	30.8	106	0.69
E5213177	0.39	0.72	9.9	<0.01	<5	2	0.05	0.26	3.32	0.36	5.93	9.2	83.3	0.09
E5213178	0.14	5.09	5.8	<0.01	<5	27	0.60	0.08	1.88	0.25	21.1	28.1	34.7	2.44
E5213179	0.13	3.97	0.4	<0.01	<5	47	0.07	0.06	0.65	0.06	2.85	22.7	31.4	1.54
E5213180	0.10	2.23	0.6	<0.01	<5	8	0.09	0.05	1.20	0.03	5.02	33.7	21.8	0.18
E5213181	0.08	2.01	0.7	<0.01	<5	2	0.11	0.05	1.28	0.04	5.84	32.3	21.0	0.09
E5213182	0.25	3.93	1.2	<0.01	<5	7	0.09	0.06	9.11	0.19	2.79	30.8	175	0.19
E5213183	23.8	0.42	271	13.2	<5	5	<0.05	0.32	2.34	93.8	0.51	13.4	120	0.27
E5213184	0.38	4.75	3.4	0.09	<5	4	0.11	0.10	0.93	1.51	3.00	32.3	114	0.88
E5213185	0.46	0.23	41.5	0.14	<5	2	0.17	0.06	0.08	0.25	0.31	1.6	151	0.06
E5213186	2.08	0.41	3.2	<0.01	<5	57	0.40	4.97	0.68	0.93	35.7	1.5	62.2	0.93
E5213187 (Pulp)	58.0	0.88	463	0.49	<5	4	0.16	25.1	1.21	218	12.6	14.0	21.3	0.32
E5213188	0.24	0.09	30.4	0.02	<5	15	0.06	0.05	1.83	0.41	0.92	3.9	337	0.17
E5213310	77.1	0.21	363	4.47	<5	20	<0.05	0.22	0.03	1.70	2.64	0.9	158	0.61
E5213311	0.81	5.33	3.4	0.03	<5	3	<0.05	0.11	0.57	0.07	2.97	118	169	1.31
E5213312	0.12	1.91	9.6	<0.01	<5	44	0.27	0.01	3.87	0.14	6.52	32.6	84.0	1.21
E5213313	0.10	1.72	2.6	<0.01	<5	12	<0.05	0.19	0.24	0.02	1.07	33.0	183	0.11

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5	0.05
E5213314	0.08	1.22	1.0	<0.01	<5	22	0.12	<0.01	4.17	0.08	1.80	12.5	179	1.03
E5213315	3.30	2.03	2.6	<0.01	<5	18	0.13	19.3	3.32	0.53	1.53	30.9	165	0.43
E5213316	0.32	0.77	4.7	0.01	<5	30	0.27	0.64	3.73	15.0	11.0	14.9	76.7	0.53
E5213317	0.23	1.90	11.3	0.01	<5	3	<0.05	0.65	0.29	0.25	2.13	19.0	175	0.15
E5213318	0.12	2.80	2.6	<0.01	<5	270	0.38	0.02	4.48	0.13	14.2	36.5	190	3.17
E5213319	0.37	0.69	3.3	<0.01	<5	7	<0.05	0.24	0.45	0.39	1.51	54.9	113	0.18
E5213320	0.42	1.51	2.5	<0.01	6	32	0.10	0.10	1.52	0.15	3.47	7.3	87.9	0.58
E5213321	0.09	1.52	12.1	<0.01	<5	27	0.15	<0.01	14.8	0.37	5.91	17.0	120	2.22
E5213322	0.08	2.22	0.4	<0.01	<5	5	0.09	0.02	0.72	0.05	3.41	14.9	60.5	0.95
E5213323	0.82	4.30	1.6	<0.01	<5	1	<0.05	0.11	0.44	0.44	1.93	63.6	98.0	1.09
E5213324	0.24	0.11	25.3	0.07	<5	175	0.07	0.01	0.18	0.09	0.41	1.1	182	1.06
E5213325	0.24	0.07	18.7	0.03	<5	63	0.21	0.01	0.54	0.13	0.61	1.1	171	1.09
E5213326	0.14	3.91	7.3	<0.01	<5	9	0.30	0.02	3.14	0.13	10.8	26.6	96.2	0.79
E5213327 (Pulp)	59.4	0.89	476	0.41	<5	4	0.16	26.0	1.10	223	12.5	15.3	22.4	0.33
E5213328	0.22	0.20	11.7	0.04	<5	74	0.06	0.03	1.99	0.41	1.84	2.9	208	0.14
E5213329	0.08	0.42	5.4	<0.01	<5	61	0.35	0.01	0.74	0.42	14.0	4.7	113	2.88
E5213330	0.06	4.23	0.3	<0.01	<5	83	0.30	<0.01	3.84	0.06	14.7	34.2	91.8	1.39
E5213331	0.04	0.49	1.4	<0.01	<5	1160	0.63	0.03	0.79	0.07	47.8	5.5	66.3	3.54

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Sample Description RDL:	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	0.01
E5213161	275	5.53	4.22	<0.05	0.03	0.08	0.075	0.67	0.6	8.5	3.40	1970	5.17	<0.01
E5213162	1450	8.67	12.2	0.08	0.43	<0.01	0.040	0.01	1.4	4.8	4.06	1390	7.97	0.04
E5213163	28.4	1.15	3.91	<0.05	0.24	<0.01	<0.005	0.16	6.2	4.2	0.67	191	0.51	0.08
E5213164	41.6	9.43	15.3	0.10	0.65	0.01	0.084	0.02	2.5	11.9	3.95	576	0.70	0.05
E5213165	33.9	5.58	13.1	<0.05	0.05	<0.01	0.061	0.04	2.6	14.4	3.67	1190	0.14	0.04
E5213166	31.2	5.10	10.4	<0.05	0.02	<0.01	0.052	0.12	1.8	13.5	2.98	867	0.47	0.04
E5213167	18.0	14.6	0.58	<0.05	0.03	0.01	0.006	0.02	2.4	0.7	0.16	3650	9.47	<0.01
E5213168	4.2	6.10	0.55	<0.05	0.03	<0.01	0.018	0.07	3.1	0.7	6.02	2540	0.22	<0.01
E5213169	3.2	1.29	1.36	<0.05	<0.02	<0.01	0.011	0.01	0.7	3.3	0.60	574	1.72	<0.01
E5213170	58.7	7.59	14.3	<0.05	0.03	<0.01	0.073	0.04	3.3	20.7	3.78	1920	0.43	0.02
E5213171	10.0	1.55	3.94	<0.05	0.08	<0.01	0.033	0.19	14.5	7.1	0.73	354	0.37	0.05
E5213172	69.8	6.93	13.2	<0.05	0.03	<0.01	0.053	0.02	2.2	43.3	5.92	1860	0.42	0.02
E5213173	80.8	2.09	0.62	<0.05	<0.02	<0.01	0.026	<0.01	0.1	1.1	0.17	58	1.94	<0.01
E5213174	22.4	2.84	6.04	0.06	0.48	<0.01	0.038	0.03	1.5	5.6	0.71	241	1.36	0.08
E5213175	30.2	2.15	4.12	0.06	0.05	0.02	0.033	0.07	2.7	4.9	0.46	254	1.33	0.09
E5213176	54.4	5.62	13.4	0.09	0.41	<0.01	0.067	0.03	5.4	18.7	3.61	805	0.42	0.04
E5213177	217	7.51	3.14	0.07	0.07	0.01	0.033	<0.01	2.6	2.7	0.69	289	7.79	<0.01
E5213178	50.3	9.68	21.7	0.16	0.88	<0.01	0.121	0.05	7.2	22.9	5.11	1460	3.43	0.03
E5213179	66.0	8.90	17.4	0.12	0.31	<0.01	0.037	0.13	1.1	26.3	3.07	1100	0.29	0.01
E5213180	81.6	5.36	8.59	0.08	0.34	<0.01	0.019	0.02	1.5	5.7	2.16	717	0.25	0.10
E5213181	92.7	4.51	7.43	0.06	0.38	<0.01	0.017	0.01	1.8	4.3	1.89	776	0.37	0.10
E5213182	74.4	6.82	15.9	<0.05	0.03	<0.01	0.061	<0.01	0.9	11.9	3.87	2180	0.28	0.01
E5213183	368	6.50	1.81	0.06	<0.02	0.05	0.087	0.02	0.2	3.1	0.66	597	1.82	<0.01
E5213184	602	9.26	15.3	0.09	0.25	<0.01	0.051	0.01	0.9	11.9	4.46	1700	0.39	0.06
E5213185	35.1	7.27	1.06	0.07	0.04	<0.01	<0.005	0.01	0.2	0.6	0.21	130	3.54	<0.01
E5213186	5.2	0.52	1.57	0.06	0.07	<0.01	0.008	0.23	20.5	0.4	0.03	305	25.6	0.04
E5213187 (Pulp)	5470	8.39	5.69	<0.05	0.25	8.17	2.88	0.09	5.7	7.6	0.68	449	22.3	0.05
E5213188	14.7	1.65	0.37	<0.05	<0.02	0.08	0.012	0.03	0.4	0.7	0.58	428	2.44	<0.01
E5213310	423	3.46	0.71	0.06	<0.02	0.83	0.102	0.15	0.8	0.6	0.02	27	16.3	<0.01
E5213311	782	15.5	17.0	0.13	0.19	0.03	0.015	<0.01	0.8	12.7	5.02	2800	0.58	<0.01
E5213312	67.8	6.44	9.30	<0.05	0.02	0.02	0.066	0.02	2.1	16.1	3.53	1290	0.29	0.02
E5213313	11.3	8.84	7.40	0.08	0.30	0.02	0.010	<0.01	0.3	4.8	1.93	569	0.63	0.03

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Sample Description RDL:	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	0.01
E5213314	26.9	2.91	5.93	<0.05	0.02	0.02	0.026	0.04	0.6	11.0	1.30	560	1.25	0.02
E5213315	8.8	7.79	8.41	0.06	0.06	0.02	0.043	0.03	0.5	18.7	2.70	1130	58.4	0.01
E5213316	175	5.77	2.06	0.06	0.05	0.03	0.084	0.14	4.0	6.2	1.06	1540	1.61	0.01
E5213317	320	7.93	7.24	0.07	0.34	0.02	0.050	<0.01	0.7	3.5	1.86	786	6.55	0.04
E5213318	123	6.07	13.4	0.06	0.32	0.02	0.087	0.07	5.1	21.2	2.56	1140	1.08	0.04
E5213319	748	8.51	6.04	0.07	0.35	0.02	0.044	<0.01	0.5	1.3	0.76	406	18.8	0.04
E5213320	186	3.88	5.20	0.06	0.40	0.01	0.042	0.04	1.4	11.5	1.18	488	1.52	0.04
E5213321	42.4	4.98	4.97	<0.05	0.03	<0.01	0.053	0.15	2.2	16.7	2.06	2410	0.44	0.02
E5213322	32.6	4.23	11.3	0.08	0.46	<0.01	0.023	0.04	1.3	16.6	2.13	483	0.40	0.06
E5213323	6010	10.5	14.1	0.09	0.08	<0.01	0.036	<0.01	0.5	9.3	4.23	1450	3.34	0.05
E5213324	39.4	2.95	1.02	0.06	<0.02	<0.01	<0.005	0.01	0.3	0.4	0.07	150	3.05	<0.01
E5213325	39.1	6.57	0.81	0.07	<0.02	<0.01	<0.005	<0.01	0.5	0.2	0.04	377	3.14	<0.01
E5213326	141	7.01	14.1	0.07	0.03	<0.01	0.082	<0.01	4.4	21.3	4.06	1310	1.24	0.01
E5213327 (Pulp)	5260	8.68	5.56	0.07	0.25	8.30	2.87	0.09	5.6	7.9	0.70	465	22.9	0.05
E5213328	6.8	1.18	0.92	<0.05	<0.02	0.04	0.012	0.01	0.7	2.8	0.46	378	1.71	<0.01
E5213329	3.8	0.65	0.97	<0.05	0.04	0.02	<0.005	0.28	8.1	0.6	0.04	172	0.95	<0.01
E5213330	28.2	8.15	17.1	0.07	0.04	0.01	0.092	0.03	5.2	32.2	4.12	1270	0.78	0.03
E5213331	2.7	2.55	1.57	0.08	0.03	0.01	0.023	0.26	25.8	0.5	0.12	551	8.78	0.04

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	0.01
E5213161	0.07	40.0	27	1740	17.5	0.003	1.89	6.21	12.3	0.9	<0.2	142	<0.01	0.08
E5213162	0.16	32.0	375	19.1	0.5	0.051	2.63	0.12	9.4	4.9	0.4	8.0	<0.01	0.08
E5213163	0.17	8.9	327	8.8	5.9	0.001	0.035	0.07	1.3	<0.2	<0.2	26.1	<0.01	<0.01
E5213164	0.24	11.3	1160	5.1	0.5	0.002	1.15	0.43	25.3	0.9	0.7	14.0	<0.01	<0.01
E5213165	0.06	81.2	517	18.4	1.1	<0.001	1.05	0.48	30.7	0.5	<0.2	54.3	<0.01	<0.01
E5213166	0.06	64.8	424	2.6	3.7	<0.001	0.792	0.88	24.8	0.3	<0.2	41.8	<0.01	0.15
E5213167	0.18	5.4	170	10.1	0.4	0.001	8.55	17.8	2.0	0.5	<0.2	48.6	<0.01	0.02
E5213168	0.08	32.7	120	1.1	1.9	<0.001	0.258	0.12	6.9	0.4	<0.2	1010	<0.01	0.01
E5213169	<0.05	5.0	161	1.0	0.3	<0.001	0.071	0.10	1.9	0.2	<0.2	91.9	<0.01	0.02
E5213170	0.07	28.5	472	0.5	1.5	<0.001	0.285	0.05	26.7	0.4	<0.2	110	<0.01	0.01
E5213171	<0.05	9.9	671	482	6.4	<0.001	0.318	0.14	2.1	0.6	<0.2	104	<0.01	0.06
E5213172	0.07	198	482	7.8	0.9	0.005	2.00	0.40	25.5	0.6	<0.2	82.2	<0.01	<0.01
E5213173	0.06	6.9	33	>10000	0.2	<0.001	1.34	0.32	1.1	23.4	<0.2	8.1	<0.01	108
E5213174	0.11	20.5	108	169	1.0	<0.001	0.770	0.12	10.7	1.5	0.4	9.9	<0.01	0.69
E5213175	<0.05	9.1	133	52.1	2.2	<0.001	0.229	0.85	3.2	1.3	<0.2	5.2	<0.01	0.14
E5213176	0.25	39.9	740	9.3	0.8	0.001	1.10	0.09	24.3	0.8	0.8	41.9	<0.01	0.03
E5213177	0.10	18.5	557	8.2	<0.1	0.026	4.34	1.48	2.2	10.4	<0.2	44.2	<0.01	0.07
E5213178	1.13	23.8	1580	2.7	1.4	0.009	0.676	0.22	34.1	1.8	1.1	15.7	0.04	0.02
E5213179	0.10	11.3	625	3.0	5.1	<0.001	0.941	0.11	29.6	2.8	0.3	13.1	<0.01	0.03
E5213180	0.11	22.2	350	1.6	0.4	0.001	0.897	0.08	8.9	0.9	0.3	6.7	<0.01	0.01
E5213181	0.11	21.4	365	2.1	0.1	0.002	0.624	<0.05	7.7	0.7	0.3	6.9	<0.01	<0.01
E5213182	0.09	48.7	155	4.6	0.2	<0.001	0.850	0.07	24.7	0.4	<0.2	110	<0.01	<0.01
E5213183	0.07	28.9	17	>10000	0.8	<0.001	6.53	7.10	3.1	1.7	0.5	39.4	<0.01	0.27
E5213184	0.16	37.1	496	157	0.8	<0.001	1.07	0.23	16.0	1.7	0.8	12.1	<0.01	0.02
E5213185	0.10	4.5	74	32.8	0.2	<0.001	0.592	0.38	1.1	0.8	<0.2	2.1	<0.01	0.16
E5213186	0.10	2.0	464	204	10.0	<0.001	0.202	0.06	0.4	0.9	<0.2	17.6	<0.01	0.29
E5213187 (Pulp)	0.83	33.5	299	6060	3.5	0.016	9.37	95.7	3.0	79.9	46.2	35.0	<0.01	0.30
E5213188	0.09	10.8	158	11.0	0.7	<0.001	0.121	0.81	1.0	0.3	0.2	36.9	<0.01	0.04
E5213310	<0.05	4.8	47	>10000	3.5	<0.001	0.413	24.9	0.9	0.7	0.2	11.5	<0.01	0.15
E5213311	0.16	42.9	360	33.6	0.4	0.006	5.42	0.14	8.9	7.7	0.5	13.9	<0.01	0.10
E5213312	0.06	40.2	462	4.6	1.6	<0.001	0.162	<0.05	33.1	0.4	<0.2	205	<0.01	<0.01
E5213313	0.11	27.5	162	5.4	0.2	0.002	4.83	<0.05	8.7	9.0	0.6	6.3	<0.01	0.27

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	0.01
E5213314	<0.05	23.4	126	4.0	1.6	<0.001	0.111	0.13	10.5	<0.2	<0.2	20.2	<0.01	<0.01
E5213315	0.06	34.5	278	114	1.5	0.001	4.37	<0.05	13.2	3.5	<0.2	107	<0.01	3.88
E5213316	<0.05	1.8	1330	8.0	4.9	<0.001	1.87	0.21	13.7	1.5	<0.2	165	<0.01	0.16
E5213317	0.10	22.8	193	10.0	0.2	0.005	4.88	0.16	12.0	2.2	0.2	2.7	<0.01	0.08
E5213318	0.09	84.8	1200	1.6	2.7	0.002	0.488	0.18	28.8	0.8	0.4	160	<0.01	0.01
E5213319	0.15	12.7	112	2.6	0.2	0.090	6.74	<0.05	4.2	31.2	0.4	6.5	<0.01	0.37
E5213320	0.25	21.3	367	1.6	1.0	0.002	0.421	0.23	8.0	9.8	3.4	39.9	<0.01	0.05
E5213321	0.07	59.4	655	1.9	3.9	<0.001	1.78	8.79	18.7	0.9	<0.2	166	<0.01	0.01
E5213322	0.15	12.9	239	1.4	1.2	0.002	0.309	0.24	9.8	0.5	0.5	11.9	<0.01	0.02
E5213323	0.11	28.5	301	0.5	0.4	0.013	2.08	0.10	21.3	8.3	0.7	7.4	<0.01	0.06
E5213324	0.07	4.0	49	3.6	1.0	<0.001	0.228	0.25	0.6	0.9	<0.2	6.0	<0.01	0.02
E5213325	0.07	5.3	123	2.9	0.8	<0.001	0.813	0.33	0.2	0.8	<0.2	7.1	<0.01	0.02
E5213326	0.07	27.9	739	1.4	0.2	<0.001	0.494	0.06	20.0	0.6	0.3	39.7	<0.01	0.01
E5213327 (Pulp)	0.85	36.1	326	6270	3.4	0.017	9.77	97.4	3.0	83.4	46.1	33.4	<0.01	0.30
E5213328	0.05	5.5	162	5.4	0.4	<0.001	0.139	0.26	1.5	0.2	<0.2	43.9	<0.01	0.02
E5213329	<0.05	4.8	373	11.5	6.7	<0.001	0.019	0.13	0.7	<0.2	<0.2	10.1	<0.01	0.02
E5213330	0.08	43.0	644	0.6	1.1	0.001	0.065	0.09	35.0	0.3	0.3	92.9	<0.01	<0.01
E5213331	0.07	2.6	810	3.6	8.8	<0.001	0.054	0.27	3.2	0.2	<0.2	26.3	<0.01	<0.01

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Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Th	Ti	Ti	U	V	W	Y	Zn	Zr	Pb-OL	Zn-OL
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
RDL:	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	0.05	0.05
E5213161	<0.1	0.065	0.23	<0.05	83.4	1.50	6.77	2270	0.7	-	-
E5213162	<0.1	0.514	0.06	0.39	204	<0.05	11.8	112	13.2	-	-
E5213163	1.5	0.054	0.05	0.50	13.3	<0.05	2.03	36.2	9.6	-	-
E5213164	0.1	0.615	0.02	0.53	349	0.09	19.5	103	21.2	-	-
E5213165	<0.1	0.043	0.02	<0.05	278	<0.05	13.4	85.2	1.8	-	-
E5213166	<0.1	0.052	0.06	<0.05	217	0.15	8.66	70.5	0.8	-	-
E5213167	<0.1	<0.005	0.18	0.17	14.6	<0.05	17.0	11.5	1.1	-	-
E5213168	<0.1	<0.005	<0.02	0.15	237	<0.05	21.5	53.1	<0.5	-	-
E5213169	<0.1	<0.005	<0.02	<0.05	22.6	0.09	2.98	13.3	<0.5	-	-
E5213170	<0.1	0.015	<0.02	<0.05	245	<0.05	17.2	86.1	1.0	-	-
E5213171	5.1	<0.005	0.07	1.89	17.7	0.08	4.03	147	4.1	-	-
E5213172	0.1	0.014	<0.02	0.08	212	<0.05	12.7	83.2	1.1	-	-
E5213173	<0.1	<0.005	0.52	0.14	9.6	0.07	0.35	17.0	0.5	2.95	-
E5213174	0.2	0.091	<0.02	0.08	63.0	0.09	8.15	64.0	9.1	-	-
E5213175	0.1	0.008	0.03	<0.05	56.9	<0.05	8.80	116	1.4	-	-
E5213176	0.2	0.472	0.03	0.12	279	0.12	33.1	76.0	11.6	-	-
E5213177	0.6	0.013	0.09	0.48	37.4	0.07	15.2	40.4	3.5	-	-
E5213178	0.5	1.30	0.03	1.24	459	0.21	51.4	141	23.3	-	-
E5213179	<0.1	0.506	0.10	0.09	275	0.13	18.3	125	8.4	-	-
E5213180	<0.1	0.481	0.02	<0.05	136	<0.05	16.5	58.8	9.6	-	-
E5213181	<0.1	0.442	<0.02	<0.05	114	<0.05	17.7	65.9	9.9	-	-
E5213182	<0.1	0.097	<0.02	0.26	194	0.16	13.2	97.7	0.9	-	-
E5213183	<0.1	0.013	<0.02	<0.05	17.7	0.08	3.07	5830	<0.5	1.04	-
E5213184	<0.1	0.480	0.02	0.38	237	<0.05	17.0	268	8.4	-	-
E5213185	<0.1	0.032	<0.02	0.07	16.7	0.40	1.34	36.4	1.0	-	-
E5213186	21.6	<0.005	0.08	6.10	1.7	0.18	8.13	55.0	2.4	-	-
E5213187 (Pulp)	1.3	0.073	13.5	1.29	32.0	0.73	6.28	>10000	6.9	-	3.53
E5213188	<0.1	<0.005	0.02	<0.05	7.1	0.09	2.04	20.4	<0.5	-	-
E5213310	<0.1	<0.005	0.06	<0.05	9.9	0.54	0.51	547	<0.5	1.03	-
E5213311	<0.1	0.312	0.02	<0.05	200	<0.05	11.2	181	5.5	-	-
E5213312	<0.1	0.011	<0.02	0.07	236	<0.05	14.9	70.0	0.5	-	-
E5213313	<0.1	0.308	<0.02	<0.05	102	<0.05	5.02	58.3	7.3	-	-

Certified By:

Ron Cardinal


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

 5623 McADAM ROAD
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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Analyte:	Th	Ti	Ti	U	V	W	Y	Zn	Zr	Pb-OL	Zn-OL
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Sample Description RDL:	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	0.05	0.05
E5213314	<0.1	0.008	0.02	0.08	68.1	<0.05	4.78	33.1	0.7	-	-
E5213315	<0.1	0.011	0.02	0.09	118	1.07	6.47	80.2	2.2	-	-
E5213316	0.4	<0.005	0.04	0.07	24.1	0.23	21.5	424	1.6	-	-
E5213317	<0.1	0.272	0.05	0.63	140	<0.05	7.99	125	11.5	-	-
E5213318	0.3	0.180	0.03	0.41	218	1.19	32.6	97.2	7.6	-	-
E5213319	<0.1	0.331	<0.02	0.36	80.7	0.08	3.20	126	10.5	-	-
E5213320	0.2	0.276	0.02	0.38	65.6	0.17	6.47	32.6	13.9	-	-
E5213321	0.1	<0.005	0.05	0.16	100	0.06	15.9	55.8	0.8	-	-
E5213322	0.3	0.348	0.02	0.13	161	0.17	15.0	60.9	12.7	-	-
E5213323	<0.1	0.261	0.05	0.07	231	<0.05	9.02	141	2.9	-	-
E5213324	<0.1	0.005	<0.02	<0.05	9.2	0.08	0.68	11.2	<0.5	-	-
E5213325	<0.1	<0.005	<0.02	0.05	10.1	0.50	1.24	15.5	<0.5	-	-
E5213326	0.1	0.035	<0.02	<0.05	222	<0.05	17.3	81.0	1.1	-	-
E5213327 (Pulp)	1.2	0.070	13.8	1.32	32.9	0.73	6.14	>10000	6.8	-	3.56
E5213328	<0.1	<0.005	<0.02	<0.05	14.0	0.08	2.39	15.8	<0.5	-	-
E5213329	2.1	<0.005	0.07	0.55	2.1	0.21	2.44	27.1	3.2	-	-
E5213330	0.1	0.047	<0.02	0.07	318	<0.05	15.3	69.6	1.1	-	-
E5213331	6.0	<0.005	0.08	1.03	8.2	<0.05	11.0	40.7	2.5	-	-

Comments: RDL - Reported Detection Limit

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Fire Assay - Trace Au, ICP-OES finish (202052)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Sample Description	Analyte:	Sample Login Weight	Au	Au-Grav
	Unit:	kg	ppm	g/t
RDL:		0.01	0.001	0.05
E5213161		0.97	3.04	-
E5213162		0.83	0.036	-
E5213163		0.83	0.007	-
E5213164		0.67	0.009	-
E5213165		0.34	0.008	-
E5213166		0.42	0.003	-
E5213167		1.2	0.093	-
E5213168		0.81	0.005	-
E5213169		0.63	0.017	-
E5213170		0.72	<0.001	-
E5213171		0.73	0.010	-
E5213172		0.59	0.003	-
E5213173		1.05	1.08	-
E5213174		0.71	0.016	-
E5213175		0.56	0.006	-
E5213176		0.66	0.003	-
E5213177		0.82	0.005	-
E5213178		0.79	0.002	-
E5213179		0.77	0.002	-
E5213180		0.81	0.006	-
E5213181		0.91	0.001	-
E5213182		1.01	0.004	-
E5213183		1.43	>10	15.6
E5213184		0.72	0.148	-
E5213185		0.61	0.126	-
E5213186		0.55	0.024	-
E5213187 (Pulp)		0.08	0.941	-
E5213188		1.21	0.050	-
E5213310		0.59	4.42	-
E5213311		0.86	0.046	-
E5213312		0.77	0.021	-
E5213313		0.71	0.012	-

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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<http://www.agatlabs.com>

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Fire Assay - Trace Au, ICP-OES finish (202052)

DATE SAMPLED: Jun 21, 2011

DATE RECEIVED: Jun 21, 2011

DATE REPORTED: Jul 07, 2011

SAMPLE TYPE: Rock

Sample Description	Analyte:	Sample	Au	Au-Grav
	Unit:	Login Weight	ppm	g/t
RDL:	kg	0.01	0.001	0.05
E5213314		0.72	0.014	-
E5213315		0.57	0.013	-
E5213316		0.80	0.027	-
E5213317		0.92	0.005	-
E5213318		0.84	0.033	-
E5213319		0.71	0.011	-
E5213320		0.80	0.005	-
E5213321		0.72	0.165	-
E5213322		0.62	0.013	-
E5213323		0.78	0.005	-
E5213324		0.73	0.079	-
E5213325		0.62	0.037	-
E5213326		0.54	0.010	-
E5213327 (Pulp)		0.11	1.00	-
E5213328		0.60	0.041	-
E5213329		0.58	0.008	-
E5213330		0.76	0.003	-
E5213331		0.55	<0.001	-

Comments: RDL - Reported Detection Limit

Certified By:



AGAT Laboratories

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Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

ATTENTION TO: RICHARD BECK

Solid Analysis											
RPT Date: Jul 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Ag	1	2491042	15.5	15.6	0.6%	< 0.01	30	35	87%	80%	120%
Al	1	2491042	1.95	1.97	1.0%	< 0.01				80%	120%
As	1	2491042	156	162	3.8%	< 0.1				80%	120%
Au	1	2491053	< 0.01	< 0.01	0.0%	< 0.01	0.0834	0.0849	98%	80%	120%
B	1	2491042	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2491042	44	44	0.0%	< 1				80%	120%
Be	1	2491042	0.160	0.166	3.7%	< 0.05				80%	120%
Bi	1	2491042	0.07	0.07	0.0%	< 0.01				80%	120%
Ca	1	2491042	7.55	8.22	8.5%	< 0.01				80%	120%
Cd	1	2491042	15.7	16.3	3.8%	< 0.01	1.9	1.9	102%	80%	120%
Ce	1	2491042	1.85	1.91	3.2%	< 0.01				80%	120%
Co	1	2491042	22.1	22.6	2.2%	< 0.1				80%	120%
Cr	1	2491042	130	132	1.5%	< 0.5				80%	120%
Cs	1	2491042	3.99	3.93	1.5%	< 0.05				80%	120%
Cu	1	2491042	275	272	1.1%	< 0.1	4852	4700	103%	80%	120%
Fe	1	2491042	5.53	5.74	3.7%	< 0.01	2.5	2.8	88%	80%	120%
Ga	1	2491042	4.22	4.30	1.9%	< 0.05				80%	120%
Ge	1	2491042	< 0.05	< 0.05	0.0%	< 0.05				80%	120%
Hf	1	2491042	0.03	0.03	0.0%	< 0.02				80%	120%
Hg	1	2491042	0.08	0.08	0.0%	< 0.01				80%	120%
In	1	2491042	0.0754	0.0762	1.1%	< 0.005				80%	120%
K	1	2491042	0.674	0.684	1.5%	< 0.01				80%	120%
La	1	2491042	0.6	0.6	0.0%	< 0.1				80%	120%
Li	1	2491042	8.53	9.11	6.6%	< 0.1				80%	120%
Mg	1	2491042	3.40	3.50	2.9%	< 0.01				80%	120%
Mn	1	2491042	1970	2010	2.0%	< 1	451	500	90%	80%	120%
Mo	1	2491042	5.17	5.26	1.7%	< 0.05				80%	120%
Na	1	2491042	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Nb	1	2491042	0.07	0.07	0.0%	< 0.05				80%	120%
Ni	1	2491042	40.0	40.7	1.7%	< 0.2				80%	120%
P	1	2491042	27	28	3.6%	< 10	1318	1300	101%	80%	120%
Pb	1	2491042	1740	1770	1.7%	< 0.1				80%	120%
Rb	1	2491042	17.5	17.8	1.7%	< 0.1				80%	120%
Re	1	2491042	0.003	0.003	0.0%	< 0.001				80%	120%
S	1	2491042	1.89	2.34	21.3%	< 0.005	1.01	0.99	102%	80%	120%
Sb	1	2491042	6.21	6.38	2.7%	< 0.05				80%	120%
Sc	1	2491042	12.3	12.3	0.0%	< 0.1				80%	120%
Se	1	2491042	0.92	1.06	14.1%	< 0.2				80%	120%
Sn	1	2491042	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Sr	1	2491042	142	146	2.8%	< 0.2				80%	120%
Ta	1	2491042	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Te	1	2491042	0.08	0.08	0.0%	< 0.01				80%	120%
Th	1	2491042	< 0.1	< 0.1	0.0%	< 0.1				80%	120%
Ti	1	2491042	0.0653	0.0678	3.8%	< 0.005				80%	120%



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

ATTENTION TO: RICHARD BECK

Solid Analysis (Continued)

RPT Date: Jul 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Tl	1	2491042	0.23	0.23	0.0%	< 0.02				80% 120%
U	1	2491042	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
V	1	2491042	83.4	85.0	1.9%	< 0.5	37	49	75%	80% 120%
W	1	2491042	1.50	1.49	0.7%	< 0.05				80% 120%
Y	1	2491042	6.77	6.83	0.9%	< 0.05	17	23	74%	80% 120%
Zn	1	2491042	2270	2300	1.3%	< 0.5	203	194	104%	80% 120%
Zr	1	2491042	0.7	0.7	0.0%	< 0.5				80% 120%
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)										
Ag	1	2491067	2.08	2.15	3.3%	< 0.01	7	7	100%	80% 120%
Al	1	2491067	0.407	0.425	4.3%	< 0.01	0.375	0.359	104%	80% 120%
As	1	2491067	3.2	3.1	3.2%	< 0.1				80% 120%
Au	1	2491067	< 0.01	< 0.01	0.0%	< 0.01	0.0848	0.0849	100%	80% 120%
B	1	2491067	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2491067	57	56	1.8%	< 1				80% 120%
Be	1	2491067	0.40	0.37	7.8%	< 0.05				80% 120%
Bi	1	2491067	4.97	4.94	0.6%	< 0.01				80% 120%
Ca	1	2491067	0.68	0.72	5.7%	< 0.01	0.635	0.635	100%	80% 120%
Cd	1	2491067	0.93	0.95	2.1%	< 0.01				80% 120%
Ce	1	2491067	35.7	35.5	0.6%	< 0.01				80% 120%
Co	1	2491067	1.5	1.5	0.0%	< 0.1	5.14	4.15	124%	80% 120%
Cr	1	2491067	62.2	59.7	4.1%	< 0.5				80% 120%
Cs	1	2491067	0.93	0.86	7.8%	< 0.05				80% 120%
Cu	1	2491067	5.2	5.2	0.0%	5.1	4712	4700	100%	80% 120%
Fe	1	2491067	0.52	0.55	5.6%	< 0.01	1.27	1.31	97%	80% 120%
Ga	1	2491067	1.57	1.53	2.6%	< 0.05				80% 120%
Ge	1	2491067	0.06	0.06	0.0%	< 0.05				80% 120%
Hf	1	2491067	0.07	0.04		< 0.02				80% 120%
Hg	1	2491067	< 0.01	< 0.01	0.0%	< 0.01	1.6	1.3	121%	80% 120%
In	1	2491067	0.0077	0.0075	2.6%	< 0.005				80% 120%
K	1	2491067	0.232	0.241	3.8%	< 0.01	0.18	0.18	99%	80% 120%
La	1	2491067	20.5	20.4	0.5%	< 0.1				80% 120%
Li	1	2491067	0.4	0.4	0.0%	< 0.1				80% 120%
Mg	1	2491067	0.03	0.03	0.0%	< 0.01	0.104	0.098	106%	80% 120%
Mn	1	2491067	305	306	0.3%	6				80% 120%
Mo	1	2491067	25.6	24.9	2.8%	< 0.05	282	280	101%	80% 120%
Na	1	2491067	0.04	0.04	0.0%	< 0.01	0.031	0.038	82%	80% 120%
Nb	1	2491067	0.102	0.083	20.5%	< 0.05				80% 120%
Ni	1	2491067	2.0	2.0	0.0%	< 0.2	6.3	6.3	101%	80% 120%
P	1	2491067	464	470	1.3%	< 10				80% 120%
Pb	1	2491067	204	203	0.5%	< 0.1	27.8	28.6	97%	80% 120%
Rb	1	2491067	10.0	9.54	4.7%	< 0.1				80% 120%
Re	1	2491067	< 0.001	< 0.001	0.0%	< 0.001				80% 120%
S	1	2491067	0.202	0.217	7.2%	< 0.005	0.656	0.621	106%	80% 120%



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

ATTENTION TO: RICHARD BECK

Solid Analysis (Continued)

RPT Date: Jul 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Sb	1	2491067	0.06	0.06	0.0%	< 0.05				80% 120%
Sc	1	2491067	0.36	0.33	8.7%	< 0.1				80% 120%
Se	1	2491067	0.94	0.99	5.2%	< 0.2				80% 120%
Sn	1	2491067	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Sr	1	2491067	17.6	17.5	0.6%	< 0.2	278	264	105%	80% 120%
Ta	1	2491067	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Te	1	2491067	0.29	0.29	0.0%	< 0.01				80% 120%
Th	1	2491067	21.6	21.6	0.0%	< 0.1				80% 120%
Ti	1	2491067	< 0.005	< 0.005	0.0%	< 0.005	0.011	0.011	101%	80% 120%
Tl	1	2491067	0.08	0.08	0.0%	< 0.02				80% 120%
U	1	2491067	6.10	6.11	0.2%	< 0.05				80% 120%
V	1	2491067	2.4	2.5	4.1%	1.0				80% 120%
W	1	2491067	0.18	0.18	0.0%	< 0.05				80% 120%
Y	1	2491067	8.13	7.89	3.0%	< 0.05				80% 120%
Zn	1	2491067	55.0	55.2	0.4%	0.6	177	204	87%	80% 120%
Zr	1	2491067	2.4	1.1		< 0.5				80% 120%
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)										
Ag	1	2491089	0.08	0.08	0.0%	< 0.01	0.4	0.4	103%	80% 120%
Al	1	2491089	0.42	0.42	0.0%	< 0.01				80% 120%
As	1	2491089	5.4	5.3	1.9%	< 0.1				80% 120%
Au	1	2491089	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
B	1	2491089	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2491089	61	59	3.3%	< 1				80% 120%
Be	1	2491089	0.35	0.37	5.6%	< 0.05				80% 120%
Bi	1	2491089	0.01	0.01	0.0%	< 0.01				80% 120%
Ca	1	2491089	0.74	0.75	1.3%	< 0.01				80% 120%
Cd	1	2491089	0.419	0.403	3.9%	< 0.01	1	1	112%	80% 120%
Ce	1	2491089	14.0	13.6	2.9%	< 0.01	41	35	118%	80% 120%
Co	1	2491089	4.7	4.6	2.2%	< 0.1	13	14	92%	80% 120%
Cr	1	2491089	113	114	0.9%	< 0.5				80% 120%
Cs	1	2491089	2.88	2.85	1.0%	< 0.05				80% 120%
Cu	1	2491089	3.8	3.8	0.0%	< 0.1				80% 120%
Fe	1	2491089	0.65	0.69	6.0%	< 0.01				80% 120%
Ga	1	2491089	0.966	0.938	2.9%	< 0.05				80% 120%
Ge	1	2491089	0.045	0.051	12.5%	< 0.05				80% 120%
Hf	1	2491089	0.04	0.04	0.0%	< 0.02				80% 120%
Hg	1	2491089	0.02	0.02	0.0%	< 0.01				80% 120%
In	1	2491089	< 0.005	< 0.005	0.0%	< 0.005				80% 120%
K	1	2491089	0.28	0.28	0.0%	< 0.01				80% 120%
La	1	2491089	8.1	7.8	3.8%	< 0.1				80% 120%
Li	1	2491089	0.58	0.55	5.3%	< 0.1	21	23	92%	80% 120%
Mg	1	2491089	0.04	0.04	0.0%	< 0.01				80% 120%
Mn	1	2491089	172	176	2.3%	< 1				80% 120%
Mo	1	2491089	0.95	0.99	4.1%	< 0.05				80% 120%



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

ATTENTION TO: RICHARD BECK

Solid Analysis (Continued)

RPT Date: Jul 07, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Na	1	2491089	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Nb	1	2491089	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
Ni	1	2491089	4.8	4.7	2.1%	< 0.2	25	25	101%	80% 120%
P	1	2491089	373	396	6.0%	< 10				80% 120%
Pb	1	2491089	11.5	11.5	0.0%	< 0.1	40	39	102%	80% 120%
Rb	1	2491089	6.7	6.5	3.0%	< 0.1				80% 120%
Re	1	2491089	< 0.001	< 0.001	0.0%	< 0.001				80% 120%
S	1	2491089	0.019	0.019	0.0%	< 0.005				80% 120%
Sb	1	2491089	0.13	0.12	8.0%	< 0.05				80% 120%
Sc	1	2491089	0.65	0.62	4.7%	< 0.1				80% 120%
Se	1	2491089	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Sn	1	2491089	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Sr	1	2491089	10.1	9.7	4.0%	< 0.2				80% 120%
Ta	1	2491089	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Te	1	2491089	0.02	0.02	0.0%	< 0.01				80% 120%
Th	1	2491089	2.1	2.1	0.0%	< 0.1				80% 120%
Ti	1	2491089	< 0.005	< 0.005	0.0%	< 0.005	0.05	0.07	74%	80% 120%
Tl	1	2491089	0.067	0.063	6.2%	< 0.02				80% 120%
U	1	2491089	0.55	0.53	3.7%	< 0.05				80% 120%
V	1	2491089	2.9	3.0	3.4%	< 0.5				80% 120%
W	1	2491089	0.21	0.22	4.7%	< 0.05				80% 120%
Y	1	2491089	2.44	2.44	0.0%	< 0.05				80% 120%
Zn	1	2491089	27.1	27.6	1.8%	< 0.5	196	204	96%	80% 120%
Zr	1	2491089	3.19	3.28	2.8%	< 0.5				80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2491042	3.04	3.02	0.7%	< 0.001	0.0834	0.0849	98%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2491067	0.007	0.006	15.4%	< 0.001	0.0848	0.0849	100%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2491089	0.0037	0.0030	20.9%	< 0.001				80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2491091	< 0.001	< 0.001	0.0%	< 0.001				80% 120%

Certified By:



Method Summary

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

ATTENTION TO: RICHARD BECK

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS
Y	MIN-200-12017		ICP-MS



Method Summary

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11Y503626

PROJECT NO: Hartless Joe

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Pb-OL			AA
Zn-OL			AA
Sample Login Weight			BALANCE
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Au-Grav			GRAVIMETRIC



CLIENT NAME: UTM EXPLORATION SERVICES
PO BOX 5037
SMITHERS, BC V0J2N0

ATTENTION TO: RICHARD BECK

PROJECT NO: HAR002

AGAT WORK ORDER: 11D508748

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

DATE REPORTED: Oct 11, 2011

PAGES (INCLUDING COVER): 18

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

*NOTES

VERSION 1: Updated copy

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
Unit:	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.01	0.01	0.1	1	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5	0.05
5213342	0.22	1.32	9.3	<1	8	104	0.35	<0.01	0.94	<0.01	12.9	10.3	26.1	0.39
5213348	66.9	0.89	484	5400	15	16	0.19	25.2	1.26	204	9.70	17.5	22.1	0.34
5213201	0.21	1.31	8.4	<1	7	102	0.30	<0.01	0.91	<0.01	12.0	9.2	23.6	0.35
5213207	66.4	0.89	492	5500	13	35	0.19	26.6	1.27	204	10.3	18.0	21.9	0.35
5213332	0.15	1.09	0.9	2	<5	2	0.07	0.03	1.06	0.71	4.88	40.4	39.8	0.25
5213333	0.12	1.32	2.1	2	<5	102	0.23	<0.01	6.26	0.15	11.0	29.8	139	4.05
5213334	0.12	2.04	4.9	<1	<5	82	0.24	0.02	4.99	0.10	4.87	36.1	118	2.40
5213335	0.11	1.09	2.4	5	<5	9	<0.05	0.08	0.77	0.02	3.99	32.4	32.0	0.22
5213336	0.05	0.68	1.5	<1	<5	30	0.14	0.02	1.43	0.24	19.3	3.6	69.3	1.82
5213337	0.05	1.39	1.4	1	<5	68	0.34	0.04	0.71	0.09	37.9	9.0	78.5	0.14
5213338	0.10	0.80	0.7	<1	<5	448	0.14	0.01	0.59	0.04	10.0	2.2	94.2	1.31
5213339	0.08	0.58	13.0	2	<5	199	0.30	0.01	2.73	0.53	25.6	5.1	47.1	1.55
5213340	0.03	0.05	0.5	<1	<5	67	0.09	<0.01	23.9	0.18	3.51	0.9	19.2	0.08
5213341	0.04	2.59	6.2	2	<5	4	0.09	<0.01	0.52	0.11	1.60	33.2	196	<0.05
5213343	0.07	4.05	1.2	2	<5	5	0.19	0.01	1.93	0.02	1.73	35.1	78.0	1.92
5213344	0.11	4.05	1.3	2	<5	<1	0.06	0.01	0.51	0.01	3.13	36.6	82.3	2.88
5213345	0.10	3.07	1.5	2	<5	5	0.09	<0.01	0.76	0.09	4.06	34.4	68.6	0.48
5213346	0.63	4.33	5.9	3	<5	<1	<0.05	0.17	0.05	0.05	3.01	41.3	140	0.34
5213347	0.08	2.35	2.4	2	<5	3	0.08	0.05	0.67	0.05	3.49	22.9	122	0.22
5213349	0.14	3.65	1.0	<1	<5	<1	0.08	0.04	0.62	0.05	4.74	31.4	45.6	2.20
5213350	0.38	3.68	25.6	4	<5	<1	<0.05	0.67	0.41	0.06	3.37	240	123	0.10
5213351	0.09	2.84	3.2	1	<5	<1	<0.05	0.15	0.31	0.03	1.62	30.1	148	0.14
5213352	97.4	0.22	69.7	9030	<5	11	<0.05	0.09	0.12	0.41	0.69	1.8	175	0.22
5213353	0.18	2.27	3.3	7	<5	<1	0.12	<0.01	1.06	0.08	3.15	35.8	118	0.12
5213354	2.13	2.69	2.6	27	<5	1	<0.05	0.11	0.42	0.30	3.04	40.6	77.3	0.28
5213355	0.33	3.61	6.8	2	<5	<1	<0.05	0.36	0.34	0.06	2.21	31.4	111	0.19
5213356	4.87	0.17	49.3	63	<5	<1	<0.05	1.96	0.11	1.17	0.40	68.9	169	<0.05
5213357	0.10	2.58	1.1	1	<5	2	0.15	0.02	1.51	0.07	3.26	27.0	125	0.59
5213358	0.05	0.59	0.4	<1	<5	12	0.06	<0.01	0.04	0.03	7.50	1.4	77.3	0.29
5213189	0.06	3.90	0.9	1	<5	9	0.14	<0.01	4.90	0.11	4.45	38.4	232	0.44
5213190	0.10	3.38	1.9	3	<5	17	0.12	0.02	2.45	0.07	5.65	39.5	171	0.73
5213191	0.13	2.28	2.8	<1	<5	9	0.11	0.09	1.23	0.03	2.44	51.6	130	1.01

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
Unit:	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.01	0.01	0.1	1	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.5	0.05
5213192	0.12	1.30	1.7	<1	<5	32	0.07	0.11	1.08	0.03	2.74	37.5	50.3	2.11
5213193	0.07	1.39	1.1	<1	<5	49	0.32	0.25	0.94	0.06	35.1	9.7	46.2	0.25
5213194	0.01	0.05	<0.1	<1	<5	34	<0.05	<0.01	>25	0.80	1.02	0.7	8.0	<0.05
5213195	0.25	2.20	7.4	<1	<5	135	0.45	0.05	10.1	0.18	14.3	13.4	29.5	0.65
5213196	0.06	0.30	1.9	<1	<5	106	0.18	0.09	0.62	0.10	15.8	0.4	36.7	1.14
5213197	0.04	0.36	1.3	3	<5	49	0.21	0.06	1.26	0.06	25.2	2.5	15.8	1.09
5213198	0.11	0.50	4.1	<1	<5	10	<0.05	<0.01	0.53	0.46	0.94	5.7	99.2	0.08
5213199	0.08	2.27	1.0	<1	<5	8	0.08	<0.01	2.50	0.12	4.58	25.5	123	0.23
5213200	0.02	0.31	7.0	2	<5	27	0.23	<0.01	12.2	0.03	0.19	92.0	880	0.10
5213202	0.06	4.20	1.3	9	<5	<1	0.08	0.13	0.55	0.02	5.33	55.9	65.1	1.56
5213203	0.83	2.61	5.1	1	<5	<1	<0.05	0.15	0.36	1.01	2.17	53.9	69.1	0.07
5213204	1.27	3.11	5.9	8	<5	<1	<0.05	0.49	0.23	0.85	1.30	110	149	0.53
5213205	0.04	1.72	4.8	<1	<5	1	0.05	0.01	1.10	0.17	2.08	34.9	105	0.71
5213206	0.05	3.40	1.8	2	<5	3	0.33	<0.01	3.67	0.11	6.93	39.4	24.7	0.97
5213208	0.03	0.31	1.9	<1	<5	113	0.20	0.01	0.65	0.10	33.5	2.0	42.6	0.78
5213209	0.08	3.29	4.4	<1	<5	58	0.09	0.02	1.80	0.10	4.45	22.4	20.4	1.67
5213210	0.06	2.71	2.4	<1	<5	34	0.13	<0.01	4.04	0.05	8.26	18.8	29.4	0.82

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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SAMPLE TYPE: Soil

Analyte:	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Sample Description RDL:	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	0.01
5213342	25.0	2.15	4.76	<0.05	0.34	<0.01	<0.005	0.09	4.5	8.3	0.61	407	4.40	0.08
5213348	5440	8.82	2.71	0.10	0.26	7.13	<0.005	0.09	4.5	7.2	0.73	504	23.3	0.05
5213201	23.6	2.18	3.55	<0.05	0.32	<0.01	<0.005	0.09	3.9	8.2	0.61	367	3.81	0.08
5213207	5500	8.81	2.09	0.11	0.26	7.57	<0.005	0.09	4.8	7.0	0.72	496	22.3	0.05
5213332	134	4.42	4.95	0.17	0.16	<0.01	0.016	0.03	1.4	1.8	0.54	359	0.74	0.12
5213333	55.6	4.48	6.13	0.05	0.03	<0.01	0.048	0.12	3.9	6.9	3.37	1210	0.28	0.02
5213334	161	5.69	10.2	0.09	<0.02	<0.01	0.058	0.07	1.4	17.1	3.77	1360	0.35	0.03
5213335	46.3	6.15	8.15	0.22	0.52	<0.01	0.017	<0.01	1.3	2.6	0.85	309	0.99	0.04
5213336	11.8	0.86	2.87	0.09	0.23	<0.01	<0.005	0.13	11.0	4.9	0.38	189	0.56	0.06
5213337	8.4	2.15	7.38	0.17	0.91	<0.01	0.014	0.08	18.7	16.9	0.99	349	0.97	0.10
5213338	1.8	0.92	4.28	0.10	0.54	<0.01	<0.005	0.14	5.3	7.2	0.28	233	0.64	0.11
5213339	12.2	1.05	1.58	0.09	0.40	<0.01	0.008	0.27	15.7	1.2	0.12	308	1.22	0.05
5213340	<0.1	0.19	0.22	<0.05	0.05	0.02	<0.005	0.02	5.2	1.1	0.58	77	1.36	<0.01
5213341	71.4	5.46	6.17	0.18	0.32	<0.01	0.006	0.02	0.5	16.5	2.76	636	0.50	0.06
5213343	7.3	17.2	17.9	0.34	0.09	<0.01	0.011	<0.01	0.7	11.3	4.00	1390	2.49	0.02
5213344	120	9.36	18.0	0.25	0.14	<0.01	0.019	<0.01	0.8	10.6	4.13	1820	0.16	0.03
5213345	74.8	5.69	12.7	0.19	0.17	<0.01	0.013	0.01	1.2	13.6	3.08	1310	0.25	0.05
5213346	1170	11.4	21.1	0.28	0.07	<0.01	0.151	0.02	1.0	6.4	4.04	1240	18.6	0.02
5213347	68.2	4.42	9.08	0.16	0.35	<0.01	0.021	0.01	1.1	8.0	2.26	1120	1.27	0.10
5213349	438	8.17	17.0	0.23	0.23	<0.01	0.027	<0.01	1.3	8.3	3.36	1890	0.57	0.05
5213350	369	17.4	18.1	0.39	0.30	<0.01	0.023	<0.01	1.1	7.3	3.43	1340	3.91	0.04
5213351	103	7.90	11.9	0.20	0.31	<0.01	0.022	<0.01	0.4	6.0	3.19	1580	0.40	0.04
5213352	181	1.52	0.83	0.10	0.05	0.06	0.026	0.05	0.4	0.7	0.14	64	6.47	0.03
5213353	89.1	4.02	7.06	0.18	0.43	<0.01	0.011	<0.01	0.9	9.2	2.28	689	5.62	0.11
5213354	6270	9.36	14.3	0.23	0.46	0.01	0.194	<0.01	0.8	4.0	2.36	1550	2.49	0.03
5213355	144	9.54	15.2	0.23	0.29	<0.01	0.101	<0.01	0.6	6.0	3.35	2220	3.34	0.03
5213356	720	14.6	1.09	0.28	0.09	0.05	0.200	<0.01	0.1	0.2	0.08	87	131	0.03
5213357	94.5	4.12	9.14	0.18	0.21	<0.01	0.028	0.03	0.9	11.9	2.78	888	1.58	0.26
5213358	2.4	1.42	3.92	0.11	0.03	<0.01	0.031	0.05	2.9	3.9	0.33	318	1.29	0.08
5213189	64.1	5.44	14.4	0.19	<0.02	<0.01	0.065	<0.01	1.4	21.6	4.42	1140	0.28	0.05
5213190	55.5	5.82	16.9	0.19	0.03	<0.01	0.067	<0.01	1.9	13.3	3.71	979	0.40	0.03
5213191	243	4.63	10.4	0.19	0.31	<0.01	0.025	0.03	0.8	9.8	2.36	539	1.38	0.27

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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SAMPLE TYPE: Soil

Analyte:	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
Sample Description RDL:	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.05	0.01
5213192	189	2.89	5.24	0.14	0.12	<0.01	0.017	0.10	0.9	6.4	1.07	298	0.74	0.19
5213193	6.9	2.50	7.35	0.15	0.49	<0.01	0.025	0.05	17.1	14.9	1.18	467	1.22	0.04
5213194	<0.1	0.08	0.17	<0.05	0.03	<0.01	<0.005	<0.01	1.9	2.3	1.34	86	0.31	<0.01
5213195	100	3.19	7.25	<0.05	0.07	<0.01	0.032	0.11	14.2	39.2	2.13	747	0.31	0.02
5213196	5.9	0.17	0.97	0.09	0.59	<0.01	<0.005	0.22	9.9	0.4	0.01	145	0.52	0.05
5213197	1.9	0.73	1.30	0.10	0.57	<0.01	<0.005	0.16	15.3	1.0	0.11	249	0.25	0.03
5213198	11.8	0.95	2.22	0.10	<0.02	<0.01	0.008	<0.01	0.4	3.8	0.48	208	1.73	<0.01
5213199	62.2	3.83	11.5	0.15	0.29	0.01	0.019	<0.01	1.4	8.2	2.42	919	0.30	0.10
5213200	17.0	3.45	1.08	<0.05	<0.02	0.40	0.007	<0.01	0.1	3.9	6.45	1640	0.61	0.01
5213202	27.7	11.3	17.1	0.30	0.24	<0.01	0.026	<0.01	1.5	14.1	4.28	1940	0.33	0.03
5213203	3160	8.01	9.67	0.21	0.22	<0.01	0.099	<0.01	0.7	5.7	2.61	1200	4.83	0.04
5213204	6380	11.7	11.7	0.26	0.15	0.01	0.159	<0.01	0.4	3.8	2.95	1510	20.4	<0.01
5213205	106	3.46	7.56	0.14	0.24	<0.01	0.017	0.01	0.6	6.8	1.65	937	2.19	0.07
5213206	75.3	7.25	15.9	0.22	0.23	<0.01	0.080	0.01	2.0	14.7	3.61	1430	2.05	0.06
5213208	3.4	0.64	1.27	0.11	0.56	<0.01	<0.005	0.16	19.9	0.7	0.03	225	0.56	0.06
5213209	135	4.13	8.92	0.15	0.13	<0.01	0.022	0.04	1.5	12.3	1.71	1020	0.36	0.21
5213210	19.0	4.83	10.6	0.19	0.20	<0.01	0.051	<0.01	3.8	17.4	2.08	1350	0.54	0.05

Certified By:



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	0.01
5213342	0.40	20.3	595	2.9	9.5	0.001	0.059	2.65	6.6	<0.2	<0.2	39.7	<0.01	<0.01
5213348	0.76	38.9	483	5830	8.1	0.017	9.84	82.1	3.1	6.6	32.1	36.1	<0.01	23.5
5213201	0.32	18.7	541	3.3	8.2	0.001	0.060	2.16	5.8	<0.2	<0.2	36.7	<0.01	<0.01
5213207	0.88	39.4	493	5820	8.2	0.015	9.61	86.6	3.1	3.4	32.5	36.0	<0.01	26.2
5213332	0.15	23.8	521	1.1	0.8	0.002	1.71	0.06	4.9	0.9	<0.2	8.0	<0.01	0.03
5213333	0.08	61.0	589	0.9	3.7	<0.001	0.227	<0.05	26.7	0.4	<0.2	311	<0.01	<0.01
5213334	0.09	48.4	403	0.9	2.7	<0.001	0.814	0.05	29.0	1.4	<0.2	205	<0.01	<0.01
5213335	0.32	4.0	549	2.0	0.2	0.004	4.68	0.12	4.6	4.2	0.3	25.9	<0.01	<0.01
5213336	<0.05	11.4	453	10.6	3.7	<0.001	0.042	<0.05	2.2	<0.2	<0.2	38.1	<0.01	<0.01
5213337	1.80	24.2	926	10.8	3.5	<0.001	0.012	0.07	2.2	0.3	0.7	36.5	<0.01	<0.01
5213338	0.36	3.7	250	9.0	5.7	<0.001	0.011	0.07	1.0	<0.2	0.2	35.2	<0.01	<0.01
5213339	<0.05	6.5	433	2.3	7.7	<0.001	0.163	0.25	1.8	0.9	<0.2	153	<0.01	<0.01
5213340	0.16	7.4	358	0.6	1.0	0.004	0.437	0.17	1.4	0.5	<0.2	1650	<0.01	0.03
5213341	0.15	60.2	348	0.9	0.4	0.002	3.62	0.27	6.8	0.4	0.2	12.8	<0.01	<0.01
5213343	0.28	31.3	244	0.4	0.6	<0.001	0.376	0.07	3.3	0.5	0.5	108	<0.01	0.01
5213344	0.15	34.1	456	0.4	0.8	<0.001	0.512	<0.05	5.9	0.9	0.5	7.7	<0.01	<0.01
5213345	0.10	34.7	445	2.0	0.5	<0.001	0.130	<0.05	4.5	0.4	0.3	14.9	<0.01	<0.01
5213346	0.20	19.8	393	1.9	0.8	0.117	2.88	0.28	30.4	8.3	0.6	5.7	<0.01	0.09
5213347	0.11	39.2	351	0.6	0.6	0.003	0.533	<0.05	6.4	0.9	0.4	12.4	<0.01	0.01
5213349	0.14	29.4	504	0.3	0.7	0.003	0.710	0.09	5.0	1.5	0.4	9.7	<0.01	0.01
5213350	0.42	37.0	328	5.0	0.1	0.045	>10	0.33	12.2	29.6	0.2	13.8	<0.01	0.07
5213351	0.13	31.9	320	2.0	<0.1	0.002	4.25	<0.05	9.2	1.9	0.3	6.2	<0.01	0.02
5213352	0.09	4.8	47	5370	1.4	<0.001	0.270	50.2	0.5	1.6	<0.2	14.7	<0.01	0.46
5213353	0.14	41.5	457	8.1	0.2	0.002	0.569	0.08	7.5	0.7	0.3	8.6	<0.01	<0.01
5213354	0.22	15.5	337	16.5	0.2	0.017	3.72	0.14	6.0	9.7	0.6	11.1	<0.01	0.12
5213355	0.18	25.0	274	3.7	0.1	0.010	3.51	<0.05	15.1	4.7	0.5	8.8	<0.01	0.17
5213356	0.49	8.2	27	15.6	<0.1	0.561	>10	0.20	1.7	54.8	0.2	11.7	<0.01	1.54
5213357	0.13	38.5	524	1.6	0.3	0.003	0.182	<0.05	9.3	0.7	0.5	11.4	<0.01	0.01
5213358	<0.05	1.8	58	0.8	1.1	<0.001	0.008	<0.05	3.3	<0.2	<0.2	3.3	<0.01	<0.01
5213189	0.10	68.3	449	0.7	0.2	<0.001	0.193	<0.05	34.7	0.3	0.2	106	<0.01	<0.01
5213190	0.10	48.0	527	1.6	0.3	0.001	0.749	0.10	24.3	0.4	0.3	39.6	<0.01	<0.01
5213191	0.13	47.8	436	1.5	0.5	0.002	1.37	0.19	8.8	1.7	0.4	9.6	<0.01	0.03

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
Unit:	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description RDL:	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	0.01
5213192	0.15	39.0	664	1.6	3.2	0.001	0.924	0.18	7.0	0.6	0.3	15.5	<0.01	0.05
5213193	0.71	23.1	928	13.4	1.9	<0.001	0.023	0.06	4.8	0.2	0.4	44.5	<0.01	<0.01
5213194	0.22	4.9	278	0.5	0.3	<0.001	0.484	0.10	0.6	0.4	<0.2	456	<0.01	0.02
5213195	0.07	25.8	928	3.9	4.1	<0.001	0.320	0.14	5.7	1.0	<0.2	1140	<0.01	0.03
5213196	0.16	0.9	95	7.9	11.6	<0.001	0.024	0.06	0.2	<0.2	<0.2	39.8	<0.01	0.01
5213197	<0.05	1.9	404	5.2	5.7	<0.001	0.027	<0.05	0.4	<0.2	<0.2	48.5	<0.01	<0.01
5213198	<0.05	8.9	58	0.3	0.2	<0.001	0.010	0.09	3.3	<0.2	<0.2	3.9	<0.01	<0.01
5213199	0.12	40.8	375	0.4	0.2	<0.001	0.149	<0.05	5.9	0.5	0.3	15.2	<0.01	<0.01
5213200	0.11	1140	<10	0.8	0.2	<0.001	0.239	20.7	10.0	0.3	<0.2	205	<0.01	<0.01
5213202	0.20	42.1	529	0.6	0.7	0.003	4.35	0.14	7.2	2.8	0.6	11.8	<0.01	0.05
5213203	0.13	29.1	258	1.2	0.1	0.031	4.78	0.12	9.1	5.6	0.5	11.4	<0.01	0.09
5213204	0.18	31.7	154	2.4	0.2	0.117	8.12	0.06	14.3	17.5	0.4	8.5	<0.01	0.37
5213205	0.06	41.7	393	0.8	0.7	0.002	0.703	0.10	3.8	0.5	0.2	8.1	<0.01	<0.01
5213206	0.15	28.2	586	0.4	0.8	0.004	0.114	0.14	15.6	0.5	0.6	65.9	<0.01	<0.01
5213208	<0.05	2.4	354	14.0	5.1	<0.001	0.028	0.39	0.7	<0.2	<0.2	50.5	<0.01	<0.01
5213209	0.10	9.2	531	0.4	1.4	<0.001	0.032	0.12	8.4	0.2	<0.2	63.9	<0.01	<0.01
5213210	0.13	10.5	444	0.7	0.3	<0.001	0.150	0.22	17.9	0.5	0.3	89.3	<0.01	<0.01

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

 5623 McADAM ROAD
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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Th	Ti	Ti	U	V	W	Y	Zn	Zr	Zn-OL
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	0.05
5213342	4.6	0.145	2.41	<0.05	63.6	16.3	9.06	42.4	8.6	-
5213348	8.6	0.068	14.9	<0.05	44.1	<0.05	6.39	>10000	5.0	4.06
5213201	5.1	0.137	2.90	<0.05	56.9	16.7	8.03	42.9	7.3	-
5213207	8.3	0.071	16.0	<0.05	45.3	<0.05	6.46	>10000	5.0	4.04
5213332	<0.1	0.252	<0.02	<0.05	97.8	0.14	16.7	86.1	3.3	-
5213333	0.2	<0.005	0.03	0.05	128	<0.05	13.5	46.6	0.5	-
5213334	<0.1	<0.005	<0.02	<0.05	176	<0.05	8.61	53.9	<0.5	-
5213335	<0.1	0.457	<0.02	<0.05	114	0.14	9.83	24.2	11.9	-
5213336	2.1	<0.005	0.03	0.35	17.7	<0.05	2.48	33.6	9.9	-
5213337	10.1	0.185	0.02	1.10	46.5	0.56	11.5	42.7	50.7	-
5213338	5.5	0.026	0.04	1.24	12.8	<0.05	2.76	30.6	15.3	-
5213339	6.3	<0.005	0.09	0.84	9.3	<0.05	4.58	34.9	21.4	-
5213340	0.3	<0.005	<0.02	1.47	12.2	<0.05	8.36	13.8	2.9	-
5213341	<0.1	0.318	<0.02	0.14	108	0.11	6.00	52.0	9.8	-
5213343	<0.1	0.226	<0.02	0.12	174	0.10	6.61	85.8	2.5	-
5213344	<0.1	0.348	0.02	<0.05	201	<0.05	9.95	94.0	3.8	-
5213345	<0.1	0.312	<0.02	<0.05	123	<0.05	11.5	83.0	4.6	-
5213346	<0.1	0.111	0.03	0.21	295	0.06	8.20	90.9	2.5	-
5213347	0.2	0.409	0.02	0.33	122	<0.05	12.7	75.4	10.8	-
5213349	<0.1	0.392	0.03	0.09	186	<0.05	15.0	101	6.4	-
5213350	<0.1	0.328	<0.02	0.34	181	0.09	9.11	92.9	7.0	-
5213351	<0.1	0.295	<0.02	0.08	153	<0.05	7.32	110	8.5	-
5213352	<0.1	0.016	<0.02	0.09	11.7	2.14	0.57	97.9	1.3	-
5213353	<0.1	0.451	<0.02	2.03	120	0.08	12.7	50.3	13.3	-
5213354	<0.1	0.395	<0.02	0.06	182	<0.05	10.3	88.6	14.3	-
5213355	<0.1	0.440	<0.02	0.09	230	<0.05	9.36	141	8.7	-
5213356	<0.1	0.092	0.03	<0.05	23.5	<0.05	1.30	221	3.2	-
5213357	<0.1	0.410	<0.02	0.09	145	0.08	17.8	66.9	4.4	-
5213358	0.2	<0.005	<0.02	<0.05	7.0	0.10	3.34	40.2	1.1	-
5213189	<0.1	0.083	<0.02	<0.05	249	0.10	12.8	62.5	<0.5	-
5213190	0.1	0.048	<0.02	0.05	246	<0.05	13.9	81.8	0.9	-
5213191	<0.1	0.236	0.03	0.39	139	0.08	12.0	51.5	8.5	-

Certified By:

Ron Cardinal


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte:	Th	Ti	Ti	U	V	W	Y	Zn	Zr	Zn-OL
Unit:	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Sample Description RDL:	0.1	0.005	0.02	0.05	0.5	0.05	0.05	0.5	0.5	0.05
5213192	<0.1	0.167	0.09	<0.05	88.6	0.20	9.04	34.3	2.7	-
5213193	9.2	0.118	<0.02	0.74	47.5	0.32	10.7	45.0	28.4	-
5213194	0.1	<0.005	0.04	0.27	10.7	<0.05	6.40	16.9	1.6	-
5213195	1.0	<0.005	0.02	0.32	60.2	<0.05	15.7	56.9	2.9	-
5213196	8.8	<0.005	0.08	1.25	1.0	0.11	3.30	8.6	18.1	-
5213197	5.3	<0.005	0.05	1.10	5.3	0.07	3.49	18.3	21.9	-
5213198	0.1	<0.005	<0.02	<0.05	38.9	0.08	1.43	24.4	0.6	-
5213199	<0.1	0.377	<0.02	0.07	130	0.08	15.8	46.7	7.7	-
5213200	<0.1	<0.005	0.06	0.06	41.7	0.10	2.07	19.7	<0.5	-
5213202	<0.1	0.376	0.02	<0.05	205	<0.05	15.2	113	5.8	-
5213203	<0.1	0.217	<0.02	0.05	133	0.06	7.50	155	5.9	-
5213204	<0.1	0.184	0.15	0.23	152	0.06	7.13	121	4.2	-
5213205	<0.1	0.257	0.03	0.68	110	<0.05	10.5	101	6.4	-
5213206	<0.1	0.267	<0.02	0.31	342	0.05	22.7	54.6	7.7	-
5213208	7.4	<0.005	0.04	2.94	3.5	0.10	5.11	25.4	18.4	-
5213209	0.1	0.195	<0.02	0.05	126	0.14	8.57	41.7	3.6	-
5213210	0.4	0.153	0.02	0.15	182	0.08	11.7	30.6	6.7	-

Comments: RDL - Reported Detection Limit

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Fire Assay - Trace Au, ICP-OES finish (202052)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte: Au
Unit: ppm
Sample Description RDL: 0.001

5213342	0.003
5213348	0.945
5213201	0.001
5213207	0.896
5213332	0.005
5213333	0.005
5213334	0.006
5213335	0.006
5213336	0.002
5213337	0.001
5213338	0.003
5213339	0.003
5213340	0.001
5213341	0.003
5213343	0.002
5213344	0.003
5213345	0.003
5213346	0.004
5213347	0.002
5213349	0.002
5213350	0.014
5213351	0.004
5213352	8.61
5213353	0.011
5213354	0.034
5213355	0.003
5213356	0.043
5213357	0.003
5213358	0.002
5213189	0.004
5213190	0.004
5213191	0.031

Certified By:


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AGAT WORK ORDER: 11D508748

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TEL (905)501-9998
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<http://www.agatlabs.com>

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Fire Assay - Trace Au, ICP-OES finish (202052)

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte: Au
Unit: ppm
Sample Description RDL: 0.001

5213192	0.002
5213193	0.002
5213194	0.004
5213195	0.003
5213196	0.001
5213197	0.006
5213198	0.002
5213199	0.001
5213200	0.004
5213202	0.009
5213203	0.004
5213204	0.013
5213205	0.002
5213206	0.003
5213208	0.004
5213209	0.002
5213210	0.003

Comments: RDL - Reported Detection Limit

Certified By:


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

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

CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Sample Login Weight

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

Analyte: Sample
Login Weight
Unit: kg
Sample Description RDL:

5213342	0.10
5213348	0.10
5213201	0.14
5213207	0.10
5213332	0.78
5213333	0.60
5213334	0.66
5213335	0.70
5213336	0.70
5213337	0.62
5213338	0.58
5213339	0.66
5213340	0.54
5213341	0.62
5213343	0.84
5213344	0.78
5213345	0.58
5213346	0.54
5213347	0.76
5213349	0.96
5213350	0.74
5213351	0.64
5213352	0.56
5213353	0.98
5213354	0.56
5213355	0.58
5213356	0.62
5213357	0.60
5213358	0.80
5213189	0.88
5213190	0.72
5213191	0.66

Certified By:

Ron Cardinal

UTM Exploration Services Ltd.

Results relate only to the items tested


AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

5623 McADAM ROAD
MISSISSAUGA, ONTARIO
CANADA L4Z 1N9
TEL (905)501-9998
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CLIENT NAME: UTM EXPLORATION SERVICES

ATTENTION TO: RICHARD BECK

Sample Login Weight

DATE SAMPLED: Jul 08, 2011

DATE RECEIVED: Jul 11, 2011

DATE REPORTED: Oct 11, 2011

SAMPLE TYPE: Soil

 Analyte: Sample
Login Weight

Unit: kg

Sample Description RDL: 0.01

5213192 0.86

5213193 0.74

5213194 0.60

5213195 0.58

5213196 0.78

5213197 0.56

5213198 0.80

5213199 0.54

5213200 0.68

5213202 1.18

5213203 0.78

5213204 0.86

5213205 0.48

5213206 0.50

5213208 0.64

5213209 0.76

5213210 0.92

Comments: RDL - Reported Detection Limit

Certified By:



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

ATTENTION TO: RICHARD BECK

Solid Analysis											
RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL				
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits	
										Lower	Upper
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)											
Ag	1	2529804	0.15	0.14	6.9%	0.06				80%	120%
Al	1	2529800	1.32	1.39	5.2%	< 0.01				80%	120%
As	1	2529804	0.9	0.9	0.0%	0.3	24.7	28.0	88%	80%	120%
Au	1	2529804	2.25	1.94	14.8%	0.18				80%	120%
B	1	2529804	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	2529800	104	108	3.8%	< 1				80%	120%
Be	1	2529804	0.07	0.07	0.0%	< 0.05				80%	120%
Bi	1	2529804	0.03	0.03	0.0%	< 0.01				80%	120%
Ca	1	2529800	0.939	0.977	4.0%	< 0.01				80%	120%
Cd	1	2529804	0.709	0.654	8.1%	< 0.01				80%	120%
Ce	1	2529804	4.88	4.94	1.2%	< 0.01	49	63	77%	80%	120%
Co	1	2529804	40.4	40.6	0.5%	< 0.1	13.0	14.0	92%	80%	120%
Cr	1	2529800	26.1	26.3	0.8%	< 0.5				80%	120%
Cs	1	2529804	0.25	0.25	0.0%	< 0.05				80%	120%
Cu	1	2529800	25.0	25.9	3.5%	< 0.1	42.9	38.0	112%	80%	120%
Fe	1	2529800	2.15	2.30	6.7%	< 0.01	3.40	3.50	97%	80%	120%
Ga	1	2529804	4.95	4.98	0.6%	< 0.05				80%	120%
Ge	1	2529804	0.17	0.18	5.7%	0.09				80%	120%
Hf	1	2529804	0.16	0.16	0.0%	< 0.02				80%	120%
Hg	1	2529804	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
In	1	2529804	0.0164	0.0171	4.2%	< 0.005				80%	120%
K	1	2529800	0.09	0.09	0.0%	< 0.01				80%	120%
La	1	2529804	1.44	1.46	1.4%	< 0.1				80%	120%
Li	1	2529804	1.8	1.8	0.0%	< 0.1				80%	120%
Mg	1	2529800	0.613	0.640	4.3%	< 0.01				80%	120%
Mn	1	2529800	407	412	1.2%	< 1	2630	3000	87%	80%	120%
Mo	1	2529804	0.743	0.763	2.7%	< 0.05	6.75	7.00	96%	80%	120%
Na	1	2529800	0.08	0.08	0.0%	< 0.01				80%	120%
Nb	1	2529804	0.15	0.16	6.5%	< 0.05				80%	120%
Ni	1	2529804	23.8	24.2	1.7%	< 0.2				80%	120%
P	1	2529800	595	608	2.2%	< 10				80%	120%
Pb	1	2529804	1.11	1.19	7.0%	< 0.1	39	44	88%	80%	120%
Rb	1	2529804	0.8	0.8	0.0%	< 0.1	17	13	128%	80%	120%
Re	1	2529804	0.002	0.002	0.0%	< 0.001				80%	120%
S	1	2529800	0.0591	0.0609	3.0%	< 0.005				80%	120%
Sb	1	2529804	0.06	0.06	0.0%	< 0.05				80%	120%
Sc	1	2529804	4.87	4.81	1.2%	< 0.1				80%	120%
Se	1	2529804	0.9	0.9	0.0%	< 0.2				80%	120%
Sn	1	2529804	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Sr	1	2529800	39.7	40.0	0.8%	1.6	302	390	78%	80%	120%
Ta	1	2529804	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Te	1	2529804	0.028	0.022	24.0%	< 0.01				80%	120%
Th	1	2529804	< 0.1	< 0.1	0.0%	< 0.1				80%	120%
Ti	1	2529800	0.145	0.150	3.4%	< 0.005	0.06	0.07	83%	80%	120%



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

ATTENTION TO: RICHARD BECK

Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Ti	1	2529804	< 0.02	< 0.02	0.0%	< 0.02	0.3	0.3	103%	80% 120%
U	1	2529804	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
V	1	2529800	63.6	63.9	0.5%	< 0.5				80% 120%
W	1	2529804	0.14	0.14	0.0%	< 0.05				80% 120%
Y	1	2529804	16.7	17.2	2.9%	< 0.05		7		80% 120%
Zn	1	2529800	42.4	45.2	6.4%	2.1	207	204	101%	80% 120%
Zr	1	2529804	3.31	3.46	4.4%	< 0.5				80% 120%
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)										
Ag	1	2529828	0.05	0.03		< 0.01				80% 120%
Al	1	2529828	0.59	0.59	0.0%	< 0.01				80% 120%
As	1	2529828	0.4	0.4	0.0%	< 0.1				80% 120%
Au	1	2529828	0.10	< 0.01		< 0.01				80% 120%
B	1	2529828	< 5	< 5	0.0%	< 5				80% 120%
Ba	1	2529828	12	12	0.0%	< 1				80% 120%
Be	1	2529828	0.063	0.066	4.7%	< 0.05				80% 120%
Bi	1	2529828	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Ca	1	2529828	0.04	0.04	0.0%	< 0.01				80% 120%
Cd	1	2529828	0.03	0.03	0.0%	< 0.01				80% 120%
Ce	1	2529828	7.50	7.52	0.3%	< 0.01				80% 120%
Co	1	2529828	1.39	1.31	5.9%	< 0.1				80% 120%
Cr	1	2529828	77.3	74.4	3.8%	< 0.5				80% 120%
Cs	1	2529828	0.29	0.28	3.5%	< 0.05				80% 120%
Cu	1	2529828	2.39	1.92	21.8%	< 0.1	3914	4700	83%	80% 120%
Fe	1	2529828	1.42	1.43	0.7%	< 0.01				80% 120%
Ga	1	2529828	3.92	3.98	1.5%	< 0.05				80% 120%
Ge	1	2529828	0.11	0.12	8.7%	< 0.05				80% 120%
Hf	1	2529828	0.03	0.03	0.0%	< 0.02				80% 120%
Hg	1	2529828	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
In	1	2529828	0.0308	0.0315	2.2%	< 0.005				80% 120%
K	1	2529828	0.05	0.05	0.0%	< 0.01				80% 120%
La	1	2529828	2.9	2.9	0.0%	< 0.1				80% 120%
Li	1	2529828	3.9	3.9	0.0%	< 0.1				80% 120%
Mg	1	2529828	0.33	0.32	3.1%	< 0.01				80% 120%
Mn	1	2529828	318	319	0.3%	< 1				80% 120%
Mo	1	2529828	1.29	1.17	9.8%	< 0.05				80% 120%
Na	1	2529828	0.085	0.085	0.0%	< 0.01				80% 120%
Nb	1	2529828	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
Ni	1	2529828	1.8	1.6	11.8%	< 0.2				80% 120%
P	1	2529828	58	58	0.0%	< 10				80% 120%
Pb	1	2529828	0.8	0.8	0.0%	< 0.1				80% 120%
Rb	1	2529828	1.1	1.1	0.0%	< 0.1				80% 120%
Re	1	2529828	< 0.001	< 0.001	0.0%	< 0.001				80% 120%
S	1	2529828	0.0075	0.0073	2.7%	< 0.005				80% 120%



Quality Assurance

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

ATTENTION TO: RICHARD BECK

Solid Analysis (Continued)

RPT Date: Oct 11, 2011		REPLICATE				Method Blank	REFERENCE MATERIAL			
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Result Value	Expect Value	Recovery	Acceptable Limits
										Lower Upper
Sb	1	2529828	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
Sc	1	2529828	3.3	3.3	0.0%	< 0.1				80% 120%
Se	1	2529828	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Sn	1	2529828	< 0.2	< 0.2	0.0%	< 0.2				80% 120%
Sr	1	2529828	3.3	1.5		< 0.2	322	390	83%	80% 120%
Ta	1	2529828	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Te	1	2529828	< 0.01	< 0.01	0.0%	< 0.01				80% 120%
Th	1	2529828	0.2	0.2	0.0%	< 0.1				80% 120%
Ti	1	2529828	< 0.005	< 0.005	0.0%	< 0.005				80% 120%
Tl	1	2529828	< 0.02	< 0.02	0.0%	< 0.02				80% 120%
U	1	2529828	< 0.05	< 0.05	0.0%	< 0.05				80% 120%
V	1	2529828	7.0	7.2	2.8%	< 0.5				80% 120%
W	1	2529828	0.10	0.09	10.5%	< 0.05				80% 120%
Y	1	2529828	3.34	3.29	1.5%	< 0.05		7		80% 120%
Zn	1	2529828	40.2	39.4	2.0%	< 0.5				80% 120%
Zr	1	2529828	1.1	0.8		< 0.5				80% 120%
Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)										
Cu	1					< 0.1	3912	4700	83%	80% 120%
Sr	1					< 0.2	319	390	82%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2529804	0.005	0.004	22.2%	< 0.001	0.443	0.417	106%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2529828	0.002	0.001		< 0.001	0.187	0.203	92%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2529840	0.004	0.004	0.0%	< 0.001	0.0808	0.0849	95%	80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2529848	0.003	0.002		< 0.001				80% 120%
Fire Assay - Trace Au, ICP-OES finish (202052)										
Au	1	2529802	0.001	< 0.001		< 0.001	0.0816	0.0849	96%	80% 120%

Certified By:



Method Summary

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

ATTENTION TO: RICHARD BECK

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12017		ICP-MS
Al	MIN-200-12017		ICP/OES
As	MIN-200-12017		ICP-MS
Au	MIN-200-12017		ICP-MS
B	MIN-200-12017		ICP/OES
Ba	MIN-200-12017		ICP-MS
Be	MIN-200-12017		ICP-MS
Bi	MIN-200-12017		ICP-MS
Ca	MIN-200-12017		ICP/OES
Cd	MIN-200-12017		ICP-MS
Ce	MIN-200-12017		ICP-MS
Co	MIN-200-12017		ICP-MS
Cr	MIN-200-12017		ICP/OES
Cs	MIN-200-12017		ICP-MS
Cu	MIN-200-12017		ICP-MS
Fe	MIN-200-12017		ICP/OES
Ga	MIN-200-12017		ICP-MS
Ge	MIN-200-12017		ICP-MS
Hf	MIN-200-12017		ICP-MS
Hg	MIN-200-12017		ICP-MS
In	MIN-200-12017		ICP-MS
K	MIN-200-12017		ICP/OES
La	MIN-200-12017		ICP-MS
Li	MIN-200-12017		ICP-MS
Mg	MIN-200-12017		ICP/OES
Mn	MIN-200-12017		ICP/OES
Mo	MIN-200-12017		ICP-MS
Na	MIN-200-12017		ICP/OES
Nb	MIN-200-12017		ICP-MS
Ni	MIN-200-12017		ICP-MS
P	MIN-200-12017		ICP/OES
Pb	MIN-200-12017		ICP-MS
Rb	MIN-200-12017		ICP-MS
Re	MIN-200-12017		ICP-MS
S	MIN-200-12017		ICP/OES
Sb	MIN-200-12017		ICP-MS
Sc	MIN-200-12017		ICP-MS
Se	MIN-200-12017		ICP-MS
Sn	MIN-200-12017		ICP-MS
Sr	MIN-200-12017		ICP-MS
Ta	MIN-200-12017		ICP-MS
Te	MIN-200-12017		ICP-MS
Th	MIN-200-12017		ICP-MS
Ti	MIN-200-12017		ICP/OES
Tl	MIN-200-12017		ICP-MS
U	MIN-200-12017		ICP-MS
V	MIN-200-12017		ICP/OES
W	MIN-200-12017		ICP-MS
Y	MIN-200-12017		ICP-MS



Method Summary

CLIENT NAME: UTM EXPLORATION SERVICES

AGAT WORK ORDER: 11D508748

PROJECT NO: HAR002

ATTENTION TO: RICHARD BECK

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Zn	MIN-200-12017		ICP-MS
Zr	MIN-200-12017		ICP-MS
Zn-OL			AA
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Sample Login Weight	MIN-200-12009		BALANCE

Appendix II: Field Notes

UTM EXPLORATION SERVICES																	
HARTLESS JOE PROJECT																	
WHITEHORSE DISTRICT, YUKON TERRITORY																	
SUMMARY OF FIELD RECORDS																	
Mapping Sta. No.	UTM Coordinate		Elev. (m.)	Rock Type	Alteration					Oxides		Mineralization				Remarks	
	East	North			sil	chl	epi	ser	carb	lim	mag	py	Sulfides (%)				
K2	516484	6753624		Andesite	1	2						-1					
K3	516510	6753607		Andesite	1	2						-1					
K4	516553	6753585		Andesite	1	2						-1					
K5	516553	6753546		Andesite	1	2				10	5	4					
KM4	516679	6753636		Andesite	1	1	1		1			-1					
KM5	516705	6753590		Andesite	1	1	1		1	1		-1					
KM6	516722	6753594		Andesite Porpherie	3	2						-1					
KM7	516730	6753598		Andesite Porpherie	3	2						-1					
KM8	516739	6753602		Andesite		2						-1					
KM9	516786	6753594		Basalt		3	1					-1					
KM20	515404	6753844		Basalt	2	2	3					-1					
KM18.5	515443	6753935		Basalt	1	2				3		-1					
KM17	515458	6753964		Andesite Volcaniclastic		2			4		4						
KM25	515240	6753568		Basalt		2			1		5						
KM22	515344	6753833		Gabbro?		2				3							
KM21	515347	6753846		Felsic						3							
KM28	515188	6753405		Felsic						6							
KM30	515990	6752682		Andesite/basalt		3			3	5		-1					
KM31	516011	6752624		Andesite Porpherie	1	3		1	3			-1					
KM32	516026	6752599		Andesite	2	2		1	2			1					
KM33	516044	6752577		Felsic	2					2							
KM34	516046	6752553		Felsic & Andesite	2	2				2							
KM36	516109	6752500		Felsic	2					2							
KM37	516122	6752492		Andesite	2					2		-1					
KM38	516144	6752465		Andesite	2	2				2		-1					
KM40	515949	6752131		Andesite Porpherie					4	2							
KM41	515967	6752172		Andesite?		1											
KM42	516037	6752258		Basalt	2	1											
KM44	515972	6752355		Volcaniclastic Andesite	1	2			4	1		-1					
KM45	515994	6752399		Gabbro?		2											
KM46	515946	6752413		Andesite Porpherie?	3	2				2		-1					
KM47	515878	6752406		Andesite	2	2											
KM50	515720	6752632		Andesite	1	2			3	2		-1					
KM52	515561	6752483		Andesite?	1	4				2	3						
KM53	515530	6752446		Basalt	1	4											
KM55	515461	6752341		Felsic	1					2							
KM56	515468	6752293		Basalt	1	3			4								
KM57	515403	6752278		Andesite	2	2			4								
KM58	515341	6752328		Andesite	2	3			4								
KM59	515245	6752407		Pillow Basalt	1	4			4								
KM60	515234	6752422		Andesite	3	2			4								
KM61	515234	6752422		Andesite	2	2	2			1		3					
KM63	517040	6753577		Felsic	2					2							
KM64	517069	6753569		Andesite	2	5			2			2					
KM66	516853	6753693		Andesite		3				2	3	3	-1			-1	
KM67	515657	6754232		Andesite	2	2			2			-1					
KM72	515371	6753956		Volcanic Breccia	4	3			5	5							
KM73	515325	6753976		Gabbro	2	3				5							
KM74	515304	6754091		Andesite	2	3											
KM75	515279	6754006		Gabbro	2	3											
KM76	515296	6754165		Andesite	2	3											
KM80	515098	6753664		Andesite	3	3				2		-1					
KM81	514915	6753381		Pillow Basalt		1			4								
KM82	514902	6753396		Pillow Basalt		1			4								
KM83	514909	6753489		Felsic dyke	3	1				2							
KM84	514945	6753464		Felsic dyke	2	1				2							
KM85	514894	6753254		Felsic dyke	3	1				2							
KM86	514887	6753221		Felsic dyke	3	1				2							
KM87	514858	6753175		Felsic dyke	3	1				2							
KM88	514855	6753113		Felsic dyke	3	1				2							
KM89	514867	6753088		Andesite	2	3											
KM90	514889	6752982		Felsic dyke	3	2				2							
SM4	515874	6754466		Andesite	4	3			4	10							
SM5	515816	6754598		Andesite	4	3			2	10		-1					
SM6	515793	6754660		Andesite	2	3				5		-1					
SM9	515956	6754782		Porphyritic Basalt	2	2				40							

SUMMARY OF FIELD RECORDS																
Mapping Sta. No.	UTM Coordinate		Elev. (m.)	Rock Type	Alteration					Oxides		Mineralization				Remarks
												Sulfides (%)				
	East	North			sil	chl	epi	ser	carb	lim	mag	py	cpy	mal	cov	
SM11	516094	6754826		Andesite/Granodiorite	2	3						-1				
SM12	516093	6754795		Andesite	2	2				15		4				
SM13	516106	6754776		Andesite	2	3				3		4				
SM14a	516407	6754725		Andesite & Diorite	3	3				5						
SM14b	516191	6754690		Felsic dyke	3	3				5						
SM15	516252	6754648		Andesite	2	3				15						
SM17	514497	6751258		Diorite	3											
SM18a	514512	6751277		Diorite	4				2							
SM18b	514512	6751277		Basalt	2	1			3			-1				
SM21	514971	6752186		Basalt	1	1			3	5		-1				
SM22	514980	6752286		Andesite	3	3				4						
SM23	515021	6752342		Andesite	3	3			2							
SM25	515096	6752277		Andesite	3	3			2	3						
SM26	515119	6752256		Felsic dyke	5	2				30						
SM28	516281	6752618		Andesite	2	3			3	5						
SM29	516310	6752677		Felsic Intrusive	4	3				10						
SM30	516350	6752685		Andesite	3	3			1	15						
SM31	516510	6752633		Andesite	3	3			1	20						
SM33a	516628	6752679		Quartz vein & Andesite	5	3			1	10						
SM33b	516628	6752679		Andesite	2	3				10						
SM34	515656	6752683		Andesite	2	3				10						
SM35	516713	6752682		Andesite	2	2			2	10						
SM36	517126	6752815		Basalt	2	2			2	10						
SM38	517119	6752875		Andesite	2	3			2	2	5	-1				
SM39	517081	6752892		Andesite	2	3			2	2	5	-1				
SM40	516472	6753602		Andesite	3	3			2	2		-1				
SM41	516483	6753592		Andesite	2	3			2	5	-1	-1				
SM42	516497	6753581		Andesite	5	1			1	3						
SM48	516185	6752946		Andesite	2	2			3	3						
SM46b	516565	6753487		Andesite	3	3			1	3		3				
SM46a	516565	6753487		Andesite	3	3			1	20	-1	5				
SM45	516545	6753509		Andesite	2	2			1	20	-1	2				
SM44	516521	6753514		Andesite	3	3				30		7				
SM43	516514	6753562		Andesite	3	3				5	-1	-1				
SM50	516311	6752895		Andesite	3	2			2	3						
SM49	516214	6752938		Andesite	2	2			3	10		-1				
SM59	517099	6752917		Basalt	3	1			3	20		-1				
SM58	516949	6752916		Basalt	2					15		-1				
SM57	516847	6752949		Basalt	2	1			3	15						
SM56	516704	6750374		Basalt	2	1					-1					
SM55	516670	6753083		Basalt	1	1					-1					
SM54	516576	6752988		Andesite	2	2			2	5						
SM53	516512	6753000		Felsic dyke	4					60						
SM52	516502	6752974		Basaltic Andesite	2	3				3						
SM51	516451	6752921		Andesite	1	3			1	3						
SM61	517023	6752940		Basalt	1	2				15	-1	-1				
SM60	517028	6752932		Basalt	3	1			3	15	-1	-1				
SM72	515539	6751310		Andesite	2	3										
SM71	515458	6751249		Andesite	2	3										
SM70	515339	6751215		Andesite	2	3				3						
SM69	515262	6751140		Andesite	2	3				3						
SM68	515237	6751126		Andesite	1	3										
SM63	517242	6753061		Basalt	1	2				15		-1				
SM62	517027	6753031		Basalt	1	2				15		-1				
SM75	515818	6751446		Daysite	3				3	10						
SM74	515758	6751400		Andesite	3	2				10						
SM73	515623	6751340		Andesite	2	3										
SM80	515772	6751690		Andesite	3	3			2	7		-1				
SM79	515789	6751610		Andesite	2	3			2	5						
SM78	515833	6751544		Andesite	2	3			2	15						
SM77	515837	6751525		Andesite	2	3			2							
SM76	515819	6751480		Andesite	3	3				10						
SM87	516601	6754527		Andesite	1	3			1	5		-1				
SM86	516567	6754468		Andesite	1	3				5		-1				
SM83	515693	6751822		Andesite	3	3			2	3						
SM82	515707	6751808		Felsic Intrusive	3				2	15						
SM81	515745	6751748		Basalt	2	1			2	10						
SM91	516509	6754803		Felsic dyke	3					5						
SM89	516609	6754694		Andesite	3	3				15	2	2				
SM88b	516595	6754636		Felsic dyke	4					10						
SM88a	516595	6754626		Andesite	2	3				2	-1	-1				

SUMMARY OF FIELD RECORDS																	
Mapping Sta. No.	UTM Coordinate		Elev. (m.)	Rock Type	Alteration					Oxides		Mineralization					Remarks
	East	North			sil	chl	epi	ser	carb	lim	mag	py	Sulfides (%)				
SM96	515443	6755123		Andesite	3	2				3							
SM95	516443	6755123		Felsic dyke	3					20							
SM94	516430	6755024		Andesite	2	3				10	-1	4					
SM92	516506	6754833		Andesite	2	3				20		2					
K12	516643	6753432		Andesite	2	2				5							
k11b	516536	6753456		Andesite	4	2											
K11a	516536	6753456		Andesite	2	3						35					
K10	516525	6753458		Andesite	3	3				5							
K9b	516565	6753487		Andesite	2	3						-1					
K9a	516543	6753496		Andesite	2	3						-1					
K8	516543	6753502		Andesite	1	2				10		7					
K7b	512567	6753520		Andesite	2	3						-1					
K6b	516597	6753502		Andesite	2	3				10		3					
K6a	516597	6753502		Andesite	2	3					3	-1					
K14	516491	6753396		Andesite	3	3				10	4	3					
K13b	516520	6753413		Andesite	4	2											
K13a	516520	6753413		Andesite	3	3				15		5					
K24	516471	6753171		Andesite Porphyry	2	3						-1					
K23	516471	6753147		Andesite Porphyry	2	3						-1					
K22	516581	6753213		Andesite	2	3						-1					
K20	516678	6753214		Andesite	4	3						-1					
K19	516719	6753225		Andesite	2	2						-1					
K18b	516713	6753195		Andesite		4											
K18a	516713	6753195		Felsic Dyke	3					10		-1					
K17	516685	6753101		Andesite	2	3						-1					
K26c	516459	6753320		Massive Sulphide								60				2% Sulphur, 40% quartz	
K26b	516459	6753320		Andesite	2	3				7	1	3					
K26a	516459	6753320		Andesite	2	3				7	1	-1					
K36	515597	6751778		Andesite	2	3				1		-1					
K35	515528	6751763		Andesite	2	3				1		-1					
K34	515448	6751741		Andesite	2	2						-1					
K23	515373	6751703		Andesite	2	3				1		-1					
K32	515286	6751686		Andesite	2	3						-1					
K31	515249	6756253		Andesite	3	3				1		-1					
K30	515276	6751512		Andesite	1	2			1								
K40b	515686	6751957		Granodiorite Dyke	4					15							
K40a	515686	6751957		Andesite	3	2						-1					
K39	515677	6751932		Felsic dyke/ granodiorite?	4					15							
K38	515688	6751868		Felsic Dyke	4					15		-1					
K37	515697	6751820		Andesite	2	3				2		-1					
K43	515604	6752125		Andesite	3	2											
K42b	515648	6752096		Felsic Dyke	4					15							
K42a	515648	6752096		Basalt	2												
K41	515604	6752125		Felsic Dyke	4					15							
K58	514478	6751641		Basalt	1												
R8	515225	6754218		Andesite	1	2											
R7b	515286	6754237		Andesite	2	1						-1					
R7a	515286	6754237		Quartz vien/ Silicified Andesite	5					10		-1					
R5	515357	6754285		Andesite	2	2			2		-1	-1					
R4	515573	6754236		Basaltic Andesite	1	2					4						
R13	515263	6753822		Andesite	2	1											
R12	515262	6753900		Andesite	1	2											
R10	515210	6754038		Andesite	1	2											
R9	515197	6754144		Andesite	2	1				4							
R24a	515132	6753617		Felsic Dyke	2					5							
R24b	515132	6753617		Andesite	1	2				1	5	-1					
R23	515158	6753622		Andesite	1	2					4	-1					
R22	515198	6753657		Andesite	2	2			1	3	-1	-1					
R19	515087	6753251		Andesite	3	2					-1	-1					
R16	515260	6753557		Andesite		1											
R15	515241	6753653		Felsic Dyke	3					5							
R26	515114	6753611		Andesite	1	2				1	4	-1					
R25	515123	6753621		Felsic Dyke	2					7							
R36	515766	6754637		Andesite	2	2			1		3	-1					
R35	515785	6754587		Andesite	2	2			2		4	-1					
R34	515792	6754561		Andesitic Basalt	2	2			2		-1	-1					
R33	515834	6754454		Andesite	2	2					4	-1					
R32	515834	6754454		Andesite	2	2					4	-1					
R30	515878	6754399		Andesite	3	2					4	1					
R28	514921	6753365		Andesite	2	2						-1					
R27	515050	6753509		Andesite	1	2				1	3	-1					

SUMMARY OF FIELD RECORDS																
Mapping Sta. No.	UTM Coordinate		Elev. (m.)	Rock Type	Alteration					Oxides		Mineralization				Remarks
	East	North			sil	chl	epi	ser	carb	lim	mag	py	Sulfides (%)			
R40	515754	6754800		Andesite	2	1					3	-1				
R38	515743	6754747		Andesite	2	1					4	-1				
R47a	516158	6754857		Andesite	3	1					-1					
R46	516158	6754857		Andesite	1	3					4	-1				
R45	516114	6754930		Andesite	1	1					-1					
R44b	516046	6754963		Felsic Dyke	3					4						
R44a	516046	6754963		Andesite	4	2				3		-1				
R43	515995	6754984		Andesite	2	2					3	-1				
R47b	516158	6754857		Felsic Dyke	3					5						
R60	514536	6751799		Andesite Porphyry/ Diorite		1										
R59	514505	6751730		Andesite Porphyry/ Diorite	1					1						
R57	514439	6751576		Andesite/ Diorite	1					2						
R56	514420	6751561		Basalt	1											
R55	514421	6751497		Andesite Porphyry/ Diorite												
R54	514430	6751430		Andesite Porphyry/ Diorite	2					2						
R53	514420	6751337		Andesite Porphyry/ Diorite	2					2						
R52	514431	6751260		Diorite	1					2						
R51	516111	6754294		Andesite	2	2					1	-1				
R64	514723	6752137		Diorite	1	1				1						
R63	514671	6752046		Andesite Porphyry/ Diorite	1	1										
R61	514611	6751881		Andesite Porphyry/ Diorite	1	1										
R73	514759	6752422		Diorite	2	1										
R72	514733	6752466		Diorite						3						
R71	514697	6752430		Andesite Porphyry/ Diorite	4					2						
R70	514656	6752585		Diorite	4											
R69	514688	6752487		Metasiltstone	4											
R68	514719	6752432		Diorite						3						
R67	514748	6752369		Diorite	2	1										
R66	514753	6752290		Diorite	1	1										
R65	514732	6752233		Diorite	1	1				1						
R76	514963	6752375		Andesite	4	1										
R84	517074	6752343		Basalt	2	1						-1				
R83	516880	6752389		Basalt	2	1						-1				
R79	515148	6752217		Felsic Dyke	4						5					
R90	517668	6752500		Andesite	2	2	2									
R89	517654	6752337		Andesite	2	3										
RV5	516666	6753573		Andesite						4	3	5				
RV2	516462	6753640		Andesite	1	2					3	2				
RV4	516657	6753615		Andesite		1						-1				
R95	517124	6752814		Basalt	1	1					4					
R94	517151	6752824		Andesite	1	2	2									
R93	517269	6752816		Andesite	1	2	2									
RV8	516841	6753694		Andesite	1	2						-1				
RV7	516807	6753651		Andesite	1	2						-1				
RV6	516751	6753622		Andesite		2	-1			3		2				
S31	516097	6752596		Andesite	3	2										
S30	516055	6752648		Andesite	2	2				20		10				
S29	515060	6753039		Andesite		2						-1				
S28	515071	6753108		Andesite	1	3										
S25	515248	6753355		Andesite	5							3				
S22	515401	6753729		Andesite	1	2					2	-1				
S20	515457	6753865		Andesite	1	2										
S32	516130	6752529		Felsic Intrusive and Andesite	2	2				20		-1				
S42	516200	6752807		Andesite	2	3				2						
S40b	516200	6752786		Quartz Vien	2	3				2						
S40	516200	6752786		Quartz Vien/ Andesite	5							2				
S39	516236	6752725		Dacite Porphyry	2					3						
S38	516212	6752728		Gabbro	2	3				1						
S37	516199	6752706		Gabbro	2	3				1						
S36	516205	6752655		Andesite	2	2						-1				
S35	516193	6752644		Dacite Porphyry						3						
S34	516177	6752499		Dacite Porphyry						3						

SUMMARY OF FIELD RECORDS																	
Mapping Sta. No.	UTM Coordinate		Elev. (m.)	Rock Type	Alteration					Oxides		Mineralization				Remarks	
	East	North			sil	chl	epi	ser	carb	lim	mag	py	Sulfides (%)				
													cpy	mal	cov		bor
S33	516177	6752499		Basalt		1											
S45	516181	6753175		Andesite	2	3						-1					
S44	516074	6752949		Quartz Vien/ Andesite	5	1											
S43	516115	6752821		Basaltic Andesite	2	3						-1					
S59	515244	6752470		Basalt	2	2						-1					
S58	515279	6752415		Andesite	2	2						-1					
S56	515521	6752145		Andesite	2	3											
S55	515440	6752211		Andesite	3	1						-1					
S54	515379	6752312		Andesite	2	1					-1	-1					
S53	515415	6753329		Felsic Dyke	3	1											
S52	515640	6752292		Andesite	2	2						-1					
S49	515749	6752449		Andesite		1											
S61	515731	6753515		Andesite	2	1				2	4	-1					
S63	517041	6753515		Andesite	2	2						-1					