

---

2009 Whole Rock  
Geochemical Sampling  
and Mapping Program  
Hemlo East Property  
Python Claim Block

Thunder Bay Mining District  
Northwestern Ontario

NTS 42C/12

For

MetalCORP Ltd.  
705B Hammond ave, 2<sup>nd</sup> Floor  
Thunder Bay, Ontario, P7B 6T5

By

By A. Fage

April, 2010

---

# Table of Contents

1.0	Introduction, Location, Physiography .....	1
2.0	Claims.....	2
3.0	Summary of 2009 Geochemical Mapping and Sampling .....	6
4.0	Geochemistry .....	11
4.1	Methods .....	11
4.2	Results .....	11
5.0	Conclusions.....	15
5.1	Discussion.....	15
5.2	Summary.....	15
6.0	References .....	16
7.0	Certificate of Qualification.....	17

## List of Figures

Figure 1 - Location Map .....	1
Figure 2 - Hemlo East Claim Map.....	4
Figure 3 - Python Claim Map .....	5
Figure 4 - Geology Map of Thor-Gouda Lake.....	7
Figure 5 - 2009 Whole Rock Sample Locations Map.....	8
Figure 6 - 2000-2003 Teck DDH Hole Locations Map .....	9
Figure 7 - Primitive Mantle Normalized plot for metavolcanics.....	12
Figure 8 - AFM diagram for samples.....	13
Figure 9a - Basalt Classification Scheme.....	14
Figure 9b - TAS diagram .....	14

## List of Tables

Table 1 - Claim Information .....	2
Table 2 - 2000-2003 Teck Exploration Drill Holes and their location.....	10

## Appendices

Outcrop Sample Descriptions .....	Appendix A
Drill Core Sample Descriptions .....	Appendix B
Geochemistry Results .....	Appendix C

## 1.0 Introduction, Location, Physiography

MetalCORP Ltd.'s Hemlo East Property is situated approximately three hundred and thirty kilometers east of Thunder Bay, Ontario, following the Trans Canada Highway (Hwy 17) along the north shore of Lake Superior (see Figure 1). Several small townships surround the property, including Marathon, Ontario, from where MetalCORP Ltd. operates its exploration programs. Marathon has an approximate population of 4400 people, and is the largest commercial center in the area, providing most exploration needs. The claims comprising the Hemlo East property lie within the Brothers, Bomby, Laberge, and McCron townships and the Oskabukuta Lake area (see Figure 2 and Table 1), all within the NTS 42C/12 quadrangle. These claims are divided down the center by the White River into two principal blocks: the Fearless claim block to the west, and the Python claim block to the east (Figure 2). The Gouda-Thor-Carrol area is referred to as part of the Python claim block, but is geographically separated from the rest of the claims by the White River to the west, and partially by the Pickereel Bay to the east. The White River Provincial Park outlines the White River, preventing the Hemlo East property claims from being contiguous.

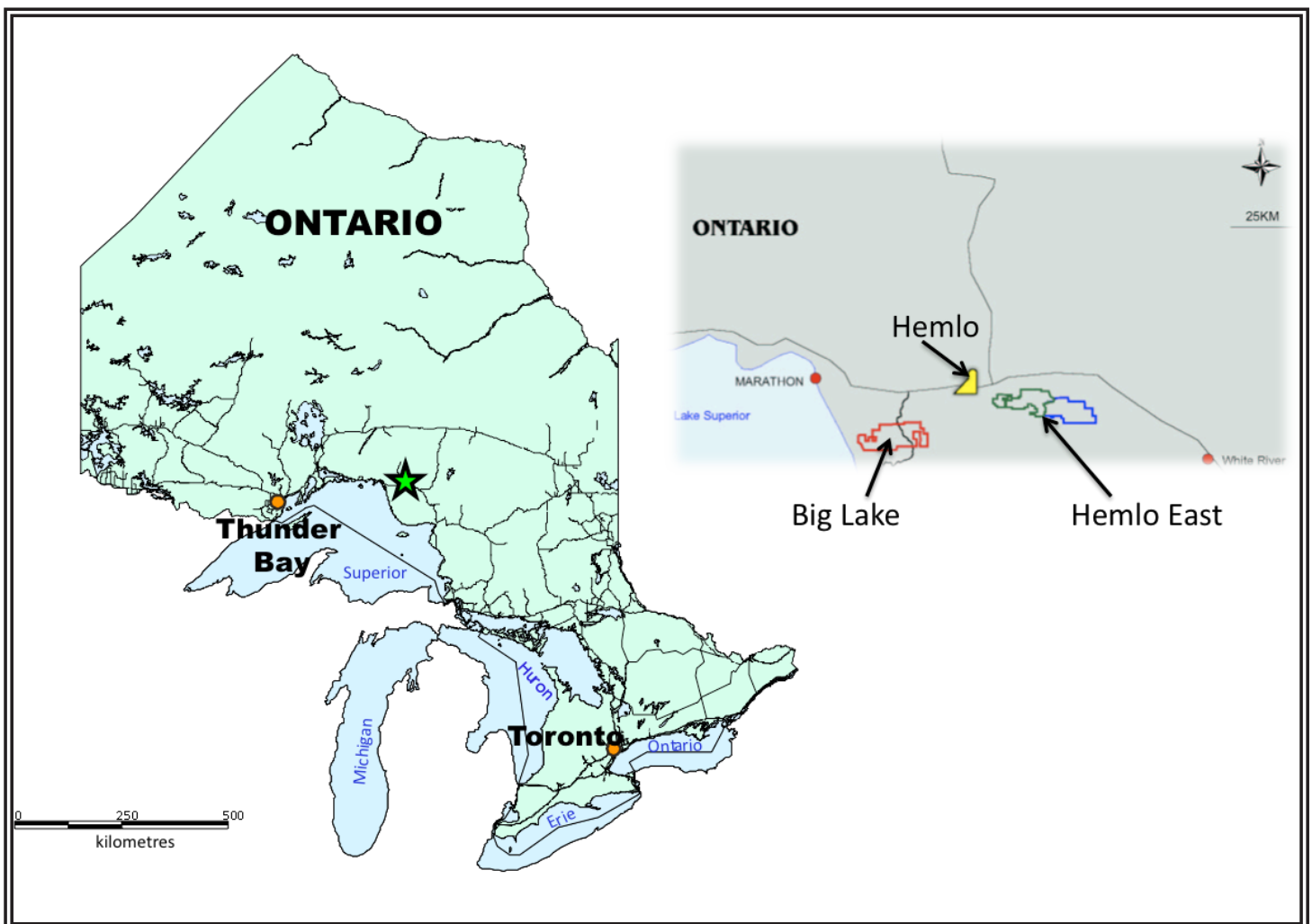


Figure 1. Location of the Hemlo East Property, Northwestern Ontario, after Eveleigh, 2008

The Hemlo East Property was previously named the White River Property, after being staked by Lac Minerals Limited between 1980 and 1982 following the discovery of the Hemlo deposit. The ground was explored by Lac Minerals and other companies (Placer Dome Canada Limited, American Barrick, and TeckCominco Limited) in the years from 1982 to 2003. Exploration was primarily for Au and associated mineralization (Ag, As, Hg, Mo, Sb, Ba, V) similar to the Hemlo gold deposit.

Topography of the Hemlo East property is typical of most of the ground surrounding Lake Superior. The northern area of the claims varies from rolling ground moraine and bedrock hills, alternating with extensive spruce and alder bogs. To the south, steep rock-dominated ridges alternate with linear swamps and lake and creek filled valleys. Elevation varies in the area but averages around 335 metres above sea level. The greatest relief is mainly along the lower White River Valley and at local cliffs ranging from ten to fifty metres in height. Vegetation is dominated by large areas of blown-down, dying and dead mixed forest, made up of mature poplar, birch and balsam. Windstorm blow-down areas are widespread, having occurred over the last 10 to 30 years, and are overgrown with dense alders. Swampy and low-lying portions of the property are generally covered with thick tag alders and minor spruce and tamarack forest. Locally, in higher ridge areas, there are mature jack pine and spruce forest. Northern Ontario has a continental climate, with warm to hot summers (June, July and August; 20 to 35°C) and cold winters (December, January, February, March; -10 to -40°C). Spring and autumn tend to be short, mixed seasons. In general, precipitation in the property area is around 900 millimeters per year.

This report details the 2009 mapping and whole rock geochemical sampling within the Gouda-Thor-Carroll area of the Python claim block. The Gouda-Thor-Carroll area is bounded by the White River to the west and north, by Pickerel Bay to the east and by the Pukaskwa batholith to the south (Figure 2).

## 2.0 Claims

MetalCORP Ltd.'s Hemlo East property claims are unpatented, and form two non-contiguous claim blocks totalling 116.7 square kilometers. The two claim blocks are separated by the White River, which flows north-east to southwest between the Fearless block to the west, and the Python block to the east. The White River is bounded by a provincial park, further separating the Hemlo East claim blocks (see Figure 2). The Fearless claim block lies directly adjacent to the eastern margins of Barrick Gold Corp's Hemlo Gold Mine concessions (Figure 2).

The claims are 100% owned by MetalCORP Ltd., and were staked beginning in 2007, up to as recently as late 2009 (see Table 1). The two claim blocks together are comprised of one hundred and four claims, or 731 units. The Fearless block is comprised of 63 claims, or 382 units for a total area of 6108.65 Ha. The Python claim block is comprised of 41 claims, or 347 units, for a total area of 5556.82 Ha. Claim information for the Python block is summarized in Table 1, and Figures 2 and 3.

Claim	Township/Area	Area (Ha)	Units	Claim Due Date	Owner	Work Required	Total Applied	Total Reserve
4214155	BROTHERS	181.75	11	2010-Jun-29	MTC	\$4,000	\$4,000	\$4,028
4214156	BROTHERS	51.79	3	2010-Jun-29	MTC	\$1,200	\$1,200	\$2,009
4214157	BROTHERS	71.58	4	2010-Jun-29	MTC	\$1,600	\$1,600	\$2,011
4214158	BROTHERS	69.29	4	2010-Jun-29	MTC	\$1,600	\$1,600	\$2,011
4226048	BROTHERS	41.97	3	2010-Jun-20	MTC	\$1,200	\$0	\$5,208



Claim	Township/Area	Area (Ha)	Units	Claim Due Date	Owner	Work Required	Total Applied	Total Reserve
4226049	BROTHERS	11.53	1	2010-Jun-20	MTC	\$400	\$0	\$2,003
4251202	BROTHERS	12.36	1	2011-Jun-30	MTC	\$400	\$0	\$0
4251210	BROTHERS	88.04	6	2011-Jun-29	MTC	\$2,000	\$0	\$0
4251717	BROTHERS	63.13	4	2011-Oct-20	MTC	\$1,600	\$0	\$0
4251949	BROTHERS	4.85	1	2011-Oct-20	MTC	\$400	\$0	\$0
4214137	LABERGE	30.73	2	2010-Apr-03	MTC	\$800	\$800	\$0
4214138	LABERGE	193.31	12	2010-Apr-03	MTC	\$4,800	\$4,800	\$0
4214139	LABERGE	157.36	10	2010-Apr-03	MTC	\$4,000	\$4,000	\$0
4214140	LABERGE	255.04	16	2010-Apr-03	MTC	\$6,400	\$6,400	\$0
4214141	LABERGE	128.76	8	2010-May-03	MTC	\$2,800	\$2,800	\$0
4214142	LABERGE	262.41	16	2010-May-08	MTC	\$6,400	\$6,400	\$0
4214143	LABERGE	145.00	9	2010-May-08	MTC	\$3,200	\$3,200	\$0
4214145	LABERGE	191.92	12	2010-May-08	MTC	\$4,800	\$4,800	\$0
4214146	LABERGE	203.05	13	2010-May-08	MTC	\$4,800	\$4,800	\$0
4214147	LABERGE	258.64	16	2010-May-08	MTC	\$6,000	\$6,000	\$0
4214148	LABERGE	273.10	17	2010-May-08	MTC	\$6,000	\$6,000	\$0
4214160	LABERGE	96.64	6	2010-Jul-09	MTC	\$2,400	\$2,400	\$0
4214161	LABERGE	242.56	15	2010-Jul-09	MTC	\$6,000	\$6,000	\$0
4214162	LABERGE	179.11	11	2010-Jul-09	MTC	\$4,800	\$4,800	\$0
4214163	LABERGE	88.99	6	2010-Jun-29	MTC	\$2,400	\$2,400	\$0
4214164	LABERGE	218.48	14	2010-Jun-29	MTC	\$6,000	\$6,000	\$0
4214167	LABERGE	124.69	8	2010-Jun-29	MTC	\$3,200	\$3,200	\$0
4214168	LABERGE	250.78	16	2010-Jun-29	MTC	\$6,400	\$6,400	\$0
4214169	LABERGE	192.38	12	2010-Jun-29	MTC	\$4,800	\$4,800	\$0
4222618	LABERGE	32.10	2	2010-Aug-07	MTC	\$800	\$800	\$0
4222619	LABERGE	82.90	5	2010-Aug-07	MTC	\$2,000	\$2,000	\$0
4222620	LABERGE	16.67	1	2010-Aug-07	MTC	\$800	\$800	\$0
4226041	LABERGE	142.25	9	2010-Nov-13	MTC	\$3,600	\$3,600	\$0
4226042	LABERGE	149.66	9	2010-Nov-13	MTC	\$3,600	\$3,600	\$1,735
4226044	LABERGE	33.12	2	2011-Feb-04	MTC	\$800	\$800	\$0
4214149	MCCRON	251.38	16	2010-May-08	MTC	\$6,400	\$6,400	\$0
4214152	MCCRON	147.57	9	2010-May-25	MTC	\$2,400	\$2,400	\$0
4214153	MCCRON	63.72	4	2010-May-25	MTC	\$1,600	\$1,600	\$0
4214150	OSKABUKUTA LAKE	246.40	15	2010-May-08	MTC	\$6,400	\$6,400	\$0
4214154	OSKABUKUTA LAKE	64.04	4	2010-May-25	MTC	\$1,600	\$1,600	\$0
4247624	OSKABUKUTA LAKE	237.78	15	2011-May-28	MTC	\$6,400	\$0	\$0
	Totals	5557	348		41	\$136,800	\$124,400	\$19,005

Table 1. Python Claim block claim information.



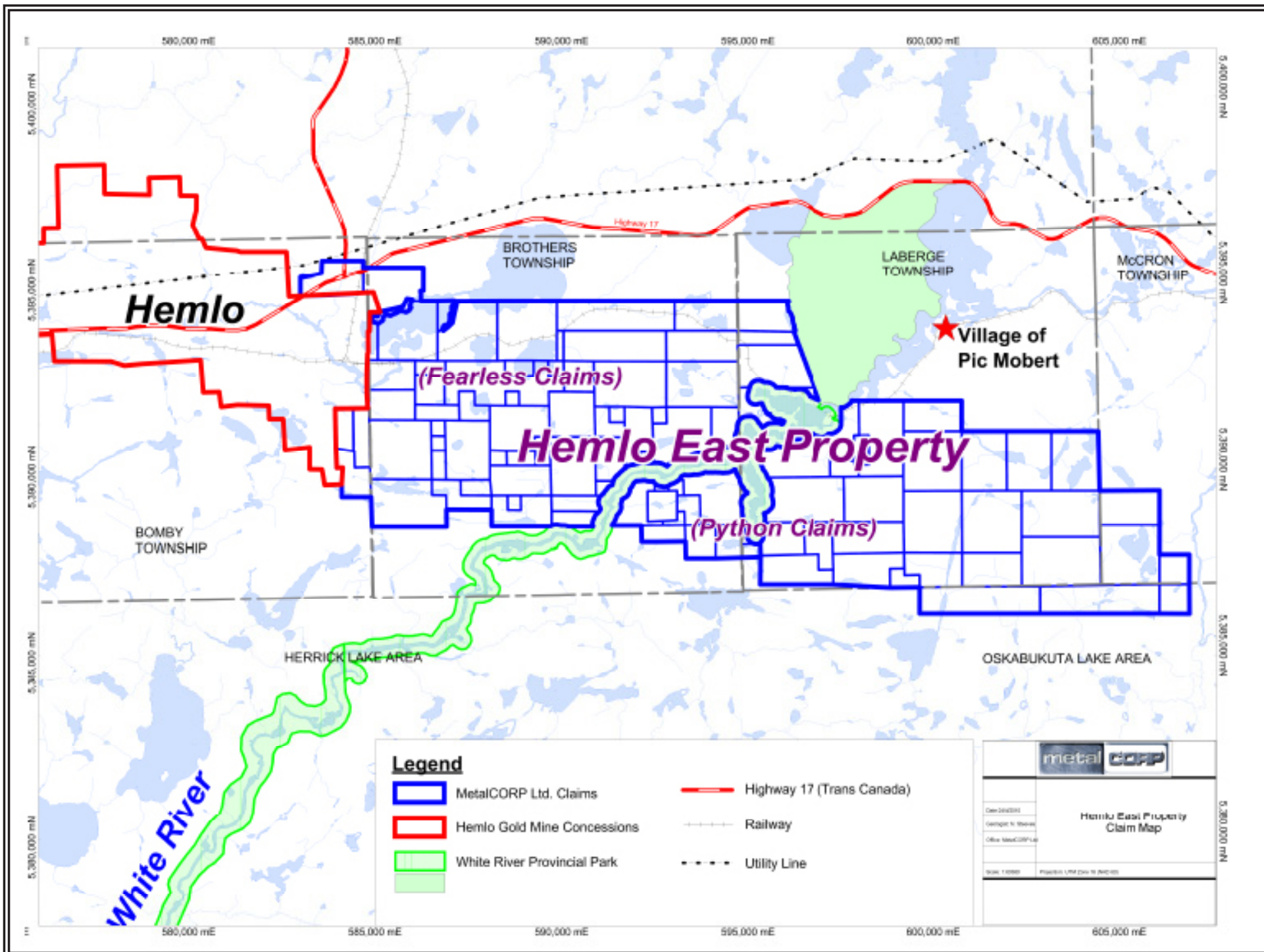


Figure 2. Claim Map of Hemlo East Property. Property is divided into two blocks: Fearless Claim Block to the west, and the Python Claim Block to the east, including the Gouda-Thor area at the center.

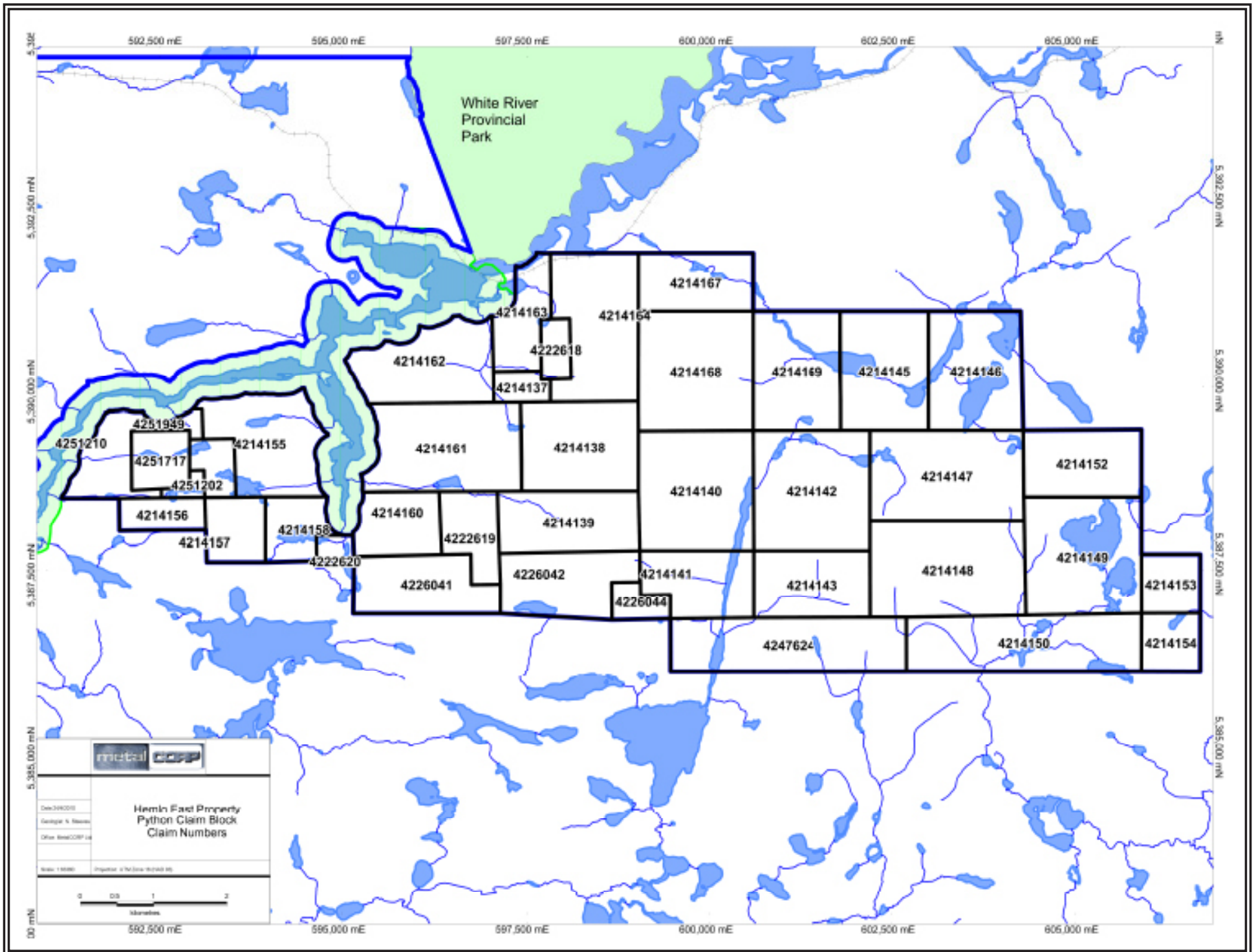


Figure 3. Claim map of Python claims, including claim numbers.

### 3.0 Summary of 2009 Geochemical Mapping and Sampling

The purpose of the 2009 geochemical mapping and sampling program was to characterize the metavolcanic rocks with full major, trace and REE analysis to better establish the geologic and tectonic setting of the property. Twenty days were spent by the author mapping and sampling on the Hemlo East Property. Ten days were spent sampling archived Teck Exploration drill core. Eighteen days were spent on travel to marathon, camp mobilization and on office work (plotting mapping data). Ten days were spent on analyzing geochemical data, map generation, and writing this report. This work will provide a basis for comparison with other Archean deposits nearby (e.g., Hemlo, Big Lake).

A geochemical study performed by Armstrong and Magnan (1998) has shown that the felsic rocks of the Gouda horizon (felsic metavolcanic rocks near the south of the property sampled in this study) are comparable to the Moose Lake Porphyry (host for Hemlo mineralization), the trace element geochemical signature of the Gouda horizon is similar to Hemlo, and that the potassic alteration index of the felsic volcanics at the Gouda horizon is similar to Hemlo ( $K > 0.7$ ). The metavolcanic rocks of the Gouda horizon and the Big Lake VMS occurrence are both hosted within the Playter-Harbour Group of the Hemlo-Heron Bay greenstone belt in a sequence of metasedimentary and metavolcanic rocks (Muir et al., 1999).

The stratigraphy of this region is characterized by metavolcanic and metasedimentary rocks dipping 30-40° to the north. Figure 4 shows the geology of the Gouda-Thor-Carrol area. The major structure in the area is the DC Lake fault, which extends from the Pukaskwa batholith northwest to the east edge of Thor Lake and to DC Lake. It has been inferred from field observations to be a dextral fault that has offset the stratigraphy in this area (Muir et al., 1999). There are three felsic metavolcanic units in the area: the Gouda horizon - a mineralized, 10-20 m thick felsic metavolcanic unit; across the DC Lake fault is the Thor horizon - a mineralized, 10-20 m thick felsic metavolcanic unit inferred to be the stratigraphic equivalent of the Gouda Horizon across the DC Lake fault; and a felsic metavolcanic unit in the vicinity of DC lake.

The stratigraphy from the Pukaskwa batholith at the south of the property extending north is as follows. A mafic metavolcanic unit is in contact with the Pukaskwa batholith. It is overlain by footwall metasedimentary rocks, which are in turn overlain by the Gouda or Thor horizons and hanging-wall sedimentary rocks. Overlying the hanging-wall sedimentary rocks is a package of mafic metavolcanic rocks which contain a horizon of a mafic lapilli tuff, coined the 'Pokerchip Horizon,' which has been used as a marker horizon by previous workers. The 'Pokerchip Horizon' occurs at the base of the mafic metavolcanic package above the Thor horizon and near the middle of the mafic metavolcanic package above the Gouda horizon. These mafic metavolcanic rocks are overlain by a thick package of metasedimentary rocks which are in contact with the White River Pluton (in the vicinity of the White River). The felsic volcanic rocks at DC Lake are not continuous along strike to the east or west.

Figure 5 shows the 2009 whole rock sample locations and Figure 6 shows the locations of 2000-2003 Teck Exploration diamond drill holes that were also sampled as part of this study. Table 2 shows the location and length of these drill holes.



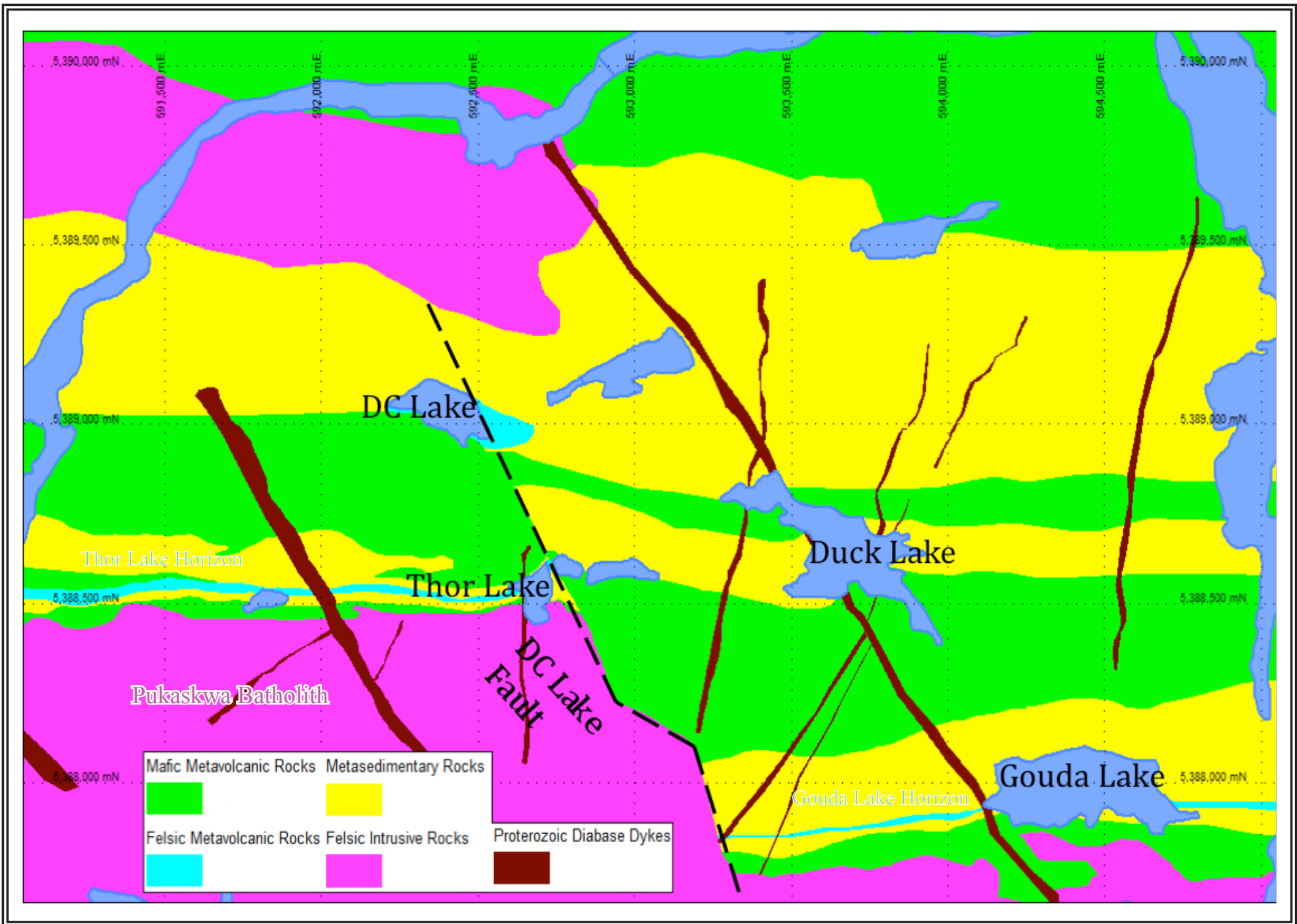


Figure 4. Simplified Geological map of the Gouda-Thor-Carrol area. Felsic Intrusive at the bottom of the map is the Pukaskwa Batholith.

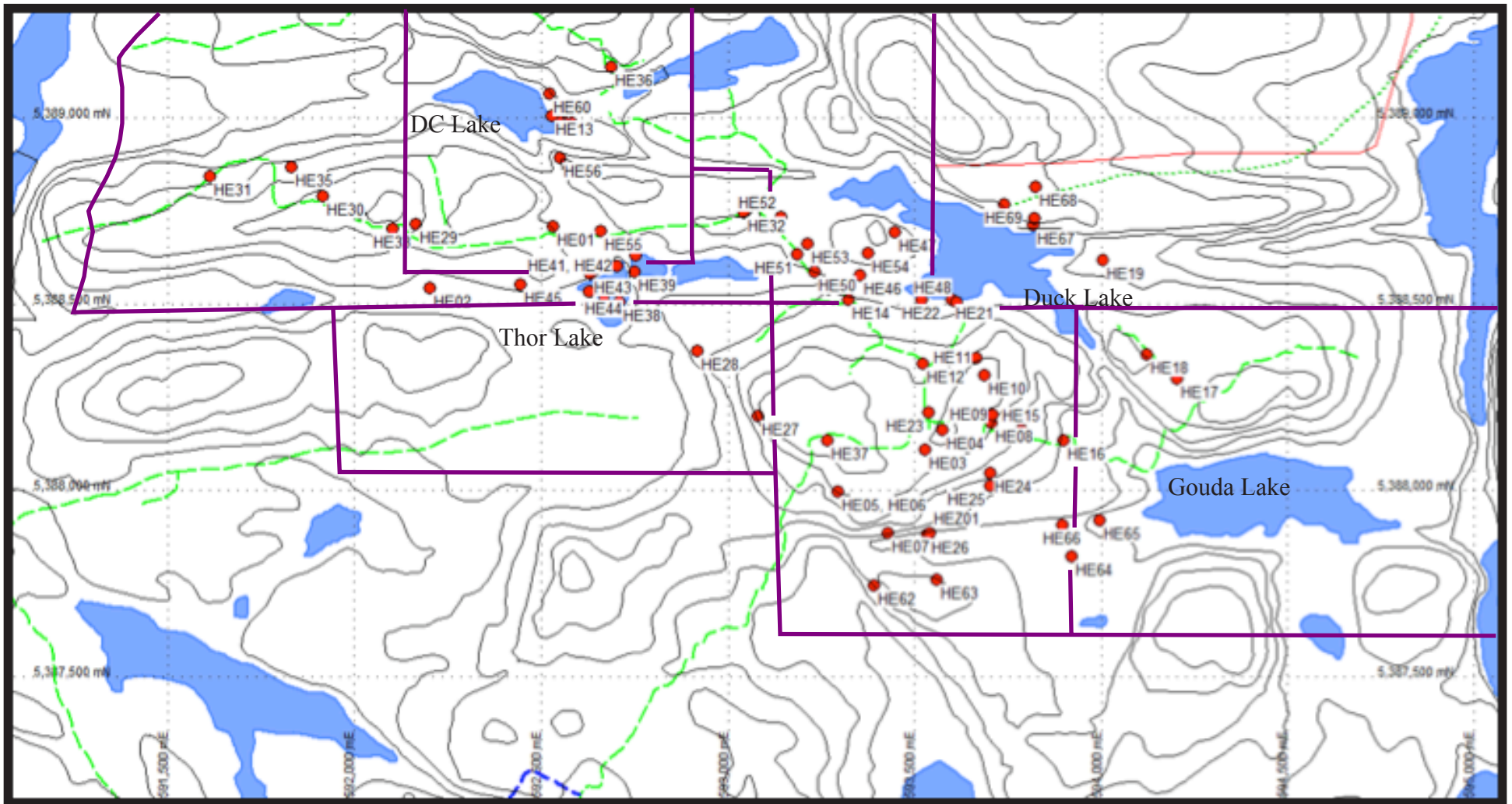
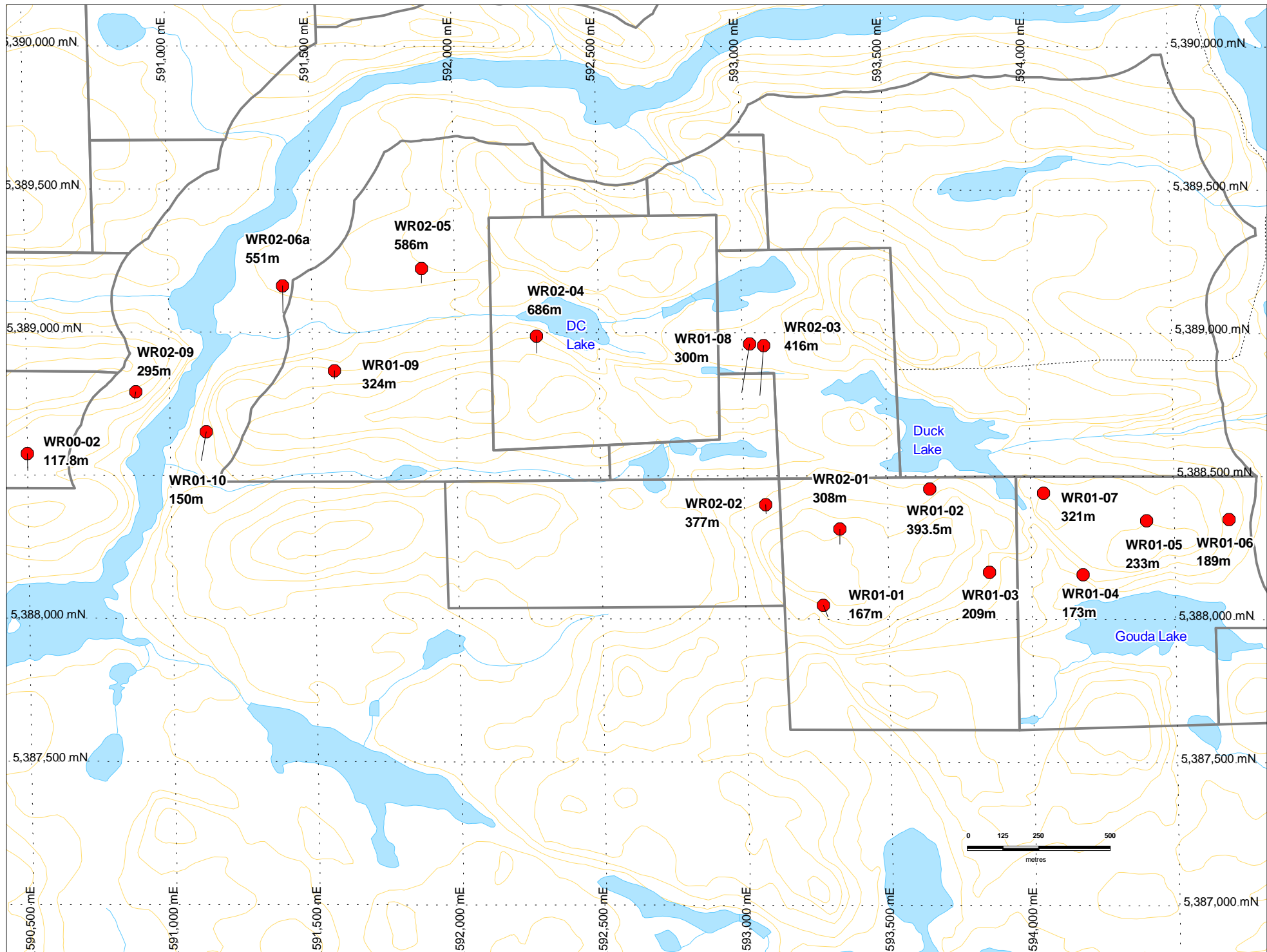


Figure 5. 2009 whole rock sample locations



Hole Number	Easting	Northing	Length (m)	Azimuth	Dip
WR00-01	590225	5388647	152.2	180	-60
WR00-02	590500	5388575	117.8	180	-60
WR00-03	590225	5389360	368.0	180	-50
WR00-04	589615	5388660	134.0	180	-60
WR00-05	589748	5392235	443.0	180	-50
WR00-06	589950	5390950	197.0	180	-45
WR00-07	587700	5389490	294.0	180	-50
WR00-08	586470	5389647	326.0	180	-50
WR01-01	593275	5388046	167.0	160	-75
WR01-02	593650	5388450	393.5	190	-89
WR01-03	593847	5388175	209.0	190	-89
WR01-04	594183	5388154	173.0	180	-89
WR01-05	594400	5388325	233.0	180	-89
WR01-06	594695	5366350	189.0	180	-70
WR01-07	594050	5388437	321.0	180	-89
WR01-08	593010	5388964	300.0	190	-55
WR01-09	591607	5388892	324.0	180	-85
WR01-10	591125	5388655	150.0	190	-47
WR02-01	593337	5388313	308.0	180	-80
WR02-02	593075	5388400	377.0	180	-85
WR02-03	593075	5388956	416.0	185	-65
WR02-04	592300	5388996	686.0	180	-85
WR02-05	591885	5389224	586.0	180	-85
WR02-06a	591330	5389150	551.0	180	-80
WR02-07	589035	5392353	569.0	180	-85
WR02-08	588502	5392266	578.0	190	-85
WR02-09	590881	5388791	295.0	190	-85
WR03-01	589032	5392506	293.0	177	-65
WR03-02	589032	5392505	698.0	180	-89
WR03-03	590035	5392025	257.0	180	-50

Table 2. 2000-2003 Teck Exploration Drill Holes and their location (UTM NAD83 zone 16)

## 4.0 Geochemistry

185 samples were collected from outcrops and archived drill core in the 2009 program. Brief Sample descriptions are given in Appendix A and B, and geochemical results are shown in Appendix C. The prefix meta- is implied on all samples as the entire Schreiber-Hemlo Greenstone belt has been affected by lower to mid amphibolite facies metamorphism (Pan and Fleet, 1993) The rocks, however, are commonly described using their igneous protolith names.

### 4.1 Methods

Samples were collected by the author from outcrops and diamond drill core, with the objective to sample a suite of felsic and mafic metavolcanic rocks ranging from least to most altered. Standard sampling procedure was applied, with efforts made to avoid sampling across lithological contacts. Split core samples are mostly 0.3-1.1 m long.

All 185 whole rock geochemical samples were analyzed at ALS Chemex. Chemex analytical procedure codes (e.g., ME-MS61) are given for each method described. Samples were crushed in Thunder Bay and pulverized in a low chrome steel mill. Most core samples were analyzed by a standard 47 element assay package (ME-MS61) at ALS Chemex. Following a four acid (HF, HN03, HCL04, HCl) digestion, samples were analyzed by ICP-MS for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, and Zr, as well as for Au, Pt, and Pd. Cu and Zn contents greater than 1 wt. % were analyzed by atomic absorption spectra (AA62).

About one third of the assay samples were instead processed by a 27 element assay package (ME-ICP61), by ICP-AES for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sr, Ti, V, W, and Zn following four-acid digestion. Along with the 47 element assay package (ME-MS61) described above, major element oxides and LOI were analysed by XRF (ME-XRF06) and trace elements (Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Tb, Th, Tm, U, Y, Yb) by ICP-MS (ME-MS82) following lithium borate fusion and four acid (HF, HN03, HCL04, HCl) digestion.

### 4.2 Results

Geochemical results of the average compositions of volcanic rocks are plotted on a primitive mantle normalized plot in Figure 7. Two distinct patterns emerge from the diagram, with some samples yielding a sloping LREE-enriched pattern that is characteristic of a volcanic arc-like signature, and others having a near-flat ocean plateau basalt signature. In the subsequent diagrams, volcanic arc-like rocks are shown with a triangle symbol and ocean plateau basalts are shown with a square symbol.

Tholeiitic basalts are the prevalent volcanic rock type. Mg# varies from 64 to 36 over a SiO<sub>2</sub> range of 45-54 wt%. Cr and Ni correlate with Mg# while Fe, Ti, Zr and all REE have a negative correlation. These rocks are characterized by a near-flat pattern on a primitive mantle normalized plot and have been described as having a plume-derived oceanic plateau association by Polat (2008).

Tholeiitic to calc-alkaline basalts, andesites, rhyodacites, and rhyolites make up a minor portion of the volcanic rocks and are characterized by LREE enrichment as well as Nb depletion; relative to Th and La. Rhyolites also exhibit HREE depletion. These rocks possess a subduction-derived oceanic island arc association (Polat, 2008).



Figure 8 is an AFM diagram, in which all mafic volcanic rocks plot in or near the tholeiitic field, and all other samples plot within the calc-alkaline field.

Figure 9a shows a classification diagram for basaltic rocks from Winchester and Floyd (1977). Ocean plateau basalts plot within the andesite/basalt field, while the arc-like mafic rocks plot largely within the rhyodacite/dacite field and intermediate to felsic rocks plot within the trachy-andesite field. Figure 9b is a total alkali versus silica (TAS) diagram from Rollinson (1993) where ocean plateau basalts and ocean island arc basalts plot within the basalt field, rhyolites plot in the rhyolite and dacite fields, andesites plot in the basaltic andesite and andesite fields, and sedimentary and volcanoclastic rocks plot across the trachyandesite, andesite, trachydacite, dacite and rhyolite fields. Sedimentary and volcanoclastic rocks are volcanic-derived and plot across andesite, dacite, and rhyolite fields.

Preliminary zircon  $^{206}\text{Pb}/^{238}\text{U}$  age dating on a rhyolite from the DC Lake area of the property has yielded an age of  $2694.5 \pm 1$  Ma (Results are pending from the Gouda Lake area rhyolites and a felsic volcanic from the Egg Lake area to the north of the property). Nd isotopic data from three tholeiitic ocean plateau basalts has yielded positive  $\epsilon\text{Nd}$  values ( $\epsilon\text{Nd} = +1.76$  to  $+2.11$ ).

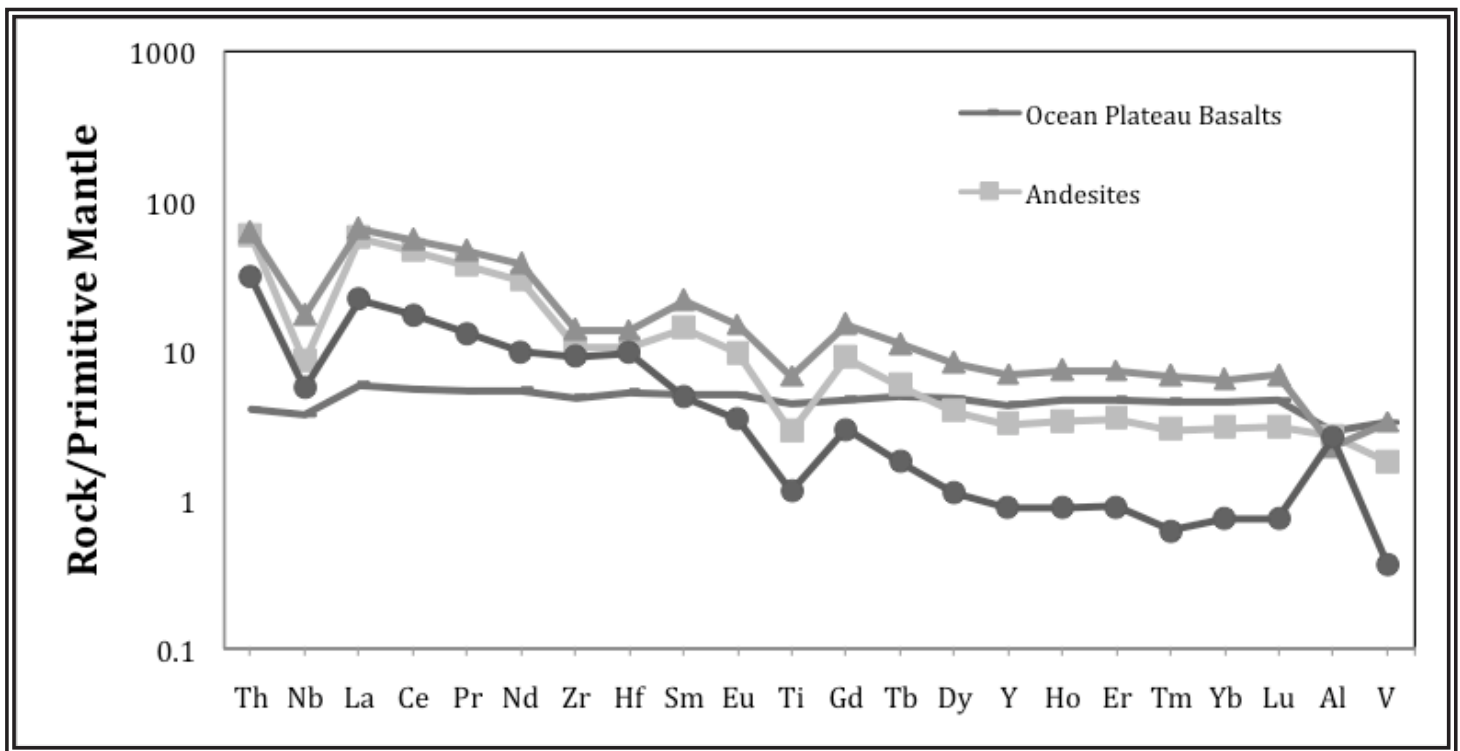


Figure 7. Primitive Mantle normalised plot for average values of metavolcanic rock samples from the Gouda-Thor-Carroll Area (normalising values from Sun and McDonough, 1989).

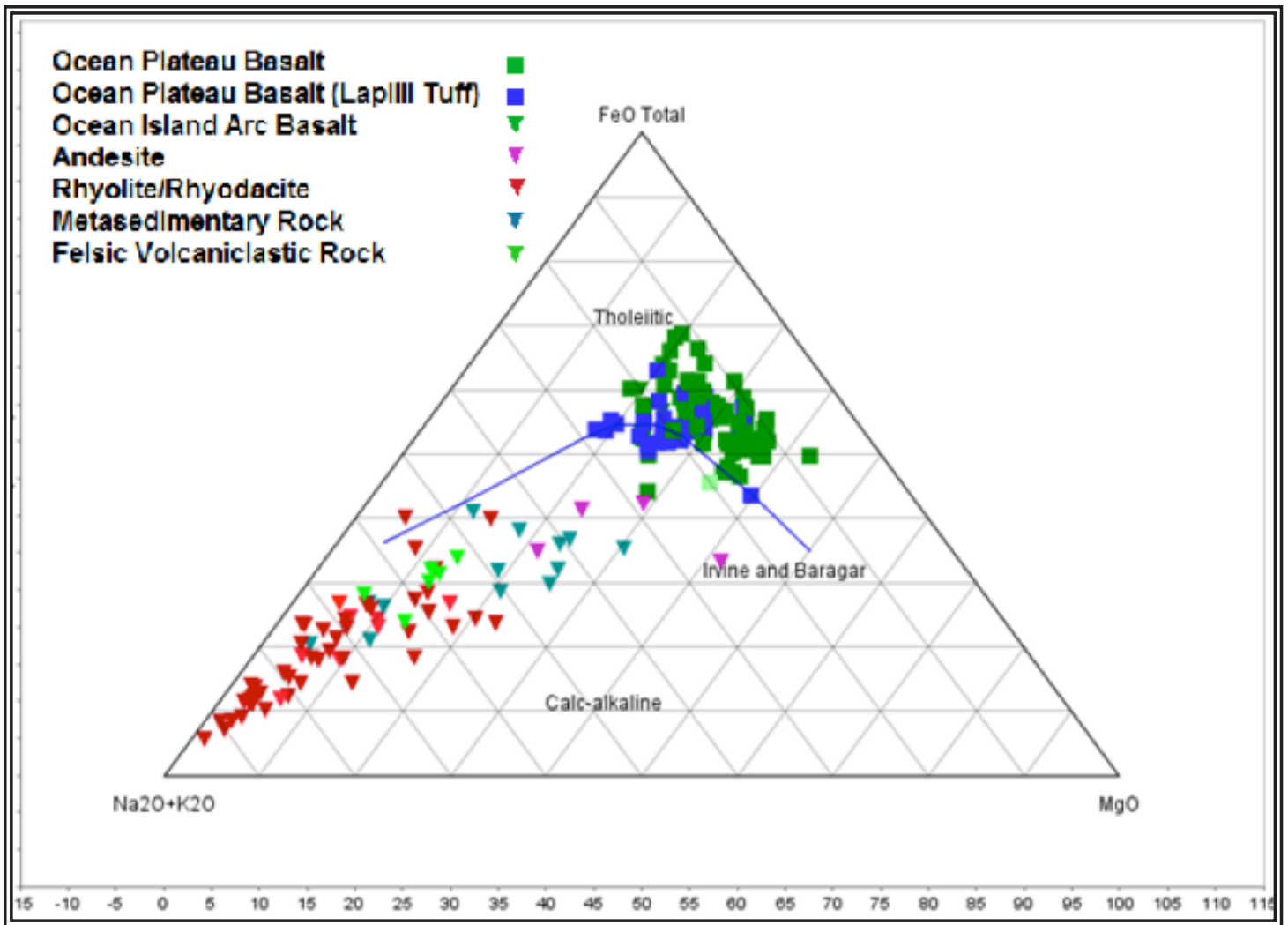


Figure 8. AFM diagram (Curve after Irvine and Baragar, 1971).

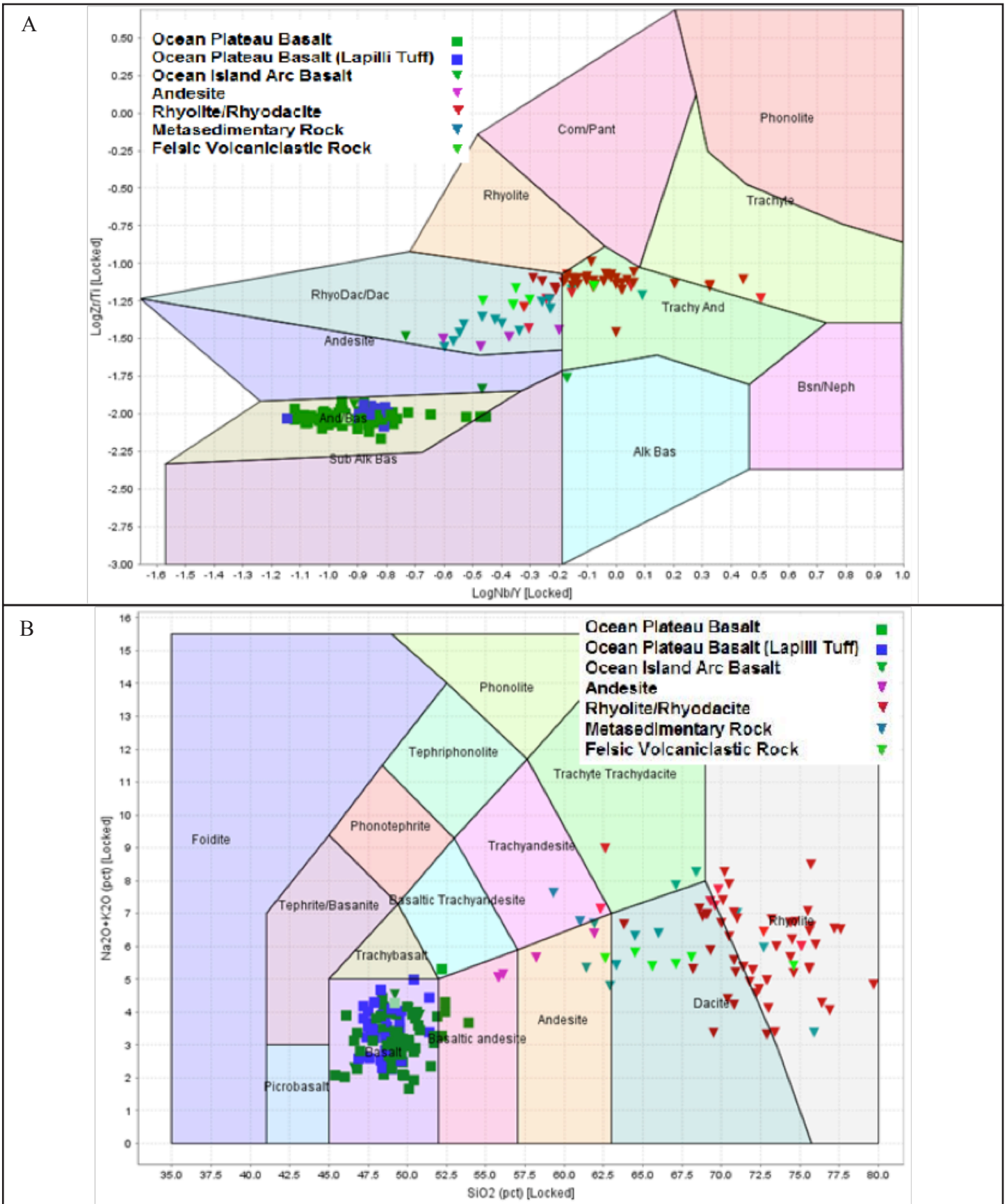


Figure 9. A) Basaltic rock classification scheme after Winchester and Floyd, 1977. B) Total Alkali versus silica diagram (Rollinson, 1993)

## 5.0 Conclusions

### 5.1 Discussion

The presence of both oceanic plateau and island arc associations of the volcanic rocks can be explained with the initiation of a subduction zone at the edge of an oceanic plateau (Polat 2008). Calc-alkaline lavas (ocean island arc basalts, andesites, rhyolites) erupted from an island arc at the edge of an oceanic plateau. Extension led to rifting of the arc and the formation of a back-arc basin. Hydrothermal alteration of back-arc oceanic crust produced the VMS deposits in the adjacent Winston Lake and Manitouwadge greenstone belts.

The  $\epsilon\text{Nd}$  data obtained from ocean plateau basalts are consistent with long-term depleted heterogeneous mantle sources (Polat, 2008).

Judging from the apparent thickness changes across the DC Lake fault, it is possible that the fault represents a reactivated primary (syn-depositional) structure that originally played a role in controlling the thickness, composition, and geochemical makeup of the metavolcanic rocks in the Gouda-Thor area. As Charlie Greig has pointed out, a number of unique and intriguing geological and geochemical features of the Hemlo East property occur in relatively close proximity to the DC Lake fault or its along-trend equivalents. There is evidence for this to the northwest by the Egg Lake horizon (also known as the upper anomalous horizon or local shear zone), as well as the Yellow Birch alteration zone. Along with the Gouda and Thor horizons, these represent the most interesting zones on the property from an exploration standpoint. This suggests that the DC Lake fault may have had a more prolonged history than is at first apparent, and a better understanding of it, and the rocks in its immediate vicinity may be significant in helping to understand the stratigraphic and structural makeup of the property as a whole.

### 5.2 Summary

From the 2009 mapping program and the 185 whole rock geochemical results received, it is shown that the volcanic rocks of the Gouda-Thor-Carrol area consist dominantly of ocean plateau basalts with minor ocean island basalts and andesites. Felsic volcanic rocks (rhyolites, dacites, and rhyodacites) form stratigraphic units and have an island arc affinity. Metasedimentary rocks are volcanic-derived and have similar geochemical characteristics to the ocean island basalts, andesites, and felsic volcanic rocks.

## 6.0 References

- Armstrong, T., and Magnan, M., 1998. 1998 Compilation and Lithogeochemical Sampling Program, White River Property, Hemlo Camp, Ontario. Lac Exploration Inc. Report No. 42C12NE200.
- Campbell, R.A. and MacMillan, G.S., 1984; Geology Report of Lac Minerals Ltd. White River Subproperties M11, N11, N12. p. 46. Report No. 42C12NE0038.
- Fleet, M.E. and Pan, Y., 1991. Metamorphic Petrology of the White River Gold Prospect, Hemlo Area. Ontario Geological Survey, Grant 305, Final Report. 47 pp.
- Guthrie, A.E., 1985; Geological Report. p.54. Report No. 42C12NW0164.
- Irvine, T.N. and Baragar, W.R.A., 1971. A guide to the chemical classification of the common volcanic rocks. Canadian Journal of Earth Sciences. 8: 523-548.
- Kent, J. A. 1984; Geology Report for Sub-Property M12; Lac Minerals Ltd. p. 29. Report No. 42C12NE0019.
- McIlveen, D.G., Stanley, M.C., 1985; Geology of the North Carroll Grid Properties L12, L113, White River Claim Group. Lac Minerals Ltd. p.43. Report No. 42C12NE0059.
- Muir, T.L., Jackson, S.L., and Beakhouse, G.P., 1999. The Regional Framework of the Hemlo Gold Deposit; Ontario Geological Survey, Summary of Field Work and Other Activities, Open File Report 6000, p.15-1 to 15-7.
- Rollinson, H.R., 1993. Using Geochemical data: Evaluation, Presentation, Interpretation. Longman Scientific and Technical. 352 pp.
- Polat, A., 2008. The geochemistry of the Neoproterozoic (ca. 2700Ma) tholeiitic basalts, transitional to alkaline basalts, and gabbros, Wawa Subprovince, Canada: Implications for petrogenetic processes. Precambrian Research. 168:83-105.
- Sun, S.-s., and McDonough, W.F. 1989. Chemical and isotopic systematics of oceanic basalts: implications for mantle composition and processes. In Magmatism in the ocean basins. Geological Society, Special Publication No.42: 313-345.
- Winchester, J.A., and Floyd, P.A., 1977. Geochemical discrimination of different magma series and their differentiation products using immobile elements. Chemical Geology. 20:325-343.
- Wood, D.A., 1980. The application of a Th-Hf-Ta diagram to problems of tectonomagmatic classification and to establishing the nature of crustal contamination of basaltic lavas of the British tertiary volcanic province. Earth and Planetary Science Letters. 50: 11-30.



## 7.0 Certificate of Qualification

To accompany the Hemlo East Report (Gouda-Thor Lakes area), Brothers, Laberge, Bomby and McCron Townships, Marathon, Ontario

I, Adam Fage, do hereby certify that:

1. I reside at 100 Ravenwood Ave., Thunder Bay, Ontario, Canada.
2. I am a graduate of the Earth Science Program at Dalhousie University, Halifax, Nova Scotia, Canada (Honours B.Sc., 2008) and am currently completing a M.Sc. in Geology at Lakehead University, Thunder Bay, Ontario, Canada.
3. I am employed as a contract geologist with MetalCORP limited; a junior mining company with its head office in Toronto, Ontario, Canada.
4. I participated in the 2009 exploration program on the Hemlo East Property, as described in this report, including the field work and preparation of this report.
5. I do not own, directly or indirectly, nor do I expect to receive, any interest in the property described in this report, or in the securities of MetalCORP limited, or any associated or affiliated companies.

Adam Fage (B.Sc)



MetalCORP Ltd.  
Phone: (807)-346-2760  
Fax: (807)-346-2769

2010 Assessment Report  
Python Claim Block, Hemlo East Property  
A. Fage

# Appendix A

2009 Geochemical Mapping and Sampling Program

Hemlo East Property  
Python Claim Block

## Outcrop Sample Descriptions

Sample	Easting	Northing	Description
HE001	592532	5388710	Massive mafic volcanic
HE002	592200	5388543	Schistose felsic volcanic (sericite schist)
HE004	593573	5388162	Mafic lapilli tuff
HE005	593295	5387999	Foliated intermediate volcanic
HE006	593295	5387999	Foliated intermediate volcanic
HE008	593706	5388182	Mafic lapilli tuff
HE009	593709	5388205	Foliated mafic volcanic
HE010	593688	5388311	Felsic intrusive
HE011	593664	5388355	Pegmatite dyke
HE013	592528	5389006	Massive mafic-intermediate volcanic. 1-3% pyrite
HE014	593323	5388511	Foliated mafic volcanic
HE015	593786	5388162	Mafic lapilli tuff
HE016	593897	5388136	Massive intermediate volcanic
HE017	594203	5388300	Massive mafic volcanic
HE018	594123	5388366	Foliated mafic volcanic
HE020	593583	5388367	Foliated mafic volcanic (amphibolite)
HE021	593600	5388511	Felsic volcanic (subvolcanic intrusive?)
HE022	593517	5388512	Mafic volcanic
HE023	593537	5388210	Mafic lapilli tuff
HE024	593702	5388047	Feldspar porphyry intrusive
HE025	593701	5388014	Foliated mafic volcanic
HE026	593535	5387883	felsic schistose volcanic
HE027	593079	5388201	Mafic lapilli tuff
HE028	592916	5388374	Mafic lapilli tuff/ Foliated mafic volcanic
HE029	592164	5388715	Massive mafic-intermediate volcanic
HE030	591915	5388791	Mafic-intermediate volcanic
HE031	591613	5388844	Foliated mafic volcanic
HE032	593041	5388745	Foliated mafic volcanic
HE033	592103	5388704	Foliated mafic volcanic
HE034	592015	5388743	Mafic lapilli tuff
HE035	591831	5388869	Foliated mafic volcanic
HE036	592687	5389135	Foliated to massive mafic volcanic
HE037	593266	5388135	Foliated mafic volcanic
HE038	592710	5388507	Foliated/ banded mafic volcanic
HE039	592748	5388587	Massive mafic volcanic
HE040	592751	5388630	Foliated/massive mafic volcanic
HE041	592701	5388603	Foliated mafic volcanic
HE042	592701	5388603	Massive felsic volcanic
HE043	592631	5388582	Foliated mafic volcanic with minor lapilli
Sample	Easting	Northing	Description
HE044	592668	5388526	Foliated mafic volcanic
HE045	592445	5388552	Foliated mafic volcanic
HE046	593353	5388579	Felsic Intrusive (subvolcanic?) fine-med grained, mostly qtz, plag, bt. Massive
HE047	593447	5388692	Foliated mafic volcanic, Very fine grained, rare felsic bands
HE048	593612	5388505	Felsic Intrusive (subvolcanic or recrystallized felsic volcanic??)

Appendix A  
Outcrop Sample Descriptions

Sample	Easting	Northing	Description
HE049	593269	5388542	Bedded feldspathic sediments. Mapped as felsic volcanoclastic by previous authors
HE050	593231	5388588	Bedded feldspathic sediments. Mapped as felsic volcanoclastic by previous authors.. Laminated, 3-20mm thick.
HE051	593186	5388635	Sediments (possible felsic volcanoclastic?) tan-orange, biotite defines foliation
HE052	593141	5388734	Variolitic mafic volcanic (band of mostly mafic volcanic sampled)
HE053	593213	5388662	Metasediments (possible felsic or felsic-int volcanic)
HE054	593374	5388636	Metasediments (possible felsic or felsic-int volcanic)
HE055	592658	5388697	Felsic fragmental. Fragments are qtz-rich, 1-2cmx.5-1cm. Some appear to have a preferred orientation. Matrix is fine-grained, grey.
HE056	592549	5388892	Variolitic Mafic Volcanic. Felsic bands 2-5mm thick every 1-2cm. Fine grained, hbl, bt, ± qtz/ser?
HE057	592582	5388968	Very fine grained felsic volcanic with 0.1mm qtz eyes. Tr. Galena, sphalerite.
HE059	592564	5388988	Very fine grained, weakly foliated to massive grey – qtz-feld, 2-5% sericite, trace pyrite, galena – altered sed or felsic V.
HE060	592523	5389066	Feldspathic sediments? Volcanoclastic? Grey with pink spots, tr. Py, fine grained,
HE061	592631	5388533	Thor Trench - felsic V , fine grained, 1-3% py, tr. gal, sph
HE062	593390	5387745	Mafic volcanic- fine-grained, foliated-crenulated.
HE063	593560	5387761	Mafic volcanic, foliated, crenulated tr. Py – fine grained ‘amphibolite’
HE064	593920	5387824	Mafic volcanic, foliated, crenulated tr. Py – fine grained ‘amphibolite’
HE065	593995	5387920	Sericite schist. tr. -2% py.
HE066	593895	5387909	Sericite schist. tr. -2% py.
HE067	593816	5388711	Cherty metasediments with white stain, possible sphalerite (none found)
HE068	593824	5388815	Foliated mafic-int volcanic
HE069	593741	5388768	Foliated mafic-int volcanic
HE070	593820	5388730	Massive mafic-int volcanic
HE071	592553	5388990	Rusty Vein with 1-3% galena within a fine grained felsic volcanic
HE072	592553	5388990	Fine grained felsic volcanic with trace galena on fractures
HE073	593863	5388693	25cm layer of qtz eye felsic volcanic within metasediments
HE074	581297	5393736	Sample of ‘Barren sulphide zone’ from roadside near Hemlo - Felsic Volcanic

Appendix A  
Outcrop Sample Descriptions

# Appendix B

2009 Geochemical Mapping and Sampling Program

Hemlo East Property  
Python Claim Block

## Drill Core Sample Descriptions



Hole ID	Sample	From	To	Lithology
WR00-01	WR101	33	33.4	Poker Chip Mafic Volcanic
WR00-01	WR102	65.6	66	Mafic Volcanic
WR00-01	WR103	94.8	95.1	Mafic Volcanic
WR00-01	WR104	131	131.4	Gouda (Schistose Felsic Volcanic)
WR00-01	WR105	139	139.3	Gouda(Schistose Felsic Volcanic)
WR00-02	WR106	48.6	49	Mafic Volcanic
WR00-02	WR107	72.6	73	Felsic Volcanic
WR00-02	WR108	89.3	89.7	Gouda(Schistose Felsic Volcanic)
WR00-03	WR109	339.3	339.7	Mafic Volcanic
WR00-03	WR110	362.9	363.3	Mafic Volcanic
WR00-04	WR111	16.4	16.9	Mafic/Intermediate Volcanic
WR00-04	WR112	50.4	50.8	Mafic/Intermediate Volcanic
WR00-04	WR113	82.7	83.2	Felsic Volcanic
WR00-04	WR114	93	93.4	Felsic Volcanic
WR00-04	WR115	131.1	131.5	Mafic Volcanic
WR00-07	WR116	111.5	111.9	Felsic Volcanic and Derived Sediments
WR00-07	WR117	132.9	133.3	Felsic Volcanic and Derived Sediments
WR00-07	WR118	203.3	203.8	Felsic Volcanic and Derived Sediments
WR00-07	WR119	231.6	232	Felsic Volcanic and Derived Sediments
WR00-08	WR120	130	130.5	Felsic Volcanic and Derived Sediments
WR00-08	WR121	156.9	157.4	Felsic Volcanic and Derived Sediments
WR01-01	WR01	138.75	139.5	Gouda(Schistose Felsic Volcanic)
WR01-01	WR02	148.3	149.9	Gouda(Schistose Felsic Volcanic)
WR01-01	WR03	151.9	153.5	Gouda(Schistose Felsic Volcanic)
WR01-02	WR04	36.4	36.85	Mafic Volcanic
WR01-02	WR05	117.6	117.95	Mafic Volcanic
WR01-02	WR06	189.2	189.6	Poker Chip Mafic Volcanic
WR01-02	WR07	213.3	213.7	Poker Chip Mafic Volcanic
WR01-02	WR08	227.4	227.9	Mafic Volcanic
WR01-02	WR09	242.2	242.6	Mafic Volcanic
WR01-02	WR10	365	365.7	Gouda(Schistose Felsic Volcanic)
WR01-02	WR11	373.3	373.8	Gouda(Schistose Felsic Volcanic)
WR01-02	WR12	383.1	383.6	Gouda(Schistose Felsic Volcanic)
WR01-03	WR13	18.5	18.9	Poker Chip Mafic Volcanic
WR01-03	WR14	165.7	166.3	Gouda(Schistose Felsic Volcanic)
WR01-03	WR15	168.2	168.9	Gouda(Schistose Felsic Volcanic)
WR01-03	WR16	173.4	174	Gouda(Schistose Felsic Volcanic)
WR01-03	WR17	189.9	190.5	Mafic Volcanic
WR01-03	WR18	192.7	193.3	Mafic Volcanic
WR01-04	WR19	81.8	82.3	Gouda(Schistose Felsic Volcanic)
WR01-04	WR20	86.1	86.6	Gouda(Schistose Felsic Volcanic)
WR01-04	WR21	86.8	87.35	Gouda(Schistose Felsic Volcanic)
WR01-04	WR22	100.4	101	Mafic Volcanic
WR01-04	WR23	108.6	109.1	Mafic Volcanic
WR01-05	WR24	11.3	11.7	Poker Chip Mafic Volcanic

Appendix B  
Drill Core Sample Descriptions

Hole ID	Sample	From	To	Lithology
WR01-05	WR25	43.6	47	Poker Chip Mafic Volcanic
WR01-05	WR26	175.7	176.3	Gouda(Schistose Felsic Volcanic)
WR01-05	WR27	186	186.6	Gouda(Schistose Felsic Volcanic)
WR01-05	WR28	196.8	197.3	Mafic Volcanic
WR01-06	WR29	6	6.4	Poker Chip Mafic Volcanic
WR01-06	WR30	42.3	42.7	Poker Chip Mafic Volcanic
WR01-06	WR31	154.7	155.2	Gouda(Schistose Felsic Volcanic)
WR01-06	WR32	166.3	166.8	Gouda(Schistose Felsic Volcanic)
WR01-06	WR33	184.6	185	Mafic Volcanic
WR01-07	WR80	24.7	25	Mafic Volcanic
WR01-07	WR81	64.2	64.5	Mafic Volcanic
WR01-07	WR82	96	96.4	Poker Chip Mafic Volcanic
WR01-07	WR83	123.8	124.2	Poker Chip Mafic Volcanic
WR01-07	WR84	151.9	152.4	Mafic Volcanic
WR01-07	WR85	252.3	252.6	Gouda(Schistose Felsic Volcanic)
WR01-07	WR86	258.5	258.9	Gouda(Schistose Felsic Volcanic)
WR01-07	WR89	291	291.3	Mafic Volcanic
WR01-08	WR87	12.8	13.2	Mafic Volcanic
WR01-08	WR88	29.5	29.9	Mafic Volcanic
WR01-08	WR122	98.5	98.9	Possible 'CADI zone' mafic volcanic
WR01-09	WR90	24.8	25.2	Mafic Volcanic
WR01-09	WR91	107.1	107.5	Mafic Volcanic
WR01-09	WR92	147.8	148.2	Poker Chip Mafic Volcanic
WR01-09	WR93	288.9	289.3	Gouda(Schistose Felsic Volcanic)
WR01-09	WR94	295.9	296.3	Gouda(Schistose Felsic Volcanic)
WR01-09	WR95	322.8	323.9	Mafic Volcanic
WR01-10	WR96	62	62.4	Mafic Volcanic
WR01-10	WR97	78	78.3	Mafic Volcanic
WR01-10	WR98	96.6	97	Gouda(Schistose Felsic Volcanic)
WR01-10	WR99	116.7	117.1	Mafic Volcanic
WR01-10	WR100	139	139.4	Mafic Volcanic
WR02-01	WR34	112	112.4	Poker Chip Mafic Volcanic
WR02-01	WR35	105.5	105.9	Poker Chip Mafic Volcanic
WR02-01	WR36	65.3	65.7	Mafic Volcanic
WR02-01	WR37	77	77.4	Mafic Volcanic
WR02-01	WR38	84.1	84.5	Mafic Volcanic
WR02-01	WR39	283.9	284.3	Gouda(Schistose Felsic Volcanic)
WR02-01	WR40	290.1	290.5	Gouda(Schistose Felsic Volcanic)
WR02-02	WR41	341.5	341.9	Gouda(Schistose Felsic Volcanic)
WR02-02	WR42	324.3	324.7	Gouda(Schistose Felsic Volcanic)
WR02-02	WR43	143.8	144.2	Poker Chip Mafic Volcanic
WR02-02	WR44	126	126.4	Poker Chip Mafic Volcanic
WR02-02	WR45	112.6	113	Mafic Volcanic
WR02-02	WR46	86.6	87	Mafic Volcanic
WR02-02	WR47	67.6	68	Mafic Volcanic

Appendix B  
Drill Core Sample Descriptions

Hole ID	Sample	From	To	Lithology
WR02-03	WR48	282.7	283.1	Mafic Volcanic
WR02-03	WR49	317.1	317.5	Mafic Volcanic
WR02-03	WR50	376.4	376.8	Mafic Volcanic
WR02-04	WR51	677.2	677.6	Mafic Volcanic
WR02-04	WR52	664.9	665.3	Mafic Volcanic
WR02-04	WR53	623.1	623.6	Gouda(Schistose Felsic Volcanic)
WR02-04	WR54	653.1	653.4	Gouda(Schistose Felsic Volcanic)
WR02-04	WR55	480.8	481.2	Poker Chip Mafic Volcanic
WR02-04	WR56	442	442.4	Mafic Volcanic
WR02-04	WR57	248.6	249	Mafic Volcanic
WR02-04	WR58	160	160.3	Poker Chip Mafic Volcanic
WR02-04	WR59	159.4	159.8	Poker Chip Mafic Volcanic
WR02-04	WR60	124.6	124.9	Mafic Volcanic
WR02-04	WR61	62.3	62.6	Mafic Volcanic
WR02-05	WR62	542.4	542.8	Gouda(Schistose Felsic Volcanic)
WR02-05	WR63	534.8	535.1	Gouda(Schistose Felsic Volcanic)
WR02-05	WR64	550.7	551	Mafic Volcanic
WR02-05	WR65	411.8	412.1	Poker Chip Mafic Volcanic
WR02-05	WR66	395.4	395.8	Poker Chip Mafic Volcanic
WR02-05	WR67	348.8	395.3	Mafic Volcanic
WR02-05	WR68	281.4	281.8	Mafic Volcanic
WR02-06a	WR69	492.2	492.6	Gouda(Schistose Felsic Volcanic)
WR02-06a	WR70	505.2	505.5	Gouda(Schistose Felsic Volcanic)
WR02-06a	WR71	517.4	517.7	Mafic Volcanic
WR02-06a	WR72	367.9	368.3	Poker Chip Mafic Volcanic
WR02-06a	WR73	359.2	359.5	Poker Chip Mafic Volcanic
WR02-06a	WR74	338.5	338.8	Mafic Volcanic
WR02-06a	WR75	240.8	241.2	Mafic Volcanic
WR02-09	WR76	228.6	229	Felsic Volcanic
WR02-09	WR77	241.2	241.5	Gouda(Schistose Felsic Volcanic)
WR02-09	WR78	264.8	265.2	Felsic Volcanic
WR02-09	WR79	12.3	12.7	Poker Chip Mafic Volcanic

Appendix B  
Drill Core Sample Descriptions

# Appendix C

2009 Geochemical Mapping and Sampling Program

Hemlo East Property  
Python Claim Block

## Geochemistry

(0 denotes below detection limit, blank is not analyzed)

Sample	HE001	HE002	HE004	HE005	HE006	HE008	HE009	HE013	HE014	HE015
Ag_ppm	0	0	3	0	0	0	0	0	0	0
Ba_ppm	213	844	132	731	854	33.4	63.8	405	124.5	14.1
Ce_ppm	44	17.3	8.8	51.8	53.6	8.3	5.5	81.7	5.7	8.2
Co_ppm	44.9	0.7	35.9	13.4	20.8	32.3	48	44	48.5	33.5
Cr_ppm	160	0	200	100	110	170	240	60	260	150
Cs_ppm	1.85	4.47	1.28	6	2.32	0.35	1.71	1.68	0.55	1.2
Cu_ppm	117	0	170	8	5	37	88	32	23	102
Dy_ppm	6.13	0.69	3.01	1.28	1.92	2.94	2.63	7.93	2.73	2.98
Er_ppm	3.85	0.35	2.03	0.75	1.23	1.95	1.81	4.66	1.95	1.99
Eu_ppm	1.38	0.24	0.8	0.88	1.05	0.77	0.6	2.47	0.77	0.74
Ga_ppm	16.8	20.5	16.8	18.2	18.8	16.8	14.9	21.1	15.1	17.3
Gd_ppm	6.23	1.28	2.6	2.97	3.66	2.46	1.95	9.52	2.14	2.32
Hf_ppm	4.3	2	1.5	2.5	3	1.5	1.2	6.6	1.2	1.5
Ho_ppm	1.3	0.13	0.7	0.27	0.39	0.67	0.63	1.65	0.61	0.69
La_ppm	20.5	7.5	3.3	24.2	27	3.1	2.1	38.6	2	3.2
Lu_ppm	0.56	0.05	0.31	0.11	0.17	0.32	0.29	0.72	0.31	0.31
Mo_ppm	0	0	2	0	0	0	0	2	0	0
Nb_ppm	11.2	3.5	2.4	2.6	3.3	2.3	1.3	28.3	1.5	2.4
Nd_ppm	23	7.3	6.5	21.8	24.9	6.4	4.6	42.5	4.7	6.5
Ni_ppm	64	0	64	59	109	58	144	39	150	63
Pb_ppm	9	14	8	11	10	5	0	56	5	0
Pr_ppm	5.53	1.93	1.29	5.9	6.68	1.24	0.86	10.25	0.91	1.27
Rb_ppm	37	106	21.5	94.8	66	2.5	22.4	47.9	4.6	4.4
Sm_ppm	5.47	1.46	2.02	3.62	4.06	1.97	1.55	9.19	1.53	2.06
Sn_ppm	1	1	1	1	1	0	0	1	0	0
Sr_ppm	341	168	317	256	379	180	106	261	207	136.5
Ta_ppm	0.7	0.3	0.2	0.2	0.3	0.2	0.1	1.8	0.1	0.2
Tb_ppm	1.06	0.17	0.51	0.33	0.44	0.49	0.4	1.49	0.41	0.48
Th_ppm	3.31	2.94	0.34	3.65	4.09	0.34	0.17	4.95	0.22	0.31
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.56	0.04	0.3	0.09	0.15	0.29	0.3	0.67	0.29	0.29
U_ppm	0.62	0.72	0.1	0.5	1.37	0.09	0.06	1.01	0.08	0.09
V_ppm	253		200	58	88	202	222	248	231	201
W_ppm	1	1	0	0	1	1	0	2	0	0
Y_ppm	32.8	3.7	16.8	6.5	11.2	17.1	15.4	42	16	17.2
Yb_ppm	3.37	0.31	1.77	0.62	0.99	1.96	1.87	4.38	1.87	1.87
Zn_ppm	119	12	83	53	68	73	80	77	76	69
Zr_ppm	151	38	48	86	106	47	36	227	38	50
SiO2_pct	50.1	75.6	51.4	66	61.9	47.6	49.4	49.2	49	49
Al2O3_pct	13.15	13.05	18.3	14.25	13.75	18.6	14.6	12.7	14.8	18.25
Fe2O3_pct	13.35	0.72	9.52	4.03	4.95	11.05	12.15	15.05	12.1	10.7
CaO_pct	8.06	1.2	9.47	2.71	3.94	11.95	10.5	5.55	10.25	11.65
MgO_pct	5.05	0.35	2.91	2.65	3.81	4.86	8.23	4.48	7.38	4.43
Na2O_pct	3.3	1.86	3.93	1.52	2.99	2.31	2.47	3.2	2.79	2.08
K2O_pct	0.82	3.49	0.51	4.88	3.7	0.29	0.39	1.34	0.31	0.18
Cr2O3_pct	0.03	0	0.03	0.02	0.02	0.03	0.04	0.01	0.04	0.02
TiO2_pct	1.72	0.06	0.83	0.36	0.45	0.82	0.69	2.19	0.69	0.81
MnO_pct	0.19	0.02	0.17	0.07	0.12	0.16	0.2	0.31	0.22	0.15
P2O5_pct	0.18	0.04	0.07	0.12	0.13	0.08	0.04	0.42	0.06	0.04
SrO_pct	0.04	0.02	0.04	0.03	0.05	0.02	0.01	0.03	0.02	0.02
BaO_pct	0.02	0.1	0.01	0.09	0.1	0	0.01	0.05	0.01	0
LOI_pct	2.67	1.9	2.09	1.5	2.69	0.3	0.5	3.56	0.4	0.7
Total_pct	98.7	98.4	99.3	98.2	98.6	98.1	99.2	98.1	98.1	98
Au_ppm	0	0	0	0	0	0	0	0	0	0

Appendix C  
Geochemistry

Sample	HE016	HE017	HE018	HE020	HE021	HE023	HE025	HE026	HE027	HE028
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	1020	70.8	76.1	66	813	108.5	518	478	92.3	92.5
Ce_ppm	53.1	8.5	5.8	6.5	32.5	8.1	97.8	23.2	8.8	5.9
Co_ppm	19.4	49.1	54.6	48.8	6.5	38.4	23.5	1	39.7	54.8
Cr_ppm	40	240	310	250	20	240	160	10	190	280
Cs_ppm	10.05	2.69	9.3	1.55	8.01	1.03	3.29	1.65	0.86	1.08
Cu_ppm	28	17	51	132	0	69	29	9	75	72
Dy_ppm	3.06	3.29	3.11	3.31	0.98	3.25	2.62	0.4	3.33	3.23
Er_ppm	1.73	2.23	2.11	2.22	0.43	2.13	1.39	0.21	2.17	2.21
Eu_ppm	1.56	0.91	0.74	0.78	0.84	0.81	1.67	0.39	0.84	0.66
Ga_ppm	20.2	16.1	17.1	15.1	22.3	16.7	19.5	19.6	16.8	14.9
Gd_ppm	4.66	2.8	2.44	2.42	2.4	2.67	5.58	1.03	2.81	2.39
Hf_ppm	3.7	1.6	1.4	1.4	3.2	1.5	3.2	2.8	1.5	1.3
Ho_ppm	0.59	0.77	0.73	0.74	0.16	0.71	0.47	0.07	0.72	0.7
La_ppm	24.4	3.7	2	2.3	14.8	3.2	43	12.4	3.4	2.3
Lu_ppm	0.27	0.34	0.35	0.35	0.05	0.3	0.18	0.03	0.33	0.32
Mo_ppm	0	0	3	0	0	0	0	2	0	0
Nb_ppm	5.3	3.2	1.4	1.5	2.4	2.2	3.5	1.5	2.4	1.3
Nd_ppm	27	7.3	5	5.5	15.7	6.5	45.7	8.8	6.9	5
Ni_ppm	19	106	160	107	10	73	88	0	76	164
Pb_ppm	14	0	0	5	21	8	9	31	0	0
Pr_ppm	6.68	1.4	0.93	1.06	4.01	1.27	12.3	2.57	1.4	0.98
Rb_ppm	66.1	27.9	28.7	11.9	80.9	20.9	61.9	39.6	8.5	22
Sm_ppm	5.31	2.13	1.68	1.88	3.07	2.04	7.09	1.25	2.13	1.67
Sn_ppm	1	1	0	1	1	1	1	1	0	1
Sr_ppm	905	117.5	94.4	154.5	952	285	762	204	161	149
Ta_ppm	0.3	0.2	0.1	0.2	0.3	0.3	0.4	0.2	0.3	0.2
Tb_ppm	0.62	0.54	0.48	0.46	0.24	0.46	0.57	0.09	0.48	0.44
Th_ppm	4.71	0.29	0.21	0.25	2.95	0.31	5.63	2.13	0.33	0.22
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.26	0.34	0.34	0.34	0.04	0.33	0.19	0.01	0.34	0.33
U_ppm	1.24	0.07	0.08	0.08	0.94	0.11	1.07	0.39	0.07	0.05
V_ppm	132	261	273	289	52	292	133	42	262	287
W_ppm	1	0	0	1	1	2	2	2	1	2
Y_ppm	15.7	20.7	18.4	19.1	4.2	18.4	12.3	1.8	18.8	18.2
Yb_ppm	1.61	2.09	2.16	2.15	0.33	2.05	1.22	0.2	2.08	2.1
Zn_ppm	94	95	91	103	84	94	89	19	81	105
Zr_ppm	126	53	44	46	115	50	116	100	53	43
SiO2_pct	58.2	46.8	47.7	50.4	69	48.6	61.4	74.5	48.7	51.4
Al2O3_pct	15.3	15	16.6	13.8	15.25	16.7	14.85	14.55	17.6	16.6
Fe2O3_pct	7.31	13.65	12.2	12.85	2.87	12.35	6.13	1.13	11.8	11.5
CaO_pct	5.94	10.5	10.4	10.3	2.96	9.83	5.46	1.5	10.1	10.4
MgO_pct	3.66	6.95	5.52	7.36	1.09	5.78	4.76	0.2	5.69	4.02
Na2O_pct	3.66	1.86	2.81	1.61	4.9	3.25	3.22	3.83	3.15	2.75
K2O_pct	2	0.41	0.62	0.32	2.07	0.76	2.13	2.38	0.41	0.64
Cr2O3_pct	0.01	0.04	0.05	0.04	0	0.04	0.02	0	0.03	0.04
TiO2_pct	0.75	0.98	0.8	0.79	0.33	0.9	0.56	0.24	0.86	0.77
MnO_pct	0.13	0.22	0.22	0.19	0.04	0.18	0.09	0.01	0.16	0.2
P2O5_pct	0.34	0.07	0.06	0.05	0.11	0.09	0.22	0.03	0.08	0.06
SrO_pct	0.11	0.02	0.01	0.02	0.12	0.03	0.09	0.02	0.02	0.02
BaO_pct	0.12	0.01	0.01	0.01	0.09	0.01	0.06	0.05	0.01	0.01
LOI_pct	0.7	1.6	1.09	0.67	1.37	1.27	0.67	1.07	0.39	1.56
Total_pct	98.2	98.1	98.1	98.4	100	99.8	99.7	99.5	99	100
Au_ppm	0	0	0							

Appendix C  
Geochemistry



Sample	HE029	HE030	HE031	HE032	HE033	HE034	HE035	HE036	HE037	HE038
Ag_ppm	0	0	0	0	0	0	1	0	0	0
Ba_ppm	162.5	285	101.5	266	26.3	141	101.5	442	123	112.5
Ce_ppm	235	11.4	6.1	10.3	9.9	13.3	7.3	54.8	10.2	9
Co_ppm	34.4	49.3	57.7	32.3	44.7	43.8	59	17	47	54.3
Cr_ppm	180	170	290	20	240	240	250	100	210	80
Cs_ppm	1.55	2.29	3.29	1.57	0.65	2.56	4.63	0.51	3.32	1.55
Cu_ppm	30	96	50	79	35	39	68	9	74	20
Dy_ppm	6.2	4.41	2.79	4.05	3.84	3.95	3.18	2.31	3.78	3.39
Er_ppm	2.93	2.92	1.71	2.55	2.38	2.46	2.03	1.21	2.32	2.13
Eu_ppm	4.89	1.04	0.64	0.98	0.89	0.92	0.72	1.18	0.91	0.86
Ga_ppm	18.2	18.1	17	22.5	19.3	19.9	18.1	16.5	18.9	17.2
Gd_ppm	15.6	3.58	2.12	3.03	3	3.19	2.44	3.93	2.96	2.69
Hf_ppm	3.6	2	1.2	1.9	1.7	1.6	1.4	2.6	1.7	1.4
Ho_ppm	1.03	0.96	0.6	0.87	0.83	0.85	0.69	0.41	0.79	0.72
La_ppm	106.5	4.5	2.5	3.9	3.9	5.7	3	26.2	4	3.3
Lu_ppm	0.34	0.43	0.28	0.43	0.38	0.4	0.34	0.17	0.39	0.34
Mo_ppm	0	0	0	0	0	0	4	0	0	0
Nb_ppm	5.1	2.8	1.7	3.4	2.8	2.6	1.7	2.8	2.7	2.6
Nd_ppm	125.5	9	4.9	7.7	7.7	8.7	5.7	27.7	7.7	7
Ni_ppm	56	83	143	23	82	88	125	45	90	82
Pb_ppm	9	5	11	13	14	15	14	13	12	11
Pr_ppm	32	1.82	0.97	1.54	1.55	1.87	1.13	6.95	1.55	1.38
Rb_ppm	10.7	36	25.9	54.1	4.7	35.6	44.5	38.4	26.3	26.1
Sm_ppm	19.95	2.78	1.64	2.48	2.45	2.54	1.86	4.91	2.43	2.21
Sn_ppm	1	1	1	1	1	1	1	1	1	1
Sr_ppm	574	151.5	196	322	170.5	310	132	297	346	173
Ta_ppm	0.4	0.3	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2
Tb_ppm	1.53	0.64	0.4	0.58	0.55	0.57	0.45	0.45	0.53	0.51
Th_ppm	11.15	0.43	0.19	0.36	0.33	0.35	0.21	3.43	0.32	0.27
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.37	0.45	0.31	0.41	0.37	0.38	0.29	0.14	0.38	0.33
U_ppm	1.95	0.1	0.06	0.19	0.1	0.12	0.06	2.39	0.09	0.09
V_ppm	302	370	276	398	286	273	308	120	255	300
W_ppm	1	1	1	1	1	2	1	2	1	1
Y_ppm	27.6	25.1	15.6	22.8	21.7	23	17.9	11.1	21	19
Yb_ppm	2.32	2.79	1.75	2.67	2.39	2.51	2.04	1.06	2.39	2.1
Zn_ppm	123	125	126	127	95	89	101	43	105	109
Zr_ppm	157	71	38	63	57	55	47	95	56	52
SiO2_pct	46.6	49.7	48.9	53.9	52.4	47.5	48.5	59.3	48.6	50.1
Al2O3_pct	15.1	14.45	13.55	13.55	17.3	16.4	14.95	13.25	16.9	13.55
Fe2O3_pct	10.45	13.15	12.6	11.05	9.1	12	12.35	6.35	11.9	14.5
CaO_pct	15.1	11.15	11.45	9.48	10.05	11.1	11.55	5.19	10.75	10.25
MgO_pct	7.04	4.53	8.12	5.19	4.23	5.81	6.78	4.5	5.84	6.36
Na2O_pct	1.86	1.04	1.98	2.9	3.65	2.68	1.92	6.11	2.85	2.44
K2O_pct	0.45	1.06	0.39	0.78	0.36	0.88	0.45	1.52	0.54	0.62
Cr2O3_pct	0.03	0.02	0.04	0	0.03	0.03	0.03	0.02	0.03	0.01
TiO2_pct	0.8	1.13	0.68	1.2	0.94	0.91	0.77	0.57	0.9	1.02
MnO_pct	0.2	0.22	0.21	0.22	0.19	0.18	0.24	0.12	0.18	0.26
P2O5_pct	0.94	0.11	0.07	0.08	0.11	0.08	0.06	0.2	0.09	0.1
SrO_pct	0.07	0.02	0.02	0.04	0.02	0.04	0.02	0.04	0.04	0.02
BaO_pct	0.02	0.03	0.01	0.03	0	0.01	0.01	0.05	0.01	0.01
LOI_pct	2.03	1.76	1.22	-0.87	-0.29	1.16	0.88	1.55	0.2	0.1
Total_pct	100.5	98.4	99.2	97.6	98.1	98.8	98.5	98.8	98.8	99.3
Au_ppm										

Appendix C  
Geochemistry

Sample	HE039	HE040	HE041	HE042	HE043	HE044	HE045	HE46	HE47	HE48
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	34	755	197.5	1470	120.5	59.5	106	948	172.5	810
Ce_ppm	14.5	6.1	7.7	58.6	8.5	8.7	6.4	56	7.7	41.3
Co_ppm	48	55.3	53.3	3.7	55.7	45.8	55.4	5	58.1	6.9
Cr_ppm	230	260	270	10	290	70	290	20	310	30
Cs_ppm	0.46	3.36	1.95	1.81	0.9	1.77	1.61	28.4	4.94	2.5
Cu_ppm	98	85	92	27	30	7	39	0	48	13
Dy_ppm	2.69	2.67	3.51	0.59	3.82	3.14	2.93	1.82	3.75	1.06
Er_ppm	1.63	1.67	2.26	0.21	2.54	1.87	1.9	0.95	2.45	0.5
Eu_ppm	0.69	0.65	0.75	0.97	0.78	0.76	0.63	1.05	0.99	0.9
Ga_ppm	18.6	12.6	17.8	24.2	17.7	14.6	18.7	21.2	18.3	23.8
Gd_ppm	2.37	2.05	2.52	2.92	2.88	2.44	2.12	3.23	3	2.71
Hf_ppm	0.9	1.1	1.4	3.8	1.6	1.4	1.2	4.5	1.6	3.5
Ho_ppm	0.55	0.54	0.75	0.07	0.83	0.64	0.61	0.34	0.81	0.17
La_ppm	6.4	2.4	3	27.7	3.4	3.3	2.6	27.4	2.9	19.6
Lu_ppm	0.25	0.27	0.37	0.01	0.4	0.29	0.3	0.11	0.36	0.05
Mo_ppm	0	0	0	0	0	0	0	0	0	0
Nb_ppm	1.9	1.4	1.9	2.1	1.8	2.3	1.4	10.5	2.3	2.7
Nd_ppm	8	4.6	5.9	27.1	6.8	6.4	5	20.5	6.3	20.5
Ni_ppm	113	131	105	0	110	67	168	0	159	11
Pb_ppm	13	10	16	31	14	12	11	20	9	33
Pr_ppm	1.89	0.92	1.17	7.1	1.35	1.28	1.01	5.87	1.24	5.16
Rb_ppm	5.5	76.8	47.8	61.3	19.7	21.5	20.6	227	20.1	56.3
Sm_ppm	2.06	1.6	1.99	4.41	2.2	2.09	1.8	3.47	2.14	3.54
Sn_ppm	0	0	1	1	1	1	1	2	1	1
Sr_ppm	1020	460	245	1150	168	243	134	500	262	707
Ta_ppm	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.9	0.2	0.2
Tb_ppm	0.4	0.37	0.49	0.21	0.54	0.44	0.4	0.39	0.56	0.28
Th_ppm	0.39	0.19	0.24	4.51	0.29	0.26	0.17	7.63	0.26	3.2
Tl_ppm	0	0	0	0	0	0	0	1	0	0
Tm_ppm	0.24	0.26	0.35		0.38	0.28	0.29	0.1	0.34	0.03
U_ppm	0.14	0.05	0.12	1.34	0.05	0.07	0.07	1	0.07	1.01
V_ppm	241	263	288	22	320	250	264	30	287	45
W_ppm	2	1	1	1	1	1	1	1	1	1
Y_ppm	15.1	14.8	19.6	2.1	22	16.7	16.9	9.3	21.3	4.6
Yb_ppm	1.57	1.59	2.39	0.09	2.59	1.84	1.91	0.78	2.59	0.34
Zn_ppm	84	85	103	46	129	93	97	63	136	79
Zr_ppm	29	33	44	126	52	46	40	167	51	118
SiO2_pct	46	50.3	52.2	70.2	47.4	51.7	50.1	69.6	52.4	69.3
Al2O3_pct	13.65	13.55	14.65	16.1	14.15	13.4	16.8	15.2	17.1	15.4
Fe2O3_pct	11.75	12.35	12.7	1.77	14.45	13.35	11.8	2.91	10.95	2.87
CaO_pct	15.35	8.36	8.9	2.1	9.54	9.8	11.35	2.24	9.11	2.42
MgO_pct	7.16	8.82	5.02	0.57	8.2	6.37	5.02	0.76	4.31	1.21
Na2O_pct	1.78	2.24	2.05	5.06	2.52	2.68	1.08	4.46	3.75	5.44
K2O_pct	0.25	1.69	1.23	3.2	0.72	0.6	0.59	2.78	0.56	1.93
Cr2O3_pct	0.03	0.04	0.04	0	0.04	0.01	0.04	0	0.05	0.01
TiO2_pct	0.61	0.69	0.86	0.25	0.92	1.01	0.77	0.39	0.95	0.34
MnO_pct	0.23	0.24	0.23	0.03	0.24	0.23	0.24	0.05	0.3	0.05
P2O5_pct	0.08	0.06	0.07	0.14	0.08	0.08	0.09	0.19	0.11	0.14
SrO_pct	0.13	0.06	0.03	0.14	0.02	0.03	0.01	0.06	0.03	0.09
BaO_pct	0	0.09	0.02	0.17	0.01	0.01	0.01	0.11	0.02	0.09
LOI_pct	2.49	1.98	1.97	0.49	1.72	1.08	1.97	0.39	0.3	0.39
Total_pct	99.5	100.5	100	100	100	100.5	99.9	99.1	99.9	99.7
Au_ppm										

Appendix C  
Geochemistry

Sample	HE49	HE50	HE51	HE52	HE53	HE54	HE55	HE56	HE57	HE59
Ag_ppm	0	0	0	0	0	0	0	0	2	1
Ba_ppm	644	631	256	298	352	1090	972	728	760	555
Ce_ppm	9.1	26.8	28.2	7.6	32.9	34	166	10.2	56.5	36.4
Co_ppm	6.3	4.6	4.6	51.2	6.6	7.5	11.4	58.2	7.9	9.9
Cr_ppm	30	20	10	300	30	20	120	360	20	40
Cs_ppm	20.8	5.58	3.72	1.99	4.97	189	2.99	2.56	2.17	2.13
Cu_ppm	10	14	8	96	30	7	59	61	40	90
Dy_ppm	0.46	1.05	0.94	3.52	1.23	2.53	3.29	2.84	1.33	1.36
Er_ppm	0.33	0.51	0.46	2.26	0.67	1.21	1.71	1.81	0.86	0.75
Eu_ppm	0.44	0.6	0.71	0.84	0.53	1.32	2.46	0.76	0.85	0.72
Ga_ppm	23.6	20.7	19.9	18.9	18.2	23.5	21.9	15.8	18.5	17.7
Gd_ppm	0.67	1.64	1.78	2.71	2.07	3.53	8.69	2.47	2.66	2.2
Hf_ppm	3.9	3.5	2.6	1.6	3.3	4.5	4.1	1.4	3.7	3
Ho_ppm	0.11	0.18	0.16	0.75	0.24	0.48	0.56	0.63	0.28	0.26
La_ppm	4.9	12	13.7	2.9	17	14.7	78	4.2	27.1	17.2
Lu_ppm	0.06	0.08	0.05	0.36	0.09	0.13	0.21	0.27	0.12	0.1
Mo_ppm	0	0	0	3	0	0	0	0	0	2
Nb_ppm	3.7	3.5	2.4	2.3	3.6	5.8	5.4	1.8	8.8	3.7
Nd_ppm	3.7	11.2	12.8	6.2	14.2	18.8	75.1	6.9	23.2	15.7
Ni_ppm	5	7	0	108	5	0	53	256	18	34
Pb_ppm	13	44	9	0	0	11	8	5	1355	1045
Pr_ppm	0.98	3.05	3.38	1.22	3.78	4.55	20.2	1.5	6.52	4.12
Rb_ppm	94.4	83.1	25.1	17.5	53.5	106.5	66.9	44.5	64.4	69.1
Sm_ppm	0.79	2.08	2.11	2.26	2.4	4.15	11.2	1.92	3.57	2.52
Sn_ppm	1	1	0	1	1	2	1	1	1	1
Sr_ppm	390	338	635	292	166.5	1015	1150	346	252	110
Ta_ppm	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.1	0.4	0.3
Tb_ppm	0.1	0.22	0.2	0.52	0.24	0.49	0.83	0.43	0.31	0.27
Th_ppm	3.03	2.81	1.78	0.29	2.49	3.45	11.9	0.55	4.18	3.89
Tl_ppm	0.5	0	0	0	0	0.6	0	0	0	0
Tm_ppm	0.02	0.05	0.03	0.32	0.07	0.12	0.21	0.25	0.1	0.08
U_ppm	0.82	0.9	0.5	0.38	0.71	0.75	2.51	0.13	5.35	0.95
V_ppm	60	40	29	286	52	97	88	221	30	49
W_ppm	0	1	0	1	1	0	1	1	2	1
Y_ppm	3	5	4.1	19.6	6.1	12.6	15.8	15.8	7.8	6.7
Yb_ppm	0.4	0.55	0.39	2.29	0.66	0.99	1.39	1.83	0.79	0.69
Zn_ppm	90	82	52	109	55	99	55	103	3250	2840
Zr_ppm	140	128	93	52	117	160	156	43	135	100
SiO2_pct	67.1	72.7	71	48.5	75.9	63.3	62.9	49.5	69.8	68.4
Al2O3_pct	16.55	14.9	15.6	16.9	13.5	16.65	14.75	14.8	13.45	14.9
Fe2O3_pct	3.6	2.72	2.14	11.8	3.27	5.26	5	10.75	2.1	2.84
CaO_pct	2.39	0.96	1.94	9.86	0.51	4.24	6.11	8.43	2.27	0.6
MgO_pct	0.97	0.92	0.48	5.58	0.85	2.25	2.95	8.78	0.52	1.34
Na2O_pct	4.65	3.29	6.05	3.42	0.92	3.39	2.06	2.7	5.1	6
K2O_pct	3.21	2.67	0.96	0.74	2.46	2.04	2.74	1.03	2.63	2.26
Cr2O3_pct	0.01	0	0	0.04	0.01	0	0.02	0.05	0	0.01
TiO2_pct	0.38	0.32	0.27	0.96	0.39	0.75	0.59	0.73	0.32	0.3
MnO_pct	0.07	0.04	0.03	0.29	0.03	0.08	0.09	0.22	0.04	0.04
P2O5_pct	0.07	0.14	0.08	0.15	0.08	0.31	0.36	0.1	0.15	0.14
SrO_pct	0.05	0.04	0.08	0.04	0.02	0.13	0.14	0.04	0.03	0.01
BaO_pct	0.08	0.08	0.03	0.03	0.04	0.13	0.11	0.08	0.09	0.06
LOI_pct	0.99	1.23	1.58	1.58	2.07	1.47	2.28	2.11	1.89	1.94
Total_pct	100	100	100	99.9	100	100	100	99.3	98.4	98.8
Au_ppm										

Appendix C  
Geochemistry

Sample	HE60	HE61	HE62	HE63	HE64	HE65	HE66	HE68	HE69	HE70
Ag_ppm	0	2	0	0	0	0	0	0	0	0
Ba_ppm	714	964	157	299	93.3	485	775	351	386	524
Ce_ppm	71.2	19.2	10.4	10.3	9.8	19	17.9	8	7.8	47.5
Co_ppm	22	6	56.9	55.4	53	3.9	0.5	42.8	50.6	28.7
Cr_ppm	110	20	100	100	110	10	10	340	290	110
Cs_ppm	1.26	5.72	2.45	1.77	1.03	4.3	4.83	2.06	3.66	2.04
Cu_ppm	41	67	81	148	46	8	0	67	81	27
Dy_ppm	2.6	0.52	3.54	3.58	3.36	0.67	0.79	3.71	3.54	2.99
Er_ppm	1.42	0.26	2.3	2.31	2.25	0.38	0.4	2.55	2.39	1.88
Eu_ppm	1.58	0.48	0.91	0.89	0.89	0.45	0.22	0.87	0.8	1.11
Ga_ppm	19	24	17.9	18.6	22.5	20.6	22.3	20.6	17.3	19.9
Gd_ppm	5.04	1.21	2.84	2.95	2.92	1.22	1.44	2.94	2.72	3.95
Hf_ppm	3.2	2.7	1.8	1.8	1.7	2.7	2.2	1.7	1.5	3
Ho_ppm	0.46	0.08	0.77	0.75	0.74	0.12	0.14	0.84	0.78	0.6
La_ppm	34.3	8.7	4	4.1	3.9	8.8	8.5	3	3	22.6
Lu_ppm	0.17	0.03	0.33	0.35	0.32	0.05	0.05	0.38	0.34	0.27
Mo_ppm	0	0	0	23	0	0	0	0	0	0
Nb_ppm	3.5	1.6	2.6	2.8	3.6	2.5	3.6	2.4	2.3	4.1
Nd_ppm	35.8	8.6	8.1	8	7.3	7.4	8.1	6.5	6.3	23.3
Ni_ppm	38	0	79	78	84	0	0	91	155	13
Pb_ppm	15	826	9	5	7	14	11	0	5	9
Pr_ppm	9.28	2.3	1.63	1.63	1.53	2.07	2.17	1.3	1.22	5.93
Rb_ppm	53.6	116.5	40.4	53.1	24.6	87.3	89.8	28.3	164.5	87.5
Sm_ppm	6.17	1.6	2.44	2.35	2.26	1.31	1.75	2.21	2.11	4.52
Sn_ppm	1	1	1	1	3	0	1	1	1	1
Sr_ppm	559	465	177.5	183.5	145.5	221	58.3	217	418	421
Ta_ppm	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Tb_ppm	0.59	0.13	0.54	0.55	0.54	0.14	0.18	0.55	0.51	0.55
Th_ppm	4.32	2.31	0.36	0.36	0.34	1.92	3.06	0.26	0.25	2.67
Tl_ppm	0	2.5	0	0	0	0	0	0	0.6	0
Tm_ppm	0.16	0.01	0.29	0.32	0.31	0.03	0.04	0.36	0.35	0.23
U_ppm	1.04	1.23	0.11	0.09	0.44	0.53	0.62	0.07	0.1	0.63
V_ppm	135	29	301	301	283	21		312	278	214
W_ppm	1	2	1	1	1	1	1	1	1	1
Y_ppm	12.9	2.4	19.4	19.9	19.1	3.4	4	21.1	20.5	16.4
Yb_ppm	1.24	0.25	2.2	2.32	2.21	0.35	0.34	2.57	2.49	1.87
Zn_ppm	93	1940	131	113	111	43	26	158	96	100
Zr_ppm	111	89	58	58	60	87	42	56	50	106
SiO2_pct	61	70.5	48.3	49.3	49.3	72	76.4	50.5	52.2	56.1
Al2O3_pct	14.65	15.4	14	13.75	13.8	14.65	13.2	16.7	15.75	15.6
Fe2O3_pct	6.66	2.75	14.5	14.15	13.9	2.07	1.26	9.38	9.55	8.45
CaO_pct	3.96	0.57	9.69	10.8	10.55	1.39	0.24	10.7	7.43	5.51
MgO_pct	3.9	0.59	6.27	6.08	5.97	1.21	0.45	3.85	5.54	5.21
Na2O_pct	5.08	4.21	2.6	2.22	3.08	2.55	0.52	3.11	3.54	3.64
K2O_pct	1.68	3.68	0.89	1.05	0.85	2.73	3.76	0.7	1.77	1.51
Cr2O3_pct	0.02	0	0.02	0.02	0.02	0	0	0.04	0.04	0.02
TiO2_pct	0.61	0.19	1.02	1	0.98	0.2	0.06	0.93	0.91	0.56
MnO_pct	0.11	0.04	0.31	0.29	0.26	0.04	0.01	0.23	0.31	0.18
P2O5_pct	0.23	0.08	0.12	0.08	0.11	0.08	0.02	0.1	0.1	0.24
SrO_pct	0.07	0.06	0.02	0.02	0.02	0.03	0.01	0.02	0.05	0.05
BaO_pct	0.08	0.11	0.02	0.03	0.01	0.06	0.09	0.04	0.04	0.06
LOI_pct	0.98	1.39	2.17	1.66	1.77	3.31	2.08	1.8	2.05	2.77
Total_pct	99	99.6	99.9	100.5	100.5	100.5	98.1	98.1	99.3	99.9
Au_ppm										

Appendix C  
Geochemistry

Sample	HE73	HE74	WR01	WR02	WR03	WR04	WR05	WR06	WR07	WR08
Ag_ppm	0	0	0	4	0	0	0	0	0	0
Ba_ppm	1300	608	376	837	549	93	59	55.3	181	292
Ce_ppm	60.1	42.7	35.5	30.3	31.5	7.3	7.2	9.7	9.9	17.6
Co_ppm	1.8	8.6	4.5	4.2	7.3	54.1	56.1	40.3	38.4	47.8
Cr_ppm	10	50	10	10	20	230	290	170	170	30
Cs_ppm	1.34	3.91	14.95	9.03	7.76	1.77	1.11	2.5	1.83	6.11
Cu_ppm	0	9	6	409	20	145	75	78	83	135
Dy_ppm	2.9	1.12	0.89	0.67	0.56	2.82	3.16	3.32	3.25	5.78
Er_ppm	1.36	0.45	0.41	0.32	0.28	1.79	2.04	2.15	2.13	3.64
Eu_ppm	1.69	0.77	0.62	0.49	0.53	0.7	0.73	0.87	0.84	1.38
Ga_ppm	23.9	14.3	21.5	20.8	23.1	15.9	24	18.9	19.1	24.6
Gd_ppm	5.25	2.57	2.05	1.7	1.38	2.13	2.38	2.65	2.7	4.76
Hf_ppm	5	2.6	3	2.9	3.1	1.2	1.3	1.5	1.5	2.9
Ho_ppm	0.5	0.12	0.14	0.1	0.09	0.58	0.68	0.71	0.69	1.25
La_ppm	27.6	20.6	17.5	15.6	16.6	3	3.3	4.2	4	7.3
Lu_ppm	0.14	0.02	0.05	0.04	0.03	0.29	0.33	0.33	0.3	0.55
Mo_ppm	0	2	2	6	5	0	0	0	0	2
Nb_ppm	6.8	3.2	3	2.2	5.5	1.6	6.2	2.7	2.7	5.5
Nd_ppm	34	19.9	15.4	13.5	12.1	5.6	5.7	7.5	7.5	13.2
Ni_ppm	0	29	7	10	13	129	172	79	69	36
Pb_ppm	20	7	14	21	15	0	11	0	0	8
Pr_ppm	8.03	5.11	4.21	3.63	3.51	1.12	1.13	1.49	1.53	2.67
Rb_ppm	46.1	41.9	111	148	132.5	13.5	40.7	18.6	58.4	58.9
Sm_ppm	6.62	3.09	2.49	2.09	1.69	1.8	1.83	2.16	2.16	3.91
Sn_ppm	1	0	1	1	1	1	5	1	1	3
Sr_ppm	1110	370	99.4	275	603	144.5	123	209	347	172
Ta_ppm	0.4	0.1	0.2	0.2	0.7	0.1	1	0.2	0.2	0.5
Tb_ppm	0.64	0.22	0.22	0.19	0.15	0.42	0.48	0.54	0.52	0.89
Th_ppm	3.48	3.99	3.33	2.26	2.05	0.24	0.22	0.29	0.32	0.55
Tl_ppm	0	0	0.5	0.9	0.6	0	0	0	0	0
Tm_ppm	0.14	0.06	0.04	0.02	0.02	0.25	0.3	0.3	0.28	0.52
U_ppm	0.72	1.14	0.48	0.7	0.6	0	0.27	0.08	0.07	0.25
V_ppm	95	42	28	25	34	277	271	214	218	437
W_ppm	0	14	2	2	1	0	0	0	1	2
Y_ppm	13.7	6.7	4.2	3	2.6	16.3	18.4	18.9	18.3	31.9
Yb_ppm	1.02	0.44	0.32	0.28	0.24	1.82	2.14	2.1	2.02	3.69
Zn_ppm	46	25	55	278	47	90	118	90	85	189
Zr_ppm	173	92	105	100	105	43	43	55	54	98
SiO2_pct	62.3	72.7	73.4	72.4	70.8	49	48.8	47.7	48.6	46.8
Al2O3_pct	16.45	12.2	15.3	14.2	15.8	14.25	16.8	19.5	20.5	12.95
Fe2O3_pct	3.75	2.81	1.84	3.83	1.04	12.45	11.7	11.25	8.43	17.65
CaO_pct	4.09	0.91	0.73	0.5	2.52	10.85	12.25	11.45	11.85	9.2
MgO_pct	2.08	0.47	0.78	0.45	0.29	7.89	4.4	4.89	2.74	4.79
Na2O_pct	4.58	4.55	0.63	1.25	5.19	2.25	2.4	3.1	2.76	2.27
K2O_pct	2.56	1.89	2.76	3.45	1.84	0.34	0.57	0.53	1.05	1.1
Cr2O3_pct	0	0.01	0	0	0	0.03	0.04	0.02	0.02	0.01
TiO2_pct	0.78	0.3	0.22	0.21	0.25	0.71	0.75	0.84	0.83	1.76
MnO_pct	0.07	0.01	0.02	0.01	0.02	0.21	0.25	0.16	0.17	0.28
P2O5_pct	0.31	0.06	0.06	0.08	0.05	0.05	0.06	0.07	0.07	0.15
SrO_pct	0.13	0.04	0.01	0.03	0.07	0.01	0.01	0.02	0.04	0.02
BaO_pct	0.15	0.07	0.04	0.1	0.06	0.01	0.01	0.01	0.02	0.03
LOI_pct	2.51	2.19	3.29	2.51	0.3	0.7	0.6	1.11	1.89	1.2
Total_pct	99.8	98.2	99.1	99	98.2	98.8	98.6	100.5	99	98.2
Au_ppm		0.038	0.002	0.243	0.01					

Appendix C  
Geochemistry

Sample	WR09	WR10	WR11	WR12	WR13	WR14	WR15	WR16	WR17	WR18
Ag_ppm	0	0	0	0	0	1	0	1	0	0
Ba_ppm	165.5	314	487	472	294	457	506	447	97.4	85.4
Ce_ppm	16.2	27.5	17.7	77.9	10.8	21.6	17.4	21.3	12.5	25.9
Co_ppm	48.9	6.5	3.8	15.4	44.4	5.5	3.6	6.1	54	78.7
Cr_ppm	30	30	10	110	210	20	10	10	90	1340
Cs_ppm	2.19	3.18	8.7	1.52	1.22	6.63	9.76	10	0.66	2.14
Cu_ppm	128	38	5	8	85	26	0	15	146	133
Dy_ppm	5.84	0.79	0.53	2.23	3.44	0.75	0.53	0.58	3.54	3.31
Er_ppm	3.7	0.45	0.29	1.23	2.17	0.38	0.3	0.31	2.25	1.74
Eu_ppm	1.44	0.58	0.41	1.18	0.86	0.47	0.35	0.47	0.94	1.29
Ga_ppm	20	20	18.4	14.3	17.9	18.9	19.7	19.6	18.4	17.2
Gd_ppm	4.67	1.65	1.16	4.64	2.77	1.39	1.09	1.26	3.11	3.73
Hf_ppm	2.8	2.9	2.5	3	1.7	2.8	2.8	3	1.9	2
Ho_ppm	1.27	0.15	0.09	0.41	0.71	0.14	0.09	0.11	0.77	0.66
La_ppm	6.4	14.2	8.9	35.9	4.5	11.1	8.5	11	5.5	11
Lu_ppm	0.59	0.06	0.03	0.17	0.33	0.06	0.05	0.05	0.34	0.23
Mo_ppm	0	0	3	5	0	0	0	0	2	0
Nb_ppm	4.6	2.4	2.3	10.1	2.6	2.2	2	2.3	3.3	5.7
Nd_ppm	12.6	11.6	7.8	38	8	9.2	7.4	8.8	9.2	16.1
Ni_ppm	25	15	5	40	88	11	0	8	80	521
Pb_ppm	0	9	19	0	13	8	9	20	10	6
Pr_ppm	2.53	3.23	2.12	9.84	1.64	2.51	2.05	2.42	1.86	3.62
Rb_ppm	28.3	67.1	47.1	63.3	83.5	44.7	88.4	79.5	21	20
Sm_ppm	3.73	1.86	1.34	6.11	2.25	1.59	1.21	1.48	2.63	3.81
Sn_ppm	1	1	4	1	1	1	1	1	1	1
Sr_ppm	357	184	480	137	252	353	47.2	446	379	133.5
Ta_ppm	0.3	0.2	0.1	1	0.2	0.2	0.2	0.2	0.2	0.4
Tb_ppm	0.92	0.19	0.13	0.52	0.53	0.17	0.13	0.14	0.57	0.6
Th_ppm	0.46	1.74	1.33	5.28	0.37	1.77	1.5	1.63	0.4	0.82
Tl_ppm	0	0	0.6	0	0	0	0	0.6	0	0
Tm_ppm	0.55	0.05	0.02	0.16	0.31	0.04	0.02	0.03	0.33	0.22
U_ppm	0.13	0.56	1.04	2.61	0.08	0.63	0.49	0.57	0.16	0.46
V_ppm	415	41	17	71	245	31	24	25	306	284
W_ppm	1	1	1	1	0	1	2	2	1	0
Y_ppm	32.7	3.9	2.5	10.1	19.2	3.6	2.4	2.9	19.8	16.2
Yb_ppm	3.77	0.4	0.28	1.11	2.15	0.33	0.27	0.28	2.16	1.62
Zn_ppm	148	37	60	56	125	52	47	77	103	156
Zr_ppm	96	100	87	92	58	91	92	98	65	70
SiO2_pct	50.6	68.6	74.4	63.8	48.4	72.2	72.9	70.9	48.4	45.4
Al2O3_pct	12.35	15.15	13.35	13.4	17.35	15.35	15.2	15.85	14	8.78
Fe2O3_pct	18.05	2.62	1.25	6.45	12.2	2.31	2.14	2.03	14.05	15.15
CaO_pct	6.53	1.48	1.9	2.8	9.69	2.86	0.16	2.03	12.45	11.9
MgO_pct	5.13	0.79	0.17	2.07	5.65	0.96	0.74	0.52	3.92	11.7
Na2O_pct	3.29	5.5	4.89	4.45	2.62	2.29	0.29	2.72	3.86	1.32
K2O_pct	0.72	1.65	1.83	2.22	1.3	2.28	3.03	2.49	0.57	0.76
Cr2O3_pct	0	0	0	0.02	0.03	0	0	0	0.01	0.2
TiO2_pct	1.78	0.25	0.17	0.44	0.9	0.22	0.2	0.2	1.06	1.22
MnO_pct	0.28	0.03	0.01	0.08	0.21	0.04	0.01	0.02	0.25	0.25
P2O5_pct	0.14	0.05	0.03	0.19	0.09	0.04	0.04	0.07	0.08	0.09
SrO_pct	0.04	0.02	0.06	0.02	0.03	0.04	0.01	0.06	0.05	0.02
BaO_pct	0.02	0.04	0.06	0.05	0.03	0.05	0.05	0.05	0.01	0.01
LOI_pct	1	1.9	0.6	3.1	1.7	1.5	4	1.8	0.6	1.2
Total_pct	99.9	98.1	98.7	99.1	100	100	98.8	98.7	99.3	98
Au_ppm		0	0	0.001		0.001	0.001	0.001		

Appendix C  
Geochemistry



Sample	WR19	WR20	WR21	WR22	WR23	WR24	WR25	WR26	WR27	WR28
Ag_ppm	1	0	0	0	0	0	0	0	0	0
Ba_ppm	504	432	678	107.5	271	26.1	51.4	595	506	169.5
Ce_ppm	16.9	21.5	22.4	17.4	14.6	9.9	8.9	20.2	18.8	8.4
Co_ppm	4	8.9	16.6	84.3	57	56.4	43	4.4	2.5	51.2
Cr_ppm	10	10	10	1400	320	280	240	10	20	240
Cs_ppm	8.16	10.35	9.56	0.56	1.71	1.59	2.52	22.9	5.55	5.35
Cu_ppm	26	14	14	115	110	75	57	5	10	66
Dy_ppm	0.59	0.46	0.48	4.09	3.15	3.73	3.4	0.6	0.5	2.74
Er_ppm	0.27	0.25	0.28	2.37	1.93	2.43	2.16	0.33	0.3	1.71
Eu_ppm	0.38	0.44	0.4	1.21	0.9	0.92	0.84	0.41	0.36	0.72
Ga_ppm	16.7	19.9	20	19.1	16.8	17.4	17.9	20.3	15	17.1
Gd_ppm	1.07	1.04	1.07	3.95	2.81	2.98	2.73	1.28	1.05	2.31
Hf_ppm	2.6	2.7	2.8	2.2	1.5	1.8	1.6	2.8	2.4	1.3
Ho_ppm	0.1	0.08	0.08	0.82	0.66	0.82	0.73	0.11	0.09	0.59
La_ppm	8.6	11.2	11.9	7.1	6.6	4.2	3.7	10.5	9.5	3.6
Lu_ppm	0.04	0.03	0.04	0.33	0.27	0.38	0.34	0.05	0.04	0.25
Mo_ppm	8	8	3	0	0	0	0	4	0	0
Nb_ppm	2.5	2	2.4	6.1	2.4	2.9	2.4	2.5	3	3.3
Nd_ppm	7.4	8.1	8.5	13.1	9.6	8	7.1	8.5	7.9	6.3
Ni_ppm	7	12	27	468	119	136	94	7	9	127
Pb_ppm	72	14	18	6	6	0	0	6	6	8
Pr_ppm	1.97	2.43	2.49	2.71	2.09	1.57	1.41	2.31	2.16	1.29
Rb_ppm	52.2	93.7	97.7	24.8	64.9	8.1	10.5	181	80.8	112.5
Sm_ppm	1.36	1.25	1.3	3.51	2.58	2.37	2.11	1.45	1.23	1.78
Sn_ppm	1	0	1	2	1	1	1	1	1	1
Sr_ppm	381	542	728	379	265	99.9	132	277	267	246
Ta_ppm	0.2	0.1	0.2	0.4	0.1	0.2	0.2	0.2	0.2	0.2
Tb_ppm	0.13	0.11	0.11	0.68	0.49	0.58	0.53	0.14	0.13	0.44
Th_ppm	1.44	1.67	1.85	0.46	0.85	0.28	0.24	1.82	1.52	0.25
Tl_ppm	0	0	0	0	0	0	0	0.6	0	0
Tm_ppm	0.03	0.02	0.03	0.31	0.27	0.34	0.3	0.04	0.02	0.24
U_ppm	0.56	0.59	0.6	0.29	0.27	0.18	0.09	0.69	0.66	0.06
V_ppm	21	26	28	315	281	270	255	24	17	252
W_ppm	1	1	1	1	0	1	1	1	1	0
Y_ppm	2.6	2.2	2.2	20.3	17.1	21.3	18.8	3.2	2.6	14.6
Yb_ppm	0.24	0.23	0.25	2.19	1.85	2.46	2.26	0.27	0.28	1.64
Zn_ppm	287	75	63	120	127	109	72	47	16	104
Zr_ppm	81	92	98	79	52	59	55	91	84	44
SiO2_pct	73.5	68.8	69.1	46.6	48.8	46.9	47.9	70.8	75.5	48.8
Al2O3_pct	13.2	16.25	16.6	10.45	14.05	15.15	18.05	15.05	12.9	13.9
Fe2O3_pct	2.13	1.54	2.11	15.4	12.95	14.15	11.65	1.76	0.75	11.65
CaO_pct	1.79	2.6	3	12.35	11.05	10.45	10.95	2.36	0.9	10.5
MgO_pct	0.22	0.4	0.38	9.48	7.3	7.43	5.78	1.47	0.23	7.75
Na2O_pct	3.92	4.12	4	2.23	2.28	2.34	2.97	2.68	4.91	2.76
K2O_pct	2.08	2.79	2.98	0.9	1.09	0.25	0.25	2.9	2.16	1.22
Cr2O3_pct	0	0	0	0.2	0.05	0.04	0.03	0	0	0.03
TiO2_pct	0.16	0.2	0.21	1.38	0.84	0.95	0.92	0.19	0.16	0.74
MnO_pct	0.01	0.02	0.02	0.27	0.25	0.21	0.16	0.04	0.01	0.19
P2O5_pct	0.03	0.05	0.04	0.09	0.09	0.08	0.06	0.03	0.04	0.07
SrO_pct	0.05	0.07	0.09	0.05	0.03	0.01	0.01	0.03	0.03	0.03
BaO_pct	0.05	0.04	0.07	0.01	0.03	0	0.01	0.06	0.05	0.02
LOI_pct	1.39	1.49	0.7	1	1.49	0.4	1	1.39	0.4	1.6
Total_pct	98.5	98.4	99.3	100.5	100.5	98.4	99.7	98.8	98	99.3
Au_ppm	0.001	0	0					0	0	

Appendix C  
Geochemistry

Sample	WR29	WR30	WR31	WR32	WR33	WR34	WR35	WR36	WR37	WR38
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	33.9	157.5	447	601	168	112.5	61.9	268	30.2	48.6
Ce_ppm	8.8	14.3	23	14	13.1	11.5	9.7	16.7	6.9	10
Co_ppm	45.7	43.3	6	3.3	50.1	37.5	38.7	51.5	32.6	51.8
Cr_ppm	200	200	20	20	280	170	170	70	160	270
Cs_ppm	9.51	5.09	10.4	8.01	2.93	5.26	5.28	7.29	0.58	0.64
Cu_ppm	58	111	28	11	133	61	95	106	63	100
Dy_ppm	3.22	3.42	0.81	0.45	2.98	3.4	3.3	5.89	2.29	3.66
Er_ppm	2.05	2.15	0.4	0.23	1.81	2.17	2.19	3.76	1.45	2.32
Eu_ppm	0.8	0.91	0.52	0.38	0.9	0.87	0.84	1.35	0.55	0.9
Ga_ppm	18.8	18.7	20.6	17.2	16.1	18.9	18.9	21.1	11.3	17.5
Gd_ppm	2.59	3.01	1.54	0.9	2.78	2.77	2.63	4.68	1.84	2.86
Hf_ppm	1.6	1.6	2.8	2.6	1.4	1.6	1.6	3.2	1.2	1.6
Ho_ppm	0.68	0.73	0.16	0.08	0.63	0.72	0.74	1.27	0.49	0.78
La_ppm	4	6.8	11.9	7.1	5.9	4.7	4.1	6.8	3.3	4.3
Lu_ppm	0.32	0.32	0.06	0.03	0.26	0.33	0.33	0.57	0.23	0.34
Mo_ppm	0	0	13	2	5	0	0	0	0	0
Nb_ppm	2.6	2.7	4.4	2.1	2.3	2.6	2.8	4.4	2	2.9
Nd_ppm	6.9	9.1	9.8	6	8.8	8.2	7.4	13	5.1	7.6
Ni_ppm	93	82	11	6	116	69	70	55	70	118
Pb_ppm	10	5	15	8	7	0	0	0	0	0
Pr_ppm	1.36	1.99	2.7	1.66	1.89	1.7	1.5	2.59	1.05	1.56
Rb_ppm	38.4	51.2	66.6	52.3	41.1	41.1	21	38.7	5.2	5
Sm_ppm	2.02	2.43	1.72	1.11	2.36	2.23	2.16	3.82	1.48	2.31
Sn_ppm	1	0	1	1	1	1	1	1	0	1
Sr_ppm	162.5	321	401	431	277	295	198	177	71.8	99.4
Ta_ppm	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.3	0.1	0.2
Tb_ppm	0.51	0.56	0.17	0.1	0.48	0.53	0.52	0.91	0.36	0.56
Th_ppm	0.26	0.45	1.8	1.39	0.67	0.65	0.3	0.58	0.25	0.29
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.29	0.31	0.06	0.01	0.26	0.3	0.31	0.56	0.22	0.33
U_ppm	0.07	0.15	0.68	0.52	0.22	0.35	0.14	0.13	0.17	0.1
V_ppm	248	239	33	21	258	213	223	384	178	269
W_ppm	0	1	1	1	0	0	0	1	1	0
Y_ppm	17.8	19	4.2	2.1	15.6	18.6	19.2	33.2	13.2	20.5
Yb_ppm	2.04	2.15	0.38	0.22	1.73	2.12	2.18	3.85	1.44	2.29
Zn_ppm	81	85	85	28	90	83	88	152	65	96
Zr_ppm	50	54	96	86	49	57	55	109	41	56
SiO2_pct	47.5	47.9	70.5	74.7	49.7	47.2	47.2	49	49	48.5
Al2O3_pct	18.2	18	15.5	13.5	14.55	20.3	19.45	14.7	15.05	15.4
Fe2O3_pct	11.75	11.55	2.77	0.78	12.25	10.4	11.2	16.5	13.1	13.8
CaO_pct	10.7	10.25	2.24	1.74	11.65	11.45	11.9	9.49	10.55	10.65
MgO_pct	5.68	5.38	0.84	0.28	7.05	3.89	4.9	5.07	6.46	6.57
Na2O_pct	3.41	3.28	3.68	4.39	2.28	3.07	2.22	1.46	2.61	1.91
K2O_pct	0.61	1.01	2.62	2.35	0.91	0.74	0.44	0.99	0.3	0.19
Cr2O3_pct	0.03	0.03	0	0	0.04	0.02	0.02	0.01	0.03	0.04
TiO2_pct	0.85	0.85	0.24	0.18	0.77	0.84	0.85	1.53	1	0.99
MnO_pct	0.17	0.18	0.04	0.01	0.22	0.16	0.17	0.22	0.2	0.2
P2O5_pct	0.05	0.08	0.05	0.03	0.08	0.08	0.08	0.12	0.07	0.08
SrO_pct	0.02	0.04	0.05	0.05	0.03	0.03	0.02	0.02	0.01	0.01
BaO_pct	0	0.02	0.04	0.06	0.02	0.01	0.01	0.03	0	0.01
LOI_pct	0.7	1.99	1.69	0.7	1.09	1.59	1.3	0.6	0.3	0.1
Total_pct	99.7	100.5	100.5	98.8	100.5	99.8	99.8	99.7	98.7	98.5
Au_ppm			0	0						

Appendix C  
Geochemistry

Sample	WR39	WR40	WR41	WR42	WR43	WR44	WR45	WR46	WR47	WR48
Ag_ppm	0	0	1	0	0	0	0	0	0	0
Ba_ppm	891	357	528	495	50.7	62.2	356	74.6	76.1	58.9
Ce_ppm	20.7	26.6	21.6	27.4	9.5	10.1	168.5	12.2	18.4	6.7
Co_ppm	0.9	3.9	9	4.5	39.1	51	33.7	53.2	49.9	56.2
Cr_ppm	10	20	10	20	180	240	480	140	50	260
Cs_ppm	5.77	21.1	9.35	9.34	0.51	1.85	7.79	0.52	0.43	0.49
Cu_ppm	0	0	24	8	81	98	31	113	127	90
Dy_ppm	0.91	0.75	0.47	0.76	3.22	3.78	3.3	4.95	5.69	2.79
Er_ppm	0.43	0.39	0.25	0.4	2.08	2.4	1.85	3.19	3.68	1.78
Eu_ppm	0.27	0.52	0.5	0.53	0.85	0.87	2.44	1.09	1.29	0.67
Ga_ppm	19.8	19.6	22.3	19.5	19.8	17.7	16.6	19.1	19.8	15.7
Gd_ppm	1.55	1.6	1.05	1.54	2.53	2.88	8.57	3.7	4.62	2.2
Hf_ppm	1.9	3	2.9	2.9	1.6	1.9	3	2.2	2.9	1.2
Ho_ppm	0.16	0.14	0.09	0.13	0.69	0.8	0.59	1.09	1.24	0.61
La_ppm	10.3	13.6	10.8	13.6	3.9	4.3	78.8	5	8.1	3
Lu_ppm	0.05	0.05	0.03	0.05	0.31	0.37	0.21	0.51	0.58	0.26
Mo_ppm	0	0	0	0	0	0	0	0	0	0
Nb_ppm	3.6	2.5	2.2	2.6	2.7	2.8	10	2.7	3.5	1.6
Nd_ppm	9.6	11.1	8.4	11.5	7.3	7.9	77.8	9.4	13.1	5.2
Ni_ppm	8	11	17	10	75	100	182	47	35	126
Pb_ppm	9	7	82	11	0	0	5	0	0	0
Pr_ppm	2.54	3.08	2.41	3.15	1.45	1.56	20.7	1.89	2.72	1.04
Rb_ppm	71.9	75.2	68.5	69.6	4.7	9.4	33.7	13.6	11.6	7.3
Sm_ppm	1.9	1.93	1.25	1.93	2.07	2.36	10.25	2.73	3.66	1.6
Sn_ppm	1	0	1	1	0	0	1	1	1	0
Sr_ppm	85.6	125.5	708	308	154.5	122	168.5	186.5	152.5	127.5
Ta_ppm	0.3	0.2	0.1	0.2	0.2	0.2	0.4	0.2	0.3	0.1
Tb_ppm	0.2	0.19	0.11	0.18	0.49	0.58	0.89	0.75	0.87	0.42
Th_ppm	3.17	2.09	1.82	2.1	0.32	0.3	8.3	0.4	0.77	0.17
Tl_ppm	0	0	2.5	0	0	0	0	0	0	0
Tm_ppm	0.05	0.04	0.02	0.04	0.29	0.34	0.21	0.47	0.53	0.23
U_ppm	1.11	0.63	0.57	0.7	0.07	0.07	1.41	0.08	0.17	0
V_ppm	7	24	30	26	224	277	134	374	381	266
W_ppm	1	1	2	1	0	0	0	1	0	0
Y_ppm	4.2	3.7	2.1	3.6	18.4	21.2	15.8	28.1	31.6	15.2
Yb_ppm	0.34	0.33	0.22	0.32	2.12	2.41	1.46	3.25	3.74	1.65
Zn_ppm	87	42	52	60	88	100	78	118	135	88
Zr_ppm	40	101	98	100	56	65	119	71	95	39
SiO2_pct	76.9	70.4	68.2	71.8	48.3	48.4	55.8	49.5	50.8	49
Al2O3_pct	12.8	15.1	17.85	15.05	20.2	15.8	13.7	13.5	13.5	14.65
Fe2O3_pct	1.35	2.17	1.49	2.17	10.65	13.5	7.45	15.55	15.45	12.3
CaO_pct	0.72	1.64	4.02	2.16	12.6	10.95	6.58	9.39	9.26	11.7
MgO_pct	0.42	1.88	0.71	1.58	3.98	6.79	8.39	6.19	4.71	7.76
Na2O_pct	0.75	1.11	3.68	2.09	2.3	1.99	3.75	3.01	3.03	2.6
K2O_pct	3.31	3.29	1.63	2.83	0.24	0.31	1.31	0.47	0.42	0.39
Cr2O3_pct	0	0	0	0	0.02	0.03	0.07	0.02	0.01	0.04
TiO2_pct	0.04	0.2	0.22	0.21	0.87	0.94	0.55	1.14	1.31	0.7
MnO_pct	0.01	0.04	0.02	0.04	0.16	0.21	0.13	0.23	0.25	0.23
P2O5_pct	0	0.05	0.04	0.06	0.08	0.08	0.32	0.09	0.11	0.06
SrO_pct	0.01	0.01	0.09	0.04	0.02	0.01	0.02	0.02	0.02	0.01
BaO_pct	0.1	0.03	0.05	0.05	0.01	0.01	0.04	0.01	0.01	0.01
LOI_pct	1.69	2.41	0.7	1.4	0.6	0.6	0.7	0	-0.8	0.6
Total_pct	98.1	98.3	98.7	99.5	100	99.6	98.8	99.1	98.1	100
Au_ppm	0.001	0.002	0.005	0.002						

Appendix C  
Geochemistry

Sample	WR49	WR50	WR51	WR52	WR53	WR54	WR55	WR56	WR57	WR58
Ag_ppm	0	0	0	0	1	0	0	0	0	0
Ba_ppm	43.9	13.5	60.2	77.3	443	514	64.1	53.3	118	163
Ce_ppm	6.4	6.1	7.8	10.4	28.3	20.8	9.5	16	6.1	8.9
Co_ppm	53.9	54.1	49.8	53.7	4.5	6.8	38.7	47.5	54.4	36.7
Cr_ppm	220	270	250	80	10	10	170	140	260	170
Cs_ppm	0.94	11.2	2.49	0.95	6.08	9.32	2.84	0.73	2.47	2.33
Cu_ppm	109	126	85	55	6	10	79	105	104	72
Dy_ppm	2.59	2.99	2.61	3.41	0.75	0.41	3.38	4.35	2.63	3.25
Er_ppm	1.75	1.96	1.69	2.2	0.38	0.22	2.19	3.08	1.74	2.08
Eu_ppm	0.66	0.7	0.67	0.88	0.53	0.42	0.84	1.08	0.63	0.78
Ga_ppm	15.4	16.4	15	17	19.5	19.6	17.7	18.3	15	16.2
Gd_ppm	1.99	2.21	2.19	2.88	1.62	0.98	2.72	3.62	1.99	2.59
Hf_ppm	1.1	1.2	1.3	1.7	2.9	2.6	1.7	2.1	1.2	1.6
Ho_ppm	0.59	0.68	0.57	0.74	0.12	0.07	0.73	0.99	0.57	0.7
La_ppm	2.6	2.7	3.4	4.1	14.5	10.7	3.9	6.8	2.5	3.6
Lu_ppm	0.27	0.32	0.23	0.33	0.04	0.03	0.33	0.45	0.24	0.3
Mo_ppm	0	0	0	0	0	0	0	0	0	0
Nb_ppm	1.5	1.5	2.1	3	2.3	2.3	2.9	2.7	1.7	2.7
Nd_ppm	5.1	5.1	5.8	7.6	12.1	8	7.1	10.4	4.7	6.7
Ni_ppm	117	157	125	76	9	9	75	51	133	65
Pb_ppm	0	0	8	0	8	7	0	0	0	0
Pr_ppm	1.03	0.97	1.2	1.58	3.32	2.31	1.47	2.25	0.96	1.37
Rb_ppm	4.7	16	47.4	16.4	47.2	102	16.5	12.2	60.9	45.3
Sm_ppm	1.59	1.54	1.74	2.4	1.99	1.17	2.21	2.85	1.59	2.07
Sn_ppm	0	0	1	1	1	0	1	1	0	1
Sr_ppm	107.5	149	194	201	239	639	216	262	228	329
Ta_ppm	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Tb_ppm	0.4	0.45	0.42	0.54	0.18	0.1	0.52	0.68	0.41	0.5
Th_ppm	0.15	0.15	0.34	0.38	2.26	1.71	0.35	0.83	0.23	0.34
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.23	0.29	0.25	0.32	0.03	0.01	0.33	0.42	0.22	0.29
U_ppm	0	0	0.14	0.09	0.65	0.52	0.08	0.16	0	0.1
V_ppm	268	258	243	305	29	21	220	321	249	199
W_ppm	0	0	0	0	2	1	0	0	0	1
Y_ppm	15.3	17.3	14.2	18.9	3.5	2	18.7	24.6	14.6	17.6
Yb_ppm	1.74	2.04	1.66	2.14	0.31	0.19	2.17	2.95	1.56	2.01
Zn_ppm	91	92	107	110	33	65	90	120	84	83
Zr_ppm	38	42	45	58	99	89	55	71	39	54
SiO2_pct	48.8	47	48.6	48.9	70.8	71.4	48.6	49.2	49.7	47.2
Al2O3_pct	14.3	15.55	14.35	13.65	15.15	16.35	19.45	13.7	14.7	18.5
Fe2O3_pct	12.5	12.45	12.15	14.95	2.07	1.45	10.05	15.3	12.15	10.7
CaO_pct	11.25	10.9	12.15	10.25	3.23	3.58	11.4	9.34	11.6	10.55
MgO_pct	8.31	8.55	7.04	5.93	1.56	0.45	3.98	6.16	6.49	4.79
Na2O_pct	2.29	2.49	2.41	2.69	1.96	2.92	2.76	3	1.58	3.14
K2O_pct	0.38	0.33	0.81	0.54	2.26	2.46	0.48	0.43	0.9	1.04
Cr2O3_pct	0.03	0.04	0.04	0.01	0	0	0.03	0.02	0.04	0.03
TiO2_pct	0.69	0.72	0.77	1.04	0.22	0.2	0.89	1.1	0.71	0.85
MnO_pct	0.21	0.2	0.22	0.26	0.04	0.02	0.18	0.24	0.23	0.17
P2O5_pct	0.04	0.06	0.05	0.08	0.05	0.04	0.06	0.1	0.04	0.06
SrO_pct	0.01	0.02	0.02	0.02	0.03	0.08	0.03	0.03	0.03	0.04
BaO_pct	0	0	0	0	0.04	0.05	0	0	0	0.01
LOI_pct	0.5	0.6	1.1	-0.1	1.39	0.7	2.58	1.2	1.89	2.09
Total_pct	99.3	98.9	99.7	98.2	98.8	99.7	100.5	99.8	100	99.2
Au_ppm					0.003	0				

Appendix C  
Geochemistry

Sample	WR59	WR60	WR61	WR62	WR63	WR64	WR65	WR66	WR67	WR68
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	206	120	65.5	832	1630	129.5	142.5	11.8	16.7	22.3
Ce_ppm	8.7	13.6	7.4	27.6	68.4	10.7	10.3	9.1	7.2	6.2
Co_ppm	35.3	47.4	53.9	3.9	5.7	55.1	36.9	39	52.6	53.1
Cr_ppm	160	90	220	20	30	90	170	170	270	260
Cs_ppm	2.49	0.39	1.8	4.64	4.7	0.64	3.26	0.92	1.9	2.09
Cu_ppm	81	113	108	6	0	155	88	83	87	110
Dy_ppm	3.11	5.19	2.87	0.82	1.48	3.68	3.4	3.4	3.42	2.55
Er_ppm	2.01	3.31	1.91	0.39	0.67	2.41	2.18	2.23	2.34	1.66
Eu_ppm	0.76	1.2	0.68	0.57	1.11	0.92	0.86	0.81	0.77	0.65
Ga_ppm	17.5	18.7	15	21.3	21	17.2	18.8	17.3	15.6	15.3
Gd_ppm	2.6	4.18	2.28	1.78	3.9	3	2.75	2.7	2.62	2.05
Hf_ppm	1.5	2.6	1.3	2.8	4.1	1.8	1.8	1.7	1.5	1.1
Ho_ppm	0.69	1.16	0.62	0.14	0.22	0.79	0.72	0.75	0.76	0.58
La_ppm	3.5	5.3	3.3	14	32.9	4.2	4.3	3.7	3.1	2.6
Lu_ppm	0.31	0.51	0.29	0.05	0.07	0.34	0.32	0.33	0.36	0.25
Mo_ppm	0	0	2	0	7	7	0	0	0	0
Nb_ppm	2.6	4	2.1	2.1	4.3	3.1	2.9	2.9	1.8	2
Nd_ppm	6.5	10.7	5.5	12.5	30.9	8.2	7.6	7	5.7	4.8
Ni_ppm	68	52	111	7	14	79	67	70	122	127
Pb_ppm	0	0	0	20	10	0	5	0	0	6
Pr_ppm	1.35	2.08	1.11	3.29	8.25	1.67	1.55	1.41	1.14	0.95
Rb_ppm	53.6	12.6	12.1	72.1	126.5	28	22	7.2	9.2	23
Sm_ppm	2.03	3.28	1.71	2.23	5.16	2.4	2.23	2.19	1.91	1.54
Sn_ppm	1	1	0	1	1	1	1	1	0	1
Sr_ppm	330	231	121.5	965	602	186	269	139	151	189
Ta_ppm	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1
Tb_ppm	0.49	0.79	0.43	0.2	0.39	0.57	0.5	0.51	0.52	0.4
Th_ppm	0.32	0.5	0.27	2.8	5.91	0.38	0.41	0.34	0.25	0.22
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.29	0.5	0.26	0.03	0.05	0.32	0.31	0.33	0.34	0.23
U_ppm	0.07	0.12	0.06	1.35	2	0.17	0.1	0.08	0.06	0.06
V_ppm	198	343	264	28	38	298	211	218	270	244
W_ppm	3	1	0	0	1	1	0	1	1	0
Y_ppm	17.3	28.6	15.7	3.8	6.1	19.8	18.5	18.7	19	14.1
Yb_ppm	1.96	3.42	1.78	0.29	0.43	2.25	2.13	2.16	2.26	1.63
Zn_ppm	85	128	95	57	37	111	89	89	99	93
Zr_ppm	50	84	42	91	139	60	57	55	48	36
SiO2_pct	47.9	49	49.8	70.1	69.3	49.9	49.6	48.6	48.7	49.6
Al2O3_pct	19.65	14.05	14.95	14.95	15.6	14.05	20.2	18.6	14.65	14.45
Fe2O3_pct	10.45	15.2	12.5	1.98	2.79	14.4	9.7	11.55	13.5	12.5
CaO_pct	10.4	11.8	11.7	2.23	1.7	10.6	11.6	11.8	11.05	12.1
MgO_pct	4.52	3.94	6.35	0.71	1.48	5.26	3.02	5.24	7.84	7.31
Na2O_pct	3.03	1.72	1.7	5.1	2.12	2.32	3.28	2.6	2.69	2.36
K2O_pct	1.28	0.56	0.37	2.3	3.76	0.64	0.76	0.24	0.31	0.41
Cr2O3_pct	0.02	0.01	0.03	0	0	0.01	0.03	0.03	0.04	0.04
TiO2_pct	0.82	1.42	0.75	0.2	0.29	1.06	0.86	0.89	0.85	0.69
MnO_pct	0.17	0.27	0.25	0.03	0.05	0.26	0.17	0.16	0.22	0.22
P2O5_pct	0.06	0.13	0.03	0.06	0.13	0.08	0.07	0.06	0.05	0.03
SrO_pct	0.04	0.03	0.01	0.12	0.07	0.02	0.03	0.02	0.02	0.02
BaO_pct	0.01	0	0	0.09	0.19	0.01	0.01	0	0	0
LOI_pct	1.69	0.7	1.39	0.3	2	1.29	0.9	0.3	0.7	0.8
Total_pct	100	98.8	99.8	98.2	99.5	99.9	100	100	100.5	100.5
Au_ppm				0.002	0.002					

Appendix C  
Geochemistry

Sample	WR69	WR70	WR71	WR72	WR73	WR74	WR75	WR76	WR77	WR78
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	624	595	87.4	14.5	47.6	64.4	33.3	503	308	556
Ce_ppm	21.3	28.6	9.7	9.2	9.9	10.4	5.9	15.9	32.5	26.5
Co_ppm	3.7	7.2	55.5	38.4	39.2	53.3	55.3	7.2	4.8	6.2
Cr_ppm	10	10	140	170	170	130	260	10	10	20
Cs_ppm	1.59	6.33	1.11	2.25	2.21	0.25	0.58	4.69	10.1	4.1
Cu_ppm	10	13	139	100	73	120	111	13	20	11
Dy_ppm	0.67	0.51	3.32	3.26	3.47	4.56	2.56	0.74	0.65	0.52
Er_ppm	0.39	0.26	2.15	2.13	2.31	3.08	1.68	0.41	0.32	0.23
Eu_ppm	0.4	0.47	0.86	0.82	0.92	1.01	0.65	0.31	0.57	0.49
Ga_ppm	20.1	21.6	17	17.9	19.4	19	15.4	21.9	27.1	18.8
Gd_ppm	1.22	1.17	2.74	2.63	2.86	3.63	2	1.19	1.67	1.34
Hf_ppm	2.8	3.2	1.6	1.6	1.6	2.1	1.1	2.1	3.2	2.6
Ho_ppm	0.14	0.08	0.72	0.7	0.75	1.01	0.56	0.13	0.11	0.08
La_ppm	10.7	14.9	3.8	3.6	4	4.1	2.6	7.7	16.7	13.3
Lu_ppm	0.06	0.04	0.31	0.32	0.34	0.48	0.24	0.06	0.04	0.03
Mo_ppm	3	17	0	0	0	0	0	0	0	2
Nb_ppm	1.8	2.2	2.7	2.8	3	2.6	1.6	12.2	7	1.9
Nd_ppm	8.8	10.6	7.4	7	7.4	8.2	4.7	7.1	12.3	10.9
Ni_ppm	9	14	96	72	70	47	132	0	7	5
Pb_ppm	9	12	0	0	0	0	0	39	62	25
Pr_ppm	2.46	3.09	1.5	1.45	1.51	1.64	0.91	1.93	3.66	3
Rb_ppm	33.8	49.4	21.4	7.7	10	7	4.1	163.5	133.5	80.4
Sm_ppm	1.51	1.54	2.26	2.17	2.23	2.78	1.57	1.46	1.87	1.72
Sn_ppm	1	1	1	0	1	1	0	2	1	1
Sr_ppm	257	807	162.5	163.5	195	159.5	163.5	211	148	564
Ta_ppm	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.5	0.4	0.1
Tb_ppm	0.14	0.13	0.52	0.51	0.54	0.69	0.41	0.15	0.16	0.14
Th_ppm	1.43	2	0.36	0.37	0.38	0.37	0.21	2.04	2.39	1.9
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.05	0.03	0.34	0.35	0.38	0.52	0.25	0.04	0.05	0.03
U_ppm	0.5	0.6	0.16	0.09	0.11	0.1	0.06	1.43	0.69	0.58
V_ppm	23	28	292	217	226	364	255	12	35	10
W_ppm	0	1	1	1	1	1	1	2	2	2
Y_ppm	3.5	2.3	18.4	18.4	19.8	26.8	14.4	4.4	3.3	2.1
Yb_ppm	0.33	0.23	2.06	2.06	2.22	3.08	1.55	0.34	0.24	0.18
Zn_ppm	117	78	106	90	101	129	86	52	44	27
Zr_ppm	91	111	53	53	55	69	35	61	112	91
SiO2_pct	74.6	71	50.4	49.5	49.6	51.7	49.7	77.2	73	75.7
Al2O3_pct	14.95	16.2	14.05	19.7	19.65	13.55	14.25	12.05	16.5	12.95
Fe2O3_pct	0.77	0.99	13.45	9.95	10.45	14.45	12.3	1.11	1.46	0.68
CaO_pct	1.47	3.15	10.95	10.8	13.25	9.98	12.4	1.2	0.11	1.61
MgO_pct	0.16	0.3	6.13	3.59	3	5.08	7.33	0.29	0.17	0.13
Na2O_pct	3.27	5.15	2.23	3.29	2.03	2.68	1.91	4.53	0.73	5.12
K2O_pct	1.92	1.7	0.56	0.24	0.49	0.38	0.18	2.01	3.39	1.49
Cr2O3_pct	0	0	0.02	0.02	0.02	0.02	0.04	0	0	0
TiO2_pct	0.19	0.23	0.99	0.9	0.91	1.18	0.7	0.13	0.26	0.2
MnO_pct	0.01	0.01	0.27	0.18	0.19	0.28	0.21	0.02	0.01	0.01
P2O5_pct	0.02	0.04	0.08	0.07	0.08	0.1	0.06	0.01	0.01	0.03
SrO_pct	0.03	0.1	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.07
BaO_pct	0.06	0.06	0.01	0	0.01	0.01	0	0.06	0.04	0.07
LOI_pct	1.1	0.1	0.5	1	0.7	0.2	1.08	0.5	2.48	0.7
Total_pct	98.6	99	99.7	99.3	100.5	99.6	100	99.1	98.2	98.8
Au_ppm	0	0.003						0	0	0.001

Appendix C  
Geochemistry



Sample	WR79	WR80	WR81	WR82	WR83	WR84	WR85	WR86	WR87	WR88
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	85.7	83.2	106.5	115	177.5	90	534	521	744	726
Ce_ppm	9.4	5.4	14.8	8.5	9.2	10.7	16.3	15.2	54.6	57.1
Co_ppm	38	53.1	52.2	41.8	37.6	54.2	6.3	2.3	18.2	14.1
Cr_ppm	170	260	140	180	170	260	20	20	100	80
Cs_ppm	12.8	20.2	0.68	1.54	2.18	1.16	4.1	7.19	1.92	1.87
Cu_ppm	48	136	170	71	140	124	9	8	29	25
Dy_ppm	3.03	2.76	4.58	3.1	3.19	3.97	0.56	0.52	2.01	1.89
Er_ppm	1.97	1.88	3.01	2.01	2.04	2.6	0.32	0.28	1.09	1.02
Eu_ppm	0.78	0.65	1.1	0.81	0.8	0.98	0.43	0.32	1.21	1.14
Ga_ppm	20.2	17.2	18.8	17.6	18.3	18.3	18.1	15.9	21.2	21.3
Gd_ppm	2.57	2.14	3.7	2.54	2.59	3.14	1.07	0.92	3.65	3.6
Hf_ppm	1.5	1.2	2.1	1.4	1.6	1.9	2.3	2.1	3	3.1
Ho_ppm	0.66	0.63	1	0.66	0.68	0.87	0.11	0.1	0.37	0.35
La_ppm	3.9	2	6.1	3.4	3.7	4.3	7.8	7.7	26.3	28.1
Lu_ppm	0.3	0.3	0.47	0.31	0.32	0.39	0.04	0.05	0.14	0.14
Mo_ppm	0	15	0	5	0	0	3	0	0	0
Nb_ppm	2.5	2.7	2.8	2.7	2.6	3.3	4.8	2.6	4.2	3.6
Nd_ppm	7	4.7	10.2	6.5	6.8	8.1	7.4	6.6	26.8	26.5
Ni_ppm	71	160	48	75	69	113	11	7	40	34
Pb_ppm	6	6	0	0	0	0	11	11	9	10
Pr_ppm	1.41	0.85	2.17	1.32	1.41	1.63	1.94	1.75	6.78	6.96
Rb_ppm	69.8	113	18.3	58.3	85	32.6	32.6	75.7	45.1	48.1
Sm_ppm	2.13	1.7	3.12	2.02	2.11	2.53	1.32	1.1	4.63	4.42
Sn_ppm	0	1	1	0	0	1	1	1	1	1
Sr_ppm	513	215	218	183	267	225	518	394	731	902
Ta_ppm	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3
Tb_ppm	0.47	0.42	0.71	0.48	0.5	0.63	0.13	0.11	0.43	0.4
Th_ppm	0.34	0.19	0.6	0.32	0.32	0.4	1.42	1.25	3.64	4.16
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.41	0.32	0.49	0.32	0.33	0.43	0.04	0.03	0.16	0.15
U_ppm	0.14	0.14	0.17	0.07	0.08	0.11	0.58	0.56	0.98	1.2
V_ppm	223	238	348	230	206	286	16	15	107	81
W_ppm	1	1	1	1	1	1	1	1	2	1
Y_ppm	17.3	16.1	26	17.4	17.9	22.6	3	2.6	9.9	9.5
Yb_ppm	1.86	1.87	3	1.97	1.98	2.41	0.29	0.24	0.94	0.91
Zn_ppm	101	90	128	91	83	121	29	116	87	73
Zr_ppm	51	37	69	47	54	63	79	74	111	114
SiO2_pct	48.3	48.3	50.5	47.5	47.8	51.9	76	79.7	61.9	64.5
Al2O3_pct	18.1	15.05	13.75	17.85	19.6	16.15	12.9	11.4	14.95	15.15
Fe2O3_pct	10.9	12.15	14.8	11.8	9.89	11.75	0.89	0.82	5.71	4.55
CaO_pct	9.82	9.38	10.5	10.4	11.75	9.38	2.13	2.15	4.72	4.49
MgO_pct	4.94	8.34	5.46	5.34	4.18	3.92	0.23	0.41	3.18	2.45
Na2O_pct	3.44	3.04	2.51	2.98	2.24	3.26	4.63	3.6	4.68	4.27
K2O_pct	1.24	0.84	0.4	0.7	1.23	0.61	1.42	1.24	1.71	2.05
Cr2O3_pct	0.02	0.04	0.02	0.03	0.02	0.04	0	0	0.01	0.01
TiO2_pct	0.86	0.72	1.13	0.95	0.85	1.07	0.18	0.17	0.57	0.45
MnO_pct	0.17	0.2	0.27	0.17	0.17	0.21	0.01	0.02	0.08	0.07
P2O5_pct	0.07	0.04	0.13	0.07	0.07	0.08	0.05	0.03	0.17	0.14
SrO_pct	0.06	0.03	0.03	0.02	0.03	0.03	0.06	0.05	0.09	0.11
BaO_pct	0.01	0.01	0.01	0.01	0.02	0.01	0.06	0.06	0.09	0.09
LOI_pct	1.4	0.89	0.5	1.6	2.1	1.7	0.3	0.88	1.07	-0.3
Total_pct	99.3	99	100	99.4	100	100	98.9	100.5	98.9	98
Au_ppm	0	0					0.001	0		

Appendix C  
Geochemistry

Sample	WR89	WR90	WR91	WR92	WR93	WR94	WR95	WR96	WR97	WR98
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	68.7	97.2	33.6	134.5	409	1015	103.5	197	449	501
Ce_ppm	8.2	6.3	11	10.3	22.5	21.5	10.8	6.2	39.2	34.5
Co_ppm	51.1	51.5	53.5	39.2	4.1	1.1	56.6	52.6	4.9	5
Cr_ppm	250	230	120	170	10	10	90	300	30	10
Cs_ppm	2.32	2.54	1.54	3.81	2.06	6.16	0.6	4.17	13.55	11.4
Cu_ppm	116	134	175	75	19	7	167	118	9	14
Dy_ppm	2.86	2.64	4.29	3.39	0.61	0.98	3.52	3.15	0.67	0.59
Er_ppm	1.75	1.69	2.91	2.14	0.34	0.48	2.3	2.17	0.34	0.3
Eu_ppm	0.7	0.63	0.98	0.85	0.39	0.28	0.94	0.68	0.64	0.47
Ga_ppm	16.3	15.4	19	18.1	19.4	22.7	18.2	17.3	20.6	24.5
Gd_ppm	2.31	2.07	3.25	2.71	1.25	1.67	3.03	2.33	1.84	1.53
Hf_ppm	1.4	1.2	2	1.7	2.8	2.2	1.8	1.3	2.7	3.4
Ho_ppm	0.6	0.58	0.95	0.71	0.12	0.18	0.76	0.71	0.12	0.1
La_ppm	3.3	2.4	4.3	4.2	11.7	10.3	4.4	2.6	19.6	17.8
Lu_ppm	0.27	0.27	0.46	0.32	0.05	0.06	0.35	0.34	0.04	0.04
Mo_ppm	0	0	0	0	7	0	0	0	0	0
Nb_ppm	2.4	1.6	2.7	3	2.3	4.1	3.3	1.7	2.1	2.2
Nd_ppm	6.3	5	8.5	7.4	9.1	9.8	8.5	5.3	16	13.4
Ni_ppm	122	114	68	68	9	0	83	145	21	10
Pb_ppm	0	0	0	0	5	19	5	0	8	29
Pr_ppm	1.24	1.01	1.71	1.54	2.6	2.65	1.69	1.01	4.57	3.89
Rb_ppm	52.8	33.7	24.8	32.6	28.8	123.5	26.4	17.7	39	67.4
Sm_ppm	1.91	1.66	2.58	2.24	1.46	2.11	2.52	1.79	2.34	1.99
Sn_ppm	1	0	1	1	0	1	1	0	0	0
Sr_ppm	216	137	197	237	238	135.5	191.5	128.5	337	124
Ta_ppm	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2
Tb_ppm	0.43	0.42	0.64	0.5	0.14	0.23	0.57	0.46	0.18	0.16
Th_ppm	0.34	0.21	0.39	0.4	1.78	3.29	0.41	0.21	3.57	2.37
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.28	0.29	0.44	0.35	0.07	0.06	0.36	0.35	0.04	0.04
U_ppm	0.25	0.06	0.1	0.11	0.64	1.47	0.14	0.08	0.6	0.67
V_ppm	255	262	328	216	18	5	317	254	27	26
W_ppm	1	1	2	1	2	2	1	1	1	2
Y_ppm	15.7	15.3	25.8	18.7	3.2	5	20.1	18.4	3	2.6
Yb_ppm	1.65	1.77	2.84	2.06	0.29	0.39	2.25	2.12	0.26	0.26
Zn_ppm	90	87	126	89	38	55	128	96	76	145
Zr_ppm	45	39	66	54	97	43	62	41	99	122
SiO2_pct	49.4	49.1	47.8	49	75.6	74.4	49.4	50.1	75.1	69.5
Al2O3_pct	14.05	14.3	14.55	18.95	14.15	13.8	13.7	16.1	14.35	17.6
Fe2O3_pct	12.25	12.4	15.25	10.1	0.88	1.24	14.15	11.25	0.97	2.36
CaO_pct	11.25	10.9	9.75	10.35	1.68	1.45	11.85	10.65	1.44	0.15
MgO_pct	7.55	7.83	6.09	4.01	0.22	0.97	5.1	5.31	0.46	0.52
Na2O_pct	2.65	2.5	2.82	3.48	3.69	0.96	2.42	2.6	3.56	0.42
K2O_pct	0.75	0.57	0.31	0.62	1.62	4.71	0.6	0.56	2.45	2.95
Cr2O3_pct	0.04	0.03	0.02	0.02	0	0	0.01	0.04	0	0
TiO2_pct	0.82	0.74	1.13	0.88	0.21	0.07	1.05	0.76	0.26	0.28
MnO_pct	0.2	0.2	0.23	0.19	0.01	0.04	0.27	0.21	0.01	0.01
P2O5_pct	0.06	0.05	0.09	0.07	0.03	0.01	0.08	0.04	0.03	0.06
SrO_pct	0.03	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.04	0.02
BaO_pct	0.01	0.01	0	0.02	0.05	0.12	0.01	0.02	0.05	0.06
LOI_pct	1.05	0.8	0.79	0.7	0.1	1.19	0	0.8	1.2	4.6
Total_pct	100	99.5	98.9	98.4	98.3	99	98.7	98.5	99.9	98.5
Au_ppm					0	0				0.002

Appendix C  
Geochemistry

Sample	WR99	WR100	WR101	WR102	WR103	WR104	WR105	WR106	WR107	WR108
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	46.9	55.7	297	223	83.1	818	599	472	765	429
Ce_ppm	9.7	6.3	9.8	15.8	8.7	19.4	24.4	6.5	18	25.7
Co_ppm	54.1	54.5	52	45.8	52.8	1.6	1.4	52.9	1.8	2
Cr_ppm	100	280	180	250	260	10	10	260	10	20
Cs_ppm	0.88	0.92	2.28	8.51	0.77	14.3	7.57	16.7	7.29	8.26
Cu_ppm	146	127	118	82	103	0	0	53	8	5
Dy_ppm	3.28	2.67	3.71	3.22	3.74	0.65	0.65	3.32	0.78	0.53
Er_ppm	2.08	1.72	2.39	2.07	2.48	0.35	0.31	2.26	0.38	0.19
Eu_ppm	0.88	0.63	0.92	0.9	0.83	0.34	0.51	0.78	0.4	0.27
Ga_ppm	17.1	16.1	19.7	16.7	16.6	19.3	18.9	16.7	17.8	19.7
Gd_ppm	2.82	2.04	2.96	2.97	2.87	1.21	1.43	2.36	1.39	1.37
Hf_ppm	1.6	1.2	1.9	1.7	1.5	2.3	2.8	1.3	2.1	2.9
Ho_ppm	0.72	0.58	0.8	0.7	0.82	0.13	0.12	0.74	0.14	0.03
La_ppm	3.7	2.5	4	7.1	3.6	9.5	12.6	2.5	9	13.1
Lu_ppm	0.31	0.27	0.39	0.33	0.4	0.05	0.04	0.33	0.05	
Mo_ppm	0	0	0	0	9	2	0	0	0	0
Nb_ppm	2.8	1.6	3.1	2.3	1.8	3	2.2	1.6	2.6	4.7
Nd_ppm	7.5	5.2	7.5	9.8	6.9	8.7	10.3	5.3	8.2	10.9
Ni_ppm	81	147	91	95	112	0	0	154	0	0
Pb_ppm	0	0	11	5	0	14	5	0	0	23
Pr_ppm	1.55	0.99	1.53	2.2	1.35	2.29	2.96	1.08	2.26	2.8
Rb_ppm	7.9	7.2	55.5	54.5	9.5	92.9	119.5	78.7	83.7	108
Sm_ppm	2.26	1.67	2.38	2.64	2.15	1.55	1.65	1.74	1.46	1.65
Sn_ppm	0	0	1	1	0	1	0	0	0	0
Sr_ppm	112	110	137	213	103.5	211	432	205	275	297
Ta_ppm	0.2	0.1	0.2	0.1	0.1	0.3	0.2	0.1	0.2	1.2
Tb_ppm	0.52	0.39	0.58	0.52	0.58	0.16	0.16	0.47	0.16	0.1
Th_ppm	0.32	0.19	0.37	0.94	0.3	2.13	1.92	0.23	1.81	2.27
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.33	0.27	0.42	0.32	0.41	0.08	0.03	0.32	0.05	0.04
U_ppm	0.08	0.06	1.34	0.39	0.09	1.28	0.85	0.06	0.96	0.91
V_ppm	298	258	308	265	287	14	21	244	12	27
W_ppm	1	1	1	1	1	1	1	1	1	0
Y_ppm	18.9	15.4	22.4	18.8	22.2	3.8	2.9	17.5	3.7	4.2
Yb_ppm	1.99	1.67	2.41	2.05	2.51	0.32	0.28	2.09	0.33	0.16
Zn_ppm	107	89	131	88	109	35	13	94	29	39
Zr_ppm	56	39	63	57	49	69	94	42	60	91
SiO2_pct	49.7	51.5	50.4	50.8	49.6	75.7	73.2	46.1	75.6	72.9
Al2O3_pct	13.6	15.65	16.3	13.8	14.2	13.15	15.2	15.85	12.2	14.75
Fe2O3_pct	14.35	11.5	11.95	12.6	16.55	0.57	0.6	12.65	1	1.01
CaO_pct	9.97	12.45	9.84	9.76	10.1	1.12	1.68	11.1	1.65	2.08
MgO_pct	6.92	5.56	3.93	6.83	4.23	0.13	0.21	6.73	0.24	0.45
Na2O_pct	2.61	2.12	4.09	3.12	2.29	3.26	4.71	2.63	3.8	2.73
K2O_pct	0.37	0.23	0.9	0.8	0.43	5.23	2.11	1.27	2.67	2.24
Cr2O3_pct	0.01	0.04	0.03	0.04	0.04	0	0.01	0.05	0.02	0.01
TiO2_pct	1.02	0.74	1.06	0.82	0.87	0.15	0.23	0.75	0.14	0.21
MnO_pct	0.22	0.25	0.25	0.19	0.44	0.01	0.02	0.2	0.02	0.02
P2O5_pct	0.07	0.05	0.08	0.12	0.06	0.04	0	0.07	0.03	0.02
SrO_pct	0.01	0.01	0.02	0.03	0.01	0.02	0.05	0.02	0.03	0.03
BaO_pct	0.01	0.01	0.04	0.03	0.01	0.1	0.07	0.05	0.08	0.05
LOI_pct	0.5	0.1	1.6	0.7	1.09	0.4	0.69	1.79	0.69	1.59
Total_pct	99.4	100	100.5	99.6	99.9	99.9	98.8	99.3	98.2	98.1
Au_ppm						0.004	0			0

Appendix C  
Geochemistry

Sample	WR109	WR110	WR111	WR112	WR113	WR114	WR115	WR116	WR117	WR118
Ag_ppm	0	0	0	0	0	0	0	0	0	0
Ba_ppm	43.1	67.2	62.1	104.5	639	668	62	302	168.5	356
Ce_ppm	6.4	6	6.1	8.3	20.7	18.3	12.3	68.7	136.5	37.6
Co_ppm	53.4	53	51.4	49.2	2.7	1.6	45.7	7.7	7.7	7.2
Cr_ppm	280	260	290	270	160	30	30	40	70	40
Cs_ppm	1.23	2.64	0.68	0.2	2.83	1.2	1.08	11.7	8.47	3.31
Cu_ppm	107	94	94	92	9	7	57	24	52	21
Dy_ppm	2.38	2.43	2.74	3.18	0.83	0.44	3.8	1.34	1.79	0.93
Er_ppm	1.53	1.45	1.83	2.22	0.48	0.14	2.46	0.65	0.89	0.43
Eu_ppm	0.4	0.42	0.45	0.59	0.18	0.14	0.81	0.8	1.05	0.46
Ga_ppm	14.7	13.8	14.8	16.3	19.7	15.7	18.2	19.2	18.3	16.6
Gd_ppm	1.72	1.8	2.05	2.52	1.36	1.02	3.17	3.33	5.72	1.85
Hf_ppm	1.3	1.1	1.4	1.6	2.6	2.1	1.9	3.7	3.4	2.7
Ho_ppm	0.48	0.42	0.54	0.67	0.11	0.01	0.74	0.16	0.27	0.1
La_ppm	2.9	2.7	3.2	3.6	10.1	9.5	5.3	34.1	67.4	19.5
Lu_ppm	0.18	0.18	0.24	0.31	0.03		0.3	0.04	0.08	0.03
Mo_ppm	0	0	0	0	0	0	4	0	0	0
Nb_ppm	1.5	1.5	1.3	1.7	2.5	1.8	2.9	3.4	3.3	2.7
Nd_ppm	4.5	4.6	4.6	6.2	9.1	7.7	8.9	28.3	57.5	15.8
Ni_ppm	121	120	148	95	0	6	31	25	17	16
Pb_ppm	0	0	5	5	6	7	0	5	0	53
Pr_ppm	0.78	0.74	0.73	1.04	2.23	1.97	1.67	7.75	15.75	4.11
Rb_ppm	4.8	9.7	10.1	8.6	76.9	42.9	15.8	146	140.5	50.6
Sm_ppm	1.33	1.26	1.36	1.85	1.5	1.24	2.53	4.09	7.93	2.4
Sn_ppm	0	0	0	0	0	0	0	0	0	0
Sr_ppm	192.5	156	112	157.5	373	314	204	305	182.5	216
Ta_ppm	0	0	0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Tb_ppm	0.32	0.32	0.34	0.42	0.15	0.08	0.51	0.28	0.46	0.17
Th_ppm	0.14	0.2	0.13	0.2	2.29	1.8	0.33	5.95	9.65	2.38
Tl_ppm	0	0	0	0	0	0	0	0	0	0
Tm_ppm	0.23	0.24	0.27	0.35	0.09	0.06	0.38	0.06	0.11	0.06
U_ppm	0	0	0	0	0.87	0.6	0	1.42	1.9	0.82
V_ppm	254	252	234	297	27	21	324	53	55	47
W_ppm	0	0	2	1	0	0	0	0	0	0
Y_ppm	14.8	15.1	17.1	20.8	5.4	3.1	22.4	7.6	9.6	5.4
Yb_ppm	1.44	1.36	1.78	2.16	0.45	0.12	2.26	0.46	0.66	0.32
Zn_ppm	83	78	82	100	41	14	82	58	30	786
Zr_ppm	39	34	44	50	70	60	63	131	122	103
SiO2_pct	49	49.5	48	50	70	77.6	50.7	67.1	64.5	74.6
Al2O3_pct	14.1	13.95	15.25	14.05	13.95	11.45	13.8	14.3	14.4	12.25
Fe2O3_pct	12.35	12	11.95	12.5	3.03	1.05	14.05	3.19	2.45	2.61
CaO_pct	10.85	10.8	10.45	10.05	1.8	1.23	9.36	3.07	4.31	1.36
MgO_pct	7.63	7.27	7.83	5.53	0.81	0.25	4.57	1.21	1.23	0.57
Na2O_pct	2.8	2.4	3.21	3.7	4.7	4.58	3.17	2.94	3.52	3.63
K2O_pct	0.29	0.3	0.6	0.47	2.01	1.94	0.43	2.52	2.29	1.78
Cr2O3_pct	0.04	0.04	0.04	0.04	0.03	0.01	0.01	0.01	0.01	0.01
TiO2_pct	0.67	0.67	0.68	0.85	0.15	0.13	1.14	0.32	0.36	0.3
MnO_pct	0.21	0.2	0.19	0.29	0.08	0.02	0.2	0.05	0.05	0.05
P2O5_pct	0.03	0.03	0.03	0.05	0	0.06	0.05	0.09	0.2	0.05
SrO_pct	0.02	0.02	0.01	0.02	0.04	0.03	0.02	0.03	0.02	0.02
BaO_pct	0	0.01	0.01	0.01	0.07	0.08	0.01	0.03	0.02	0.04
LOI_pct	0.6	1	1.5	0.6	1.39	0.69	0.59	3.97	4.75	0.8
Total_pct	98.6	98.2	99.8	98.2	98.1	99.1	98.1	98.8	98.1	98.1
Au_ppm					0	0.059		0.001	0.001	0.003

Appendix C  
Geochemistry

Sample	WR119	WR120	WR121	WR122
Ag_ppm	0	0	0	0
Ba_ppm	214	580	382	545
Ce_ppm	59	50.7	48	7.7
Co_ppm	8.5	12.5	11.1	57.4
Cr_ppm	50	60	60	290
Cs_ppm	14.7	3.8	14.35	35.7
Cu_ppm	14	32	37	82
Dy_ppm	1.54	1.4	1.13	3.01
Er_ppm	0.77	0.63	0.61	1.9
Eu_ppm	0.58	0.65	0.6	0.55
Ga_ppm	22.7	20.9	18.6	16.3
Gd_ppm	3.2	2.54	2.55	2.27
Hf_ppm	4.3	3.4	3	1.3
Ho_ppm	0.21	0.2	0.16	0.58
La_ppm	28.3	25.1	25	3.2
Lu_ppm	0.08	0.05	0.05	0.25
Mo_ppm	0	0	16	0
Nb_ppm	9.7	3.5	3.2	2.1
Nd_ppm	26	21.7	20.8	5.6
Ni_ppm	13	32	36	202
Pb_ppm	11	11	0	0
Pr_ppm	7.02	5.82	5.48	0.92
Rb_ppm	230	51.5	108	41.3
Sm_ppm	3.8	3.24	3.01	1.64
Sn_ppm	1	0	1	0
Sr_ppm	104	415	388	242
Ta_ppm	0.6	0.2	0.2	0.1
Tb_ppm	0.27	0.24	0.24	0.39
Th_ppm	4.38	3.91	2.95	0.17
Tl_ppm	0.5	0	0	0
Tm_ppm	0.09	0.1	0.07	0.33
U_ppm	0.98	0.89	0.66	0.13
V_ppm	69	69	73	237
W_ppm	0	0	1	1
Y_ppm	11.6	8	7.3	18.2
Yb_ppm	0.66	0.6	0.43	1.81
Zn_ppm	73	105	80	98
Zr_ppm	161	120	115	44
SiO2_pct	62.6	65.6	68.1	49.2
Al2O3_pct	14.65	15.2	13.95	15.15
Fe2O3_pct	3.59	3.88	3.56	10.8
CaO_pct	4.29	3.26	2.6	9.96
MgO_pct	1.2	1.42	1.34	7.31
Na2O_pct	2.62	3.4	3.48	3.22
K2O_pct	3.02	2	2.19	1.06
Cr2O3_pct	0.01	0.01	0.01	0.05
TiO2_pct	0.38	0.38	0.36	0.79
MnO_pct	0.07	0.07	0.06	0.29
P2O5_pct	0.15	0.09	0.14	0.04
SrO_pct	0.01	0.05	0.04	0.02
BaO_pct	0.02	0.07	0.04	0.06
LOI_pct	5.48	2.68	2.99	1.2
Total_pct	98.1	98.1	98.9	99.2
Au_ppm	0	0	0	0

Appendix C  
Geochemistry



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

212 Brooksbank Avenue

North Vancouver BC V7J 2C1

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 1  
Finalized Date: 31-JUL-2009  
Account: METCOR

## CERTIFICATE TB09074079

Project: HEMLO EAST

P.O. No.:

This report is for 15 Rock samples submitted to our lab in Thunder Bay, ON, Canada on 21-JUL-2009.

The following have access to data associated with this certificate:

CHARLES GREIG

DAVID MALLALIEU

METALCORP WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

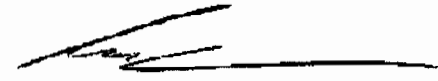
## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
ME-MS81	38 element fusion ICP-MS	ICP-MS
TOT-ICP06	Total Calculation for ICP06	ICP-AES

To: METALCORP LIMITED  
ATTN: CHARLES GREIG  
705B HAMMOND AVE  
THUNDER BAY ON P7B 6T5

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

  
Colin Ramshaw, Vancouver Laboratory Manager





**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

212 Brooksbank Avenue  
 North Vancouver BC V7J 2C1  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 2 - A  
 Total # Pages: 2 (A - D)  
 Finalized Date: 31-JUL-2009  
 Account: METCOR

Project: HEMLO EAST

**CERTIFICATE OF ANALYSIS TB09074079**

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
		0.02	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2	0.01
HE001		3.29	<1	213	44.0	44.9	160	1.85	117	6.13	3.85	1.38	16.8	6.23	4.3	1.30
HE002		1.60	<1	844	17.3	0.7	<10	4.47	<5	0.69	0.35	0.24	20.5	1.28	2.0	0.13
HE004		2.42	3	132.0	8.8	35.9	200	1.28	170	3.01	2.03	0.80	16.8	2.60	1.5	0.70
HE005		2.11	<1	731	51.8	13.4	100	6.00	8	1.28	0.75	0.88	18.2	2.97	2.5	0.27
HE006		1.85	<1	854	53.6	20.8	110	2.32	5	1.92	1.23	1.05	18.8	3.66	3.0	0.39
HE008		0.75	<1	33.4	8.3	32.3	170	0.35	37	2.94	1.95	0.77	16.8	2.46	1.5	0.67
HE009		2.40	<1	63.8	5.5	48.0	240	1.71	88	2.63	1.81	0.60	14.9	1.95	1.2	0.63
HE010		1.40	<1	616	12.5	5.6	30	3.78	<5	0.36	0.26	0.36	17.8	0.76	2.3	0.07
HE011		0.90	<1	70.7	4.1	0.7	10	19.15	124	1.02	0.46	0.08	25.5	1.19	1.9	0.17
HE013		1.30	<1	405	81.7	44.0	60	1.68	32	7.93	4.66	2.47	21.1	9.52	6.6	1.65
HE014		0.89	<1	124.5	5.7	48.5	260	0.55	23	2.73	1.95	0.77	15.1	2.14	1.2	0.61
HE015		1.27	<1	14.1	8.2	33.5	150	1.20	102	2.98	1.99	0.74	17.3	2.32	1.5	0.69
HE016		1.10	<1	1020	53.1	19.4	40	10.05	28	3.06	1.73	1.56	20.2	4.66	3.7	0.59
HE017		1.20	<1	70.8	8.5	49.1	240	2.69	17	3.29	2.23	0.91	16.1	2.80	1.6	0.77
HE018		1.02	<1	76.1	5.8	54.6	310	9.30	51	3.11	2.11	0.74	17.1	2.44	1.4	0.73



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.  
 212 Brooksbank Avenue  
 North Vancouver BC V7J 2C1  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 2 - B  
 Total # Pages: 2 (A - D)  
 Finalized Date: 31-JUL-2009  
 Account: METCOR

Project: HEMLO EAST

**CERTIFICATE OF ANALYSIS TB09074079**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		La	Lu	Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.05	
HE001		20.5	0.56	<2	11.2	23.0	64	9	5.53	37.0	5.47	1	341	0.7	1.06	3.31
HE002		7.5	0.05	<2	3.5	7.3	<5	14	1.93	106.0	1.46	1	168.0	0.3	0.17	2.94
HE004		3.3	0.31	2	2.4	6.5	64	8	1.29	21.5	2.02	1	317	0.2	0.51	0.34
HE005		24.2	0.11	<2	2.6	21.8	59	11	5.90	94.8	3.62	1	256	0.2	0.33	3.65
HE006		27.0	0.17	<2	3.3	24.9	109	10	6.68	66.0	4.06	1	379	0.3	0.44	4.09
HE008		3.1	0.32	<2	2.3	6.4	58	5	1.24	2.5	1.97	<1	180.0	0.2	0.49	0.34
HE009		2.1	0.29	<2	1.3	4.6	144	<5	0.86	22.4	1.55	<1	106.0	0.1	0.40	0.17
HE010		7.0	0.04	<2	3.4	4.9	16	12	1.39	90.3	0.88	1	338	0.3	0.10	2.39
HE011		1.7	0.07	5	65.4	2.1	<5	67	0.47	556	0.93	3	16.9	12.6	0.22	4.61
HE013		38.6	0.72	2	28.3	42.5	39	56	10.25	47.9	9.19	1	261	1.8	1.49	4.95
HE014		2.0	0.31	<2	1.5	4.7	150	5	0.91	4.6	1.53	<1	207	0.1	0.41	0.22
HE015		3.2	0.31	<2	2.4	6.5	63	<5	1.27	4.4	2.06	<1	136.5	0.2	0.48	0.31
HE016		24.4	0.27	<2	5.3	27.0	19	14	6.68	66.1	5.31	1	905	0.3	0.62	4.71
HE017		3.7	0.34	<2	3.2	7.3	106	<5	1.40	27.9	2.13	1	117.5	0.2	0.54	0.29
HE018		2.0	0.35	3	1.4	5.0	160	<5	0.93	28.7	1.68	<1	94.4	0.1	0.48	0.21



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

212 Brooksbank Avenue

North Vancouver BC V7J 2C1

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - C  
Total # Pages: 2 (A - D)  
Finalized Date: 31-JUL-2009  
Account: METCOR

Project: HEMLO EAST

## CERTIFICATE OF ANALYSIS TB09074079

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
		Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %
		0.5	0.01	0.05	5	1	0.5	0.03	5	2	0.01	0.01	0.01	0.01	0.01	0.01
HE001		<0.5	0.56	0.62	253	1	32.8	3.37	119	151	50.1	13.15	13.35	8.06	5.05	3.30
HE002		<0.5	0.04	0.72	<5	1	3.7	0.31	12	38	75.6	13.05	0.72	1.20	0.35	1.86
HE004		<0.5	0.30	0.10	200	<1	16.8	1.77	83	48	51.4	18.30	9.52	9.47	2.91	3.93
HE005		<0.5	0.09	0.50	58	<1	6.5	0.62	53	86	66.0	14.25	4.03	2.71	2.65	1.52
HE006		<0.5	0.15	1.37	88	1	11.2	0.99	68	106	61.9	13.75	4.95	3.94	3.81	2.99
HE008		<0.5	0.29	0.09	202	1	17.1	1.96	73	47	47.6	18.60	11.05	11.95	4.86	2.31
HE009		<0.5	0.30	0.06	222	<1	15.4	1.87	80	36	49.4	14.60	12.15	10.50	8.23	2.47
HE010		<0.5	0.02	0.73	23	1	2.0	0.18	42	80	68.4	16.10	1.92	3.51	1.04	4.48
HE011		1.6	0.06	2.57	<5	1	9.0	0.40	5	14	77.6	11.35	0.78	0.21	0.03	4.06
HE013		<0.5	0.67	1.01	248	2	42.0	4.38	77	227	49.2	12.70	15.05	5.55	4.48	3.20
HE014		<0.5	0.29	0.08	231	<1	16.0	1.87	76	38	49.0	14.80	12.10	10.25	7.38	2.79
HE015		<0.5	0.29	0.09	201	<1	17.2	1.87	69	50	49.0	18.25	10.70	11.65	4.43	2.08
HE016		<0.5	0.26	1.24	132	1	15.7	1.61	94	126	58.2	15.30	7.31	5.94	3.66	3.66
HE017		<0.5	0.34	0.07	261	<1	20.7	2.09	95	53	46.8	15.00	13.65	10.50	6.95	1.86
HE018		<0.5	0.34	0.08	273	<1	18.4	2.16	91	44	47.7	16.60	12.20	10.40	5.52	2.81



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

212 Brooksbank Avenue  
North Vancouver BC V7J 2C1

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - D  
Total # Pages: 2 (A - D)  
Finalized Date: 31-JUL-2009  
Account: METCOR

Project: HEMLO EAST

CERTIFICATE OF ANALYSIS	TB09074079
-------------------------	------------

Sample Description	Method Analyte Units LOR	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
		K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	LOI	Total	Au
		%	%	%	%	%	%	%	%	%	ppm
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001
HE001		0.82	0.03	1.72	0.19	0.18	0.04	0.02	2.67	98.7	<0.001
HE002		3.49	<0.01	0.06	0.02	0.04	0.02	0.10	1.90	98.4	<0.001
HE004		0.51	0.03	0.83	0.17	0.07	0.04	0.01	2.09	99.3	<0.001
HE005		4.88	0.02	0.36	0.07	0.12	0.03	0.09	1.50	98.2	<0.001
HE006		3.70	0.02	0.45	0.12	0.13	0.05	0.10	2.69	98.6	<0.001
HE008		0.29	0.03	0.82	0.16	0.08	0.02	<0.01	0.30	98.1	<0.001
HE009		0.39	0.04	0.69	0.20	0.04	0.01	0.01	0.50	99.2	<0.001
HE010		1.53	0.01	0.23	0.03	0.06	0.04	0.07	1.00	98.4	<0.001
HE011		3.59	<0.01	0.06	0.01	0.01	<0.01	0.01	0.89	98.6	<0.001
HE013		1.34	0.01	2.19	0.31	0.42	0.03	0.05	3.56	98.1	<0.001
HE014		0.31	0.04	0.69	0.22	0.06	0.02	0.01	0.40	98.1	<0.001
HE015		0.18	0.02	0.81	0.15	0.04	0.02	<0.01	0.70	98.0	<0.001
HE016		2.00	0.01	0.75	0.13	0.34	0.11	0.12	0.70	98.2	<0.001
HE017		0.41	0.04	0.98	0.22	0.07	0.02	0.01	1.60	98.1	<0.001
HE018		0.62	0.05	0.80	0.22	0.06	0.01	0.01	1.09	98.1	<0.001



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED

1801-180 DUNDAS ST. W.

TORONTO ON M5G 1Z8

Page: 1

Finalized Date: 12-AUG-2009

Account: METCOR

## CERTIFICATE TB09077193

Project: PYTHON

P.O. No.:

This report is for 26 Rock samples submitted to our lab in Thunder Bay, ON, Canada on 29-JUL-2009.

The following have access to data associated with this certificate:

CHARLES GREIG

DAVID MALLALIEU

METALCORP WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

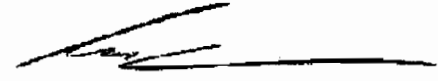
## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
ME-MS81	38 element fusion ICP-MS	ICP-MS
TOT-ICP06	Total Calculation for ICP06	ICP-AES

To: METALCORP LIMITED  
ATTN: CHARLES GREIG  
705B HAMMOND AVE  
THUNDER BAY ON P7B 6T5

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

  
Colin Ramshaw, Vancouver Laboratory Manager



# ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - A  
Total # Pages: 2 (A - D)  
Finalized Date: 12-AUG-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09077193

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
		0.02	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2	0.01
HE20		1.66	<1	66.0	6.5	48.8	250	1.55	132	3.31	2.22	0.78	15.1	2.42	1.4	0.74
HE21		1.18	<1	813	32.5	6.5	20	8.01	<5	0.98	0.43	0.84	22.3	2.40	3.2	0.16
HE22		2.05														
HE23		1.55	<1	108.5	8.1	38.4	240	1.03	69	3.25	2.13	0.81	16.7	2.67	1.5	0.71
HE24		1.25	<1	1060	71.1	10.1	40	25.7	15	1.43	0.67	1.26	21.5	3.80	3.4	0.24
HE25		1.27	<1	518	97.8	23.5	160	3.29	29	2.62	1.39	1.67	19.5	5.58	3.2	0.47
HE26		0.93	<1	478	23.2	1.0	10	1.65	9	0.40	0.21	0.39	19.6	1.03	2.8	0.07
HE27		0.95	<1	92.3	8.8	39.7	190	0.86	75	3.33	2.17	0.84	16.8	2.81	1.5	0.72
HE28		1.03	<1	92.5	5.9	54.8	280	1.08	72	3.23	2.21	0.66	14.9	2.39	1.3	0.70
HE29		0.74	<1	162.5	235	34.4	180	1.55	30	6.20	2.93	4.89	18.2	15.60	3.6	1.03
HE30		1.43	<1	285	11.4	49.3	170	2.29	96	4.41	2.92	1.04	18.1	3.58	2.0	0.96
HE31		0.69	<1	101.5	6.1	57.7	290	3.29	50	2.79	1.71	0.64	17.0	2.12	1.2	0.60
HE32		1.19	<1	266	10.3	32.3	20	1.57	79	4.05	2.55	0.98	22.5	3.03	1.9	0.87
HE33		0.67	<1	26.3	9.9	44.7	240	0.65	35	3.84	2.38	0.89	19.3	3.00	1.7	0.83
HE34		0.75	<1	141.0	13.3	43.8	240	2.56	39	3.95	2.46	0.92	19.9	3.19	1.6	0.85
HE35		0.63	1	101.5	7.3	59.0	250	4.63	68	3.18	2.03	0.72	18.1	2.44	1.4	0.69
HE36		0.68	<1	442	54.8	17.0	100	0.51	9	2.31	1.21	1.18	16.5	3.93	2.6	0.41
HE37		0.63	<1	123.0	10.2	47.0	210	3.32	74	3.78	2.32	0.91	18.9	2.96	1.7	0.79
HE38		0.65	<1	112.5	9.0	54.3	80	1.55	20	3.39	2.13	0.86	17.2	2.69	1.4	0.72
HE39		0.55	<1	34.0	14.5	48.0	230	0.46	98	2.69	1.63	0.69	18.6	2.37	0.9	0.55
HE40		0.54	<1	755	6.1	55.3	260	3.36	85	2.67	1.67	0.65	12.6	2.05	1.1	0.54
HE41		0.72	<1	197.5	7.7	53.3	270	1.95	92	3.51	2.26	0.75	17.8	2.52	1.4	0.75
HE42		0.85	<1	1470	58.6	3.7	10	1.81	27	0.59	0.21	0.97	24.2	2.92	3.8	0.07
HE43		0.66	<1	120.5	8.5	55.7	290	0.90	30	3.82	2.54	0.78	17.7	2.88	1.6	0.83
HE44		0.72	<1	59.5	8.7	45.8	70	1.77	7	3.14	1.87	0.76	14.6	2.44	1.4	0.64
HE45		0.62	<1	106.0	6.4	55.4	290	1.61	39	2.93	1.90	0.63	18.7	2.12	1.2	0.61



# ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - B  
Total # Pages: 2 (A - D)  
Finalized Date: 12-AUG-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09077193

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm
		0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.01	0.05
HE20		2.3	0.35	<2	1.5	5.5	107	5	1.06	11.9	1.88	1	154.5	0.2	0.46	0.25
HE21		14.8	0.05	<2	2.4	15.7	10	21	4.01	80.9	3.07	1	952	0.3	0.24	2.95
HE22																
HE23		3.2	0.30	<2	2.2	6.5	73	8	1.27	20.9	2.04	1	285	0.3	0.46	0.31
HE24		34.9	0.08	<2	4.3	31.5	17	19	8.61	128.0	5.07	1	1140	0.4	0.36	5.36
HE25		43.0	0.18	<2	3.5	45.7	88	9	12.30	61.9	7.09	1	762	0.4	0.57	5.63
HE26		12.4	0.03	2	1.5	8.8	<5	31	2.57	39.6	1.25	1	204	0.2	0.09	2.13
HE27		3.4	0.33	<2	2.4	6.9	76	<5	1.40	8.5	2.13	<1	161.0	0.3	0.48	0.33
HE28		2.3	0.32	<2	1.3	5.0	164	<5	0.98	22.0	1.67	1	149.0	0.2	0.44	0.22
HE29		106.5	0.34	<2	5.1	125.5	56	9	32.0	10.7	19.95	1	574	0.4	1.53	11.15
HE30		4.5	0.43	<2	2.8	9.0	83	5	1.82	36.0	2.78	1	151.5	0.3	0.64	0.43
HE31		2.5	0.28	<2	1.7	4.9	143	11	0.97	25.9	1.64	1	196.0	0.1	0.40	0.19
HE32		3.9	0.43	<2	3.4	7.7	23	13	1.54	54.1	2.48	1	322	0.2	0.58	0.36
HE33		3.9	0.38	<2	2.8	7.7	82	14	1.55	4.7	2.45	1	170.5	0.2	0.55	0.33
HE34		5.7	0.40	<2	2.6	8.7	88	15	1.87	35.6	2.54	1	310	0.2	0.57	0.35
HE35		3.0	0.34	4	1.7	5.7	125	14	1.13	44.5	1.86	1	132.0	0.1	0.45	0.21
HE36		26.2	0.17	<2	2.8	27.7	45	13	6.95	38.4	4.91	1	297	0.2	0.45	3.43
HE37		4.0	0.39	<2	2.7	7.7	90	12	1.55	26.3	2.43	1	346	0.2	0.53	0.32
HE38		3.3	0.34	<2	2.6	7.0	82	11	1.38	26.1	2.21	1	173.0	0.2	0.51	0.27
HE39		6.4	0.25	<2	1.9	8.0	113	13	1.89	5.5	2.06	<1	1020	0.1	0.40	0.39
HE40		2.4	0.27	<2	1.4	4.6	131	10	0.92	76.8	1.60	<1	460	0.1	0.37	0.19
HE41		3.0	0.37	<2	1.9	5.9	105	16	1.17	47.8	1.99	1	245	0.1	0.49	0.24
HE42		27.7	0.01	<2	2.1	27.1	<5	31	7.10	61.3	4.41	1	1150	0.1	0.21	4.51
HE43		3.4	0.40	<2	1.8	6.8	110	14	1.35	19.7	2.20	1	168.0	0.1	0.54	0.29
HE44		3.3	0.29	<2	2.3	6.4	67	12	1.28	21.5	2.09	1	243	0.2	0.44	0.26
HE45		2.6	0.30	<2	1.4	5.0	168	11	1.01	20.6	1.80	1	134.0	0.1	0.40	0.17





**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 2 - C  
 Total # Pages: 2 (A - D)  
 Finalized Date: 12-AUG-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09077193**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
		Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %
		0.5	0.01	0.05	5	1	0.5	0.03	5	2	0.01	0.01	0.01	0.01	0.01	0.01
HE20		<0.5	0.34	0.08	289	1	19.1	2.15	103	46	50.4	13.80	12.85	10.30	7.36	1.61
HE21		<0.5	0.04	0.94	52	1	4.2	0.33	84	115	69.0	15.25	2.87	2.96	1.09	4.90
HE22																
HE23		<0.5	0.33	0.11	292	2	18.4	2.05	94	50	48.6	16.70	12.35	9.83	5.78	3.25
HE24		<0.5	0.08	1.38	71	2	6.5	0.51	85	131	65.6	15.75	3.80	3.31	1.77	5.01
HE25		<0.5	0.19	1.07	133	2	12.3	1.22	89	116	61.4	14.85	6.13	5.46	4.76	3.22
HE26		<0.5	0.01	0.39	42	2	1.8	0.20	19	100	74.5	14.55	1.13	1.50	0.20	3.83
HE27		<0.5	0.34	0.07	262	1	18.8	2.08	81	53	48.7	17.60	11.80	10.10	5.69	3.15
HE28		<0.5	0.33	0.05	287	2	18.2	2.10	105	43	51.4	16.60	11.50	10.40	4.02	2.75
HE29		<0.5	0.37	1.95	302	1	27.6	2.32	123	157	46.6	15.10	10.45	15.10	7.04	1.86
HE30		<0.5	0.45	0.10	370	1	25.1	2.79	125	71	49.7	14.45	13.15	11.15	4.53	1.04
HE31		<0.5	0.31	0.06	276	1	15.6	1.75	126	38	48.9	13.55	12.60	11.45	8.12	1.98
HE32		<0.5	0.41	0.19	398	1	22.8	2.67	127	63	53.9	13.55	11.05	9.48	5.19	2.90
HE33		<0.5	0.37	0.10	286	1	21.7	2.39	95	57	52.4	17.30	9.10	10.05	4.23	3.65
HE34		<0.5	0.38	0.12	273	2	23.0	2.51	89	55	47.5	16.40	12.00	11.10	5.81	2.68
HE35		<0.5	0.29	0.06	308	1	17.9	2.04	101	47	48.5	14.95	12.35	11.55	6.78	1.92
HE36		<0.5	0.14	2.39	120	2	11.1	1.06	43	95	59.3	13.25	6.35	5.19	4.50	6.11
HE37		<0.5	0.38	0.09	255	1	21.0	2.39	105	56	48.6	16.90	11.90	10.75	5.84	2.85
HE38		<0.5	0.33	0.09	300	1	19.0	2.10	109	52	50.1	13.55	14.50	10.25	6.36	2.44
HE39		<0.5	0.24	0.14	241	2	15.1	1.57	84	29	46.0	13.65	11.75	15.35	7.16	1.78
HE40		<0.5	0.26	0.05	263	1	14.8	1.59	85	33	50.3	13.55	12.35	8.36	8.82	2.24
HE41		<0.5	0.35	0.12	288	1	19.6	2.39	103	44	52.2	14.65	12.70	8.90	5.02	2.05
HE42		<0.5	<0.01	1.34	22	1	2.1	0.09	46	126	70.2	16.10	1.77	2.10	0.57	5.06
HE43		<0.5	0.38	0.05	320	1	22.0	2.59	129	52	47.4	14.15	14.45	9.54	8.20	2.52
HE44		<0.5	0.28	0.07	250	1	16.7	1.84	93	46	51.7	13.40	13.35	9.80	6.37	2.68
HE45		<0.5	0.29	0.07	264	1	16.9	1.91	97	40	50.1	16.80	11.80	11.35	5.02	1.08



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - D  
Total # Pages: 2 (A - D)  
Finalized Date: 12-AUG-2009  
Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09077193**

Sample Description	Method Analyte Units LOR	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
		K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %	LOI %	Total %	Au ppm
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001
HE20		0.32	0.04	0.79	0.19	0.05	0.02	0.01	0.67	98.4	
HE21		2.07	<0.01	0.33	0.04	0.11	0.12	0.09	1.37	100.0	
HE22											0.002
HE23		0.76	0.04	0.90	0.18	0.09	0.03	0.01	1.27	99.8	
HE24		2.64	0.01	0.40	0.06	0.17	0.14	0.12	0.29	99.1	
HE25		2.13	0.02	0.56	0.09	0.22	0.09	0.06	0.67	99.7	
HE26		2.38	<0.01	0.24	0.01	0.03	0.02	0.05	1.07	99.5	
HE27		0.41	0.03	0.86	0.16	0.08	0.02	0.01	0.39	99.0	
HE28		0.64	0.04	0.77	0.20	0.06	0.02	0.01	1.56	100.0	
HE29		0.45	0.03	0.80	0.20	0.94	0.07	0.02	2.03	100.5	
HE30		1.06	0.02	1.13	0.22	0.11	0.02	0.03	1.76	98.4	
HE31		0.39	0.04	0.68	0.21	0.07	0.02	0.01	1.22	99.2	
HE32		0.78	<0.01	1.20	0.22	0.08	0.04	0.03	-0.87	97.6	
HE33		0.36	0.03	0.94	0.19	0.11	0.02	<0.01	-0.29	98.1	
HE34		0.88	0.03	0.91	0.18	0.08	0.04	0.01	1.16	98.8	
HE35		0.45	0.03	0.77	0.24	0.06	0.02	0.01	0.88	98.5	
HE36		1.52	0.02	0.57	0.12	0.20	0.04	0.05	1.55	98.8	
HE37		0.54	0.03	0.90	0.18	0.09	0.04	0.01	0.20	98.8	
HE38		0.62	0.01	1.02	0.26	0.10	0.02	0.01	0.10	99.3	
HE39		0.25	0.03	0.61	0.23	0.08	0.13	<0.01	2.49	99.5	
HE40		1.69	0.04	0.69	0.24	0.06	0.06	0.09	1.98	100.5	
HE41		1.23	0.04	0.86	0.23	0.07	0.03	0.02	1.97	100.0	
HE42		3.20	<0.01	0.25	0.03	0.14	0.14	0.17	0.49	100.0	
HE43		0.72	0.04	0.92	0.24	0.08	0.02	0.01	1.72	100.0	
HE44		0.60	0.01	1.01	0.23	0.08	0.03	0.01	1.08	100.5	
HE45		0.59	0.04	0.77	0.24	0.09	0.01	0.01	1.97	99.9	



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 1  
Finalized Date: 8-SEP-2009  
Account: METCOR

## CERTIFICATE TB09087636

Project: PYTHON

P.O. No.:

This report is for 31 Rock samples submitted to our lab in Thunder Bay, ON, Canada on 21-AUG-2009.

The following have access to data associated with this certificate:

CHARLES GREIG

DAVID MALLALIEU

METALCORP WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
ME-MS81	38 element fusion ICP-MS	ICP-MS
TOT-ICP06	Total Calculation for ICP06	ICP-AES
ME-MS41	51 anal. aqua regia ICPMS	

To: METALCORP LIMITED  
ATTN: CHARLES GREIG  
705B HAMMOND AVE  
THUNDER BAY ON P7B 6T5

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - A  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

<b>CERTIFICATE OF ANALYSIS TB09087636</b>
---

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm
BL-25-A		1.32														
BL-25-B		1.03														
HE07		1.95	0.25	1.81	0.3	<0.2	<10	20	0.16	0.28	0.94	0.03	8.00	44.3	151	0.29
HE12		1.97	0.19	1.68	<0.1	<0.2	<10	50	0.31	1.24	1.53	0.04	1.57	29.2	95	2.63
HE46		0.73														
HE47		0.85														
HE48		0.65														
HE49		0.77														
HE50		0.64														
HE51		0.93														
HE52		0.75														
HE53		0.56														
HE54		0.56														
HE55		0.68														
HE56		0.67														
HE57		1.10														
HE59		0.76														
HE60		0.67														
HE61		0.53														
HE62		0.74														
HE63		0.96														
HE64		0.62														
HE65		0.96														
HE66		0.96														
HE67		1.29	0.06	0.86	0.2	<0.2	<10	20	0.21	0.17	0.54	0.05	67.2	5.4	25	0.53
HE68		0.63														
HE69		0.75														
HE70		0.86														
HE71		1.57	1.13	0.34	12.8	<0.2	<10	20	0.59	1.19	7.04	4.97	28.1	12.1	43	0.73
HE72		0.60														
HE73		1.13														



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - B  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

<b>CERTIFICATE OF ANALYSIS</b>	<b>TB09087636</b>
--------------------------------	-------------------

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
		Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
		ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
		0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05
BL-25-A BL-25-B HE07 HE12 HE46		194.0 150.0	5.94 4.29	7.34 5.03	0.21 0.18	0.21 0.12	<0.01 <0.01	0.018 0.009	0.08 0.16	4.0 0.6	15.6 17.7	1.23 0.81	726 653	0.28 0.57	0.08 0.13	0.36 0.26
HE47 HE48 HE49 HE50 HE51																
HE52 HE53 HE54 HE55 HE56																
HE57 HE59 HE60 HE61 HE62																
HE63 HE64 HE65 HE66 HE67		22.7	1.55	8.15	0.16	0.48	<0.01	0.012	0.06	32.7	24.9	0.49	280	0.56	0.07	0.27
HE68 HE69 HE70 HE71 HE72		19.8	3.11	2.90	0.11	0.61	0.08	0.040	0.02	11.2	2.9	1.68	1210	0.65	0.05	0.25
HE73																



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - C  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	
		Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %
BL-25-A BL-25-B HE07 HE12 HE46		0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2	0.005
HE47 HE48 HE49 HE50 HE51																
HE52 HE53 HE54 HE55 HE56																
HE57 HE59 HE60 HE61 HE62																
HE63 HE64 HE65 HE66 HE67		13.1	560	4.0	2.9	<0.001	0.08	<0.05	3.6	0.4	0.4	22.4	<0.01	0.02	5.7	0.090
HE68 HE69 HE70 HE71 HE72		10.8	260	3720	1.1	<0.001	0.27	0.59	9.8	1.6	0.4	188.5	<0.01	0.03	9.5	<0.005
HE73																



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - D  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	Au-ICP21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Tl ppm 0.02	U ppm 0.05	V ppm 1	W ppm 0.05	Y ppm 0.05	Zn ppm 2	Zr ppm 0.5	Au ppm 0.001	Ag ppm 1	Ba ppm 0.5	Ce ppm 0.5	Co ppm 0.5	Cr ppm 10	Cs ppm 0.01	Cu ppm 5
BL-25-A										<1	163.0	3.2	22.7	160	1.63	15
BL-25-B										<1	237	1.7	9.1	50	1.86	6
HE07		0.02	0.34	129	0.18	5.25	56	4.0	0.002							
HE12		0.07	<0.05	89	0.07	5.32	33	2.4	<0.001							
HE46										<1	948	56.0	5.0	20	28.4	<5
HE47										<1	172.5	7.7	58.1	310	4.94	48
HE48										<1	810	41.3	6.9	30	2.50	13
HE49										<1	644	9.1	6.3	30	20.8	10
HE50										<1	631	26.8	4.6	20	5.58	14
HE51										<1	256	28.2	4.6	10	3.72	8
HE52										<1	298	7.6	51.2	300	1.99	96
HE53										<1	352	32.9	6.6	30	4.97	30
HE54										<1	1090	34.0	7.5	20	189.0	7
HE55										<1	972	166.0	11.4	120	2.99	59
HE56										<1	728	10.2	58.2	360	2.56	61
HE57										2	760	56.5	7.9	20	2.17	40
HE59										1	555	36.4	9.9	40	2.13	90
HE60										<1	714	71.2	22.0	110	1.26	41
HE61										2	964	19.2	6.0	20	5.72	67
HE62										<1	157.0	10.4	56.9	100	2.45	81
HE63										<1	299	10.3	55.4	100	1.77	148
HE64										<1	93.3	9.8	53.0	110	1.03	46
HE65										<1	485	19.0	3.9	10	4.30	8
HE66										<1	775	17.9	0.5	10	4.83	<5
HE67		0.03	0.64	32	0.14	5.72	27	21.0	<0.001							
HE68										<1	351	8.0	42.8	340	2.06	67
HE69										<1	386	7.8	50.6	290	3.66	81
HE70										<1	524	47.5	28.7	110	2.04	27
HE71		0.04	16.10	69	<0.05	16.40	2400	95.2	0.001							
HE72										<1	550	49.8	4.5	50	1.06	131
HE73										<1	1300	60.1	1.8	10	1.34	<5





# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - E  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		Dy ppm 0.05	Er ppm 0.03	Eu ppm 0.03	Ga ppm 0.1	Gd ppm 0.05	Hf ppm 0.2	Ho ppm 0.01	La ppm 0.5	Lu ppm 0.01	Mo ppm 2	Nb ppm 0.2	Nd ppm 0.1	Ni ppm 5	Pb ppm 5	Pr ppm 0.03
BL-25-A		1.33	0.81	0.35	17.4	0.98	0.6	0.29	1.2	0.11	<2	1.0	2.5	72	6	0.46
BL-25-B		0.66	0.43	0.32	18.4	0.50	0.2	0.15	0.8	0.06	<2	0.3	1.2	26	6	0.25
HE07																
HE12																
HE46		1.82	0.95	1.05	21.2	3.23	4.5	0.34	27.4	0.11	<2	10.5	20.5	<5	20	5.87
HE47		3.75	2.45	0.99	18.3	3.00	1.6	0.81	2.9	0.36	<2	2.3	6.3	159	9	1.24
HE48		1.06	0.50	0.90	23.8	2.71	3.5	0.17	19.6	0.05	<2	2.7	20.5	11	33	5.16
HE49		0.46	0.33	0.44	23.6	0.67	3.9	0.11	4.9	0.06	<2	3.7	3.7	5	13	0.98
HE50		1.05	0.51	0.60	20.7	1.64	3.5	0.18	12.0	0.08	<2	3.5	11.2	7	44	3.05
HE51		0.94	0.46	0.71	19.9	1.78	2.6	0.16	13.7	0.05	<2	2.4	12.8	<5	9	3.38
HE52		3.52	2.26	0.84	18.9	2.71	1.6	0.75	2.9	0.36	3	2.3	6.2	108	<5	1.22
HE53		1.23	0.67	0.53	18.2	2.07	3.3	0.24	17.0	0.09	<2	3.6	14.2	5	<5	3.78
HE54		2.53	1.21	1.32	23.5	3.53	4.5	0.48	14.7	0.13	<2	5.8	18.8	<5	11	4.55
HE55		3.29	1.71	2.46	21.9	8.69	4.1	0.56	78.0	0.21	<2	5.4	75.1	53	8	20.2
HE56		2.84	1.81	0.76	15.8	2.47	1.4	0.63	4.2	0.27	<2	1.8	6.9	256	5	1.50
HE57		1.33	0.86	0.85	18.5	2.66	3.7	0.28	27.1	0.12	<2	8.8	23.2	18	1355	6.52
HE59		1.36	0.75	0.72	17.7	2.20	3.0	0.26	17.2	0.10	2	3.7	15.7	34	1045	4.12
HE60		2.60	1.42	1.58	19.0	5.04	3.2	0.46	34.3	0.17	<2	3.5	35.8	38	15	9.28
HE61		0.52	0.26	0.48	24.0	1.21	2.7	0.08	8.7	0.03	<2	1.6	8.6	<5	826	2.30
HE62		3.54	2.30	0.91	17.9	2.84	1.8	0.77	4.0	0.33	<2	2.6	8.1	79	9	1.63
HE63		3.58	2.31	0.89	18.6	2.95	1.8	0.75	4.1	0.35	23	2.8	8.0	78	5	1.63
HE64		3.36	2.25	0.89	22.5	2.92	1.7	0.74	3.9	0.32	<2	3.6	7.3	84	7	1.53
HE65		0.67	0.38	0.45	20.6	1.22	2.7	0.12	8.8	0.05	<2	2.5	7.4	<5	14	2.07
HE66		0.79	0.40	0.22	22.3	1.44	2.2	0.14	8.5	0.05	<2	3.6	8.1	<5	11	2.17
HE67																
HE68		3.71	2.55	0.87	20.6	2.94	1.7	0.84	3.0	0.38	<2	2.4	6.5	91	<5	1.30
HE69		3.54	2.39	0.80	17.3	2.72	1.5	0.78	3.0	0.34	<2	2.3	6.3	155	5	1.22
HE70		2.99	1.88	1.11	19.9	3.95	3.0	0.60	22.6	0.27	<2	4.1	23.3	13	9	5.93
HE71																
HE72		1.03	0.74	0.64	16.4	2.24	2.8	0.22	23.9	0.13	2	20.1	22.2	5	308	6.06
HE73		2.90	1.36	1.69	23.9	5.25	5.0	0.50	27.6	0.14	<2	6.8	34.0	<5	20	8.03



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - F  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm	Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm
		0.2	0.03	1	0.1	0.1	0.01	0.05	0.5	0.01	0.05	5	1	0.5	0.03	5
BL-25-A		33.9	0.83	<1	265	0.1	0.20	0.11	<0.5	0.10	<0.05	109	1	7.1	0.85	42
BL-25-B		56.3	0.38	<1	343	<0.1	0.09	0.13	<0.5	0.03	<0.05	53	1	4.1	0.43	19
HE07																
HE12																
HE46		227	3.47	2	500	0.9	0.39	7.63	1.0	0.10	1.00	30	1	9.3	0.78	63
HE47		20.1	2.14	1	262	0.2	0.56	0.26	<0.5	0.34	0.07	287	1	21.3	2.59	136
HE48		56.3	3.54	1	707	0.2	0.28	3.20	<0.5	0.03	1.01	45	1	4.6	0.34	79
HE49		94.4	0.79	1	390	0.3	0.10	3.03	0.5	0.02	0.82	60	<1	3.0	0.40	90
HE50		83.1	2.08	1	338	0.3	0.22	2.81	<0.5	0.05	0.90	40	1	5.0	0.55	82
HE51		25.1	2.11	<1	635	0.2	0.20	1.78	<0.5	0.03	0.50	29	<1	4.1	0.39	52
HE52		17.5	2.26	1	292	0.2	0.52	0.29	<0.5	0.32	0.38	286	1	19.6	2.29	109
HE53		53.5	2.40	1	166.5	0.3	0.24	2.49	<0.5	0.07	0.71	52	1	6.1	0.66	55
HE54		106.5	4.15	2	1015	0.3	0.49	3.45	0.6	0.12	0.75	97	<1	12.6	0.99	99
HE55		66.9	11.20	1	1150	0.4	0.83	11.90	<0.5	0.21	2.51	88	1	15.8	1.39	55
HE56		44.5	1.92	1	346	0.1	0.43	0.55	<0.5	0.25	0.13	221	1	15.8	1.83	103
HE57		64.4	3.57	1	252	0.4	0.31	4.18	<0.5	0.10	5.35	30	2	7.8	0.79	3250
HE59		69.1	2.52	1	110.0	0.3	0.27	3.89	<0.5	0.08	0.95	49	1	6.7	0.69	2840
HE60		53.6	6.17	1	559	0.2	0.59	4.32	<0.5	0.16	1.04	135	1	12.9	1.24	93
HE61		116.5	1.60	1	465	0.1	0.13	2.31	2.5	0.01	1.23	29	2	2.4	0.25	1940
HE62		40.4	2.44	1	177.5	0.2	0.54	0.36	<0.5	0.29	0.11	301	1	19.4	2.20	131
HE63		53.1	2.35	1	183.5	0.2	0.55	0.36	<0.5	0.32	0.09	301	1	19.9	2.32	113
HE64		24.6	2.26	3	145.5	0.2	0.54	0.34	<0.5	0.31	0.44	283	1	19.1	2.21	111
HE65		87.3	1.31	<1	221	0.2	0.14	1.92	<0.5	0.03	0.53	21	1	3.4	0.35	43
HE66		89.8	1.75	1	58.3	0.3	0.18	3.06	<0.5	0.04	0.62	<5	1	4.0	0.34	26
HE67																
HE68		28.3	2.21	1	217	0.2	0.55	0.26	<0.5	0.36	0.07	312	1	21.1	2.57	158
HE69		164.5	2.11	1	418	0.2	0.51	0.25	0.6	0.35	0.10	278	1	20.5	2.49	96
HE70		87.5	4.52	1	421	0.2	0.55	2.67	<0.5	0.23	0.63	214	1	16.4	1.87	100
HE71																
HE72		74.8	3.03	1	349	0.5	0.22	6.53	<0.5	0.11	4.38	56	8	6.3	0.89	1455
HE73		46.1	6.62	1	1110	0.4	0.64	3.48	<0.5	0.14	0.72	95	<1	13.7	1.02	46



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - G  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05
		Zr ppm	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %	LOI %
BL-25-A		19	43.4	25.8	5.58	15.20	3.58	2.14	0.79	0.02	0.38	0.09	0.04	0.03	0.02	3.01
BL-25-B		4	45.6	28.2	3.64	15.80	1.36	2.24	1.18	0.01	0.12	0.08	0.05	0.04	0.03	2.18
HE07																
HE12																
HE46		167	69.6	15.20	2.91	2.24	0.76	4.46	2.78	<0.01	0.39	0.05	0.19	0.06	0.11	0.39
HE47		51	52.4	17.10	10.95	9.11	4.31	3.75	0.56	0.05	0.95	0.30	0.11	0.03	0.02	0.30
HE48		118	69.3	15.40	2.87	2.42	1.21	5.44	1.93	0.01	0.34	0.05	0.14	0.09	0.09	0.39
HE49		140	67.1	16.55	3.60	2.39	0.97	4.65	3.21	0.01	0.38	0.07	0.07	0.05	0.08	0.99
HE50		128	72.7	14.90	2.72	0.96	0.92	3.29	2.67	<0.01	0.32	0.04	0.14	0.04	0.08	1.23
HE51		93	71.0	15.60	2.14	1.94	0.48	6.05	0.96	<0.01	0.27	0.03	0.08	0.08	0.03	1.58
HE52		52	48.5	16.90	11.80	9.86	5.58	3.42	0.74	0.04	0.96	0.29	0.15	0.04	0.03	1.58
HE53		117	75.9	13.50	3.27	0.51	0.85	0.92	2.46	0.01	0.39	0.03	0.08	0.02	0.04	2.07
HE54		160	63.3	16.65	5.26	4.24	2.25	3.39	2.04	<0.01	0.75	0.08	0.31	0.13	0.13	1.47
HE55		156	62.9	14.75	5.00	6.11	2.95	2.06	2.74	0.02	0.59	0.09	0.36	0.14	0.11	2.28
HE56		43	49.5	14.80	10.75	8.43	8.78	2.70	1.03	0.05	0.73	0.22	0.10	0.04	0.08	2.11
HE57		135	69.8	13.45	2.10	2.27	0.52	5.10	2.63	<0.01	0.32	0.04	0.15	0.03	0.09	1.89
HE59		100	68.4	14.90	2.84	0.60	1.34	6.00	2.26	0.01	0.30	0.04	0.14	0.01	0.06	1.94
HE60		111	61.0	14.65	6.66	3.96	3.90	5.08	1.68	0.02	0.61	0.11	0.23	0.07	0.08	0.98
HE61		89	70.5	15.40	2.75	0.57	0.59	4.21	3.68	<0.01	0.19	0.04	0.08	0.06	0.11	1.39
HE62		58	48.3	14.00	14.50	9.69	6.27	2.60	0.89	0.02	1.02	0.31	0.12	0.02	0.02	2.17
HE63		58	49.3	13.75	14.15	10.80	6.08	2.22	1.05	0.02	1.00	0.29	0.08	0.02	0.03	1.66
HE64		60	49.3	13.80	13.90	10.55	5.97	3.08	0.85	0.02	0.98	0.26	0.11	0.02	0.01	1.77
HE65		87	72.0	14.65	2.07	1.39	1.21	2.55	2.73	<0.01	0.20	0.04	0.08	0.03	0.06	3.31
HE66		42	76.4	13.20	1.26	0.24	0.45	0.52	3.76	<0.01	0.06	0.01	0.02	0.01	0.09	2.08
HE67																
HE68		56	50.5	16.70	9.38	10.70	3.85	3.11	0.70	0.04	0.93	0.23	0.10	0.02	0.04	1.80
HE69		50	52.2	15.75	9.55	7.43	5.54	3.54	1.77	0.04	0.91	0.31	0.10	0.05	0.04	2.05
HE70		106	56.1	15.60	8.45	5.51	5.21	3.64	1.51	0.02	0.56	0.18	0.24	0.05	0.06	2.77
HE71																
HE72		102	62.6	14.35	2.49	4.11	1.15	5.63	3.35	0.01	0.29	0.07	0.09	0.04	0.06	5.97
HE73		173	62.3	16.45	3.75	4.09	2.08	4.58	2.56	<0.01	0.78	0.07	0.31	0.13	0.15	2.51



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - H  
Total # Pages: 2 (A - H)  
Plus Appendix Pages  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09087636

Sample Description	Method Analyte Units LOR	TOT-ICP06
		Total % 0.01
BL-25-A		100.0
BL-25-B		100.5
HE07		
HE12		
HE46		99.1
HE47		99.9
HE48		99.7
HE49		100.0
HE50		100.0
HE51		100.0
HE52		99.9
HE53		100.0
HE54		100.0
HE55		100.0
HE56		99.3
HE57		98.4
HE59		98.8
HE60		99.0
HE61		99.6
HE62		99.9
HE63		100.5
HE64		100.5
HE65		100.5
HE66		98.1
HE67		
HE68		98.1
HE69		99.3
HE70		99.9
HE71		
HE72		100.0
HE73		99.8



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: Appendix 1  
Total # Appendix Pages: 1  
Finalized Date: 8-SEP-2009  
Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09087636**

<b>Method</b>	<b>CERTIFICATE COMMENTS</b>
ME-MS41	Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 1  
Finalized Date: 28-SEP-2009  
Account: METCOR

## CERTIFICATE TB09098217

Project: PYTHON

P.O. No.:

This report is for 18 Drill Core samples submitted to our lab in Thunder Bay, ON, Canada on 10-SEP-2009.

The following have access to data associated with this certificate:

CHARLES GREIG

DAVID MALLALIEU

METALCORP WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
ME-MS81	38 element fusion ICP-MS	ICP-MS
TOT-ICP06	Total Calculation for ICP06	ICP-AES

To: METALCORP LIMITED  
ATTN: CHARLES GREIG  
705B HAMMOND AVE  
THUNDER BAY ON P7B 6T5

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - A  
Total # Pages: 2 (A - D)  
Finalized Date: 28-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098217

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
HE74		0.92	<1	608	42.7	8.6	50	3.91	9	1.12	0.45	0.77	14.3	2.57	2.6	0.12
KC01		0.53	<1	982	110.5	21.5	130	12.40	49	3.01	1.59	2.05	24.3	6.61	4.6	0.48
KC02		0.61	<1	1000	43.1	22.8	80	33.6	31	2.52	1.66	0.59	25.8	3.41	3.9	0.48
KC03		0.46	<1	228	28.0	49.6	550	9.65	46	2.20	1.35	0.83	18.7	2.64	2.6	0.41
KC04		0.56	<1	304	30.7	49.2	550	22.1	45	2.87	1.71	0.94	20.3	3.31	2.5	0.50
KC05		0.45	<1	197.5	28.2	48.3	560	5.32	51	2.61	1.42	0.80	19.8	2.82	2.5	0.47
KC06		0.43	<1	300	27.5	48.1	600	8.90	59	2.18	1.26	0.71	18.9	2.52	2.5	0.39
KC07		0.32	<1	1520	127.0	8.1	70	4.11	18	2.11	0.81	1.83	22.0	6.71	4.8	0.26
KC08		0.47	<1	987	62.3	16.5	80	4.77	25	2.38	1.12	1.20	21.8	4.34	3.5	0.36
KC09		0.49	<1	149.0	10.4	54.5	130	2.24	99	3.66	2.32	0.63	17.0	2.83	1.8	0.70
KC10		0.40	<1	688	79.5	23.3	140	5.70	12	3.82	2.07	1.79	19.7	6.49	3.9	0.70
KC11		0.36	<1	534	58.2	22.9	260	5.99	51	2.30	1.11	1.15	20.1	3.90	3.2	0.35
KC12		0.41	<1	1115	77.9	9.1	70	3.19	27	1.73	0.71	1.14	21.3	4.43	4.5	0.25
KC13		0.48	<1	273	137.0	47.8	730	35.4	<5	6.99	2.71	3.71	16.8	13.90	3.4	1.06
KC14		0.51	<1	709	97.4	18.4	90	13.00	45	2.83	1.44	1.71	22.5	5.91	4.1	0.45
KC15		0.54	<1	1340	100.0	19.3	80	13.40	39	2.90	1.39	1.82	23.7	6.26	4.0	0.47
KC16		0.53	<1	1510	81.2	12.5	60	23.7	25	1.95	0.90	1.33	21.3	4.73	3.6	0.29
KC17		0.39	<1	10000	116.5	21.1	70	15.30	10	2.87	1.30	2.02	30.3	7.01	4.2	0.48





**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 2 - B  
 Total # Pages: 2 (A - D)  
 Finalized Date: 28-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098217**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm
		0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.05	
HE74		20.6	0.02	2	3.2	19.9	29	7	5.11	41.9	3.09	<1	370	0.1	0.22	3.99
KC01		52.8	0.15	2	6.2	52.7	89	6	13.60	68.6	8.29	1	616	0.3	0.66	7.81
KC02		20.1	0.24	<2	5.0	21.5	36	5	5.28	120.5	3.97	1	300	0.2	0.41	2.57
KC03		12.8	0.19	<2	3.1	13.9	426	11	3.38	39.0	2.73	<1	264	0.1	0.34	1.74
KC04		14.2	0.21	<2	3.2	15.5	398	7	3.64	67.6	3.24	<1	234	0.1	0.44	1.97
KC05		13.5	0.18	<2	3.1	14.5	399	7	3.36	37.1	2.80	<1	284	0.1	0.39	1.79
KC06		13.1	0.15	<2	3.2	13.7	393	6	3.26	58.9	2.54	<1	239	0.1	0.32	1.64
KC07		63.6	0.04	<2	5.6	55.1	45	15	14.95	69.5	8.27	1	1320	0.2	0.54	9.25
KC08		30.2	0.12	<2	3.4	29.8	29	16	7.65	50.5	5.24	1	1120	0.1	0.45	4.24
KC09		4.3	0.32	<2	2.5	7.4	70	<5	1.31	12.3	2.05	<1	104.0	0.1	0.45	0.28
KC10		38.2	0.25	<2	4.6	40.6	36	10	9.88	72.2	7.16	1	831	0.2	0.72	4.90
KC11		28.6	0.12	<2	4.7	26.8	89	14	6.82	64.7	4.55	<1	610	0.2	0.40	4.61
KC12		37.9	0.04	<2	4.2	35.9	27	11	9.41	64.4	5.65	1	925	0.2	0.38	5.05
KC13		60.6	0.22	<2	5.0	77.1	118	8	18.25	115.0	15.45	1	1115	0.1	1.54	6.26
KC14		47.6	0.13	2	5.8	45.6	65	11	11.85	62.0	7.39	1	1205	0.7	0.59	6.52
KC15		48.2	0.14	2	6.2	46.3	53	11	12.15	92.4	7.55	<1	1135	0.3	0.62	6.79
KC16		38.7	0.09	<2	4.4	37.9	25	11	9.85	101.5	5.99	<1	783	0.2	0.42	5.03
KC17		56.5	0.15	5	6.1	52.9	41	9	14.20	34.3	8.89	1	951	0.3	0.73	6.49



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - C  
Total # Pages: 2 (A - D)  
Finalized Date: 28-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098217

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
		Ti ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %
HE74		<0.5	0.06	1.14	42	14	6.7	0.44	25	92	72.7	12.20	2.81	0.91	0.47	4.55
KC01		<0.5	0.21	1.82	133	15	16.1	1.26	92	168	62.7	17.95	4.62	3.25	1.62	2.57
KC02		0.7	0.24	0.80	237	73	15.5	1.62	124	130	63.2	19.30	5.53	0.55	2.51	0.85
KC03		<0.5	0.24	0.35	189	1	13.8	1.42	143	88	55.3	16.10	9.81	3.47	7.12	3.02
KC04		<0.5	0.31	0.42	196	<1	16.4	1.59	97	86	56.1	16.40	9.84	3.65	6.37	2.94
KC05		<0.5	0.25	0.42	187	1	15.6	1.46	100	86	56.7	15.55	9.68	3.77	6.67	3.55
KC06		<0.5	0.23	0.37	180	<1	13.5	1.27	99	87	58.9	14.95	9.25	3.64	6.12	2.79
KC07		<0.5	0.10	2.18	54	<1	10.9	0.51	71	177	65.3	15.25	3.30	3.07	1.66	5.05
KC08		<0.5	0.18	1.21	112	<1	12.6	0.90	86	113	61.2	15.60	5.70	4.63	3.22	4.85
KC09		<0.5	0.41	<0.05	311	<1	22.6	2.30	94	55	51.0	14.10	12.40	10.75	6.24	2.21
KC10		<0.5	0.30	1.20	166	1	22.1	1.82	104	144	54.1	16.20	8.72	6.17	4.35	4.17
KC11		<0.5	0.19	1.05	108	<1	12.9	1.02	99	117	63.5	15.60	5.61	2.94	2.89	4.03
KC12		<0.5	0.11	1.07	62	3	9.4	0.55	56	155	67.9	15.35	3.36	2.63	1.45	4.42
KC13		<0.5	0.29	1.67	209	1	32.8	1.88	98	131	48.7	11.30	10.60	10.35	10.90	1.62
KC14		<0.5	0.17	1.60	138	17	15.1	1.14	89	148	65.0	16.75	3.67	3.51	1.59	1.95
KC15		1.7	0.21	1.63	131	21	15.8	1.15	81	141	58.9	16.75	7.17	4.57	1.11	2.17
KC16		0.7	0.12	1.37	84	10	10.9	0.74	75	130	65.1	15.45	2.63	3.77	1.32	3.71
KC17		2.9	0.14	1.88	97	154	11.2	0.99	101	166	50.4	22.7	12.20	0.37	0.05	2.75



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 2 - D  
 Total # Pages: 2 (A - D)  
 Finalized Date: 28-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098217**

Sample Description	Method	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
	Analyte	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	LOI	Total	Au
	Units LOR	%	%	%	%	%	%	%	%	%	ppm
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001
HE74		1.89	0.01	0.30	0.01	0.06	0.04	0.07	2.19	98.2	0.038
KC01		2.48	0.02	0.64	0.10	0.32	0.07	0.11	1.90	98.4	<0.001
KC02		3.76	0.02	0.94	0.05	0.09	0.03	0.12	2.50	99.5	0.004
KC03		1.16	0.08	0.72	0.12	0.10	0.03	0.03	2.68	99.7	0.002
KC04		1.66	0.09	0.77	0.14	0.15	0.02	0.03	1.49	99.7	<0.001
KC05		1.09	0.09	0.74	0.14	0.05	0.03	0.02	0.79	98.9	<0.001
KC06		1.66	0.09	0.70	0.13	0.10	0.02	0.04	0.60	99.0	0.001
KC07		3.03	0.01	0.44	0.05	0.27	0.16	0.18	1.50	99.3	<0.001
KC08		1.54	0.02	0.57	0.09	0.20	0.13	0.12	0.70	98.6	0.001
KC09		0.37	0.02	0.90	0.25	0.09	<0.01	0.02	1.00	99.4	
KC10		1.44	0.03	0.73	0.15	0.44	0.09	0.08	1.91	98.6	
KC11		2.24	0.04	0.56	0.08	0.18	0.07	0.06	0.60	98.4	<0.001
KC12		2.47	0.01	0.40	0.05	0.13	0.11	0.13	1.48	99.9	<0.001
KC13		1.88	0.11	0.74	0.20	0.57	0.13	0.03	1.50	98.6	<0.001
KC14		2.29	0.02	0.63	0.07	0.33	0.14	0.09	2.09	98.1	0.001
KC15		2.61	0.02	0.61	0.04	0.21	0.14	0.15	4.31	98.8	0.043
KC16		3.37	0.01	0.46	0.04	0.15	0.09	0.18	1.80	98.1	0.005
KC17		1.47	0.01	0.69	0.01	0.20	0.12	1.30	7.44	99.7	0.012



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 1  
Finalized Date: 30-SEP-2009  
Account: METCOR

## CERTIFICATE TB09098216

Project: PYTHON

P.O. No.:

This report is for 92 Drill Core samples submitted to our lab in Thunder Bay, ON, Canada on 10-SEP-2009.

The following have access to data associated with this certificate:

CHARLES GREIG

DAVID MALLALIEU

METALCORP WEBTRIEVE

## SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

## ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
ME-MS81	38 element fusion ICP-MS	ICP-MS
TOT-ICP06	Total Calculation for ICP06	ICP-AES

To: METALCORP LIMITED  
ATTN: CHARLES GREIG  
705B HAMMOND AVE  
THUNDER BAY ON P7B 6T5

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

  
Colin Ramshaw, Vancouver Laboratory Manager



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - A  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
		0.02	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2	0.01
WR01		0.70	<1	376	35.5	4.5	10	14.95	6	0.89	0.41	0.62	21.5	2.05	3.0	0.14
WR02		0.62	4	837	30.3	4.2	10	9.03	409	0.67	0.32	0.49	20.8	1.70	2.9	0.10
WR03		0.72	<1	549	31.5	7.3	20	7.76	20	0.56	0.28	0.53	23.1	1.38	3.1	0.09
WR10		0.64	<1	314	27.5	6.5	30	3.18	38	0.79	0.45	0.58	20.0	1.65	2.9	0.15
WR11		0.54	<1	487	17.7	3.8	10	8.70	5	0.53	0.29	0.41	18.4	1.16	2.5	0.09
WR12		0.60	<1	472	77.9	15.4	110	1.52	8	2.23	1.23	1.18	14.3	4.64	3.0	0.41
WR14		0.54	1	457	21.6	5.5	20	6.63	26	0.75	0.38	0.47	18.9	1.39	2.8	0.14
WR15		0.42	<1	506	17.4	3.6	10	9.76	<5	0.53	0.30	0.35	19.7	1.09	2.8	0.09
WR16		0.61	1	447	21.3	6.1	10	10.00	15	0.58	0.31	0.47	19.6	1.26	3.0	0.11
WR19		0.60	1	504	16.9	4.0	10	8.16	26	0.59	0.27	0.38	16.7	1.07	2.6	0.10
WR20		0.67	<1	432	21.5	8.9	10	10.35	14	0.46	0.25	0.44	19.9	1.04	2.7	0.08
WR21		0.42	<1	678	22.4	16.6	10	9.56	14	0.48	0.28	0.40	20.0	1.07	2.8	0.08
WR26		0.72	<1	595	20.2	4.4	10	22.9	5	0.60	0.33	0.41	20.3	1.28	2.8	0.11
WR27		0.45	<1	506	18.8	2.5	20	5.55	10	0.50	0.30	0.36	15.0	1.05	2.4	0.09
WR31		0.49	<1	447	23.0	6.0	20	10.40	28	0.81	0.40	0.52	20.6	1.54	2.8	0.16
WR32		0.52	<1	601	14.0	3.3	20	8.01	11	0.45	0.23	0.38	17.2	0.90	2.6	0.08
WR39		0.64	<1	891	20.7	0.9	10	5.77	<5	0.91	0.43	0.27	19.8	1.55	1.9	0.16
WR40		0.57	<1	357	26.6	3.9	20	21.1	<5	0.75	0.39	0.52	19.6	1.60	3.0	0.14
WR41		0.58	1	528	21.6	9.0	10	9.35	24	0.47	0.25	0.50	22.3	1.05	2.9	0.09
WR42		0.60	<1	495	27.4	4.5	20	9.34	8	0.76	0.40	0.53	19.5	1.54	2.9	0.13
WR51		1.20	<1	60.2	7.8	49.8	250	2.49	85	2.61	1.69	0.67	15.0	2.19	1.3	0.57
WR52		0.62	<1	77.3	10.4	53.7	80	0.95	55	3.41	2.20	0.88	17.0	2.88	1.7	0.74
WR53		0.58	1	443	28.3	4.5	10	6.08	6	0.75	0.38	0.53	19.5	1.62	2.9	0.12
WR54		0.42	<1	514	20.8	6.8	10	9.32	10	0.41	0.22	0.42	19.6	0.98	2.6	0.07
WR55		0.93	<1	64.1	9.5	38.7	170	2.84	79	3.38	2.19	0.84	17.7	2.72	1.7	0.73
WR56		1.06	<1	53.3	16.0	47.5	140	0.73	105	4.35	3.08	1.08	18.3	3.62	2.1	0.99
WR57		1.02	<1	118.0	6.1	54.4	260	2.47	104	2.63	1.74	0.63	15.0	1.99	1.2	0.57
WR58		0.73	<1	163.0	8.9	36.7	170	2.33	72	3.25	2.08	0.78	16.2	2.59	1.6	0.70
WR59		0.79	<1	206	8.7	35.3	160	2.49	81	3.11	2.01	0.76	17.5	2.60	1.5	0.69
WR60		0.99	<1	120.0	13.6	47.4	90	0.39	113	5.19	3.31	1.20	18.7	4.18	2.6	1.16
WR61		0.84	<1	65.5	7.4	53.9	220	1.80	108	2.87	1.91	0.68	15.0	2.28	1.3	0.62
WR62		0.49	<1	832	27.6	3.9	20	4.64	6	0.82	0.39	0.57	21.3	1.78	2.8	0.14
WR63		0.31	<1	1630	68.4	5.7	30	4.70	<5	1.48	0.67	1.11	21.0	3.90	4.1	0.22
WR64		0.76	<1	129.5	10.7	55.1	90	0.64	155	3.68	2.41	0.92	17.2	3.00	1.8	0.79
WR65		0.89	<1	142.5	10.3	36.9	170	3.26	88	3.40	2.18	0.86	18.8	2.75	1.8	0.72
WR66		0.82	<1	11.8	9.1	39.0	170	0.92	83	3.40	2.23	0.81	17.3	2.70	1.7	0.75
WR67		0.96	<1	16.7	7.2	52.6	270	1.90	87	3.42	2.34	0.77	15.6	2.62	1.5	0.76
WR68		0.67	<1	22.3	6.2	53.1	260	2.09	110	2.55	1.66	0.65	15.3	2.05	1.1	0.58
WR69		0.53	<1	624	21.3	3.7	10	1.59	10	0.67	0.39	0.40	20.1	1.22	2.8	0.14
WR70		0.42	<1	595	28.6	7.2	10	6.33	13	0.51	0.26	0.47	21.6	1.17	3.2	0.08



# ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - B  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	La ppm	Lu ppm	Mo ppm	Nb ppm	Nd ppm	Ni ppm	Pb ppm	Pr ppm	Rb ppm	Sm ppm	Sn ppm	Sr ppm	Ta ppm	Tb ppm	Th ppm
	0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.01	0.05
WR01	17.5	0.05	2	3.0	15.4	7	14	4.21	111.0	2.49	1	99.4	0.2	0.22	3.33
WR02	15.6	0.04	6	2.2	13.5	10	21	3.63	148.0	2.09	1	275	0.2	0.19	2.26
WR03	16.6	0.03	5	5.5	12.1	13	15	3.51	132.5	1.69	1	603	0.7	0.15	2.05
WR10	14.2	0.06	<2	2.4	11.6	15	9	3.23	67.1	1.86	1	184.0	0.2	0.19	1.74
WR11	8.9	0.03	3	2.3	7.8	5	19	2.12	47.1	1.34	4	480	0.1	0.13	1.33
WR12	35.9	0.17	5	10.1	38.0	40	<5	9.84	63.3	6.11	1	137.0	1.0	0.52	5.28
WR14	11.1	0.06	<2	2.2	9.2	11	8	2.51	44.7	1.59	1	353	0.2	0.17	1.77
WR15	8.5	0.05	<2	2.0	7.4	<5	9	2.05	88.4	1.21	1	47.2	0.2	0.13	1.50
WR16	11.0	0.05	<2	2.3	8.8	8	20	2.42	79.5	1.48	1	446	0.2	0.14	1.63
WR19	8.6	0.04	8	2.5	7.4	7	72	1.97	52.2	1.36	1	381	0.2	0.13	1.44
WR20	11.2	0.03	8	2.0	8.1	12	14	2.43	93.7	1.25	<1	542	0.1	0.11	1.67
WR21	11.9	0.04	3	2.4	8.5	27	18	2.49	97.7	1.30	1	728	0.2	0.11	1.85
WR26	10.5	0.05	4	2.5	8.5	7	6	2.31	181.0	1.45	1	277	0.2	0.14	1.82
WR27	9.5	0.04	<2	3.0	7.9	9	6	2.16	80.8	1.23	1	267	0.2	0.13	1.52
WR31	11.9	0.06	13	4.4	9.8	11	15	2.70	66.6	1.72	1	401	0.4	0.17	1.80
WR32	7.1	0.03	2	2.1	6.0	6	8	1.66	52.3	1.11	1	431	0.2	0.10	1.39
WR39	10.3	0.05	<2	3.6	9.6	8	9	2.54	71.9	1.90	1	85.6	0.3	0.20	3.17
WR40	13.6	0.05	<2	2.5	11.1	11	7	3.08	75.2	1.93	<1	125.5	0.2	0.19	2.09
WR41	10.8	0.03	<2	2.2	8.4	17	82	2.41	68.5	1.25	1	708	0.1	0.11	1.82
WR42	13.6	0.05	<2	2.6	11.5	10	11	3.15	69.6	1.93	1	308	0.2	0.18	2.10
WR51	3.4	0.23	<2	2.1	5.8	125	8	1.20	47.4	1.74	1	194.0	0.1	0.42	0.34
WR52	4.1	0.33	<2	3.0	7.6	76	<5	1.58	16.4	2.40	1	201	0.2	0.54	0.38
WR53	14.5	0.04	<2	2.3	12.1	9	8	3.32	47.2	1.99	1	239	0.2	0.18	2.26
WR54	10.7	0.03	<2	2.3	8.0	9	7	2.31	102.0	1.17	<1	639	0.2	0.10	1.71
WR55	3.9	0.33	<2	2.9	7.1	75	<5	1.47	16.5	2.21	1	216	0.2	0.52	0.35
WR56	6.8	0.45	<2	2.7	10.4	51	<5	2.25	12.2	2.85	1	262	0.2	0.68	0.83
WR57	2.5	0.24	<2	1.7	4.7	133	<5	0.96	60.9	1.59	<1	228	0.1	0.41	0.23
WR58	3.6	0.30	<2	2.7	6.7	65	<5	1.37	45.3	2.07	1	329	0.2	0.50	0.34
WR59	3.5	0.31	<2	2.6	6.5	68	<5	1.35	53.6	2.03	1	330	0.2	0.49	0.32
WR60	5.3	0.51	<2	4.0	10.7	52	<5	2.08	12.6	3.28	1	231	0.2	0.79	0.50
WR61	3.3	0.29	2	2.1	5.5	111	<5	1.11	12.1	1.71	<1	121.5	0.1	0.43	0.27
WR62	14.0	0.05	<2	2.1	12.5	7	20	3.29	72.1	2.23	1	965	0.2	0.20	2.80
WR63	32.9	0.07	7	4.3	30.9	14	10	8.25	126.5	5.16	1	602	0.3	0.39	5.91
WR64	4.2	0.34	7	3.1	8.2	79	<5	1.67	28.0	2.40	1	186.0	0.2	0.57	0.38
WR65	4.3	0.32	<2	2.9	7.6	67	5	1.55	22.0	2.23	1	269	0.2	0.50	0.41
WR66	3.7	0.33	<2	2.9	7.0	70	<5	1.41	7.2	2.19	1	139.0	0.2	0.51	0.34
WR67	3.1	0.36	<2	1.8	5.7	122	<5	1.14	9.2	1.91	<1	151.0	0.1	0.52	0.25
WR68	2.6	0.25	<2	2.0	4.8	127	6	0.95	23.0	1.54	1	189.0	0.1	0.40	0.22
WR69	10.7	0.06	3	1.8	8.8	9	9	2.46	33.8	1.51	1	257	0.1	0.14	1.43
WR70	14.9	0.04	17	2.2	10.6	14	12	3.09	49.4	1.54	1	807	0.1	0.13	2.00



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - C  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	
		Tl ppm	Tm ppm	U ppm	V ppm	W ppm	Y ppm	Yb ppm	Zn ppm	Zr ppm	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %
WR01		0.5	0.04	0.48	28	2	4.2	0.32	55	105	73.4	15.30	1.84	0.73	0.78	0.63
WR02		0.9	0.02	0.70	25	2	3.0	0.28	278	100	72.4	14.20	3.83	0.50	0.45	1.25
WR03		0.6	0.02	0.60	34	1	2.6	0.24	47	105	70.8	15.80	1.04	2.52	0.29	5.19
WR10		<0.5	0.05	0.56	41	1	3.9	0.40	37	100	68.6	15.15	2.62	1.48	0.79	5.50
WR11		0.6	0.02	1.04	17	1	2.5	0.28	60	87	74.4	13.35	1.25	1.90	0.17	4.89
WR12		<0.5	0.16	2.61	71	1	10.1	1.11	56	92	63.8	13.40	6.45	2.80	2.07	4.45
WR14		<0.5	0.04	0.63	31	1	3.6	0.33	52	91	72.2	15.35	2.31	2.86	0.96	2.29
WR15		<0.5	0.02	0.49	24	2	2.4	0.27	47	92	72.9	15.20	2.14	0.16	0.74	0.29
WR16		0.6	0.03	0.57	25	2	2.9	0.28	77	98	70.9	15.85	2.03	2.03	0.52	2.72
WR19		<0.5	0.03	0.56	21	1	2.6	0.24	287	81	73.5	13.20	2.13	1.79	0.22	3.92
WR20		<0.5	0.02	0.59	26	1	2.2	0.23	75	92	68.8	16.25	1.54	2.60	0.40	4.12
WR21		<0.5	0.03	0.60	28	1	2.2	0.25	63	98	69.1	16.60	2.11	3.00	0.38	4.00
WR26		0.6	0.04	0.69	24	1	3.2	0.27	47	91	70.8	15.05	1.76	2.36	1.47	2.68
WR27		<0.5	0.02	0.66	17	1	2.6	0.28	16	84	75.5	12.90	0.75	0.90	0.23	4.91
WR31		<0.5	0.06	0.68	33	1	4.2	0.38	85	96	70.5	15.50	2.77	2.24	0.84	3.68
WR32		<0.5	0.01	0.52	21	1	2.1	0.22	28	86	74.7	13.50	0.78	1.74	0.28	4.39
WR39		<0.5	0.05	1.11	7	1	4.2	0.34	87	40	76.9	12.80	1.35	0.72	0.42	0.75
WR40		<0.5	0.04	0.63	24	1	3.7	0.33	42	101	70.4	15.10	2.17	1.64	1.88	1.11
WR41		2.5	0.02	0.57	30	2	2.1	0.22	52	98	68.2	17.85	1.49	4.02	0.71	3.68
WR42		<0.5	0.04	0.70	26	1	3.6	0.32	60	100	71.8	15.05	2.17	2.16	1.58	2.09
WR51		<0.5	0.25	0.14	243	<1	14.2	1.66	107	45	48.6	14.35	12.15	12.15	7.04	2.41
WR52		<0.5	0.32	0.09	305	<1	18.9	2.14	110	58	48.9	13.65	14.95	10.25	5.93	2.69
WR53		<0.5	0.03	0.65	29	2	3.5	0.31	33	99	70.8	15.15	2.07	3.23	1.56	1.96
WR54		<0.5	0.01	0.52	21	1	2.0	0.19	65	89	71.4	16.35	1.45	3.58	0.45	2.92
WR55		<0.5	0.33	0.08	220	<1	18.7	2.17	90	55	48.6	19.45	10.05	11.40	3.98	2.76
WR56		<0.5	0.42	0.16	321	<1	24.6	2.95	120	71	49.2	13.70	15.30	9.34	6.16	3.00
WR57		<0.5	0.22	<0.05	249	<1	14.6	1.56	84	39	49.7	14.70	12.15	11.60	6.49	1.58
WR58		<0.5	0.29	0.10	199	1	17.6	2.01	83	54	47.2	18.50	10.70	10.55	4.79	3.14
WR59		<0.5	0.29	0.07	198	3	17.3	1.96	85	50	47.9	19.65	10.45	10.40	4.52	3.03
WR60		<0.5	0.50	0.12	343	1	28.6	3.42	128	84	49.0	14.05	15.20	11.80	3.94	1.72
WR61		<0.5	0.26	0.06	264	<1	15.7	1.78	95	42	49.8	14.95	12.50	11.70	6.35	1.70
WR62		<0.5	0.03	1.35	28	<1	3.8	0.29	57	91	70.1	14.95	1.98	2.23	0.71	5.10
WR63		<0.5	0.05	2.00	38	1	6.1	0.43	37	139	69.3	15.60	2.79	1.70	1.48	2.12
WR64		<0.5	0.32	0.17	298	1	19.8	2.25	111	60	49.9	14.05	14.40	10.60	5.26	2.32
WR65		<0.5	0.31	0.10	211	<1	18.5	2.13	89	57	49.6	20.2	9.70	11.60	3.02	3.28
WR66		<0.5	0.33	0.08	218	1	18.7	2.16	89	55	48.6	18.60	11.55	11.80	5.24	2.60
WR67		<0.5	0.34	0.06	270	1	19.0	2.26	99	48	48.7	14.65	13.50	11.05	7.84	2.69
WR68		<0.5	0.23	0.06	244	<1	14.1	1.63	93	36	49.6	14.45	12.50	12.10	7.31	2.36
WR69		<0.5	0.05	0.50	23	<1	3.5	0.33	117	91	74.6	14.95	0.77	1.47	0.16	3.27
WR70		<0.5	0.03	0.60	28	1	2.3	0.23	78	111	71.0	16.20	0.99	3.15	0.30	5.15





# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 2 - D  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
		K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	LOI	Total	Au
		%	%	%	%	%	%	%	%	%	ppm
		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.001
WR01		2.76	<0.01	0.22	0.02	0.06	0.01	0.04	3.29	99.1	0.002
WR02		3.45	<0.01	0.21	0.01	0.08	0.03	0.10	2.51	99.0	0.243
WR03		1.84	<0.01	0.25	0.02	0.05	0.07	0.06	0.30	98.2	0.010
WR10		1.65	<0.01	0.25	0.03	0.05	0.02	0.04	1.90	98.1	<0.001
WR11		1.83	<0.01	0.17	0.01	0.03	0.06	0.06	0.60	98.7	<0.001
WR12		2.22	0.02	0.44	0.08	0.19	0.02	0.05	3.10	99.1	0.001
WR14		2.28	<0.01	0.22	0.04	0.04	0.04	0.05	1.50	100.0	0.001
WR15		3.03	<0.01	0.20	0.01	0.04	0.01	0.05	4.00	98.8	0.001
WR16		2.49	<0.01	0.20	0.02	0.07	0.06	0.05	1.80	98.7	0.001
WR19		2.08	<0.01	0.16	0.01	0.03	0.05	0.05	1.39	98.5	0.001
WR20		2.79	<0.01	0.20	0.02	0.05	0.07	0.04	1.49	98.4	<0.001
WR21		2.98	<0.01	0.21	0.02	0.04	0.09	0.07	0.70	99.3	<0.001
WR26		2.90	<0.01	0.19	0.04	0.03	0.03	0.06	1.39	98.8	<0.001
WR27		2.16	<0.01	0.16	0.01	0.04	0.03	0.05	0.40	98.0	<0.001
WR31		2.62	<0.01	0.24	0.04	0.05	0.05	0.04	1.69	100.5	<0.001
WR32		2.35	<0.01	0.18	0.01	0.03	0.05	0.06	0.70	98.8	<0.001
WR39		3.31	<0.01	0.04	0.01	<0.01	0.01	0.10	1.69	98.1	0.001
WR40		3.29	<0.01	0.20	0.04	0.05	0.01	0.03	2.41	98.3	0.002
WR41		1.63	<0.01	0.22	0.02	0.04	0.09	0.05	0.70	98.7	0.005
WR42		2.83	<0.01	0.21	0.04	0.06	0.04	0.05	1.40	99.5	0.002
WR51		0.81	0.04	0.77	0.22	0.05	0.02	<0.01	1.10	99.7	
WR52		0.54	0.01	1.04	0.26	0.08	0.02	<0.01	-0.10	98.2	
WR53		2.26	<0.01	0.22	0.04	0.05	0.03	0.04	1.39	98.8	0.003
WR54		2.46	<0.01	0.20	0.02	0.04	0.08	0.05	0.70	99.7	<0.001
WR55		0.48	0.03	0.89	0.18	0.06	0.03	<0.01	2.58	100.5	
WR56		0.43	0.02	1.10	0.24	0.10	0.03	<0.01	1.20	99.8	
WR57		0.90	0.04	0.71	0.23	0.04	0.03	<0.01	1.89	100.0	
WR58		1.04	0.03	0.85	0.17	0.06	0.04	0.01	2.09	99.2	
WR59		1.28	0.02	0.82	0.17	0.06	0.04	0.01	1.69	100.0	
WR60		0.56	0.01	1.42	0.27	0.13	0.03	<0.01	0.70	98.8	
WR61		0.37	0.03	0.75	0.25	0.03	0.01	<0.01	1.39	99.8	
WR62		2.30	<0.01	0.20	0.03	0.06	0.12	0.09	0.30	98.2	0.002
WR63		3.76	<0.01	0.29	0.05	0.13	0.07	0.19	2.00	99.5	0.002
WR64		0.64	0.01	1.06	0.26	0.08	0.02	0.01	1.29	99.9	
WR65		0.76	0.03	0.86	0.17	0.07	0.03	0.01	0.90	100.0	
WR66		0.24	0.03	0.89	0.16	0.06	0.02	<0.01	0.30	100.0	
WR67		0.31	0.04	0.85	0.22	0.05	0.02	<0.01	0.70	100.5	
WR68		0.41	0.04	0.69	0.22	0.03	0.02	<0.01	0.80	100.5	
WR69		1.92	<0.01	0.19	0.01	0.02	0.03	0.06	1.10	98.6	<0.001
WR70		1.70	<0.01	0.23	0.01	0.04	0.10	0.06	0.10	99.0	0.003



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 3 - A  
 Total # Pages: 4 (A - D)  
 Finalized Date: 30-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098216**

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
WR71		0.82	<1	87.4	9.7	55.5	140	1.11	139	3.32	2.15	0.86	17.0	2.74	1.6	0.72
WR72		0.88	<1	14.5	9.2	38.4	170	2.25	100	3.26	2.13	0.82	17.9	2.63	1.6	0.70
WR73		0.88	<1	47.6	9.9	39.2	170	2.21	73	3.47	2.31	0.92	19.4	2.86	1.6	0.75
WR74		0.74	<1	64.4	10.4	53.3	130	0.25	120	4.56	3.08	1.01	19.0	3.63	2.1	1.01
WR75		0.96	<1	33.3	5.9	55.3	260	0.58	111	2.56	1.68	0.65	15.4	2.00	1.1	0.56
WR76		0.47	<1	503	15.9	7.2	10	4.69	13	0.74	0.41	0.31	21.9	1.19	2.1	0.13
WR77		0.38	<1	308	32.5	4.8	10	10.10	20	0.65	0.32	0.57	27.1	1.67	3.2	0.11
WR78		0.33	<1	556	26.5	6.2	20	4.10	11	0.52	0.23	0.49	18.8	1.34	2.6	0.08
WR79		1.07	<1	85.7	9.4	38.0	170	12.80	48	3.03	1.97	0.78	20.2	2.57	1.5	0.66
WR80		0.69	<1	83.2	5.4	53.1	260	20.2	136	2.76	1.88	0.65	17.2	2.14	1.2	0.63
WR81		0.83	<1	106.5	14.8	52.2	140	0.68	170	4.58	3.01	1.10	18.8	3.70	2.1	1.00
WR82		0.73	<1	115.0	8.5	41.8	180	1.54	71	3.10	2.01	0.81	17.6	2.54	1.4	0.66
WR83		1.00	<1	177.5	9.2	37.6	170	2.18	140	3.19	2.04	0.80	18.3	2.59	1.6	0.68
WR84		0.70	<1	90.0	10.7	54.2	260	1.16	124	3.97	2.60	0.98	18.3	3.14	1.9	0.87
WR85		0.31	<1	534	16.3	6.3	20	4.10	9	0.56	0.32	0.43	18.1	1.07	2.3	0.11
WR86		0.36	<1	521	15.2	2.3	20	7.19	8	0.52	0.28	0.32	15.9	0.92	2.1	0.10
WR87		0.82	<1	744	54.6	18.2	100	1.92	29	2.01	1.09	1.21	21.2	3.65	3.0	0.37
WR88		0.60	<1	726	57.1	14.1	80	1.87	25	1.89	1.02	1.14	21.3	3.60	3.1	0.35
WR89		0.59	<1	68.7	8.2	51.1	250	2.32	116	2.86	1.75	0.70	16.3	2.31	1.4	0.60
WR90		0.96	<1	97.2	6.3	51.5	230	2.54	134	2.64	1.69	0.63	15.4	2.07	1.2	0.58
WR91		0.75	<1	33.6	11.0	53.5	120	1.54	175	4.29	2.91	0.98	19.0	3.25	2.0	0.95
WR92		0.90	<1	134.5	10.3	39.2	170	3.81	75	3.39	2.14	0.85	18.1	2.71	1.7	0.71
WR93		0.46	<1	409	22.5	4.1	10	2.06	19	0.61	0.34	0.39	19.4	1.25	2.8	0.12
WR94		0.31	<1	1015	21.5	1.1	10	6.16	7	0.98	0.48	0.28	22.7	1.67	2.2	0.18
WR95		0.67	<1	103.5	10.8	56.6	90	0.60	167	3.52	2.30	0.94	18.2	3.03	1.8	0.76
WR96		0.95	<1	197.0	6.2	52.6	300	4.17	118	3.15	2.17	0.68	17.3	2.33	1.3	0.71
WR97		0.33	<1	449	39.2	4.9	30	13.55	9	0.67	0.34	0.64	20.6	1.84	2.7	0.12
WR98		0.48	<1	501	34.5	5.0	10	11.40	14	0.59	0.30	0.47	24.5	1.53	3.4	0.10
WR99		0.99	<1	46.9	9.7	54.1	100	0.88	146	3.28	2.08	0.88	17.1	2.82	1.6	0.72
WR100		1.00	<1	55.7	6.3	54.5	280	0.92	127	2.67	1.72	0.63	16.1	2.04	1.2	0.58
WR101		0.40	<1	297	9.8	52.0	180	2.28	118	3.71	2.39	0.92	19.7	2.96	1.9	0.80
WR102		0.54	<1	223	15.8	45.8	250	8.51	82	3.22	2.07	0.90	16.7	2.97	1.7	0.70
WR103		0.40	<1	83.1	8.7	52.8	260	0.77	103	3.74	2.48	0.83	16.6	2.87	1.5	0.82
WR104		0.35	<1	818	19.4	1.6	10	14.30	<5	0.65	0.35	0.34	19.3	1.21	2.3	0.13
WR105		0.32	<1	599	24.4	1.4	10	7.57	<5	0.65	0.31	0.51	18.9	1.43	2.8	0.12
WR106		0.46	<1	472	6.5	52.9	260	16.70	53	3.32	2.26	0.78	16.7	2.36	1.3	0.74
WR107		0.51	<1	765	18.0	1.8	10	7.29	8	0.78	0.38	0.40	17.8	1.39	2.1	0.14
WR108		0.43	<1	429	25.7	2.0	20	8.26	5	0.53	0.19	0.27	19.7	1.37	2.9	0.03
WR109		0.49	<1	43.1	6.4	53.4	280	1.23	107	2.38	1.53	0.40	14.7	1.72	1.3	0.48
WR110		0.47	<1	67.2	6.0	53.0	260	2.64	94	2.43	1.45	0.42	13.8	1.80	1.1	0.42



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy  
North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 3 - B  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
	Analyte	La	Lu	Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th
Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LOR		0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.01	0.05
WR71		3.8	0.31	<2	2.7	7.4	96	<5	1.50	21.4	2.26	1	162.5	0.2	0.52	0.36
WR72		3.6	0.32	<2	2.8	7.0	72	<5	1.45	7.7	2.17	<1	163.5	0.2	0.51	0.37
WR73		4.0	0.34	<2	3.0	7.4	70	<5	1.51	10.0	2.23	1	195.0	0.2	0.54	0.38
WR74		4.1	0.48	<2	2.6	8.2	47	<5	1.64	7.0	2.78	1	159.5	0.2	0.69	0.37
WR75		2.6	0.24	<2	1.6	4.7	132	<5	0.91	4.1	1.57	<1	163.5	0.1	0.41	0.21
WR76		7.7	0.06	<2	12.2	7.1	<5	39	1.93	163.5	1.46	2	211	0.5	0.15	2.04
WR77		16.7	0.04	<2	7.0	12.3	7	62	3.66	133.5	1.87	1	148.0	0.4	0.16	2.39
WR78		13.3	0.03	2	1.9	10.9	5	25	3.00	80.4	1.72	1	564	0.1	0.14	1.90
WR79		3.9	0.30	<2	2.5	7.0	71	6	1.41	69.8	2.13	<1	513	0.2	0.47	0.34
WR80		2.0	0.30	15	2.7	4.7	160	6	0.85	113.0	1.70	1	215	0.2	0.42	0.19
WR81		6.1	0.47	<2	2.8	10.2	48	<5	2.17	18.3	3.12	1	218	0.2	0.71	0.60
WR82		3.4	0.31	5	2.7	6.5	75	<5	1.32	58.3	2.02	<1	183.0	0.2	0.48	0.32
WR83		3.7	0.32	<2	2.6	6.8	69	<5	1.41	85.0	2.11	<1	267	0.2	0.50	0.32
WR84		4.3	0.39	<2	3.3	8.1	113	<5	1.63	32.6	2.53	1	225	0.2	0.63	0.40
WR85		7.8	0.04	3	4.8	7.4	11	11	1.94	32.6	1.32	1	518	0.2	0.13	1.42
WR86		7.7	0.05	<2	2.6	6.6	7	11	1.75	75.7	1.10	1	394	0.2	0.11	1.25
WR87		26.3	0.14	<2	4.2	26.8	40	9	6.78	45.1	4.63	1	731	0.2	0.43	3.64
WR88		28.1	0.14	<2	3.6	26.5	34	10	6.96	48.1	4.42	1	902	0.3	0.40	4.16
WR89		3.3	0.27	<2	2.4	6.3	122	<5	1.24	52.8	1.91	1	216	0.2	0.43	0.34
WR90		2.4	0.27	<2	1.6	5.0	114	<5	1.01	33.7	1.66	<1	137.0	0.1	0.42	0.21
WR91		4.3	0.46	<2	2.7	8.5	68	<5	1.71	24.8	2.58	1	197.0	0.2	0.64	0.39
WR92		4.2	0.32	<2	3.0	7.4	68	<5	1.54	32.6	2.24	1	237	0.2	0.50	0.40
WR93		11.7	0.05	7	2.3	9.1	9	5	2.60	28.8	1.46	<1	238	0.2	0.14	1.78
WR94		10.3	0.06	<2	4.1	9.8	<5	19	2.65	123.5	2.11	1	135.5	0.3	0.23	3.29
WR95		4.4	0.35	<2	3.3	8.5	83	5	1.69	26.4	2.52	1	191.5	0.2	0.57	0.41
WR96		2.6	0.34	<2	1.7	5.3	145	<5	1.01	17.7	1.79	<1	128.5	0.1	0.46	0.21
WR97		19.6	0.04	<2	2.1	16.0	21	8	4.57	39.0	2.34	<1	337	0.1	0.18	3.57
WR98		17.8	0.04	<2	2.2	13.4	10	29	3.89	67.4	1.99	<1	124.0	0.2	0.16	2.37
WR99		3.7	0.31	<2	2.8	7.5	81	<5	1.55	7.9	2.26	<1	112.0	0.2	0.52	0.32
WR100		2.5	0.27	<2	1.6	5.2	147	<5	0.99	7.2	1.67	<1	110.0	0.1	0.39	0.19
WR101		4.0	0.39	<2	3.1	7.5	91	11	1.53	55.5	2.38	1	137.0	0.2	0.58	0.37
WR102		7.1	0.33	<2	2.3	9.8	95	5	2.20	54.5	2.64	1	213	0.1	0.52	0.94
WR103		3.6	0.40	9	1.8	6.9	112	<5	1.35	9.5	2.15	<1	103.5	0.1	0.58	0.30
WR104		9.5	0.05	2	3.0	8.7	<5	14	2.29	92.9	1.55	1	211	0.3	0.16	2.13
WR105		12.6	0.04	<2	2.2	10.3	<5	5	2.96	119.5	1.65	<1	432	0.2	0.16	1.92
WR106		2.5	0.33	<2	1.6	5.3	154	<5	1.08	78.7	1.74	<1	205	0.1	0.47	0.23
WR107		9.0	0.05	<2	2.6	8.2	<5	<5	2.26	83.7	1.46	<1	275	0.2	0.16	1.81
WR108		13.1	<0.01	<2	4.7	10.9	<5	23	2.80	108.0	1.65	<1	297	1.2	0.10	2.27
WR109		2.9	0.18	<2	1.5	4.5	121	<5	0.78	4.8	1.33	<1	192.5	<0.1	0.32	0.14
WR110		2.7	0.18	<2	1.5	4.6	120	<5	0.74	9.7	1.26	<1	156.0	<0.1	0.32	0.20



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 3 - C  
 Total # Pages: 4 (A - D)  
 Finalized Date: 30-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098216**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	
		Tl	Tm	U	V	W	Y	Yb	Zn	Zr	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%
WR71		<0.5	0.34	0.16	292	1	18.4	2.06	106	53	50.4	14.05	13.45	10.95	6.13	2.23
WR72		<0.5	0.35	0.09	217	1	18.4	2.06	90	53	49.5	19.70	9.95	10.80	3.59	3.29
WR73		<0.5	0.38	0.11	226	1	19.8	2.22	101	55	49.6	19.65	10.45	13.25	3.00	2.03
WR74		<0.5	0.52	0.10	364	1	26.8	3.08	129	69	51.7	13.55	14.45	9.98	5.08	2.68
WR75		<0.5	0.25	0.06	255	1	14.4	1.55	86	35	49.7	14.25	12.30	12.40	7.33	1.91
WR76		<0.5	0.04	1.43	12	2	4.4	0.34	52	61	77.2	12.05	1.11	1.20	0.29	4.53
WR77		<0.5	0.05	0.69	35	2	3.3	0.24	44	112	73.0	16.50	1.46	0.11	0.17	0.73
WR78		<0.5	0.03	0.58	10	2	2.1	0.18	27	91	75.7	12.95	0.68	1.61	0.13	5.12
WR79		<0.5	0.41	0.14	223	1	17.3	1.86	101	51	48.3	18.10	10.90	9.82	4.94	3.44
WR80		<0.5	0.32	0.14	238	1	16.1	1.87	90	37	48.3	15.05	12.15	9.38	8.34	3.04
WR81		<0.5	0.49	0.17	348	1	26.0	3.00	128	69	50.5	13.75	14.80	10.50	5.46	2.51
WR82		<0.5	0.32	0.07	230	1	17.4	1.97	91	47	47.5	17.85	11.80	10.40	5.34	2.98
WR83		<0.5	0.33	0.08	206	1	17.9	1.98	83	54	47.8	19.60	9.89	11.75	4.18	2.24
WR84		<0.5	0.43	0.11	286	1	22.6	2.41	121	63	51.9	16.15	11.75	9.38	3.92	3.26
WR85		<0.5	0.04	0.58	16	1	3.0	0.29	29	79	76.0	12.90	0.89	2.13	0.23	4.63
WR86		<0.5	0.03	0.56	15	1	2.6	0.24	116	74	79.7	11.40	0.82	2.15	0.41	3.60
WR87		<0.5	0.16	0.98	107	2	9.9	0.94	87	111	61.9	14.95	5.71	4.72	3.18	4.68
WR88		<0.5	0.15	1.20	81	1	9.5	0.91	73	114	64.5	15.15	4.55	4.49	2.45	4.27
WR89		<0.5	0.28	0.25	255	1	15.7	1.65	90	45	49.4	14.05	12.25	11.25	7.55	2.65
WR90		<0.5	0.29	0.06	262	1	15.3	1.77	87	39	49.1	14.30	12.40	10.90	7.83	2.50
WR91		<0.5	0.44	0.10	328	2	25.8	2.84	126	66	47.8	14.55	15.25	9.75	6.09	2.82
WR92		<0.5	0.35	0.11	216	1	18.7	2.06	89	54	49.0	18.95	10.10	10.35	4.01	3.48
WR93		<0.5	0.07	0.64	18	2	3.2	0.29	38	97	75.6	14.15	0.88	1.68	0.22	3.69
WR94		<0.5	0.06	1.47	5	2	5.0	0.39	55	43	74.4	13.80	1.24	1.45	0.97	0.96
WR95		<0.5	0.36	0.14	317	1	20.1	2.25	128	62	49.4	13.70	14.15	11.85	5.10	2.42
WR96		<0.5	0.35	0.08	254	1	18.4	2.12	96	41	50.1	16.10	11.25	10.65	5.31	2.60
WR97		<0.5	0.04	0.60	27	1	3.0	0.26	76	99	75.1	14.35	0.97	1.44	0.46	3.56
WR98		<0.5	0.04	0.67	26	2	2.6	0.26	145	122	69.5	17.60	2.36	0.15	0.52	0.42
WR99		<0.5	0.33	0.08	298	1	18.9	1.99	107	56	49.7	13.60	14.35	9.97	6.92	2.61
WR100		<0.5	0.27	0.06	258	1	15.4	1.67	89	39	51.5	15.65	11.50	12.45	5.56	2.12
WR101		<0.5	0.42	1.34	308	1	22.4	2.41	131	63	50.4	16.30	11.95	9.84	3.93	4.09
WR102		<0.5	0.32	0.39	265	1	18.8	2.05	88	57	50.8	13.80	12.60	9.76	6.83	3.12
WR103		<0.5	0.41	0.09	287	1	22.2	2.51	109	49	49.6	14.20	16.55	10.10	4.23	2.29
WR104		<0.5	0.08	1.28	14	1	3.8	0.32	35	69	75.7	13.15	0.57	1.12	0.13	3.26
WR105		<0.5	0.03	0.85	21	1	2.9	0.28	13	94	73.2	15.20	0.60	1.68	0.21	4.71
WR106		<0.5	0.32	0.06	244	1	17.5	2.09	94	42	46.1	15.85	12.65	11.10	6.73	2.63
WR107		<0.5	0.05	0.96	12	1	3.7	0.33	29	60	75.6	12.20	1.00	1.65	0.24	3.80
WR108		<0.5	0.04	0.91	27	<1	4.2	0.16	39	91	72.9	14.75	1.01	2.08	0.45	2.73
WR109		<0.5	0.23	<0.05	254	<1	14.8	1.44	83	39	49.0	14.10	12.35	10.85	7.63	2.80
WR110		<0.5	0.24	<0.05	252	<1	15.1	1.36	78	34	49.5	13.95	12.00	10.80	7.27	2.40



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 3 - D  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
		K2O %	Cr2O3 %	TiO2 %	MnO %	P2O5 %	SrO %	BaO %	LOI %	Total %	Au ppm
WR71		0.56	0.02	0.99	0.27	0.08	0.02	0.01	0.50	99.7	
WR72		0.24	0.02	0.90	0.18	0.07	0.02	<0.01	1.00	99.3	
WR73		0.49	0.02	0.91	0.19	0.08	0.02	0.01	0.70	100.5	
WR74		0.38	0.02	1.18	0.28	0.10	0.02	0.01	0.20	99.6	
WR75		0.18	0.04	0.70	0.21	0.06	0.02	<0.01	1.08	100.0	
WR76		2.01	<0.01	0.13	0.02	0.01	0.03	0.06	0.50	99.1	<0.001
WR77		3.39	<0.01	0.26	0.01	0.01	0.02	0.04	2.48	98.2	<0.001
WR78		1.49	<0.01	0.20	0.01	0.03	0.07	0.07	0.70	98.8	0.001
WR79		1.24	0.02	0.86	0.17	0.07	0.06	0.01	1.40	99.3	<0.001
WR80		0.84	0.04	0.72	0.20	0.04	0.03	0.01	0.89	99.0	<0.001
WR81		0.40	0.02	1.13	0.27	0.13	0.03	0.01	0.50	100.0	
WR82		0.70	0.03	0.95	0.17	0.07	0.02	0.01	1.60	99.4	
WR83		1.23	0.02	0.85	0.17	0.07	0.03	0.02	2.10	100.0	
WR84		0.61	0.04	1.07	0.21	0.08	0.03	0.01	1.70	100.0	
WR85		1.42	<0.01	0.18	0.01	0.05	0.06	0.06	0.30	98.9	0.001
WR86		1.24	<0.01	0.17	0.02	0.03	0.05	0.06	0.88	100.5	<0.001
WR87		1.71	0.01	0.57	0.08	0.17	0.09	0.09	1.07	98.9	
WR88		2.05	0.01	0.45	0.07	0.14	0.11	0.09	-0.30	98.0	
WR89		0.75	0.04	0.82	0.20	0.06	0.03	0.01	1.05	100.0	
WR90		0.57	0.03	0.74	0.20	0.05	0.02	0.01	0.80	99.5	
WR91		0.31	0.02	1.13	0.23	0.09	0.02	<0.01	0.79	98.9	
WR92		0.62	0.02	0.88	0.19	0.07	0.03	0.02	0.70	98.4	
WR93		1.62	<0.01	0.21	0.01	0.03	0.03	0.05	0.10	98.3	<0.001
WR94		4.71	<0.01	0.07	0.04	0.01	0.02	0.12	1.19	99.0	<0.001
WR95		0.60	0.01	1.05	0.27	0.08	0.02	0.01	0.00	98.7	
WR96		0.56	0.04	0.76	0.21	0.04	0.02	0.02	0.80	98.5	
WR97		2.45	<0.01	0.26	0.01	0.03	0.04	0.05	1.20	99.9	
WR98		2.95	<0.01	0.28	0.01	0.06	0.02	0.06	4.60	98.5	0.002
WR99		0.37	0.01	1.02	0.22	0.07	0.01	0.01	0.50	99.4	
WR100		0.23	0.04	0.74	0.25	0.05	0.01	0.01	0.10	100.0	
WR101		0.90	0.03	1.06	0.25	0.08	0.02	0.04	1.60	100.5	
WR102		0.80	0.04	0.82	0.19	0.12	0.03	0.03	0.70	99.6	
WR103		0.43	0.04	0.87	0.44	0.06	0.01	0.01	1.09	99.9	
WR104		5.23	<0.01	0.15	0.01	0.04	0.02	0.10	0.40	99.9	0.004
WR105		2.11	0.01	0.23	0.02	<0.01	0.05	0.07	0.69	98.8	<0.001
WR106		1.27	0.05	0.75	0.20	0.07	0.02	0.05	1.79	99.3	
WR107		2.67	0.02	0.14	0.02	0.03	0.03	0.08	0.69	98.2	
WR108		2.24	0.01	0.21	0.02	0.02	0.03	0.05	1.59	98.1	<0.001
WR109		0.29	0.04	0.67	0.21	0.03	0.02	<0.01	0.60	98.6	
WR110		0.30	0.04	0.67	0.20	0.03	0.02	0.01	1.00	98.2	



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 4 - A  
 Total # Pages: 4 (A - D)  
 Finalized Date: 30-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098216**

Sample Description	Method Analyte Units LOR	WEI-21	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
		Recvd Wt. kg	Ag ppm	Ba ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Ga ppm	Gd ppm	Hf ppm	Ho ppm
		0.02	1	0.5	0.5	0.5	10	0.01	5	0.05	0.03	0.03	0.1	0.05	0.2	0.01
WR111		0.52	<1	62.1	6.1	51.4	290	0.68	94	2.74	1.83	0.45	14.8	2.05	1.4	0.54
WR112		0.38	<1	104.5	8.3	49.2	270	0.20	92	3.18	2.22	0.59	16.3	2.52	1.6	0.67
WR113		0.42	<1	639	20.7	2.7	160	2.83	9	0.83	0.48	0.18	19.7	1.36	2.6	0.11
WR114		0.46	<1	668	18.3	1.6	30	1.20	7	0.44	0.14	0.14	15.7	1.02	2.1	0.01
WR115		0.51	<1	62.0	12.3	45.7	30	1.08	57	3.80	2.46	0.81	18.2	3.17	1.9	0.74
WR116		0.38	<1	302	68.7	7.7	40	11.70	24	1.34	0.65	0.80	19.2	3.33	3.7	0.16
WR117		0.37	<1	168.5	136.5	7.7	70	8.47	52	1.79	0.89	1.05	18.3	5.72	3.4	0.27
WR118		0.54	<1	356	37.6	7.2	40	3.31	21	0.93	0.43	0.46	16.6	1.85	2.7	0.10
WR119		0.47	<1	214	59.0	8.5	50	14.70	14	1.54	0.77	0.58	22.7	3.20	4.3	0.21
WR120		0.50	<1	580	50.7	12.5	60	3.80	32	1.40	0.63	0.65	20.9	2.54	3.4	0.20
WR121		0.41	<1	382	48.0	11.1	60	14.35	37	1.13	0.61	0.60	18.6	2.55	3.0	0.16
WR122		0.59	<1	545	7.7	57.4	290	35.7	82	3.01	1.90	0.55	16.3	2.27	1.3	0.58



**ALS Chemex**  
**EXCELLENCE IN ANALYTICAL CHEMISTRY**  
 ALS Canada Ltd.

2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
 1801-180 DUNDAS ST. W.  
 TORONTO ON M5G 1Z8

Page: 4 - B  
 Total # Pages: 4 (A - D)  
 Finalized Date: 30-SEP-2009  
 Account: METCOR

Project: PYTHON

**CERTIFICATE OF ANALYSIS TB09098216**

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	
		La	Lu	Mo	Nb	Nd	Ni	Pb	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		0.5	0.01	2	0.2	0.1	5	5	0.03	0.2	0.03	1	0.1	0.1	0.05	
WR111		3.2	0.24	<2	1.3	4.6	148	5	0.73	10.1	1.36	<1	112.0	<0.1	0.34	0.13
WR112		3.6	0.31	<2	1.7	6.2	95	5	1.04	8.6	1.85	<1	157.5	0.1	0.42	0.20
WR113		10.1	0.03	<2	2.5	9.1	<5	6	2.23	76.9	1.50	<1	373	0.1	0.15	2.29
WR114		9.5	<0.01	<2	1.8	7.7	6	7	1.97	42.9	1.24	<1	314	0.1	0.08	1.80
WR115		5.3	0.30	4	2.9	8.9	31	<5	1.67	15.8	2.53	<1	204	0.1	0.51	0.33
WR116		34.1	0.04	<2	3.4	28.3	25	5	7.75	146.0	4.09	<1	305	0.2	0.28	5.95
WR117		67.4	0.08	<2	3.3	57.5	17	<5	15.75	140.5	7.93	<1	182.5	0.2	0.46	9.65
WR118		19.5	0.03	<2	2.7	15.8	16	53	4.11	50.6	2.40	<1	216	0.2	0.17	2.38
WR119		28.3	0.08	<2	9.7	26.0	13	11	7.02	230	3.80	1	104.0	0.6	0.27	4.38
WR120		25.1	0.05	<2	3.5	21.7	32	11	5.82	51.5	3.24	<1	415	0.2	0.24	3.91
WR121		25.0	0.05	16	3.2	20.8	36	<5	5.48	108.0	3.01	1	388	0.2	0.24	2.95
WR122		3.2	0.25	<2	2.1	5.6	202	<5	0.92	41.3	1.64	<1	242	0.1	0.39	0.17



# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 4 - C  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	
		Tl	Tm	U	V	W	Y	Yb	Zn	Zr	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O
		ppm 0.5	ppm 0.01	ppm 0.05	ppm 5	ppm 1	ppm 0.5	ppm 0.03	ppm 5	ppm 2	% 0.01	% 0.01	% 0.01	% 0.01	% 0.01	% 0.01
WR111		<0.5	0.27	<0.05	234	2	17.1	1.78	82	44	48.0	15.25	11.95	10.45	7.83	3.21
WR112		<0.5	0.35	<0.05	297	1	20.8	2.16	100	50	50.0	14.05	12.50	10.05	5.53	3.70
WR113		<0.5	0.09	0.87	27	<1	5.4	0.45	41	70	70.0	13.95	3.03	1.80	0.81	4.70
WR114		<0.5	0.06	0.60	21	<1	3.1	0.12	14	60	77.6	11.45	1.05	1.23	0.25	4.58
WR115		<0.5	0.38	<0.05	324	<1	22.4	2.26	82	63	50.7	13.80	14.05	9.36	4.57	3.17
WR116		<0.5	0.06	1.42	53	<1	7.6	0.46	58	131	67.1	14.30	3.19	3.07	1.21	2.94
WR117		<0.5	0.11	1.90	55	<1	9.6	0.66	30	122	64.5	14.40	2.45	4.31	1.23	3.52
WR118		<0.5	0.06	0.82	47	<1	5.4	0.32	786	103	74.6	12.25	2.61	1.36	0.57	3.63
WR119		0.5	0.09	0.98	69	<1	11.6	0.66	73	161	62.6	14.65	3.59	4.29	1.20	2.62
WR120		<0.5	0.10	0.89	69	<1	8.0	0.60	105	120	65.6	15.20	3.88	3.26	1.42	3.40
WR121		<0.5	0.07	0.66	73	1	7.3	0.43	80	115	68.1	13.95	3.56	2.60	1.34	3.48
WR122		<0.5	0.33	0.13	237	1	18.2	1.81	98	44	49.2	15.15	10.80	9.96	7.31	3.22





# ALS Chemex

**EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

2103 Dollarton Hwy

North Vancouver BC V7H 0A7

Phone: 604 984 0221 Fax: 604 984 0218 www.alschemex.com

To: METALCORP LIMITED  
1801-180 DUNDAS ST. W.  
TORONTO ON M5G 1Z8

Page: 4 - D  
Total # Pages: 4 (A - D)  
Finalized Date: 30-SEP-2009  
Account: METCOR

Project: PYTHON

## CERTIFICATE OF ANALYSIS TB09098216

Sample Description	Method Analyte Units LOR	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06	Au-ICP21
		K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	LOI	Total	Au
		%	%	%	%	%	%	%	%	%	ppm
WR111		0.60	0.04	0.68	0.19	0.03	0.01	0.01	1.50	99.8	
WR112		0.47	0.04	0.85	0.29	0.05	0.02	0.01	0.60	98.2	
WR113		2.01	0.03	0.15	0.08	<0.01	0.04	0.07	1.39	98.1	<0.001
WR114		1.94	0.01	0.13	0.02	0.06	0.03	0.08	0.69	99.1	0.059
WR115		0.43	0.01	1.14	0.20	0.05	0.02	0.01	0.59	98.1	
WR116		2.52	0.01	0.32	0.05	0.09	0.03	0.03	3.97	98.8	0.001
WR117		2.29	0.01	0.36	0.05	0.20	0.02	0.02	4.75	98.1	0.001
WR118		1.78	0.01	0.30	0.05	0.05	0.02	0.04	0.80	98.1	0.003
WR119		3.02	0.01	0.38	0.07	0.15	0.01	0.02	5.48	98.1	<0.001
WR120		2.00	0.01	0.38	0.07	0.09	0.05	0.07	2.68	98.1	<0.001
WR121		2.19	0.01	0.36	0.06	0.14	0.04	0.04	2.99	98.9	<0.001
WR122		1.06	0.05	0.79	0.29	0.04	0.02	0.06	1.20	99.2	<0.001