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ASSESSMENT REPORT

describing

GRAVITY SURVEYS AND LITHOGEOCHEMICAL SAMPLING

at the

MOR PROPERTY

MOR	1-4	YB89771-YB89774
	5-8	YB91626-YB91629
	9-12	YB91820-YB91823
	13-52	YB92029-YB92068
	53-106	YC71599-YC71652
	107-224	YC72301-YC72418
	225-290	YC73523-YC73588

NTS 105C/01
Latitude 60°06'N; Longitude 132°05'W

in the

Watson Lake Mining District,
Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

TARSIS RESOURCES

by

W A Wengzynowski, P Eng.

March 2010

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INTRODUCTION

The MOR property covers a volcanic hosted massive sulphide (VHMS) prospect located in southern Yukon. Tarsis Resources owns the property 100%

This report describes the results of ground gravity surveys across the Discovery and SD Zones plus select lithogeochemical analyses of volcanic sequences plus associated alteration and mineralization from 2007/08 diamond drill core All work was conducted with daily helicopter support from Teslin and/or a staging area located at the Morley River, 8 km south of the property. The program was completed between September 19-27 Exploration was funded by Tarsis and managed by Archer, Cathro & Associates (1981) Limited The author participated in and/or supervised the work program The author's Statement of Qualifications appears in Appendix I.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The MOR property consists of 290 contiguous mineral claims located in southern Yukon on NTS map sheets 105C/01 at latitude 60°06'N and longitude 132°05'W (Figure 1) The claims are registered with the Watson Lake Mining Recorder in the name of Tarsis Capital Corp. The locations of individual claims are shown on Figure 2 while claim registration data are listed below

Claim Name	Grant Number	Expiry Date *
MOR 1-4	YB89771-YB89774	April 29, 2024
5-8	YB91626-YB91629	April 29, 2021
9-12	YB91820-YB91823	April 29, 2021
13-52	YB92029-YB92068	April 29, 2022
53-106	YC71599-YC71652	April 29, 2017
107-224	YC72301-YC72418	April 29, 2013
225-290	YC73523-YC73588	April 29, 2014

*Expiry dates include 2009 work which has been filed for assessment credit but not yet accepted.

The MOR property is located 35 km east of Teslin, a village that lies alongside the Alaska Highway approximately 183 km by road southeast of Whitehorse In 2009, the mobilization to and from the property and daily crew moves were performed with a Bell 206B operated by Capital Helicopters Ltd from Teslin and/or a staging area at the Morley River camp.

HISTORY

In 1980 Regional Resources Limited conducted regional scale stream sediment sampling in the MOR area and discovered a small zone of significant base and precious metal values in soil as well as a subcrop of gossanous schist (Discovery Showing), however, no claims were staked at this time. In 1997 Fairfield Minerals Ltd. revisited the area and staked four claims (MOR 1- 4) to cover the Discovery Showing. Exploration consisted of hand pitting and trenching followed

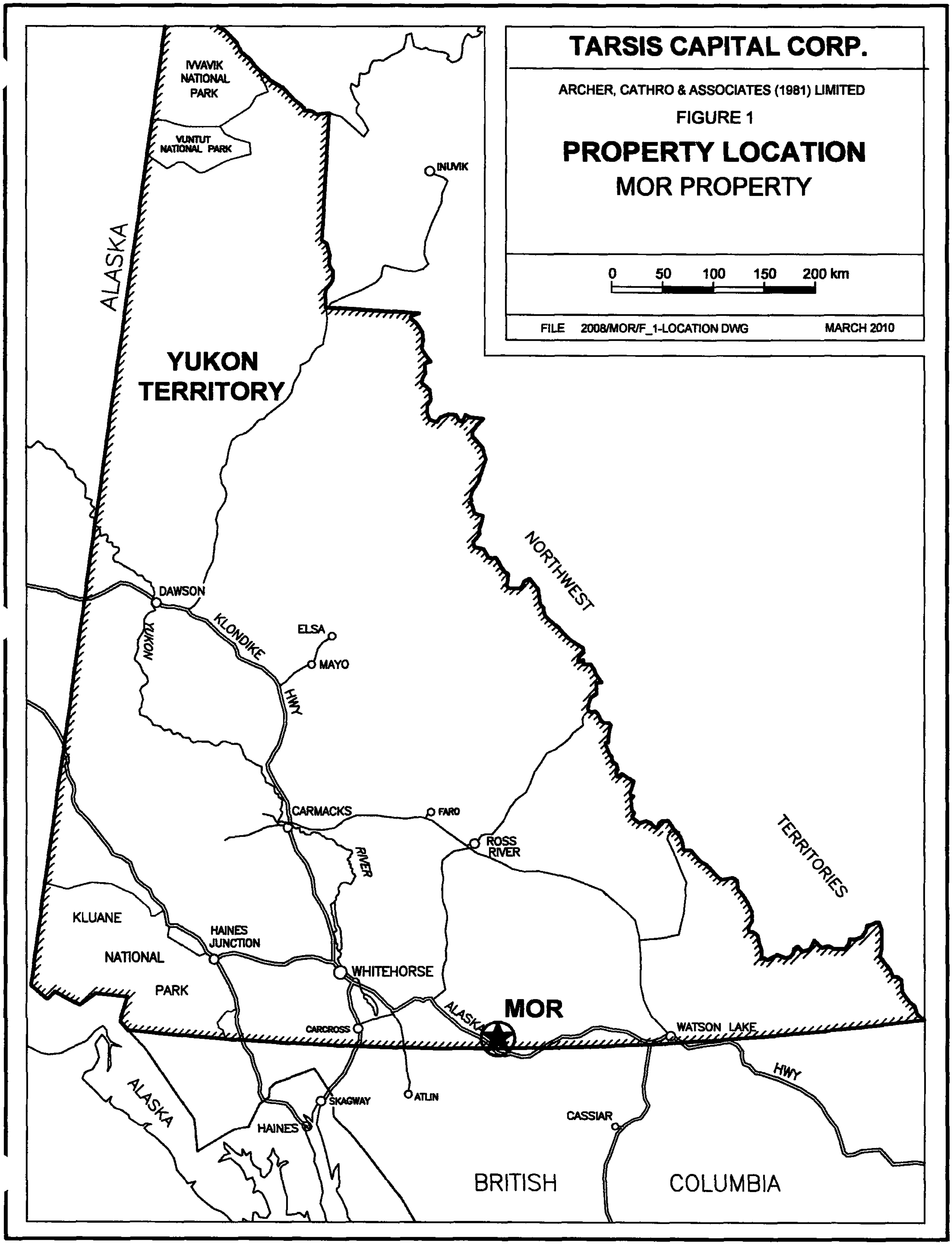

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FIGURE 1

PROPERTY LOCATION

MOR PROPERTY

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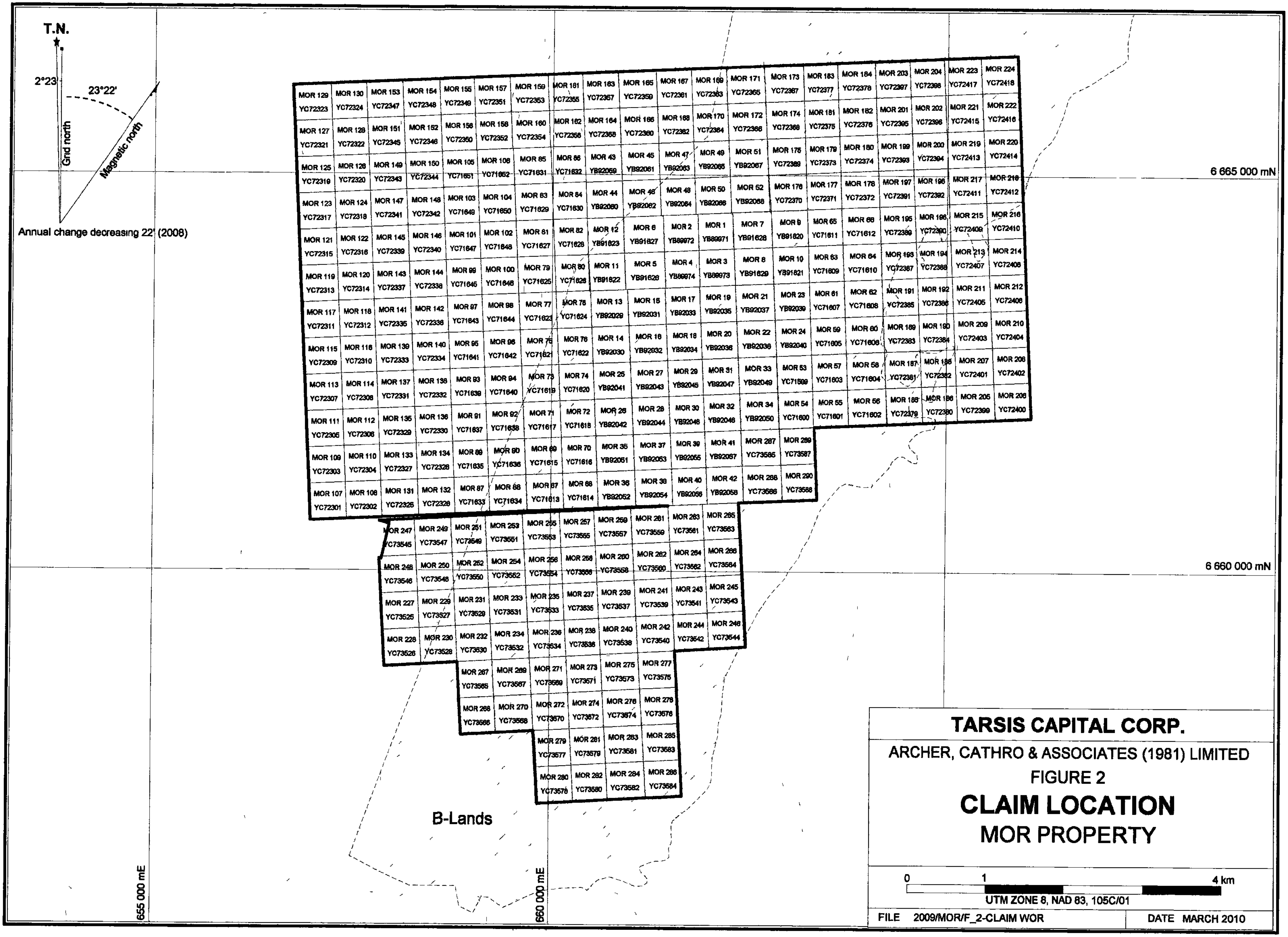

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FIGURE 2

CLAIM LOCATION
MOR PROPERTY

FILE 2009/MOR/F_2-CLAIM WOR

DATE MARCH 2010

by reconnaissance scale prospecting and silt, rock and soil sampling across the entire property. In 1998 Fairfield staked an additional 8 claims (MOR 5-12) and carried out grid soil sampling, and ground magnetic and VLF-EM geophysical surveys. Limited blast trenching, prospecting and reconnaissance rock sampling were also conducted in the area of the Discovery Showing

In 1999 the property was optioned to Brett Resources Inc. who staked an additional 40 claims (MOR 13-52). Exploration consisted of geochemical sampling (22 line km/442 samples), property wide geological mapping at 1.10,000 scale, and detailed geological mapping (1:1500) in areas of known mineralization. In December 1999 Brett relinquished its option due to a corporate merger and shift in exploration focus.

Field work by Fairfield in 2000 consisted of additional grid soil sampling and ground magnetic and VLF-EM surveys, in conjunction with detailed grid-based soil profile and bedrock sampling by portable power augur. The following summer, geochemically anomalous areas were followed up by a series of in-fill auger sampling lines and prospecting. A total of 1223 samples were collected for multi-element analysis. This work identified a linear east trending band of anomalous copper, lead and zinc-in-soil up to 2000 m long centered on the Discovery Showing.

In 2002 Fairfield was amalgamated with Almaden Resources Corporation to form Almaden Minerals Ltd. and the MOR mineral title was subsequently transferred.

In 2003 Kobex Resources Ltd. acquired a 60 % interest in the MOR property and in 2004 conducted a two phase work program, consisting of an induced polarization (IP) geophysical survey followed by a two hole diamond drilling program. Results confirmed the presence of sub economic VMS style mineralization (Discovery Horizon), however, Kobex elected to return the property to Almaden in September 2005.

Tarsis purchased the property from Almaden in April 2007 and proceeded with a four hole drill program, coarse wide spaced soil sampling and 285 line km of helicopter borne Versatile Time Domain Electromagnetic surveys Diamond drilling was focused at the Discovery Horizon following up the intersections reported by Kobex and confirming the geometry of the system. The drilling encountered gently dipping massive sulphide in two to three stacked horizons beneath the near surface historical intersections and traced the mineralization along strike for 300 m. VTEM surveys identified a series of intermittent conductors coincident with the projected surface trace of the Discovery Horizon in the northern part of the property traceable for over 5 km. Another isolated but fairly intense anomaly was identified 2 km south of the Discovery Horizon.

In 2008 Tarsis expanded the claim block significantly to cover potential for mineralization higher in the stratigraphic sequence. VTEM surveys were flown to cover the additional claims and soil sampling, mapping, prospecting, diamond drilling and orientation style ground gravity surveys were conducted Ground supported exploration focused largely on extending the known mineralization along strike to the east and downdip at the Discovery Horizon. This exploration returned mixed results and suggested the sulphide horizons are locally folded/displaced and/or thinning distally from the vent. Cursory gravity surveys identified a 1 mg anomaly directly overtop the thickest accumulation of sulphide cut in 2007.

Work in 2008 also discovered a new area of mineralization 2 km southwest of the Discovery Zone referred to as the SD Zone. At this locale, semi-massive sulphide is hosted in strongly chlorite altered stacked or fold repeated volcaniclastic units. Two diamond drill holes spaced approximately 200 m apart encountered narrow intervals of sulphide bearing volcaniclastic tuff Cursory gravity surveys across the mineralized zone identified a localized 1 mg anomaly inferred to represent potential mineralization in a lower stratigraphic sequence not tested

GEOMORPHOLOGY

The property lies along the northwestern flank of the Cassiar Mountains. It is mostly situated between Mount Morley to west and the Morley River Valley to the east and encompasses two moderately steep north trending ridges that are linked by a narrow upland valley. Local topography is subdued with local elevations ranging from 900 m in the valley bottom to 1400 m atop the westernmost ridge. The best exposures are on glacially scoured hummocks along the ridge crest and on oversteepened hillsides where soil has been washed away.

A small, unnamed lake surrounded by marshland is located in the centre of the property. This lake is fed by tributaries of Hassell Lake from the north and by numerous small creeks and streams that drain from the upper ridge crests that surround it. Creeks draining from the ridge on the eastern half of the property form tributaries of the Morley River which is part of the Yukon River watershed.

Much of the claim block is well vegetated with spruce, balsam, pine, alder, and tamarack on hillsides with willow occurring along creeks and in marshes. Treeline in the vicinity of the MOR property occurs at 1450 m.

GEOLOGY

Regional Geology

The property lies within a belt of Yukon-Tanana Terrane rocks on the southwest side of the Tintina Fault Zone (Figure 3) Yukon-Tanana Terrane rocks underlie much of west-central Yukon, including a displaced block immediately northeast of the Tintina Fault Zone referred to as the Finlayson Lake District, which hosts a number of VHMS deposits and prospects.

The most recent classification of the Yukon-Tanana Terrane southwest of the Tintina Fault Zone near the B C.-Yukon border was addressed in a special paper published by the Geological Association of Canada, 2006. This portion of the cordillera is segregated into three belts referred to as the eastern, central and western belts (Roots et al., 2006) and all three belts comprise stratigraphy associated with Permian and older sedimentation, arc related volcanism and coeval intrusions. Stratigraphy within all belts has been intruded by Eocene to early Jurassic intrusions.

The western belt hosts the MOR property and is bound by the strike-slip Teslin Fault to the west and an unnamed fault to the northeast (Figure 4). Stratigraphic units belong mostly to the Big Salmon Complex and comprise bimodal arc-volcanic rocks, phyllite, siliceous metasedimentary

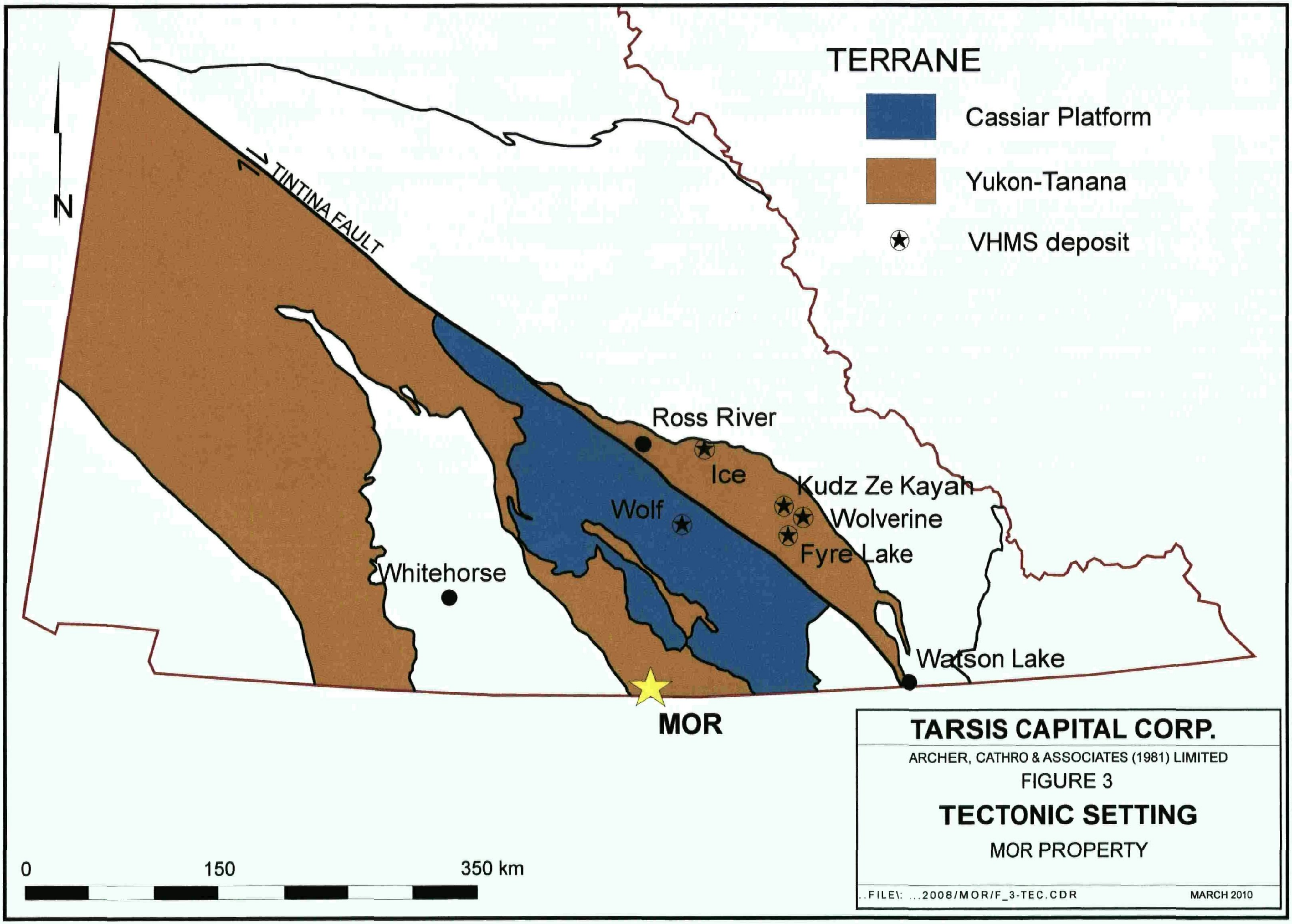

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FIGURE 3

TECTONIC SETTING

MOR PROPERTY

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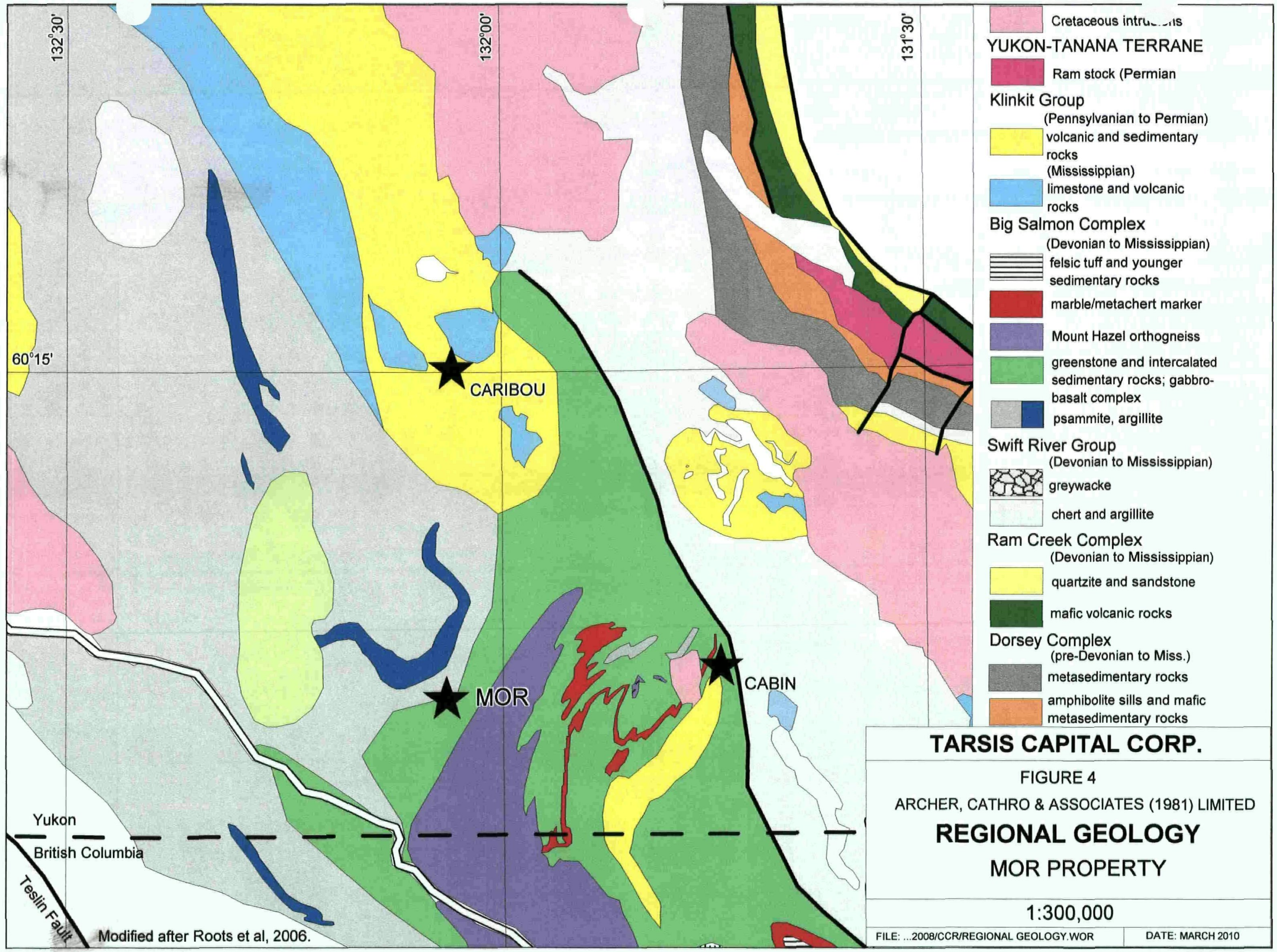

Modified after Roots et al, 2006.

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FIGURE 4

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REGIONAL GEOLOGY

MOR PROPERTY

1:300,000

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DATE: MARCH 2010

rocks and minor carbonate units Coeval orthogneiss is common throughout the sequence and ranges in age from late Devonian to Jurassic. The upper portion of the volcanic sequence of the Big Salmon Complex is marked by a rose coloured manganiferous metachert believed to represent an exhalative volcanic pulse (Mihalynuk et al, 2006). The metavolcanic rocks of the Big Salmon Complex are considered age equivalent to the Finlayson Assemblage northeast of the Tintina Fault Zone (Colpron et al, 2006). The magnetic cycles associated with these rocks span upper Devonian to mid Mississippian and are age equivalent to the Finlayson and Wolverine Magmatic Cycles (Figure 5)

Klinkit Group unconformably overlies stratigraphy of the Big Salmon Complex. It consists of pale coloured marble and intermediate to mafic tuffs plus volcanic-derived metasedimentary rocks, with lesser volcanic flows, quartz sandstone and interlayered dark siltstone. Volcanic rocks are more abundant near the base of the succession. These sequences were deposited between Middle Mississippian and Permian.

The main lithologies in the vicinity of the MOR property are summarized on the Table I

Table I: Main Lithological Units

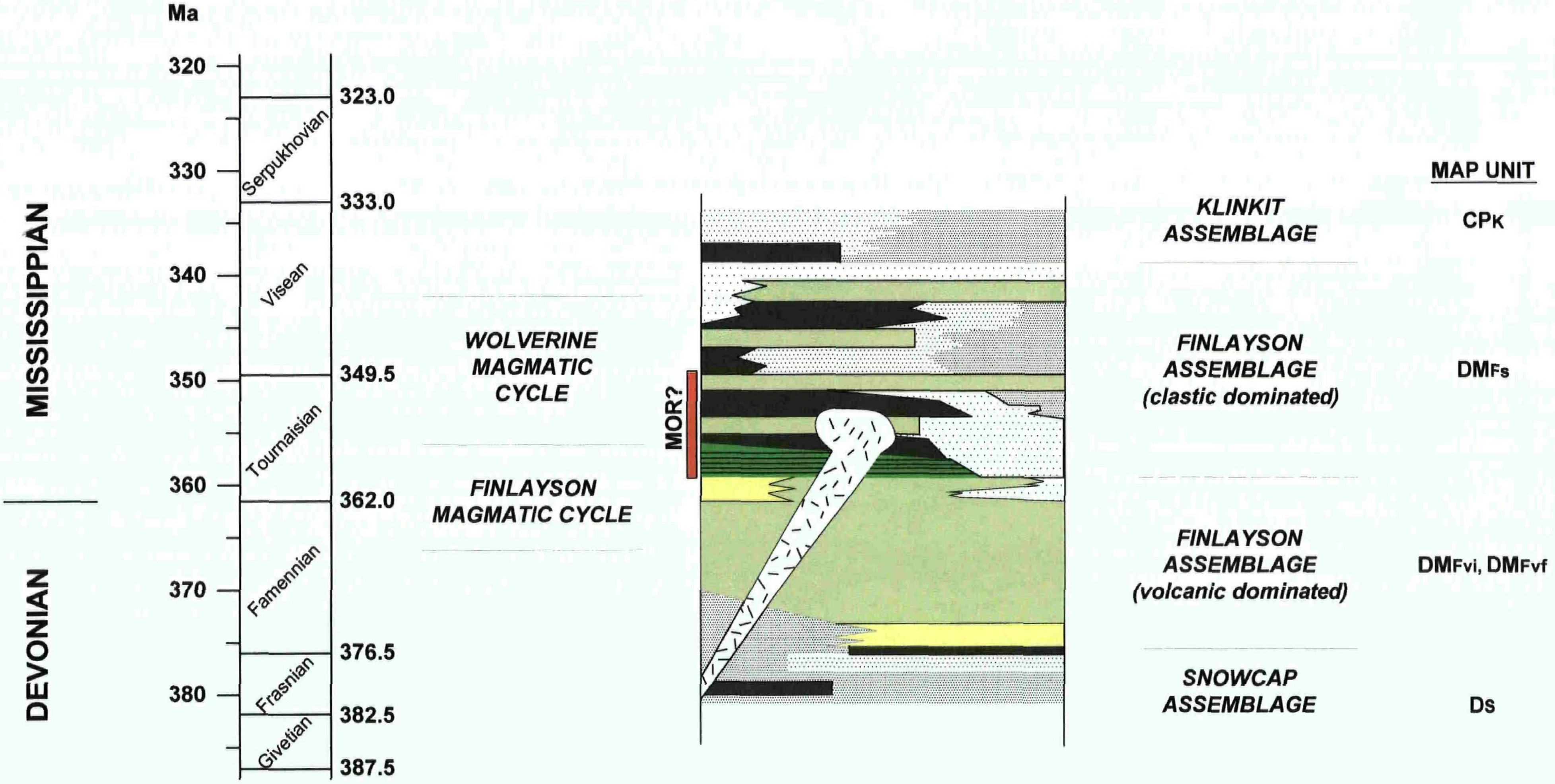
Quarternary Overburden	Glacial till, lateral and terminal moraines and glaciofluvial outwash
Mid-Cretaceous or Early Tertiary Cassiar Suite	Granodiorite and biotite-quartz monzonite porphyry
Pennsylvanian to Permian Klinkit Group	Volcaniclastic and sedimentary rocks
Mississippian Klinkit Group	Limestone and volcanic rocks
Devonian to Mississippian Big Salmon Complex	Mount Hazel orthogneiss
	Greenstone and intercalated sedimentary rocks

(Roots et al, 2006)

Property Geology

The MOR property is mostly underlain by mafic and felsic metavolcaniclastic rocks of the Devono-Mississippian Big Salmon Complex (Figure 6). Much of the stratigraphic descriptions below are based on previous authors (Ritcey and Balon, 1998) descriptions plus traverses and drill core inspection by the current author.

The MOR property is underlain by a thick sequence of pale green-grey chlorite±quartz schist of which the protolith is interpreted to be primarily mafic to intermediate volcaniclastic tuff These rocks contain varying amounts of layer parallel quartz and feldspar. Quartzite/chert is observed locally as interbeds within the mafic dominated succession but never sufficiently thick enough to form a mappable unit. All rocks are strongly deformed and have a pervasive schistosity which generally strikes east and dips moderately to the south. The sequence has been significantly thickened by tight high amplitude folds, which are observed in outcrop scale and drill core. Metamorphic grade is middle greenschist facies. This assemblage of dominantly mafic



- ▨ lower to mid Mississippian granite
- ▤ exhalite (manganiferous "crinkle" chert)
- 🟨 felsic volcanic sequence
- 🟩 mafic to intermediate volcanic sequence
- ■ marble
- ⬚ conglomerate
- ▒ quartzite
- ▓ psammite

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FIGURE 5

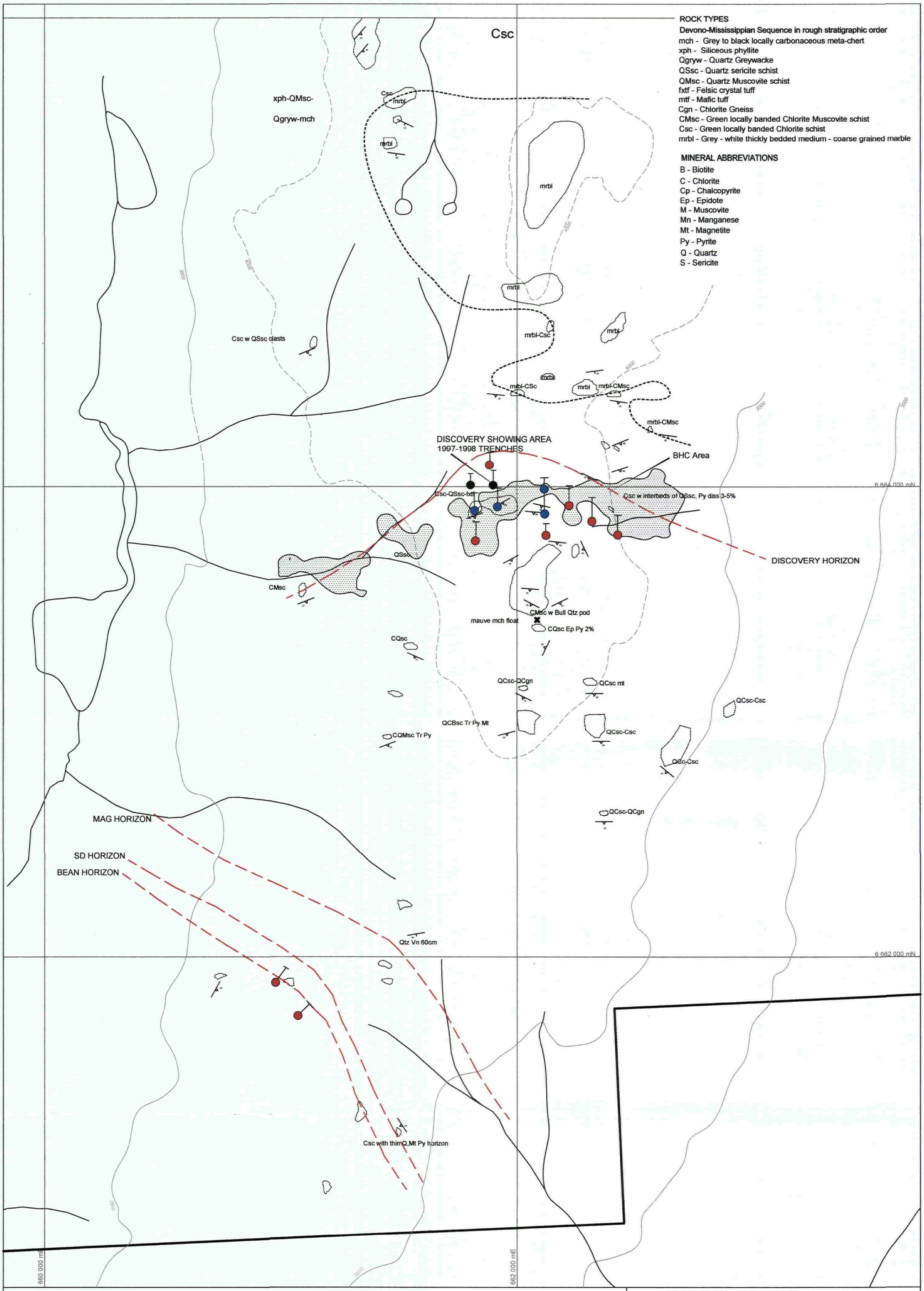
STRATIGRAPHIC COLUMN

YUKON TANANA TERRANE

TESLIN AREA

YUKON AND NORTHERN BRITISH COLUMBIA

after Mihalynuk et al (2000)



ROCK TYPES

Devono-Mississippian Sequence in rough stratigraphic order

mch - Grey to black locally carbonaceous meta-chert
xph - Siliceous phyllite
Qgryw - Quartz Greywacke
QSsc - Quartz sericite schist
QMsc - Quartz Muscovite schist
fxtf - Felsic crystal tuff
mtf - Mafic tuff
Cgn - Chlorite Gneiss
CMsc - Green locally banded Chlorite Muscovite schist
Csc - Green locally banded Chlorite schist
mrbl - Grey - white thickly bedded medium - coarse grained marble

MINERAL ABBREVIATIONS

B - Biotite
C - Chlorite
Cp - Chalcopyrite
Ep - Epidote
M - Muscovite
Mn - Manganese
Mt - Magnetite
Py - Pyrite
Q - Quartz
S - Sericite

Geological Contact
Creek
Elevation Contour (Feet)
Bedrock Exposure
Strike and Dip of Bedding and Foliation
Rock Sample Location
Note: MOR99-R12, R13 not shown as they are outside the map area
Main Soil Geochemical Anomaly
(Cu±Pb±Zn+Ag+Au)

● 2004 Drill hole
● 2007 Drill hole
● 2008 Drill hole

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FIGURE 6

PROPERTY GEOLOGY

MOR PROPERTY

0 0.5 1.0 km

UTM ZONE 8, NAD83
105C01

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DATE: MARCH 2010

metavolcanic rocks is suggested to correlate with the "greenstone sequence" of the Big Salmon Complex mapped by Mihalynuk et al. (1998).
Metavolcaniclastic stratigraphy contains coeval pale grey to white orthogneiss sills that are texturally sucrosic and very difficult to distinguish from some felsic and intermediate volcaniclastic rocks The orthogneiss likely evolved from a fairly fine grained intrusive as the augen are virtually non existent.

Basement stratigraphy in the northeast portion of the property consists of grey-white, thickly bedded, medium- to coarse-grained limestone/marble. This unit is gently southward dipping and appears to be conformable with the overlying volcaniclastic sequence described above. Bedding attitudes strike east and dip south approximately 30°.

A single traverse to the north of the limestone unit (outside the northern MOR claim boundary) revealed a third mappable geological unit comprising a highly variable sequence of grey, siliceous, phyllitic metasediments with interbedded 1-10 m thick, dark grey to black, carbonaceous cherts. This unit strikes to the northeast and dips to the southeast.

An inferred stratigraphic column for the Teslin area is shown on Figure 6 based on observations by Nelson et al., 2000 and postulates the relative position of the MOR mineralization. This theory is partly supported by geochronological results from select MOR drill core in late 2007 which yielded a morphologically simple population of zircon, permissive of magmatic origin yielding Devono-Mississippian dates between 347 and 365 Ma (M. Colpron pers. comm., 2008)

MINERALIZATION

VHMS style mineralization occurs within two parts of the MOR property. The Discovery Horizon is located in the northern part of the claim block and has been the primary focus of exploration. Several new mineralized outcrops were located in 2008 approximately 2 km south of the Discovery Horizon and collectively they are referred to as the SD Zone. Most parts of the property are heavily vegetated with rare outcrop and subcrop exposure.

Mineralization at the Discovery Horizon consists of medium- and coarse-grained massive and semi-massive sulphide comprised dominantly of pyrite. The most common accessory sulphide is chalcopyrite which occurs as interstitial grains and blebby aggregates within a pyrite dominant matrix. Sphalerite and galena are rarely observed as trace disseminations.

Massive and semi-massive sulphide horizons are stacked within an envelope of mafic dominant volcaniclastic stratigraphy that is weakly to moderately mineralized with coarse disseminated pyrite and rare chalcopyrite. Medium- to coarse-grained magnetite is irregularly disseminated throughout the stratigraphic column. Alteration associated with the volcaniclastic rocks is dominated by a combination of pale to medium green chlorite and sericite. Darker chlorite is developed nearer the massive sulphide sections and narrow felsic volcaniclastic pulses coincide with some of the stronger mineralization.

The SD Zone is defined by three or more northwest trending, gently southwest dipping sulphide and/or oxide bearing mafic and felsic metavolcanic horizons in the southern portion of the claim block. Three distinct horizons have been identified within a 250 m thick package of bimodal mafic and felsic metavolcaniclastic stratigraphy and they are referred to as the Mag, SD and Bean Horizons.

Sulphides at the SD and Bean Horizons are dominated by thinly laminated and strongly magnetic pyrrhotite with lower concentrations of blebby interstitial and disseminated chalcopyrite Coarse pyrite is less common than pyrrhotite at the SD Horizon and visa versa at the Bean Horizon. Where pyrite is present it occurs as foliation parallel grains and aggregates. Magnetite is present as fine grained massive bands and medium- to coarse grains. The Mag Horizon is characterized by medium to coarse disseminated magnetite and minor amounts of coarse foliation parallel pyrite.

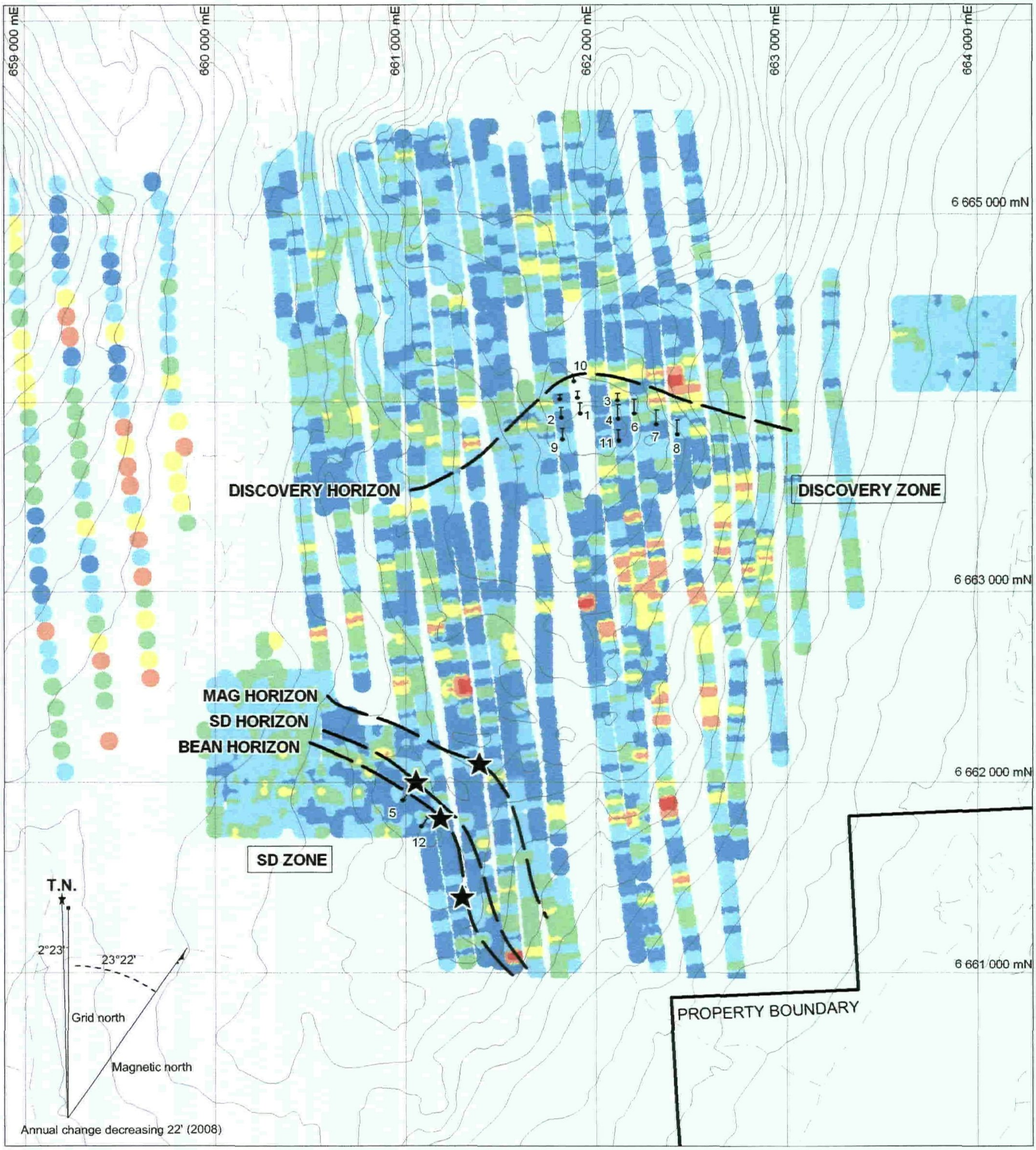
In general, sulphide and magnetite-rich horizons at the SD Zone are developed within locally mafic volcaniclastic units that appear to have been subjected to fairly intense hydrothermal alteration.

SOIL GEOCHEMISTRY

The combined results for all soil geochemical surveys on the property (copper, lead, zinc, silver and gold) are shown on Figures 7 through 11 respectively. They highlight a pronounced, coincident, easterly trending copper-lead-zinc-silver anomaly for roughly 2500 m along the surface trace of the Discovery Horizon. Copper, lead and zinc exhibit the strongest contrast relative to the property background values. Response for all VHMS indicator elements is subdued on the VTEM grid over Anomaly D at the eastern end of the Discovery Horizon but this is not surprising considering the extensive organic and till cover at lower elevations near the Morley River.

Geochemical response in the vicinity of the SD Zone is spotty. The three known mineralized trends best coincide with a number of intermittent copper (up to 721 ppm) and silver (up to 2.6 ppm) point anomalies scattered along a 1500 m strike length. Lead and zinc response in this area is subdued.

Sampling just above the creek valley 1000 m west of the Discovery Horizon and the SD Zone in 2007 identified copper-in-soil geochemical anomalies with peak values up to 448 ppm copper contained within broad zones up 500 m wide and 750 m long. The highest values are centred adjacent to the upland lake in the centre of the claim block and form a roughly northwesterly trend. A secondary cluster of strongly to moderately anomalous response occurs along the slope of the western ridge. The northernmost of the anomalies coincides with the projected surface trace of the Discovery Horizon and also coincides with one of four EM conductors identified by the 2007 airborne VTEM survey. None of these anomalies have been fully delineated but prospecting the area in 2008 discovered pyritic felsic volcaniclastic talus in the vicinity of the VTEM anomaly.



Copper (ppm)

🟥	≥500
🟥	≥200 <500
🟨	≥100 <200
🟩	≥50 <100
🟦	≥25 <50
🟦	≥0 <25

●—| Diamond drill hole

— — — Mineralized horizon

★ Mineralized showing

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FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL COPPER GEOCHEMISTRY

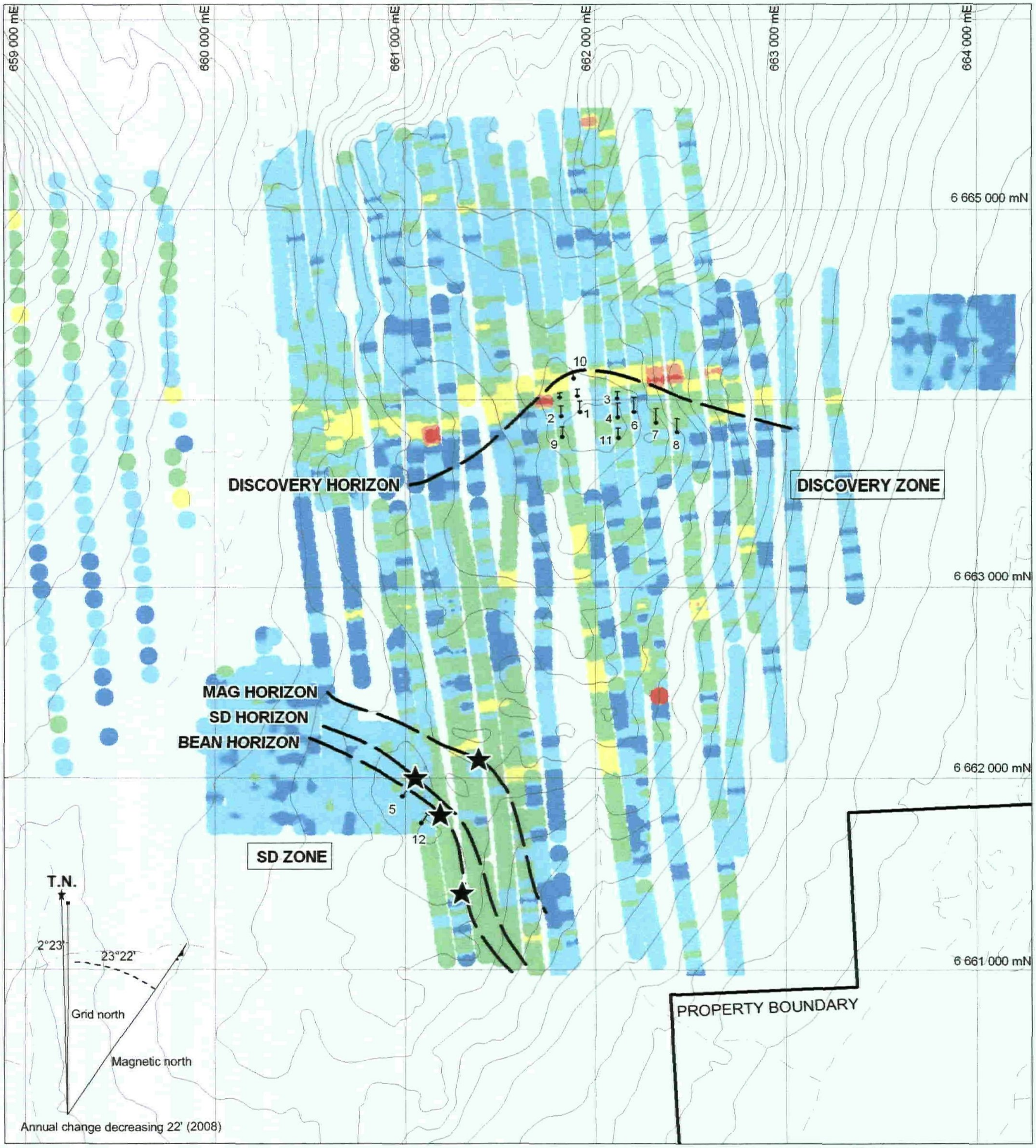
MOR PROPERTY

0 1 km

UTM ZONE 8, NAD 83, 105C/01

FILE: 2009/MOR

DATE: MARCH 2010



Lead (ppm)

🟥	≥100
🟧	≥50 <100
🟨	≥20 <50
🟩	≥10 <20
🟦	≥5 <10
🟦	≥0 <5

●—┤	Diamond drill hole
— — —	Mineralized horizon
★	Mineralized showing

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FIGURE 8

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HISTORICAL LEAD GEOCHEMISTRY

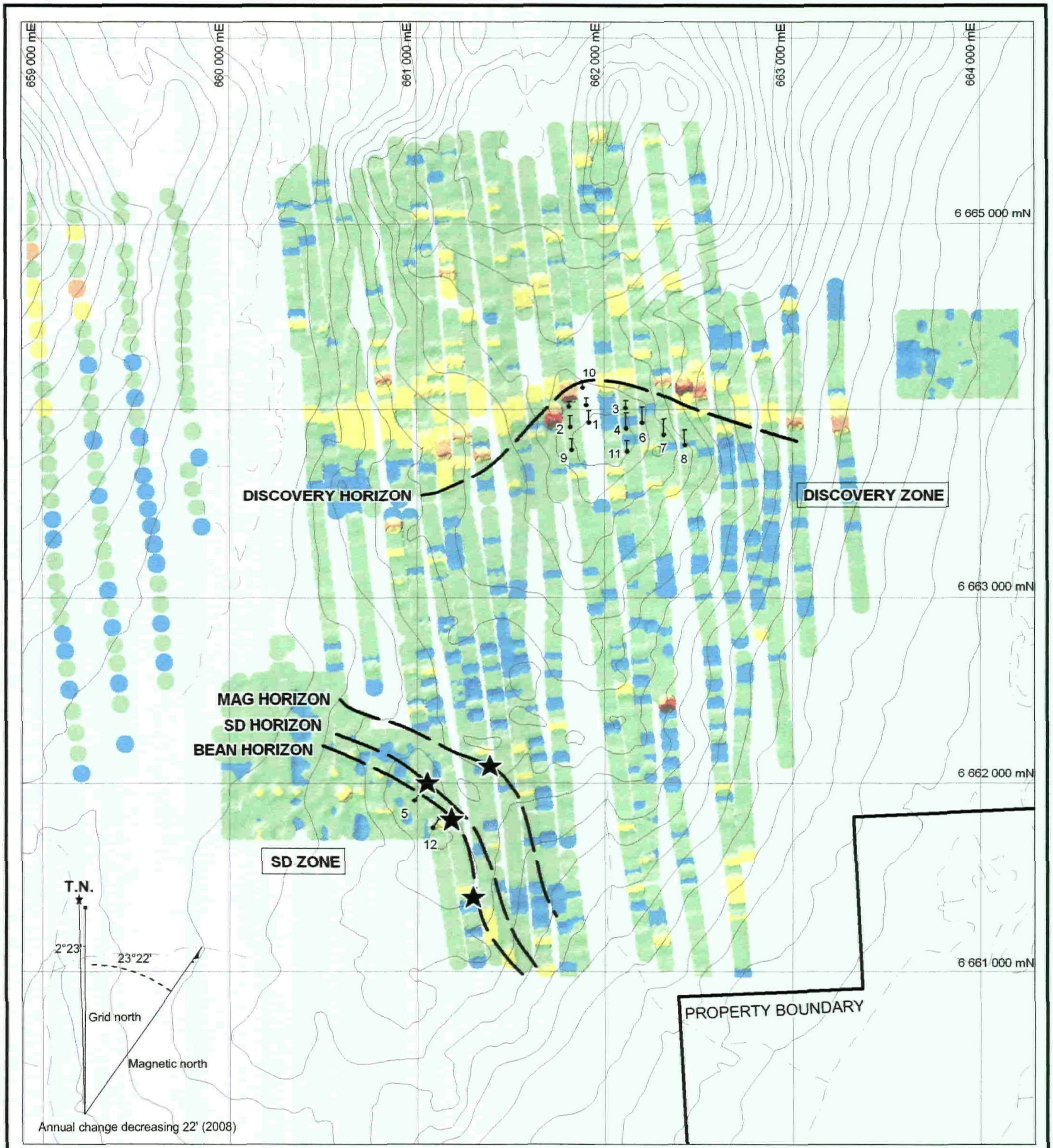
MOR PROPERTY

0 1 km

UTM ZONE 8, NAD 83, 105C/01

FILE: 2009/MOR

DATE: MARCH 2010



Zinc (ppm)

🟥 ≥500

🟧 ≥200 <500

🟨 ≥100 <200

🟩 ≥50 <100

🟦 ≥0 <50

●—| Diamond drill hole

— — — Mineralized horizon

★ Mineralized showing

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FIGURE 9

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL ZINC GEOCHEMISTRY

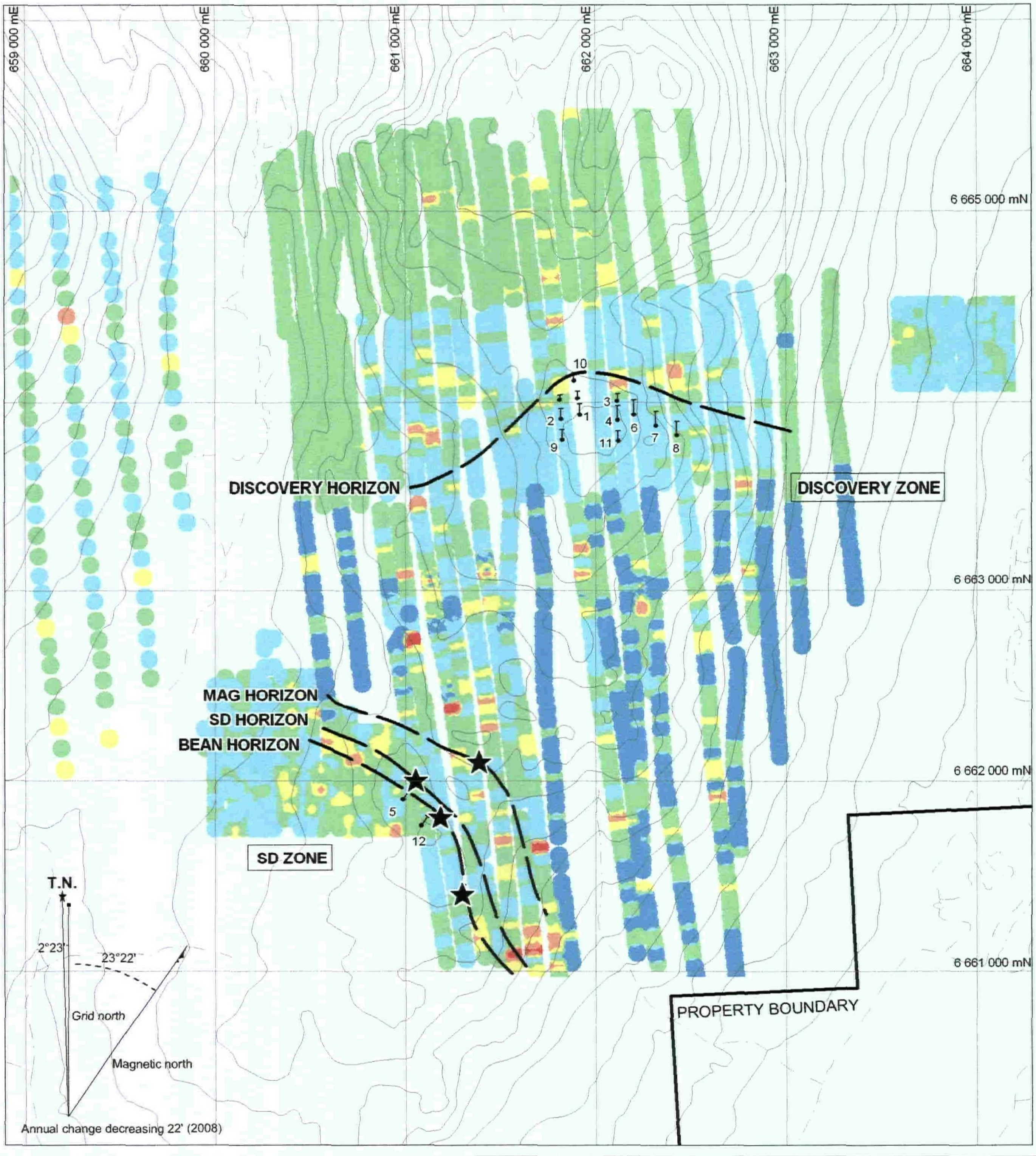
MOR PROPERTY

0 1 km

UTM ZONE 8, NAD 83, 105C/01

FILE: 2009/MOR

DATE: MARCH 2010



Silver (ppm)

- 🟥 ≥2.0
- 🟧 ≥1.0 <2.0
- 🟨 ≥0.5 <1.0
- 🟩 ≥0.2 <0.5
- 🟦 ≥0.1 <0.2
- 🟦 ≥0 <0.1

●—┤ Diamond drill hole

— — — Mineralized horizon

★ Mineralized showing

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FIGURE 10

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL SILVER GEOCHEMISTRY

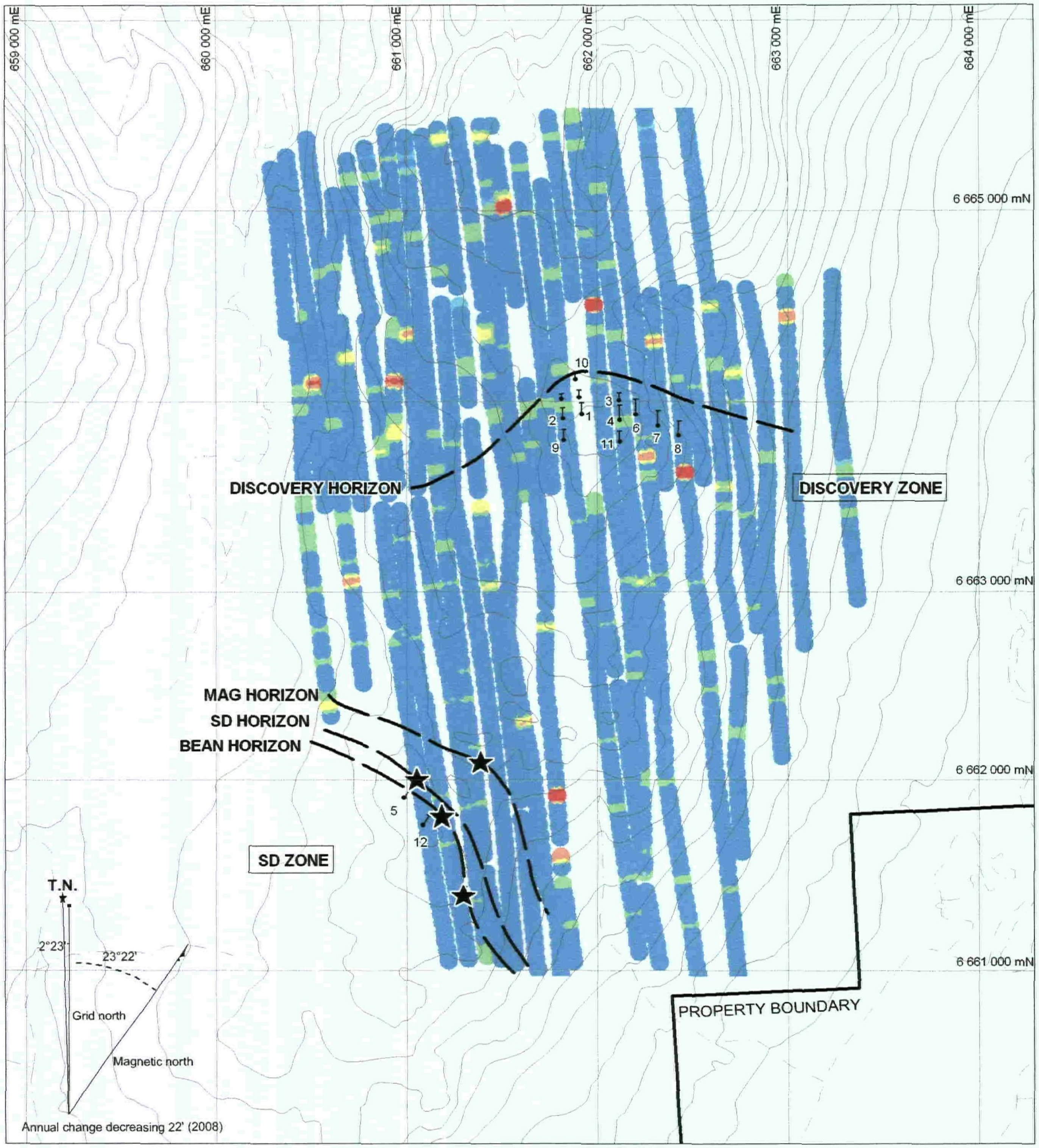
MOR PROPERTY

0 1 km

UTM ZONE 8, NAD 83, 105C/01

FILE: 2009/MOR

DATE: MARCH 2010



Gold (ppb)

- 🟥 ≥100
- 🟧 ≥50 <100
- 🟨 ≥25 <50
- 🟩 ≥10 <25
- 🟦 ≥0 <10

●—| Diamond drill hole

— — — Mineralized horizon

★ Mineralized showing

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FIGURE 11

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

HISTORICAL GOLD GEOCHEMISTRY

MOR PROPERTY

0 1 km

UTM ZONE 8, NAD 83, 105C/01

FILE: 2009/MOR

DATE: MARCH 2010

Another cluster of weak to moderate response occurs to the southwest of the lake in a low-lying marshy area. Many of the proposed sites in this part of the property were not sampled due the absence of proper soil development and abundant organic material.

2009 PROGRAM

Lithogeochemistry

Lithogeochemical sampling of key stratigraphic units, alteration and mineralization was conducted on drill core from three holes representing the Discovery Horizon and two holes at the SD Horizon. The sampling was carried out to evaluate the primary chemostratigraphic characteristics of the host volcanic rocks at both target areas, provide insight into the paleotectonic setting of the MOR mineralizing system, provide comparisons with other established VMS/VHMS belts, evaluate the mobile alteration and mineralization related signatures of the host rocks and rank the intensity of alteration and mineralization for prospective future drill targets.

Samples were collected for various lithofacies plus alteration and mineralized facies from drill holes MOR-07-02, MOR-07-03, MOR-08-05, MOR-08-07, and MOR-08-12. Sample descriptions, sample number and the depth down hole from which the samples were collected are documented in Appendix II Approximately 15 to 25 cm of core length was selected at each facies change downhole and quartered with an impact splitter. The quartered core was then placed in plastic bags, assigned a pre-numbered assay tag and tied with flagging. It should be noted that some mineralized core intervals are stored at the core library in Whitehorse while the majority of the core is stored onsite at the MOR property. Surface samples representing interpreted vent proximal volcanic fragmental units were also collected south of the SD Zone mineralized horizons.

All rock samples were sent to ALS Chemex in North Vancouver, B.C. where they were analysed for major, trace, and rare-earth elements (REE) using the complete characterization package (CGP-PKG01). Major elements (SiO_2, Al_2O_3, Fe_2O_3, CaO, MgO, Na_2O, K_2O, TiO_2, MnO, and P_2O_5) and LOI were obtained by lithium metaborate fusion pre-preparation followed by dissolution of the fused bead and subsequent analysis via inductively coupled plasma emission spectroscopy (ICP-ES). Sulfur and C were obtained via Leco, and base metals (Ag, Co, Cu, Mo, Ni, Pb, and Zn) were obtained by four acid digestion and subsequent analysis by ICP-ES. Trace elements and rare earth elements (Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, and Zr) were obtained via lithium metaborate fusion with subsequent analysis via inductively coupled plasma mass spectrometry (ICP-MS), whereas volatile elements (As, Bi, Hg, Sb, Se, and Te) were obtained via aqua regia digestion and subsequent analysis via ICP-MS. Fusion pre-preparation ensures the complete digestion of resistant phases like zircon, ensuring high quality and complete values for high field strength element (HFSE: Zr, Hf, Nb, Ta, Y) and REE (La-Lu) In contrast, four acid and aqua regia digestions are partial digestions that specifically attack sulfide and weakly held elements and provide ideal results for base metals and volatile elements. Certificates of Analysis are contained in Appendix III.

The sampling, assessment and interpretation of results was completed under the direction of or done by SJP GeoConsulting of St. John's Newfoundland. Chemostratigraphic and mobile element results from the drill core and surface samples confirm the mineralizing system at MOR is similar to other known VMS belts in the northern Cordillera. Down hole alteration profiles constructed from the lithogeochemical data distinguish the Discovery Zone as being highly prospective for addition exploration A complete report prepared by SJP GeoConsulting is contained in Appendix IV.

Gravity

Approximately 13 line km of ground based gravity surveys were conducted by MWH Geo-Surveys Inc. of Reno, Nevada. Roughly 4 line km were completed along the eastern extension of the Discovery Horizon while the remaining 9 km was done along strike of the mineralized horizons identified at the SD Zone The orientation and spacing of the survey lines are illustrated on Figure 12 while the Bouguer results are shown on Figure 13.

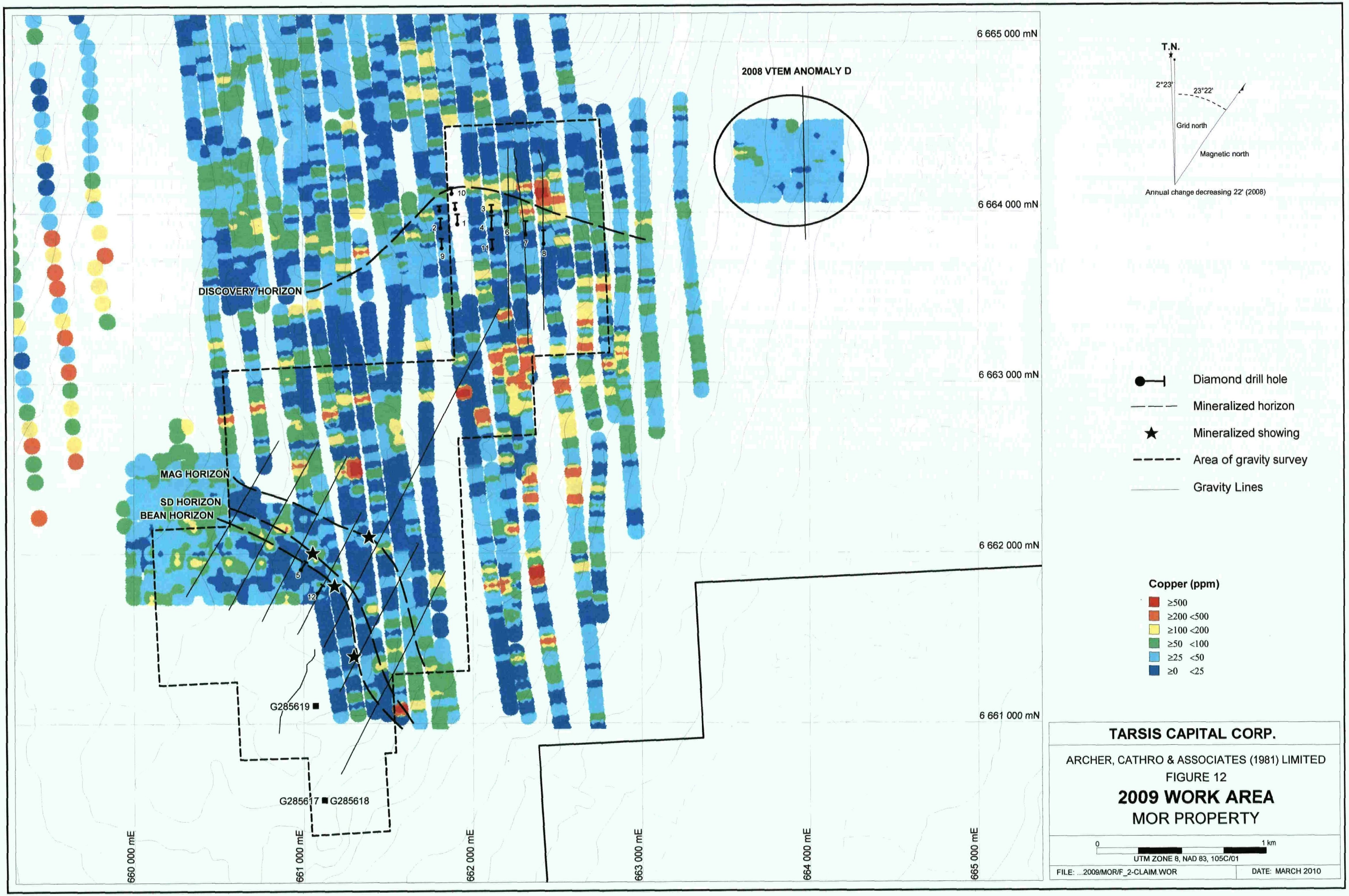
Surveys across the eastern extension of the Discovery Horizon were hampered by dense vegetation and canopy cover which disabled the differential global positioning satellite (GPS) equipment. As a result, far fewer lines were surveyed at this target and survey points had to be chosen based on vegetation cover

The three lines surveyed targeted the strike extension of the Discovery Horizon and additional zones that may exist deeper in the stratigraphic section. In particular, the lines tested beneath an unexplained, strongly anomalous copper-in-soil anomaly identified from previous closely spaced soil auger sampling

Condor Consulting Ltd. was retained to model and interpret the Bouguer results referred to as the DHG anomaly. The modeling involved the preparation of 2D and 3D voxel models illustrated on Figures 14 and 15, respectively. The DHG anomaly is an elongate 800 m long 100 to 250 m wide northerly trending gravity anomaly The strongest portion of the anomaly is roughly 250 by 200 m in size and is interpreted to lie stratigraphically beneath the Discovery Horizon mineralization. The voxel model was constructed with inverted data and while the rocks associated with the anomaly are more dense than the surrounding units, the absolute difference is not known.

The gravity response downdip and along strike of SD Zone mineralized horizons is somewhat subdued and indicates only subtle contrast with the surrounding volcaniclastic rocks. The SDG anomaly happens to coincide with the edge of the survey block and may be attributed to an "edge effect". However, the anomaly occurs in an area of vegetation cover and subdued relief with intermittent elevated copper-in-soil response.

DISCUSSION AND CONCLUSIONS



TARSIS CAPITAL CORP.

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

FIGURE 12

2009 WORK AREA

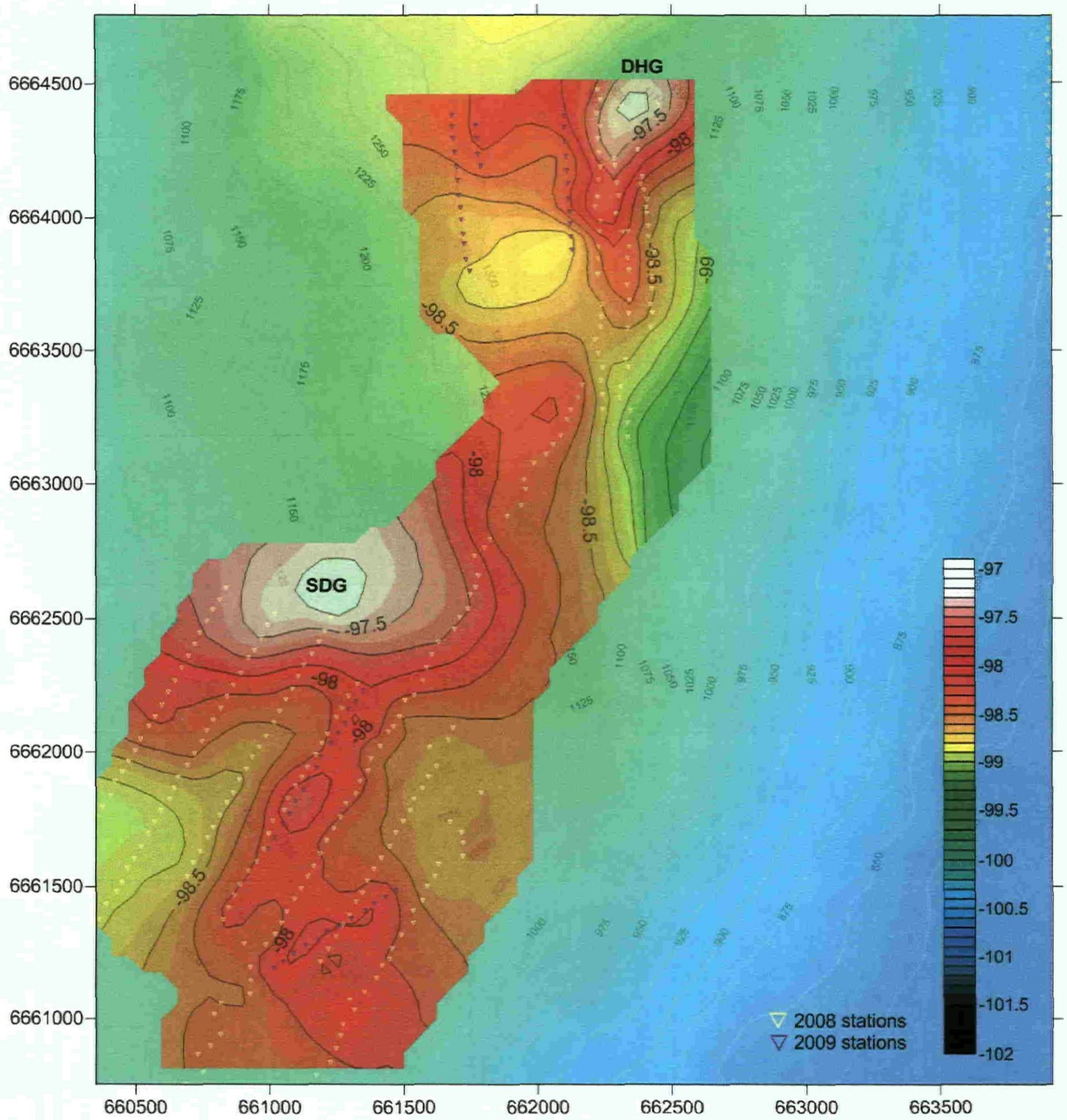
MOR PROPERTY

UTM ZONE 8, NAD 83, 105C/01

FILE: ...2009/MOR/F_2-CLAIM.WOR

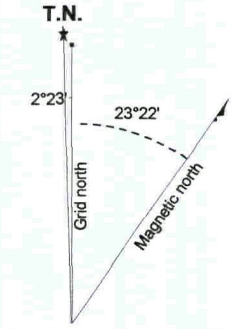
DATE: MARCH 2010

Bouguer Gravity:
MOR Property, Yukon
Tarsis Capital Corp



UTM Zone 8N NAD83
Bouguer density 2.67 gm/cc
Terrain Corrections:
to 10,000m radius with acquired DEM / clino

MWH Geo-Surveys, Inc.



Annual change decreasing 22'

DHG Gravity anomaly described in text

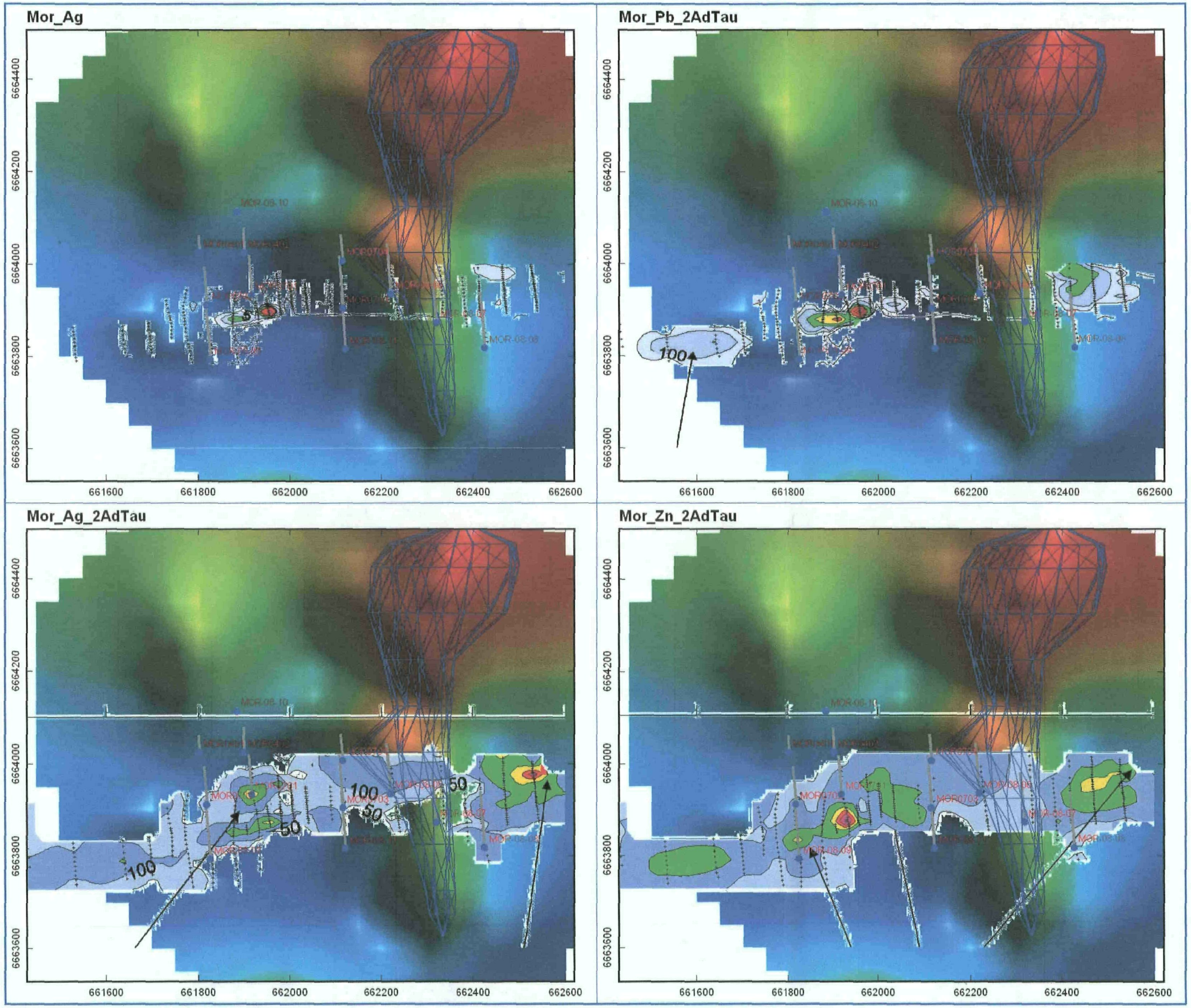
TARSIS CAPITAL CORP.

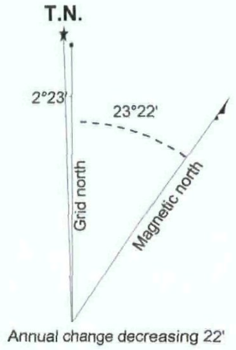
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
FIGURE 13

BOUGER GRAVITY
MOR PROPERTY

0 1 km
UTM ZONE 8, NAD 83, 105C/01

FILE: ...2009/MOR/F_2-CLAIM.WOR
DATE: MARCH 2010





TARSIS CAPITAL CORP.

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
FIGURE 14

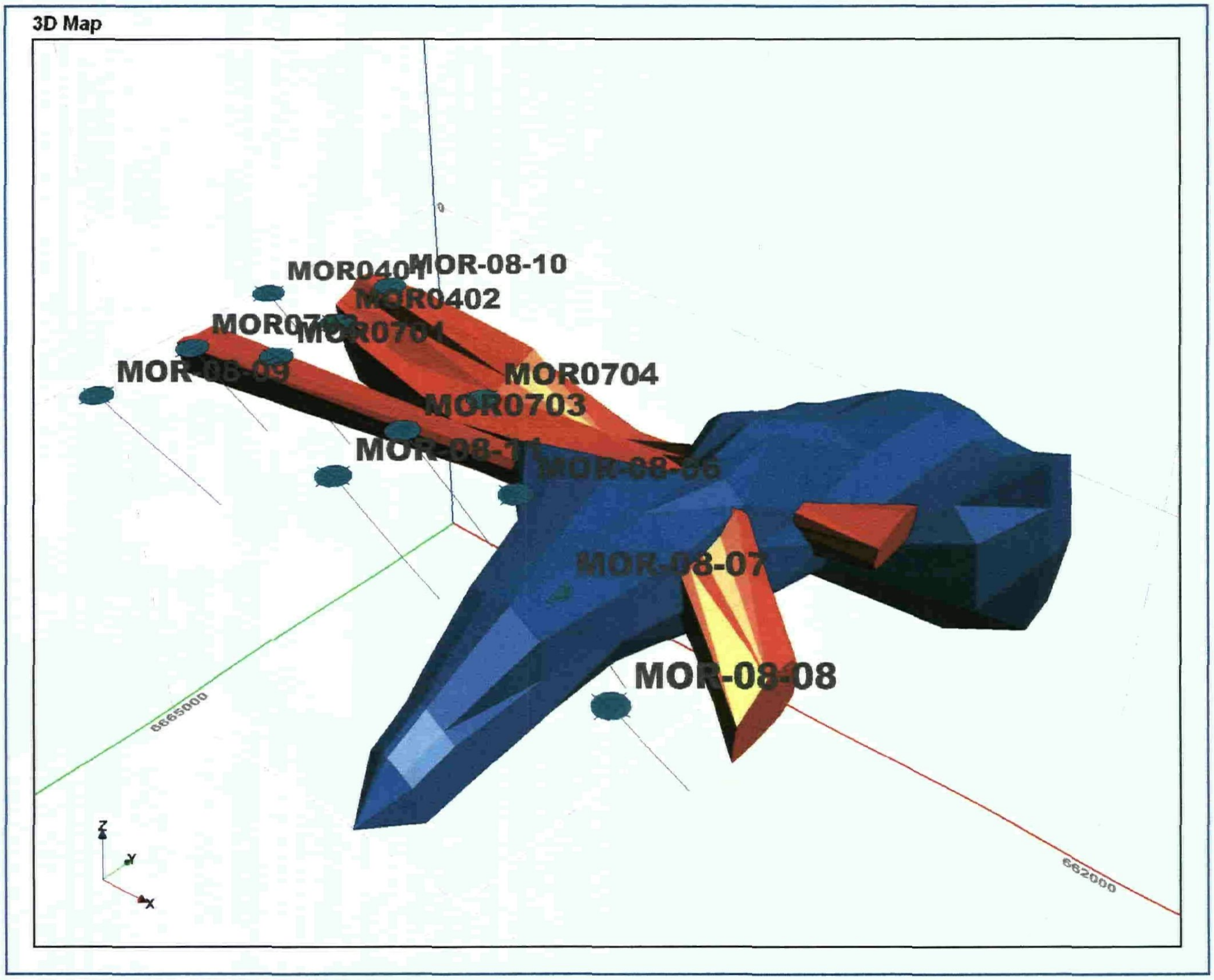
GRAVITY VOXEL MODEL
PLAN VIEW

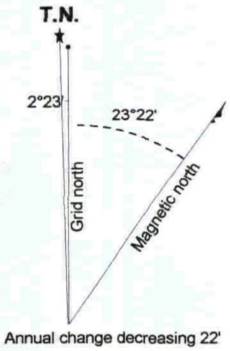
MOR PROPERTY

0 1 km
UTM ZONE 8, NAD 83, 105C/01

FILE: ...2009/MOR/F_2-CLAIM.WOR
DATE: MARCH 2010

VIEW LOOKING NW





TARSIS CAPITAL CORP.

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
FIGURE 15

GRAVITY VOXEL MODEL
3D VIEW

MOR PROPERTY

UTM ZONE 8, NAD 83, 105C/01

FILE: ...2009/MOR/F_2-CLAIM.WOR

DATE: MARCH 2010

The MOR property covers a highly prospective Kuroko style VHMS target in southern Yukon, where remarkably little exploration has occurred during the 20th Century, despite a vast area of promising geology. Most of the known VHMS deposits in Yukon were discovered in the past decade within the evolving Finlayson Lake District, located in the southeastern part of the territory. These deposits are hosted within Yukon-Tanana Terrane, which comprises a composite collage of middle Paleozoic-age (Devonian to Carboniferous) bimodal arc volcanic rocks, metasedimentary and meta-igneous units. Regional geological mapping initiatives by the Yukon Geology Program have designated a vast area of Yukon to be underlain by Yukon-Tanana Terrane including the area occupied by the MOR prospect. Recent geochronological work conducted on select felsic to intermediate horizons from the MOR drill core yielded ages that categorize the MOR volcanism as time equivalent with the upper Finlayson to middle Wolverine Magmatic Cycles. These particular cycles hosts the Kudz Ze Kayah and Wolverine Deposits in the Finlayson Lake District.

Exploration to date has defined two distinct areas of interest where VHMS mineralization has been identified. These two areas are referred to as the Discovery and SD Zones. The sulphide intervals defining the Discovery Horizon within the Discovery Zone are pyrite dominant and appear to have been folded and coarsely recrystallized. The host rocks are classified as metavolcaniclastic, that likely represents a distal part of a VHMS mineralizing system. Typical barite, silica and/or magnetite-rich exhalative sequences have not yet been documented above or below the sulphide horizons, however, disseminated magnetite is noted in the stratigraphy overlying the Discovery Horizon mineralization and may represent the waning stages of an exhalative iron formation, which supports a distal VHMS environment.

Possible displacement of the MOR massive sulphide lenses from the origin of deposition is not known but the presence of significant amounts of chalcopyrite in portions of the mineralized horizons suggests displacement is likely minor and this mineralization may be of similar origin to the Kutcho Creek copper-rich sulphide. Results from both the lithogeochemical and gravity surveys suggest the greatest potential for additional VHMS discovery is in the vicinity of the Discovery Zone. The DHG anomaly is interpreted to lie stratigraphically beneath the Discovery Horizon but the geometry of the gravity voxel model suggests a northerly trend, which is roughly perpendicular to the known mineralized horizons. This particular geometry remains unexplained.

The MOR property covers an extensive VHMS system with excellent potential additional discoveries. Future work should focus on testing the gravity response defining the DHG anomaly.

Respectfully submitted,

Archer, Cathro & Associates (1981) Limited

B. Wengzynowski

W.A. Wengzynowski, P.Eng.

REFERENCES

Colpron, M.

2008 Personal Communication – Geochronological Assessment of core from MOR-04-01

Colpron M., Nelson, J. L., Murphy, D.C.

2006 A tectonostratigraphic framework for the pericroatonic terranes of the northern Cordillera, in Colpron, M. and Nelson, J.L., eds. Paleozoic Evolution and Metallogeny of Pericratonic Terranes at the Ancient Pacific Margins of North America, Canadian and Alaskan Cordillera: Geological Association of Canada, Special Paper 45, p. 1-23.

Gordey, S.P. and Makepeace, A.J. (comp)

1999 Yukon Bedrock Geology in Yukon Digital Geology Open File D3826

Mihalynuk, M.G., Friedman, R.M., Devine, F. and Heaman, L.M.,

2006 Protolith age and deformation history of the Big Salmon Complex, relicts of a Paleozoic continental arc in northern British Columbia, in Colpron, M. and Nelson, J.L., eds., Paleozoic Evolution and Metallogeny of Pericratonic Terranes at the Ancient Pacific Margins of North America, Canadian and Alaskan Cordillera: Geological Association of Canada, Special Paper 45, p. 179-200.

Mihalynuk M.G., Nelson J. and Friedman R.M.

1998 Regional geology and mineralization of the Big Salmon Complex (104 N NE and 104 O NW). *In*: Geological Fieldwork 1997, British Columbia Survey Branch, Paper 1998-1, p. 6-1 to 6-20.

Ritcey, D.H. and Balon, E.A

1998 1997 Geological, Geochemical, Geophysical and Trenching Report on the Cabin Lake Property (CL 1-2 Claims) May, 1998 (1997 Assessment Report).

Roots, C.F., Nelson, J.L., Simard, R.-L. and Harms, T.A.,

2006 Continental fragments, mid Paleozoic arcs and overlapping later Paleozoic arc and Triassic sedimentary strata is the Yukon-Tanana terrane of northern British Columbia and southern Yukon, in Colpron, M and Nelson, J.L., eds., Paleozoic Evolution and Metallogeny of Pericratonic Terranes at the Ancient Pacific Margin of North America, Canadian and Alaskan Cordillera: Geological Association of Canada, Special Paper 45, p.154-177.

APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, William A. Wengzynowski, geological engineer, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address at 301 Fairway Drive, North Vancouver, British Columbia, V7G 1L4 do hereby certify that:

1. I am President of Archer, Cathro & Associates (1981) Limited.
2. I graduated from the University of British Columbia in 1993 with a B.A.Sc in Geological Engineering, Option l, mineral and fuel exploration.
3. I registered as a Professional Engineer in the Province of British Columbia on December 12, 1998 (Licence Number 24119).
4. From 1983 to present, I have been actively engaged in mineral exploration in the Yukon Territory, Northwest Territories, northern British Columbia and Mexico.
5. I have personally participated in and supervised the fieldwork reported herein.

William A. Wengzynowski, B.A.Sc., P. Eng.

Surface Litho Samples

Sample #	Description
G285617	Limonite boxwork layers in very punky rotting sericite chlorite volcaniclastic
G285618	Mafic volcaniclastic with abundant blue opalescent quartz eyes
G285619	Coarse grained intermediate volcanic tuff with 2-3% pyrite
G285620	Chlorite sericite tuff with minor blue opalescent quartz eyes
G285621	Pyritic volcaniclastic tuff with abundant pyrite
G285630	Heavily pyritic chlorite altered volcaniclastic tuff - sample taken from the Bean Zone at south end of property

MOR-07-02	Sample #	Depth (m)	Description
	G285238	3 40	Pyritic speckled quartz-seri-bi-chl schist minor magentite
	G285239	6 60	Fine grained chloritic volcanic tuff (andesite)
	G285240	12 30	Wht speckled quartz-ser schist with ghosted chlorite altered volc folds
	G285241	24 10	Same as above but more py
	G285242	29.47	Section of fine chlorite banding altn
	G285243	41 50	Transition from speckled qtz-ser-chl to felsic qtz-ser dominant
	G285244	42.67	Transition to qtz rich banded unit - not thin banded like rhyolite or silica exhalite
	G285245	47 45	Chl alt tuffaceous volc
	G285246	54 10	Chl alt tuffaceous volc
	G285247	56.80	Gneiss interbanded with chlorite laths
	G285248	61.50	Chl alt volc tuff
	G285249	69 78	Felsic tuff ser dominant
	G285250	74 90	Chlorite altn zone - pyritic volcaniclastic
	G285501	79 80	Chlorite alt volc
	G285502	81.64	Top of sx zone in felsic volc
	G285503	84.60	Centre of sx zone
	G285504	86.63	Centre of sx zone
	G285505	88.70	Base of sx zone
	G285506	90 50	Chl alt tuff btwn sx horizons
	G628507	91.15	White speckled gneiss foliated sills Chl+py
	G628508	97.45	Upper sx in chl alt felsic volc
	G285509	102.00	Chlorite alt tuff just above sx
	G285510	103.35	Felsic sx zone
	G285511	106 40	Felsic sx zone
	G285512	111 00	Volc tuff footwall
	G285513	115 30	Felsic schist with minor chl altn
	G285514	131 50	Fine volc tuff ser/chl altn
	G285515	142 00	Phyric Bi-chl volcanclastic
	G288516	160 30	Grey ser alt qtz rich seds
	G285517	166 00	White marble

MOR-07-03

Sample #	Depth (m)	Description
G285518	6.20	Qtz-ser-chl schist.
G285519	25.20	Speckled Qtz-mu-ser schist py-po-mag+epidote
G285520	41.36	Andesite sill?
G285521	45.50	Speckled qtz-mu-ser schist.
G285522	48.50	Chlorite volc tuff.
G285523	65.50	Speckled qtz-mu-ser schist with minor epidote.
G285524	84.65	Speckled qtz-mu-ser schist.
G285525	102.90	Chl volc tuff.
G285526	116.50	Chl vol tuff with progressive stronger altn.
G285527	118 10	Strong ser alt tuff above mzn
G285528	128 50	Strong cir alt pyritic tuff.
G285529	135.50	Smmx coarse py+ser+chl alt volc.
G285530	138.00	Strong ser-chl alt volc tuff.
G285531	143.95	MxSx
G285532	152.00	Mod pyritic ser-chl volc tuff.
G285533	170 00	Ser-qtz-tuff.
G285534	175.50	Qtz-mu-ser-chl schist/tuff - weak py
G285535	191.10	Strongly py ser-chl volc tuff
G285536	194.16	Qtz-ser-chl schist
G285537	212 00	Pyritic ser-qtz schist
G285538	219.00	Qtz phyric ser-chl volc tuff.
G285539	223.50	Ser laminated rhyolite?
G285540	227.00	Marble
G285541	230.50	Carbonate alt Andesite?

MOR-08-05

Sample #	Depth (m)	Description	
G285561	11 35	Chl-mu tuff + mag xls	
G285562	23 06	Felsic tuff ser>>chl	
G285563	34 08	Strong chl alt vol tuff + magnetite xls	
G285564	36.08	White-grey silica (rhyh) flow? Ser alt+epidote alt clasts	
G285551	38 90	Chl alt volc dyke/sill?	
G285552	40 50	Speckled qtz >> ser>chl schist	
	*41 63-42 50	Mzn (marc has in van)	Not Sampled
	*47 02-48 19	Mzn (marc has in van)	Not Sampled
G285553	51 20	Chl alt volc tuff	
G285554	52 15	Mx pyroxenes+Py * Hard as hell!! Skarn - thought it was chlorite altn at first	
G285555	65 80	Speckled qtz -ser-chl schist with epidote alt	
G285565	82 94	Volc tuff	
G285566	100 05	Volc tuff	
G285567	125 12	Volc tuff	
G285568	142 59	Pyritic tuff and mag xstls	
G285569	149 32	Grey-white flow band rhyolite+ser altn	
G285670	155 49	Fine ser>>chl alt tuff + epidote altn clasts	
G285671	178 10	Increase chlorite altn	
G285672	185 25	Increase sericite altn + bands and disseminations of pyrite	
G285673	191 76	Ser alt orthogneiss with coarse py cubes	

MOR-08-07

Sample #	Depth (m)	Description
G285574	13.90	Pyritic seri-chl tuff
G285575	17.90	Andesite ?
G285576	24 29	Felsic qtz-ser schist/tuff
G285577	43.88	Ser<chl alt tuff
G285578	62.68	Ser>chl alt tuff
G285578	71.31	Coarse ser-chl fragmental
G285780	83 90	Chl-ser tuff
G285781	105.55	Pyritic tuff
G285582	119.60	Pyritic tuff ser=chl
G285556	126 00	Strong chl alt volc tuff
G285557	127 30	Mx py with chl alt vol tuff band
G285558	128.80	Volc tuff ser>>chl
G285559	130.00	Chl-ser volc tuff. Py+cpy.
G285583	135.84	Heavy pyritic chl>ser tuff.
G285584	136.42	Mx coarse py
G285585	145.70	Felsic volc tuff weak py
G285586	156.50	Strong chl>ser volc tuff 15% py.
G285587	158.35	Grey silica flood exhalite?
G285588	171.40	Volc tuff + 5% py
G285589	179.50	Blk phyllite and felsic tuff interbeds
G285590	188.20	Dark grey qtzite
G285591	191.00	Volc tuff ser=chl
G285592	209 50	Chl-mu schist+py
G285593	215.50	Qtzite.

MOR-08-12

Sample #	Depth (m)	Description
G285594	14.90	Chl-ser pyritic volc tuff.
G285595	24.40	Ser>>chl with minor py in v-fine gr tuff/schist
G285596	32.70	Chl>>ser volc tuff.
G285597	47.70	Qtz rich sed? Rhy flow-ser alt+epidote.
G285598	53.55	Volc tuff chl>ser altn / feld-clay-epidote
G285599	64.50	Speckled sediment with ser>>chl
G285600	70.50	Volc tuff chl>ser
G285601	73.50	Felsic tuff with grey silica-epidote bands.
G285602	83.20	Intense silica-epidote altn
G285603	91.50	Qtz-feld-volc tuff+epidote
G285542	93 40	Qtz-ser-chl tuff
G285543	95.50	Chl-py-po-mag mzn
G285544	98.40	Chl-py-po-mag mzn.
G285545	100.10	Chl alt qtz feldspar volc tuff.
G285604	112.90	Qtz-feld-volc tuff+epidote
G285605	132.50	Qtz-feld-volc tuff+epidote
G285606	138.20	Chl>ser volc tuff
G285607	146 30	Felsic tuff
G285608	153 50	Chl>ser volc tuff
G285609	159.00	Mod pyritic tuff
G285610	173.00	Mod pyritic tuff
G285611	177 60	Qtz-mu-ser speckled schist±epidote
G685612	189 80	Chl-ser volc tuff
G685613	196.40	Felsic-intermediate volc tuff+py bands
G285546	205.40	Qtz-ser-chl schist.
G285547	207.50	Chl alt tuff with dissem py-cpy
G285548	211.00	Speckled ser-chl-epidote alt schist
G685614	216.00	Grey rhy flow+coarse py+ser>>chl
G685615	218.44	Dark chl>ser altn
G285549	227 00	Chl alt vol tuff with secondary carbonate and weak py+cpy
G285560	229.00	Chl alt tuff + py
G285550	239.00	Ser-chl volc tuff with secondary carbonate and weak py+cpy
G685616	245 40	Felsic tuff - clay+epidote altn.

APPENDIX III

CERTIFICATES OF ANALYSIS

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

ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Page: 1
Finalized D 15-OCT-2009
Account: F

CERTIFICATE VA09108634

Project MOR
P.O No :
This report is for 2 Rock samples submitted to our lab in Vancouver, BC, Canada on 1-OCT-2009

The following have access to data associated with this certificate:

AL ARCHER VANCOUVER OFFICE	DOUG EATON BILL WENGZYNOWSKI	JOAN MARIACHER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
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
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

To. **ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED**
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

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

Project MOR

CERTIFICATE OF ANALYSIS VA09108634

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01	ME-ICP41 Ga ppm 10
G285627		0.52	1.2	0.97	86	<10	100	<0.5	2	0.28	<0.5	6	9	7	1.66	<10
G285628		2.00	1.3	2.60	8	<10	210	<0.5	<2	1.36	<0.5	19	9	348	5.40	10

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ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project MOR

CERTIFICATE OF ANALYSIS VA09108634

Sample Description	Method Analyte Units LOR	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 Ni ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1	ME-ICP41 Th ppm 20
G285627		<1	0.23	10	0.47	699	<1	0.02	13	220	7	0.07	<2	3	8	<20
G285628		<1	0.64	<10	2.38	1195	<1	0.03	5	830	40	0.04	<2	11	75	<20

CERTIFICATE OF ANALYSIS VA09108634

Sample Description	Method Analyte Units LOR	ME-ICP41 Ti % 0 01	ME-ICP41 Tl ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2
G285627		0 06	<10	<10	12	<10	49
G285628		0 13	<10	<10	124	<10	106

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LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8**

Finalized D. 28-OCT-2009
Account: F

CERTIFICATE VA09107973

Project: MOR

P O. No

This report is for 11 Rock samples submitted to our lab in Vancouver, BC, Canada on 1-OCT-2009.

The following have access to data associated with this certificate.

AL ARCHER VANCOUVER OFFICE	DOUG EATON BILL WENGZYNOWSKI	JOAN MARIACHER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (Leco)	LECO
S-IR08	Total Sulphur (Leco)	LECO
ME-MS81	38 element fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	ICP-AES
ME-4ACD81	Base Metals by 4-acid dig	ICP-AES

To: **ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8**

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

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EXCELLENCE IN ANALYTICAL CHEMISTRY
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Project MOR

CERTIFICATE OF ANALYSIS VA09107973

Method	WEI-21	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	C-IR07
Analyte	Recvd Wt	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	C
Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description LOR	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
G285617	1.66	61.8	15.15	5.05	1.29	4.05	4.19	1.98	<0.01	0.50	0.21	0.10	0.01	0.11	0.27
G285618	0.60	52.1	16.75	11.40	0.48	5.29	3.44	3.11	<0.01	0.73	0.50	0.13	0.01	0.12	0.06
G285619	0.50	71.6	10.85	4.38	1.77	2.18	4.32	0.42	<0.01	0.25	0.09	0.09	0.01	0.02	0.51
G285620	0.98	83.8	4.11	4.55	0.38	1.88	0.18	1.29	0.01	0.18	0.05	0.04	<0.01	0.18	0.17
G285621	1.20	69.4	13.25	5.31	0.40	2.48	0.80	3.38	0.01	0.62	0.07	0.10	0.01	0.32	0.07
G285622	1.90	54.9	17.00	8.15	6.33	2.95	5.22	0.51	<0.01	0.86	0.19	0.21	0.03	0.02	0.01
G285623	0.94	53.2	16.50	9.63	4.02	5.90	3.59	1.22	0.01	0.94	0.18	0.22	0.02	0.09	0.15
G285624	0.86	45.2	14.85	17.55	0.43	7.29	0.31	2.34	0.01	0.79	0.24	0.12	<0.01	0.30	0.07
G285625	0.96	71.5	12.65	4.92	0.34	1.38	1.59	3.02	<0.01	0.37	0.04	0.07	<0.01	0.28	0.01
G285626	1.96	51.2	16.60	5.82	6.39	4.88	5.86	0.37	<0.01	1.50	0.14	0.39	0.01	0.05	1.04
G285630	1.46	36.9	4.42	46.0	0.66	3.06	0.41	<0.01	<0.01	0.29	0.10	0.08	<0.01	<0.01	0.01

surface

CERTIFICATE OF ANALYSIS VA09107973

Sample Description	Method Analyte Units LOR	S-IR08 S % 0.01	ME-MS81 Ag ppm 1	ME-MS81 Ba ppm 0.5	ME-MS81 Ce ppm 0.5	ME-MS81 Co ppm 0.5	ME-MS81 Cr ppm 10	ME-MS81 Cs ppm 0.01	ME-MS81 Cu ppm 5	ME-MS81 Dy ppm 0.05	ME-MS81 Er ppm 0.03	ME-MS81 Eu ppm 0.03	ME-MS81 Ga ppm 0.1	ME-MS81 Gd ppm 0.05	ME-MS81 Hf ppm 0.2	ME-MS81 Ho ppm 0.01
G285617		0.02	<1	949	25.7	14.6	10	1.02	21	4.47	2.65	0.92	16.4	3.94	2.9	0.86
G285618		1.59	<1	1050	10.5	29.5	10	1.97	32	3.24	1.95	0.82	18.0	2.73	1.5	0.66
G285619		0.01	<1	157.5	12.6	8.0	10	0.25	101	2.32	1.46	0.63	8.9	2.09	2.8	0.46
G285620		0.28	<1	1530	17.0	5.3	60	2.58	49	2.29	1.33	0.47	9.2	2.38	1.4	0.42
G285621		0.07	<1	2840	38.3	3.4	80	1.89	47	2.24	1.58	0.54	20.4	2.71	3.4	0.45
G285622		0.01	<1	196.5	28.4	16.9	20	0.26	119	4.18	2.23	1.35	18.3	4.57	2.8	0.75
G285623		0.02	<1	733	25.8	23.3	30	1.54	119	4.41	2.50	1.35	17.7	4.44	3.0	0.84
G285624		6.74	<1	2510	5.2	80.7	40	0.68	19	2.11	1.27	0.58	15.7	1.92	1.3	0.41
G285625		1.94	<1	2490	32.8	5.5	10	0.93	10	3.75	2.42	0.78	12.2	4.06	4.2	0.73
G285626		0.07	<1	419	15.3	8.8	10	0.40	45	4.15	2.50	1.42	16.3	3.45	1.7	0.81
G285630		12.25	<1	29.2	32.1	79.8	20	0.12	1230	2.27	1.14	0.47	9.9	2.83	3.0	0.39

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Sample Description	Method Analyte Units LOR	ME-MS81 La ppm 0 5	ME-MS81 Lu ppm 0 01	ME-MS81 Mo ppm 2	ME-MS81 Nb ppm 0 2	ME-MS81 Nd ppm 0 1	ME-MS81 Ni ppm 5	ME-MS81 Pb ppm 5	ME-MS81 Pr ppm 0 03	ME-MS81 Rb ppm 0 2	ME-MS81 Sm ppm 0 03	ME-MS81 Sn ppm 1	ME-MS81 Sr ppm 0 1	ME-MS81 Ta ppm 0 1	ME-MS81 Tb ppm 0 01	ME-MS81 Th ppm 0 05
G285617		10 9	0 41	<2	3 7	14 1	11	17	3 44	42 2	3 64	2	81 4	0 2	0 74	2 09
G285618		4 6	0 26	<2	2 2	7 2	<5	26	1 53	64 4	2 19	1	52 8	0 1	0 55	0 70
G285619		5 5	0 32	<2	2 0	6 8	<5	22	1 57	6 0	1 72	1	68 8	0 3	0 38	2 52
G285620		9 2	0 19	<2	3 9	9 3	40	16	2 54	60 3	2 19	1	38 4	0 3	0 39	2 49
G285621		20 9	0 28	3	11 7	14 7	13	20	3 96	131 5	2 64	2	77 7	0 8	0 39	7 44
G285622		13 4	0 30	<2	7 7	17 0	9	9	3 84	6 3	4 15	1	223	0 3	0 70	1 62
G285623		10 9	0 37	<2	3 8	16 4	17	<5	3 56	23 3	3 92	1	192 5	0 3	0 75	1 57
G285624		2 0	0 19	5	3 1	4 1	30	11	0 77	52 3	1 27	4	30 3	0 2	0 35	1 06
G285625		15 4	0 44	4	10 2	16 4	8	37	3 98	69 3	3 96	2	34 4	0 7	0 65	4 39
G285626		6 0	0 33	<2	4 6	9 0	8	50	2 03	8 2	2 65	2	81 7	0 3	0 64	1 26
G285630		15 2	0 15	5	3 9	13 4	11	49	3 47	0 4	2 57	4	19 4	0 3	0 41	5 35

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**Page: 2 - D
Total [illegible]ges: 2 (A - E)
Finalized Date: 28-OCT-2009
Account: F**

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Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
Analyte	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	As	Bi	Hg	Sb	Se	Te
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description LOR	0 5	0 01	0 05	5	1	0 5	0 03	5	2	0 1	0 01	0 005	0 05	0 2	0 01
G285617	<0 5	0 41	0 89	137	1	25 6	2 71	231	95	24 6	0 14	<0 005	0 08	0 2	0 01
G285618	0 5	0 28	0 36	253	1	17 2	1 67	450	45	26 3	0 48	0 014	0 07	0 8	0 24
G285619	<0 5	0 25	0 45	99	1	12 4	1 80	39	98	237	0 79	0 009	0 10	<0 2	0 01
G285620	<0 5	0 22	0 47	70	1	9 9	1 26	44	58	30 3	0 16	<0 005	0 13	0 5	0 05
G285621	<0 5	0 29	1 97	141	4	11 5	1 83	108	123	0 7	0 20	<0 005	<0 05	0 9	0 09
G285622	<0 5	0 34	0 62	217	<1	21 2	2 04	86	100	1 9	0 01	0 008	0 06	0 2	0 02
G285623	<0 5	0 38	0 62	231	<1	23 5	2 45	103	102	0 4	0 01	0 006	0 07	0 2	0 02
G285624	<0 5	0 19	0 45	237	2	13 1	1 18	165	43	10 7	1 76	0 061	0 24	28 9	1 30
G285625	0 5	0 41	1 38	47	1	21 6	2 80	31	144	22 9	3 59	0 020	0 33	0 6	2 02
G285626	<0 5	0 37	0 93	219	1	21 7	2 21	123	56	4 3	0 05	0 020	0 73	0 3	0 02
G285630	<0 5	0 14	3 62	26	<1	10 9	1 01	37	108	27 4	2 99	0 042	0 25	86 3	1 45

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Sample Description	**Method** **Analyte** **Units** **LOR**	OA-GRA05 LOI % 0 01	TOT-ICP06 Total % 0 01	ME-4ACD81 Ag ppm 0 5	ME-4ACD81 As ppm 5	ME-4ACD81 Cd ppm 0 5	ME-4ACD81 Co ppm 1	ME-4ACD81 Cu ppm 1	ME-4ACD81 Mo ppm 1	ME-4ACD81 Ni ppm 1	ME-4ACD81 Pb ppm 1	ME-4ACD81 Zn ppm 2
G285617		3 79	98 2	<0 5	29	0 5	14	22	<1	8	5	236
G285618		4 36	98 4	<0 5	26	<0 5	31	34	<1	3	7	461
G285619		4 11	100 0	0 6	235	<0 5	6	80	<1	1	1	35
G285620		1 43	98 1	<0 5	31	<0 5	5	46	<1	41	2	44
G285621		2 21	98 4	<0 5	<5	<0 5	3	45	2	11	14	109
G285622		1 60	98 0	<0 5	<5	<0 5	17	125	<1	7	3	85
G285623		3 44	99 0	<0 5	<5	<0 5	24	126	<1	12	3	105
G285624		8 88	98 3	<0 5	6	<0 5	84	17	5	29	10	164
G285625		3 81	100 0	<0 5	21	<0 5	5	8	4	2	23	28
G285626		6 34	99 6	<0 5	5	<0 5	8	48	<1	5	4	120
G285630		8 63	100 5	1 0	19	<0 5	95	1440	3	13	9	37

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P.O No.:
This report is for 129 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 1-OCT-2009.

The following have access to data associated with this certificate

AL ARCHER VANCOUVER OFFICE	DOUG EATON BILL WENGZYNOWSKI	JOAN MARIACHER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-QC	Crushing QC Test
CRU-31	Fine crushing - 70% <2mm
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	ICP-AES
ME-4ACD81	Base Metals by 4-acid dig	ICP-AES
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	VARIABLE
Zn-OG62	Ore Grade Zn - Four Acid	VARIABLE
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (Leco)	LECO
S-IR08	Total Sulphur (Leco)	LECO
ME-MS81	38 element fusion ICP-MS	ICP-MS

To: **ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED**
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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

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	Method	WEI-21	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	C-IR07
	Analyte	Recvd Wt	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	C
	Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	LOR	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
G285238		0.42	71.2	14.20	4.00	2.54	0.94	5.20	0.90	<0.01	0.36	0.05	0.09	0.01	0.07	0.02
G285239		0.38	52.8	15.85	11.05	4.30	5.39	3.28	1.16	<0.01	0.90	0.19	0.08	0.01	0.06	0.37
G285240		0.52	55.0	16.15	9.98	6.46	3.92	2.41	0.78	<0.01	1.02	0.16	0.28	0.04	0.04	0.07
G285241		0.42	72.0	13.10	3.11	3.13	1.06	4.78	0.48	<0.01	0.31	0.06	0.05	0.02	0.03	0.11
G285242		0.38	49.6	15.45	9.05	6.91	6.00	3.01	0.82	0.01	0.86	0.19	0.14	0.01	0.03	1.19
G285243		0.32	70.0	13.55	3.62	2.19	1.08	4.29	1.48	<0.01	0.32	0.05	0.07	0.02	0.10	0.11
G285244	MOR	0.42	95.8	1.04	1.06	0.22	0.35	0.04	0.21	<0.01	0.03	0.01	0.02	<0.01	0.01	0.04
G285245		0.34	66.4	11.60	7.75	1.59	3.27	0.37	2.87	0.01	0.77	0.16	0.43	<0.01	0.09	0.03
G285246	07-02	0.42	48.9	16.55	8.69	5.86	6.50	4.73	0.35	0.01	0.97	0.24	0.14	0.01	0.01	1.04
G285247		0.48	76.7	11.85	1.74	1.42	0.68	5.72	0.15	<0.01	0.11	0.03	0.01	0.01	0.01	0.11
G285248		0.38	48.1	15.50	7.84	8.08	5.88	4.19	0.64	0.01	0.58	0.21	0.07	0.02	0.01	1.61
G285249		0.20	65.4	15.55	4.42	0.93	2.74	4.63	1.85	<0.01	0.45	0.05	0.14	0.01	0.08	0.16
G285250		0.24	50.2	15.30	15.75	0.55	6.92	0.20	1.94	0.01	0.86	0.20	0.19	<0.01	0.08	0.08
G285501		0.18	52.2	16.95	10.30	2.24	6.07	4.47	0.53	<0.01	1.34	0.12	0.14	0.01	0.16	0.27
G285502		0.36	17.40	5.90	45.7	1.88	2.20	0.65	0.89	<0.01	0.31	0.08	0.03	<0.01	0.33	0.39
G285503		0.32	6.20	1.49	57.7	0.95	0.67	0.46	0.11	<0.01	0.06	0.05	0.01	0.04	3.35	0.22
G285504		0.50	8.51	2.82	53.5	1.68	2.46	0.16	0.17	<0.01	0.11	0.09	<0.01	0.03	2.92	0.28
G285505	MOR	0.26	19.65	5.92	31.8	0.57	2.28	<0.01	1.25	<0.01	0.29	0.05	0.03	0.07	5.55	0.19
G285506		0.20	51.9	16.70	9.46	2.72	7.55	4.70	1.56	0.01	0.99	0.15	0.08	0.01	0.24	0.40
G285507	07-02	0.28	71.8	12.95	3.09	1.16	1.72	5.58	0.81	<0.01	0.34	0.04	0.07	0.01	0.11	0.10
G285508		0.26	33.1	9.85	28.6	2.72	4.85	1.14	0.90	<0.01	0.66	0.13	0.08	0.03	1.70	0.57
G285509		0.24	47.3	15.90	9.28	5.54	7.66	4.13	0.24	<0.01	1.18	0.22	0.16	0.01	0.11	1.10
G285510		0.24	26.9	10.10	38.6	0.22	1.28	1.02	2.62	<0.01	0.40	0.02	0.08	0.01	0.21	0.03
G285511		0.24	40.5	10.25	25.7	0.77	1.29	1.03	2.45	<0.01	0.33	0.03	<0.01	0.01	0.20	0.07
G285512		0.26	50.1	16.40	9.83	3.27	7.07	4.61	0.31	<0.01	1.28	0.20	0.22	0.01	0.02	0.65
G285513		0.24	73.2	11.70	4.30	0.77	1.34	4.83	0.48	<0.01	0.29	0.06	0.05	0.01	0.03	0.13
G285514		0.42	67.7	13.50	4.89	2.20	1.79	3.02	2.21	<0.01	0.34	0.08	0.08	0.01	0.10	0.47
G285515		0.30	59.9	13.65	6.23	3.58	3.75	4.17	3.24	0.02	0.58	0.14	0.25	0.04	0.10	0.76
G285516		0.26	73.8	7.09	5.09	2.46	3.99	1.43	0.58	0.02	0.80	0.18	0.18	0.01	0.03	0.88
G285517		0.26	9.81	0.16	0.58	28.8	19.25	0.04	0.04	<0.01	0.01	0.04	0.13	0.02	<0.01	11.55
G285518		0.36	54.7	13.75	8.18	6.45	5.74	2.92	0.45	0.04	0.70	0.21	0.10	0.01	0.02	1.11
G285519	MOR	0.34	64.7	15.25	6.96	4.40	1.64	5.12	0.17	<0.01	0.62	0.14	0.13	0.02	0.01	0.05
G285520		0.54	52.6	15.60	11.90	3.89	6.14	3.24	1.35	<0.01	1.18	0.18	0.12	<0.01	0.12	0.49
G285521	07-03	0.34	70.4	13.25	5.00	3.39	1.05	4.14	0.76	<0.01	0.47	0.09	0.11	0.02	0.10	0.05
G285522		0.50	51.5	15.40	9.78	5.86	6.41	3.35	0.61	<0.01	0.74	0.24	0.07	0.01	0.03	0.83
G285523		0.44	72.5	13.60	3.66	2.61	1.05	4.79	0.71	<0.01	0.38	0.06	0.08	0.01	0.04	0.02
G285524		0.42	67.9	14.65	4.56	3.37	1.36	4.81	1.07	<0.01	0.51	0.05	0.16	0.02	0.09	0.04
G285525		0.42	52.3	15.80	10.40	8.36	4.91	1.87	0.24	<0.01	1.04	0.22	0.19	0.03	0.04	0.28
G285526		0.44	49.5	15.80	10.15	5.20	5.98	3.02	1.45	<0.01	1.22	0.26	0.20	0.01	0.08	0.85
G285527		0.32	75.2	11.25	2.71	1.37	0.85	3.76	1.42	<0.01	0.22	0.04	0.03	<0.01	0.10	0.25

Comments Low whole rock totals confirmed by a re-analysis

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Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	S-IR08 S % 0.01	ME-MS81 Ag ppm 1	ME-MS81 Ba ppm 0.5	ME-MS81 Ce ppm 0.5	ME-MS81 Co ppm 0.5	ME-MS81 Cr ppm 10	ME-MS81 Cs ppm 0.01	ME-MS81 Cu ppm 5	ME-MS81 Dy ppm 0.05	ME-MS81 Er ppm 0.03	ME-MS81 Eu ppm 0.03	ME-MS81 Ga ppm 0.1	ME-MS81 Gd ppm 0.05	ME-MS81 Hf ppm 0.2	ME-MS81 Ho ppm 0.01
G285238		0.08	<1	621	50.2	4.5	10	0.28	9	4.56	2.87	0.93	15.3	4.41	5.4	0.90
G285239		0.01	<1	540	15.3	22.7	10	0.83	13	3.53	2.26	0.97	19.1	2.89	1.6	0.71
G285240		0.06	<1	350	29.3	18.2	<10	0.48	<5	4.11	2.50	1.27	17.1	4.22	2.7	0.83
G285241		0.17	<1	311	42.7	5.4	10	0.08	13	3.76	2.51	0.86	13.0	3.98	4.5	0.75
G285242		0.09	<1	235	14.7	23.8	80	0.41	38	2.92	1.88	0.99	14.1	2.78	1.6	0.59
G285243		0.59	<1	848	44.9	4.3	<10	0.36	5	4.67	2.88	0.96	14.3	4.68	4.6	0.90
G285244		0.10	<1	86.9	3.9	2.1	20	0.04	<5	0.40	0.27	0.12	2.3	0.45	0.2	0.09
G285245		0.44	<1	774	81.2	18.4	50	0.72	123	5.77	2.98	1.50	16.9	7.17	3.7	1.01
G285246		0.02	<1	73.5	12.9	25.5	50	0.26	<5	3.31	1.99	0.88	14.8	3.11	1.5	0.65
G285247		0.01	<1	59.7	48.6	1.6	10	0.02	9	3.67	2.49	0.59	10.7	3.78	4.1	0.75
G285248		0.02	<1	124.0	9.4	25.6	40	0.27	27	2.38	1.63	0.59	14.3	2.06	1.2	0.52
G285249		0.13	<1	690	41.8	6.2	10	0.36	7	3.84	2.31	0.97	16.7	4.13	4.4	0.71
G285250		1.92	<1	677	41.4	27.0	40	0.22	201	3.86	2.37	0.62	17.7	4.49	3.5	0.78
G285501		0.03	<1	1465	24.4	22.1	<10	0.08	16	4.21	2.66	1.18	18.3	3.96	2.8	0.82
G285502		36.0	<1	2720	19.4	18.2	10	0.14	64	2.09	1.18	0.48	7.1	2.42	1.1	0.36
G285503		43.1	<1	>10000	3.1	26.4	<10	0.01	265	0.40	0.22	0.21	1.9	0.44	<0.2	0.08
G285504		36.3	1	>10000	2.2	20.1	<10	0.11	1240	0.42	0.24	0.04	4.1	0.42	0.2	0.08
G285505		27.1	34	>10000	15.2	62.2	<10	0.20	9480	1.60	0.97	0.31	8.6	1.65	1.3	0.31
G285506		0.40	1	2420	21.0	34.0	80	0.96	373	4.76	2.82	1.18	20.3	4.27	2.2	0.93
G285507		0.15	1	966	46.7	3.8	10	0.26	160	3.50	2.46	0.96	11.7	3.84	4.6	0.73
G285508		17.85	8	>10000	12.7	51.2	40	0.20	2420	2.46	1.48	1.03	12.1	2.13	1.3	0.56
G285509		0.10	<1	931	31.6	27.8	10	0.12	165	4.90	2.96	1.35	16.9	4.61	2.0	0.95
G285510		27.5	15	1495	35.0	98.6	<10	0.18	>10000	3.26	1.84	0.44	13.5	3.42	3.3	0.60
G285511		18.50	9	1595	41.5	83.6	10	0.29	8700	4.09	2.38	0.62	16.0	4.17	3.8	0.81
G285512		0.18	<1	139.0	16.3	28.1	20	0.11	153	4.14	2.64	1.05	16.7	3.74	2.2	0.89
G285513		0.05	<1	220	24.9	2.5	10	0.08	22	5.80	4.09	1.16	14.3	5.00	3.6	1.29
G285514		0.33	<1	842	24.6	4.7	<10	1.62	16	4.65	3.05	1.03	16.2	4.08	3.0	0.99
G285515		0.05	<1	771	61.3	16.2	110	3.69	29	3.87	2.12	1.45	15.7	5.54	3.5	0.71
G285516		0.16	<1	264	33.9	19.6	120	0.37	40	2.68	1.38	0.98	10.0	3.76	2.4	0.49
G285517		0.02	<1	12.2	1.6	1.1	<10	0.04	<5	0.16	0.09	0.09	0.8	0.20	<0.2	0.01
G285518		0.02	<1	159.0	16.7	25.6	240	0.30	6	3.15	1.96	0.81	14.4	2.99	2.0	0.66
G285519		0.14	<1	75.5	23.6	11.6	10	0.07	51	4.87	3.26	1.30	17.0	4.35	2.8	1.06
G285520		0.01	<1	930	14.6	28.1	<10	0.73	<5	4.13	2.52	1.03	19.8	3.54	1.6	0.81
G285521		0.15	<1	804	25.0	6.5	<10	0.18	30	4.85	3.11	1.05	15.6	4.46	3.2	1.02
G285522		0.02	<1	275	8.7	31.4	10	0.38	5	2.42	1.54	0.61	15.5	2.18	1.3	0.49
G285523		0.03	<1	361	46.9	6.2	<10	0.13	15	4.50	2.87	1.04	16.4	4.79	4.9	0.92
G285524		0.33	<1	689	44.6	9.0	10	0.22	16	4.41	2.84	1.10	18.1	4.67	4.9	0.92
G285525		0.01	<1	297	19.3	27.3	10	0.26	32	3.44	2.07	1.06	19.7	3.37	1.7	0.67
G285526		0.27	<1	643	14.2	32.6	10	0.58	60	4.48	3.00	1.40	17.3	4.04	1.8	0.96
G285527		0.34	<1	846	36.0	3.3	10	0.21	<5	3.72	2.64	0.75	13.1	3.93	4.6	0.80

Comments Low whole rock totals confirmed by a re-analysis.

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Total # Pages: 5 (A - E)
Finalized Date: 29-OCT-2009
Account: F

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

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	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
Sample Description 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
G285238	25.7	0.47	<2	9.7	20.5	<5	27	5.56	23.1	4.21	2	122.0	0.8	0.74	8.17
G285239	7.0	0.35	<2	4.1	8.0	<5	24	1.84	32.3	2.38	1	117.0	0.3	0.51	1.57
G285240	13.5	0.36	2	6.8	15.5	6	20	3.58	21.5	3.78	1	293	0.4	0.70	2.53
G285241	21.0	0.39	<2	8.8	16.9	<5	6	4.50	10.2	3.51	1	139.0	0.7	0.64	7.27
G285242	6.5	0.26	<2	4.5	8.4	25	5	1.96	24.0	2.34	<1	127.5	0.3	0.49	1.09
G285243	22.5	0.44	<2	9.0	19.4	<5	34	5.11	32.7	4.01	2	126.5	0.7	0.77	7.26
G285244	1.7	0.04	<2	0.8	1.6	10	93	0.38	5.1	0.35	1	5.0	<0.1	0.08	0.42
G285245	42.9	0.40	<2	24.5	35.1	47	90	9.45	73.9	6.86	3	43.4	1.5	1.05	10.45
G285246	5.4	0.28	<2	4.5	8.7	26	70	1.82	10.0	2.35	1	116.0	0.2	0.55	0.62
G285247	25.0	0.36	5	7.0	17.2	6	44	5.05	2.2	3.66	1	89.6	0.7	0.61	9.48
G285248	4.1	0.24	<2	2.5	5.8	29	23	1.25	21.0	1.73	<1	141.0	0.1	0.39	0.69
G285249	19.9	0.34	<2	13.9	17.2	<5	11	4.57	43.2	3.62	2	58.2	0.9	0.62	6.79
G285250	20.6	0.32	<2	16.0	18.3	15	7	4.74	44.4	3.94	3	17.6	1.0	0.71	4.58
G285501	10.7	0.39	<2	6.7	13.1	<5	62	2.91	14.7	3.43	1	87.6	0.4	0.71	2.26
G285502	10.0	0.18	6	1.7	8.9	<5	682	2.28	23.0	2.10	27	31.8	0.1	0.36	1.48
G285503	2.4	0.04	17	<0.2	1.3	<5	484	0.31	3.4	0.33	5	275	<0.1	0.07	0.10
G285504	1.7	0.04	10	<0.2	1.2	<5	574	0.23	7.5	0.32	15	281	<0.1	0.08	<0.05
G285505	8.5	0.16	11	2.3	6.7	<5	4500	1.75	33.6	1.56	39	589	0.2	0.27	1.81
G285506	9.3	0.39	<2	6.1	12.2	36	136	2.89	52.2	3.36	2	90.5	0.3	0.78	1.63
G285507	25.8	0.43	<2	9.3	19.9	6	57	5.23	17.9	4.12	2	77.5	0.7	0.58	7.44
G285508	6.5	0.21	8	2.6	7.3	17	869	1.73	23.8	1.92	17	248	0.2	0.41	0.81
G285509	15.2	0.39	<2	5.9	17.1	16	46	3.88	7.1	4.07	1	123.0	0.3	0.79	0.93
G285510	17.1	0.26	5	6.6	15.6	<5	824	3.94	51.5	3.18	7	23.2	0.5	0.54	4.10
G285511	21.0	0.29	10	10.6	19.4	18	293	5.26	52.8	3.93	5	47.6	0.7	0.69	5.35
G285512	6.7	0.37	<2	5.0	11.1	13	49	2.40	7.3	3.06	2	65.6	0.3	0.66	1.11
G285513	11.3	0.60	<2	6.6	15.1	<5	8	3.39	10.1	4.25	1	44.1	0.4	0.89	2.75
G285514	11.6	0.49	<2	6.5	13.9	<5	12	3.23	69.7	3.53	1	95.1	0.4	0.71	2.80
G285515	31.7	0.28	<2	14.1	27.5	27	21	7.19	145.0	5.68	2	309	0.9	0.75	10.65
G285516	17.3	0.18	<2	14.2	17.8	63	12	4.36	12.8	3.53	1	65.8	0.9	0.50	4.31
G285517	1.0	<0.01	<2	0.2	0.9	<5	<5	0.22	1.6	0.18	<1	135.0	<0.1	0.01	0.09
G285518	7.6	0.26	<2	4.8	10.1	61	<5	2.25	10.3	2.55	1	109.0	0.3	0.52	1.71
G285519	10.9	0.50	<2	3.9	14.0	<5	13	3.17	3.4	3.74	1	197.0	0.3	0.80	2.07
G285520	6.5	0.35	<2	3.7	9.8	<5	19	2.13	35.7	2.98	1	47.8	0.2	0.63	0.88
G285521	11.9	0.48	<2	6.2	14.0	<5	28	3.27	15.9	3.55	1	140.0	0.4	0.73	3.40
G285522	3.7	0.20	<2	2.2	6.1	11	23	1.31	16.7	1.78	1	123.5	0.1	0.38	0.69
G285523	23.6	0.43	<2	10.3	20.9	<5	25	5.44	13.9	4.43	2	122.0	0.7	0.72	8.13
G285524	22.9	0.42	2	13.3	20.4	<5	<5	5.29	20.4	4.34	3	155.5	0.8	0.73	6.58
G285525	9.0	0.29	<2	5.3	11.7	6	30	2.62	6.3	2.81	1	270	0.3	0.54	1.91
G285526	5.9	0.39	<2	5.6	10.5	17	17	2.15	37.6	3.14	1	103.0	0.2	0.72	0.53
G285527	18.1	0.42	2	9.0	16.3	<5	14	4.29	32.0	3.43	2	40.6	0.6	0.58	6.93

Comments Low whole rock totals confirmed by a re-analysis

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CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	ME-MS81 Tl ppm 0.5	ME-MS81 Tm ppm 0.01	ME-MS81 U ppm 0.05	ME-MS81 V ppm 5	ME-MS81 W ppm 1	ME-MS81 Y ppm 0.5	ME-MS81 Yb ppm 0.03	ME-MS81 Zn ppm 5	ME-MS81 Zr ppm 2	ME-MS42 As ppm 0.1	ME-MS42 Bi ppm 0.01	ME-MS42 Hg ppm 0.005	ME-MS42 Sb ppm 0.05	ME-MS42 Se ppm 0.2	ME-MS42 Te ppm 0.01
G285238		<0.5	0.44	2.40	38	<1	27.3	2.76	32	193	0.9	0.08	<0.005	0.11	<0.2	0.01
G285239		<0.5	0.33	0.67	428	1	19.5	2.20	159	58	0.1	0.05	<0.005	0.05	<0.2	<0.01
G285240		<0.5	0.36	0.88	185	1	22.2	2.34	68	91	0.5	0.04	<0.005	0.11	0.2	0.01
G285241		<0.5	0.39	2.12	42	1	22.5	2.54	27	160	0.4	0.05	<0.005	0.06	<0.2	0.02
G285242		<0.5	0.29	0.39	220	1	16.3	1.76	83	55	<0.1	0.05	<0.005	0.06	0.2	0.01
G285243		<0.5	0.43	2.24	42	1	25.0	2.67	39	153	0.9	0.10	<0.005	0.05	0.3	0.15
G285244		<0.5	0.06	0.15	12	<1	2.2	0.25	12	10	0.9	0.07	<0.005	<0.05	<0.2	0.04
G285245		<0.5	0.45	4.55	136	2	29.0	2.64	198	144	4.9	0.12	<0.005	0.08	0.4	0.20
G285246		<0.5	0.31	0.28	158	2	17.8	1.79	106	55	0.6	0.09	<0.005	<0.05	0.2	0.01
G285247		<0.5	0.40	2.47	28	1	22.3	2.43	17	142	0.5	0.08	<0.005	<0.05	0.2	0.01
G285248		<0.5	0.25	0.32	173	1	14.1	1.54	99	40	0.1	0.09	<0.005	<0.05	0.2	0.02
G285249		<0.5	0.34	2.22	47	1	21.9	2.19	90	175	4.3	0.14	<0.005	0.10	<0.2	0.02
G285250		1.0	0.33	1.60	116	2	21.1	2.13	129	133	11.5	2.87	<0.005	0.12	2.6	0.57
G285501		0.8	0.41	0.73	315	1	23.0	2.51	167	103	6.2	0.08	<0.005	0.23	0.2	0.01
G285502		1.5	0.19	2.68	28	1	10.8	1.12	>10000	42	58.7	80.8	17.25	1.84	249	0.61
G285503		0.5	0.04	0.31	<5	1	2.5	0.25	5970	4	>250	135.5	10.05	>250	50.8	0.53
G285504		0.7	0.04	0.89	10	<1	2.8	0.24	>10000	5	45.3	105.0	20.1	3.92	80.9	0.93
G285505		3.6	0.14	1.63	24	2	9.7	1.00	>10000	45	>250	179.5	22.0	99.2	77.1	0.54
G285506		2.9	0.43	0.77	255	2	24.7	2.59	609	83	12.8	2.62	0.444	2.46	1.6	0.03
G285507		0.9	0.39	2.27	56	1	22.4	2.65	164	175	11.6	1.54	0.169	2.22	0.7	<0.01
G285508		0.9	0.25	1.05	124	4	12.2	1.40	8590	54	36.6	48.8	5.51	1.69	47.7	0.20
G285509		<0.5	0.42	0.50	217	5	27.5	2.67	268	75	12.8	0.54	0.101	0.85	0.6	0.01
G285510		1.3	0.28	2.45	37	3	15.2	1.60	2880	119	78.0	107.0	2.55	1.17	232	3.55
G285511		1.0	0.33	3.24	56	4	18.0	2.13	3170	148	48.5	45.4	2.45	0.38	119.0	1.47
G285512		<0.5	0.37	0.36	226	4	22.5	2.56	1215	85	3.9	1.87	0.309	0.08	1.4	0.02
G285513		<0.5	0.58	0.91	<5	1	32.3	4.13	42	129	14.9	0.77	0.018	0.09	0.3	<0.01
G285514		<0.5	0.47	0.91	16	1	25.3	3.02	62	105	5.2	0.19	0.006	0.06	0.4	0.01
G285515		<0.5	0.30	3.81	94	2	19.3	1.96	71	142	2.1	0.10	<0.005	0.05	0.3	0.01
G285516		<0.5	0.17	1.60	79	1	12.8	1.27	60	97	11.5	0.07	0.005	0.25	0.3	0.02
G285517		<0.5	0.01	0.63	<5	<1	1.1	0.08	13	3	<0.1	0.03	<0.005	0.07	0.2	0.01
G285518		<0.5	0.27	0.44	153	2	16.5	1.83	85	70	<0.1	0.03	<0.005	0.05	0.2	0.01
G285519		<0.5	0.46	0.70	93	1	26.7	3.25	51	101	0.4	0.03	<0.005	0.08	0.5	0.03
G285520		<0.5	0.36	0.35	313	1	21.9	2.46	144	61	0.1	0.02	<0.005	<0.05	0.2	<0.01
G285521		<0.5	0.46	1.08	24	1	26.6	3.19	51	118	1.1	0.05	<0.005	<0.05	<0.2	<0.01
G285522		<0.5	0.20	0.19	233	1	12.6	1.48	111	45	<0.1	0.03	<0.005	<0.05	<0.2	0.01
G285523		<0.5	0.44	2.29	34	<1	25.3	3.01	29	195	0.7	0.27	<0.005	0.07	<0.2	<0.01
G285524		<0.5	0.40	1.98	46	1	24.1	2.88	22	210	1.2	0.06	<0.005	0.05	0.3	0.05
G285525		<0.5	0.28	0.49	287	1	18.1	2.04	104	67	0.8	0.04	<0.005	0.10	0.2	0.02
G285526		<0.5	0.42	0.43	165	2	26.7	2.80	146	67	1.8	0.33	<0.005	<0.05	0.4	0.10
G285527		<0.5	0.42	1.70	19	1	21.5	2.69	30	178	2.0	0.23	<0.005	0.05	0.3	0.04

Comments Low whole rock totals confirmed by a re-analysis

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Method	OA-GRA05	TOT-ICP06	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	Cu-OG62	Zn-OG62
Analyte	LOI	Total	Ag	As	Cd	Co	Cu	Mo	Ni	Pb	Zn	Cu	Zn
Units	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Sample Description LOR	0 01	0 01	0 5	5	0 5	1	1	1	1	1	2	0 001	0 001
G285238	1 18	100 5	<0 5	9	<0 5	5	9	1	2	<1	29		
G285239	4 23	99 3	<0 5	<5	<0 5	23	14	2	3	<1	157		
G285240	3 96	100 0	<0 5	<5	<0 5	18	6	3	5	<1	60		
G285241	1 58	99 7	<0 5	<5	<0 5	3	13	2	2	1	24		
G285242	7 82	99 9	<0 5	6	<0 5	24	41	<1	22	5	79		
G285243	1 78	98 6	<0 5	7	<0 5	4	5	1	<1	<1	40		
G285244	0 77	99 6	<0 5	<5	<0 5	1	3	1	9	<1	13		
G285245	3 23	98 5	<0 5	<5	1 1	16	119	1	46	<1	183		
G285246	5 48	98 4	<0 5	5	<0 5	25	2	<1	24	6	94		
G285247	0 89	99 3	0 5	<5	<0 5	1	9	5	1	<1	13		
G285248	9 42	100 5	<0 5	6	<0 5	25	29	1	25	<1	100		
G285249	3 08	99 3	<0 5	8	<0 5	6	16	1	1	8	87		
G285250	6 12	98 3	<0 5	17	<0 5	26	197	2	13	<1	120		
G285501	3 98	98 5	<0 5	17	<0 5	22	18	1	<1	37	160		
G285502	22 6	98 0	39 6	60	64 1	68	1745	7	8	2990	>10000		2 67
G285503	27 3	98 4	74 2	916	33 6	216	>10000	24	10	2940	9700	2 09	
G285504	25 3	97 8	55 4	61	76 1	100	>10000	14	14	2260	>10000	2 71	2 62
G285505	19 15	86 6	84 2	292	73 7	118	>10000	15	12	5420	>10000	2 40	2 25
G285506	4 14	100 0	1 2	18	1 2	30	349	<1	31	100	499		
G285507	1 08	98 8	0 9	18	0 6	4	166	1	3	58	165		
G285508	14 45	98 2	14 3	33	38 3	54	3830	10	22	1250	9990		
G285509	7 31	99 0	<0 5	21	0 6	25	156	1	15	28	230		
G285510	17 75	99 2	42 1	78	15 7	146	>10000	7	5	1490	3290	1 900	
G285511	12 45	95 0	17 5	41	14 8	81	>10000	11	6	665	3640	1 435	
G285512	4 77	98 1	0 5	11	1 0	28	226	1	15	47	1420		
G285513	1 54	98 6	<0 5	16	<0 5	2	34	1	1	<1	48		
G285514	2 70	98 6	<0 5	8	<0 5	2	22	1	<1	4	66		
G285515	3 85	99 5	<0 5	5	<0 5	13	35	1	26	9	75		
G285516	4 34	100 0	<0 5	23	<0 5	18	50	1	69	3	62		
G285517	41 2	100 0	<0 5	<5	<0 5	<1	4	1	4	8	19		
G285518	4 77	98 0	<0 5	5	<0 5	22	6	1	63	<1	92		
G285519	0 79	100 0	<0 5	<5	<0 5	10	59	1	3	<1	50		
G285520	4 00	100 5	<0 5	<5	<0 5	25	<1	<1	3	2	144		
G285521	0 99	99 8	<0 5	<5	<0 5	5	31	<1	<1	4	51		
G285522	5 47	99 5	<0 5	<5	<0 5	26	2	<1	12	5	109		
G285523	0 20	99 7	<0 5	5	<0 5	6	17	2	2	2	30		
G285524	1 19	99 7	<0 5	10	<0 5	9	20	3	1	<1	22		
G285525	3 16	98 6	<0 5	<5	<0 5	23	38	<1	6	19	105		
G285526	5 37	98 2	<0 5	5	<0 5	29	76	1	20	3	162		
G285527	1 47	98 4	<0 5	5	<0 5	2	5	2	1	6	33		

Comments Low whole rock totals confirmed by a re-analysis

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	WEI-21	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	C-IR07
Analyte	Recvd Wt	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	C
Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
LOR	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
G285528	0.22	55.2	12.10	16.55	0.51	4.87	0.15	1.75	<0.01	0.41	0.20	0.07	<0.01	0.09	0.02
G285529	0.22	19.80	5.58	38.0	0.78	2.46	0.41	1.01	<0.01	0.26	0.06	0.09	0.07	4.72	0.17
G285530	0.18	49.8	15.80	9.84	2.54	7.77	1.81	1.84	<0.01	0.73	0.19	0.04	0.02	1.58	0.44
G285531	0.30	6.50	2.00	52.4	0.51	0.78	0.31	0.29	<0.01	0.09	0.03	0.06	0.04	3.54	0.10
G285532	0.16	66.2	11.10	9.68	1.65	3.45	0.28	2.52	<0.01	0.37	0.08	0.06	0.01	0.22	0.25
G285533	0.36	75.7	12.40	3.37	0.46	0.65	4.77	1.82	<0.01	0.24	0.04	0.05	0.01	0.10	0.08
G285534	0.20	61.1	14.75	6.56	1.50	5.09	2.73	3.71	<0.01	0.72	0.17	0.10	<0.01	0.14	0.29
G285535	0.36	52.3	9.84	20.9	0.55	6.11	0.50	0.66	<0.01	0.30	0.12	0.11	<0.01	0.07	0.03
G285536	0.34	69.4	12.80	5.88	2.26	1.73	4.46	0.74	<0.01	0.50	0.13	0.09	0.01	0.06	0.28
G285537	0.36	70.0	13.65	3.71	1.92	1.97	3.70	1.88	<0.01	0.39	0.06	0.09	<0.01	0.08	0.45
G285538	0.30	58.6	14.05	6.36	4.79	3.80	2.77	3.76	0.02	0.58	0.13	0.24	0.02	0.14	1.16
G285539	0.30	91.2	2.53	1.63	0.97	0.79	0.04	0.82	<0.01	0.14	0.06	0.02	<0.01	0.02	0.57
G285540	0.44	2.34	0.40	0.60	30.1	20.5	0.02	0.10	<0.01	0.04	0.04	<0.01	0.04	0.02	12.90
G285541	0.36	39.4	12.90	10.70	7.62	10.25	1.11	1.16	0.04	2.11	0.12	0.27	0.02	0.08	2.81
G285542	0.24	67.2	13.70	4.94	3.90	1.81	3.62	0.75	<0.01	0.67	0.06	0.16	0.03	0.03	0.17
G285543	0.26	25.3	3.45	52.3	3.97	3.16	0.04	<0.01	<0.01	0.17	0.15	0.07	0.01	0.01	0.84
G285544	0.30	39.2	6.58	33.6	6.35	5.28	1.45	0.14	<0.01	0.22	0.17	0.07	0.01	<0.01	0.16
G285545	0.18	52.0	16.70	9.90	7.77	4.86	5.11	0.05	<0.01	0.73	0.13	0.10	0.04	<0.01	0.09
G285546	0.36	70.3	13.85	3.68	1.82	1.43	5.59	0.50	<0.01	0.37	0.04	0.06	0.01	0.02	0.22
G285547	0.22	46.5	10.20	20.5	3.58	6.06	1.03	0.13	0.09	0.53	0.27	0.05	0.02	0.01	0.38
G285548	0.22	60.5	14.70	6.98	4.85	2.78	3.23	0.78	<0.01	0.86	0.16	0.26	0.04	0.07	0.05
G285549	0.30	46.5	16.35	10.25	4.38	8.16	3.94	0.57	0.01	0.77	0.34	0.07	0.01	0.02	1.59
G285550	0.34	57.4	13.85	8.73	4.38	3.92	2.56	1.77	0.01	0.78	0.18	0.09	0.01	0.04	1.43
G285551	0.36	52.7	16.40	9.81	7.32	4.83	3.57	0.17	<0.01	0.75	0.19	0.09	0.04	0.03	0.07
G285552	0.26	72.3	13.40	2.35	1.75	1.22	5.34	0.54	<0.01	0.28	0.04	0.04	0.02	0.05	0.02
G285553	0.22	50.6	16.45	8.57	9.47	6.54	3.57	0.05	0.02	0.67	0.17	0.15	0.03	<0.01	0.02
G285554	0.14	49.0	7.04	23.1	8.73	7.59	1.04	0.16	<0.01	0.15	0.41	<0.01	<0.01	<0.01	0.16
G285555	0.20	64.9	14.95	5.30	3.77	1.53	5.09	0.30	<0.01	0.70	0.08	0.19	0.02	0.02	0.13
G285556	0.16	48.6	16.00	13.00	2.82	7.98	3.17	0.13	0.02	0.89	0.17	0.09	0.01	0.01	0.42
G285557	0.28	9.92	2.99	56.2	0.76	1.83	0.19	0.17	<0.01	0.12	0.05	<0.01	0.01	0.07	0.16
G285558	0.22	69.0	13.60	3.77	1.19	2.35	4.72	0.98	<0.01	0.39	0.05	0.06	0.01	0.12	0.19
G285559	0.20	51.2	13.40	12.00	3.56	5.71	1.84	1.51	0.01	0.55	0.18	0.04	0.01	0.92	0.79
G285560	0.20	47.0	16.90	12.55	2.06	8.25	4.04	0.35	0.01	0.78	0.23	0.15	0.01	0.03	0.43
G285561	0.46	60.6	14.25	8.64	3.35	2.16	2.79	2.20	<0.01	0.86	0.19	0.15	0.02	0.10	0.61
G285562	0.46	69.7	13.65	3.14	2.64	0.42	3.79	2.43	<0.01	0.28	0.05	0.04	0.01	0.08	0.53
G285563	0.38	50.3	8.87	13.05	8.24	9.43	0.98	0.02	0.01	0.37	0.40	0.09	0.02	0.11	1.47
G285564	0.44	74.7	12.20	2.23	3.32	0.36	4.27	0.47	<0.01	0.19	0.04	0.02	0.02	0.04	0.07
G285565	0.36	66.3	15.25	4.72	2.88	2.60	4.11	0.71	<0.01	0.92	0.08	0.12	0.02	0.03	0.04
G285566	0.52	67.2	12.65	6.02	1.90	4.33	3.71	0.06	0.01	0.56	0.08	0.08	0.01	<0.01	0.04
G285567	0.48	68.2	13.55	4.09	2.63	2.44	3.25	1.16	<0.01	0.58	0.06	0.06	0.02	0.07	0.22

MOR 07-03

MOR 08-05 (3)

Comments Low whole rock totals confirmed by a re-analysis

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Total # Pages: 5 (A - E)
Finalized Date: 29-OCT-2009
Account: F

Project MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	S-IR08 S % 0.01	ME-MS81 Ag ppm 1	ME-MS81 Ba ppm 0.5	ME-MS81 Ce ppm 0.5	ME-MS81 Co ppm 0.5	ME-MS81 Cr ppm 10	ME-MS81 Cs ppm 0.01	ME-MS81 Cu ppm 5	ME-MS81 Dy ppm 0.05	ME-MS81 Er ppm 0.03	ME-MS81 Eu ppm 0.03	ME-MS81 Ga ppm 0.1	ME-MS81 Gd ppm 0.05	ME-MS81 Hf ppm 0.2	ME-MS81 Ho ppm 0.01
G285528		5.68	1	707	46.1	17.9	10	0.20	599	4.68	2.80	0.53	16.2	5.09	4.6	0.94
G285529		31.6	29	>10000	11.9	35.5	<10	0.32	4040	1.37	0.81	1.15	10.4	1.59	1.2	0.23
G285530		1.04	7	>10000	11.2	7.5	40	0.26	2620	2.57	1.98	0.80	18.8	2.11	1.1	0.57
G285531		44.3	18	>10000	6.2	100.0	<10	0.06	>10000	0.58	0.30	0.64	6.9	0.75	0.7	0.04
G285532		1.32	1	1755	34.8	15.3	20	0.36	228	3.73	2.34	0.62	16.3	3.99	3.8	0.79
G285533		0.11	<1	836	46.3	2.4	10	0.45	116	5.60	3.78	1.07	15.0	5.77	5.5	1.18
G285534		0.85	<1	1035	29.6	15.8	20	1.59	95	3.90	2.48	1.02	16.7	3.85	3.4	0.81
G285535		8.01	1	535	23.9	57.5	<10	0.15	2540	2.97	2.26	0.36	18.9	2.50	3.8	0.70
G285536		0.17	<1	478	17.6	7.1	<10	0.21	37	4.49	2.93	1.05	15.9	3.80	2.5	0.95
G285537		1.37	<1	629	29.3	10.4	10	1.06	42	4.86	3.09	1.03	16.3	4.57	3.2	1.02
G285538		0.08	<1	1125	67.8	16.5	110	4.49	19	3.90	2.12	1.58	16.6	5.61	3.8	0.69
G285539		0.40	<1	177.5	11.3	6.8	30	0.42	34	0.65	0.44	0.20	5.2	0.88	0.8	0.12
G285540		<0.01	<1	142.5	1.6	1.3	<10	0.09	<5	0.19	0.08	0.05	1.3	0.17	0.2	0.01
G285541		0.12	<1	670	40.8	29.6	310	3.13	<5	4.43	2.31	1.86	21.4	5.65	3.6	0.82
G285542		0.10	<1	202	37.8	10.4	10	0.68	<5	3.83	2.37	1.04	15.9	4.20	3.8	0.75
G285543		19.60	<1	16.3	15.7	77.0	<10	0.11	400	1.13	0.77	0.12	8.8	1.45	1.3	0.16
G285544		11.35	<1	23.0	16.7	15.7	20	0.05	72	0.97	0.56	0.34	13.2	1.53	1.3	0.12
G285545		0.04	<1	36.6	15.7	29.8	<10	0.02	<5	3.13	1.96	0.85	18.4	2.84	1.7	0.63
G285546		0.03	<1	132.0	49.7	4.3	10	0.60	<5	5.06	3.18	1.05	16.2	5.40	6.1	0.99
G285547		8.44	3	103.5	11.4	92.1	550	0.31	7690	4.82	3.09	1.38	21.8	3.92	1.8	1.07
G285548		0.61	<1	544	43.0	14.2	10	0.32	38	4.85	2.86	1.36	17.1	4.93	4.1	0.97
G285549		1.45	<1	199.5	8.1	35.8	90	0.29	240	2.66	1.77	0.79	15.9	2.29	1.3	0.55
G285550		0.08	<1	327	12.7	19.7	40	0.70	27	3.01	2.03	0.68	14.4	2.41	1.8	0.65
G285551		0.02	<1	267	13.2	30.8	10	0.09	16	2.77	1.83	0.74	16.9	2.59	1.4	0.58
G285552		0.06	<1	412	44.1	4.0	10	0.17	5	4.08	2.54	0.83	13.7	4.30	4.9	0.83
G285553		0.01	<1	40.4	10.8	31.3	100	0.03	45	2.23	1.34	0.68	13.6	2.03	0.9	0.40
G285554		1.08	3	45.7	23.3	46.1	30	0.24	4300	2.11	1.44	0.59	12.0	1.75	1.1	0.34
G285555		0.06	<1	182.5	35.8	8.6	10	0.33	23	4.08	2.57	1.19	15.2	4.45	3.7	0.86
G285556		0.32	1	79.6	15.7	14.4	130	0.10	1600	3.25	1.96	0.78	16.8	3.06	1.7	0.64
G285557		43.3	24	550	9.2	46.8	<10	<0.01	4610	0.72	0.41	0.19	4.9	0.84	0.7	0.05
G285558		0.21	<1	949	40.7	7.2	10	0.17	65	3.57	2.54	0.91	13.9	3.71	4.9	0.79
G285559		5.51	5	7150	17.7	25.4	60	0.19	704	2.97	1.90	0.76	13.4	2.74	2.1	0.63
G285560		2.63	<1	228	10.1	34.1	60	0.25	127	2.73	1.87	0.72	16.9	2.26	1.1	0.61
G285561		0.04	<1	826	28.8	16.4	<10	0.99	60	5.43	3.35	1.33	18.2	4.94	3.4	1.11
G285562		0.03	<1	596	47.0	3.0	10	0.86	6	5.41	3.41	1.06	16.0	5.04	5.7	1.11
G285563		0.87	<1	855	31.4	28.0	40	0.20	88	2.15	1.24	0.69	12.5	2.43	2.3	0.42
G285564		0.02	<1	325	50.3	1.7	10	0.26	<5	5.45	3.47	0.94	12.1	5.43	5.8	1.11
G285565		<0.01	<1	235	39.9	13.1	10	0.62	<5	3.94	2.21	1.08	16.0	4.03	4.2	0.73
G285566		0.02	<1	42.8	38.3	10.4	70	0.09	<5	2.81	1.76	0.56	13.8	3.02	4.6	0.55
G285567		0.01	<1	558	32.7	6.5	30	0.64	<5	4.02	2.69	0.94	13.4	3.73	4.0	0.84

Comments Low whole rock totals confirmed by a re-analysis

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Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	ME-MS81 La ppm 0.5	ME-MS81 Lu ppm 0.01	ME-MS81 Mo ppm 2	ME-MS81 Nb ppm 0.2	ME-MS81 Nd ppm 0.1	ME-MS81 Ni ppm 5	ME-MS81 Pb ppm 5	ME-MS81 Pr ppm 0.03	ME-MS81 Rb ppm 0.2	ME-MS81 Sm ppm 0.03	ME-MS81 Sn ppm 1	ME-MS81 Sr ppm 0.1	ME-MS81 Ta ppm 0.1	ME-MS81 Tb ppm 0.01	ME-MS81 Th ppm 0.05
G285528		23.2	0.40	4	13.4	21.6	<5	46	5.56	38.3	4.69	4	23.3	0.9	0.79	6.55
G285529		6.6	0.06	9	1.8	5.8	<5	4530	1.46	24.1	1.12	43	469	0.1	0.17	1.39
G285530		5.7	0.31	<2	5.5	6.9	13	340	1.50	37.9	1.67	36	130.0	0.4	0.36	0.90
G285531		4.2	<0.01	9	1.0	3.0	<5	2120	0.74	7.3	0.51	33	314	<0.1	0.01	0.76
G285532		16.7	0.34	<2	10.4	16.9	8	313	4.20	59.1	3.63	4	56.8	0.7	0.64	5.05
G285533		22.6	0.56	<2	11.7	22.6	<5	25	5.71	49.7	5.00	2	47.2	0.8	0.92	7.47
G285534		14.5	0.37	<2	8.5	14.7	8	346	3.58	95.2	3.46	2	37.2	0.5	0.64	4.33
G285535		11.3	0.24	2	10.2	11.3	6	47	2.88	15.3	2.54	3	24.1	0.7	0.46	5.15
G285536		7.8	0.42	<2	5.3	11.3	<5	25	2.45	15.6	3.09	1	85.4	0.3	0.68	1.85
G285537		14.1	0.45	<2	8.1	15.9	<5	65	3.79	53.4	4.09	1	51.0	0.5	0.77	3.10
G285538		35.9	0.26	<2	15.1	29.5	23	32	7.86	150.0	5.80	2	202	1.0	0.73	12.10
G285539		5.6	0.05	<2	3.3	4.7	21	14	1.26	24.0	0.91	1	39.3	0.2	0.11	1.52
G285540		0.9	<0.01	<2	0.8	0.9	<5	<5	0.21	3.0	0.13	<1	286	<0.1	<0.01	0.10
G285541		20.4	0.27	<2	33.0	22.7	149	<5	5.24	39.6	5.29	2	179.5	2.0	0.81	2.48
G285542		18.5	0.33	7	10.5	18.1	9	5	4.68	19.8	4.19	2	213	0.7	0.64	5.85
G285543		7.3	0.02	15	1.3	6.8	<5	11	1.69	0.5	1.33	3	12.4	0.1	0.11	2.53
G285544		7.4	0.01	<2	1.7	7.7	6	17	1.90	1.3	1.13	11	66.0	0.1	0.10	2.59
G285545		6.9	0.26	2	3.1	10.2	6	10	2.15	0.3	2.62	1	359	0.2	0.48	1.41
G285546		24.6	0.46	<2	14.5	22.9	<5	7	5.83	11.1	4.71	2	102.0	1.0	0.81	8.09
G285547		5.7	0.34	11	2.3	7.8	130	15	1.58	3.0	2.58	2	182.0	0.1	0.71	0.31
G285548		21.1	0.38	<2	14.3	21.2	<5	15	5.25	14.2	4.57	1	269	1.1	0.77	5.42
G285549		3.6	0.22	<2	1.7	6.1	48	13	1.24	9.6	1.82	2	76.8	0.1	0.40	0.41
G285550		5.9	0.28	<2	3.4	7.4	12	16	1.68	26.8	2.03	1	57.8	0.3	0.43	1.52
G285551		5.9	0.23	<2	2.6	8.4	6	37	1.82	1.4	2.28	1	336	0.2	0.46	1.08
G285552		21.8	0.40	2	11.5	19.8	<5	<5	5.18	10.9	4.00	1	136.0	1.0	0.65	7.13
G285553		4.8	0.15	<2	1.8	7.3	47	<5	1.56	0.3	1.96	<1	249	0.1	0.35	0.75
G285554		10.6	0.11	3	1.6	9.6	36	<5	2.53	0.4	1.92	7	24.4	0.3	0.22	3.88
G285555		17.1	0.34	<2	9.8	18.3	7	<5	4.45	6.1	4.06	2	176.5	0.7	0.70	4.53
G285556		7.3	0.24	<2	5.6	9.4	33	60	2.15	3.3	2.48	7	76.9	0.3	0.50	1.35
G285557		5.1	<0.01	9	0.7	4.3	<5	1330	1.05	3.8	0.68	4	16.4	<0.1	0.06	0.99
G285558		21.5	0.35	<2	9.2	17.2	5	50	4.60	23.7	3.64	2	56.7	0.8	0.61	7.57
G285559		8.6	0.27	4	4.6	9.4	23	1540	2.20	33.8	2.33	31	104.5	0.3	0.45	2.18
G285560		4.5	0.25	<2	2.4	7.1	25	9	1.49	5.4	1.93	2	58.8	0.1	0.39	0.64
G285561		13.0	0.41	2	7.0	16.8	<5	19	3.82	47.4	4.38	1	128.5	0.5	0.82	3.04
G285562		23.5	0.50	<2	11.2	22.0	<5	<5	5.55	44.2	4.65	2	78.5	0.9	0.86	7.67
G285563		16.5	0.16	<2	5.9	12.3	22	<5	3.29	0.2	2.28	5	140.5	0.4	0.37	4.14
G285564		24.8	0.52	4	11.8	23.7	<5	<5	6.16	9.7	5.33	3	179.5	0.9	0.91	7.82
G285565		20.1	0.27	<2	16.5	18.5	12	<5	4.72	15.9	3.91	2	189.0	1.3	0.62	5.12
G285566		19.5	0.24	4	10.2	16.1	18	5	4.34	1.2	3.01	1	107.5	0.8	0.45	7.02
G285567		15.8	0.38	<2	8.6	15.9	8	9	4.01	23.2	3.54	3	121.0	0.7	0.63	6.08

Comments Low whole rock totals confirmed by a re-analysis

CERTIFICATE OF ANALYSIS VA09107974

Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
Analyte	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	As	Bi	Hg	Sb	Se	Te
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description LOR	0.5	0.01	0.05	5	1	0.5	0.03	5	2	0.1	0.01	0.005	0.05	0.2	0.01
G285528	1.3	0.38	2.07	23	2	22.3	2.70	117	187	22.7	6.71	0.022	0.13	20.0	0.11
G285529	1.8	0.08	1.49	22	2	7.3	0.89	>10000	46	135.0	68.8	>25.0	89.0	79.0	0.45
G285530	3.3	0.32	0.58	128	2	15.6	2.28	2400	39	>250	7.25	4.32	239	5.2	0.03
G285531	0.9	<0.01	1.03	11	2	3.3	0.39	>10000	26	234	95.8	19.50	122.5	180.5	1.59
G285532	2.2	0.35	1.58	81	3	19.8	2.34	299	152	23.1	2.67	0.279	5.43	3.9	0.24
G285533	<0.5	0.54	2.09	5	1	31.4	4.08	118	214	2.3	0.48	0.090	0.69	0.9	0.01
G285534	0.9	0.35	1.40	109	3	21.3	2.46	1315	140	6.1	0.73	0.311	0.76	0.6	0.06
G285535	<0.5	0.29	1.64	15	2	18.5	2.46	114	153	38.3	11.70	0.074	0.24	30.9	1.24
G285536	<0.5	0.41	0.60	18	1	24.3	2.91	84	93	1.1	0.23	0.010	0.27	0.5	0.02
G285537	<0.5	0.43	0.98	13	2	26.8	3.07	60	118	11.7	0.77	0.008	0.28	5.0	0.60
G285538	<0.5	0.27	3.92	96	4	19.0	1.89	61	158	1.3	0.04	<0.005	0.18	0.4	0.02
G285539	<0.5	0.06	1.19	34	1	3.8	0.46	25	34	19.3	0.04	<0.005	1.42	0.7	0.04
G285540	<0.5	<0.01	0.63	<5	1	0.7	0.07	12	7	<0.1	<0.01	<0.005	0.09	0.3	0.02
G285541	<0.5	0.28	1.00	185	7	20.5	1.90	131	151	1.4	0.02	<0.005	0.36	0.3	0.01
G285542	<0.5	0.33	1.80	54	2	20.4	2.29	19	149	1.0	0.08	<0.005	0.11	0.2	0.01
G285543	<0.5	0.07	1.41	14	1	6.2	0.77	37	52	35.2	1.95	<0.005	0.18	94.4	1.40
G285544	<0.5	0.01	0.90	50	1	5.1	0.52	31	50	42.7	0.80	<0.005	0.06	56.4	0.42
G285545	<0.5	0.28	0.65	259	1	17.1	1.96	48	60	1.2	0.13	<0.005	0.17	0.5	0.01
G285546	<0.5	0.48	1.88	30	1	27.4	3.13	20	249	0.2	0.12	<0.005	0.06	0.3	<0.01
G285547	<0.5	0.37	1.11	169	5	29.5	2.69	71	74	3.0	7.41	0.056	0.09	35.0	4.73
G285548	<0.5	0.39	1.88	85	2	24.5	2.65	70	156	3.1	0.17	<0.005	0.11	0.9	0.20
G285549	<0.5	0.23	0.10	204	2	14.2	1.46	132	48	0.8	0.59	0.020	<0.05	1.2	0.44
G285550	<0.5	0.28	0.51	230	3	16.2	1.92	84	64	0.2	0.03	<0.005	<0.05	0.2	<0.01
G285551	<0.5	0.24	0.39	262	2	15.2	1.68	93	50	0.8	0.02	<0.005	0.16	<0.2	0.01
G285552	<0.5	0.37	1.97	11	2	21.1	2.57	20	189	0.5	0.02	<0.005	0.08	<0.2	0.01
G285553	<0.5	0.19	0.24	230	2	11.0	1.14	64	30	3.2	0.06	<0.005	0.18	0.2	0.04
G285554	<0.5	0.14	4.22	51	5	13.3	1.23	98	39	17.3	0.41	0.032	0.18	4.7	2.03
G285555	<0.5	0.35	1.59	29	2	21.8	2.34	40	136	1.6	0.05	<0.005	0.10	0.2	0.02
G285556	<0.5	0.28	0.52	159	3	16.5	1.68	3350	65	4.1	3.75	2.43	0.40	4.3	0.04
G285557	<0.5	<0.01	2.32	16	5	3.7	0.50	>10000	32	59.4	158.0	16.00	2.24	200	0.41
G285558	1.5	0.34	2.20	65	3	20.3	2.38	139	187	6.9	0.81	0.083	0.68	1.1	0.01
G285559	2.7	0.25	1.01	122	4	16.1	1.77	8470	78	13.0	19.60	6.70	1.96	20.1	0.08
G285560	<0.5	0.24	0.21	229	2	15.7	1.80	158	42	1.0	0.80	0.146	<0.05	2.9	0.68
G285561	<0.5	0.48	1.24	99	2	28.3	2.93	173	118	0.1	0.29	0.030	0.05	0.4	0.02
G285562	<0.5	0.49	2.48	11	2	29.0	3.21	20	221	<0.1	0.02	<0.005	<0.05	0.2	<0.01
G285563	<0.5	0.14	1.76	81	3	10.7	1.15	48	88	6.0	0.36	0.016	0.05	3.1	0.25
G285564	<0.5	0.52	2.44	6	2	29.7	3.33	11	222	1.0	0.05	0.007	0.21	0.3	0.01
G285565	<0.5	0.29	1.55	115	2	19.9	1.87	32	163	0.2	0.04	<0.005	0.05	<0.2	<0.01
G285566	<0.5	0.24	1.74	71	2	14.7	1.66	87	174	0.3	0.03	<0.005	<0.05	0.2	0.01
G285567	<0.5	0.36	1.50	62	2	22.1	2.48	18	147	<0.1	0.02	<0.005	0.07	0.2	<0.01

Comments Low whole rock totals confirmed by a re-analysis

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To: ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
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Total [illegible]es: 5 (A - E)
Finalized Date: 29-OCT-2009
Account: F

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method	OA-GRA05	TOT-ICP06	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	Cu-OG62	Zn-OG62
	Analyte	LOI	Total	Ag	As	Cd	Co	Cu	Mo	Ni	Pb	Zn	Cu	Zn
	Units	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOR	0.01	0.01	0.5	5	0.5	1	1	1	1	1	2	0.001	0.001
G285528		6.44	98.3	0.5	24	<0.5	16	739	5	<1	12	126		
G285529		21.3	94.5	75.4	147	121.0	60	8190	11	11	8520	>10000		4.16
G285530		6.59	98.6	25.5	416	7.0	7	7560	1	18	407	3050		
G285531		27.0	93.6	74.1	285	64.7	225	>10000	10	13	4510	>10000	3.45	2.11
G285532		3.80	99.4	1.5	25	1.2	14	306	<1	2	340	318		
G285533		0.49	100.0	0.5	<5	<0.5	2	145	1	<1	26	133		
G285534		3.76	100.5	0.6	10	5.6	16	134	2	9	415	1580		
G285535		7.55	99.0	1.7	47	<0.5	53	3460	2	1	38	126		
G285536		2.27	100.5	<0.5	6	<0.5	4	49	1	<1	<1	89		
G285537		3.16	100.5	<0.5	16	<0.5	10	57	2	2	32	63		
G285538		2.98	98.2	<0.5	6	<0.5	14	20	1	22	10	64		
G285539		0.40	98.6	<0.5	19	<0.5	7	41	1	21	<1	28		
G285540		44.0	98.2	<0.5	<5	<0.5	<1	1	1	<1	2	13		
G285541		12.30	98.1	<0.5	<5	<0.5	23	2	<1	147	5	122		
G285542		1.58	98.5	<0.5	<5	<0.5	10	1	7	4	4	15		
G285543		9.79	98.4	1.1	37	<0.5	102	1000	16	10	9	43		
G285544		7.16	100.0	<0.5	38	<0.5	11	108	<1	2	5	33		
G285545		2.38	99.8	<0.5	9	<0.5	25	2	3	2	1	46		
G285546		1.19	98.9	<0.5	<5	<0.5	4	<1	<1	2	1	17		
G285547		9.26	98.2	7.7	7	<0.5	91	>10000	15	136	3	91	1.115	
G285548		2.94	98.2	<0.5	7	<0.5	15	57	2	1	3	79		
G285549		6.76	98.1	<0.5	<5	<0.5	32	320	<1	43	4	143		
G285550		4.49	98.2	<0.5	5	<0.5	19	35	<1	11	3	93		
G285551		2.67	98.6	<0.5	5	<0.5	28	16	<1	3	6	99		
G285552	MOR	1.49	98.8	<0.5	<5	<0.5	4	5	3	<1	<1	20		
G285553	08-05	1.90	98.2	<0.5	10	<0.5	29	54	1	47	<1	70		
G285554		0.89	98.1	5.6	20	0.6	41	5430	2	30	5	103		
G285555	ctd (2)	1.29	98.1	<0.5	<5	<0.5	7	20	<1	1	3	24		
G285556		5.38	98.3	1.0	8	3.2	12	2300	1	29	56	3800		
G285557		26.6	98.9	60.7	100	81.7	98	>10000	11	10	2480	>10000	1.060	2.97
G285558		1.78	98.0	<0.5	14	<0.5	6	71	<1	<1	45	144		
G285559		7.19	98.1	13.9	13	25.6	21	1265	5	21	2690	9800		
G285560	MOR	5.87	98.2	<0.5	<5	<0.5	34	190	1	22	11	165		
G285561		2.75	98.1	<0.5	<5	<0.5	19	58	2	2	28	171		
G285562	start (1)	1.89	98.1	<0.5	<5	<0.5	6	3	2	2	4	16		
G285563		6.19	98.1	<0.5	12	<0.5	28	97	<1	21	4	48		
G285564	08-05	1.40	99.3	<0.5	<5	<0.5	2	1	4	2	3	7		
G285565		2.84	100.5	<0.5	<5	<0.5	16	1	1	12	2	25		
G285566	part (3)	2.59	99.2	<0.5	<5	<0.5	11	<1	4	15	2	85		
G285567		2.75	98.9	<0.5	<5	<0.5	9	<1	<1	9	2	15		

Comments Low whole rock totals confirmed by a re-analysis.

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

	Method	WEI-21	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	C-IR07
	Analyte	Recvd Wt	SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Na_2O	K_2O	Cr_2O_3	TiO_2	MnO	P_2O_5	SrO	BaO	C
	Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	**LOR**	0 02	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01
G285568		0 24	51 2	7 15	22 5	4 19	4 42	1 71	0 10	0 01	0 36	0 13	<0 01	0 02	<0 01	0 15
G285569		0 38	77 3	11 00	1 20	1 92	0 49	4 72	0 31	<0 01	0 12	0 02	<0 01	0 01	0 02	0 19
G285570		0 48	65 4	15 00	5 41	5 46	1 56	3 38	0 63	<0 01	0 62	0 07	0 13	0 04	0 04	0 04
G285571		0 18	61 0	13 65	8 17	2 16	4 45	4 14	0 17	0 02	0 55	0 13	0 10	0 01	0 02	0 31
G285572		0 22	55 5	14 15	9 81	1 49	5 52	3 21	0 91	<0 01	0 78	0 08	0 09	0 01	0 05	0 19
G285573		0 24	69 7	13 45	3 24	0 91	2 15	4 82	0 90	<0 01	0 34	0 04	0 05	0 01	0 13	0 16
G285574		0 52	59 3	15 60	6 33	4 53	2 53	4 43	1 13	<0 01	0 83	0 10	0 18	0 02	0 16	0 28
G285575		0 40	49 7	15 90	12 00	9 12	4 70	1 20	0 41	<0 01	1 34	0 22	0 13	0 06	0 01	0 06
G285576		0 44	64 8	14 10	3 57	4 41	1 58	5 45	0 42	<0 01	0 55	0 09	0 08	0 01	0 02	0 48
G285577		0 50	50 5	14 75	9 28	6 28	5 12	3 64	0 26	0 01	0 94	0 16	0 10	0 01	0 01	1 05
G285578		0 32	68 0	13 60	4 82	3 19	0 88	3 58	1 44	<0 01	0 50	0 08	0.10	0 02	0 07	0 14
G285579		0 42	58 3	15 45	8 96	6 13	2 83	3 24	0 46	<0 01	1 00	0 14	0 12	0 03	0 03	0 05
G285580		0 50	53 7	16 15	12 05	4 48	4 16	3 71	0 47	<0 01	1 25	0 23	0 13	0 02	0 02	0 15
G285581		0 50	53 7	16 30	8 65	2 93	4 94	4 22	1 60	0 01	0 87	0 12	0 12	0 01	0 07	0 52
G285582		0 26	60 7	14 65	9 55	1 02	3 42	0 30	3 41	<0 01	0 85	0 09	0 20	<0 01	0 14	0 05
G285583		0 26	40 9	12 65	24 1	1 20	6 90	1 78	0 48	<0 01	0 61	0 17	0 06	0 01	0 06	0 12
G285584		0 34	6 50	1 74	58 9	1 76	0 88	0 03	0 18	<0 01	0 07	0 06	0 01	<0 01	0 04	0 36
G285585		0 40	68 9	12 85	4 80	1 51	1 55	4 77	1 38	<0 01	0 44	0 08	0 09	0 01	0 08	0 32
G285586		0 58	53 4	13 65	11 90	1 35	6 01	2 88	0 95	0 01	0 67	0 16	0 08	0 01	0 11	0 32
G285587		0 40	87 0	4 21	2 69	0 31	0 51	0 18	1 13	0 02	0 19	0 02	0 04	<0 01	0 03	0 07
G285588		0 50	72 6	9 90	4 99	1 85	2 01	0 16	2 73	0 01	0 50	0 11	0 11	0 01	0 14	0 56
G285589		0 40	82 1	5 08	4 08	1 51	1 19	0 09	1 30	0 01	0 33	0 19	0 29	<0 01	0 04	0 93
G285590		0 42	95 5	0 99	0 82	0 39	0 35	0 02	0 29	<0 01	0 04	0.04	0 01	<0 01	0 02	0 16
G285591		0 42	68 6	12 85	4 58	2 61	1 68	2 08	2 96	<0 01	0 38	0 10	0 10	0 01	0 14	0 52
G285592		0 34	57 7	12 90	6 08	5 99	3 36	1 78	4 26	0 02	0 53	0 16	0 21	0 03	0 15	1 37
G285593		0 34	89 8	1 85	1 87	2 07	1 06	0 03	0 55	<0 01	0 11	0 18	0 05	0 01	0 03	0 88
G285594		0 40	52 9	14 45	14 35	2 84	4 58	2 59	0 81	<0 01	0 90	0 34	0 15	0 01	0 02	0 18
G285595		0 42	75 4	11 50	2 85	1 54	0 82	2 92	1 84	<0 01	0 21	0 07	0 05	0 01	0 05	0 32
G285596		0 60	56 5	14 70	8 35	3 16	5 08	5 27	0 16	<0 01	0 71	0 15	0 10	0 01	0 01	0 67
G285597		0 44	76 1	12 10	1 90	2 93	0 30	4 99	0 24	<0 01	0 19	0 04	0 03	0 02	0 01	0 02
G285598		0 56	60 0	14 45	5 96	5 97	4 52	3 74	0 21	0 02	0 67	0 12	0 12	0 03	0 01	0 28
G285599		0 68	69 1	12 85	4 57	3 82	1 43	3 64	0 42	<0 01	0 56	0 07	0 09	0 03	0 03	0 02
G285600		0 48	47 5	14 40	7 99	9 99	8 35	4 31	0 03	0 03	0 65	0.23	0 08	0 03	<0 01	1 15
G285601		0 52	72 1	13 35	3 36	3 50	0 72	5 51	0 08	<0 01	0 29	0 06	0 06	0 03	<0 01	0 11
G285602		0 66	39 3	22 8	11 50	19 85	0 54	0 08	0 75	<0 01	0 65	0.14	0 17	0 13	0 03	0 28
G285603		0 68	68 9	14 05	5 04	2 81	1 32	5 42	0 35	<0 01	0 64	0.03	0 15	0 03	0 02	0 02
G285604		0 54	63 7	13 40	6 03	3 98	4 20	3 67	0 40	0 01	0 53	0 14	0 09	0 02	0 03	0 44
G285605		0 62	70 0	13 15	3 88	2 44	0 76	5 36	0 58	<0 01	0 40	0 02	0 10	0 02	0 03	0 18
G285606		0 54	49 3	15 95	8 40	3 42	10 00	4 02	0 06	0 02	0 71	0 24	0 08	0 01	0 03	0 63
G285607		0 68	70 7	12 75	4 12	2 64	0 70	5 22	0 61	<0 01	0 34	0 03	0 08	0 02	0 02	0 44

Comments: Low whole rock totals confirmed by a re-analysis

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	S-IR08 S % 0 01	ME-MS81 Ag ppm 1	ME-MS81 Ba ppm 0 5	ME-MS81 Ce ppm 0 5	ME-MS81 Co ppm 0 5	ME-MS81 Cr ppm 10	ME-MS81 Cs ppm 0 01	ME-MS81 Cu ppm 5	ME-MS81 Dy ppm 0 05	ME-MS81 Er ppm 0 03	ME-MS81 Eu ppm 0 03	ME-MS81 Ga ppm 0 1	ME-MS81 Gd ppm 0 05	ME-MS81 Hf ppm 0 2	ME-MS81 Ho ppm 0 01
G285568		8 48	<1	27 6	37 5	32 3	50	0 07	570	1 89	1 19	0 62	12 4	2 41	3 5	0 31
G285569		0 01	<1	175 0	44 4	1 8	10	0 21	<5	4 69	3 18	0 62	10 6	4 46	5 1	0 99
G285570		0 04	<1	343	23 9	10 3	10	0 33	<5	4 44	3 03	1 15	16 2	4 30	3 0	0 92
G285571		1 24	<1	132 0	31 9	19 9	110	0 26	188	3 03	1 82	0 80	14 2	2 95	3 5	0 62
G285572		4 84	<1	463	30 9	20 3	30	0 52	21	3 10	1 87	0 84	15 8	3 24	3 1	0 66
G285573		0 95	<1	1020	47 6	3 8	10	0 55	10	4 44	2 77	0 86	14 2	4 78	5 7	0 88
G285574		0 11	<1	1305	33 7	12 1	10	0 52	143	4 34	2 65	1 11	16 3	4 23	3 5	0 91
G285575		0 16	<1	119 5	10 7	28 6	10	0 59	53	3 38	2 24	0 94	19 5	2 94	1 3	0 71
G285576		0 04	<1	164 5	38 9	7 8	20	0 11	33	4 25	2 52	0 99	13 3	3 98	5 0	0 84
G285577		<0 01	<1	70 9	10 6	26 6	80	0 54	26	3 06	1 85	0 79	14 8	2 32	1 4	0 65
G285578		0 01	<1	614	25 9	4 9	10	0 67	20	5 25	3 43	1 02	15 5	4 38	3 5	1 08
G285579		0 05	<1	234	28 2	20 8	<10	0 32	<5	4 64	2 95	1 15	18 0	4 25	3 4	0 96
G285580		0 28	<1	166 0	14 5	31 3	<10	0 55	14	3 58	2 32	0 97	18 3	3 05	1 9	0 72
G285581		0 40	<1	611	33 0	27 9	60	0 54	19	3 66	2 34	1 07	19 4	3 64	2 8	0 80
G285582		2 07	<1	1180	52 7	20 8	10	0 43	39	4 39	2 62	0 57	19 5	5 02	3 9	0 90
G285583		8 54	4	463	25 0	79 7	40	0 12	1005	3 14	1 90	0 47	15 4	2.88	2 3	0 65
G285584		44 5	25	336	9 3	84 1	<10	0 07	1455	0 87	0 50	0 18	2 4	1 02	0 5	0 16
G285585		0 33	<1	726	40 6	7 7	10	0 37	17	5 03	3 25	1 07	16 6	4 74	4 3	1 07
G285586		4 14	1	982	15 8	37 9	50	0 36	464	2 37	1 54	0 62	15 1	2 17	1 5	0 52
G285587		1 32	1	263	21 1	18 0	160	0 42	60	0 98	0 60	0 32	6 5	1 24	1 1	0 20
G285588		1 91	<1	1275	44 7	18 8	80	1 28	99	3 25	1 93	0 76	15 7	3 61	2 5	0 67
G285589		1 10	<1	359	31 4	11 5	50	0 57	83	2 36	1 35	0 59	8 5	2 80	1 5	0 47
G285590		0 22	<1	211	6 8	4 6	20	0 20	30	0 54	0 31	0 12	2 1	0 59	0 3	0 10
G285591		0 28	<1	1215	47 8	6 3	20	1 58	12	4 51	2 88	1 01	17 6	4 61	4 0	0 96
G285592		0 27	<1	1315	68 2	15 8	130	4 06	19	3 76	2 14	1 38	15 8	5 16	3 4	0 74
G285593		0 29	<1	268	10 7	5 9	20	0 34	23	0 82	0 46	0 27	3 4	1 00	0 5	0 16
G285594		4 29	<1	173 5	17 5	28 8	10	0 52	65	3 44	2 13	1 11	17 8	3 15	1 7	0 74
G285595		0 03	<1	445	23 1	2 3	10	1 21	29	5 24	3 55	0 87	13 9	4 22	3 5	1 16
G285596		0 03	<1	68 8	17 4	24 8	10	0 28	26	3 15	2 00	0 78	16 5	2 75	1 9	0 65
G285597		0 05	<1	93 4	49 8	3 4	20	0 17	<5	4 88	3 02	0 85	13 0	4 87	5 0	1 01
G285598		<0 01	<1	114 5	34 3	21 9	130	0 82	<5	3 08	1 94	0 75	15 8	3 28	3 2	0 63
G285599		0 03	<1	251	47 8	6 3	20	0 29	8	4 17	2 59	1 02	15 2	4 46	4 0	0 86
G285600		0 01	<1	12 6	7 7	35 8	240	0 08	119	2 18	1 30	0 59	12 7	1 73	0 8	0 46
G285601		0 03	<1	47 6	47 6	4 2	10	0 10	<5	4 57	2 90	0 82	14 8	4 75	5 1	0 97
G285602		<0 01	<1	307	54 8	2 0	10	0 84	7	4 97	3 18	1 45	41 0	5 39	3 9	1 05
G285603		0 01	<1	193 5	49 3	7 2	10	0 25	<5	4 52	2 74	1 11	15 4	5 02	4 2	0 95
G285604		0 16	<1	306	37 0	21 8	90	0 38	92	2 77	1 75	0 75	15 1	3 18	3 6	0 59
G285605		0 01	<1	330	26 0	3 8	10	0 47	<5	5 49	3 58	1 05	15 5	4 57	3 3	1 18
G285606		0 01	<1	267	8 7	32 5	140	0 20	24	2 74	1 68	0 72	15 3	2 12	1 2	0 57
G285607		0 07	<1	194 0	25 4	3 8	10	0 47	11	5 09	3 33	1 11	15 4	4 36	3 1	1 12

Comments: Low whole rock totals confirmed by a re-analysis.

CERTIFICATE OF ANALYSIS VA09107974

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	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
Sample Description 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
G285568	21.6	0.09	<2	5.4	15.2	24	5	4.26	0.8	3.03	7	144.5	0.4	0.30	7.33
G285569	22.6	0.48	<2	10.2	19.4	<5	<5	5.19	6.9	4.30	1	91.5	0.9	0.73	8.20
G285570	10.7	0.44	<2	4.6	14.6	<5	<5	3.32	13.5	3.82	1	293	0.3	0.69	2.29
G285571	15.7	0.23	2	8.9	14.7	22	<5	3.84	3.5	3.09	2	98.6	0.7	0.47	4.95
G285572	15.0	0.25	2	9.9	15.3	10	<5	3.85	19.9	3.38	2	48.5	0.7	0.50	3.78
G285573	23.5	0.38	2	14.0	21.9	6	<5	5.71	17.4	4.56	2	64.9	1.1	0.71	7.65
G285574	16.5	0.35	2	9.2	16.8	<5	<5	4.20	29.2	3.92	2	155.5	0.7	0.67	4.69
G285575	4.2	0.29	<2	3.7	8.5	6	13	1.67	13.5	2.46	1	436	0.2	0.54	0.27
G285576	19.7	0.37	<2	10.6	17.8	10	<5	4.64	8.8	3.81	3	112.5	0.8	0.64	6.37
G285577	4.7	0.26	<2	2.9	7.3	25	5	1.54	7.2	2.10	1	106.0	0.2	0.45	0.80
G285578	12.4	0.51	<2	6.2	14.4	<5	<5	3.35	30.4	3.73	1	125.5	0.5	0.78	3.60
G285579	13.8	0.41	<2	8.0	15.0	5	<5	3.53	11.5	3.82	3	244	0.5	0.70	3.82
G285580	6.4	0.29	<2	4.6	9.3	6	21	2.01	12.6	2.62	1	143.5	0.2	0.52	0.93
G285581	16.1	0.36	<2	8.7	15.7	26	14	3.98	45.0	3.66	2	88.6	0.6	0.62	4.15
G285582	26.0	0.38	<2	18.3	23.5	<5	9	6.15	86.7	4.89	4	41.5	1.4	0.76	6.55
G285583	12.3	0.30	3	7.0	11.9	16	247	2.97	11.4	2.72	4	41.2	0.5	0.50	3.41
G285584	5.0	0.08	3	0.5	4.4	<5	1435	1.08	4.9	0.98	1	23.9	<0.1	0.18	0.66
G285585	19.8	0.52	<2	10.4	19.4	<5	19	4.89	32.2	4.62	2	49.9	0.7	0.80	5.77
G285586	7.6	0.25	<2	4.2	8.4	22	22	1.99	28.5	2.05	3	42.8	0.3	0.37	1.57
G285587	9.1	0.10	<2	3.7	7.2	65	21	1.94	36.7	1.43	1	16.6	0.3	0.19	3.30
G285588	21.8	0.32	3	8.9	18.9	51	12	5.01	94.3	3.74	2	70.3	0.7	0.54	7.67
G285589	17.5	0.19	5	9.9	14.1	29	9	3.81	46.6	2.73	1	44.1	0.7	0.40	5.24
G285590	2.7	0.05	<2	1.3	2.5	8	<5	0.65	11.3	0.51	1	9.2	0.1	0.09	0.60
G285591	24.2	0.46	<2	12.4	20.4	6	13	5.46	92.2	4.44	2	69.0	0.9	0.74	7.48
G285592	36.0	0.32	<2	13.5	27.3	28	13	7.45	165.0	5.35	1	267	1.0	0.73	12.80
G285593	5.1	0.07	<2	4.5	4.2	10	9	1.10	17.8	0.92	<1	54.9	0.3	0.15	1.32
G285594	7.5	0.33	<2	3.6	10.8	<5	21	2.44	17.4	2.90	2	104.0	0.2	0.54	1.57
G285595	10.4	0.56	<2	4.7	13.3	<5	<5	3.04	39.4	3.69	1	65.0	0.4	0.79	2.43
G285596	7.8	0.33	<2	3.3	9.7	5	7	2.31	3.7	2.65	1	112.5	0.3	0.48	1.61
G285597	24.6	0.50	2	10.5	22.1	<5	<5	5.81	5.6	4.85	2	147.5	0.9	0.80	8.25
G285598	17.4	0.29	2	8.8	15.1	25	<5	3.99	6.5	3.09	2	276	0.7	0.52	5.46
G285599	23.6	0.40	2	11.1	21.2	6	<5	5.52	10.2	4.51	2	228	0.8	0.70	7.73
G285600	3.3	0.19	<2	1.7	5.3	65	<5	1.11	0.2	1.61	<1	211	0.1	0.33	0.39
G285601	23.5	0.48	<2	9.9	20.3	<5	<5	5.48	1.9	4.33	1	213	0.9	0.73	7.88
G285602	27.5	0.47	3	9.9	24.3	<5	9	6.38	21.4	5.14	5	1000	0.8	0.85	6.89
G285603	24.3	0.42	<2	12.3	22.1	5	<5	5.79	8.6	4.68	2	214	0.9	0.77	7.52
G285604	18.9	0.27	2	8.8	15.2	18	<5	4.12	10.4	3.05	2	149.0	0.7	0.48	5.87
G285605	12.0	0.57	<2	5.5	14.7	<5	<5	3.41	16.0	3.94	1	136.5	0.4	0.84	2.71
G285606	3.7	0.25	<2	1.8	6.0	49	<5	1.28	1.6	1.75	<1	77.7	0.1	0.40	0.41
G285607	12.1	0.54	3	5.0	13.8	<5	<5	3.22	15.8	3.82	1	118.0	0.4	0.80	2.57

Comments Low whole rock totals confirmed by a re-analysis

ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-OCT-2009
Account: F

Project: MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method / Analyte / Units / LOR	ME-MS81 Tl ppm 0.5	ME-MS81 Tm ppm 0.01	ME-MS81 U ppm 0.05	ME-MS81 V ppm 5	ME-MS81 W ppm 1	ME-MS81 Y ppm 0.5	ME-MS81 Yb ppm 0.03	ME-MS81 Zn ppm 5	ME-MS81 Zr ppm 2	ME-MS42 As ppm 0.1	ME-MS42 Bi ppm 0.01	ME-MS42 Hg ppm 0.005	ME-MS42 Sb ppm 0.05	ME-MS42 Se ppm 0.2	ME-MS42 Te ppm 0.01
G285568		<0.5	0.13	2.58	51	5	10.1	1.23	82	139	1.7	0.62	0.061	0.06	22.2	1.13
G285569		<0.5	0.48	2.31	13	1	26.1	3.10	6	179	0.4	0.03	<0.005	0.06	0.3	<0.01
G285570		<0.5	0.44	0.91	73	2	24.8	2.91	13	106	0.6	0.01	<0.005	0.09	0.2	<0.01
G285571		<0.5	0.25	1.41	113	2	15.7	1.69	125	132	0.8	0.64	0.009	<0.05	2.4	0.29
G285572		<0.5	0.26	1.12	134	2	16.5	1.74	63	117	4.5	1.17	0.011	0.05	2.7	0.60
G285573		<0.5	0.41	2.27	19	2	24.2	2.75	28	213	1.0	0.38	<0.005	0.05	0.5	0.06
G285574		<0.5	0.36	1.55	123	2	23.5	2.42	44	136	0.3	0.02	<0.005	<0.05	0.3	0.02
G285575		<0.5	0.29	0.11	349	2	18.7	2.12	96	41	0.4	0.04	<0.005	0.08	0.3	0.02
G285576		<0.5	0.36	1.98	82	2	21.8	2.55	36	190	0.2	0.03	<0.005	0.06	0.3	0.01
G285577		<0.5	0.27	0.28	251	2	15.8	1.85	88	50	<0.1	0.01	<0.005	0.05	0.3	0.01
G285578		<0.5	0.50	1.11	27	6	29.0	3.41	39	123	0.5	0.02	<0.005	0.15	0.3	0.01
G285579		<0.5	0.43	1.19	170	2	24.8	2.72	71	133	0.6	0.10	<0.005	0.07	0.2	0.03
G285580		<0.5	0.32	0.41	375	2	18.9	2.04	142	65	1.0	0.03	<0.005	0.12	0.3	0.04
G285581		<0.5	0.35	1.17	191	3	23.8	2.29	118	110	1.0	0.30	<0.005	0.09	0.5	0.05
G285582		1.3	0.39	1.79	159	4	26.8	2.45	71	154	5.9	0.63	<0.005	0.09	1.1	0.23
G285583		0.9	0.29	1.15	103	4	19.1	1.89	1840	90	24.5	34.6	1.295	0.52	67.5	0.36
G285584		<0.5	0.11	3.01	<5	4	5.7	0.44	2510	19	62.7	116.0	2.74	0.90	>250	0.72
G285585		<0.5	0.50	1.44	38	3	31.4	3.36	104	165	5.9	0.60	0.026	0.16	1.6	0.04
G285586		<0.5	0.23	0.56	205	5	13.8	1.52	152	54	7.0	4.12	0.028	<0.05	23.8	2.85
G285587		<0.5	0.10	0.78	41	3	5.4	0.66	45	43	7.2	1.67	0.038	0.06	1.5	2.21
G285588		<0.5	0.28	2.79	127	4	19.0	2.03	93	94	43.1	0.84	0.008	0.11	1.6	0.18
G285589		<0.5	0.20	2.88	102	3	13.3	1.29	61	60	189.0	0.59	0.012	0.16	1.2	0.23
G285590		<0.5	0.07	0.26	12	2	3.3	0.32	24	11	13.1	0.70	<0.005	0.09	0.3	0.08
G285591		<0.5	0.42	2.28	43	2	28.0	2.82	74	143	2.1	0.27	0.005	0.07	0.5	0.04
G285592		<0.5	0.31	4.47	110	7	21.0	2.00	55	130	2.1	0.12	<0.005	0.12	0.5	0.03
G285593		<0.5	0.08	0.46	21	4	4.9	0.46	42	21	6.8	0.26	0.008	0.31	0.3	0.04
G285594		<0.5	0.31	0.65	238	2	20.1	2.10	153	55	10.6	0.90	0.008	0.07	4.8	1.12
G285595		<0.5	0.55	1.15	6	2	32.7	3.73	56	111	0.1	0.05	<0.005	<0.05	0.2	0.01
G285596		<0.5	0.30	0.52	222	2	18.5	2.03	75	62	0.2	0.05	0.005	0.10	0.2	0.02
G285597		<0.5	0.47	2.25	7	2	28.3	3.10	6	182	1.5	0.12	<0.005	0.11	<0.2	0.01
G285598		<0.5	0.29	1.42	147	1	18.2	1.92	29	119	0.6	0.06	<0.005	0.13	<0.2	0.01
G285599		<0.5	0.38	1.95	41	2	23.6	2.48	24	145	1.5	0.07	<0.005	0.10	0.2	0.01
G285600		<0.5	0.20	0.13	226	2	12.0	1.31	104	29	0.5	0.35	<0.005	0.11	0.2	0.24
G285601		<0.5	0.46	2.11	23	2	25.9	3.03	13	180	0.5	0.05	<0.005	0.10	<0.2	0.01
G285602		<0.5	0.48	2.42	159	2	29.7	3.22	11	138	2.4	0.16	<0.005	0.31	0.3	0.01
G285603		<0.5	0.42	1.93	47	2	25.7	2.80	13	151	0.8	0.02	<0.005	0.07	<0.2	<0.01
G285604		<0.5	0.27	1.48	113	2	15.5	1.74	47	123	1.0	0.85	0.009	0.06	0.7	0.45
G285605		<0.5	0.55	0.90	15	2	31.1	3.68	13	106	0.1	0.10	<0.005	<0.05	0.2	0.01
G285606		<0.5	0.25	0.19	219	1	15.8	1.63	142	40	0.1	0.04	<0.005	0.05	0.2	0.01
G285607		<0.5	0.52	0.94	11	2	29.5	3.48	14	97	0.1	0.12	<0.005	<0.05	0.2	0.03

Comments Low whole rock totals confirmed by a re-analysis

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CERTIFICATE OF ANALYSIS VA09107974

Sample Description	**Method** **Analyte** **Units** **LOR**	OA-GRA05 LOI % 0 01	TOT-ICP06 Total % 0 01	ME-4ACD81 Ag ppm 0 5	ME-4ACD81 As ppm 5	ME-4ACD81 Cd ppm 0 5	ME-4ACD81 Co ppm 1	ME-4ACD81 Cu ppm 1	ME-4ACD81 Mo ppm 1	ME-4ACD81 Ni ppm 1	ME-4ACD81 Pb ppm 1	ME-4ACD81 Zn ppm 2	Cu-OG62 Cu % 0 001	Zn-OG62 Zn % 0 001
G285568		6 20	98 0	0 7	<5	<0 5	30	700	<1	15	1	87		
G285569		1 19	98 3	<0 5	<5	<0 5	3	2	1	2	1	4		
G285570		1 26	99 0	<0 5	<5	<0 5	12	1	<1	2	4	8		
G285571		3 57	98 1	<0 5	<5	<0 5	20	204	2	21	7	131		
G285572		6 58	98 2	<0 5	10	<0 5	22	20	2	4	<1	59		
G285573		2 37	98 1	<0 5	<5	<0 5	7	10	2	1	2	27		
G285574		3 10	98 2	<0 5	<5	<0 5	15	152	1	1	5	43		
G285575		3 53	98 3	<0 5	<5	<0 5	31	60	<1	6	13	97		
G285576		3 00	98 1	<0 5	<5	<0 5	12	33	1	5	4	35		
G285577		7 11	98 2	<0 5	<5	<0 5	31	26	<1	25	3	90		
G285578		1 78	98 1	<0 5	<5	<0 5	8	20	<1	3	5	38		
G285579		2 76	99 5	<0 5	<5	<0 5	26	4	<1	4	6	72		
G285580		3 91	100 5	<0 5	<5	<0 5	35	11	<1	4	17	144		
G285581		5 15	98 7	<0 5	<5	<0 5	25	18	<1	25	14	112		
G285582		4 37	98 7	<0 5	11	<0 5	20	39	1	3	10	68		
G285583		9 95	98 9	8 6	23	3 0	73	1985	2	10	278	2100		
G285584		28 6	98 8	66 1	66	32 7	187	3330	2	<1	2250	3010		
G285585		2 65	99 1	<0 5	9	<0 5	10	16	1	2	15	105		
G285586		7 20	98 4	1 4	<5	<0 5	32	571	1	20	17	157		
G285587		2 47	98 8	1 1	8	<0 5	15	72	1	52	29	43		
G285588		3 58	98 7	<0 5	38	<0 5	15	85	4	43	16	92		
G285589		3 40	99 6	<0 5	156	<0 5	10	86	6	25	12	58		
G285590		1 10	99 6	<0 5	11	<0 5	4	29	1	8	4	21		
G285591		3 63	99 7	<0 5	6	<0 5	9	12	1	6	14	74		
G285592		4 98	98 2	<0 5	<5	<0 5	18	20	1	27	12	54		
G285593		3 08	100 5	<0 5	8	<0 5	6	23	1	10	11	44		
G285594		5 78	99 7	<0 5	16	<0 5	32	82	2	1	22	154		
G285595		1 57	98 8	<0 5	5	<0 5	4	27	<1	<1	7	59		
G285596		5 23	99 4	<0 5	7	0 6	21	29	2	3	<1	74		
G285597		0 57	99 4	<0 5	5	<0 5	2	3	2	1	<1	5		
G285598		3 19	99 0	<0 5	<5	<0 5	20	1	2	24	<1	27		
G285599		2 29	98 9	<0 5	5	<0 5	7	9	3	3	<1	21		
G285600		6 35	99 9	<0 5	<5	<0 5	31	126	<1	60	3	107		
G285601		0 98	100 0	<0 5	<5	<0 5	2	3	1	1	<1	14		
G285602		3 19	99 1	<0 5	9	<0 5	<1	6	3	<1	<1	4		
G285603		1 29	100 0	<0 5	<5	<0 5	6	<1	<1	1	1	9		
G285604		4 19	100 5	<0 5	<5	<0 5	20	106	3	18	<1	46		
G285605		2 73	99 5	<0 5	<5	<0 5	3	2	1	<1	<1	10		
G285606		6 24	98 5	<0 5	<5	<0 5	28	23	<1	45	<1	147		
G285607		2 76	100 0	<0 5	6	<0 5	2	12	3	1	<1	13		

Comments Low whole rock totals confirmed by a re-analysis

Project MOR

CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method	WEI-21	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	C-IR07
	Analyte	Recvd Wt	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO	P2O5	SrO	BaO	C
	Units	kg	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	LOR	0 02	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01	0 01
G285608		0 64	46 9	16 15	10 30	6 34	8 05	4 90	0 04	0 01	0 68	0 17	0 08	0 02	<0 01	0 74
G285609		0 48	58 8	13 00	11 20	1 48	4 98	3 90	0 07	0 01	0 76	0 12	0 13	0 01	0 01	0 05
G285610		0 52	60 1	13 45	9 28	1 05	4 95	4 96	0 08	0 02	0 52	0 07	0 11	0 01	0 02	0 21
G285611		0 54	73 4	12 05	4 04	1 85	0 47	4 93	0 53	<0 01	0 29	0 02	0 05	0 01	0 01	0 24
G285612		0 52	56 3	14 40	9 07	2 50	5 39	3 76	0 70	0 01	0 67	0 11	0 12	0 01	0 04	0 66
G285613		0 58	55 4	14 85	8 42	3 64	6 26	4 10	0 41	0 02	0 60	0 13	0 10	0 02	0 03	0 53
G285614		0 72	67 5	12 75	4 63	3 66	1 94	3 20	0 81	<0 01	0 40	0 11	0 08	0 01	0 05	1 12
G285615		0 40	45 9	15 75	9 83	4 98	6 34	3 62	0 97	0 01	0 75	0 33	0 12	0 01	0 07	1 82
G285616		0 48	61 9	14 40	6 24	4 76	1 76	2 09	2 01	<0 01	0 69	0 16	0 12	0 01	0 05	1 38

Comments Low whole rock totals confirmed by a re-analysis

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CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	S-IR08 S % 0.01	ME-MS81 Ag ppm 1	ME-MS81 Ba ppm 0.5	ME-MS81 Ce ppm 0.5	ME-MS81 Co ppm 0.5	ME-MS81 Cr ppm 10	ME-MS81 Cs ppm 0.01	ME-MS81 Cu ppm 5	ME-MS81 Dy ppm 0.05	ME-MS81 Er ppm 0.03	ME-MS81 Eu ppm 0.03	ME-MS81 Ga ppm 0.1	ME-MS81 Gd ppm 0.05	ME-MS81 Hf ppm 0.2	ME-MS81 Ho ppm 0.01
G285608		<0.01	<1	24.5	8.2	39.5	100	0.14	<5	2.36	1.50	0.64	14.9	2.00	1.0	0.52
G285609		3.25	<1	71.9	26.9	46.2	60	0.15	119	2.81	1.69	0.84	14.7	2.80	2.7	0.60
G285610		2.67	<1	194.5	21.8	20.2	140	0.17	8	2.55	1.68	0.53	15.2	2.30	3.0	0.57
G285611		1.08	<1	139.0	25.0	2.9	10	0.82	<5	5.11	3.33	1.02	13.7	4.40	3.2	1.12
G285612		2.83	<1	380	28.9	19.9	50	0.61	11	2.98	1.84	0.74	15.5	3.04	3.1	0.60
G285613		2.59	<1	272	26.8	27.1	110	0.33	107	2.76	1.81	0.69	15.9	2.81	2.5	0.58
G285614		0.21	<1	415	32.5	7.5	10	0.60	9	5.31	3.47	1.01	15.5	4.61	3.5	1.13
G285615		0.03	<1	692	17.9	21.8	80	0.59	10	3.52	2.30	0.84	19.3	3.12	1.9	0.76
G285616		0.23	<1	432	23.5	8.9	20	1.16	<5	4.45	3.00	1.01	17.1	3.73	3.1	1.00

Comments Low whole rock totals confirmed by a re-analysis

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CERTIFICATE OF ANALYSIS VA09107974

Sample Description	Method Analyte Units LOR	ME-MS81 La ppm 0.5	ME-MS81 Lu ppm 0.01	ME-MS81 Mo ppm 2	ME-MS81 Nb ppm 0.2	ME-MS81 Nd ppm 0.1	ME-MS81 Ni ppm 5	ME-MS81 Pb ppm 5	ME-MS81 Pr ppm 0.03	ME-MS81 Rb ppm 0.2	ME-MS81 Sm ppm 0.03	ME-MS81 Sn ppm 1	ME-MS81 Sr ppm 0.1	ME-MS81 Ta ppm 0.1	ME-MS81 Tb ppm 0.01	ME-MS81 Th ppm 0.05
G285608		3.4	0.22	<2	1.6	5.7	51	<5	1.19	0.4	1.72	1	196.0	0.1	0.36	0.33
G285609		12.8	0.27	3	8.7	12.3	19	<5	3.21	1.6	2.66	3	86.4	0.7	0.47	4.89
G285610		10.6	0.28	5	7.8	9.6	23	<5	2.57	1.9	2.08	3	44.8	0.7	0.39	4.78
G285611		11.5	0.55	<2	4.1	13.9	<5	<5	3.22	16.7	3.79	1	107.0	0.3	0.77	2.79
G285612		14.1	0.30	2	8.8	13.1	12	<5	3.46	15.9	2.94	2	73.4	0.7	0.46	4.68
G285613		12.4	0.28	<2	7.1	12.2	22	6	3.21	8.9	2.70	1	146.5	0.5	0.46	4.00
G285614		15.9	0.54	<2	8.7	16.2	<5	<5	3.98	14.1	4.02	2	92.4	0.6	0.80	4.22
G285615		8.1	0.38	<2	6.3	10.3	30	<5	2.39	17.6	2.83	2	84.1	0.3	0.56	1.53
G285616		11.4	0.47	<2	5.9	12.7	<5	11	3.04	35.4	3.25	1	88.5	0.4	0.73	3.38

Comments Low whole rock totals confirmed by a re-analysis

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Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
Analyte	Tl	Tm	U	V	W	Y	Yb	Zn	Zr	As	Bi	Hg	Sb	Se	Te
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Sample Description LOR	0.5	0.01	0.05	5	1	0.5	0.03	5	2	0.1	0.01	0.005	0.05	0.2	0.01
G285608	<0.5	0.22	0.14	237	2	13.5	1.47	33	33	0.5	0.03	<0.005	0.08	<0.2	<0.01
G285609	<0.5	0.26	1.17	135	2	15.8	1.65	50	95	4.0	1.03	0.005	0.06	7.8	0.78
G285610	<0.5	0.27	1.12	114	2	13.8	1.67	28	106	2.3	0.36	<0.005	<0.05	3.3	0.35
G285611	<0.5	0.52	0.94	7	5	28.9	3.53	10	104	76.5	0.12	<0.005	0.32	0.2	0.01
G285612	<0.5	0.28	1.11	111	2	16.3	1.91	91	111	1.7	0.49	0.008	<0.05	1.4	0.77
G285613	<0.5	0.27	1.08	173	2	16.5	1.78	75	90	1.9	0.91	0.006	0.05	3.1	0.60
G285614	<0.5	0.54	1.40	38	2	31.1	3.47	41	118	0.1	0.26	<0.005	<0.05	0.4	0.06
G285615	<0.5	0.35	0.55	122	2	20.0	2.32	132	68	<0.1	0.24	0.005	<0.05	0.2	0.14
G285616	<0.5	0.45	1.08	61	2	25.8	2.83	90	112	0.4	0.05	<0.005	<0.05	0.2	<0.01

Comments Low whole rock totals confirmed by a re-analysis

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Finalized Date: 29-OCT-2009
Account: F

Project MOR

CERTIFICATE OF ANALYSIS VA09107974

Method Analyte Units LOR	OA-GRA05	TOT-ICP06	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	Cu-OG62	Zn-OG62
	LOI	Total	Ag	As	Cd	Co	Cu	Mo	Ni	Pb	Zn	Cu	Zn
	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Sample Description	0 01	0 01	0 5	5	0 5	1	1	1	1	1	2	0 001	0 001
G285608	5 86	99 5	<0 5	<5	<0 5	34	<1	<1	50	4	30		
G285609	4 38	98 9	<0 5	10	<0 5	45	145	3	20	<1	50		
G285610	4 00	98 6	<0 5	11	0 5	20	8	6	23	<1	27		
G285611	2 46	100 0	<0 5	80	<0 5	2	3	1	<1	<1	7		
G285612	5 44	98 5	<0 5	5	<0 5	17	11	2	11	<1	94		
G285613	4 97	99 0	<0 5	<5	<0 5	24	125	1	18	<1	73		
G285614	4 95	100 0	<0 5	<5	<0 5	7	11	1	1	<1	43		
G285615	10 10	98 8	<0 5	<5	<0 5	19	8	<1	27	5	142		
G285616	5 50	99 7	<0 5	8	<0 5	7	4	1	2	6	86		

Comments Low whole rock totals confirmed by a re-analysis

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Page: 1
Finalized D 14-OCT-2009
Account: F

CERTIFICATE VA09107972

Project: MOR
P O No:
This report is for 1 Soil sample submitted to our lab in Vancouver, BC, Canada on 1-OCT-2009.

The following have access to data associated with this certificate

AL ARCHER VANCOUVER OFFICE	DOUG EATON BILL WENGZYNOWSKI	JOAN MARIACHER

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

To. ARCHER, CATHRO AND ASSOCIATES (1981) LIMITED
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VANCOUVER BC V6B 1L8

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

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Page: 2 - A
Total # Pages: 2 (A - C)
Finalized Date: 14-OCT-2009
Account: F

Project MOR

CERTIFICATE OF ANALYSIS VA09107972

Method **Analyte** **Units** **LOR**	WEI-21 Recvd Wt kg 0 02	Au-AA23 Au ppm 0 005	ME-ICP41 Ag ppm 0 2	ME-ICP41 Al % 0 01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0 5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0 01	ME-ICP41 Cd ppm 0 5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0 01
Sample Description															
G285629	0 36	<0 005	<0 2	2 20	12	<10	230	0 5	<2	0 73	0 6	13	39	21	3 14

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Project. MOR

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Sample Description	Method Analyte Units LOR	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 Ni ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1	ME-ICP41 Sr ppm 1
G285629		10	1	0.09	10	0.63	673	1	<0.01	20	960	10	0.05	3	3	21

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Sample Description	Method Analyte Units LOR	ME-ICP41 Th ppm 20	ME-ICP41 Ti % 0 01	ME-ICP41 Tl ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2
G285629		<20	0 09	<10	<10	60	<10	233

APPENDIX IV

LITHOGEOCHEMISTRY REPORT BY SJP GEOCONSULTING

Report on the Lithogeochemistry of Volcanic Rocks from the MOR volcanogenic massive sulfide (VMS) prospect, Yukon, Canada

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Provisional Draft

January 18, 2010

Executive Summary

The MOR prospect represents a relatively new VMS discovery within the Yukon-Tanana terrane near Teslin, Yukon. The prospect is associated with basaltic, andesitic, and rhyolitic rocks that have immobile element signatures they range in composition from tholeiitic through transitional to calc-alkalic. The felsic rocks are predominantly transitional to calc-alkalic, FII affinities, and have evidence for interaction with upper continental crust. Mafic to intermediate rocks are dominated by transitional to tholeiitic rocks with lesser calc-alkalic rocks and have Ti-V systematics indicative of formation within a rift environment. All the immobile element data indicate that the various suites of rocks can be related by variable amounts of mixing between more primitive, basaltic end members and continental crust, with the more felsic end-members being almost entirely derived from continental crust, whereas the basaltic rocks are predominantly derived from mantle with minor upper crust contamination. The chemostratigraphic assemblages present in the MOR prospect are indicative of formation within a rift to arc-rift built proximal to or upon continental crust, a setting similar to other VMS belts in the Cordillera (e.g., Finlayson Lake, Eskay Creek, Tulsequah). While not directly similar to the Finlayson Lake District, the MOR prospect has a "petrochemical assemblage" that is broadly similar to other VMS belts hosted by felsic rocks and formed proximal to continental crust (e.g., bimodal felsic to felsic siliciclastic VMS environments).

The mobile element systematics of the MOR prospect host rocks indicate that a significant proportion of samples have evidence for VMS-like alteration, including chlorite-sericite-sulfide with lesser quartz and carbonate alteration, as indicated by the strong alkali (e.g, Na_2O) depletion, Fe_2O_3-MgO-base metal-volatile element enrichment, and elevated alteration index values in many samples. Samples have been ranked using a single "VMS score" that integrates various indicators of VMS-related alteration and mineralization. This VMS score is maximized in samples with numerous indicators of alteration and mineralization, whereas it minimizes values for those samples with lesser indicators of mineralization. The vast majority of samples with high VMS score values are from surface and drill core in the main Discovery Zone of the MOR prospect with much lesser samples from the SD Zone.

It is recommended that further work be concentrated proximal to the Discovery Zone if budgets are limited. If exploration is to be expanded areas with calc-alkalic felsic to andesitic rocks with evidence of alteration and mineralization, and high VMS score values should be concentrated upon. In screening new areas it may be possible to utilize existing government databases (e.g., NATMAP lithogeochemical databases) to screen new areas for VMS potential.

Introduction

The MOR prospect represents a relatively newly discovered volcanogenic massive sulfide (VMS) prospect hosted by rocks of the Yukon-Tanana terrane (YTT) near Teslin, Yukon. The YTT is relatively well endowed with massive sulfide with ~30Mt of VMS mineralization found within the Finlayson Lake district, a potential correlative of the host rocks that host the MOR prospect. In this report lithogeochemical data for host rocks to the MOR prospect are provided in order to: 1) evaluate the primary chemostratigraphic characteristics of the host volcanic rocks of the MOR prospect; 2) to provide insight into paleotectonic setting of the MOR prospect and to see if it formed in a prospective stratigraphic setting with potential to host VMS mineralization; 3) use the data to provide some comparisons to other VMS-hosting rocks of the YTT, namely the Finlayson Lake District, and other VMS belts globally; 4) to evaluate the mobile alteration and mineralization related signatures of rocks hosting the MOR prospect; and 5) to rank the intensity of alteration and mineralization within the MOR host rocks to evaluate the best potential hosts to mineralization from an alteration/mineralization perspective.

Sampling and Analytical Methods

Samples from the MOR prospect were taken from both surface samples and drill core from the main Discovery Zone area and the SD Zone of the MOR prospect. All samples were collected by Bill Wengzynowski and Marc Blythe in September 2009. Samples were analyzed at ALS-Chemex Laboratories in North Vancouver, Canada for major, trace, and rare-earth elements (REE) using the complete characterization package (CGP-PKG01). Major elements (SiO_2, Al_2O_3, Fe_2O_3, CaO, MgO, Na_2O, K_2O, TiO_2, MnO, and P_2O_5) and LOI were obtained by lithium metaborate fusion pre-preparation followed by dissolution of the fused bead and subsequent analysis via inductively coupled plasma emission spectroscopy (ICP-ES). Sulfur and C were obtained via Leco, and base metals (Ag, Co, Cu, Mo, Ni, Pb, and Zn) were obtained by four acid digestion and subsequent analysis by ICP-ES. Trace elements and rare earth elements (Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tl, Tm, U, V, W, Y, Yb, and Zr) were obtained via lithium metaborate fusion with subsequent analysis via inductively coupled plasma mass spectrometry (ICP-MS), whereas volatile elements (As, Bi, Hg, Sb, Se, and Te) were obtained via aqua regia digestion and subsequent analysis via ICP-MS. Fusion pre-preparation ensures the complete digestion of resistant phases like zircon, ensuring high quality and complete values for high field strength element (HFSE: Zr, Hf, Nb, Ta, Y) and REE (La-Lu). In contrast, four acid and aqua regia digestions are partial digestions that specifically attack sulfide and weakly held elements and provide ideal results for base metals and volatile elements.

Lithogeochemical Results

Results from the lithogeochemical survey are presented in Figures 1-19. The various ratios, alteration indexes, and other calculations are included in the attached spreadsheet. Data will be treated in two steps: 1) utilizing immobile element geochemistry to understand primary chemostratigraphic and petrologic attributes (i.e., those largely unaffected by subsequent hydrothermal alteration and metamorphism); and 2) mobile element systematics (i.e., those induced by hydrothermal alteration and metamorphism).

Immobile Element Attributes

The immobile element attributes of samples from the MOR prospect are shown in Figures 1-7. These diagrams concentrate on the elements that are largely considered immobile during alteration and metamorphism, including Al_2O_3, TiO_2, the high field strength elements (HFSE: Zr, Hf, Nb, Ta, Y) and rare earth elements (REE: La-Lu)(e.g., Winchester and Floyd, 1977; Pearce, 1996; Barrett and MacLean, 1999). Despite these elements being considered immobile there are cases in both this dataset, and globally (e.g., Finlow-Bates and Stumpfl, 1981; Campbell et al., 1984; Whitford et al., 1988; Valsami and Cann, 1992), where these elements are mobile, particularly in rocks that are strongly altered by chlorite and sulfide. Despite this, the dataset has been subdivided into rock types based on the Zr-TiO_2 systematics of the samples into four groups (Figs. 1a-c): 1) basaltic rocks (Zr/TiO_2<95); 2) intermediate (andesitic) rocks (Zr/TiO_2 = 95-200); 3) felsic rocks (Zr/TiO_2 = 200-700); and 4) high Zr/Ti felsic rocks (Zr/TiO_2>700). The basaltic rocks have generally low Zr/TiO_2 ratios and Nb/Y<0.7, typical of subalkalic rocks, and generally have higher TiO_2 and Al_2O_3 contents in comparison to other rock types (Figs. 1a-c). The felsic rocks are characterized by generally subalkalic rocks, higher Zr contents, high Zr/TiO_2 ratios, and generally lower Al_2O_3 at a given Zr content (Figs. 1a-c). Intermediate rocks have values and ratios intermediate between the felsic and mafic rocks, and the entire data array forms a continuum from mafic to felsic (Figs. 1a-c). The Zr-Y and Th-Yb systematics illustrate that the rocks can be further divided into magmatic affinities (Figs. 1d-e)(Barrett and MacLean, 1999; Ross and Bedard, 2009). Most basaltic rocks have tholeiitic to transitional affinities, whereas the majority of felsic and andesitic rocks have calc-alkalic to transitional affinities (Figs. 1d-e). The high Zr/Ti samples have very high Zr/Ti ratios above those of the normal felsic rocks (Fig. 1a-b) and likely represent highly fractionated rocks.

Felsic rocks are shown on felsic discrimination diagrams in Figure 2 and shown for comparison are felsic host rocks to the VMS deposits in the Finlayson Lake district (Kudz Ze Kayah, GP4F, and Wolverine)(data from Piercey et al., 2001). In Zr-Nb space the samples generally have lower Zr and Nb contents in comparison to the main host rocks to mineralization, but do overlap, in part, the hanging wall rocks to the Wolverine deposit (Fig. 2a). They have Zr/Yb-Ti/Yb systematics that overlap the Wolverine hanging wall and Cleaver Lake formation (Fig. 2b), and they have volcanic arc type affinities in Nb-Y and Ta-Yb space (Figs. 2c-d)(Pearce et al., 1984). Notably, the high Zr/Ti samples lie overlap the fields for VMS deposits from the Finlayson Lake district (Figs. 2a-d). Figure 2e contains the Zr/Y-Y diagram of Lesher et al. (1986) which was created to discriminate VMS-associated and VMS-barren rhyolitic rocks from the Superior Province in Ontario and Quebec. On this diagram, the most prospective hosts for mineralization are the FIII rhyolites, with the FII rhyolites also being prospective, but less so than the FIII rhyolites, whereas the FI are the least prospective (Fig. 2e). Most samples from the MOR overlap the FII to FIII fields, with the high Zr/Ti samples closest to the FIII fields (Fig. 2e). Notably, in post-Archean settings FII rhyolites are very common hosts to mineralization, particularly in areas partially to fully underlain by continental crusts (Piercey et al., 2001; Hart et al., 2004; Piercey, 2007, 2009). Furthermore, with the exception of some of the transitional felsic samples, most felsic samples lie close to the upper crustal control line (Fig. 2f)(values from McLennan, 2001) suggesting that they have been at least partially influenced by continental crust, hence, likely explaining why FII affinities are dominant at the MOR prospect; FII affinities are also the dominant rhyolite type in the Finlayson Lake district (Piercey et al., 2001; Piercey et al., 2008).

Primitive mantle normalized multi-element plots provide a very compact way to view various elemental groups within a rock and provide a multi-element fingerprint of a rock that is often proportional the tectonic setting in which that rock formed (e.g., Sun and McDonough, 1989; Pearce and Peate, 1995). In Figure 3 profiles are shown for all samples of a given population, as well screened to remove altered samples (i.e., samples with Na_2O = 2-5% are shown and all other data are excluded). Notably, the plots with more altered samples (Figs. 3b and 3d) have a much broader spread in trace element signatures suggesting some mobility in the so-called immobile elements, features observed in other VMS-related alteration zones (e.g., Finlow-Bates and Stumpfl, 1981; Campbell et al., 1984; Whitford et al., 1988; Valsami and Cann, 1992). Using only the least altered sample profiles, all populations (high Zr/Ti, calc-alkalic, transitional) have broadly similar patterns with negative Nb and Ti anomalies with low compatible element contents (e.g., Al, V)(Fig. 3). Negative Nb and Ti anomalies have often been attributed to rocks that have formed in an arc environment (Pearce, 1983; Pearce and Peate, 1995), but can also be inherited from melting of upper continental crust or contamination by arc basement (Piercey, 2007); this will be further discussed below. There are subtle changes between the populations, however, most notably the enrichment in light REE (i.e., LREE: La, Ce, Pr, Nd, and Sm) decreases from the high Zr/Ti group through the calc-alkalic group through the transitional group, with the latter group having the flattest patterns (Fig. 3). These patterns reflect a combination of both fractionation (i.e., the transitional samples are less fractionated) coupled with upper crust contamination (i.e., the calc-alkalic and high Zr/Ti suite have greater crustal contamination). Support for a greater upper crust contribution in the high Zr/Ti and calc-alkalic suite is also support by their upper crust normalized REE profiles shown in Figure 4. Flat patterns are indicative of the rock being sourced from or to have interacted with upper crustal material; notably, both the calc-alkalic and transitional suites have relatively flat patterns, albeit with minor LREE depletion (Figs. 4a-b). In contrast, the transitional felsic rocks have significantly LREE-depleted upper crust normalized profiles, suggesting that they have a lesser upper crustal component (Fig. 4c).

The primitive mantle normalized plots for the mafic and intermediate rocks are shown in Figure 5 and like above have been shown for the complete dataset and those screened for alteration. In the suites that have strong alteration there is more scatter in the data with some groups having un-interpretable patterns (e.g., Fig. 5b, 5h), but for the most part they all exhibit broadly similar patterns with flat to weakly developed negative Nb anomalies weak to moderately elevate LREE enrichment relative to the HREE (Fig. 5). The altered calc-alkalic basalts have Zr/TiO_2 and Zr/Y features like calc-alkalic basalts but have patterns that exhibit positive Nb anomalies like enriched mid-ocean ridge basalts (E-MORB)(Fig. 5a). There is also a notable increase in the enrichment in LREE and size of the negative Nb anomaly as one proceeds towards more calc-alkalic rocks and going from basalt to andesite (Fig. 5). While the negative Nb anomaly suggests the potential for these rocks forming in an arc, the above behaviour is much more consistent with them forming within a non-arc environment (i.e., arc rift) and having negative Nb anomalies and LREE-enrichment due to crustal contamination. This is supported by the Ti-V systematics of the mafic to intermediate rocks, where most samples plot in the mid-ocean ridge basalt (MORB) to back-arc basin MORB fields (Fig. 6). Since Ti-V are insensitive to crustal contamination these data provide the best indicators of setting for mafic rocks and imply a rift-like setting for the MOR mafic-intermediate rocks.

Further support for the role of crustal contamination is presented in Figure 7. On this plot Nb/Th, a proxy for the negative Nb anomaly, is plotted against two indexes for crustal contamination, La/Sm, a measure of LREE-enrichment on primitive mantle normalized plots, and Zr/Y, a measure of tholeiitic through calc-alkalic affinities (Fig. 7). With increasing continental crustal contamination there is a coincident increase in Th, increase in the size of the negative Nb anomaly, a decrease in Nb/Th and the coincident increase in La/Sm and Zr/Y. Notably, the more felsic and more calc-alkalic the samples are the lower the Nb/Th and higher the La/Sm and Zr/Y ratios are (Fig. 7). Furthermore, the data array form a continuum from those with smaller negative Nb anomalies (high Nb/Th, low La/Sm and Zr/Y) and tholeiitic affinities towards samples with more negative Nb anomalies (low Nb/Th, high La/Sm and Zr/Y) and calc-alkalic affinities (Fig. 7). ***This suggests that the negative Nb anomalies present in these rocks are not due to formation within an arc environment, but due to continental crustal contamination - this implies that these rocks formed within a non-arc setting, likely an arc rift setting.***

Mobile Element Geochemistry

General Mobile Element Variations

General mobile element variations are shown on Figures 8-10. A significant population of samples have low Na_2O values and high to very high Spitz-Darling index values (Spitz and Darling, 1978) ($Al_2O_3/Na_2O>10$)(Fig. 8a)(diagram from Ruks et al., 2006). These low Na_2O values and accompanying high Al_2O_3 values are due to the destruction of feldspar and glasses where Na_2O to the hydrothermal fluid and Al_2O_3 is conserved during the clay mineral forming process:

$3NaAlSi_3O_8$	$+ K^+ + 2H^+ =$	$KAl_3Si_3O_{10} +$	$6SiO_2 +$	$3Na^+$
Albite	+ seawater	sericite	Si in sol'n	Na in sol'n

$2NaAlSi_3O_8$	$+ 5Mg^{2+} + 8H_2O =$	$Mg_5Al_2Si_3(OH)_8 + 3SiO_2 +$		$2Na^+ + 2H^+$
Albite	+ seawater	chlorite	Si in sol'n	Na^++ H^+ in sol'n

Samples that have less than 2% Na_2O and/or $Al_2O_3/Na_2O>10$ are considered moderately altered, whereas those with <1% and $Al_2O_3/Na_2O>50-100$ are considered strongly altered. Notably, there is a significant population of samples that are moderate to strongly altered, especially the calc-alkalic felsic and andesitic rocks (Fig. 8a).

The highly altered samples with low Na_2O are also characterized by elevated chlorite-carbonate-pyrite index (CCPI)[1] (Large et al., 2001) and Hashimoto alteration index (AI)[2] (Ishikawa et al., 1976) values (Fig. 8b). These indexes (see below) are based on the gains of MgO, Fe_2O_3, and K_2O and the coincident losses of Na_2O and CaO during the alteration process, leading to elevated values for the most altered samples (Fig. 8b). It is notable that there is a significant population of samples that trends from the least altered box towards the pyrite-chlorite node and the dolomite-ankerite nodes, consistent with chlorite-pyrite and carbonate alteration, especially in the calc-alkalic suite rocks

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[1] $CCPI = 100*[(Fe_2O_3T+MgO)/ (Fe_2O_3T+MgO+CaO+Na_2O)]$

[2] $AI = 100*[(K_2O+MgO)/ (K_2O+MgO+CaO+Na_2O)]$

(Fig. 8b). There is also a population that trends towards the albite node, indicative of more diagenetic or regional Na-metasomatism, likely due to fluid flow on the flanks of a hydrothermal system, or lower temperature hanging-wall alteration (e.g., Spooner and Fyfe, 1973; Galley, 1993)(Fig. 8b). The Na_2O-enriched samples are also present in said field on a Hughes (1973) diagram, but there is also a very strong population of calc-alkalic rocks, both andesites and rhyolites, that have strong potassic metasomatism (Fig. 8c). This distribution is also shown on ternary MgO-Al_2O_3-alkali plot of MacDonald et al. (1996) where most samples lie between the albite-muscovite, and chlorite nodes, reflecting varying amounts of these elements (Fig. 8d).

Mobile element ratio plots for the MOR samples are shown in Figure 9. Element ratios are used to remove the effects of closure (Stanley and Madeisky, 1994) and also to outline alteration- and mineralization-related trends in horizontal and vertical dimensions. The TiO_2/Zr-SiO_2/Zr diagram is utilized to elucidate quartz alteration and is based on the fact that TiO_2/Zr can be used to discriminate mafic through felsic rocks (e.g., Figs. 1a-b) and in unaltered rocks SiO_2/Zr will lead to positive arrays with TiO_2/Zr (Fig. 9a). In contrast, horizontal trends on this diagram reflect either excess SiO_2 (trends off the main array to the right), or SiO_2 losses (trends of the main array to the left) at a given TiO_2/Zr ratio; there are a population of samples that lies off the main array towards higher quartz content, specifically the calc-alkalic felsic rocks and to a lesser extent the transitional suite (Fig. 9a). The K_2O/Na_2O-SiO_2/Na_2O plot is based on the premise that during alteration Na_2O is lost to the hydrothermal fluid due to mineral destruction reactions (see above) whereas K_2O and SiO_2 are gained in sericite and quartz, respectively (Fig. 9b). On this diagram, more quartz and sericite altered samples will have higher ratios and tend towards the top of the data array, whereas samples that have just quartz alteration will form horizontal trends away from the data array, both of which are observable in the samples from the MOR prospect; the calc-alkalic suite of felsic and andesitic rocks form a distinctive group at the top of the data array that indicate they have the strongest quartz-sericite alteration (Fig. 9b). A similar premise can be made for Figures 9c (Fe-Mg = chlorite + sulfide), 9e (Ca = carbonate), and 9f (Cu-Zn = sulfides), where the most altered samples have the highest ratios relative to Na_2O. Clearly, in all these plots there is strong evidence for sericite, chlorite, and sulfide alteration, with lesser carbonate and quartz alteration (Fig. 9).

Base metal and volatile element plots are shown in Figure 10. There are numerous samples that contain highly anomalous base metal contenst (i.e., Cu, Zn, or Pb>1000 ppm), many of which are ore grade and at the upper detection limit of the ICP-MS and ICP-ES (i.e., 10000ppm). It is also notable that the more mineralized samples have higher Hg content, similar to that found in the Duck Pond VMS deposit in Newfoundland (Collins, 1989). These high values are also accompanied by high Hg/Na_2O ratios and anomalous Ba/Sr ratios (i.e., >10), features associated with VMS deposits in similar geological settings (e.g., Collins, 1989; Piercey, 2009).

Downhole Profiles

Key mobile major and trace elements and associated alteration indexes and ratios are shown in Figures 11-15. These plots are done to: 1) see spatial variations in alteration and relationships between different element groups; 2) to see the size of the profiles and to see what are the best drill holes from an alteration perspective; and 3) utilize the latter to rank different drill holes and potential areas to target further work. The drill holes include those from the Discovery Zone (MOR-07-02, MOR-07-03, MOR-08-07) and the SD Zone (MOR-08-05, MOR-08-12). Outlined below are key observations regarding the various drill holes.

Hole MOR-07-02 (Discovery Zone, West of Main Discovery)(Fig. 11)

- This hole has a main anomalous alteration and mineralization zone from ~80-111m.
- This zone is characterized by sulfide-related element enrichment, namely Fe_2O_3, S, LOI, Zn, Cu, Pb, Tl, and Hg.
- This area is also characterized by spiky, but coincident lows in SiO_2 and Na_2O.
- There is also low, but erratic behaviour of K_2O.
- The Al_2O_3/Na_2O ratios, Hashimoto index, CCPI, and sericite index, while spiky, are all elevated here as well.
- The area has high Hg/Na_2O, Zn/Na_2O, Cu/Na_2O, and Ba/Sr enrichments.
- There is a second zone of anomalous behaviour of elements ~42-47m that is characterized by anomalous SiO_2, low Na_2O, K_2O, MnO, and enrichments in SiO_2/Zr Ba/Sr, Hashimoto index, CCPI, and sericite index – these all likely represent quartz-carbonate vein material(?) and associated alteration.

Hole MOR-07-03 (Discovery Zone, Main Discovery)(Fig. 12)

- Like hole MOR-07-02 there is a broad zone of anomalous alteration and mineralization ~116-152m.
- This zone is characterized by Fe_2O_3-S-LOI-Zn-Cu-Pb-Tl-Hg enrichment and depletions in SiO_2 and Na_2O and to a lesser extent CaO and K_2O.
- Notably, in this zone, below the higher base metal values there is a coincident loss in Na_2O coupled with enrichment in K_2O, likely related to sericite alteration.
- This anomalous zone is also characterized by anomalous Spitz-Darling index, Hashimoto index, CCPI, sericite index, Hg/Na_2O, Zn/Na_2O, and Cu/Na_2O, and Ba/Sr values.
- At 46m there is another zone of SiO_2 enrichment coupled with low Fe_2O_3, MgO, MnO, and anomalous Hashimoto, CCPI, and sericite index values. This likely is the same anomaly found in hole MOR-07-03 and likely represents quartz-(carbonate) veining(?).

Hole MOR-08-06 (SD Zone)(Fig. 13)

- This hole has a few anomalous zones, but not to the same extent as MOR-07-02 and MOR-07-03.
- At ~23-51m and 125-149m are erratic and spiky anomalous zones characterized by spiky Fe_2O_3-Na_2O-MnO-LOI, weak base metal and S enrichment, and anomalous Spitz-Darling, Hashimoto, and CCPI values.
- These zones have lower values in sericite index and SiO_2 like in the Discovery Zone.
- There is no accompanying Tl, Hg, or Ba/Sr anomalies.
- These anomalies have to be ranked as secondary in comparison to those from the Discovery Zone.

Hole MOR-08-07 (SD Zone)(Fig. 14)

- This hole has a similar profile to others found in the Discovery Zone, albeit with a more spiky nature. The anomalous zone is present at ~120-135m.
- Like previous holes it is characterized by spiky Fe_2O_3-S-LOI-Zn-Cu-Pb-Tl-Hg enrichment and depletions in SiO_2 and Na_2O and to a lesser extent CaO and K_2O.
- The zone also contains similar anomalous Spitz-Darling index values, and high Hashimoto index, CCPI, sericite index, Hg/Na_2O, Zn/Na_2O, and Cu/Na_2O, and Ba/Sr values.
- Notably, however, these anomalies are less continuous but more spiky in this hole.

Hole MOR-08-12 (SD Zone)(Fig. 15)

- This hole has a very spiky profile with a few anomalous zones, notably there is a zone at 92-98m and at 205-211m.
- These zones area characterized by Fe_2O_3-S-LOI, minor base and volatile element enrichment, and anomalous alteration index values, coupled with Na_2O and SiO_2 depletions.
- There are also other zones with anomalous CaO enrichment (carbonate veins at ~83m?) and quartz alteration (~70m with high SiO_2/Zr).
- While having VMS-related alteration the patterns are spiky and not broad and extensive like in the Discovery Zone.

Ranking Samples: Calculating a VMS Score for Samples from the MOR Prospect

In order to evaluate the prospectivity of samples from the MOR prospect and to integrate various base metal, volatile metal, mobile element and alteration index indicators of prospectivity, a single "VMS score" for each sample has been created. This score takes the various criteria, assigns them a value, and sums the value to see which samples have the highest scores. In creating the score, the elements and element ratios that best discriminate alteration and mineralization are chosen and thresholds are selected based on the present dataset and experience in other VMS systems globally. By integrating variables the samples with the best set of criteria (i.e., both alteration and mineralization) will have the highest scores, whereas samples with only single element or index anomalies will be given lower values. The following variables and associated scores were used (all calculations are provided in the attached spreadsheet):

- **Fe_2O_3** – if <10%, score 0; 10-20%, score 1; >20%, score 2;
- **Na_2O** – if >2%, score 0; 1-2%, score 2; <1%, score 2;
- **S** - <5%, score 0; 5-10%, score 1; >10%, score 2;
- **LOI** - <5%, score 0; 5-10%, score 1; >10%, score 2;
- **Ba** - <500ppm, score 0; 500-1000 ppm, score 1; >1000 ppm, score 2;
- **Cu** (by ICP-ES) - <1000 ppm, score 0; 1000-2500 ppm, score 1; >2500 ppm, score 2;
- **Zn** (by ICP-ES) - <1000 ppm, score 0; 1000-2500 ppm, score 1; >2500 ppm, score 2;
- **Pb** (by ICP-ES) - <1000 ppm, score 0; 1000-2500 ppm, score 1; >2500 ppm, score 2;

- **Tl** - <1 ppm, score 0; >1 ppm, score 2;
- **Hg** - <1 ppm, score 0; 1-2.5 ppm, score 1; >2.5 ppm, score 2;
- **Al_2O_3/Na_2O** - <10, score 0; 10-100, score 1; >100, score 2;
- **Ba/Sr** - <10, score 0; 10-25, score 1; >25, score 2.

The results of the calculations are provided in the attached spreadsheet and samples were given the following assignments based on their VMS score:

- **Highly Prospective** - VMS score >10.
- **Moderately Prospective** - VMS score = 5-10.
- **Prospective** - VMS Score 2-5.
- **Anomalous** - VMS Score = 1.
- **Lesser Prospective** = VMS Score <1.

Outlined in Table 1 are the top ranked samples, i.e., those with highly prospective or moderately prospective signatures. Notable, all of these samples, with a few exceptions, occur within the main Discovery Zone.

Table 1. VMS scores for samples from the MOR prospect.

Sample #	Drillhole	Depth	VMS_Score	Ranking	Valuation
G285505	MOR-07-02	88.7	23	1	highly prospective
G285529	MOR-07-03	135.5	22	2	highly prospective
G285502	MOR-07-02	81.64	21	3	highly prospective
G285503	MOR-07-02	84.6	20	4	highly prospective
G285504	MOR-07-02	86.63	20	5	highly prospective
G285510	MOR-07-02	103.35	20	6	highly prospective
G285531	MOR-07-03	143.95	20	7	highly prospective
G285557	MOR-08-07	127.3	19	8	highly prospective
G628508	MOR-07-02	97.45	18	9	highly prospective
G285559	MOR-08-07	130	17	10	highly prospective
G285584	MOR-08-07	136.42	17	11	highly prospective
G285511	MOR-07-02	106.4	16	12	highly prospective
G285530	MOR-07-03	138	14	13	highly prospective
G285528	MOR-07-03	128.5	11	14	highly prospective
G285535	MOR-07-03	191.1	11	15	highly prospective
G285624			10	16	moderately prospective
G285532	MOR-07-03	152	9	17	moderately prospective
G285582	MOR-08-07	119.6	9	18	moderately prospective
G285630			9	19	moderately prospective
G285250	MOR-07-02	74.9	8	20	moderately prospective
G285543	MOR-08-12	95.5	8	21	moderately prospective
G285547	MOR-08-12	207.5	7	22	moderately prospective
G285621			7	23	moderately prospective
G285620			7	24	moderately prospective
G285506	MOR-07-02	90.5	6	25	moderately prospective
G285541	MOR-07-03	230.5	6	26	moderately prospective
G285556	MOR-08-07	126	6	27	moderately prospective
G285588	MOR-08-07	171.4	6	28	moderately prospective

G285544	MOR-08-12	98.4	6	29	moderately prospective

The relationship of VMS score to various alteration and mineralization-related elements is shown in Figure 16 and downhole profile comparisons for the Discovery Zone and SD Zone are shown in Figures 17 and 18. There is a good correlation between VMS score and base metal enrichment (Figs. 16a,b), LOI (Fig. 16c), Na_2O depletion (Fig. 16d), Fe_2O_3+MgO (Fig. 16e), and S (Fig. 16f). These all illustrate that the score is successful in delineating both mineralization (e.g., Zn-Cu-S-LOI) and alteration (e.g., Na_2O depletion, Fe-Mg-enrichment, LOI – hydration/carbonation).

Tectonic Setting and the MOR Petrochemical Assemblage: Comparisons to other VMS Hosting Successions in the Cordillera

The immobile element systematics of the MOR host rocks provide significant insight into the tectonic setting for mineralization and helps in facilitating comparisons to other VMS districts in the Yukon-Tanana terrane and elsewhere globally. The rocks of the MOR prospect are unlike the Finlayson Lake district in that they form continuous spectra from basalt through felsic, and have a range of compositions from tholeiitic to calc-alkalic, and there is a notable absence of felsic rocks enriched in HFSE and REE, features that are very distinctive in Finlayson Lake (e.g., Piercey et al., 2001; Piercey et al., 2008). Despite this, the chemostratigraphy and petrology of rocks from the MOR prospect do have features that indicate a potentially prospective environment for mineralization. In particular, the MOR area shows evidence for formation within a rift environment with E-MORB-type rocks that have been contaminated by continental crust (Fig. 7). It is likely that these mafic rocks upwelled beneath a rift, likely due to arc rifting along the western Laurentian cratonic margin (Nelson et al., 2006; Roots et al., 2006), melting continental crust forming the rhyolitic rocks, and mixed with crust to form andesitic rocks. The suggested rift setting is also important as rift environments are particularly conducive to VMS deposit formation largely due to the fact that rifts are characterized by extensional geodynamic activity leading to extensional faults that provide fluid pathways and permeability required to focus hydrothermal fluids, and secondly there is an upwelling of mantle heat beneath the rift that raises the local geothermal gradient and helps stimulate hydrothermal fluid flow (e.g., Sillitoe, 1982; Swinden, 1991; Piercey, 2007, 2009).

The association of these E-MORB, contaminated E-MORB, and calc-alkalic felsic rocks is not an uncommon "petrochemical assemblage" in the VMS environment (Piercey, 2007, 2009). Petrochemical assemblages are chemostratigraphic assemblages of mafic and felsic rocks that indicate a specific geodynamic environment and are a predictive tool to identify environments with the potential to host VMS mineralization (Piercey, 2009)(Fig. 19). Notably, the rock associations in the MOR area are broadly similar to other bimodal felsic to felsic-siliciclastic VMS settings (Fig. 19). This does not imply that there will be significant mineralization like these camps or even a direct correlation to the deposits and environments present in Figure 19, but it does suggest that the area has a good geodynamic environment and coupled with the known intersections of VMS mineralization and VMS-related alteration bolsters the assertion that the MOR area has potential for VMS mineralization.

Recommendations and Comments

It is clear from previous drilling results, geological work, and the results presented herein that the MOR prospect does have potential to host VMS mineralization. It is recommended that further exploration be done in the area as the prospect. A number of suggestions and recommendations are provided below:

1. Most VMS mineralization at the MOR prospect is associated with calc-alkalic to transitional affinity felsic to andesitic rocks with evidence of strong alteration and mineralization (e.g., low Na_2O; anomalous base- and volatile metal contents; high Fe_2O_3+MgO, Spitz-Darling index, CCPI, Hashimoto index, and Ba/Sr index values). Rocks with similar attributes should be concentrated upon during regional exploration.
2. The VMS score could be utilized in all new data sets, and regional datasets, to screen areas with the best potential. The VMS score could also be used to discriminate potential new areas to stake. Utilization of existing government lithogeochemical data (e.g., like the data from the Ancient Pacific Margin NATMAP project) and testing the VMS score in such datasets may provide fruitful in exploring new areas and providing targets outside of the MOR area to potentially stake.
3. In comparing the Discovery Zone and SD Zone, the Discovery Zone has much better lithogeochemical signatures and indicators of mineralization and alteration, including broad alteration and mineralization haloes and highly anomalous VMS score values. The SD Zone, while having anomalous character, does not appear as prospective as the Discovery Zone. If budgets are limited, it is suggested that further work be concentrated near the Discovery Zone.
4. Within the Discovery Zone it does appear that alteration and mineralization signatures are strongest in the main part of the Discovery Zone (e.g., hole MOR-07-03) and west (e.g., hole MOR-07-02) and is less developed, but still developed, in the eastern portion of the prospect (e.g., hole MOR-08-07). It is highly probable that these signatures are a function of limited sampling from a spatial perspective, but if real, it suggests that he main area and west of the Discovery Zone are the best areas to concentrate further exploration. It is also recommended that down-dip signatures be tested in some holes to see if such signatures increase towards the north and down-dip or not.

Summary

The MOR prospect represents a relatively new VMS discovery within the Yukon-Tanana terrane near Teslin, Yukon. The prospect is associated with basaltic, andesitic, and rhyolitic rocks that have immobile element signatures they range in composition from tholeiitic through transitional to calc-alkalic. The felsic rocks are predominantly transitional to calc-alkalic, FII affinities, and have evidence for interaction with upper continental crust. Mafic to intermediate rocks are dominated by transitional to tholeiitic rocks with lesser calc-alkalic rocks and have Ti-V systematics indicative of formation within a rift environment. All the immobile element data indicate that the various suites of rocks can be related by variable amounts of mixing between more primitive, basaltic end members and continental crust, with the more felsic end-members being almost entirely derived from continental crust, whereas the basaltic rocks are predominantly derived from mantle with minor upper crust contamination. The chemostratigraphic assemblages present in the MOR prospect are indicative of formation within a rift to arc-rift built proximal to or upon continental crust, a setting similar to other VMS belts in the Cordillera (e.g., Finlayson Lake, Eskay Creek, Tulsequah). While not directly similar to the Finlayson Lake District, the MOR prospect has a "petrochemical assemblage" that is broadly similar to other VMS belts hosted by felsic rocks and formed proximal to continental crust (e.g., bimodal felsic to felsic siliciclastic VMS environments).

The mobile element systematics of the MOR prospect host rocks indicate that a significant proportion of samples have evidence for VMS-like alteration, including chlorite-sericite-sulfide with lesser quartz and carbonate alteration, as indicated by the strong alkali (e.g, Na_2O) depletion, Fe_2O_3-MgO-base metal-volatile element enrichment, and elevated alteration index values in many samples. Samples have been ranked using a single "VMS score" that integrates various indicators of VMS-related alteration and mineralization. This VMS score is maximized in samples with numerous indicators of alteration and mineralization, whereas it minimizes values for those samples with lesser indicators of mineralization. The vast majority of samples with high VMS score values are from surface and drill core in the main Discovery Zone of the MOR prospect with much lesser samples from the SD Zone.

It is recommended that further work be concentrated proximal to the Discovery Zone if budgets are limited. If exploration is to be expanded areas with calc-alkalic felsic to andesitic rocks with evidence of alteration and mineralization, and high VMS score values should be concentrated upon. In screening new areas it may be possible to utilize existing government databases (e.g., NATMAP lithogeochemical databases) to screen new areas for VMS potential.

References

Barrett, T. J., and MacLean, W. H., 1999, Volcanic sequences, lithogeochemistry, and hydrothermal alteration in some bimodal volcanic-associated massive sulfide systems, *in* Barrie, C. T., and Hannington, M. D., eds., Volcanic-Associated Massive Sulfide Deposits: Processes and Examples in Modern and Ancient Environments, Reviews in Economic Geology 8, Society of Economic Geologists, p. 101-131.

Campbell, I. H., Lesher, C. M., Coad, P., Franklin, J. M., Gorton, M. P., and Thurston, P. C., 1984, Rare-earth element mobility in alteration pipes below massive Cu-Zn sulfide deposits: Chemical Geology, v. 45, p. 181-202.

Collins, C. J., 1989, Report on lithogeochemical study of the Tally Pond Volcanics and associated alteration and mineralization, Unpublished Report for Noranda Exploration Company Limited (Assessment File 012A/1033 Newfoundland Department of Mines and Energy, Mineral Lands Division): St. John's, Newfoundland, p. 87.

Finlow-Bates, T., and Stumpfl, E. F., 1981, The behaviour of so-called immobile elements in hydrothermally altered rocks associated with volcanogenic submarine-exhalative ore deposits: Mineralium Deposita, v. 16, p. 319-328.

Galley, A. G., 1993, Characteristics of semi-conformable alteration zones associated with volcanogenic massive sulphide districts: Journal of Geochemical Exploration, v. 48, p. 175-200.

Hart, T. R., Gibson, H. L., and Lesher, C. M., 2004, Trace element geochemistry and petrogenesis of felsic volcanic rocks associated with volcanogenic massive Cu-Zn-Pb sulfide deposits: Economic Geology, v. 99, p. 1003-1013.

Hughes, C. J., 1973, Spilites, keratophyres, and the igneous spectrum: Geological Magazine, v. 109, p. 513-527.

Ishikawa, Y., Sawaguchi, T., Ywaya, S., and Horiuchi, M., 1976, Delineation of prospecting targets for Kuroko deposits based on modes of volcanism of underlying dacite and alteration haloes: Mining Geology, v. 26, p. 105-117.

Large, R. R., Gemmell, J. B., Paulick, H., and Huston, D. L., 2001, The alteration box plot: a simple approach to understanding the relationships between alteration mineralogy and lithogeochemistry associated with VHMS deposits: Economic Geology, v. 96, p. 957-971.

Lesher, C. M., Goodwin, A. M., Campbell, I. H., and Gorton, M. P., 1986, Trace element geochemistry of ore-associated and barren felsic metavolcanic rocks in the Superior province, Canada: Canadian Journal of Earth Sciences, v. 23, p. 222-237.

MacDonald, R. W. J., Barrett, T. J., and Sherlock, R. L., 1996, Geology and lithogeochemistry at the Hidden Creek massive sulfide deposit, Anyox, west-central British Columbia: Exploration and Mining Geology, v. 5, p. 369-398.

McLennan, S. M., 2001, Relationships between the trace element composition of sedimentary rocks and upper continental crust: Geochemistry, Geophysics, Geosystems, v. 2, p. Paper 2000GC000109.

Nelson, J. L., Colpron, M., Piercey, S. J., Murphy, D. C., Dusel-Bacon, C., and Roots, C. F., 2006, Paleozoic tectonic and metallogenetic evolution of pericratonic terranes in Yukon, northern British Columbia and eastern Alaska, *in* Colpron, M., and Nelson, J. L., eds., Paleozoic Evolution and Metallogeny of Pericratonic Terranes at the Ancient Pacific Margin of North America, Canadian and Alaskan Cordillera, Geological Association of Canada Special Paper 45: St John's, Geological Association of Canada, p. 323-360.

Pearce, J. A., 1983, Role of sub-continental lithosphere in magma genesis at active continental Margins., *in* Hawkesworth, C. J., and Norry, M. J., eds., Continental Basalts and Mantle Xenoliths: Nantwich, U.K., Shivan, p. 230-249.

Pearce, J. A., 1996, A user's guide to basalt discrimination diagrams, *in* Wyman, D. A., ed., Trace element geochemistry of volcanic rocks: Applications for massive sulphide exploration, Short Course Notes, Volume 12, Geological Association of Canada, p. 79-113.

Pearce, J. A., Harris, N. B. W., and Tindle, A. G., 1984, Trace element discrimination diagrams for the tectonic interpretation of granitic rocks: Journal of Petrology, v. 25, p. 956-983.

Pearce, J. A., and Peate, D. W., 1995, Tectonic implications of the composition of volcanic arc magmas: Annual Reviews of Earth and Planetary Science, v. 23, p. 251-285.

Piercey, S. J., 2007, An overview of the use of petrochemistry in the regional exploration for volcanogenic massive sulfide (VMS) deposits, *in* Milkereit, B., ed., Proceedings of Exploration 07: Fifth Decennial International Conference on Mineral Exploration: Toronto, ON, p. 223-246.

Piercey, S. J., 2009, Lithogeochemistry of volcanic rocks associated with volcanogenic massive sulfide (VMS) deposits and applications to exploration, *in* Cousens, B. L., and Piercey, S. J., eds., Subaqeous Volcanism and Mineralization - Modern Through Ancient, Short Course Notes Volume 19: St. John's, NL, Canada, Geological Association of Canada, p. 15-40.

Piercey, S. J., Paradis, S., Murphy, D. C., and Mortensen, J. K., 2001, Geochemistry and paleotectonic setting of felsic volcanic rocks in the Finlayson Lake volcanic-hosted massive sulfide (VHMS) district, Yukon, Canada: Economic Geology, v. 96, p. 1877-1905.

Piercey, S. J., Peter, J. M., Mortensen, J. K., Paradis, S., Murphy, D. C., and Tucker, T. L., 2008, Petrology and U-Pb Geochronology of Footwall Porphyritic Rhyolites from the Wolverine Volcanogenic Massive Sulfide Deposit, Yukon, Canada: Implications for the Genesis of Massive Sulfide Deposits in Continental Margin Environments: Economic Geology, v. 103, p. 5-33.

Roots, C. F., Nelson, J. L., Simard, R.-L., and Harms, T., 2006, Continental fragments, mid-Paleozoic arcs and overlapping late Paleozoic arc and Triassic sedimentation in the Yukon-Tanana terrane of northern British Columbia and southern Yukon, *in* Colpron, M., and Nelson, J. L., eds., Paleozoic Evolution and Metallogeny of Pericratonic Terranes at the Ancient Pacific Margin of North America, Canadian and Alaskan Cordillera, Geological Association of Canada Special Paper 45: St. John's, NL, Canada, Geological Association of Canada, p. 153-177.

Ross, P.-S., and Bedard, J. H., 2009, Magmatic affinity of modern and ancient subalkaline volcanic rocks determined from trace-element discriminant diagrams: Canadian Journal of Earth Sciences, v. 46, p. 823-839.

Ruks, T. W., Piercey, S. J., Ryan, J. J., Villeneuve, M. E., and Creaser, R. A., 2006, Mid- to Late Paleozoic K-Feldspar Augen Granitoids of the Yukon-Tanana Terrane, Yukon, Canada: Implications for Crustal Growth and Tectonic Evolution of the Northern Cordillera: Geological Society of America Bulletin, v. 118, p. 1212-1231.

Sillitoe, R. H., 1982, Extensional habitats of rhyolite-hosted massive sulfide deposits: Geology, v. 10, p. 403-407.

Spitz, G., and Darling, R., 1978, Major and minor element lithogeochemical anomalies surrounding the Louvem copper deposit, Val d'Or, Quebec: Canadian Journal of Earth Sciences, v. 15, p. 1161-1169.

Spooner, E. T. C., and Fyfe, W. S., 1973, Sub-Sea-Floor Metamorphism, Heat and Mass Transfer: Contributions to Mineralogy and Petrology, v. 42, p. 287-304.

Stanley, C. R., and Madeisky, H. E., 1994, Lithogeochemical exploration for hydrothermal ore deposits using Pearce Element Ratio analysis, *in* Lentz, D. R., ed., Alteration and Alteration Processes Associated with Ore-Forming Systems, Short Course Notes Volume 11, Geological Association of Canada, p. 193-211.

Sun, S.-s., and McDonough, W. F., 1989, Chemical and isotopic systematics of oceanic basalts: implications for mantle composition and processes, *in* Saunders, A. D., and Norry, M. J., eds., Magmatism in the Ocean Basins, Geological Society Special Publication 42, p. 313-345.

Swinden, H. S., 1991, Paleotectonic settings of volcanogenic massive sulphide deposits in the Dunnage Zone, Newfoundland Appalachians: Canadian Institute of Mining and Metallurgy Bulletin, v. 84, p. 59-89.

Valsami, E., and Cann, J. R., 1992, Mobility of rare earth elements in zones of intense hydrothermal alteration in the Pindos ophiolite, Greece, *in* Parson, L. M., Murton, B. J., and Browning, P., eds., Ophiolites and their Modern Oceanic Analogues., Geological Society Special Publication No. 60, p. 219-232.

Whitford, D. J., Korsch, M. J., porritt, P. M., and Craven, S. J., 1988, Rare-earth element mobility around the volcanogenic polymetallic massive sulfide deposit at Que River, Tasmania, Australia: Chemical Geology, v. 68, p. 105-119.

Winchester, J. A., and Floyd, P. A., 1977, Geochemical discrimination of different magma series and their differentiation products using immobile elements: Chemical Geology, v. 20, p. 325-343.

Important Notice

The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in Stephen J. Piercey Geological Consulting's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. The results and opinions expressed in this report are based on Stephen J. Piercey Geological Consulting's interpretation of technical data sited in this report. The author has not visited the property and thus any assertions are based entirely on lithogeochemical data and data from publically available information on the MOR prospect. While Stephen J. Piercey Geological Consulting has carefully reviewed all of the information provided by Tarsis Resources Ltd., and believes the information to be reliable, Stephen J. Piercey Geological Consulting has not conducted an in-depth independent investigation to verify its accuracy and completeness.

This report is intended for Tarsis Resources Ltd. and any third party use is at that party's sole risk.

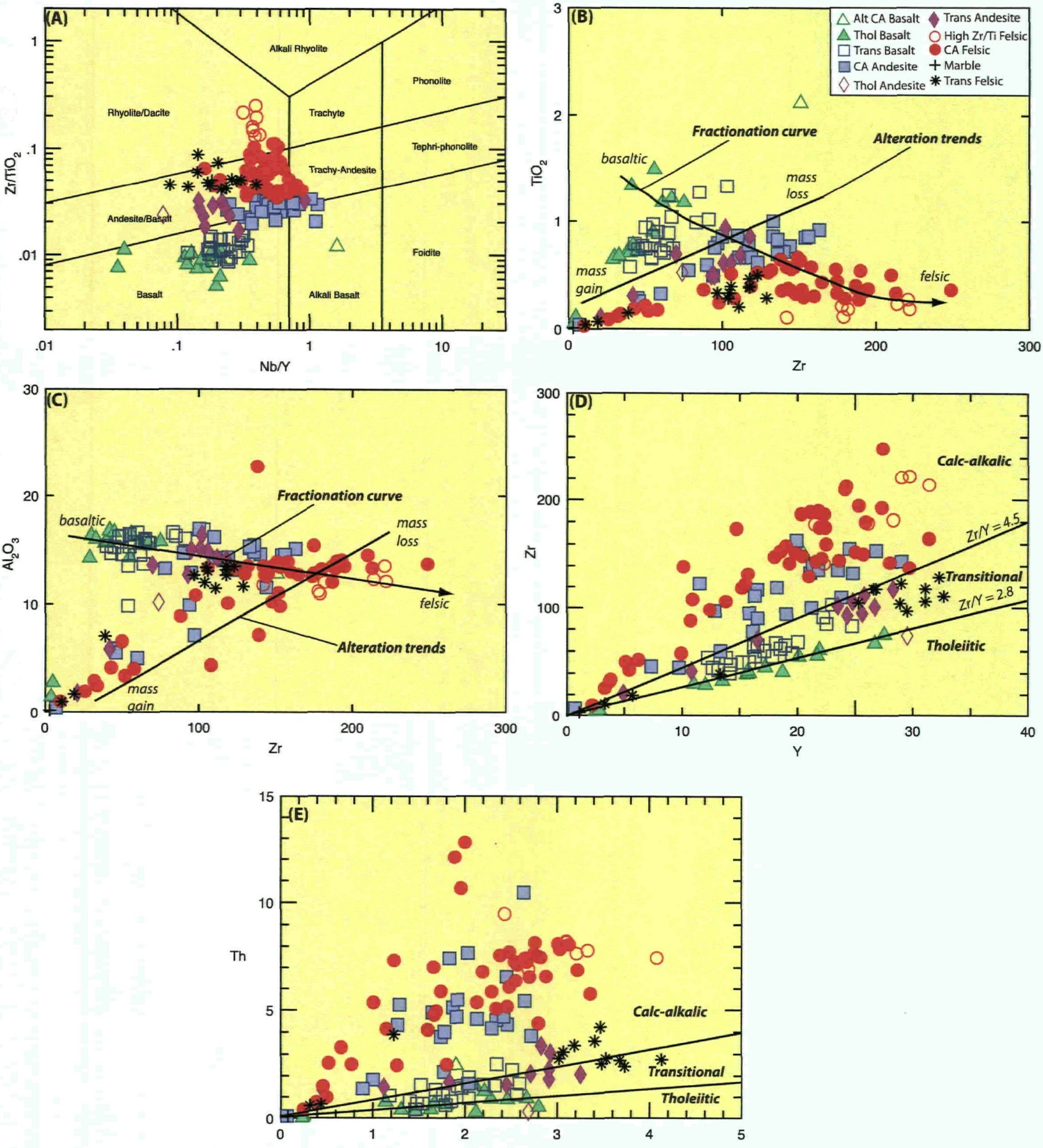


Figure 1. Immobile trace element plots for samples from the MOR prospect. A) Zr/TiO2-Nb/Y plot of Winchester and Floyd (1977) (modfied by Pearce, 1996). B) TiO2-Zr and C) Al2O3-Zr fractionation plots. D) Zr-Y and E) Th-Yb classificati4on plots of Ross and Bedard (2009) (modified from Barrett and MacLean, 1999).

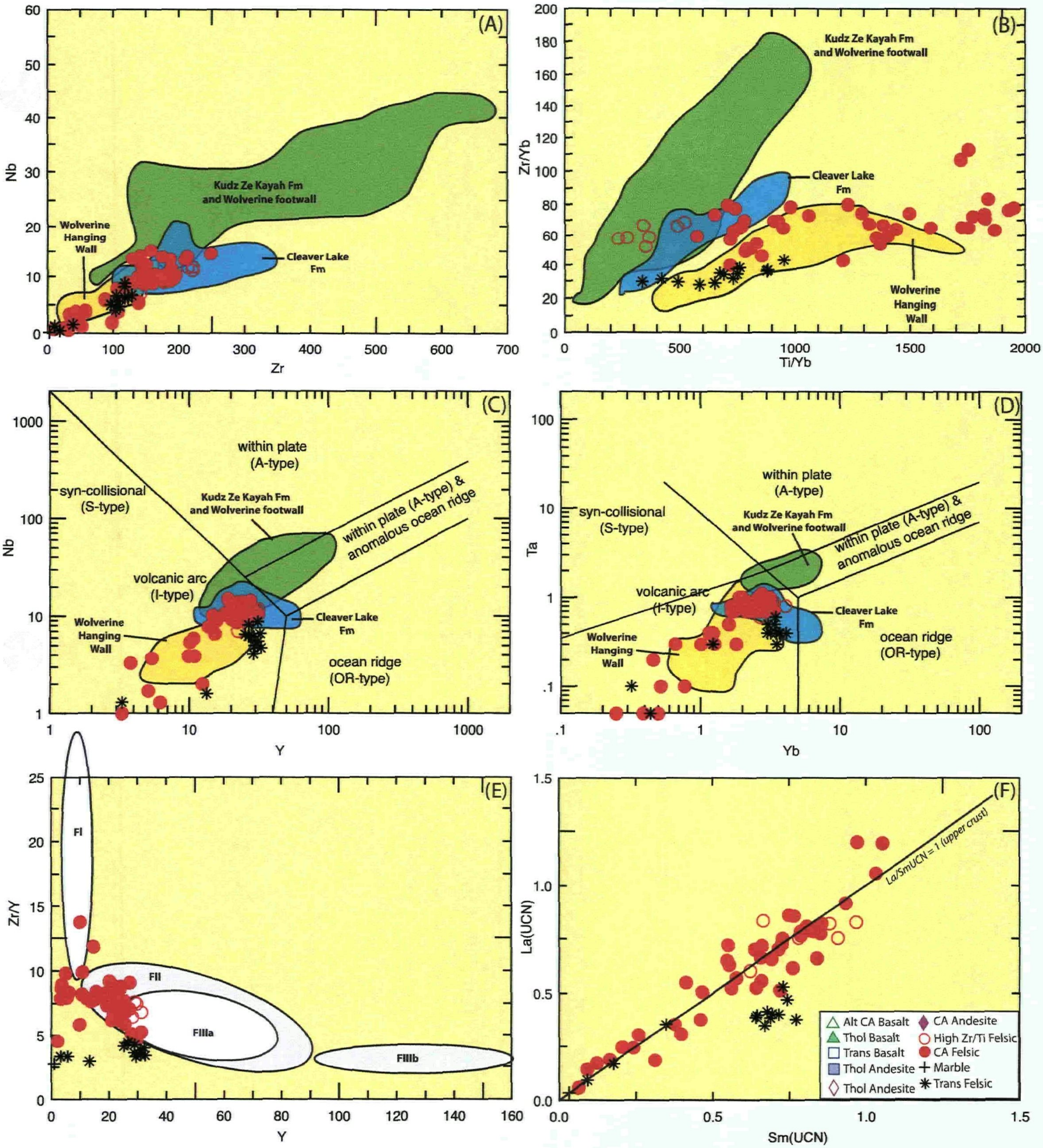


Figure 2. Immobile trace element plots for felsic samples from the Mor prospect. A) Zr-Nb plot. B) Zr/Yb-Ti/Yb (after Piercey et al., 2001). C) Nb-Y and D) Ta-Yb discrimination diagrams (from Pearce et al., 1984). E) Zr/Y-Y VMS rhyolite discrimination diagram (from Lesher et al., 1986 and Hart et al., 2004). F) Upper curst normalized (UCN) La-Sm plot (upper crust values from McLennan, 2001). Shown for comparison in A-D ar ethe fiels for various rocks from the Finlayson Lake VMS district (from Piercey et al., 2001).

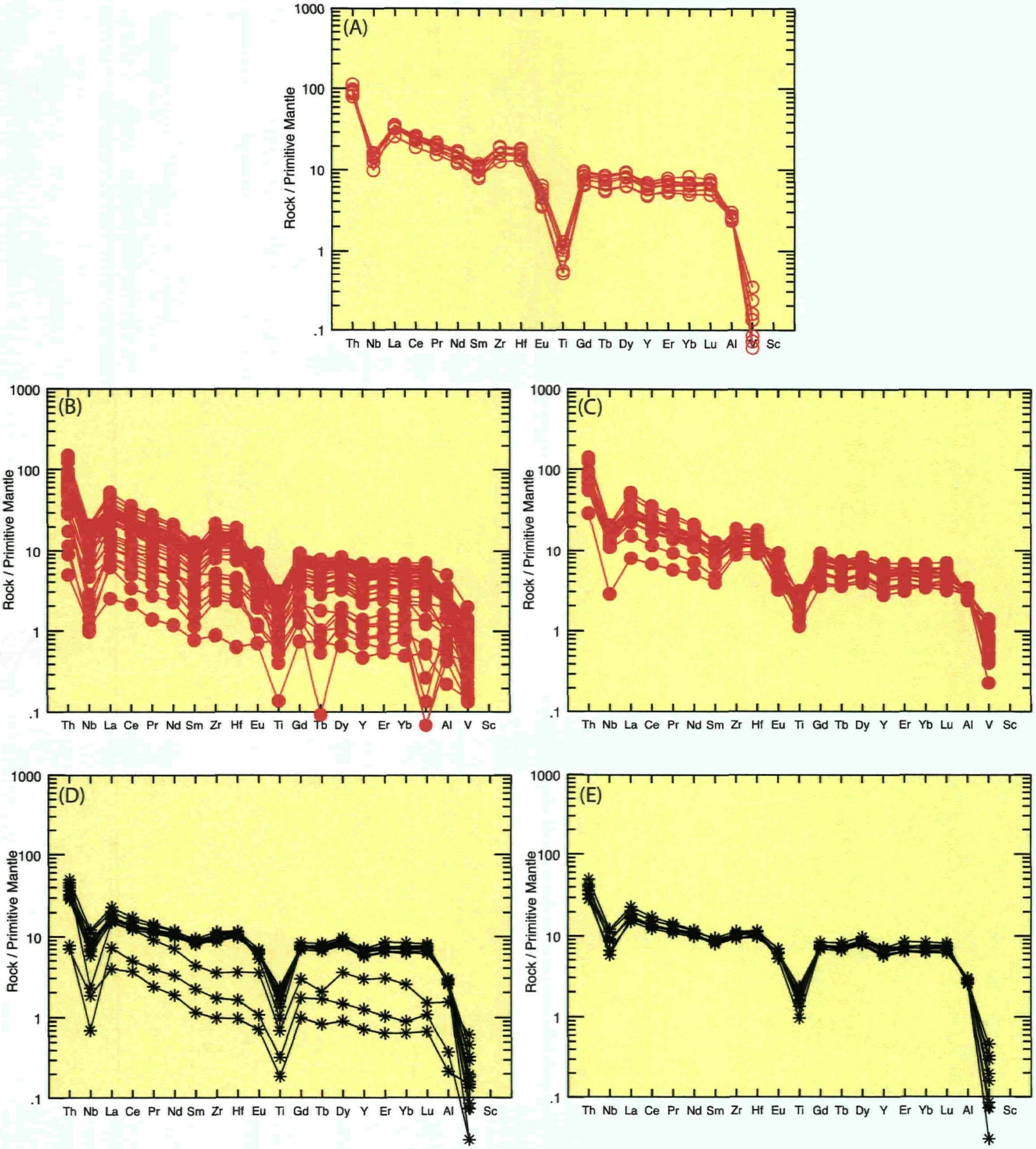


Figure 3. Primitive mantle normalized plots (values from Sun and McDonough, 1989) for felsic rocks from the MOR prospect. A) High Zr/Ti felsic rocks. B) Calc-alkalic felsic rocks (entire dataset). C) Calc-alkalic felsic rocks screened to remove altered samples. D) Transitional felsic rocks (entire dataset). E) Transitional felsic rocks screened to remove altered samples. Notably, some highly altered samples appear to have had mobility of so-called immobile elements.

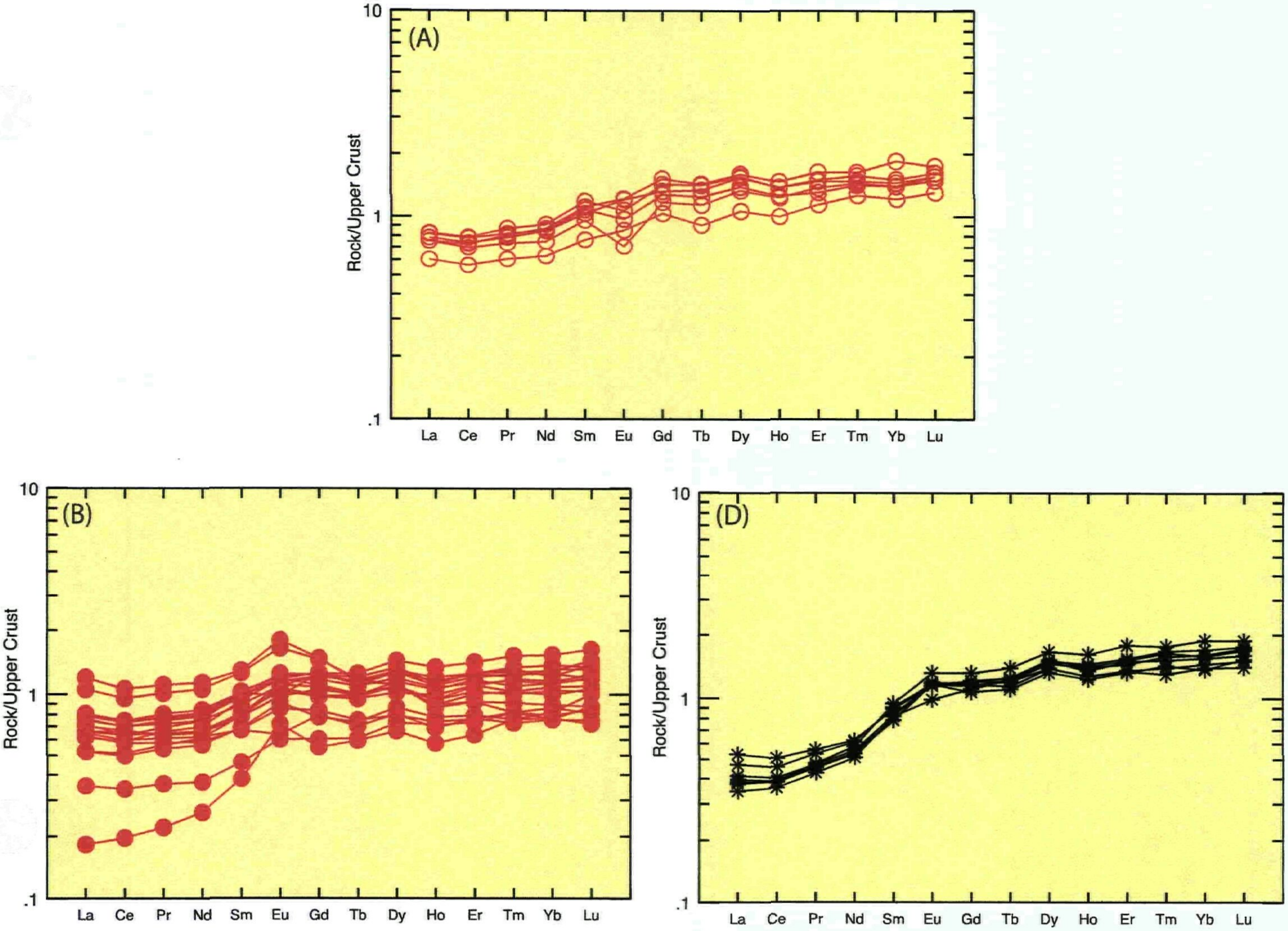


Figure 4. Upper continental crust normalized plots (values from McLennan, 2001) for least altered felsic rocks from the MOR prospect. A) High Zr/Ti felsic rocks. B) Calc-alkalic felsic rocks C) Transitional felsic rocks.

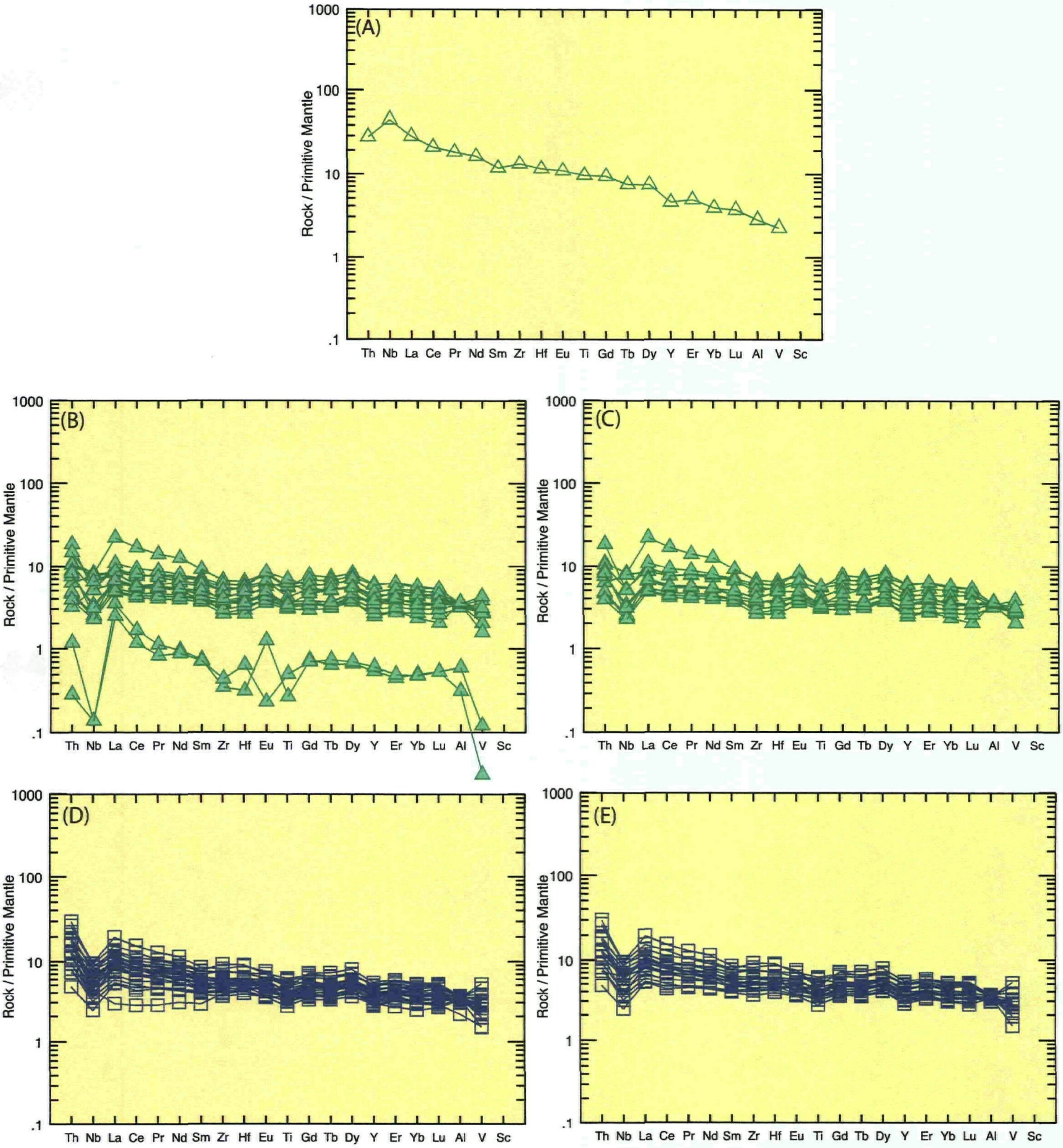


Figure 5. Primitive mantle normalized plots for mafic to intermediate rocks of the MOR prospect. A) altered calc-alkalic(?) basalt (this sample actually has a signature similar to modern enriched mid-ocean ridge basalts (E-MORB). B) Tholeitic basalts (entire suite) and C) tholeitic basalts without highly altered samples. D) Transitional basalts (entire suite) and E) transitional basalts without highly altered samples.

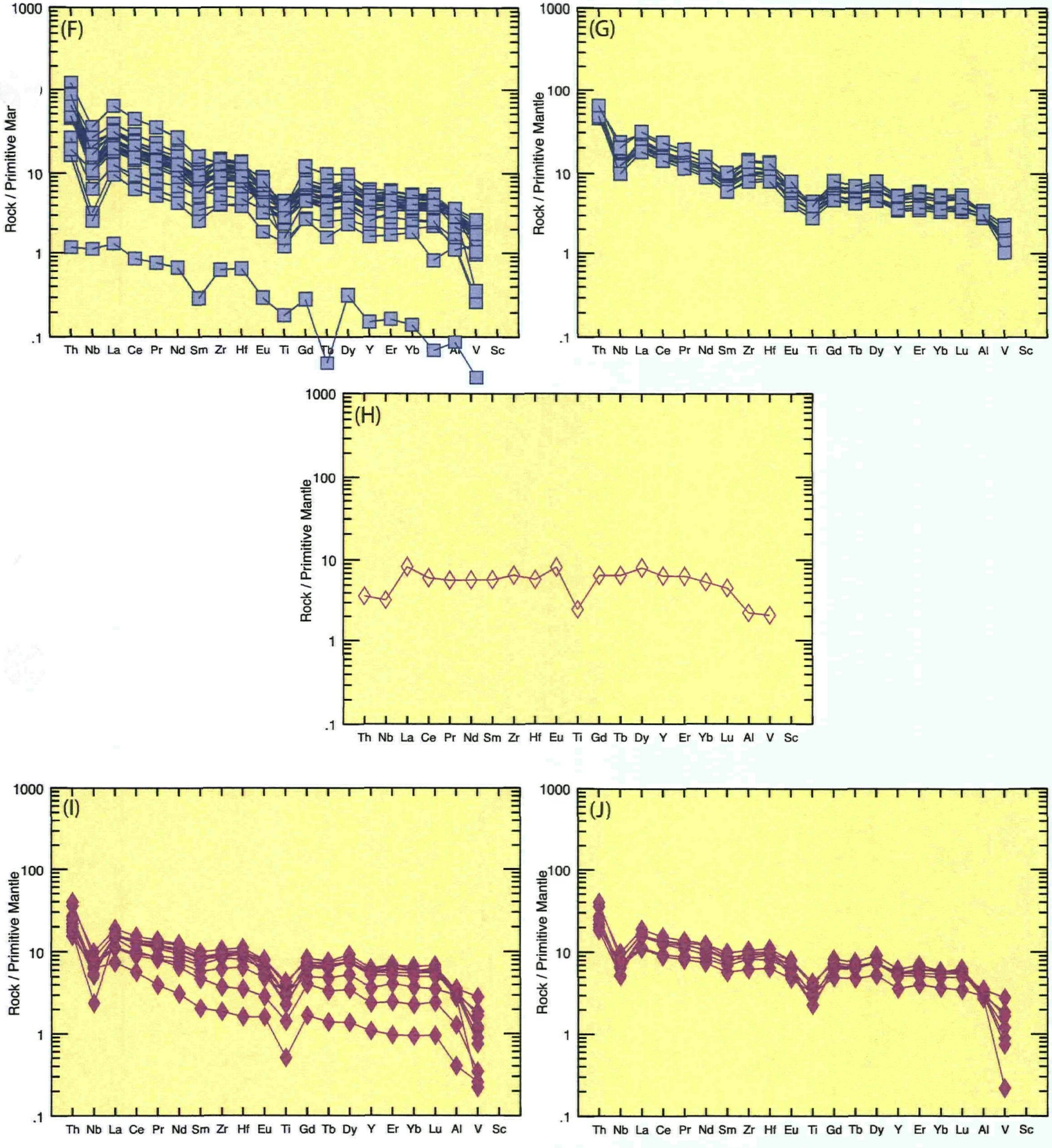


Figure 5 (continued). Primitive mantle normalized plots for mafic to intermediate rocks of the MOR prospect. F) Tholeitic andesites (entire suite) and G) tholeitic andesites without highly altered samples. H) Tholeiitic andesite. I) Calc-alkalic andesites (entire suite) and J) calc-alkalic andesites without highly altered samples.

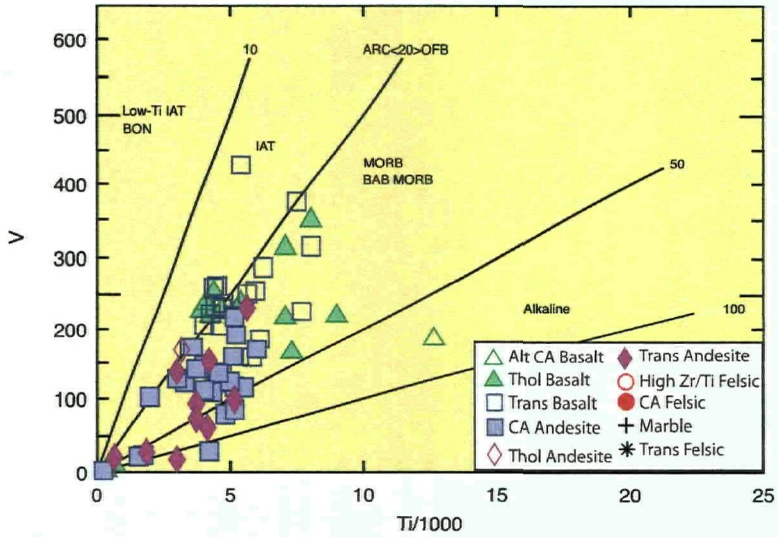


Figure 6. Ti-V discrimination diagram (from Shervais, 1982) for mafic-intermediate rocks from the MOR prospect. Notably, most mafic rocks lie within the field for mid-ocean ridge basalt (MORB) to back-arc basin MORB, suggesting a non-arc origin.

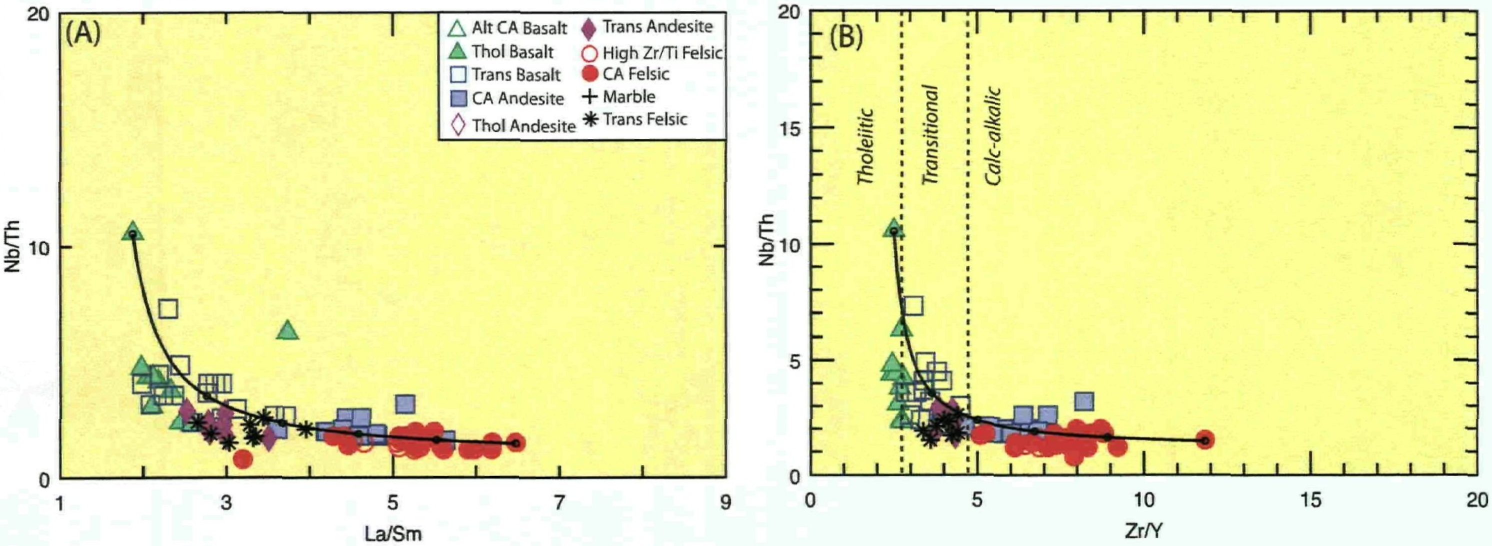


Figure 7. Trace element mixing diagrams for least altered samples from the MOR prospect. Nb/Th ratios are utilized to measure the size of the negative Nb anomaly (i.e., lower values = larger anomaly), whereas La/Sm and Zr/Y are measures of LREE-enrichment and steepness of the trace element profiles. As well, these latter ratios are good measures of the degree of potential continental crustal involvement. Notably, there are hyperbolic arrays in these diagrams in which the samples lie on mixing lines between mafic rocks and the felsic rocks. This suggests that these rocks represent mixtures of non-arc mantle and continental crust and most Nb anomalies are likely due to contamination by crust rather than true "arc" signatures. It suggests that these rocks formed within a rifted arc or back-arc setting likely partially floored by continental crust.

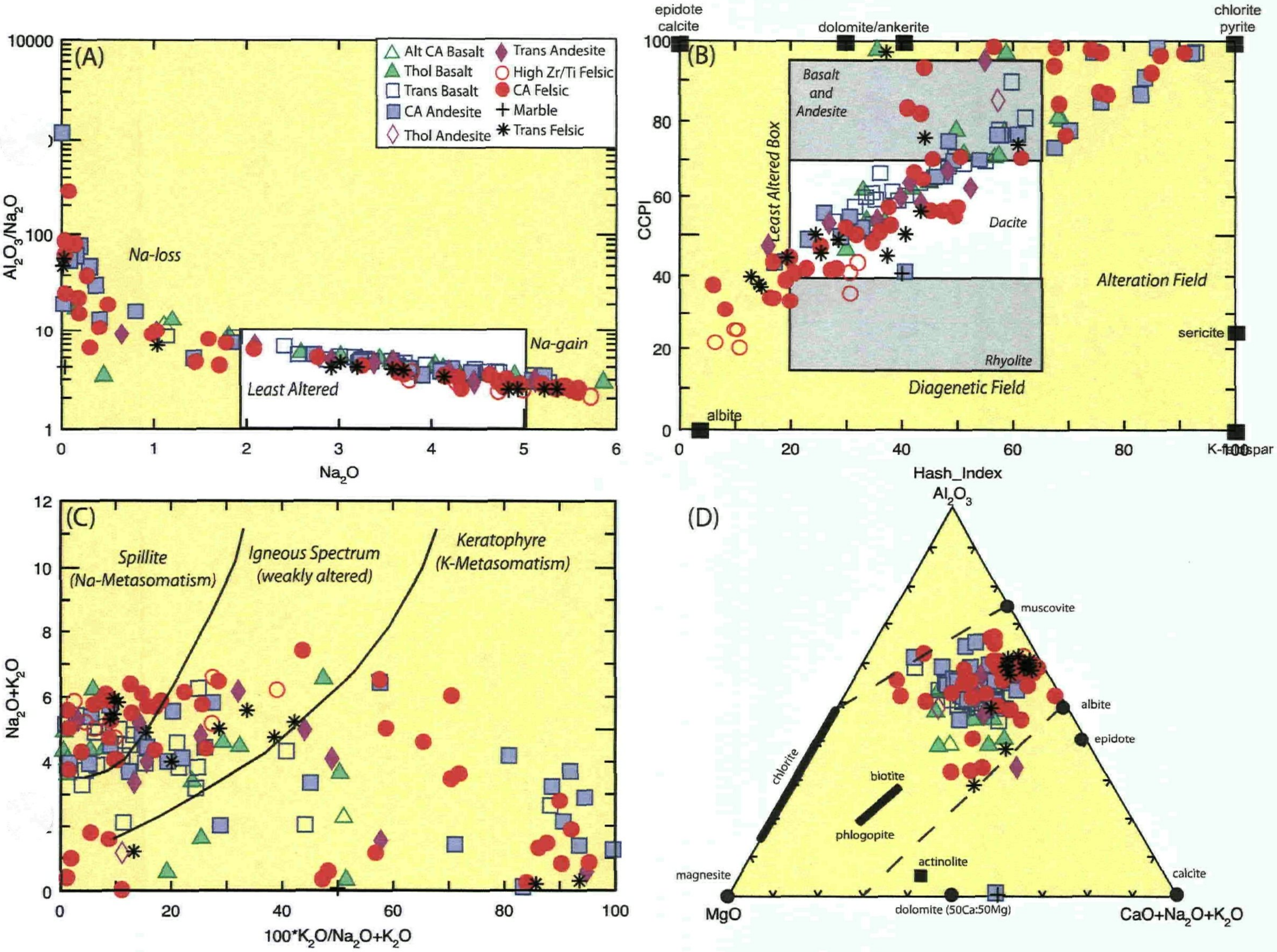


Figure 8. Major element plots for mobile elements in rocks from the MOR prospect. A) Spitz-Darling index (Al2O3/Na2O) against Na2O content (diagram from Ruks et al., 2006). B) Alteration box plot (Large et al., 2001) with the Hashimoto alteration Index against the chlorite-carbonate-pyrite index (CCPI). C) Hughes (1973) plot. D) MgO-Al2O3-alkali plot of MacDonald et al. (1996). These results clearly illustrate that there is a significant population of samples at the MOR prospect that exhibit VMS-like chlorite-pyrite-sericite alteration.

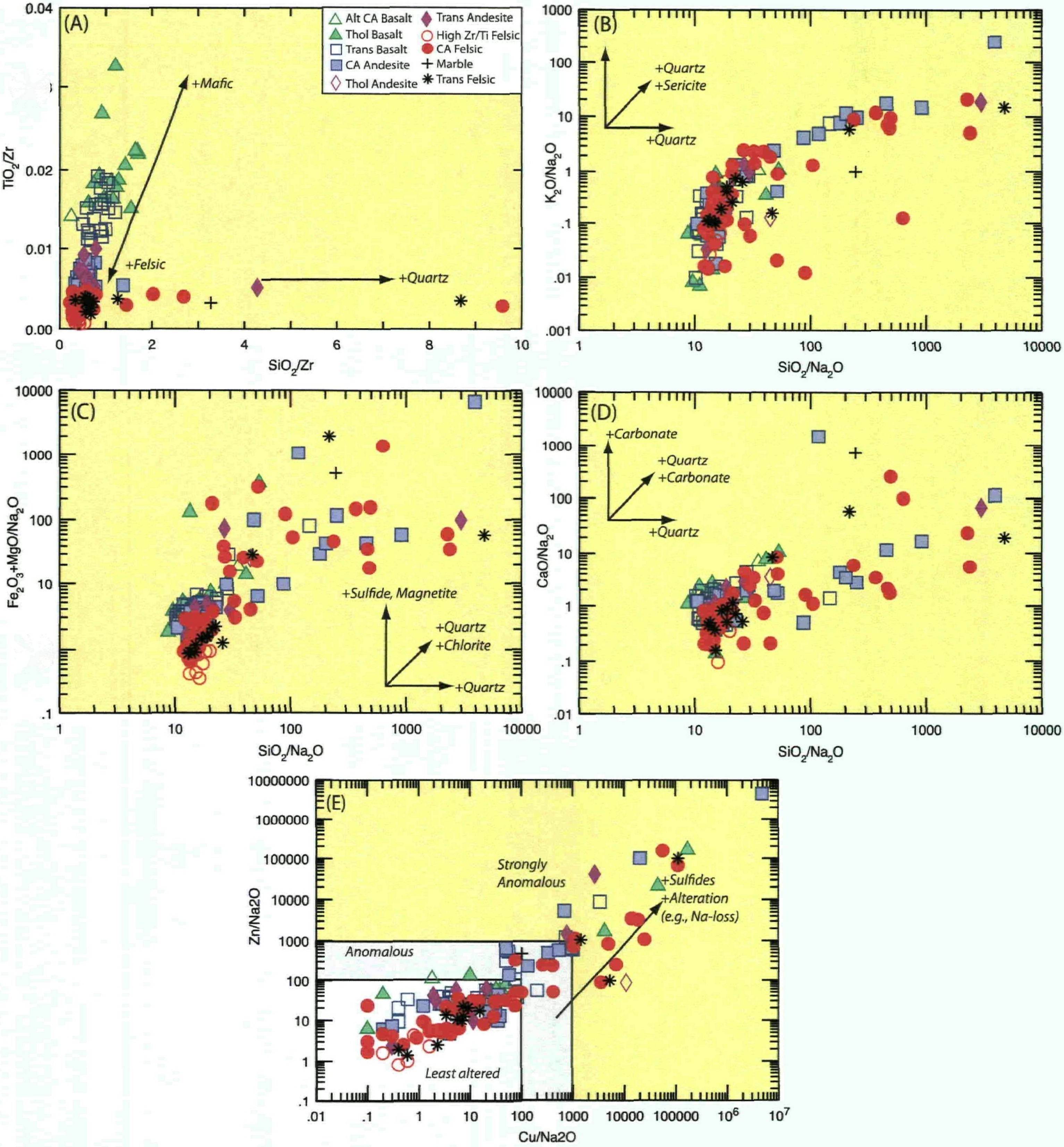


Figure 9. Mobile element ratio plots for samples from the MOR prospect. A) TiO2/Zr-SiO2/Zr diagram for discriminating quartz alteration. B) K2O/Na2O-SiO2/Na2O. C) Fe2O3+MgO/Na2O-SiO2/Na2O. D) CaO/Na2O-SiO2/Na2O. and E) Zn/Na2O-Cu/Na2O. These diagrams are useful at identifying various alteration types and mineralization within volcanic rocks. .

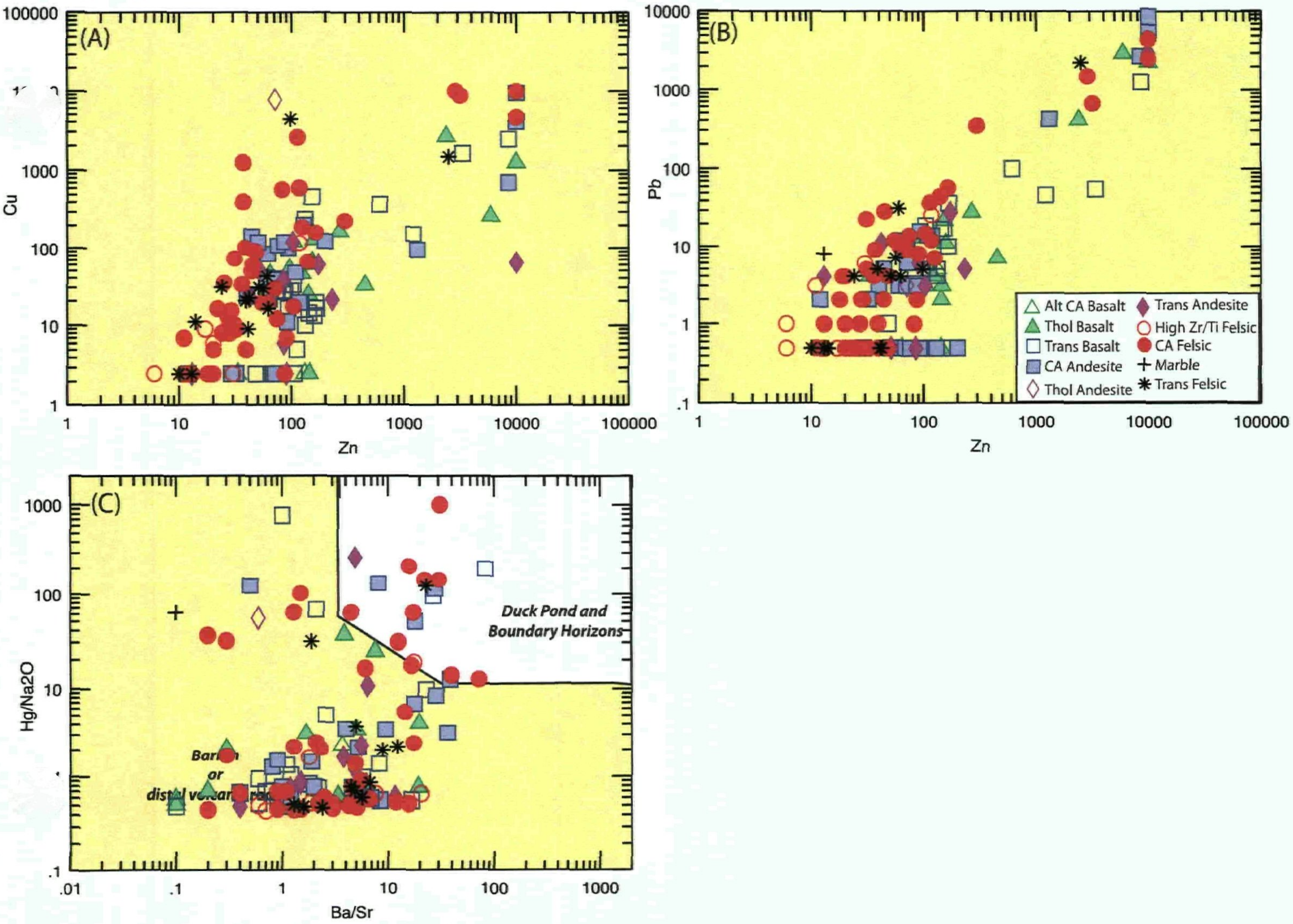


Figure 10. Base metal and volatile element plots. A) Cu-Zn. B) Pb-Zn). C) Duck Pond Index plot (from Collins, 1989) illustrating the volatile enrichment in some rocks from the MOR prospect (i.e., high Hg and Ba/Sr).

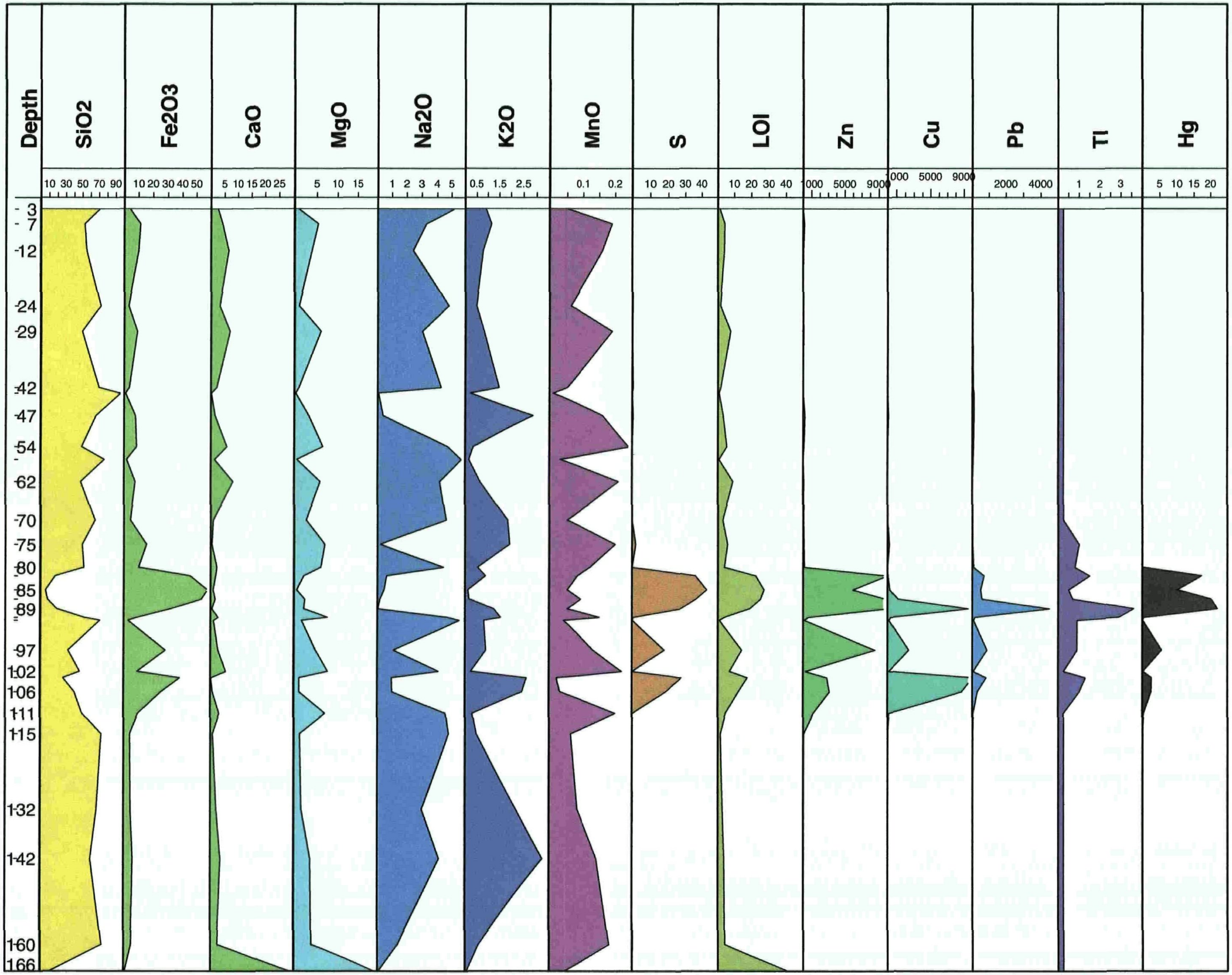


Figure 1 ownhole profiles for key trace elements, element ratios, and alteratior exes for drill hole MOR-07-02

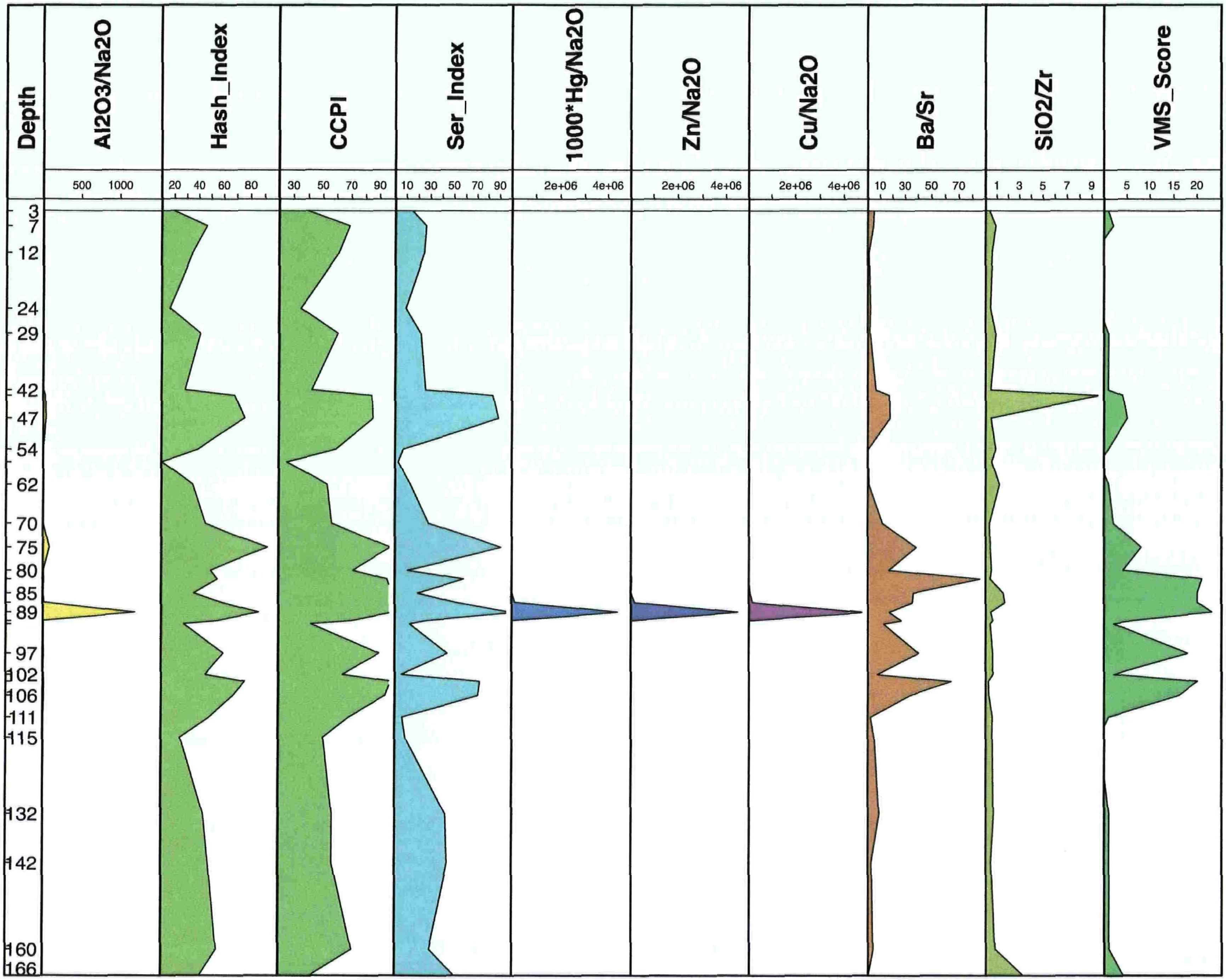


Figure 11 (continued). Downhole profiles for key trace elements, element ratios, and alteration indexes for drill hole MOR-07-02

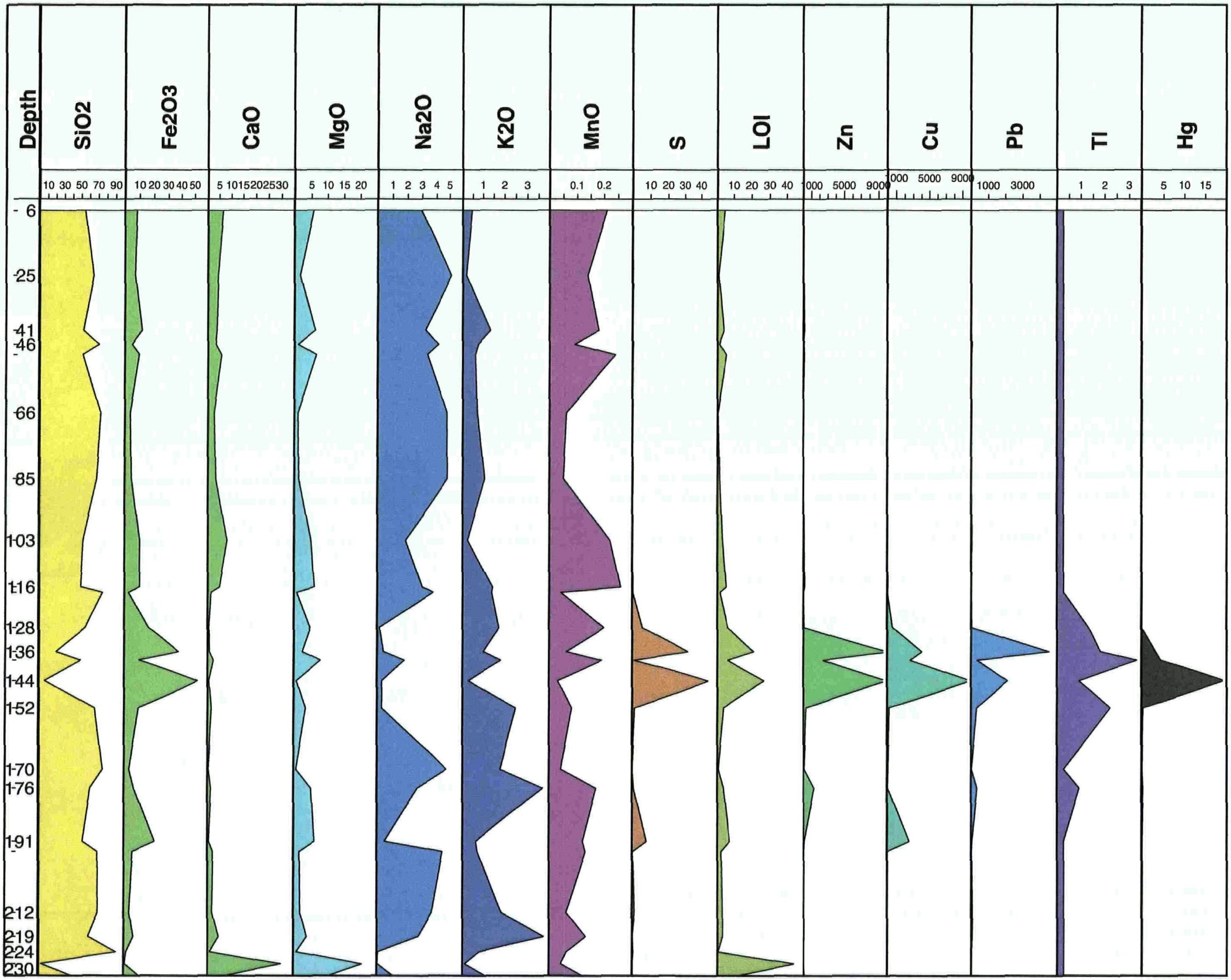


Figure [illegible])ownhole profiles for key trace elements, element ratios, and alteratio [illegible] 'exes for drill hole MOR-07-03.

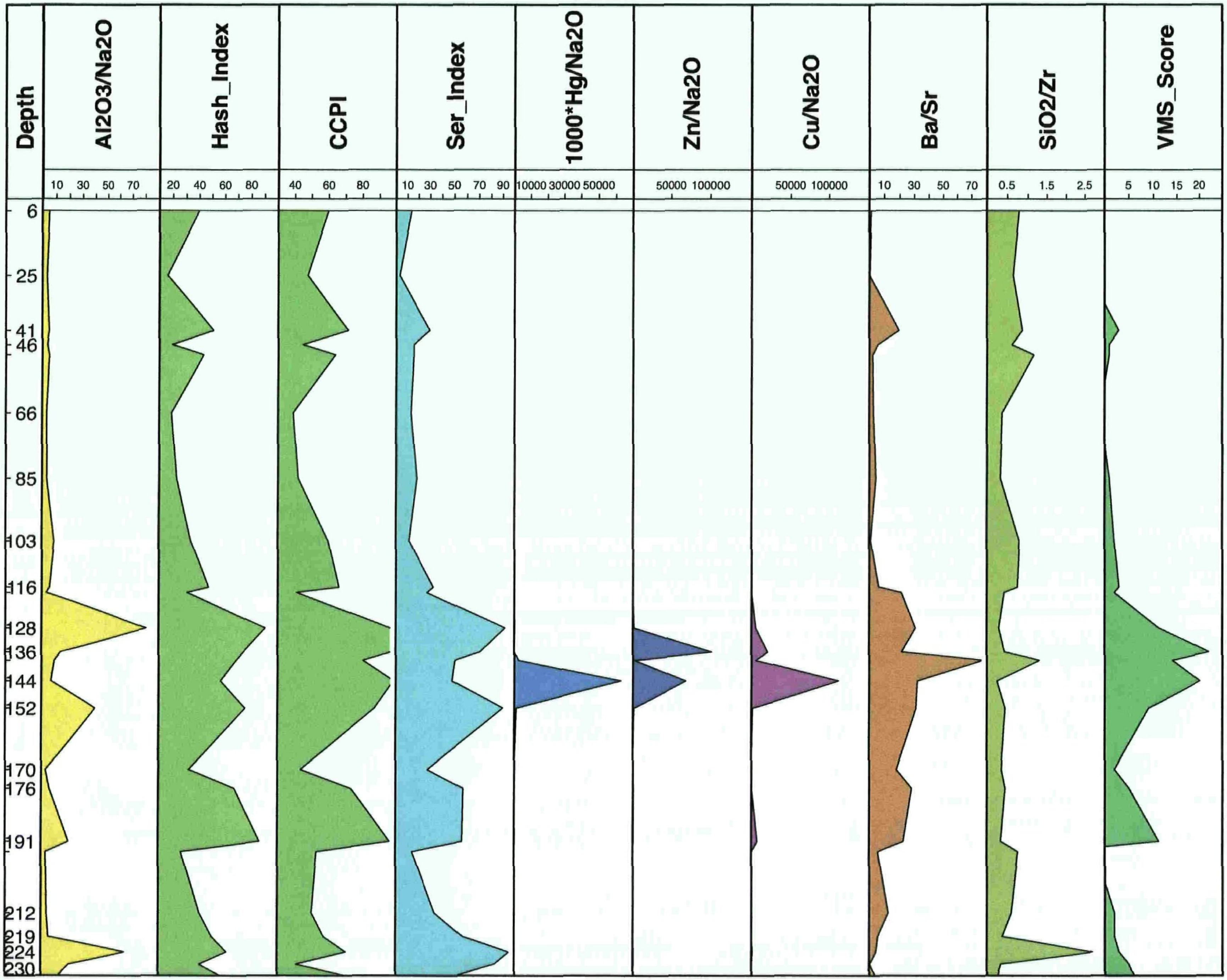


Figure 12 (continued). Downhole profiles for key trace elements, element ratios, and alteration indexes for drill hole MOR-07-03.

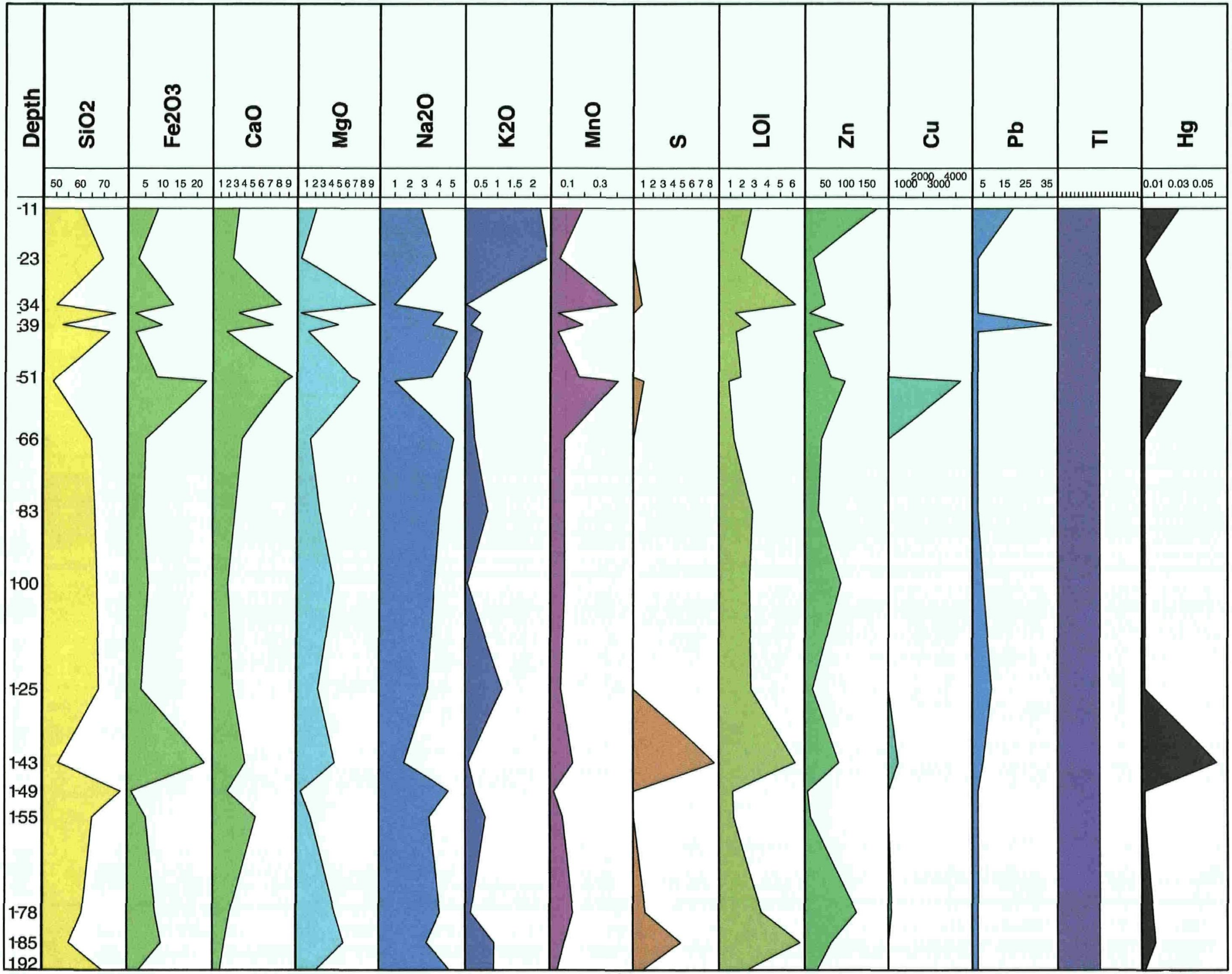


Figure ownhole profiles for key trace elements, element ratios, and alteratio exes for drill hole MOR-08-05.

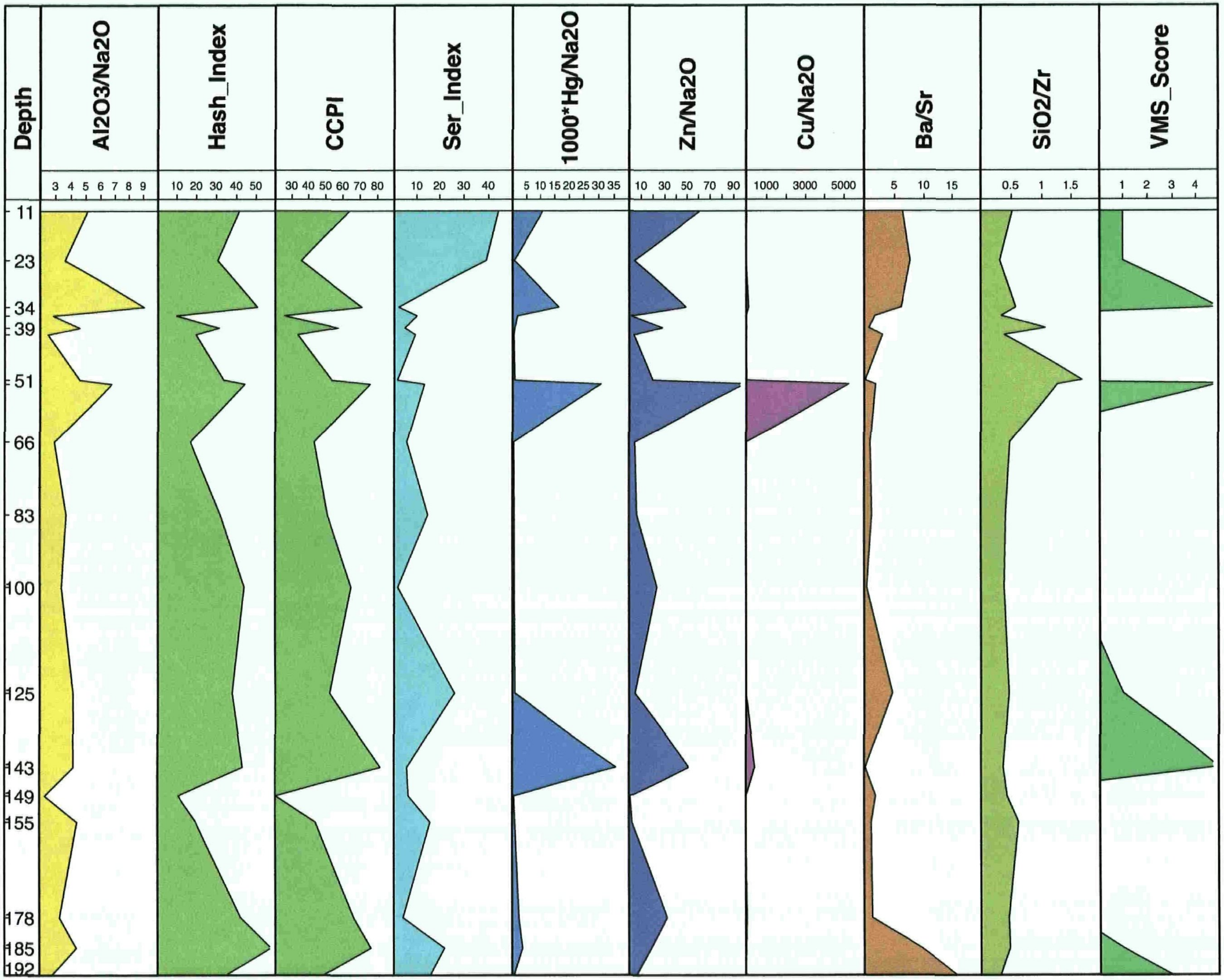


Figure 13 (continued). Downhole profiles for key trace elements, element ratios, and alteration indexes for drill hole MOR-08-05.

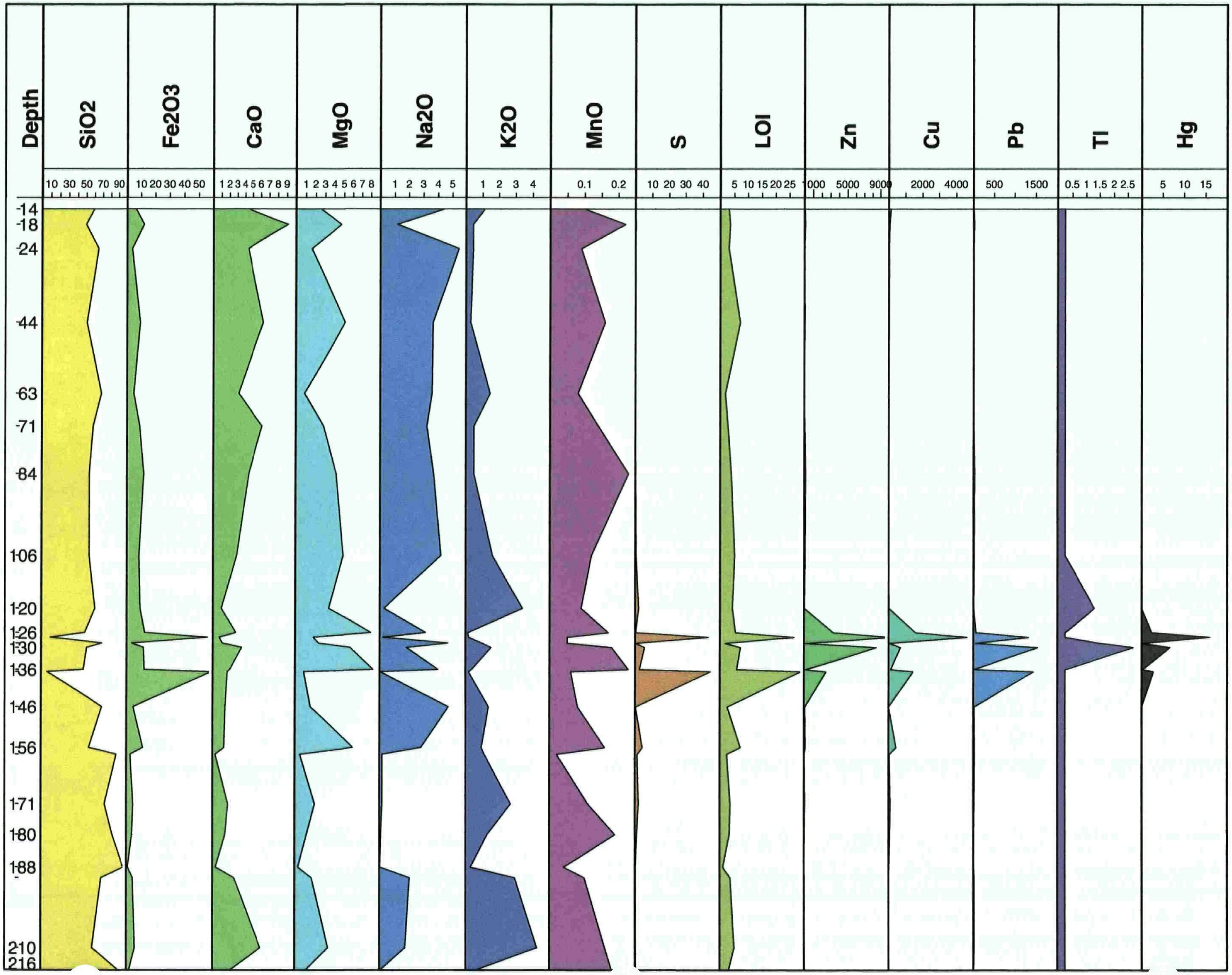


Figure , Downhole profiles for key trace elements, element ratios, and alterat ndexes for drill hole MOR-08-07.

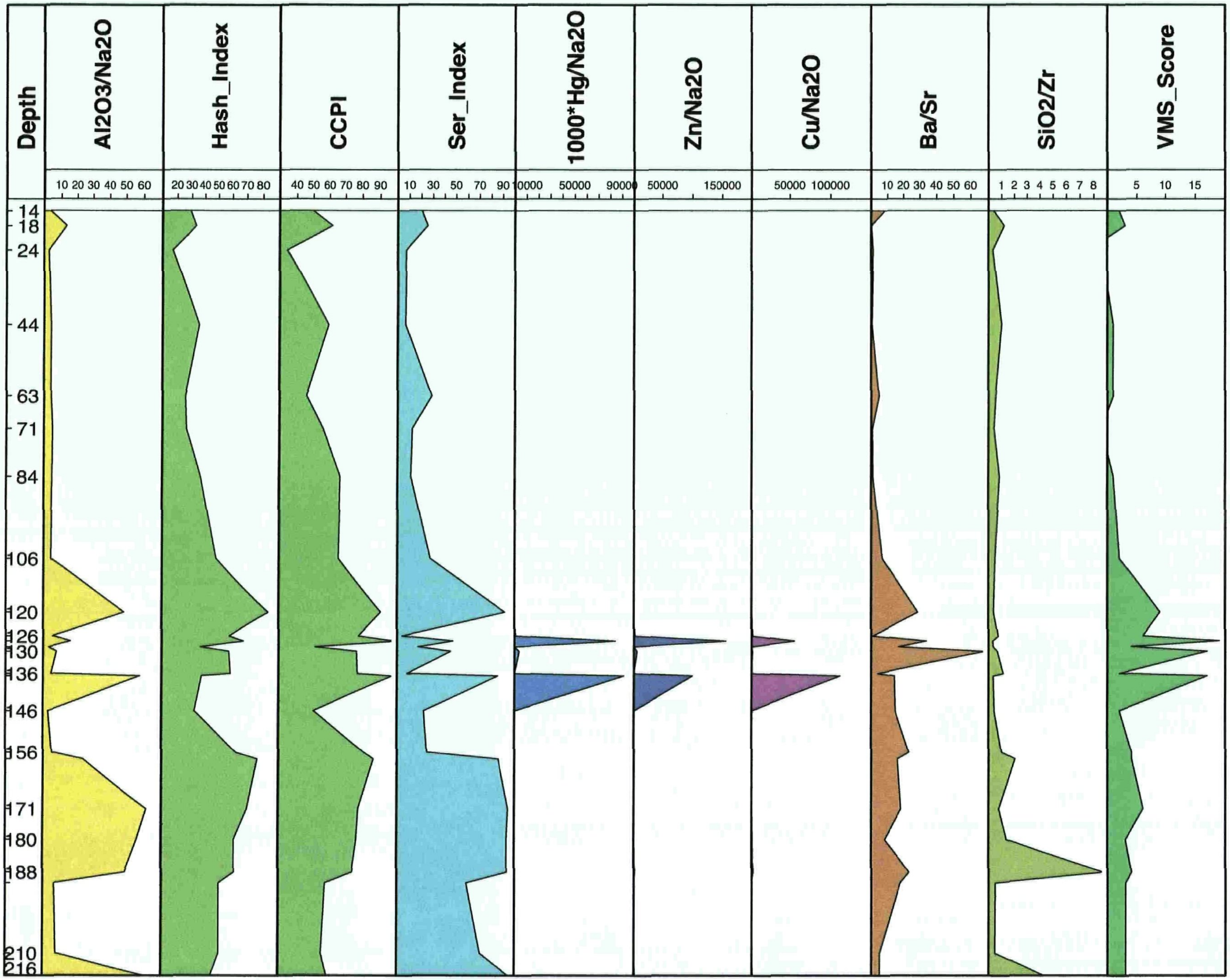
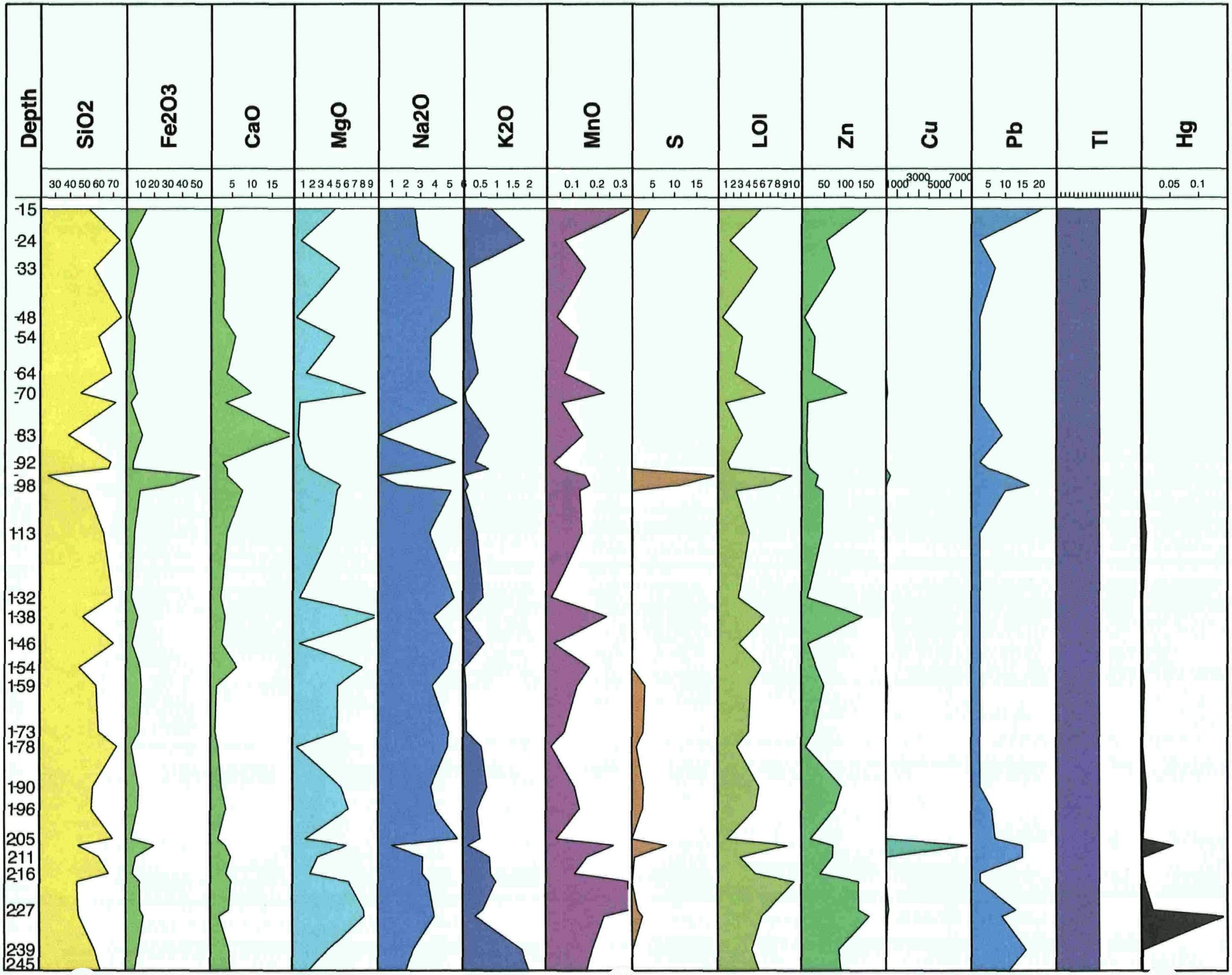


Figure 14 (continued). Downhole profiles for key trace elements, element ratios, and alteration indexes for drill hole MOR-08-07.



Figur Downhole profiles for key trace elements, element ratios, and alterat idexes for drill hole MOR-08-12.

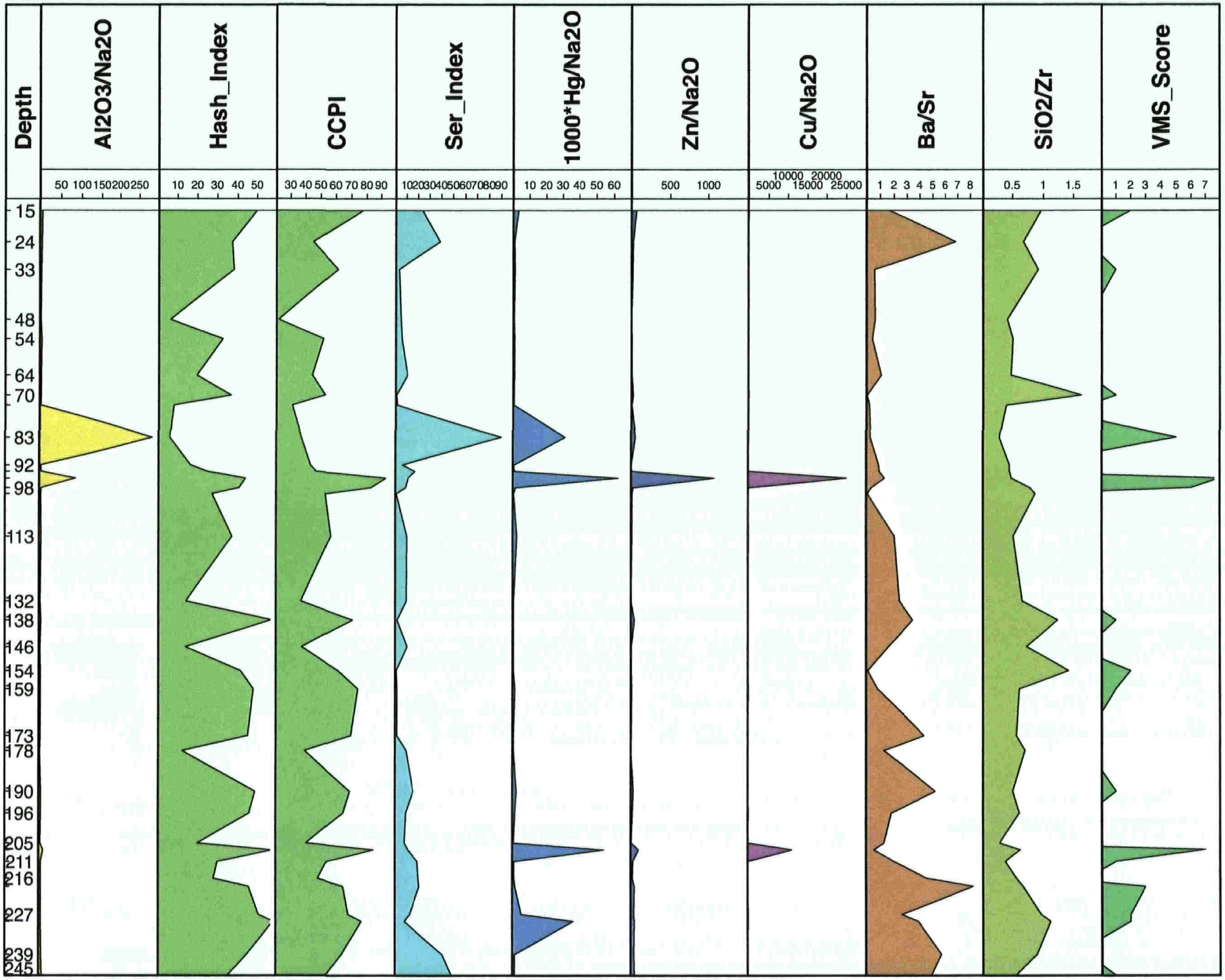


Figure 15 (continued). Downhole profiles for key trace elements, element ratios, and alteration indexes for drill hole MOR-08-12.

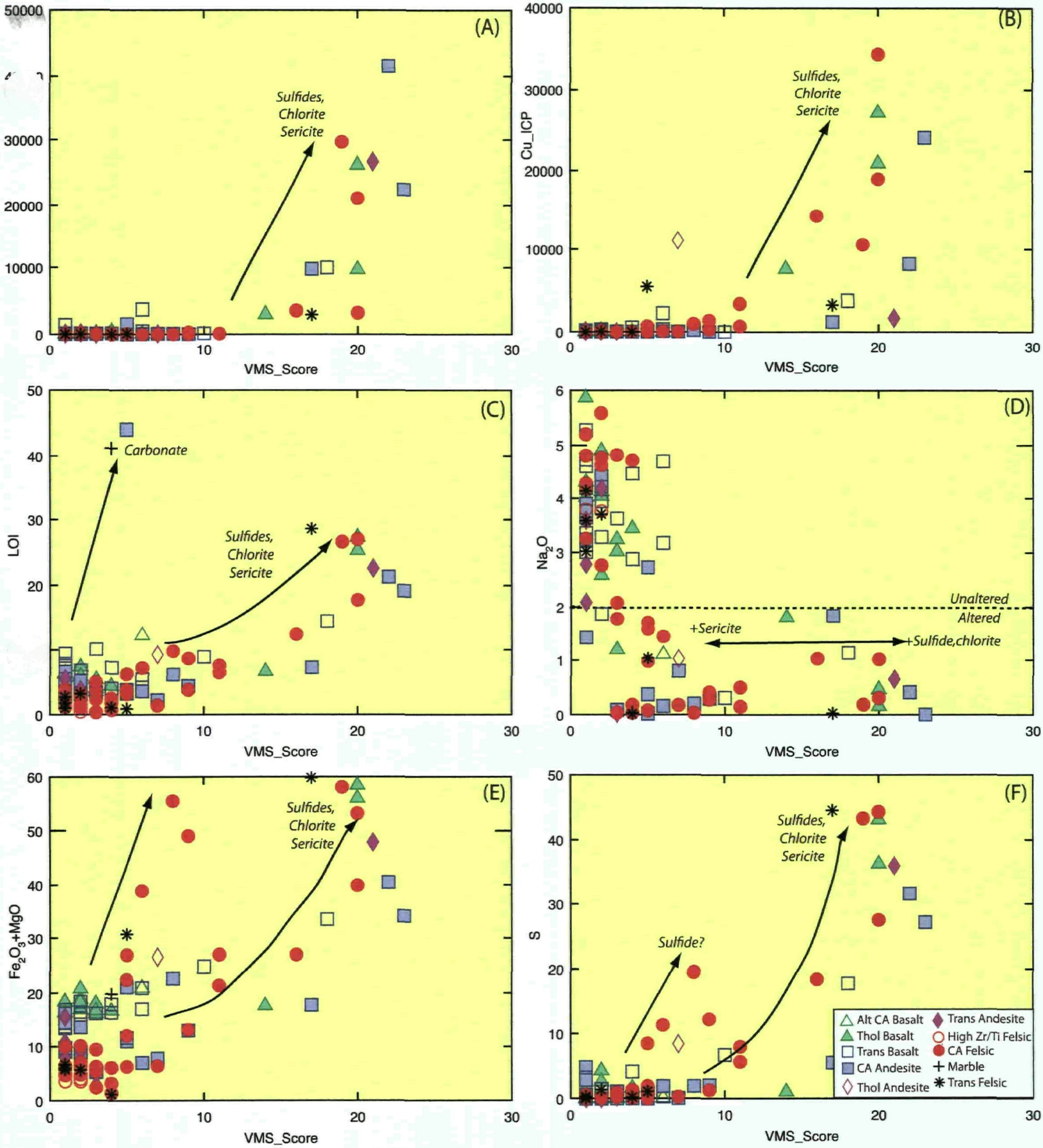


Figure 16. VMS score against other indicators of mineralization, including base metals Zn (A) and Cu (B), LOI (C), Na2O (D), Fe2O3+MgO (E), and S (F). Notably, values higher than 5 seem to be key for outlining potentially prospective rocks. Values greater than 10 are associated with hihgly prospective rocks.

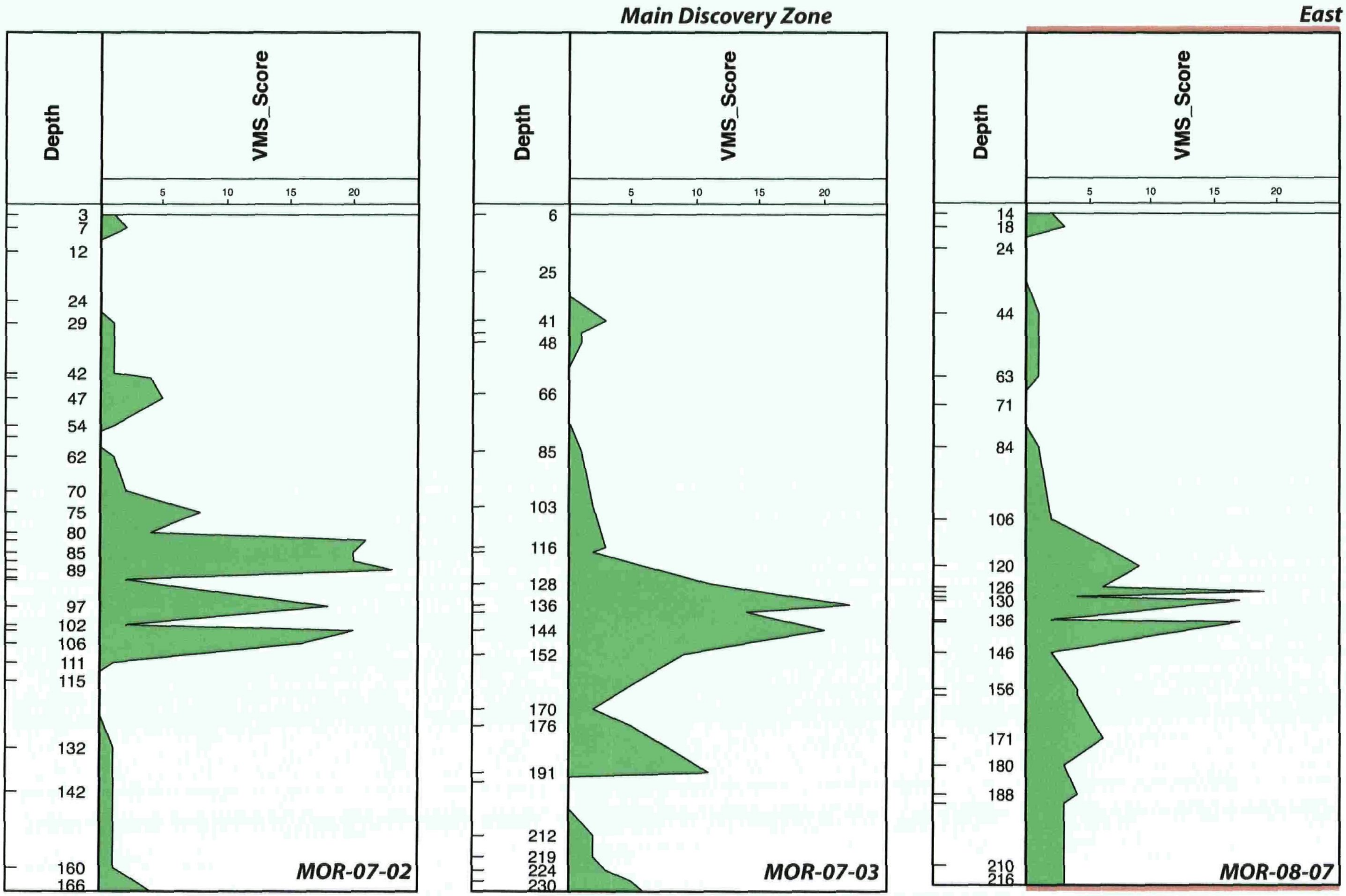


Figure 17. Downhole profiles for the VMS score for holes from the Main DIscovery Zone. Note the broad profile found in all three holes, but its greater intensity towards the Main Discovery Zone and west.

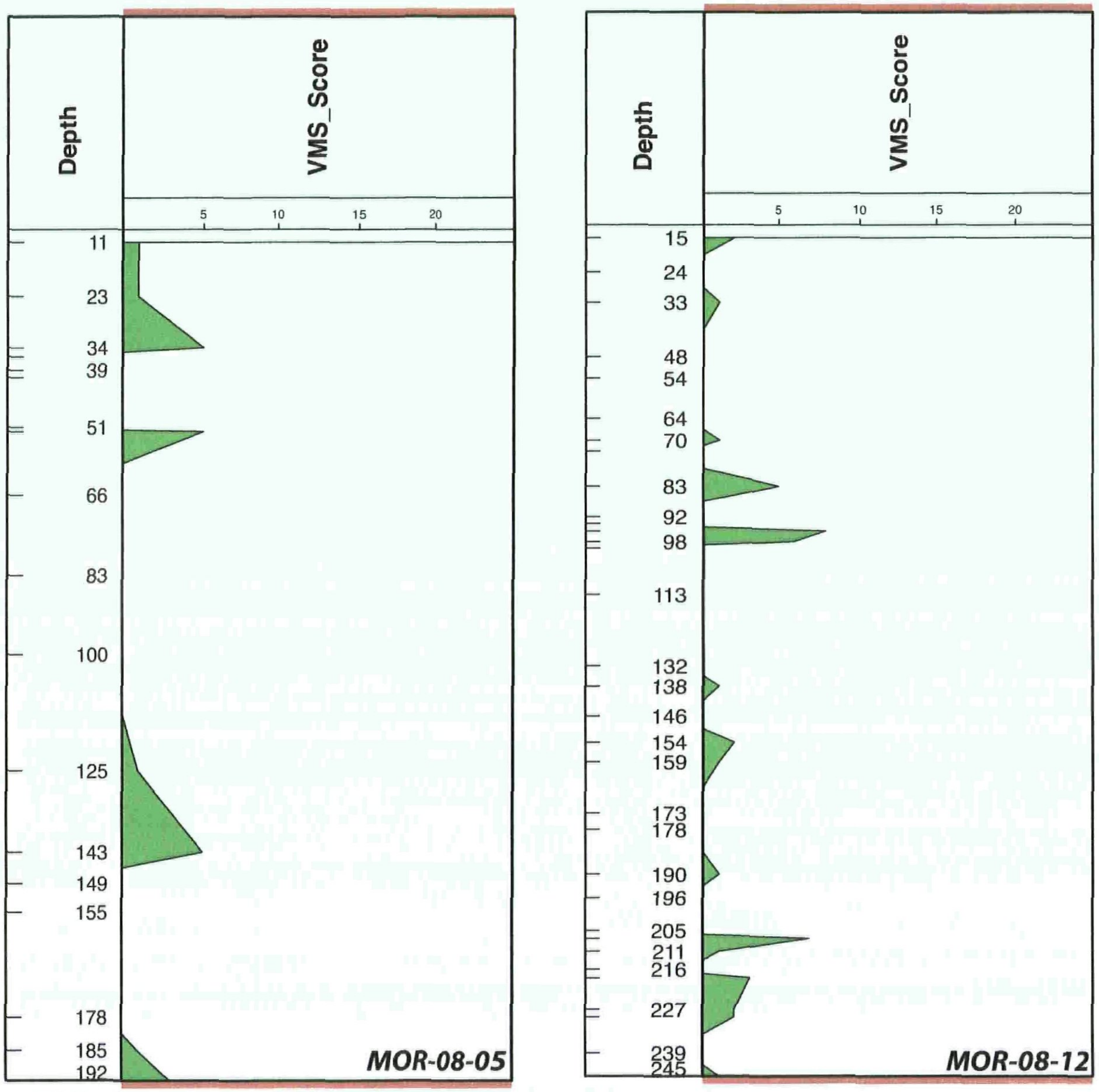


Figure 18. Downhole profiles for the VMS score for holes from the SD Zone. Note the lower intensity of the VMS score in this prospect in comparison to the Main Discovery Zone.

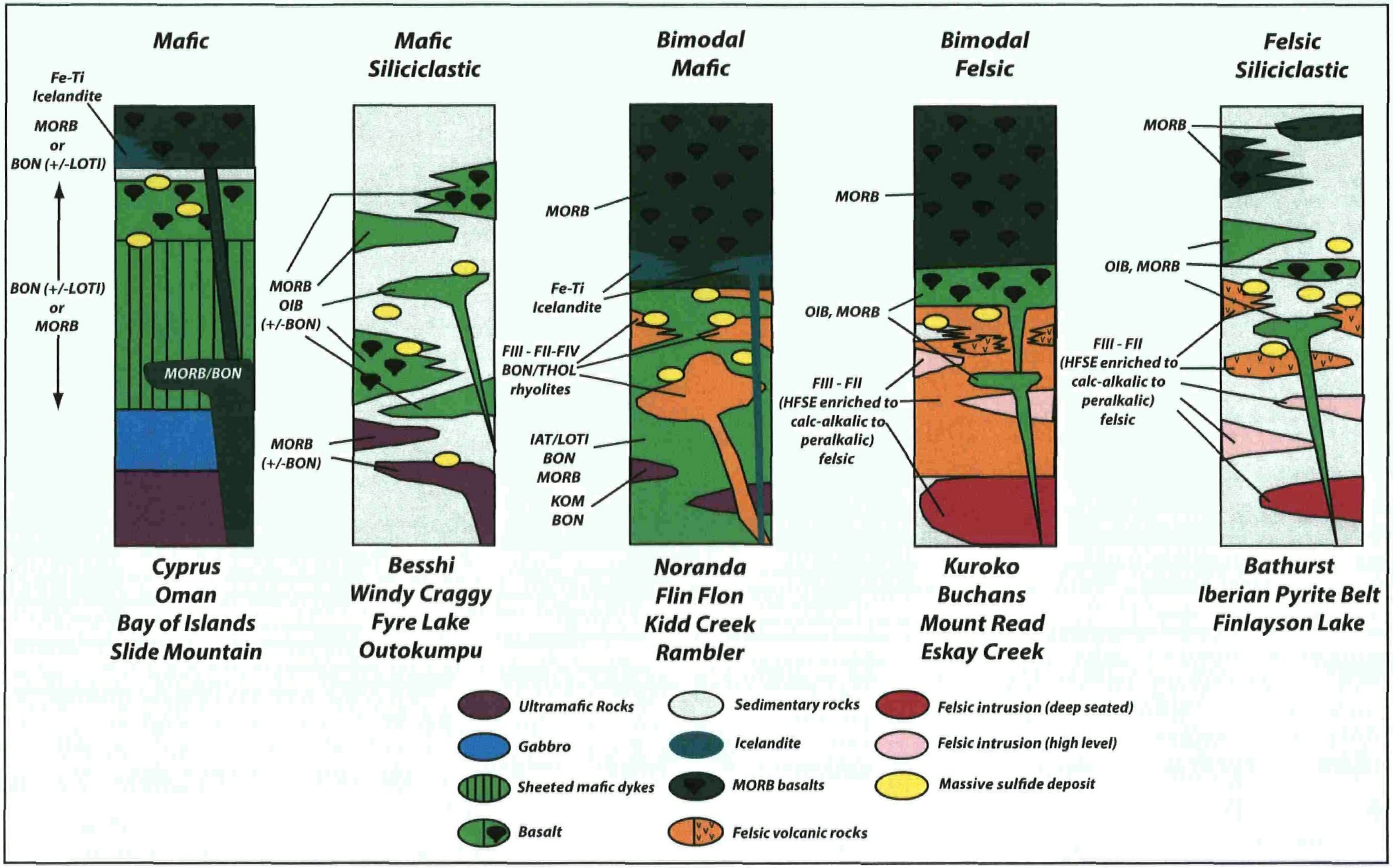
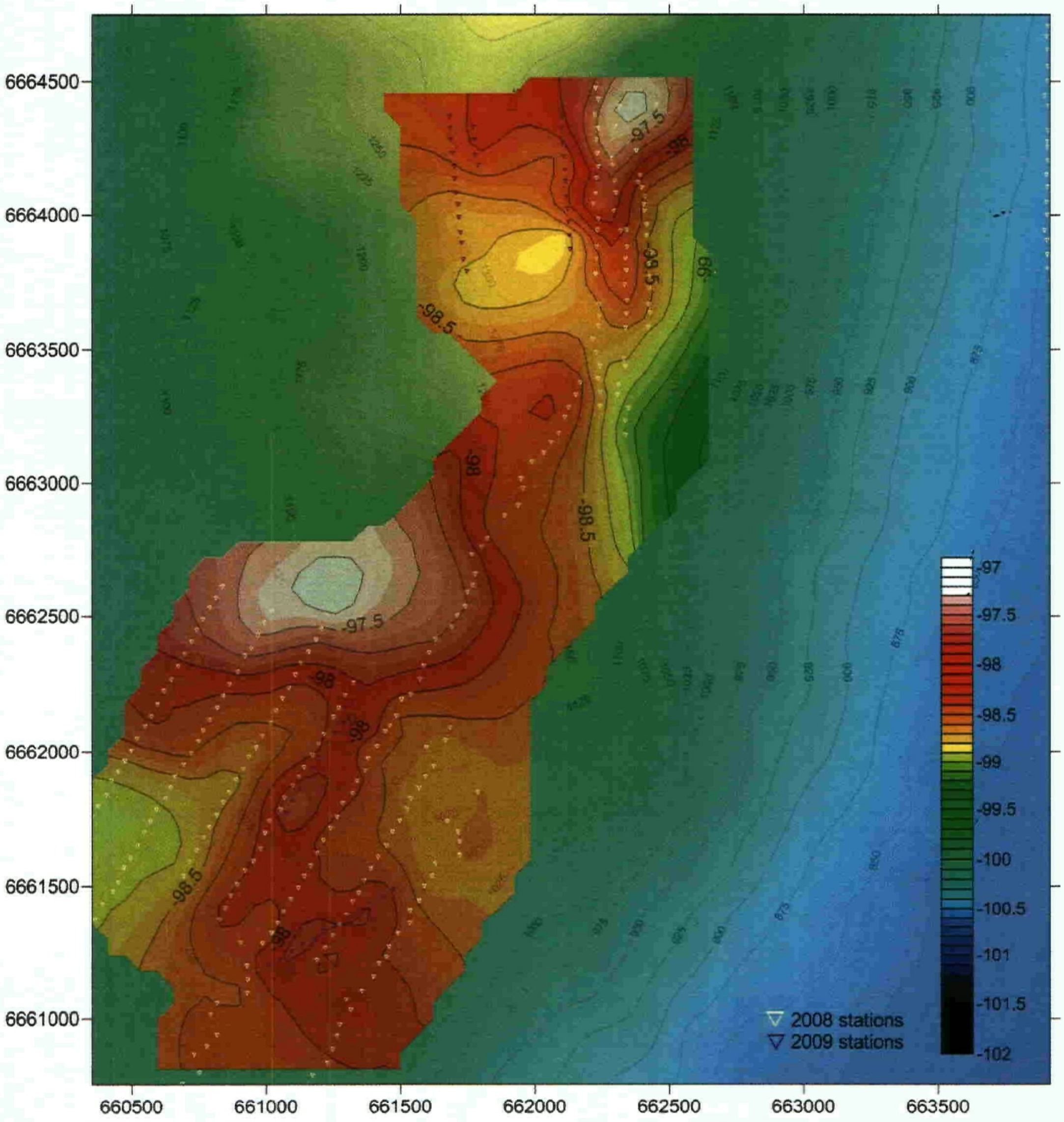


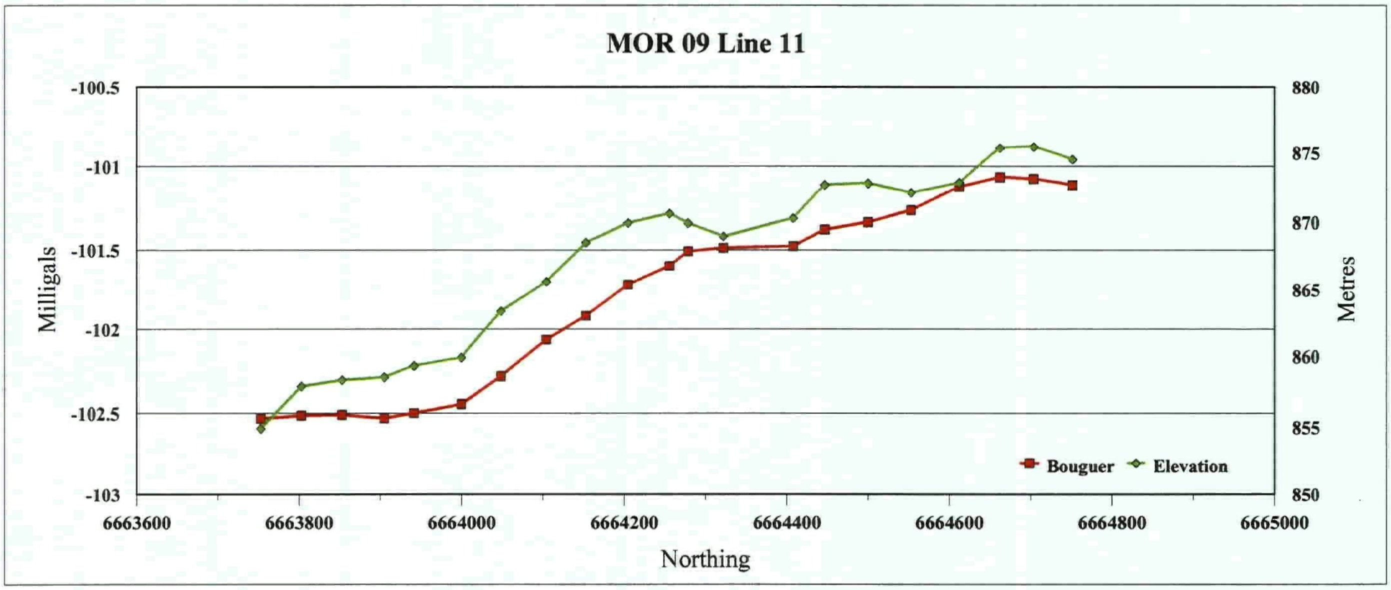
Figure 19. Petrochemical assemblages for VMS deposits (after Piercey, 2009) illustrating the various lithostratigraphic and chemostratigraphic characteristics for different VMS environments. Notably, the MOR prospect bears some similarities to the bimodal felsic to felsic siliciclastic VMS environment. This does not prove that there will be VMS mineralization present or found in the MOR area. It does illustrate, however, that the area may have potential to host mineralization.

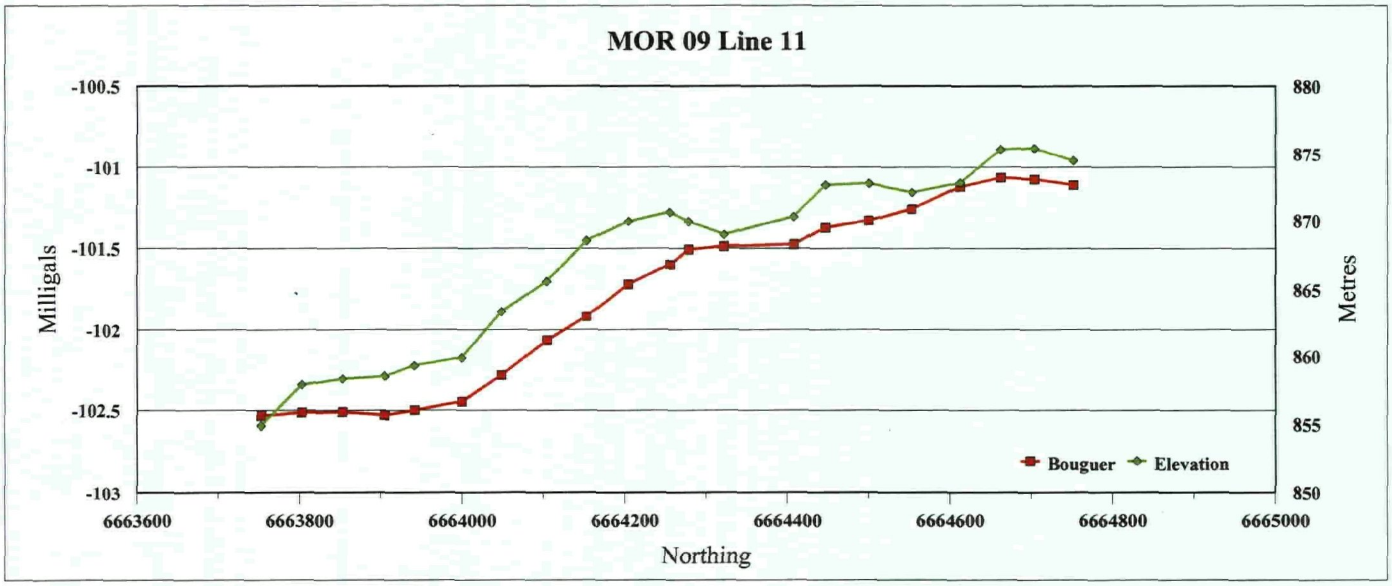
Bouguer Gravity:
MOR Property, Yukon
Tarsis Capital Corp



UTM Zone 8N NAD83
Bouguer density 2.67 gm/cc
Terrain Corrections:
to 10,000m radius with acquired DEM / clino

MWH
Geo-Surveys,
Inc.


MOR 09 Line 11
Milligals
-100.5
-101
-101.5
-102
-102.5
-103
Metres
880
875
870
865
860
855
850
Northing
6663600
6663800
6664000
6664200
6664400
6664600
6664800
6665000
Bouguer
Elevation

MOR 09 Line 11
-100.5
-101
-101.5
-102
-102.5
-103
Milligals
880
875
870
865
860
855
850
Metres
6663600
6663800
6664000
6664200
6664400
6664600
6664800
6665000
Northing
Bouguer
Elevation