HINTERLAND METALS INC.

A REPORT OF PROSPECTING AND GEOCHEMICAL SURVEYS

DAZZLE, GLEAM AND HELEN PROPERTIES
(61°22' N. LAT. AND 130°56' W. LONG., N.T.S. 105 G/07)

AND

CHRIS PROPERTY
(61°30' N. LAT. AND 131°20'W.LONG., N.T.S. 105 G/06 & 105 G/11)

WATSON LAKE MINING DISTRICT OF YUKON

AUGUST TO SEPTEMBER 2003

YMIP # 03-048

MARK FEKETE, P.GEO.
JANUARY 30, 2004

BREAKAWAY EXPLORATION MANAGEMENT INC.

SUMMARY

The 85-claim (4390-acre) Dazzle, 50-claim (2582-acre) Gleam, 18-claim (930-acre) Helen and 28-claim (1446-acre) properties are situated within the Watson Lake Mining Division and located in the Finlayson Lake Area of southeastern Yukon approximately 225 kilometres east-northeast of the capital city of Whitehorse. Based on the results of exploration program completed in 2003 and a review of relevant reports and maps obtained from various sources, an evaluation of the exploration potential of the properties is presented and an exploration program is proposed.

Hinterland Metals Inc. may earn 100% of the property mineral rights from True North Gems Inc. subject to agreements signed by the parties on December 9, 2002 with respect to the Gleam property and January 16, 2003 with respect to the Dazzle Property. Both properties are subject to an underlying 3% royalty on all gemstone and metal production in favour of Glacier Gems Inc. The Helen claims were staked in September 2003 within an area of influence and are subject to the terms and conditions of the Gleam agreement. The Chris claims were also staked in September 2003 but are held 100% by Hinterland and are not subject to any underlying agreements.

Access to the properties is limited by the lack of roads into the area. A cat trail passes within 5 km of the southeast corner of the Chris Property and provides relatively good access. The closest road to the other properties ends at Teck-Cominco's Kudz Ze Kayah camp some 15 km to the northeast. At present, the most practical access to the Dazzle, Gleam and Helen properties is provided by floatplane to one of several lakes suitable for the establishment of a base camp and then by helicopter from the base camp to the properties on a daily or fly-camp basis. All four properties are in steep, rugged terrain where snow conditions and short daylight hours in winter mean that the best period for exploration is from mid-June to mid-September.

The Finlayson Lake Area lies within the northern Canadian Cordillera in a region underlain primarily by several fault- and unconformity-bound meta-sedimentary and meta-volcanic successions and affiliated meta-plutonic rocks of the Yukon-Tanana Terrane. The region is bound to the south by the Tintina Fault and to the north by rocks of the North American Miogeocline. The properties lie in the southwestern part of the region footwall to the Money Creek thrust. Meta-sediments and meta-volcanics of the Grass Lake succession and coeval granitic and monzonitic rocks of the Grass Lakes Plutonic Suite underlie the properties. These Late Devonian to Early Mississippian rocks were deformed and imbricated prior to the emplacement of a mid-Cretaceous suite of peraluminous granitic rocks. The Dazzle, Gleam and Helen properties cover the eastern margin one such pluton in contact with sub-horizontal layers of the lowermost section of the Grass Lake succession variously displaced by normal and thrust faults. The dominant lithology is tan-coloured quartz-mica schist with thin layers of micaceous marble and calcareous schist. This unit is underlain by feldspar-muscovite-quartz schist derived from a felsic volcanic protolith and overlain by Fyre Lake metavolcanic schists. The Chris Property is underlain mainly by serpentinized ultramafic rocks of the North Lake Meta-diorite Suite.

The Finlayson Lake Area is best known for the Fyre Lake, Wolverine, Kudz Ze Kayah, Ice and GP4F volcanic massive sulphide-type deposits and more recently for the emerald mineralization found on the Regal Ridge Property. Recent geological mapping surveys of the area on a regional scale and several technical studies on a property scale have contributed greatly to the overall understanding of the mineral potential of the area. Similar to Regal Ridge, the Dazzle, Gleam and Helen properties lie adjacent to a mid-Cretaceous granitic intrusion that may have generated quartz veins or pegmatite dykes to cut neighboring schistose meta-sediments and meta-volcanics. This juxtoposition of Be-rich rocks against Cr-rich rocks may, under certain conditions, produce emeralds.

The 2003 Exploration program was completed between August 6 to 29, 2003 and consisted of prospecting, outcrop examination and rock sampling and geochemical surveys. Part of the work consisted of regional reconnaissance work and was not done directly on the properties. A total of 77 rock samples, 83 soil samples and 32 silt samples were collected.

The discovery of the Helen Gold Zone represents a significant breakthrough for Hinterland in the Finlayson Lake area. It moves the Company's efforts in the area from the grassroots stage to the target evaluation stage. A series of six chip samples across the showing returned a weighted average of 3.86 g/t Au and 48.1 g/t Ag over a width of 5.0 m. A gold equivalent of 4.54 g/t Au has been calculated for the interval based on metal prices as of September 15, 2003. The zone is a vertical hydrothermal arsenopyrite-quartz vein. Although Hinterland found no emeralds and in fact no beryl mineralization in 2003, a specific emerald target has been generated in the northern part of the Dazzle Property. The Two Creeks Be Anomaly lies directly adjacent to a mid-Cretaceous contact, is noticeably anomalous with respect to beryllium, chrome and arsenic and shows pegmatite dykes, zones of yellow sulphate alteration and tourmaline mineralization. The discovery of chrysoprase, a green, gem quality, cryptocrystalline variety of chalcedony that is used in the jewelry business, was an unexpected event. Although not nearly as valuable as emerald, chrysoprase is a sought after material that can generate a significant cash flow from a small mining operation.

The positive results of the 2003 Exploration Program clearly allow for continued exploration on the Chris, Dazzle, Gleam and Helen properties. It is recommended that the exploration be divided into three parts consisting of separate programs at the Helen Gold Zone, the Two Creeks Be Anomaly and the Chris Showing using a central base camp. The Helen Zone Gold Zone must be brought to the diamond drilling stage as soon as possible by the completion of prospecting, geochemical and geophysical surveys over a grid. If drilling in the first phase intersects significant gold-silver mineralization, it is recommended that a second phase of drilling be anticipated. The Two Creeks Be Anomaly must be prospected in detail with additional geochemical sampling. A small bulk sample must be removed from the Chris Showing in order to provide as much chrysoprase for the production of beads amd cabochons in conjuntion with a certification with the Gemological Institute of America. This report does not contemplate second phases for either the Two Creek or Chris programs. The cost of the first phase is estimated to be approximately $500,000 and the cost of the second pahse is estimated to be approximately $230,000 for a two-phase total of approximately $730,000.

CERTIFICATE OF QUALIFICATIONS

I, **Mark Fekete**, having my place of residence at 178 Dennison Boulevard in Val d'Or in the Province of Quebec do hereby certify that:

1. I obtained a Bachelor of Science Degree in Geology from the University of British Columbia in 1986, I have been engaged as a Geologist continuously since 1986, I am a Member in good standing of the Order of Geologists of Quebec (# 553) and I am a "qualified person" as defined in Section 1.2 in and for the purposes of National Instrument 43-101;

2. I have visited the Chris, Dazzle, Gleam and Helen properties (the "Properties") most recently in August 2003;

3. I wrote and am solely responsible for the contents of this technical report entitled "A Report of Prospecting and Geochemical Surveys, Dazzle, Gleam and Helen Properties (61°22' N. Lat. and 130°56' W. Long., N.T.S. 105 G/07), and Chris Property (61°30' N. Lat. and 131°20'W.Long., N.T.S. 105 G/06 & 105 G/11), Watson Lake Mining District of Yukon, August to September 2003 YMIP # 03-048" based on my professional experience, a review of relevant reports and maps and my own work on the Properties;

4. I am not aware of any material fact or material change with respect to the subject matter of the report that is not disclosed in the report which, by its omission, makes the report misleading;

5. I am an officer and director and I beneficially hold a number of shares in Hinterland Metals Inc.;

6. I hold no direct interest in either of the Properties as a result of any prior involvement in the Properties;

7. I have read, and this report has been prepared in compliance with, National Instrument 43-101 and Form 43-101; and

8. I hereby give consent to Hinterland Metals Inc. to use or reproduce this report in whole or in part for the purposes of exploring and developing the Properties (including the raising of funds) provided that no portion of the report is used in such a manner that conveys any misrepresentation of the information contained in the report.

Respectfully submitted this _____ day of _____, 20____,

"Mark Fekete"

Mark Fekete, P.Geo.

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1. Introduction and Terms of Reference

Breakaway Exploration Management Inc. ("Breakaway") was retained by Hinterland Metals Inc. ("Hinterland") to complete a program of prospecting and geochemical surveying on the Gleam and Dazzle properties located in the Finlayson Lake Area of southeastern Yukon. No work had been completed on the properties by Hinterland at the date when Breakaway was engaged. The program also included some regional exploration and subsequently led to the staking of the Chris and Helen properties. The purpose of this report is to describe the details of the work program, to provide an opinion of the exploration potential of the properties and to recommend a program for further exploration of the properties.

This report was prepared as part of continuous disclosure on the part of Hinterland. It was also prepared as a requirement of the Yukon Mining Incentive Program in order to complete the application for $11,500 of funds under YMIP # 03-048. Finally this report will be filed to complete assessment work requirements of the Yukon Quartz Mining Act. The report is based on the results of the exploration program as well as information obtained from a review of relevant reports and maps available from various sources cited throughout the report. Mark Fekete, P.Geo. is the sole author of the report. In his capacity as President of Hinterland, Mr. Fekete also accepts responsibility as the qualified person for the Company.

The metric system is used for all units of measure mentioned in this report and all dollar amounts are in Canadian funds unless otherwise stated. All maps presented in this report are plotted in map projection UTM NAD 83, Zone 9 unless otherwise stated.

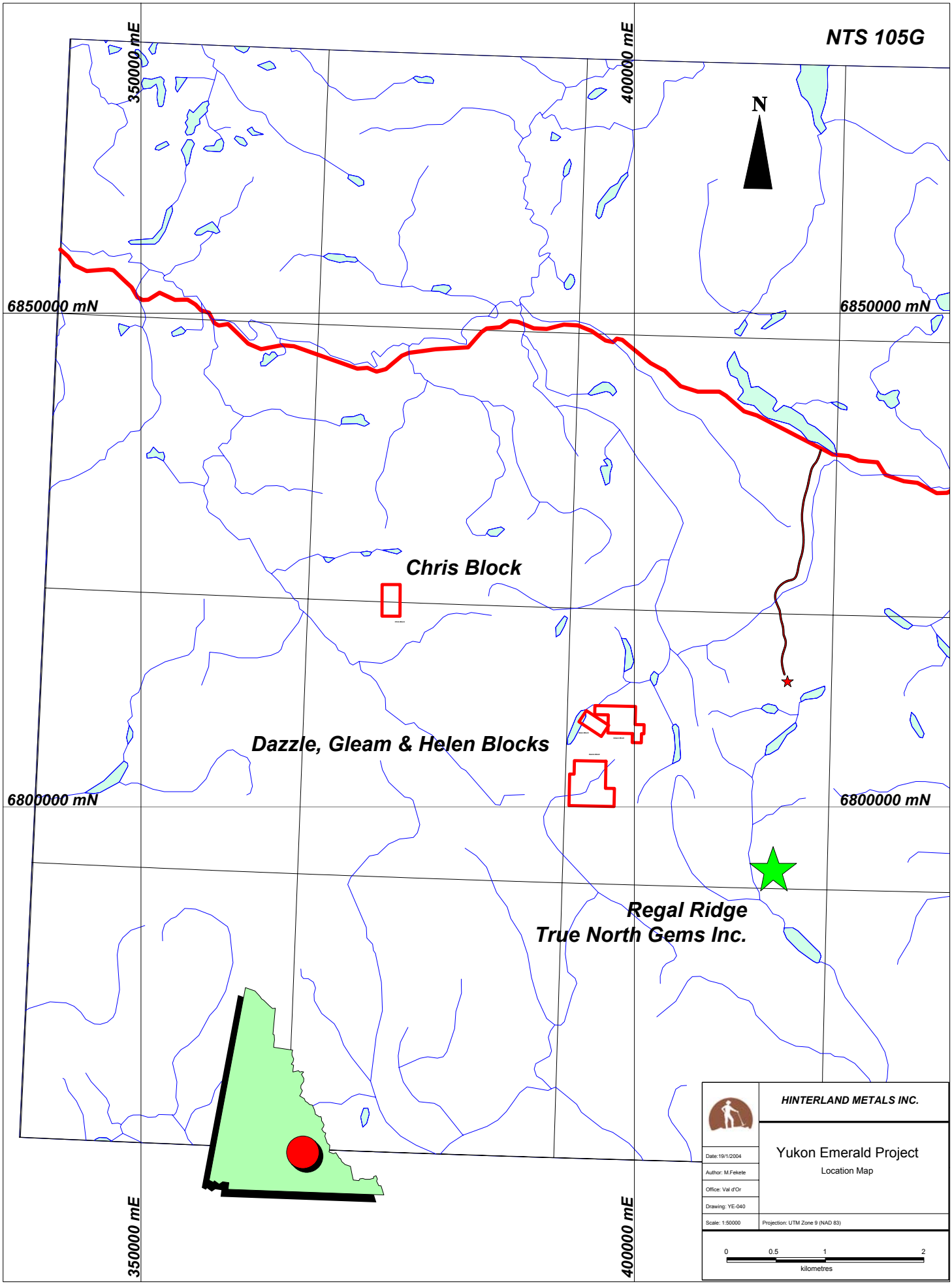
2. Disclaimer

The author has relied on the technical data and interpretation found in various sources cited throughout the report. The author has not verified this information and takes no responsibility for its accuracy or completeness. The author does not offer any opinion concerning legal, title, environmental, political or other non-technical issues that may be relevant to the technical report.

3. Location and Property Description

The Chris, Dazzle, Gleam and Helen properties are located in the Finlayson Lake Area of southeastern Yukon approximately 225 kilometres east-northeast of the capital city of Whitehorse (Figure 1). All properties are situated within the Watson Lake Mining Division. The Chris Property straddles N.T.S. map sheets 105 G/06 and 105 G/11 at an approximate geographic centre of 61°30' North Latitude and 131°20' West Longitude. There are no notable topographic features near the property. The Dazzle, Gleam and Helen properties lie on N.T.S. map sheet 105 G/07 at an approximate geographic centre of 61°22' North Latitude and 130°56' West Longitude. The most notable topographic features near these properties is West Grass Lake located 2 kilometres west of the Gleam and Helen properties and 3 kilometres north of the Dazzle Property.

The surface rights for the area of all the properties are held by the Crown. The mineral rights (Figures 2 and 3) are held under the statutes of the "Yukon Quartz Mining Act" and are listed as follows:


NTS 105G
N
350000 mE
400000 mE
6850000 mN
6800000 mN
Chris Block
Dazzle, Gleam & Helen Blocks
Regal Ridge
True North Gems Inc.
HINTERLAND METALS INC.
Yukon Emerald Project
Location Map
Date: 19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-040
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
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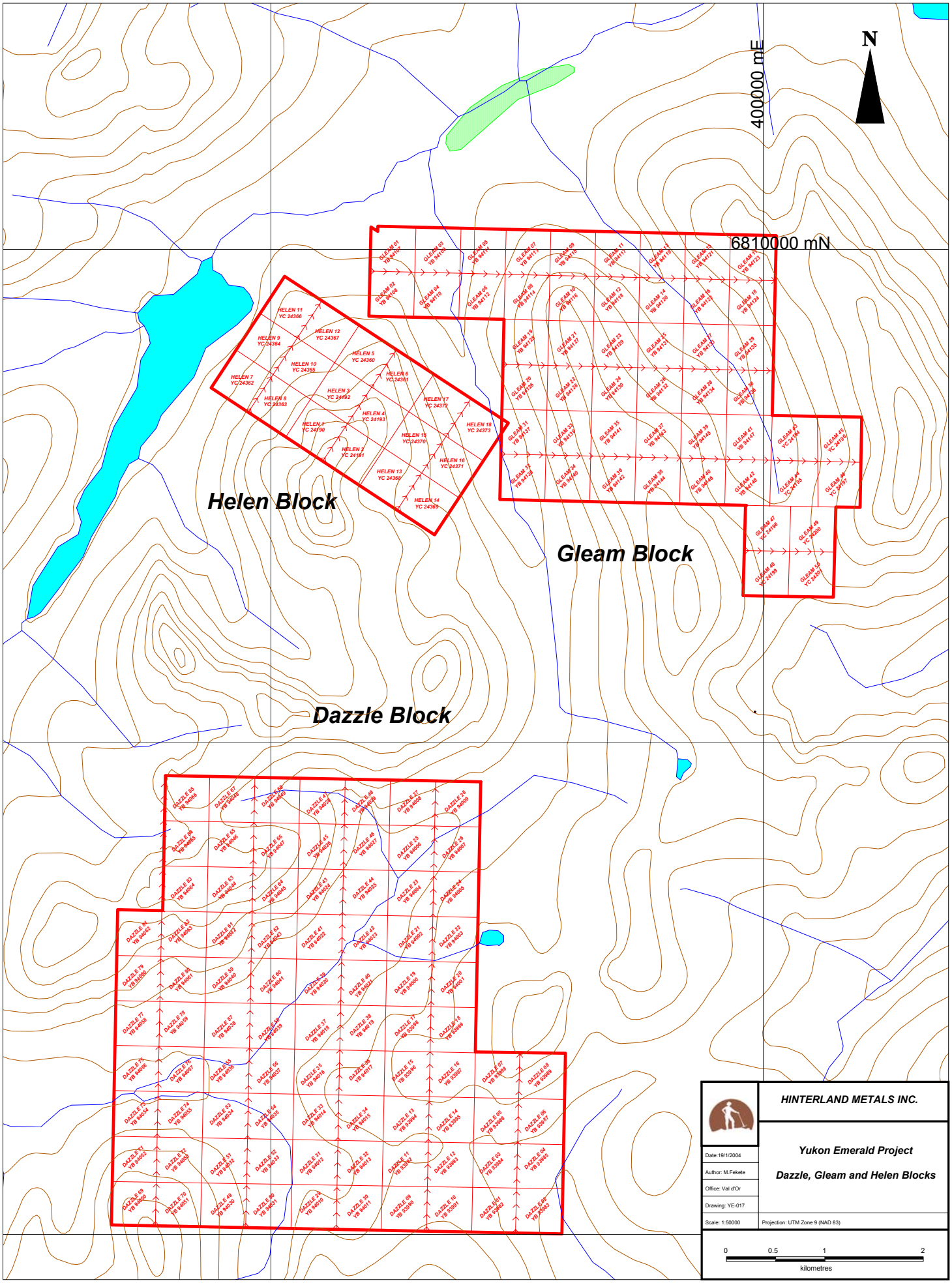
kilometres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N
6810000 mN
Helen Block
Gleam Block
Dazzle Block
HINTERLAND METALS INC.
Yukon Emerald Project
Dazzle, Gleam and Helen Blocks
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-017
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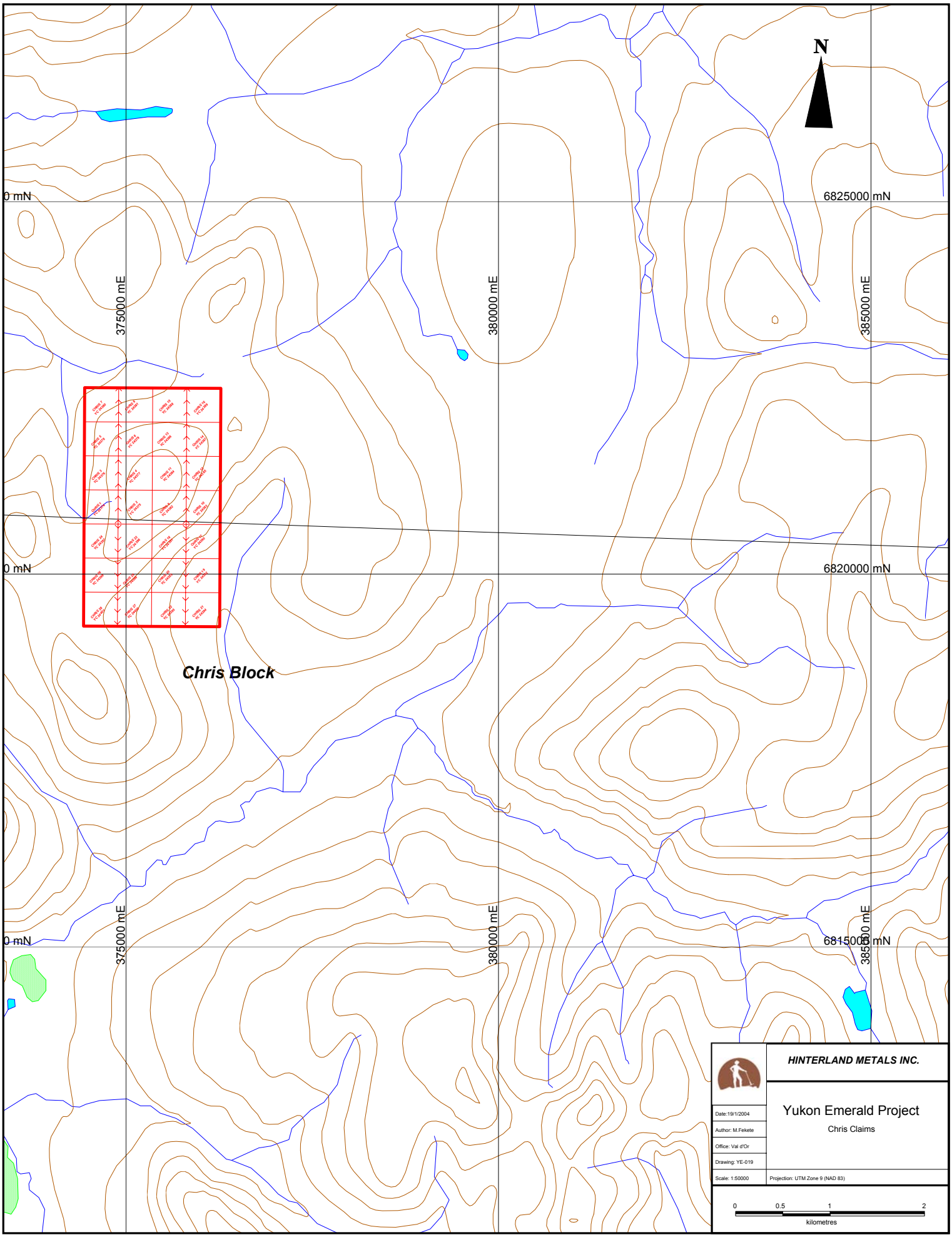
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0 mN
6815000 mN
375000 mE
380000 mE
385000 mE
Chris Block
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-019
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0
0.5
1
2
kilometres

Table 1 - List of Mineral Titles

Claim Name	Claim Number	Expiry Date
Chris 1 to Chris 28 inclusive	YC 24374 to YC 24401 inclusive	n/a
Dazzle 1 to Dazzle 85 inclusive	YB93982 to YB94066 inclusive	July 26, 2004
Gleam 1 to Gleam 42 inclusive	YB94107 to YB94148 inclusive	July 26, 2004
Gleam 43 to Gleam 50 inclusive	YC 24194 TO YC 24201 inclusive	n/a
Helen 1 to Helen 4 inclusive	YC 24190 to YC 24193 inclusive	n/a
Helen 5 to Helen 14 inclusive	YC 24260 to YC 24373 inclusive	n/a

Hinterland holds the option to acquire a 100% interest in the Gleam Property from True North Gems Inc. ("True North") under the terms and conditions of an option agreement exectued between the two parties on December 11, 2002. Under this agreement Hinterland has paid $11,000 cash, issued 50,000 shares and must complete $200,000 of work expenditures by the third anniversary of the agreement. True North may earn back a 50% interest by completing an additional $200,000 of work on the property. True North may earn an additional 10% by funding all costs through to production. The Helen Property, was staked adjacent to Gleam Property and lies within an area of influence. Consequently it is subject to the terms and conditions of the Gleam agreement and for all intents and purposes may be considered part of the Gleam Property.

Hinterland holds the option to acquire a 100% interest in the Dazzle Property from True North under the terms and conditions of an option agreement exectued between the two companies on January 16, 2003. Under this agreement Hinterland has paid $21,500 cash, issued 100,000 shares and must complete $400,000 of work expenditures by the third anniversary of the agreement. True North may earn back a 50% interest by completing an additional $400,000 of work on the property. True North may earn an additional 10% by funding all costs through to production.

All three properties above are subject to an underlying agreement with Glacier Gems Inc. ("Glacier") whereby Glacier is entitled to a 3% royalty on all metal and gemstone production from the properties. The Chris Property was acquired by staking and is held by Hinterland 100%.

4. Accessibility, Local Resources, Infrastructure, Physiography and Climate

The Chris Property is accessible by a cat trail that travels south from the Robert Campbell Highway to several abandoned placer mining operations on the upper reaches of the Hoole River. The cat trail passes within 5 km of the southwest corner of the claim block. The most suitable place to establish an exploration camp is adjacent to a small creek draining the north end of the property. This location is less than 1 km from the Chris showing.

The Dazzle, Gleam and Helen properties are relatively more isolated. There are no roads or trails that provide vehicle access to these properties. The Robert Campbell Highway, passes approximately 40 km to the north and a secondary road leads from the highway to the Kudz Ze Kayah camp located some 15 km northeast of the Gleam Property. This is a private road operated by Teck-Cominco and access to it is restricted. However, True North has gained access on two occassions in the past in order to mobilize equipment and supplies into its Regal Ridge Project. Therefore it may be possible to obtain permission to use the Kudz Ze Kayah road to mobilize equipment and supplies into the properties at sometime in the future. For the time being however, access by air is the most practical method.

The most suitable place to establish a base camp is on either Grass Lake or West Grass Lake located east and west of the properties respectively. Both lakes provide excellent access to fixed wing aircraft on floats or skis. A helicopter is necessary to move exploration crews onto the properties on a daily basis or on a fly-camp basis. All supplies and services for the base camp are available in Whitehorse. Although Ross River and Faro are much closer, these villages offer only limited services. Whitehorse also offers claim staking, linecutting, geological, geophysical, trenching and diamond drilling services through a number of contracters. Analytical services appear to be limited however and must be obtained outside Yukon.

The properties lie in rugged mountainous terrain ranging from 1250 m to 2050 m above sea level. The Chris Property is drained southward into the Hoole River, a tributary of the Pelly River in the Yukon River Watershed. The Gleam and Helen properties are drained northward into Big Robert Campbell Creek, a tributary of the Pelly River in the Yukon River Watershed. The Dazzle Propery is drained southward into Ings River, a tributary of the Liard River in the MacKenzie River Watershed. The vegetation is typical of alpine regions. The higher elevations are either barren or covered with mosses, lichen grasses and low brush. The lower elevations are covered by stunted fir forest with intermittent grassy meadows and brush covered creek bottoms. Rock outcrops are frequent and well exposed although talus slides obscure much of the geology.

The Finlayson Lake Area is characterized by a semi-arid, sub-arctic continental climate with mild summers and very cold winters. Precipitation is generally light in the summer although overcast conditions can persist for weeks without any rain. Heavy morning fog can be a problem epecially towards the end of the summer season. Maximum snow accumulations in the winter are less than two metres although avalanches result in areas of much thicker snow pack that may last into July. Due to the northerly latitude of the region, summer days are long and winter days very short. The best season for exploration is during the summer months from mid-June to mid-September.

5. Exploration History

There is no documentation of emerald exploration ever having taken place on or immediately adjacent to the Dazzle, Gleam or Helen properties. The properties have seen limited exploration for VMS-type or replacement type gold mineralization. In the past, no mineral showings have been located in place on the properties although there is reference to an occurrence of arsenopyrite float on the Helen Property (MINFILE # 105G 030). A review of the Yukon

Geology Program MINFILE database reveals that the immediate area of the properties has seen three periods of exploration activity.

The first period covers the early-1950's and is poorly documented. Records show limited staking, prospecting and geophysical surveying took place during this period (Allan 1955). The second period covers the late-1960's when North Lake Mines Ltd. led a syndicate into the area with a regional airborne geophysical survey followed by prospecting, geochemical and ground geophysical surveys (MacDonald 1967, Sevensma 1966, Sevensma 1967, Sevensma and Heard 1967). The third period of exploration in the area was touched off by the discovery of Kudz Ze Kayah deposit in 1994 and continued into the late-1990's. During this period a number of companies completed work in the area of the properties. Expatriate Resources Ltd. has been the most active company in the area. It participated in a regional airborne geophysical survey followed by prospecting, geological mapping, geochemical and ground geophysical surveys followed by limited trenching and diamond drilling on a number of adjacent properties (Burgert 1997, Eaton 1997, Wenzynowski 1996, Wenzynowski 1998, Wenzynowski 1999, Woolham 1997). Arcturus Resources Ltd. also completed exploration programs on a number of adjacent blocks. This work included participation in a regional airborne survey followed by prospecting, geological mapping, geochemical and ground geophysical surveys followed by limited diamond drilling (Davidson 1997, Davidson 1998, MacDonald 1995, Woolham 1997). Based on a regional geophysical survey flown in 1994, Cominco Ltd. staked and subsequently optioned a block of claims to Pacific Bay Minerals Ltd. Work on these claims was limited to cursory prospecting and geological mapping (MacRobbie 1996, Moyle and Wesa 1998).

6. Regional Geology

The Chris, Dazzle, Gleam and Helen properties lie within the northern Canadian Cordillera and cover complexely deformed greenschist to lower amphibolite grade metamorphic rocks of the Yukon-Tanana Terrane in contact with mid-Creatceous granitic plutons (Figure 4). Southwest of the property area, the Yukon-Tanana is faulted against sedimentary rocks of the Cassiar Platform by the right lateral Tintina Fault. Northwest of the property area, the Yukon-Tanana is thrusted over clastic and carbonate sediments of the North American Miogeocline by the Inconnu Thrust. The properties lie in an area located north of the Tintina Fault where the Yukon-Tanana is comprised mainly of pre- to Late Devonian quartz-rich meta-clastic rocks and carbonates and Late Devonian and Mississippian meta-volcanic and meta-plutonic rocks. These rocks were deformed and imbricated in the late Paleozoic and again in the Eartly Cretaceous prior to the emplacement of a suite of ca. 112 Ma peraluminous granitic intrusions (Mortenson 1999).

7. Local Geology

The most recent compilation of Finlayson Lake Area by Murphy et al (2001) divides the Yukon-Tanana Terrane locally into several fault- and unconformity-bound, meta-sedimentary and meta-volcanic successions and affiliated meta-plutonic rocks (Figure 5). The southernmost and structurally deepest rocks are found in the footwall of the Money Creek thrust and include the Grass Lakes succession, mid-Paleozoic granitic meta-plutonic rocks and the unconformably overlying Wolverine succession. On the hanging wall of the thrust is the narrow, discontinuous,

largely undifferentiated Tuchitua succession of Upper Devonian to Pennsylvanian quartzites, phyllites, limestones, greywackes and cherts, as well as intermediate metavolcanic rocks coeval to those in both the Grass Lakes and Wolverine successions. Dark clastic rocks and cherts of probable Late Pennsylvanian age overlap both the footwall and thrust sheet of the Money Creek thrust. Rocks in the footwall of the Money Creek thrust, the Money Creek thrust sheet, and the Pennsylvanian overlap rocks have been thrust to the northeast along the Jules Creek and thereby placed over the Finlayson succession composed of clastic rocks, cherts, limestones and meta-volcanics. Permian basalts and cherts of the Campbell Range succession overlie all the thrust sheets. Foliated mafic and ultramafic intrusives, possibly sub-volcanic feeders to the Campbell Range basalts, are found within much of the older rock units. In the southern part of the map area there are several weakly foliated mid-Cretaceous intrusions. In the west-central part of the map area, three bodies of non-foliated Jurassic granitic rocks intrude Yukon-Tanana rocks.

The Chris, Dazzle, Gleam and Helen properties lie within the Upper Devonian and Lower Mississippian Grass Lake succession. The lowermost section of the Grass Lakes succession includes muscovite-quartz phyllite, augen phyllite and minor chloritic phyllite, marble and calcareous schist. The Fyre Lake meta-volcanic unit, composed of mainly of chloritic phyllite with lesser carbonaceous phyllite and rare muscovite-quartz phyllite, overlies the lowermost section. Carbonaceous phyllite, lesser quartz-feldspar schists and pebble schists and thick sections of feldspar-muscovite-quartz phyllite and augen phyllite (felsic meta-volcanic rocks) of the Kudz Ze Kayah unit overlie the Fyre Lake unit. The upper part of the Grass Lakes succession is composed of carbonaceous phyllite, chloritic phyllite (mafic meta-volcanic rocks and dykes), quartzite and quartzo-feldspathic meta-conglomerate. These layered are sub-horizontal with an easterly strike. They are variously displaced by normal and thrust faults.

The Grass Lakes succession is intruded by the extensive Grass Lake Plutonic Suite of Early Mississippian age. These well foliated and lineated granites and monzonites are medium- to coarse-grained and generally equigranular, although augen textures are present locally. Smaller bodies of the late Devonian North Lakes Meta-diorite, which includes foliated hornblende-biotite meta-diorites, meta-gabbros, meta-pyroxenites and serpentinized ultramafic rocks, also intrude the Grass Lakes succession. Several weakly foliated to non-foliated peraluminous granitic mid-Cretaceous plutons intrude both the Grass Lakes succession and Grass Lake Plutonic Suite in the southern part of the region. Crosscutting relationships in this area suggest that this plutonic suite is late kinematic with respect to deformation in the host rock.

8. Property Geology

The Dazzle, Gleam and Helen properties cover the eastern margin of a mid-Cretaceous granitic pluton measuring 10 km from east to west and 6 km from north to south (Figure 6). A cursory inspection of the intrusion shows it to be medium- to coarse-grained, generally equigranular and zoned; the author observed muscovite granite in places and reddish-weathering biotite-muscovite granite elsewhere. The pluton intrudes into layered meta-sediments and meta-volcanics of the Grass Lakes succession and meta-plutonic rocks of the Grass Lakes Plutonic Suite. Lithological abbreviations used by Murphy et al (2001) are used in the following discussion for the sake of clarity.

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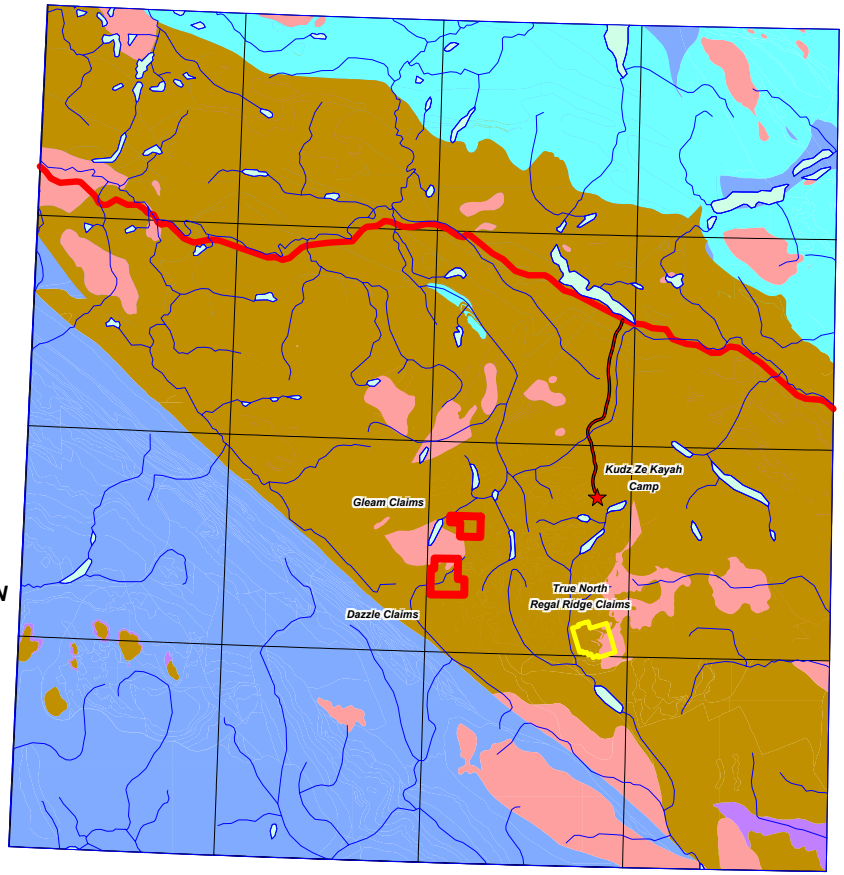
400000 mE

500000 mE

6900000 mN



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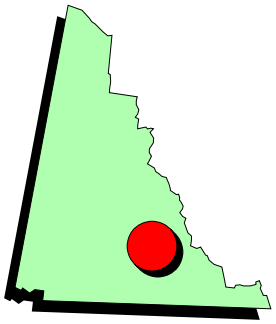


LEGEND

- CASSIAR PLATFORM
- NORTH AMERICAN MIOGEOCLINE
- INTRUSIVES
- YUKON-TANANA TERRANE

6800000 mN

6800000 mN

HINTERLAND METALS INC.

YUKON EMERALD PROJECT

Gleam and Dazzle Claims

Regional Terrane Map

Date:24/1/2003	
Author: MF	
Office: Val d'Or	
Drawing: YE-004	
Scale: 1:1000000	Projection: UTM Zone 9 (NAD 83)

0 25 50

kilometres

400000 mE

N

6850000 mN

6800000 mN

350000 mE

400000 mE

450000 mE

Kudz Ze Kayah Camp

Gleam Claims

Dazzle Claims

True North

Regal Ridge Claims

Legend

TERTIARY
- Eq - Quartz porphyry
- Eg - Gabbro and pyroxenite

CRETACEOUS
- Kg - Granite
- Kv - Crystal lithic tuff

EOCENE
- Eb - Basalt

N.A. MIOGEOSYNCLINE

UPPER TRIASSIC
- Tl - Bioclasitic limestone
- Ts - Phyllite

PERMIAN
- PMC - Mt. Christie Fm Chert

DEVONIAN - MISSISSIPPIAN
- DME - Earn Gp metasediments

~~~~~unconformity~~~~~

CASSIAR PLATFORM

MIDDLE DEVONIAN
- Dl - Limestone

SILURIAN-DEVONIAN
- SDq - Orthoquartzite
- Sdq - Dolostone and quartzite
- Ss - Laminated siltstone

Hanging Wall of Inconnu Thrust
- Jg - Granite

YUKON-TANANA TERRANE
- Plg - Leucogabbro, gabbro and diabase
- Pum - Serpentinized ultramafic

MID-PERMIAN
- Conglomerate

~~~~~unconformity~~~~~

EARLY PERMIAN

Campbell Range Succession
- PCb - basalt
- PCc - Chert

~~unconformity on all thrust sheets~~

Footwall of Jules Creek Thrust

CARBONIFEROUS?
- Cfv - Felsic metavolcanic
- Ccs - Metasediment
- Civ - Intermediate metavolcanic
- Cl - Crinoidal limestone

Hangingwall of Jules Creek Thrust

PENNSYLVANIAN
- Pcl - Phyllite, conglomerate and grewacke

~~~~~unconformity~~~~~

Hangingwall of Money Creek Thrust

EARLY MISSISSIPPIAN
- MSg - Simpson Range Granites

LATE DEVONIAN - EARLY MISSISSIPPIAN
- Dqp - Mafic poor granite
- Dum - Serpentinized ultramafic
- CMCu - Felsic metavolcanic and metasediments

PENNSYLVANIAN
- Pq - Quartzite

UPPER MISSISSIPPIAN TO MID-PENNSYLVANIAN
- *Cc - Crinoidal limestone*

LOWER MISSISSIPPIAN
- Miv - Mica-quartz phyllite

UPPER DEVONIAN
- Df - Metavolcanic
- DFcp - Carbonaceous phyllite
- DFr - Rhyolite

Footwall of Money Creek Thrust

EARLY MISSISSIPPIAN

Wolverine Succession
- MWb - Chloritic phyllite
- MWt - Phyllite
- MWf - Metaporphyry
- MWcp - Carbonaceous phyllite
- MWcl - Metasediment

~~~~~unconformity~~~~~

EARLY MISSISSIPPIAN
- MGg & Mgag - *Grass Lakes Suite* - granite

LATE DEVONIAN

North Lakes Meta-diorite
- DNd - Foliated diorite
- DMi - Metagabbro
- Dum - Serpentinized ultramafic

UPPER DEVONIAN TO LOWE MISSISSIPPIAN

Grass Lakes Succession
- DMq- Quartzite
- DMn - Chloritic phyllite
- DMcp - Phyllite and quartzite
- DMcg - Metaconglomerate
- Kudz Ze Kayah felsic metavolcanic
- DKcp - Carbonaceous phyllite
- DKcs - Calcareous metasediment
- DF - Fire Lake Metavolcanic

UPPER DEVONIAN & OLDER
- Dq - Mica-Quartz-feldspar schist
- Dqm - Marble and calcareous schist
- Dm - Chlorite schist
- Dfv - Felsic metavolcanic

HINTERLAND METALS INC.

YUKON EMERALD PROJECT

Gleam and Dazzle Claims

Finlayson Lake Geology Map

Date:24/1/2003

Author: MF

Office: Val d'Or

Drawing: YE-005

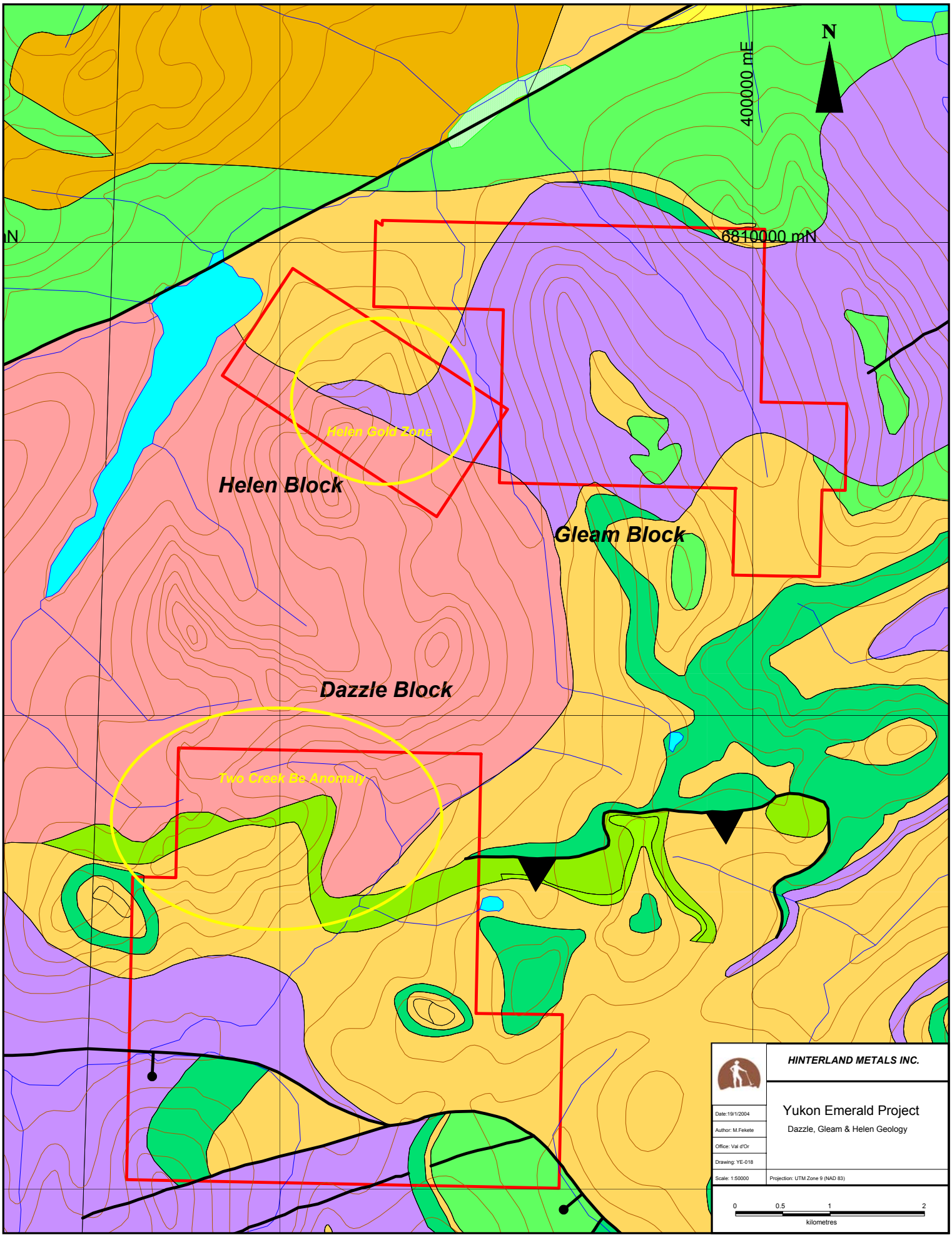
Scale: 1:500000

Projection: UTM Zone 9 (NAD 83)

0 7.5 15 30

kilometres

Adapted from Murphy et al 2001, INAC OF 2001-33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Helen Gold Zone
Helen Block
Gleam Block
Dazzle Block
Two Creek Be Anomaly
HINTERLAND METALS INC.
Yukon Emerald Project
Dazzle, Gleam & Helen Geology
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-018
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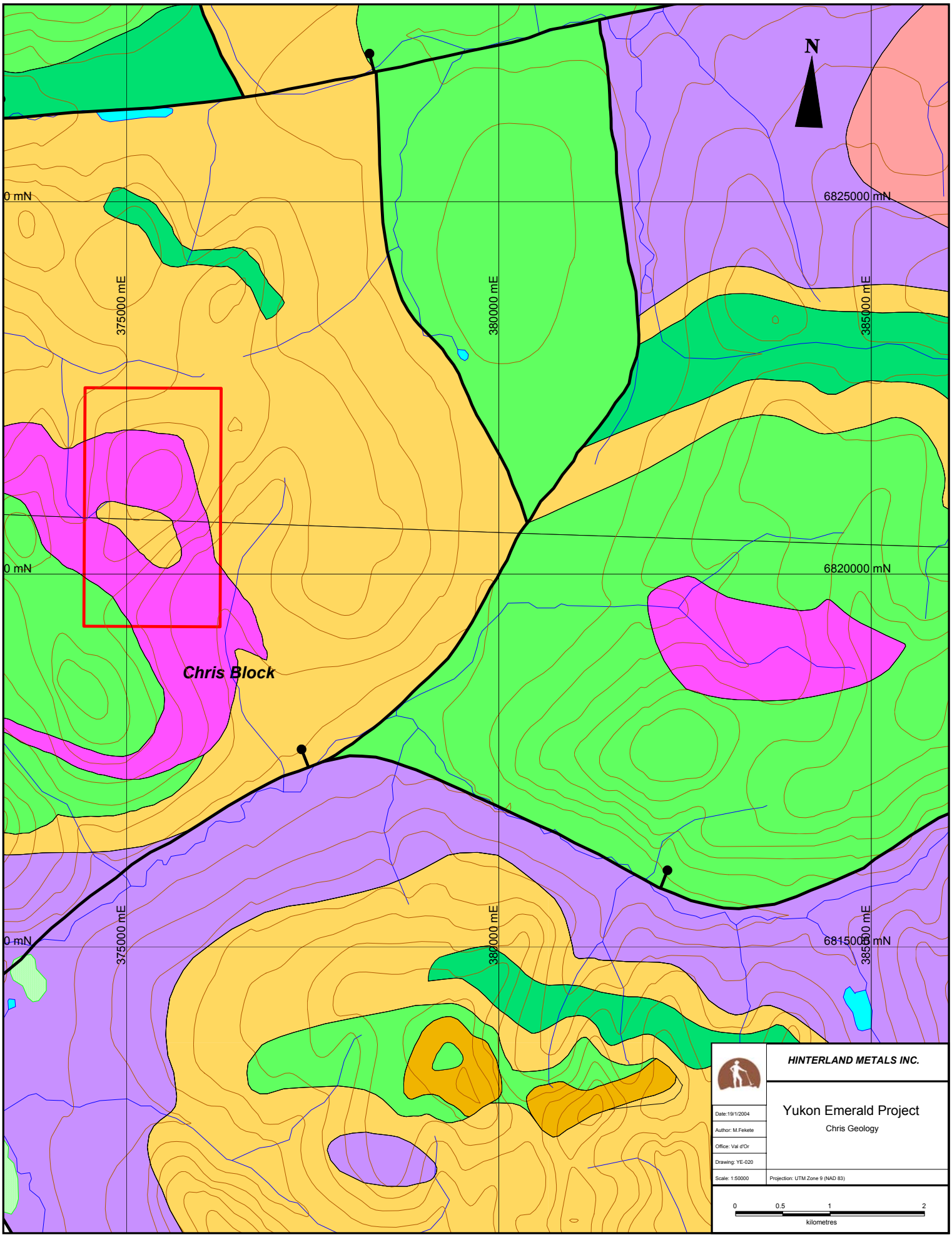
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6815000 mN
375000 mE
380000 mE
385000 mE
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Geology
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-020
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
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The Gleam Property covers a north trending ridge and is drained by two creeks flowing northwards. Roughly 50% of the property is above treeline and shows good rock outcrops. The ridge exposes mainly foliated, lineated and equigranular granitic rocks belonging to the Grass Lakes Plutonic Suite ("MGg"). The ridge is capped by flatlying tan-coloured quartz-mica schists ("Dq") overlain by Fyre Lake metavolcanic schists ("Df"). The Helen Property straddles a contact between the mid-Cretaceous granitic pluton ("Kg") to the south and MGg granitic rocks to the north. Moving west, Dq schists lie on the north side of the contact. The elevation of the Helen Property is relatively high and shows abundant outcrop.

The Dazzle Property covers the headwaters of Ings River and shows much less ground above treeline than the Gleam property. It is underlain almost entirely by the lowermost section of the Grass Lake succession. The dominant lithology is tan-coloured quartz-mica Dq schist which underlies the central third of the property. Thin layers of micaceous marble and calcareous schist ("Dqm") are found within and overlying the Dq schist. In the northern part of the property, a relatively thick band of feldspar-muscovite-quartz schist ("Dqv") underlies the Dq schist and is in contact for much of its length with the south margin of the Kg Pluton. Murphy et al (2001) interpret Dqv schists be derived from a felsic volcanic protolith. The position of the Dqv schists against the Kg pluton provides an immediate exploration target. The bottom third of the property lies on the downthrown side of an east trending normal fault. The Fyre Lake meta-volcanic unit, which lies higher in the Grass Lakes sucession, is well exposed in this area. Grass Lake Plutonic Suite rocks are found in the southwestern part of the property especially footwall to the Dq schists. They tend to be augen textured in this area ("Mgag").

The Chris Property is underlain primarily by Late Devonian serpentinized ultramafic rocks ("Dum") of the North Lake Meta-diorite Suite (Figure 7). These rocks are a distinctive green colour that is particularly visible from several kilometers away. To the north these rocks are in contact with flatlying tan-coloured quartz-mica schists ("Dq") and to the south they are in contact with Fyre Lake metavolcanic schists ("Df"). Murphy et al (2001) infer the ultramafic rocks to be in intrusive contact with the layered rocks. The property shows better rock exposures in its central and northern parts.

9. Deposit Model

Exploration of the Dazzle, Gleam and Helen properties initially targeted two deposit models. The first exploration target is emerald mineralization similar to that found on True North's Regal Ridge Project (Groat et al. 2002). Historically the Finlayson Lake Area is best known the Fyre Lake, Wolverine, Kudz Ze Kayah, Ice and GP4F volcanic massive sulphide-type ("VMS" or "VMS-type") deposits (Murphy et al. 2002).

Emeralds at the Crown Showing (MINFILE: 105G 147) were first found on the Regal Ridge Property in 1998 in the course of geochemical and follow-up prospecting surveys that were directed at finding VMS-type mineralization. Groat et al. (2002) describe the emeralds to be found where quartz veins cut mica rich layers in shallow dipping mica-chlorite schists of the Fyre Lake mafic meta-volcanic unit. The quartz veins are generally subparallel to the foliation of the schist but are also known to be vertically cross-cutting. The emeralds do not occur within

the quartz but rather in selvage zones of yellow sulphate mineralization and extensive fine-grained tourmaline mineralization adjacent to the veins. The host rock geochemistry appears to determine the presence or absence of emeralds. The quartz veins seem to be genetically related to discordant mid-Cretaceous granitic rocks exposed 700 m east of the emerrld showings. The granite is zoned with a marginal muscovite rich phase grading quickly into a biotite-muscovite granite.

Walton (1996) divides emerald deposits into two types:

1. Emerald associated with bituminous black shales and sedimentary rocks; and
2. Emeralds associated with pegmatitic/granitic rocks interacting with ultramafic rocks in either:
   a) recent suture zones; or
   b) ancient suture zones.

The emeralds at Regal Ridge do not fit easily into this classification system. Although they are associated with a recent suture zone (i.e. Type 2a) they are somewhat similar to the Kafubu emerald deposit in the Ndola district of Zambia described by Kazmi and Snee (1989) in that gemstones are found within micaceous schist horizons peripheral to concordant tourmaline veins. It is different from Kafubu in that the mica species at Regal Ridge is muscovite rather than biotite or phlogopite and Kafubu lies on an ancient suture zone. The author prefers to consider the Crown showing under the metamorphic-hydrothermal type classification proposed by Sinkankas (1981) where emeralds occur primarily as disseminated replacements in schistose wall rock adjacent to granitic pegmatites and quartz veins.

An empirical model for the formation of emeralds at Regal Ridge involves the alteration of Cr-rich, mafic to ultramafic rocks by hot, volatile-rich fluids transported by quartz veins or pegmatite dykes from a relatively evolved, Be-rich granite.

VMS-type deposits are an important source for base and precious metals in Canada (Franklin 1996). The Finlayson Lake Area has a number of VMS-type deposits that are well described in the Yukon Geology Program MINFILE database and summarized as follows:

Table 2 - Finlayson Lake Area VMS Deposits

MINFILE # Name	NTS Sheet	Host Rock (Murphy et al., 2001)	Resource
105G 034 Fyre Lake	105G/02	Fyre Lake meta-volcanic (DF)	15.4 million tonnes within which 8.2 million tonnes grade 2.1% Cu, 0.11% Co, and 0.73 g/t Au, using a 1.0% copper cut-off
105G 072 Wolverine	105 G/08	Wolverine Succession (MWcp/Mwt)	6.237 million tonnes grading 1.33% Cu, 1.55% Pb, 12.66% Zn, 1.76 g/t Au and 370.9 g/t Ag
105G 117 Kudz Ze Kayah	105G/07	Kudz Ze Kayah felsic meta-volcanic (DK)	11,100,000 tonnes averaging 5.61% Zn, 0.85% Cu, 1.56% Pb, 136.9 g/t Ag and 1.33 g/t Au
105G 118	105G/14	Campbell Range	4,561,863 tonnes grading 1.48% Cu with minor

Ice		Succession basalts (PCb)	gold, silver and cobalt
105G 143 GP4F	105G/07	Kudz Ze Kayah felsic Meta-volcanic (DK).	1.5 million tonnes grading 6.4% Zn and 3.10% Pb, 0.10% Cu, 90 g/t Ag and 2.0 g/t Au.

Murphy et al (2002) provide an excellent description of the VMS-type potential of the Finlayson Lake Area:

> *"The recognition of the several different and sequentially developed paleogeographic settings within Yukon-Tanana Terrane has implications for the exploration for new mineral deposits. With the exception of the Fyre Lake deposit, all of the known volcanic-hosted massive sulphide deposits occur within rocks inferred to have been deposited in back-arc settings (Piercey and Murphy, 2000; Piercey, 2001b). The Kudz Ze Kayah and GP4F deposits formed in the Late Devonian back-arc region, while Wolverine Lake formed in the early Mississippian back-arc region, all of these in the footwall of the Money Creek thrust. The Ice deposit formed during rifting behind a coeval Early Permian arc recently recognized in southern Yukon (Roots et al., in press). As was noted by Piercey et al. (2000, 2001b), back-arc settings have the structural and thermal characteristics necessary for the generation and maintenance of large-scale hydrothermal circulatory systems that lead to the development of sea floor massive sulphide deposits."*

Although the VMS-type deposit model is currently secondary to the emerald model, the potential for VMS-type mineralization to occur on the Dazzle, Gleam and Helen properties must not be understated. The properties are known to be partially underlain by the Fyre Lake meta-volcanic unit which hosts the Fyre Lake VMS deposit. In the northern part of Dazzle Property, there is a relatively thick band of feldspar-muscovite-quartz schist interpreted to derived from a felsic volcanic protolith. This unit must also be examined for VMS-type mineralization.

The discovery of the Helen Gold Zone on the Helen Property adds a third deposit model. The zone is a weakly deformed hydrothermal vein composed of semi-massive arsenopyrite and quartz. The vein carries significant gold and silver values. Lode gold-silver deposit models are numerous and diverse (Poulsen 1996). At this early stage it is difficult to identify the Helen gold discovery with a specific model. It does not show very high copper or zinc values so it does not appear to be related to VMS-type mineralization. Its setting within quartz-mica schists adjacent to a granitic pluton implies that it may be a mesothermal vein replacement associated with a dyke related to the pluton. Its high arsenopyrite content and texture suggests this is a credible model although no dykes were observed when the vein was sampled.

The Chris Property is also considered to be prospective for hydrothermal lode gold-type deposits although the discovery of gem-grade chrysoprase on the property overshadows its gold potential.

10. Mineralization

Previous work does not document any metal or gemstone occurrences on the Chris, Dazzle, Gleam or Helen properties. The Yukon Geology MINFILE data base contains eight files describing mineral occurrences in close proximity to these properties summarized as follows:

Table 3 - Adjacent Mineral Occurrences

MINFILE # Name	NTS Sheet	Deposit Type/Status	Location Description Best Assay Values
105G 016 El	105G/16	VMS/Drilled	5 km SW of Chris SE Corner Disseminated lenses in metasediment 0.6% Pb, 0.6% Zn & 6.87 g/t Ag across 11.3 m
105G 029 Gee	105G/07	Vein/Showing	3 km west of Gleam NW Corner Galena in small quartz stringers NA
105G 030 Pit	105 G/07	Unknown/Showing	1.5 km west of Gleam SW corner Arsenopyrite float 68.6 g/t Ag
105G 031 Rob	105G/07	VMS/Showing	0.3 km south of Gleam S boundary on ridge Massive arsenopyite in schist NA
105G 067 Lawn	105G/07	Unknown/Anomaly	1.5 km north of Gleam NW corner EM anomaly NA
105G 119 Shot	105G/07	VMS/Drilled	0.3 km north of Gleam N boundary on ridge Malachite, chalcopyrite, sphalerite and pyrite in feldspar-micas-quartz schist 0.24% Cu, 2.34% Pb, 4.24% Zn and 41.5 g/t Ag
105G 120 Blue Line	105G/07	VMS/Showing	1.9 km southeast of Dazzle NE corner limonitic semi-massive pyrite and galena bearing marble float 8.2 g/t Ag, 835 ppm Cu, 6350 ppm Pb and 6140 ppm Zn
105G 142 Blake	105G/07	VMS/Drilled	3.7 km east of Dazzle NW corner Cu-Zn-Pb anomaly coincident with 2 EM conductors over mafic schists with bands of marble and quartzite NA
105G 145 Winger	105G/07	Unknown/Anomaly	1.0 km southwest of Dazzle NW corner float of finely banded sulphides in skarn 2700 ppm Pb, 212 ppm Zn and 1.6 ppm Ag.

The Helen Property covers MINFILE # 105G 030 known as the Pit Showing which is generally described as arsenopyrite float carrying up to 68.6 g/t Ag. There is no evidence that previous workers identified the Helen Gold Zone in place.

11. Exploration 2003

11.1. Introduction

Field exploration work was completed on the Dazzle and Gleam properties from August 6 to 29, 2003. The work consisted of prospecting, outcrop examination and rock sampling and geochemical surveys. Part of the work consisted of regional reconnaissance work and was not done directly on the properties. This regional work resulted in a new gold discovery immediatly west of the Gleam Property that was subsequently staked as the 18 claim Helen Property. Most of the regional work was carried out west of the properties on N.T.S. sheets 105 G/06 and 105 G/11 and resulted in the discovery of an occurrence of the gemstone chrysoprase. This gemstone discovery was staked as the 28 claim Chris Property. Eight additional claims were also staked at the southeast corner of the Gleam Property. The goal of the exploration work was to complete an intial evaluation of the Dazzle and Gleam properties for both emerald mineralization and VMS-type mineralization. Regional reconnaissance was a secondary activity of the program.

The field crew consisted of Mark Fekete, P.Geo. of Val d'Or, Quebec, Fred Kiernicki of Kirkland Lake, Ontario and Tom Morgan, Andrew Robinson, Sylvain Montreuil and Lou Perunovic, all of Dawson City, Yukon. The crew was based at Inconnu Lodge, located on McEvoy Lake some 50 km north of the project area. Daily access from the lodge to the project area was provided by a Bell 206 helicopter piloted by Karl Zhie of Heli-Dynamics based in Whitehorse, Yukon. All sample sites were recorded with either Garmin 12XL or Garmin E-Trex GPS receivers in the NAD 83, Zone 9 map projection and plotted on appropriate maps included in this report.

Petrography, ore microscopy and S.E.M. studies were completed by Al Miller, P.Geo of Ottawa, Ontario in September and October 2003. Two X-Ray Diffraction scans were completed at the University of British Columbia under the courteous supervision of Dr. Lee Groat in September 2003. Data compilation, drafting and report preparation was completed by Mark Fekete in January 2004. All aspects of the exploration program were co-ordinated and supervised by Mark Fekete, a Professional Geologist registered in Quebec, the author of this report and a "qualified person" as defined in Section 1.2 in and for the purposes of National Instrument 43-101.

11.2. Prospecting, Outcrop Examination and Rock Sampling

The emeralds at Regal Ridge occur in selvage zones of yellow sulphate mineralization and extensive fine-grained tourmaline mineralization adjacent to quartz veins cutting shallow dipping mica-chlorite schists of probable volcanic origin. The quartz veins seem to be genetically related to discordant mid-Cretaceous granitic rocks but it is the host rock geochemistry that appears to determine the presence or absence of emeralds. Similar to the Regal Ridge property, the Dazzle and Gleam properties lie adjacent to a mid-Cretaceous grantic intrusion (Be source) and are partially underlain by schistose meta-sediments and meta-volcanics (Cr source).

Based on the empirical model developed for Regal Ridge, prospecting on the Dazzle and Gleam properties was focused on locating pegmatite dykes and quartz veins in the layered rocks adjacent to mid-Cretaceous granitic rocks and examining them for yellow sulphate mineralization and extensive fine-grained tourmaline mineralization. Sulphide mineralization was also sampled for base metal values indicative of VMS-type deposits.

The prospecting traverses were quite arbitrary due to the very preliminary nature of the program and lack of previous geochemical data that would have enabled more focused work. The prospectors sometimes followed claim lines, ridge tops, creek valleys but often wandered randomly. This work was completed by Mark Fekete, Tom Morgan, Andrew Robinson and Sylvain Montreuil. A total of 77 rock samples wewre collected. Sample locations and results are included in Appendix B. Assay certificates are included in Appendix C. Sample results for various elements are plotted on appropriate maps at a scale of 1:50,000.

11.3. Geochemical Surveys

The goal of the geochemical surveys was to provide targets for future emerald prospecting work by locating favourable geochemical anomalies. A total of 32 silt samples were collected from all the creeks draining the Dazzle and Gleam properties. This work was completed by Fred Kiernicki and Lou Perunovic. A total of 83 soil samples were collected by the prospectors listed in Section 11.2 on claim lines and at random location in conjunction with the prospecting. Sample locations and results are included in Appendix B. Assay certificates are included in Appendix C. Sample results for various elements are plotted on appropriate maps at a scale of 1:50,000.

11.4. XRD, Petrography, Ore Microscopy and S.E.M. Studies

Two samples were sent for positive identification by X-Ray Diffraction analysis. The results of this work are detailed in a letter from Dr. Lee Groat included as Appendix D. Two samples were sent for petrography, ore microscopy and S.E.M. studies. Full results of these studies are described in A. Miller's report which is included as Appendix E.

11.5. Sampling and Analytical Procedures

A description of each rock sample including its location, sample type (i.e. grab, float etc.), rock type and mineralization was recorded. A representative hand specimen marked with the appropriate sample number was also kept for later reference. The remainder of each sample was placed in a plastic sample bag marked with the appropriate sample number and sealed with flagging tape. Batches of rock samples were subsequently sealed in rice bags and delivered by courier to ALS Chemex Labs in North Vancouver B.C. These samples were analyzed for gold by 30 g Fire Assay with Atomic Absorption (AA) finish and for 27 other elements by partial acid digestion with Induced Coupled Plasma (ICP) Emission Spectroscopy finish. One sample returned a value above 100 ppm Ag and was subsequently re-analyzed by total acid digestion with Atomic Absorption (AA) finish. Twenty-one samples returned anomalous chrome and nickel values. ALS Chemex analyzed pulps of these samples for platinum, palladium and gold by 30 g Fire Assay with Induced Coupled Plasma (ICP) Emission Spectroscopy finish.

Ten rock samples were thought to contain strong potential for gold based on their high sulphide content. These samples were sent to Bourlmaque Assay Labs in Val d'Or, Quebec where they were analyzed for gold and silver by 30 g Fire Assay with Atomic Absorption (AA) finish. Five of these samples returned over 1000 ppb Au and were subsequently re-analyzed for gold a second 30 g Fire Assay with gravimetric finish. The reject portion of these ten samples was sent to Chimitec Labs, a division of ALS Chemex in Val d'Or, where check assays were completed for gold and silver by 30 g Fire Assay with gravimetric finish. These samples were also analyzed for 27 other elements by partial acid digestion with Induced Coupled Plasma (ICP) Emission Spectroscopy finish.

Soil and silt samples were handled in a similar method as the rock samples. The location of each sample was recorded and the sample was placed in a Kraft envelope marked with the appropriate sample number. The samples were dried and batches of samples were subsequently sealed in rice bags and delivered by courier to ALS Chemex Labs in North Vancouver B.C. These samples were analyzed for 27 elements by partial acid digestion with Induced Coupled Plasma (ICP) Emission Spectroscopy finish.

ALS Chemex, Chimitec and Bourlamaque all have internal quality control programs in place that use a system of duplicates, blanks and standards. It is the author's opinion that the sampling procedure, security measures, sample preparations and analytical methods described above were diligently followed and were adequate to meet industry standards commonly accepted for this level of exploration.

11.6. Sample Results

Sample results were used to generate geochemical potential plots for a number of relevant elements on a topographic base including property boundaries. Simple log scales were used to produce these plots. In the Dazzle, Gleam and Helen property area, plots were prepared for Ag, As, Au, Be, Cr, Sr, V and Zn (Figures 15 to 22). In the Chris property area, plots were prepared for Ag, As, Au, Cr and Ni (Figures 23 to 27).

11.7. Discussion of Results

The most significant result of the 2003 Exploration Program was the discovery of the Helen Gold Zone. This new gold showing was first spotted from the helicopter as a distinct green coloured gossan. It stands out as an outcrop within a talus slide and is hosted within flatlying tan-coloured quartz-mica schists several hundred metres north of a contact with a mid-Cretaceous granitic pluton (Figure 6).

A series of six chip samples across the showing returned a weighted average of 3.86 g/t Au and 48.1 g/t Ag over a width of 5.0 m. A gold equivalent of 4.54 g/t Au has been calculated for the interval based on metal prices as of September 15, 2003. Check assays have verified the tenor of the initial results. The gold-bearing structure consists of a vertical zone of massive to semi-massive sulphide mineralization approximately 4 metres wide found in brecciated wall rock that shows disseminated sulphide mineralization. The average grade cited above includes 0.5 metre samples from both the footwall and hanging wall of the sulphide zone. The gold and silver values are very consistent. Gold values range from a high of 5.03 g/t Au from within the zone to

a low of 0.25 g/t Au from the footwall sample. The silver values range from 44.0 to 58.0 g/t Ag and interestingly, the silver grades within the wall rock samples are equivalent to the silver grades within the sulphide zone.

Figure 8 - Outcrop Helen Gold Zone

Figure 9 - Hand Specimen Helen Gold Zone

Petrography, ore microscopy and S.E.M. evidence conclude the sulphide zone to be a hydrothermal vein comprised of semi-massive arsenopyrite with quartz. A secondary bluish green crust has formed on the semi-massive arsenopyrite. This secondary mineral is inferred to be scorodite [$FeAsO_4.2H_2O$], an iron-arsenic hydroxide. This hydroxide coating begins to develop on fresh surfaces within several days. The vein is mineralogically simple and contains approximately 65% arsenopyrite and 35% quartz. The distribution of arsenopyrite and quartz is

uneven resulting in domains of either fine-grained aggregates of semi-massive arsenopyrite or of arsenopyrite hosted in anhedral quartz. There is an unusual absence of typical hydrothermal minerals such as carbonate, illite, muscovite, kaolinite, and chlorite. Ultra fine-grained metallic aggregates comprised of alloys of bismuth and silver, native bismuth and galena are present as inclusions in arsenopyrite and interstitial to arsenopyrite and quartz. The scanning electron microscope investigation did not identify any gold or gold-bearing minerals. No penetrative fabric is evident in the vein material although brittle deformation is recorded by an intense micro-fracturing.

The Helen showing obviously appears on plots of arsenic, silver and gold (Figures 15, 16 and 17). Elevated gold and silver values were found at only two other locations in the West Grass Lake area although numerous areas of anomalous arsenic were determined.

No emeralds and in fact no beryl mineralization were found as a result of the prospecting effort. However the geochemical sampling has identified an anomalous zone in the area of two creeks that drain the northern part of the Dazzle Property. These creeks are roughly parallel to the contact between a mid-Cretaceous granitic intrusion to the north and Devonian Fire Lake Metavolcanic (Figure 6). Typical background beryllium values in the survey area range from 1.5 to 2.0 ppm Be. Values above 5 ppm are considered anomalous. In the Two Creeks area, all of the stream sediments show values ranging from 8.2 to 15.3 ppm Be. Most of the rock and soil samples collected in this area are also anomalous with a maximum soil sample value at 20.5 ppm Be and a maximum rock sample value at 73.5 ppm Be. A plot of the soil, silt and rock samples clearly shows this area to be distinctively anomalous with respect to beryllium (Figure 18).

Figure 10 - Pegmatite Dyke Two Creeks Area

Arsenic and chrome also appear to be anomalous in the Two Creeks area (Figues 15 and 19). Zinc also shows a weak association with beryllium (Figure 22). Strontium and vanadium show a distinct negative correlation with beryllium (Figures 20 and 21). Copper and tungsten, elements known to be geochemically related to the emerald mineralization at Regal Ridge, generally show very weak values in the study area overall and do not provide useful plots.

Figure 11 - Yellow Sulphate Alteration Two Creeks Area

Figure 12 - Tourmaline Crystals Two Creeks Area

The second most significant result of the work in 2003 was the discovery of chrysoprase at the headwaters of the Hoole River. This area was deemed prospective for gold mineralization and the chrysoprase was discovered during the course of gold prospecting. Chrysoprase is green, gem quality, cryptocrystalline variety of chalcedony that is used in the jewelry business as beads,

cabochon cuts and carved figurines. A positive identification of the mineral was obtained by powder X-Ray Diffraction analysis completed at the University of British Columbia under the supervision of Dr. Lee Groat (Appendix D). This identification was confirmed by Al Miller with an S.E.M. scan (Appendix E). It is uncertain what imparts the apple green colour to the chrysoprase but is most likely one of Cr, Fe, Ni or V. Electron microprobe or proton microprobe studies would determine what element is the chromophore.

Figure 13 - Chrysoprase Lens in Tan-coloured Mg-rich Host

Figure 14 - Chrysoprase Cabochons

The chrysoprase is hosted within a tan coloured sub-horizontal unit of uncertain thickness that is traceable on surface for at least 600 m. This unit is hosted and stands out very clearly in pale green serpentinized ultramafic rock. The tan coloured material is much softer and recessive

with respect to the chrysoprase. Its spectral image (Appendix E) is dominated by magnesium and oxygen with subordinate iron suggest that it is comprised of periclase [MgO] or brucite [$Mg(OH)_2$] and possibly derived from olivine. Most importantly the tan material hosts minute opaque grains either as disseminations or as filling in minute fractures and seams. These opaque grains are compositionally variable and include the elements Ni, Fe, Cr, Si and Al. The morphology of some grains, clearly indicate derivation from probably chromite series spinel. These pseudomrphs are termed ferrichromite and conclusively indicate that the chrysoprase was developed from and within an ultramafic protolith.

Plots for As, Cr and Ni show a strong correlation to the tan-coloured host rock (Figures 24, 26 and 27). Some anomalous silver and gold values were also obtained in this area (Figures 23 and 25). Although the geological context seems favourable for platinum and palladium, none of the ten samples assayed for these elements responded with elevated values.

A second chrysoprase occurrence located 10 km east shows many textures indicative of recurring hydrothermal activity including drusy cavities, coxcomb blades and chalcedonic banding. Overall this suggests that the chrysoprase may have been injected into the host ultrmafic rock as a result of hydrothermal activity.

12. Adjacent Properties

Information concerning adjacent properties is included in Sections 9 and 10 of this report. This information was obtained from the publically available Yukon Geology Program MINFILE database. The author has not attempted to verify any of the information contained in the MINFILE reports and **any such information is not necessarily indicative of similar mineralization existing on either of the Chris, Dazzle, Gleam or Helen properties.** The author cautions the reader to distinguish between the descriptions of mineralization found on adjacent properties provided in this report and the descriptions of mineralization found on the Chris, Dazzle, Gleam or Helen properties if and when any are provided.

13. Mineral Processing and Metallurgical Testing

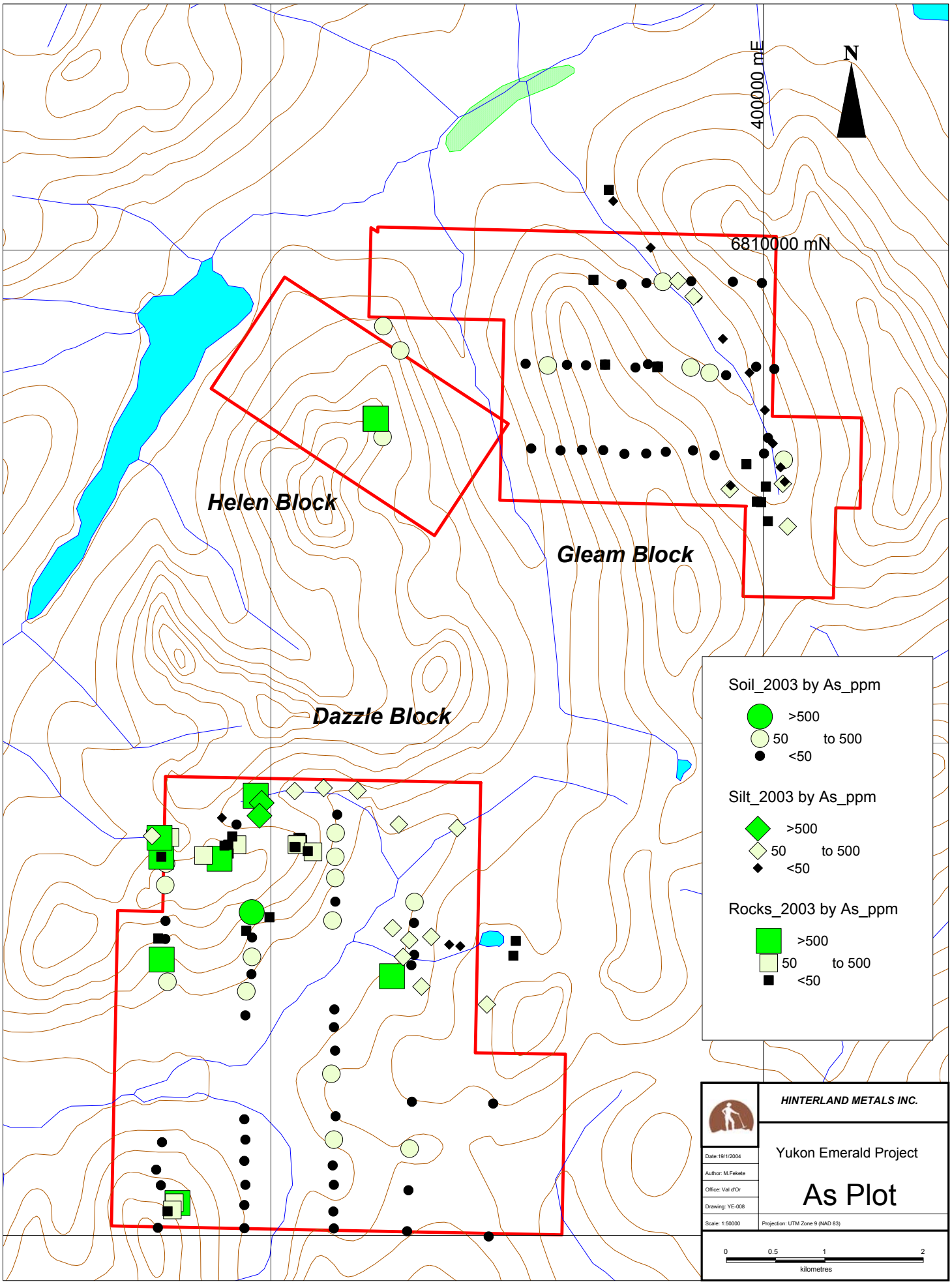
To date, Hinterland has not completed any mineral processing and/or metallurgical testing on either of the Chris, Dazzle, Gleam or Helen properties.

14. Mineral Resource and Mineral Reserve Estimates

No mineral resource or mineral reserve estimates exist for either of the Chris, Dazzle, Gleam or Helen properties.

15. Other Relevant Data and Information

The author is not aware of any other information or explanation necessary to make this technical report more understandable and not misleading.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Yukon Emerald Project
As Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-008
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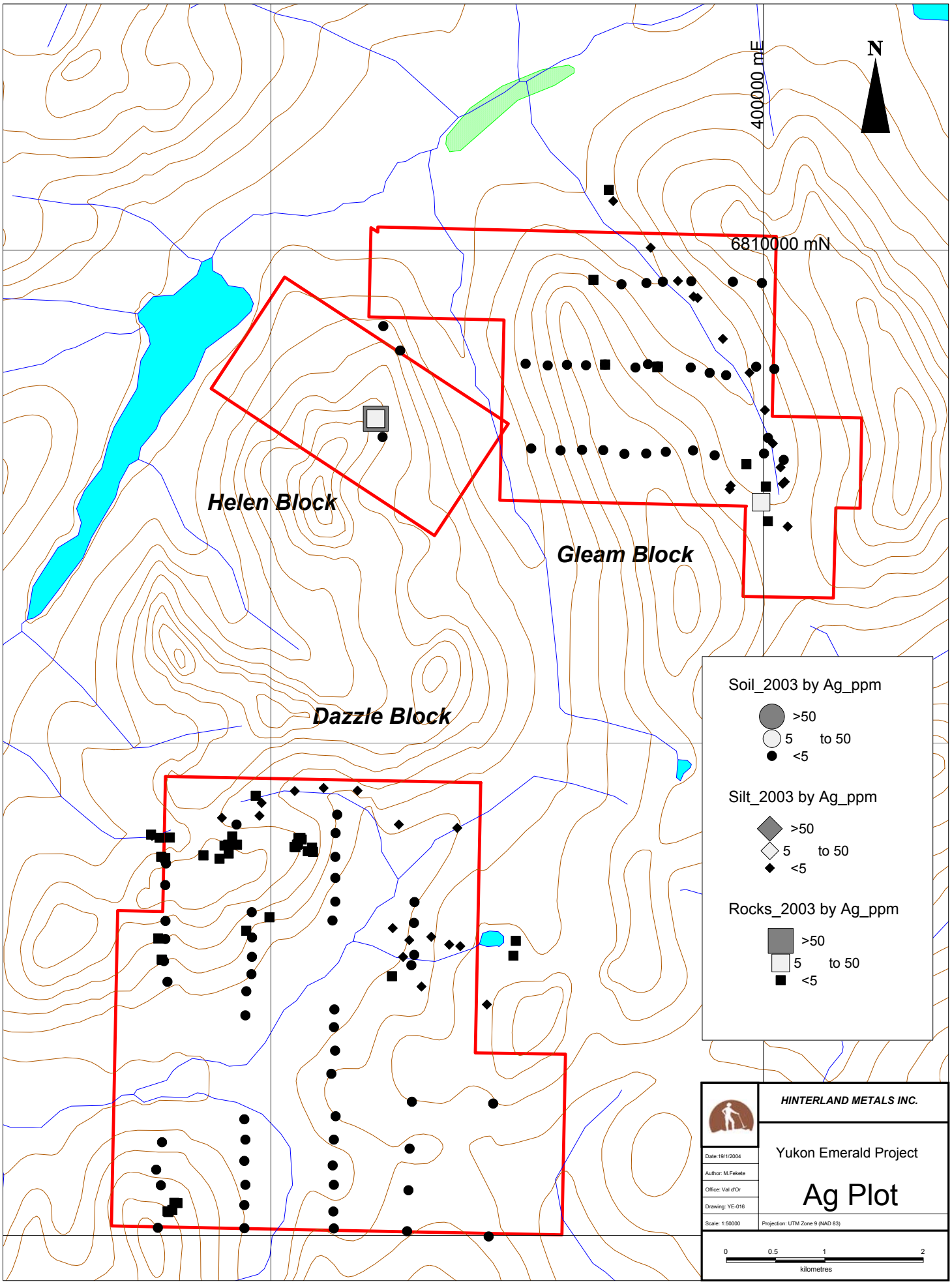
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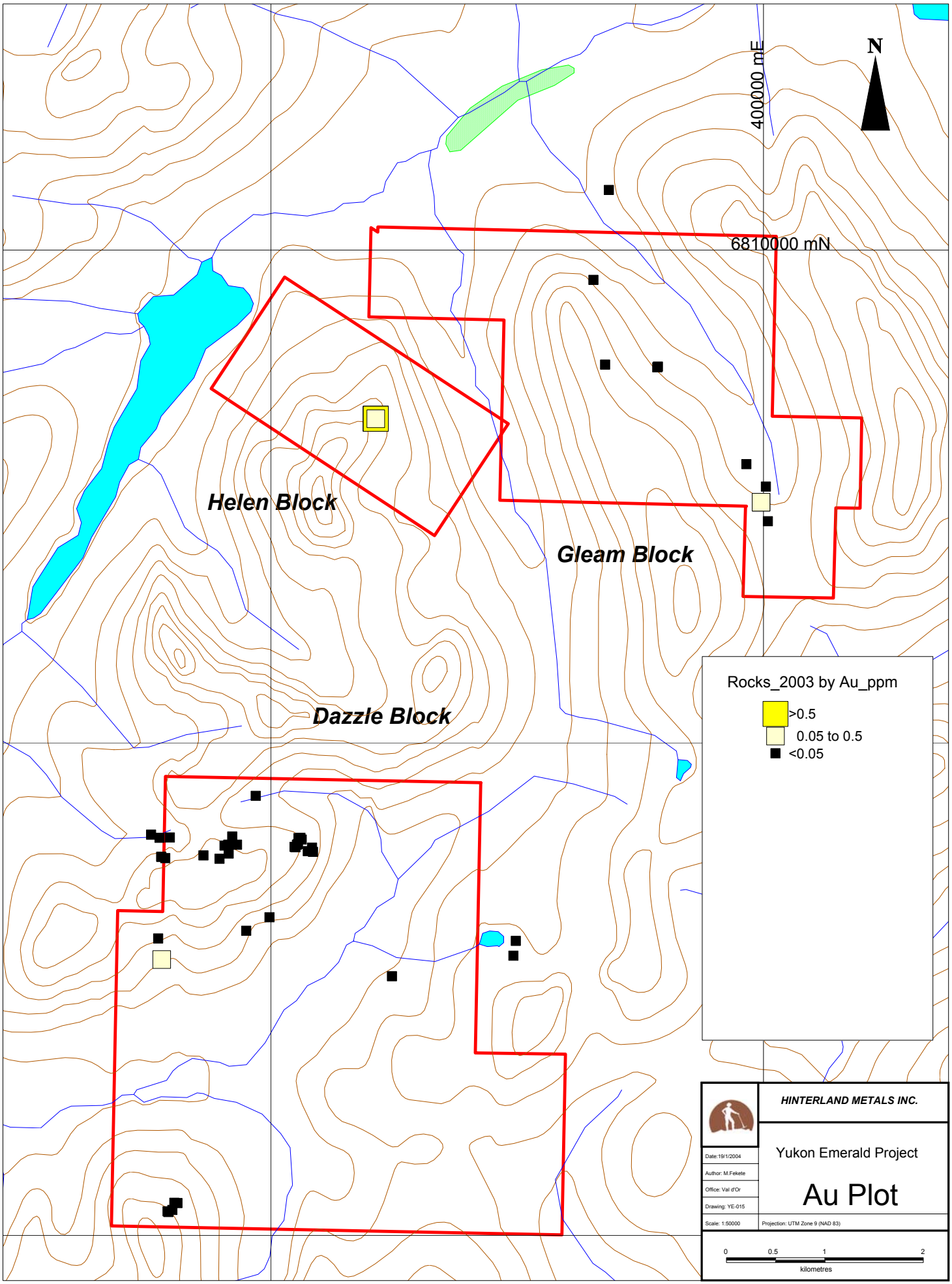
Dazzle Block
Soil_2003 by Ag_ppm
>50
5 to 50
<5
Silt_2003 by Ag_ppm
>50
5 to 50
<5
Rocks_2003 by Ag_ppm
>50
5 to 50
<5
HINTERLAND METALS INC.
Yukon Emerald Project
Ag Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-016
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres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N
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Helen Block
Gleam Block
Dazzle Block
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0.05 to 0.5
<0.05
HINTERLAND METALS INC.
Yukon Emerald Project
Au Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-015
Scale: 1:50000
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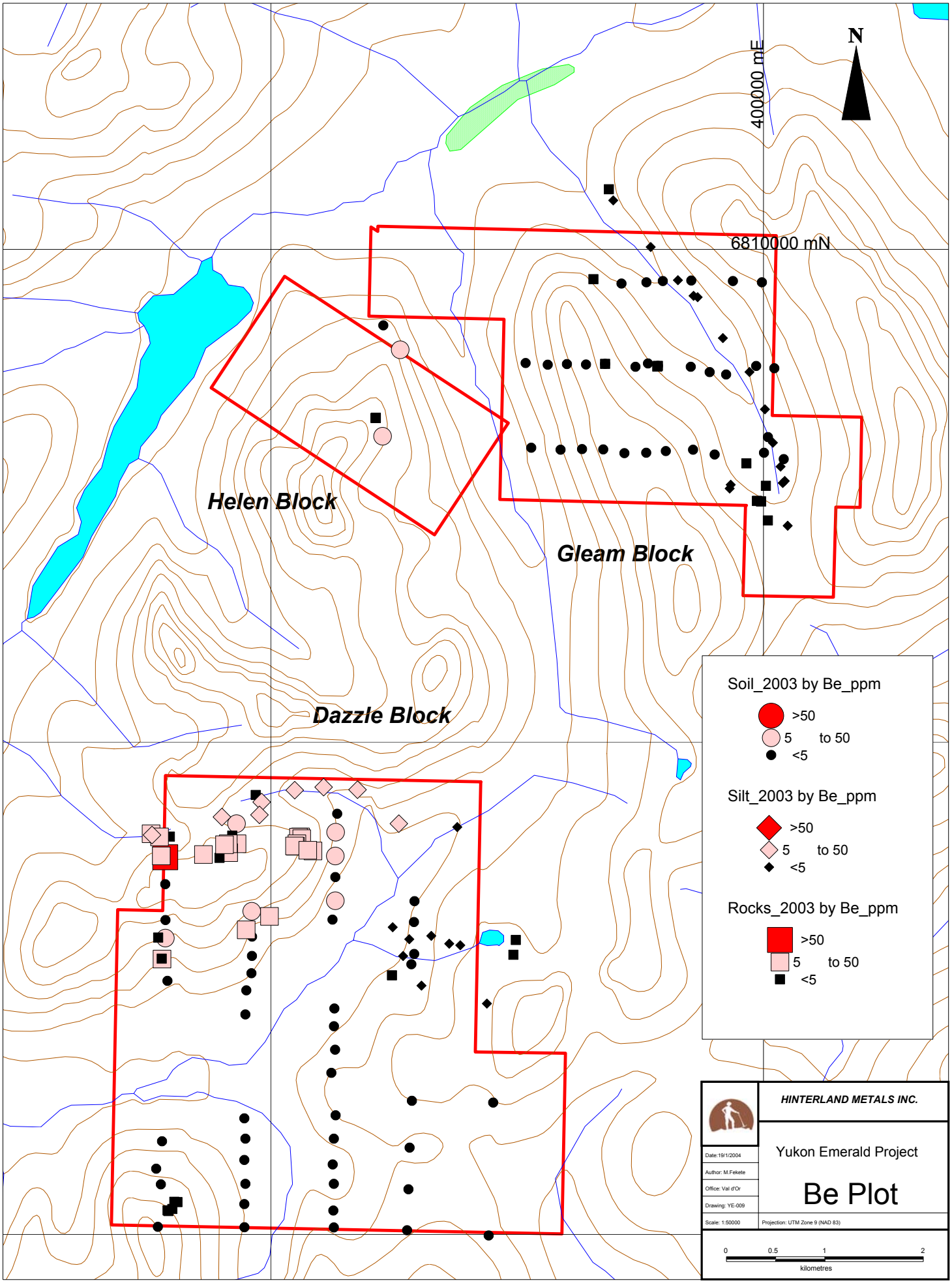
1
2
kilometres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Gleam Block
Dazzle Block
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5 to 50
<5
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>50
5 to 50
<5
Rocks_2003 by Be_ppm
>50
5 to 50
<5
HINTERLAND METALS INC.
Yukon Emerald Project
Be Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-009
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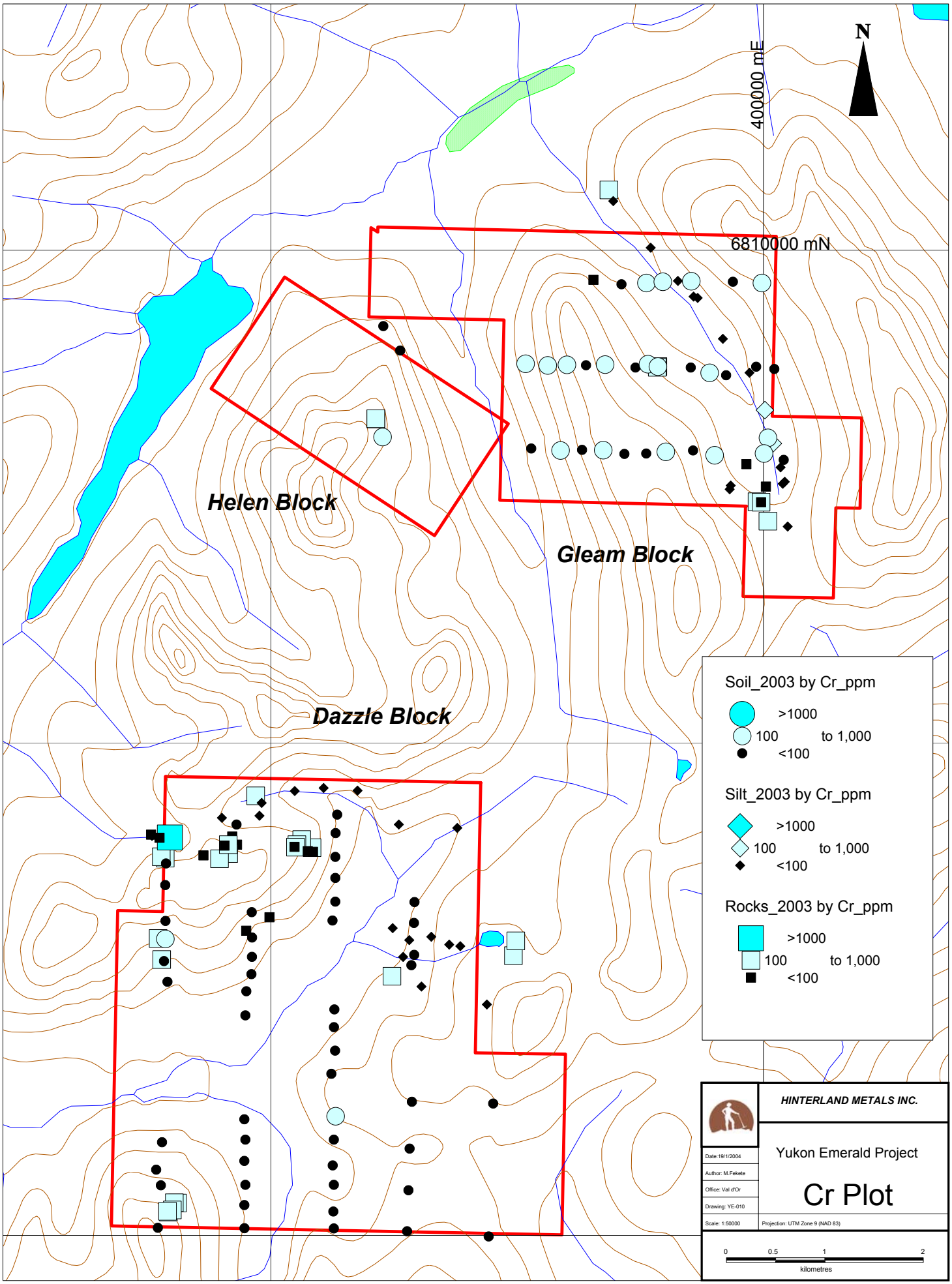
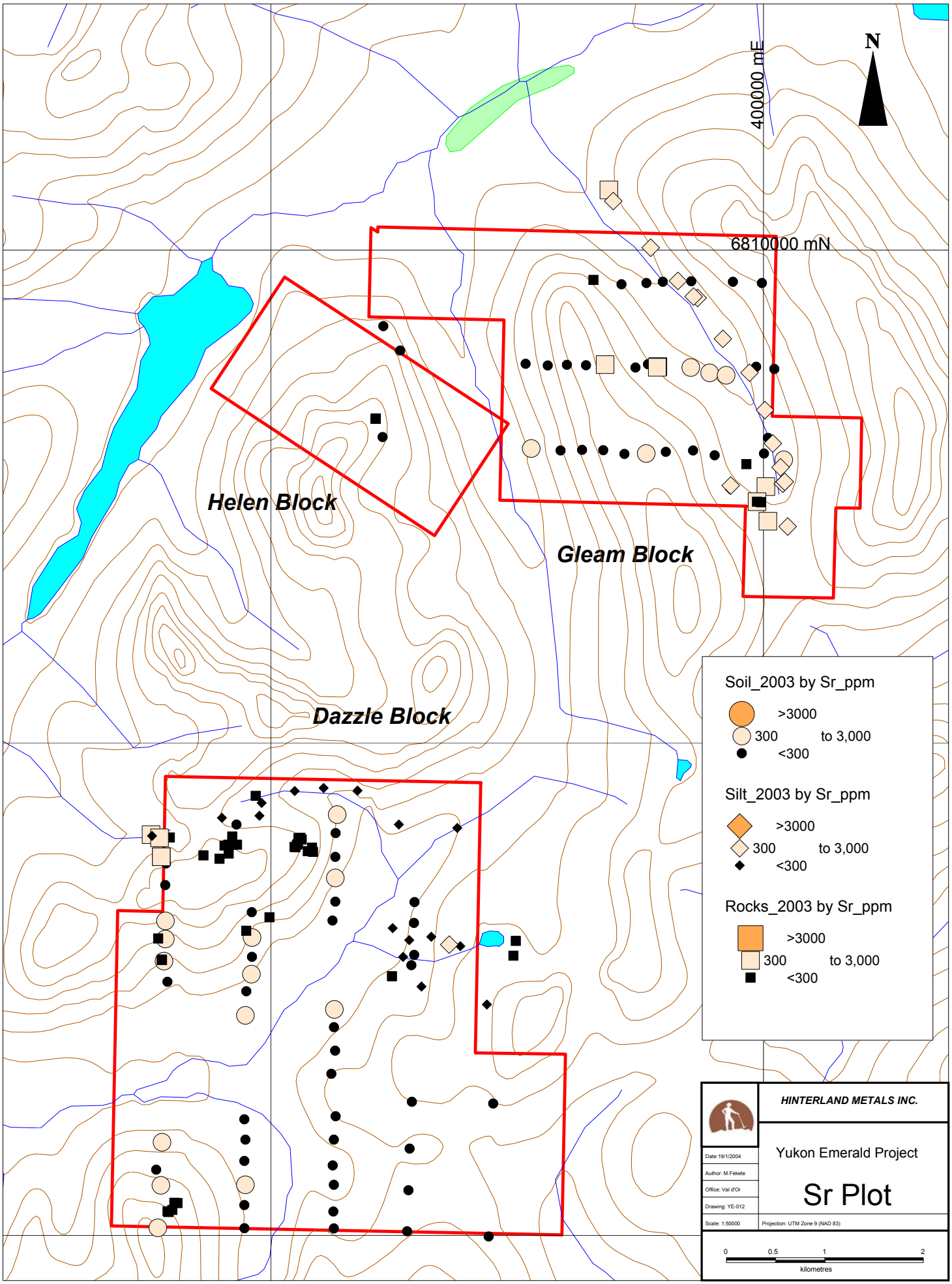
kilometres


N
400000 mE
6810000 mN
Helen Block
Gleam Block
Dazzle Block
Soil_2003 by Cr_ppm
>1000
100 to 1,000
<100
Silt_2003 by Cr_ppm
>1000
100 to 1,000
<100
Rocks_2003 by Cr_ppm
>1000
100 to 1,000
<100
HINTERLAND METALS INC.
Yukon Emerald Project
Cr Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-010
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres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N
6810000 mN
Helen Block
Gleam Block
Dazzle Block
Soil_2003 by Sr_ppm
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300 to 3,000
<300
Silt_2003 by Sr_ppm
>3000
300 to 3,000
<300
Rocks_2003 by Sr_ppm
>3000
300 to 3,000
<300
HINTERLAND METALS INC.
Yukon Emerald Project
Sr Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-012
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
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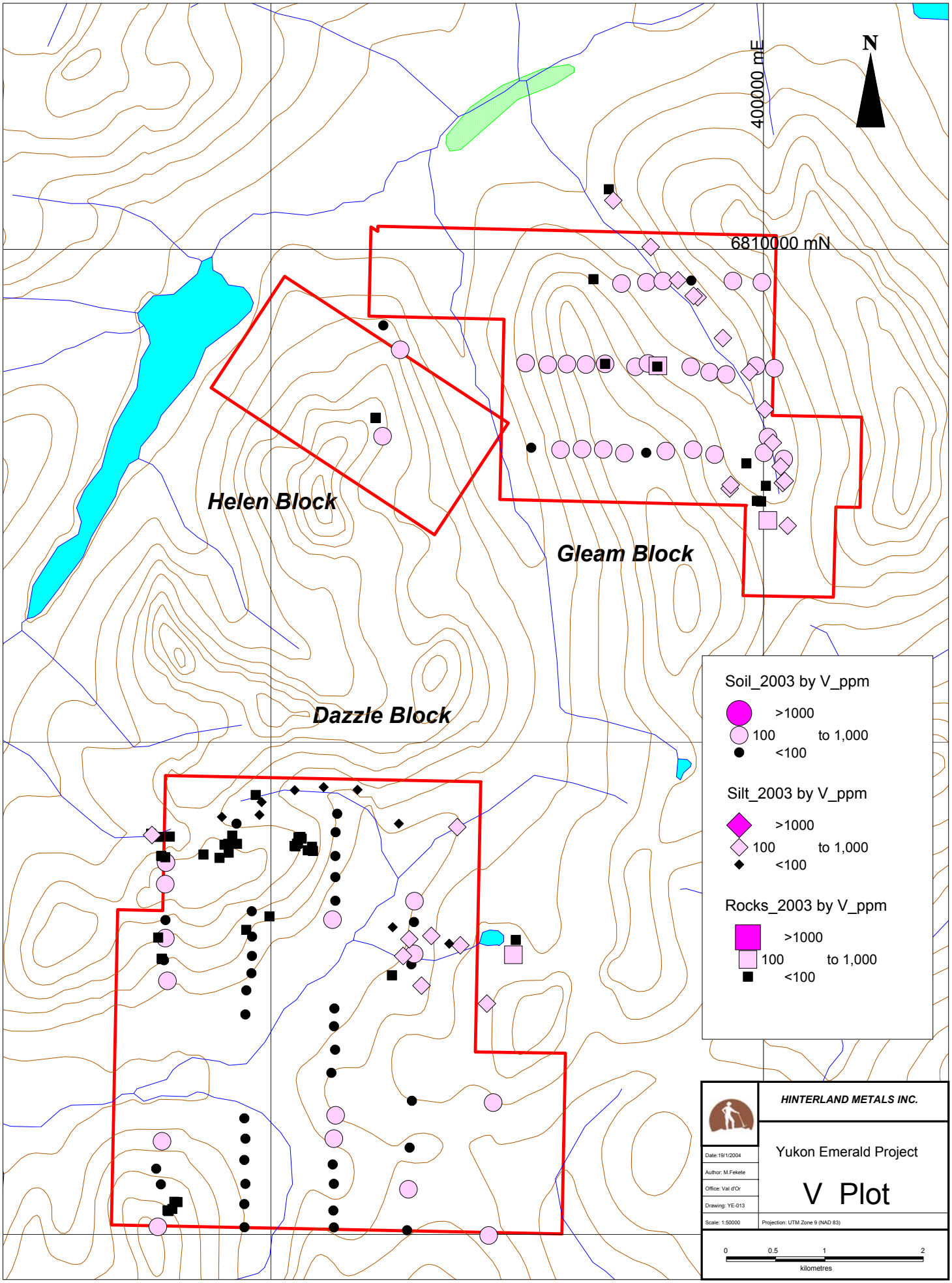
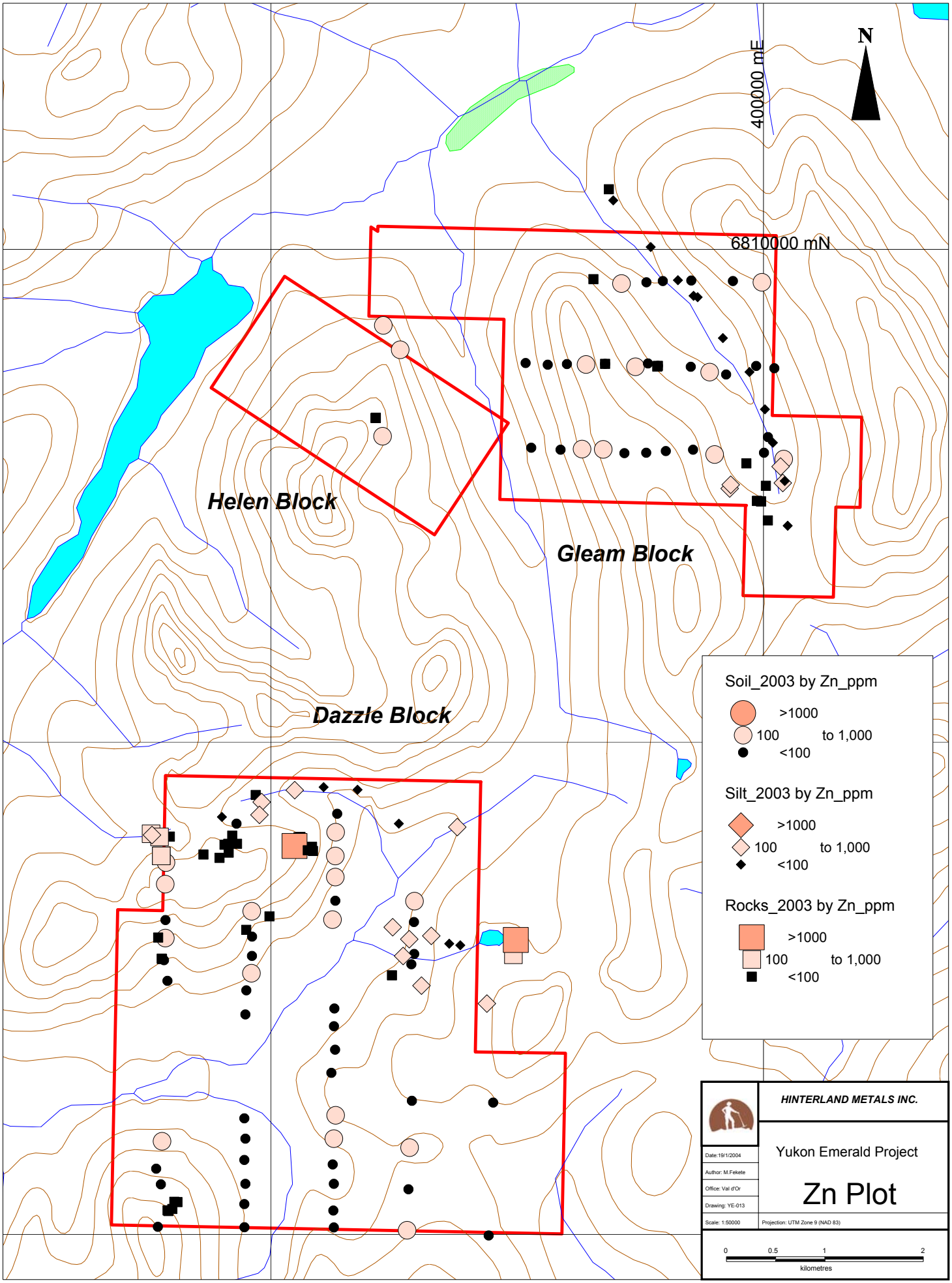
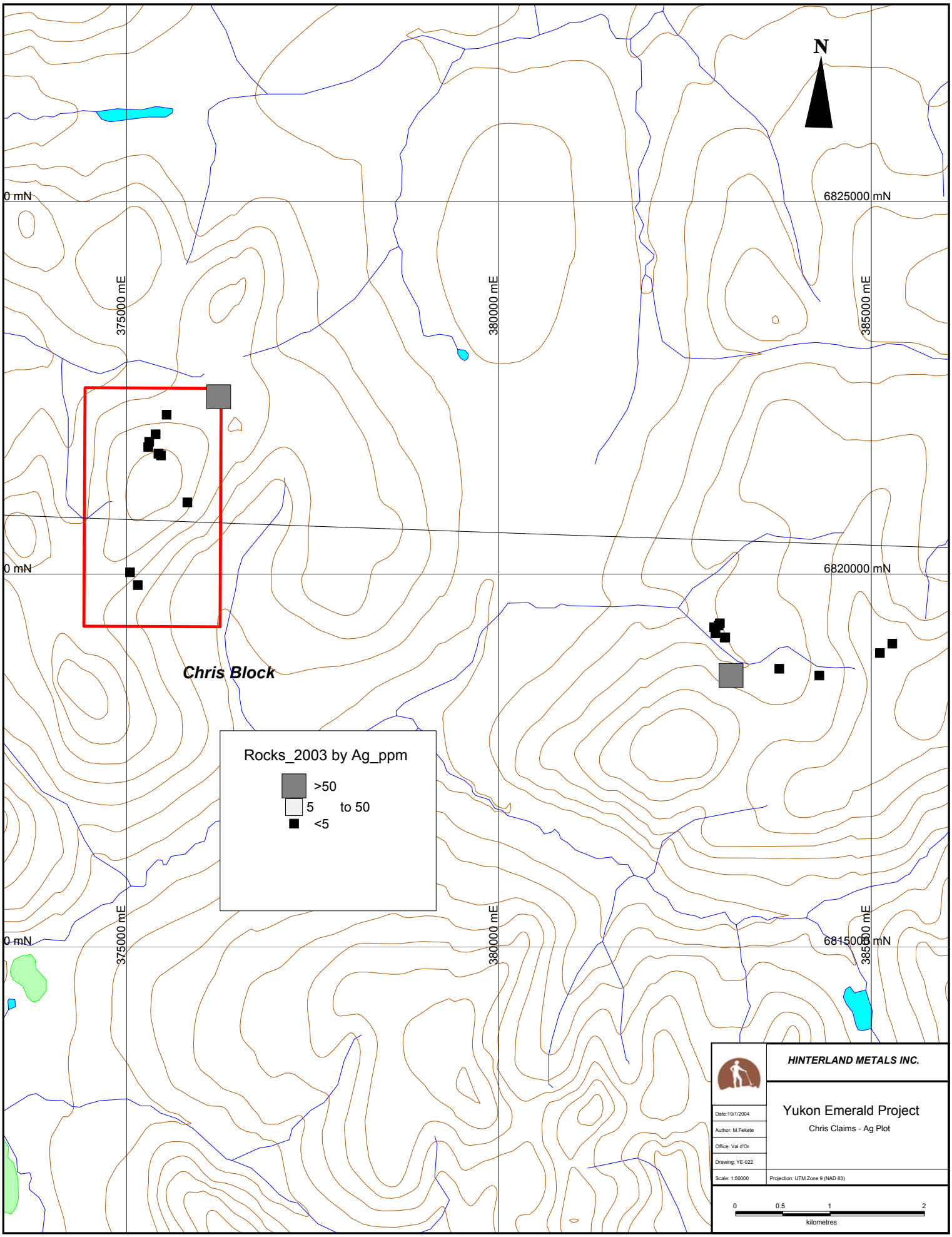
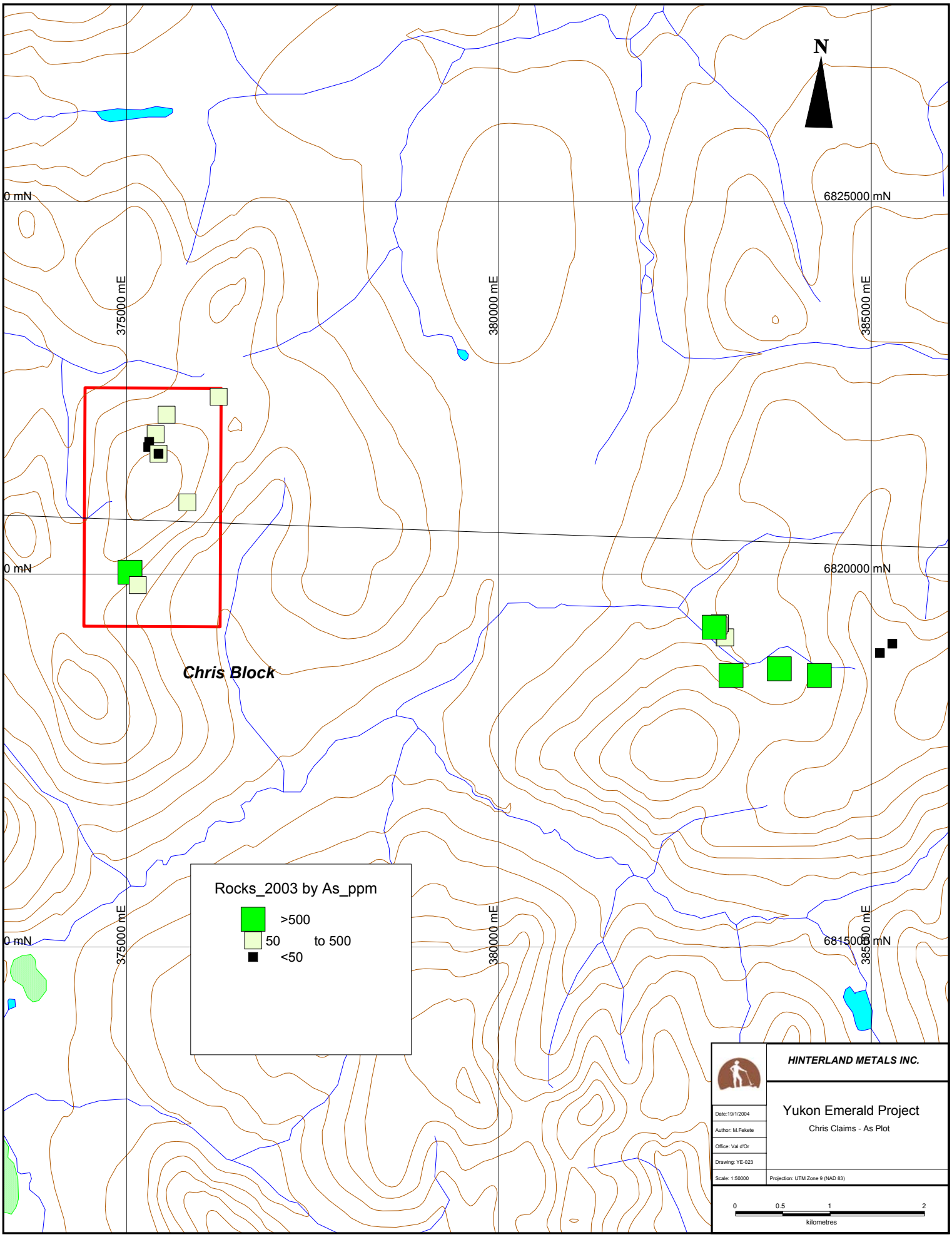
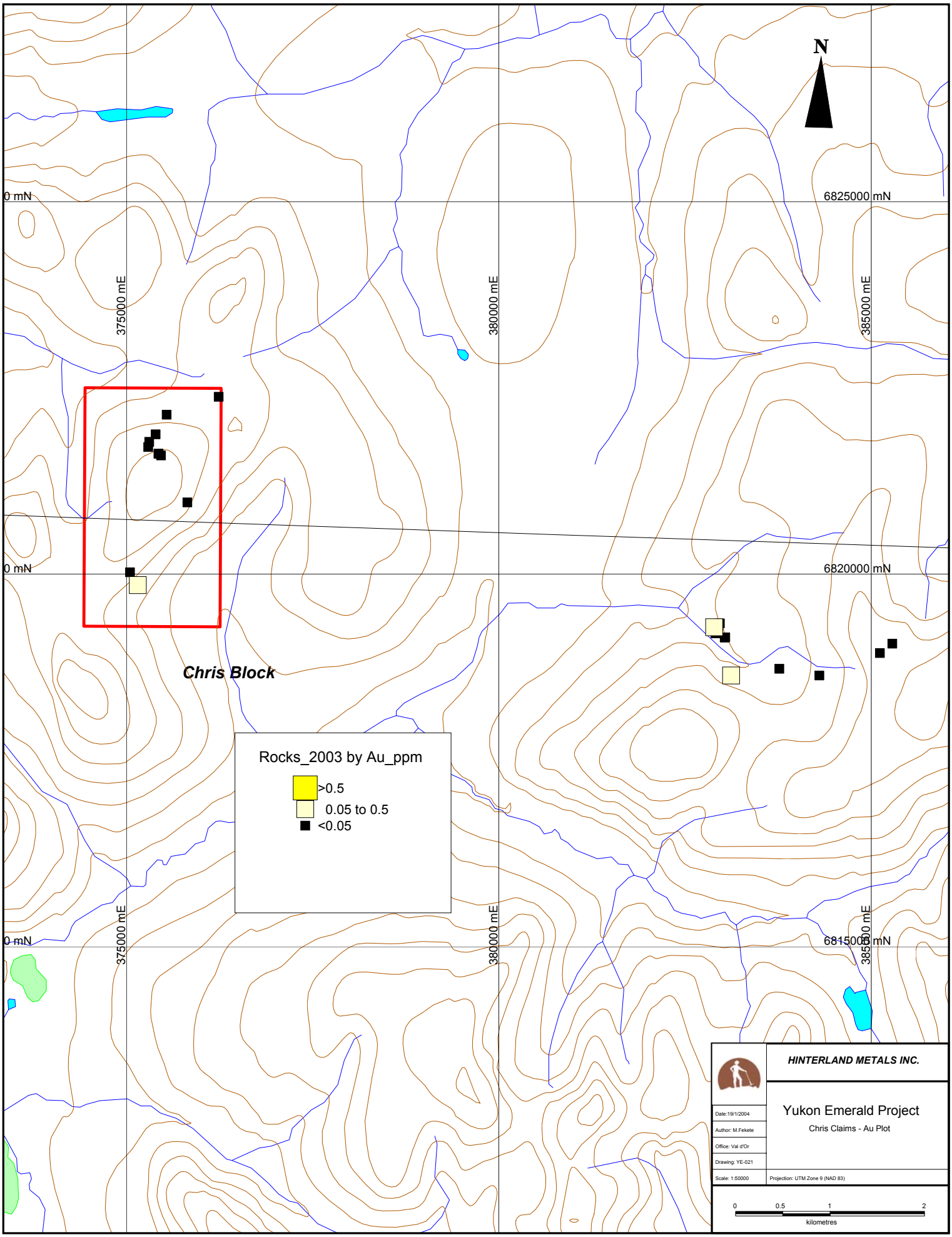
kilometres

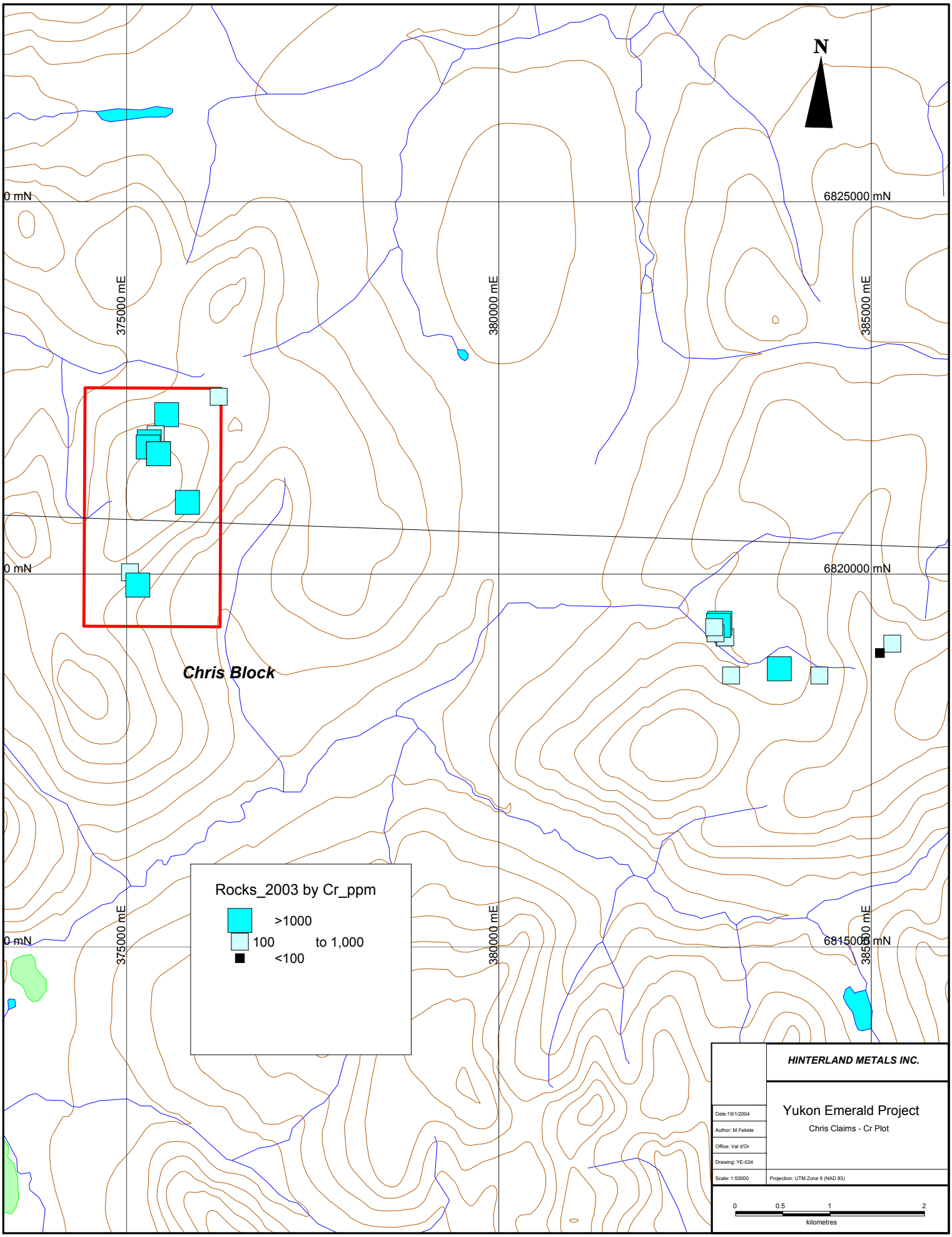

400000 mE
N
6810000 mN
Helen Block
Gleam Block
Dazzle Block
Soil_2003 by V_ppm
>1000
100 to 1,000
<100
Silt_2003 by V_ppm
>1000
100 to 1,000
<100
Rocks_2003 by V_ppm
>1000
100 to 1,000
<100
HINTERLAND METALS INC.
Yukon Emerald Project
V Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-013
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres

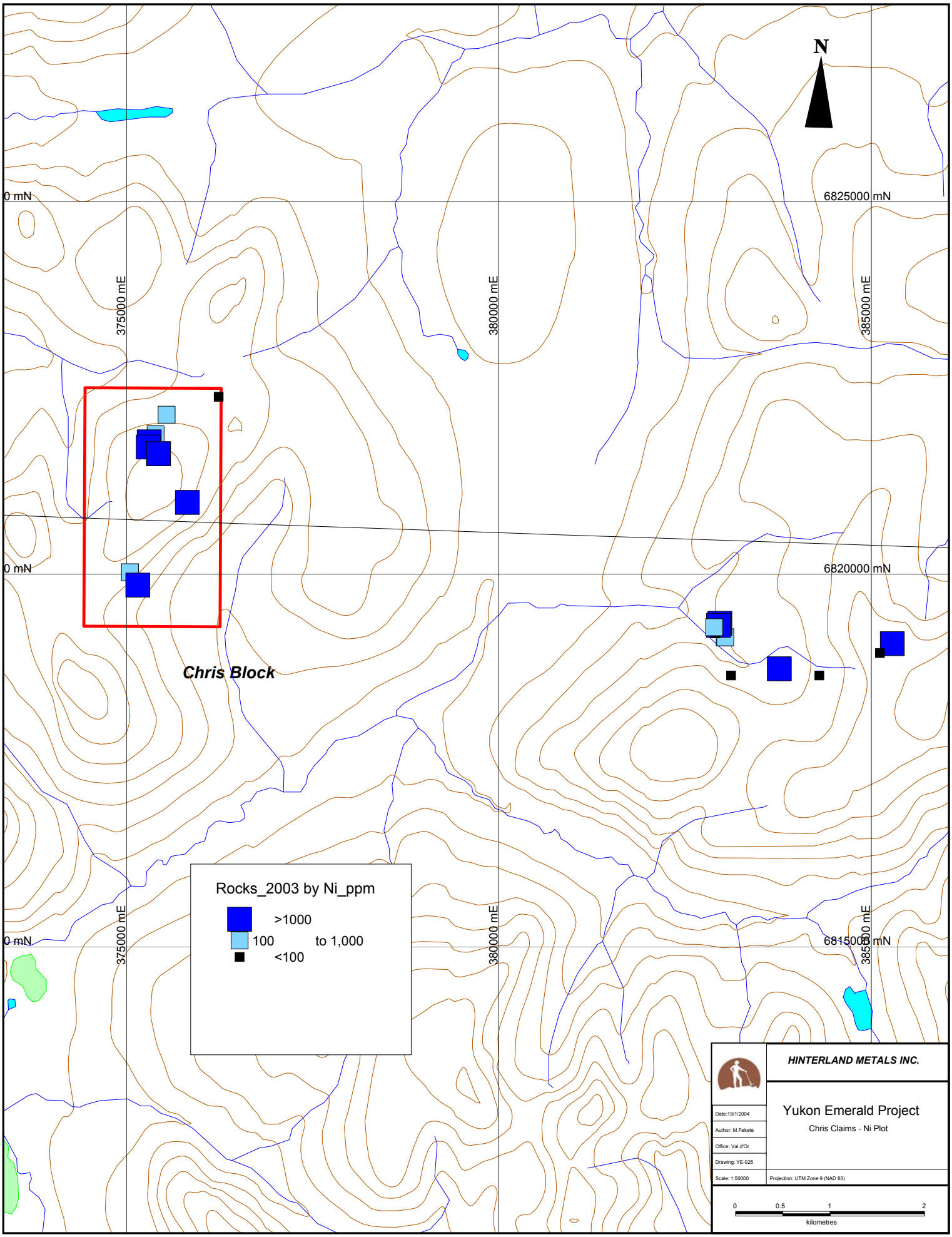

N
400000 mE
6810000 mN
Helen Block
Gleam Block
Dazzle Block
Soil_2003 by Zn_ppm
>1000
100 to 1,000
<100
Silt_2003 by Zn_ppm
>1000
100 to 1,000
<100
Rocks_2003 by Zn_ppm
>1000
100 to 1,000
<100
HINTERLAND METALS INC.
Yukon Emerald Project
Zn Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-013
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres


N
0 mN
6825000 mN
375000 mE
380000 mE
385000 mE
0 mN
6820000 mN
Chris Block
Rocks_2003 by Ag_ppm
>50
5 to 50
<5
0 mN
6815000 mN
375000 mE
380000 mE
385000 mE
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims - Ag Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-022
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0
0.5
1
2
kilometres


N
6825000 mN
6820000 mN
6815000 mN
375000 mE
380000 mE
385000 mE
Chris Block
Rocks_2003 by As_ppm
>500
50 to 500
<50
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims - As Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-023
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres


N
0 mN
6825000 mN
375000 mE
380000 mE
385000 mE
0 mN
6820000 mN
Chris Block
Rocks_2003 by Au_ppm
>0.5
0.05 to 0.5
<0.05
0 mN
6815000 mN
375000 mE
380000 mE
385000 mE
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims - Au Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-021
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0
0.5
1
2
kilometres


N
6825000 mN
6820000 mN
6815000 mN
375000 mE
380000 mE
385000 mE
Chris Block
Rocks_2003 by Cr_ppm
>1000
100 to 1,000
<100
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims - Cr Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-024
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres


N
6825000 mN
6820000 mN
6815000 mN
375000 mE
380000 mE
385000 mE
Chris Block
Rocks_2003 by Ni_ppm
>1000
100 to 1,000
<100
HINTERLAND METALS INC.
Yukon Emerald Project
Chris Claims - Ni Plot
Date:19/1/2004
Author: M.Fekete
Office: Val d'Or
Drawing: YE-025
Scale: 1:50000
Projection: UTM Zone 9 (NAD 83)
0 0.5 1 2
kilometres

16. Conclusions

The Finlayson Lake Area shows an impressive record of mineral discoveries over the past decade. These discoveries include the both volcanic massive sulphide-type base metal deposits and the Regal Ridge emerald deposit. Recent geological mapping surveys of the area on a regional scale and several technical studies on a property scale have contributed greatly to the overall understanding of the mineral potential of the area. The ongoing compilation and revision of the mineral occurrence database in terms of these recent surveys and studies provides new insights for further exploration in the area.

The discovery of the Helen Gold Zone represents a significant breakthrough for Hinterland in the Finlayson Lake area. It moves the Company's efforts in the area from the grassroots stage to the target evaluation stage.

The 2003 work represents the first attempt at exploration for emeralds on the Gleam and Dazzle properties. The emeralds at Regal Ridge occur in selvage zones of yellow sulphate mineralization and extensive fine-grained tourmaline mineralization adjacent to quartz veins cutting shallow dipping mica-chlorite schists of probable volcanic origin. The quartz veins seem to be genetically related to discordant mid-Cretaceous granitic rocks but it is the host rock geochemistry that appears to determine the presence or absence of emeralds. This empirical model continues to be useful for general emerald exploration in the Findlayson area.

Although Hinterland found no emeralds and in fact no beryl mineralization in 2003, a specific emerald target has been generated in the Twin Creeks area located in the northern part of the Dazzle Property. This area lies directly adjacent to a mid-Cretaceous contact, is noticeably anomalous with respect to beryllium, chrome and arsenic and shows pegmatite dykes, zones of yellow sulphate alteration and tourmaline mineralization.

The chrysoprase discovery was an unexpected event of the 2003 exploration program. Although it is not nearly as valuable as emerald, chrysoprase is a sought after material that may generate significant cash flow from a small mining operation (personal commumications, William Rohtert and Bernard Gaboury 2003). Relatively good road access to the Chris property makes exploitation of chrysoprase a reasonable goal. Any ultramafic units in the region that have a similar geological-structural setting to the Chris prospect may also offer potential targets for gem quality material.

17. Recommendations

The positive results of the 2003 Exploration Program clearly allow for continued exploration on the Chris, Dazzle, Gleam and Helen properties. It is the author's opinion that the properties are of sufficient merit to recommend that Hinterland further proceed with an aggressive program of exploration. Furthermore, it is recommended that Hinterland continue reconnaissance exploration in the Finlayson Lake Area to identify and acquire other properties with gemstone and precious metal potential. It is recommended that the exploration be divided into three parts consisting of separate programs at the Helen Gold Zone, the Two Creeks Be Anomaly and the

Chris Showing using a central base camp. The Helen Zone Gold Zone must be brought to the diamond drilling stage as soon as possible by the completion of prospecting, geochemical and geophysical surveys over a grid. If drilling in the first phase intersects significant gold-silver mineralization, it is recommended that a second phase of drilling be anticipated. The Two Creeks Be Anomaly must be prospected in detail with additional geochemical sampling. A small bulk sample must be removed from the Chris Showing in order to provide as much chrysoprase for the production of beads amd cabochons in conjuntion with a certification with the Gemological Institute of America. This report does not contemplate second phases for either the Two Creek or Chris programs.

Table 4 – Cost Estimate for Proposed Exploration Program

Phase I					
Helen Gold Zone					
Grid surveys and Initial Diamond Drilling					
Geologist	30	days @	$500	$15,000	
Assistant	30	days @	$250	$7,500	
Linecutting	10	km @	$600	$6,000	
Magnetic Survey	10	km @	$150	$1,500	
Electromagnetic Survey	10	km @	$300	$3,000	
Analyses	1000	@	$35	$35,000	
Drilling	500	m @	$125	$62,500	
					$130,500
Two Creeks Be Anomaly					
Detailed Prospecting					
Geologist	15	days @	$500	$7,500	
Assistant	15	days @	$250	$3,750	
Analyses	350	@	$35	$12,250	
					$23,500
Chris Showing					
Bulk Sample and Prospecting					
Geologist	30	days @	$500	$15,000	
Labourer	30	days @	$250	$7,500	
Labourer	30	days @	$250	$7,500	
Excavator	300	hours @	$150	$45,000	
Analyses	150	@	$35	$5,250	
					$80,250
Camp, Aviation, Rentals etc.					
Mob/demob	1	fixed @	$30,000	$30,000	
Camp	1	fixed @	$20,000	$20,000	
Helicopter	100	hours @	$1,100	$110,000	
Float Plane	1000	miles @	$10	$10,000	
Truck	1.5	month @	$1,500	$2,250	
Radios	4	@	$600	$2,400	
Sat Phone	1.5	month @	$2,500	$3,750	
					$178,400

Reports, Drafting and Misc.						
	Report	15	days @	$500	$7,500	
	Drafting	100	hours @	$50	$5,000	
	Permitting	1	fixed @	$10,000	$10,000	
						$22,500
					Phase I Subtotal	**$435,150**
					Contingency ~15%	**$65,273**
					Phase I Total	**$500,423**
Phase II						
Helen Gold Zone						
Follow-up Diamond Drilling						
	Drilling	1000	m @	$125	$125,000	
	Mob/demob	1	fixed @	$15,000	$15,000	
	Camp	1	fixed @	$10,000	$10,000	
	Helicopter	30	hours @	$1,100	$33,000	
	Float Plane	500	miles @	$10	$5,000	
	Truck	1	month @	$1,500	$1,500	
	Sat Phone	1	month @	$2,500	$2,500	
	Report	10	days @	$500	$5,000	
	Drafting	50	hours @	$50	$2,500	
						$199,500
					Phase II Subtotal	**$199,500**
					Contingency ~15%	**$29,925**
					Phase II Total	**$229,425**
					Two Phase Total	**$729,848**

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APPENDIX A

SAMPLE DESCRIPTIONS

Yukon Emerald Project - 2003 Sample Descriptions			
NAD 83 Zone 9			
SAMPLE	Easting	Northing	Descriptions
K023	398430	6810610	Float in Creekbed
K027	399826	6807828	Float in Creekbed
K029	393785	6804068	Float (Green) (Chlorite)
K046	397462	6802840	Rock below face: Chlorite, arseno needles, (zinc?)
K047	397486	6802990	Rock below face: Chlorite, arseno needles, (zinc?)
K048	395301	6804036	Rock qtz tourmaline
K049	395281	6804033	o/c Heavey tourmiline
K050	395275	6803973	Rock talus
K051	395418	6803936	Rock (o/c) qtz,crystal
L018	400024	6807600	Rock Sample
L020A	399934	6807447	Rock Sample
L020B	399934	6807447	Rock Sample
L020C	399975	6807442	n/a
L020D	399975	6807442	n/a
L021	400044	6807249	Rock Sample
L040	395313	6804018	n/a
L041	395265	6803967	n/a
L042	395250	6803941	n/a
L043	395240	6803944	n/a
L045	395428	6803893	n/a
L046	395375	6803901	n/a
M019A	396065	6808288	Helen Gold Zone 0.5 m chip
M019B	396065	6808288	Helen Gold Zone 1.0 m chip
M019C	396065	6808288	Helen Gold Zone 1.0 m chip
M019D	396065	6808288	Helen Gold Zone 1.0 m chip
M019E	396065	6808288	Helen Gold Zone 1.0 m chip
M019F	396065	6808288	Helen Gold Zone 0.5 m chip
M027	393928	6803830	n/a
M028A	393888	6803844	n/a
M028B	393888	6803844	n/a
M029	393975	6804039	n/a
M030	393870	6804036	n/a
M037	394657	6803967	n/a
M038	394846	6804462	n/a
M044	376238	6822381	n/a
M045	375539	6822141	n/a
M046	375391	6821877	n/a
M047	375305	6821776	n/a
M048	375292	6821707	n/a
M049	375464	6821594	n/a
M050A	375430	6821616	n/a
M050B	375430	6821616	n/a
M051	383032	6819149	n/a
M052	383040	6819152	n/a
M053	382967	6819340	n/a
M054	382950	6819312	n/a
S001	398392	6808838	n/a
S006	398928	6808818	n/a
S015	398274	6809698	n/a

Yukon Emerald Project - 2003 Sample Descriptions			
NAD 83 Zone 9			
SAMPLE	**Easting**	**Northing**	**Descriptions**
S044	394572	6803877	n/a
S047	394479	6803824	n/a
S050	394316	6803857	n/a
S052	396229	6802631	n/a
S053	398922	6808811	n/a
S055	385282	6819068	n/a
S057	385115	6818942	n/a
S059	384303	6818640	n/a
S060	383765	6818731	n/a
S062	383117	6818640	n/a
S064	382908	6819206	n/a
S065	382891	6819288	n/a
T003	393896	6802796	Rock - Tourmaline - Quartz
T004	393893	6802801	n/a
T009	393960	6800238	Rock - Tourmaline - Quartz - Schist. Talus spread over an area (50m X 150m)
T022	394608	6804049	Rock of tourmaline / quartz in intrusive contact with quartzites
T023	394568	6803966	Intrusive chilled margin of quartz / Tourmaline chlorite alteration/some pegmatitic textures
T024	394530	6803957	Same as 023, 50m West along intrusive / quartzite contact
T025	394052	6800329	Massive Arsenopyrite in blebs and stockwork through quartz vein. Blond to grey micaceous quartz schist veins along bedding, strike 17ℓ^{o} ,dip 18^{o} subcrop
T026	394021	6800333	Massive fine grain tourmaline quartz vein 30cm wide float boulder SE 20m from 025
T027	394001	6800260	Quartz / Tourmaline vein (100m from 025) fine grained massive tourmaline stockwork through quartz
T028	393952	6800246	Quartz pyrite tourmaline (150m) vein 25 cm across mineralization in fractures and vugs
T029	393857	6803015	Rock Quartz vein in mafic schist wih pyrite float
T030	394750	6803093	Rock mafic schist with pyrite outcrop
T031	394986	6803230	Rock Quartz - tourmaline felsic material in altered schist whithin subcrop
T032	375048	6820026	Altered quartz-carbonate in green mineral.Mariposite? Listwanite? outcrop
T033	375153	6819854	Quartz - carbonate breccia with green mineral (20m across x 75 m long) in matrix, along contact with ultramafic.Outcrop
T034	375818	6820964	More quartz - carbonate breccia 1 km east along ultramafic edge. Float

APPENDIX B

SAMPLE LOCATION
&
COMPILATION OF ANALYTICAL RESULTS

SAMPLE	Easting	Northing	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
K023	**398430**	**6810610**	0.005	0.50	9.36	5	1100	1.8	2	7.78	0.5	21	146	94
K027	**399826**	**6807828**	0.005	0.50	1.74	5	140	0.5	2	16.15	0.5	19	48	42
K029	**393785**	**6804068**	0.005	0.50	7.67	8	410	10.8	43	14.7	0.5	13	80	12
K046	**397462**	**6802840**	0.005	0.50	1.44	5	700	0.5	2	2.85	0.5	14	337	160
K047	**397486**	**6802990**	0.021	0.50	0.57	5	160	0.5	2	1.4	15.8	17	265	124
K048	**395301**	**6804036**	0.009	0.50	7.1	45	220	10.7	2	0.04	0.5	1	98	25
K049	**395281**	**6804033**	0.005	0.50	7.38	5	170	6.2	2	0.07	0.5	2	69	22
K050	**395275**	**6803973**	0.011	0.50	5.77	178	850	3.6	2	0.02	0.5	3	84	18
K051	**395418**	**6803936**	0.005	0.50	0.99	48	100	2.2	2	0.01	0.5	4	165	4
L018	**400024**	**6807600**	0.005	0.50	11.25	5	210	3.7	2	2.07	0.5	16	77	66
L020A	**399934**	**6807447**	0.005	0.50	3.09	5	10	0.5	2	24.1	0.5	4	84	2
L020B	**399934**	**6807447**	0.005	0.50	3.35	5	10	0.5	2	21.6	0.5	11	113	2
L020C	**399975**	**6807442**	0.14	0.6	8.21	41	30	1.6	3	5.77	0.5	44	124	52
L020D	**399975**	**6807442**	0.21	9.5	9.24	26	20	0.8	16	2.83	2.4	9	58	22
L021	**400044**	**6807249**	0.005	0.50	4.28	5	10	3.1	2	9.74	0.5	17	116	6
L040	**395313**	**6804018**	0.009	0.50	5.9	26	160	5.4	2	0.16	0.5	1	106	21
L041	**395265**	**6803967**	0.005	0.50	0.72	155	30	9.4	2	0.03	0.5	2	218	4
L042	**395250**	**6803941**	0.005	0.50	4.05	29	330	46.5	2	0.12	0.5	1	187	3
L043	**395240**	**6803944**	0.005	0.50	1.37	35	120	8.7	2	11.15	17.8	9	16	62
L045	**395428**	**6803893**	0.005	0.70	6.59	238	70	14.3	2	0.23	0.5	2	89	3
L046	**395375**	**6803901**	0.005	0.50	7.14	5	60	9.1	8	0.28	0.5	1	81	2
M019A	**396065**	**6808288**	2.230	49.00	0.06	10000	10	0.5	565	19.6	0.5	95	79	46
M019B	**396065**	**6808288**	4.270	44.00	0.02	10000	10	0.5	1200	0.66	0.5	156	62	213
M019C	**396065**	**6808288**	5.030	58.00	0.02	10000	10	0.5	1145	18.4	0.5	14	112	270
M019D	**396065**	**6808288**	4.600	46.00	0.03	10000	10	0.5	1555	0.28	0.5	37	90	116
M019E	**396065**	**6808288**	4.170	46.00	0.02	10000	10	0.5	1170	0.63	0.6	57	122	303
M019F	**396065**	**6808288**	0.245	44.00	0.03	10000	10	0.5	185	3.95	0.5	9	179	26
M027	**393928**	**6803830**	0.005	0.50	3.18	5	110	73.5	2	0.04	0.5	1	186	18
M028A	**393888**	**6803844**	0.005	0.50	7.45	8380	370	4.3	2	11.55	0.5	15	83	89
M028B	**393888**	**6803844**	0.005	0.50	7.7	21	250	6.2	3	14.35	0.5	17	126	5
M029	**393975**	**6804039**	0.005	0.50	2.89	164	90	3.7	2	8.7	0.5	134	1105	294
M030	**393870**	**6804036**	0.036	1.10	5.53	3470	160	7.1	2	15.65	0.5	7	43	43
M037	**394657**	**6803967**	0.005	0.50	7.47	68	210	5.6	2	0.3	0.5	2	79	5
M038	**394846**	**6804462**	0.005	0.50	6.82	1895	320	4.6	2	0.08	0.5	1	110	50
M044	**376238**	**6822381**	0.013	56.00	4.93	210	440	1.4	2	0.31	500	5	101	27
M045	**375539**	**6822141**	0.005	0.50	1.11	105	200	0.5	2	2.71	0.5	50	1145	11
M046	**375391**	**6821877**	0.006	0.60	2.74	188	550	0.7	2	14.5	0.5	18	198	25
M047	**375305**	**6821776**	0.005	0.50	0.31	11	20	0.5	2	0.13	0.5	81	1595	3
M048	**375292**	**6821707**	0.005	0.50	0.38	27	110	0.5	2	0.22	0.5	60	1590	3
M049	**375464**	**6821594**	0.005	0.50	0.07	6	760	0.5	2	2.55	0.5	46	786	3
M050A	**375430**	**6821616**	0.006	0.50	0.17	76	60	0.6	2	0.1	0.5	112	1325	11

SAMPLE	Easting	Northing	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
M050B	**375430**	**6821616**	0.005	0.50	0.26	24	90	0.5	2	0.48	0.5	55	1115	2
M051	**383032**	**6819149**	0.005	0.50	0.17	86	50	0.5	2	5.5	0.5	41	499	7
M052	**383040**	**6819152**	0.005	0.50	0.09	98	30	0.5	2	13.35	0.5	11	160	6
M053	**382967**	**6819340**	0.005	0.50	0.14	285	20	0.5	2	0.14	0.5	72	1130	5
M054	**382950**	**6819312**	0.005	0.50	0.24	58	120	0.5	2	0.27	0.5	67	1155	2
S001	**398392**	**6808838**	0.005	0.50	2.18	16	40	0.5	2	25	0.5	5	21	4
S006	**398928**	**6808818**	0.005	0.80	6.2	13	20	1.9	2	8.03	0.5	15	210	43
S015	**398274**	**6809698**	0.005	0.50	2.86	5	1240	0.5	2	11.2	0.5	4	83	4
S044	**394572**	**6803877**	0.005	0.50	5.67	5	220	10.2	2	0.95	0.5	1	124	3
S047	**394479**	**6803824**	0.010	4.30	1.21	10000	60	1.1	10	1.64	0.5	4	177	8
S050	**394316**	**6803857**	0.005	0.50	6.38	76	170	13.7	11	0.28	0.5	1	49	3
S052	**396229**	**6802631**	0.005	0.50	2.95	4460	560	3.7	2	0.12	0.5	4	125	41
S053	**398922**	**6808811**	0.005	0.60	8.49	30	90	1.6	2	7.07	0.5	11	133	19
S055	**385282**	**6819068**	0.005	0.50	0.23	20	70	0.8	2	4.64	0.5	82	729	4
S057	**385115**	**6818942**	0.012	0.50	5.39	41	2470	0.6	2	0.05	0.5	1	78	3
S059	**384303**	**6818640**	0.007	3.90	0.05	534	20	0.5	2	0.02	13.4	1	112	4
S060	**383765**	**6818731**	0.006	0.60	0.15	605	20	0.6	2	0.53	0.5	67	1075	3
S062	**383117**	**6818640**	0.141	191.00	0.68	1680	90	0.5	2	4.71	4.1	3	194	246
S064	**382908**	**6819206**	0.005	0.50	7.34	47	60	16.1	2	0.26	0.5	9	106	18
S065	**382891**	**6819288**	0.202	0.50	0.1	527	30	0.5	2	2.24	0.5	25	561	4
T003	**393896**	**6802796**	0.005	0.50	7.44	39	70	16	2	0.26	0.5	11	82	20
T004	**393893**	**6802801**	0.14	3.2	1.08	10000	40	1.4	13	0.29	0.8	18	166	2
T009	**393960**	**6800238**	0.005	0.50	7.56	15	150	4	2	0.2	0.5	7	117	28
T022	**394608**	**6804049**	0.005	0.50	6.33	14	560	3.7	63	1.08	0.5	2	87	2
T023	**394568**	**6803966**	0.005	0.50	4.5	5	70	5.9	2	0.71	0.5	2	122	4
T024	**394530**	**6803957**	0.005	0.50	7.57	6	270	10.2	2	0.81	0.5	2	48	3
T025	**394052**	**6800329**	0.008	0.50	0.91	10000	10	0.5	3	0.04	0.5	77	228	16
T026	**394021**	**6800333**	0.005	0.50	6.65	268	130	3.3	2	0.3	0.5	5	121	21
T027	**394001**	**6800260**	0.005	0.50	8.32	123	650	3.1	2	0.23	0.5	8	122	34
T028	**393952**	**6800246**	0.005	0.50	3.05	8	190	0.9	2	0.48	0.5	13	157	57
T029	**393857**	**6803015**	0.005	0.50	0.39	27	10	0.5	2	0.13	0.5	24	180	141
T030	**394750**	**6803093**	0.005	0.50	7.13	16	490	10.8	2	3.35	0.5	10	97	77
T031	**394986**	**6803230**	0.005	0.50	6.95	20	40	25.3	5	0.16	0.5	1	98	10
T032	**375048**	**6820026**	0.026	0.50	0.84	509	170	0.5	2	9.42	0.5	39	680	2
T033	**375153**	**6819854**	0.148	0.50	0.44	138	90	0.5	2	2.79	0.5	70	1525	16
T034	**375818**	**6820964**	0.020	0.50	0.57	73	100	0.6	2	1.42	0.5	73	1450	6

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Pt ppm	Pd ppm	S %
K023	**398430**	**6810610**	5.26	1.96	2.15	787	1	0.87	38	540	24			0.66
K027	**399826**	**6807828**	8.27	0.06	6.66	3350	1	0.17	14	130	10			0.15
K029	**393785**	**6804068**	3.1	1.19	0.88	1130	1	1.92	47	430	16			0.08
K046	**397462**	**6802840**	7.19	0.14	0.77	10000	5	0.05	98	1720	11			1.13
K047	**397486**	**6802990**	3.06	0.1	0.14	1495	63	0.01	87	1140	10			1.21
K048	**395301**	**6804036**	0.94	4.51	0.23	116	3	1.14	3	260	90			0.03
K049	**395281**	**6804033**	0.71	4.1	0.18	369	2	1.65	5	270	65			0.01
K050	**395275**	**6803973**	2.54	3.65	0.29	78	5	0.11	7	150	24			0.02
K051	**395418**	**6803936**	0.83	0.41	0.08	428	5	0.01	5	60	20			0.01
L018	**400024**	**6807600**	4.29	1.51	1.59	606	1	3.87	38	480	34			0.12
L020A	**399934**	**6807447**	2.09	0.01	0.5	608	1	0.01	18	300	17			0.01
L020B	**399934**	**6807447**	2.61	0.01	0.77	1010	1	0.01	24	340	11			0.01
L020C	**399975**	**6807442**	4.96	0.12	1.77	593	9	3.34	79	710	130	0.52	5	848
L020D	**399975**	**6807442**	2.29	0.09	0.76	278	6	5.94	18	590	8470	0.17	5	412
L021	**400044**	**6807249**	5.84	0.03	3.1	985	1	0.13	27	420	34			0.03
L040	**395313**	**6804018**	1.04	3.55	0.22	186	2	0.66	2	680	65			0.01
L041	**395265**	**6803967**	0.95	0.25	0.09	259	4	0.01	5	40	19			0.01
L042	**395250**	**6803941**	0.65	2.95	0.07	114	5	0.08	6	610	49			0.01
L043	**395240**	**6803944**	2.97	0.79	7.47	4210	1	0.05	10	40	8			0.35
L045	**395428**	**6803893**	0.71	3.54	0.14	617	2	1.72	3	370	60			0.01
L046	**395375**	**6803901**	0.5	3.27	0.09	214	1	2.25	2	340	42			0.01
M019A	**396065**	**6808288**	9.48	0.01	0.01	200	8	0.01	6	30	733			5.52
M019B	**396065**	**6808288**	24.5	0.01	0.01	5	7	0.01	1	10	761			10
M019C	**396065**	**6808288**	5.5	0.01	0.01	7	11	0.01	5	20	258			2.33
M019D	**396065**	**6808288**	20	0.02	0.01	5	8	0.01	9	30	543			8.96
M019E	**396065**	**6808288**	15.65	0.01	0.01	6	11	0.01	5	20	364			6.31
M019F	**396065**	**6808288**	3.74	0.01	0.01	44	16	0.01	6	10	898			1.86
M027	**393928**	**6803830**	0.97	2.67	0.07	87	3	0.16	3	320	24			0.05
M028A	**393888**	**6803844**	3.85	2.37	0.93	1100	1	0.32	34	400	26			0.81
M028B	**393888**	**6803844**	5.36	0.73	1.34	1530	1	1.73	39	480	12			0.01
M029	**393975**	**6804039**	7.69	2.29	7.48	1520	1	0.05	1200	190	6			1.74
M030	**393870**	**6804036**	3.87	2.62	0.56	2610	1	0.03	17	500	25			1.95
M037	**394657**	**6803967**	0.69	4.01	0.14	379	1	0.10	12	460	39			0.03
M038	**394846**	**6804462**	0.64	3.27	0.28	127	1	0.02	5	170	51			0.1
M044	**376238**	**6822381**	0.86	1.56	0.21	21	10	1.39	4	1410	10000			2.22
M045	**375539**	**6822141**	4.08	0.41	13.3	725	1	0.01	858	10	2	0.0035	0.003	0.17
M046	**375391**	**6821877**	5.31	1.14	5.86	1385	1	0.02	105	900	8	0.0005	0.001	0.01
M047	**375305**	**6821776**	4.66	0.01	15	547	1	0.01	1840	10	2	0.0041	0.003	0.01
M048	**375292**	**6821707**	4.64	0.08	15	516	1	0.01	1035	10	2	0.0022	0.002	0.01
M049	**375464**	**6821594**	1.96	0.01	15	455	1	0.01	955	10	2	0.0007	0.001	0.02
M050A	**375430**	**6821616**	4	0.05	15	909	1	0.01	1140	10	2	0.0014	0.001	0.03

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Pt ppm	Pd ppm	S %
M050B	**375430**	**6821616**	3.55	0.05	15	473	1	0.01	1005	10	2	0.0010	0.001	0.01
M051	**383032**	**6819149**	2.8	0.03	15	435	2	0.01	895	10	2	0.0022	0.001	0.05
M052	**383040**	**6819152**	1.83	0.02	15	296	3	0.01	359	20	2	0.0008	0.001	0.02
M053	**382967**	**6819340**	3.88	0.03	15	720	2	0.01	1070	10	2	0.0033	0.003	0.01
M054	**382950**	**6819312**	2.39	0.01	15	611	1	0.01	1680	10	2	0.0044	0.003	0.01
S001	**398392**	**6808838**	1.14	0.19	0.62	2060	1	1.00	17	150	8			0.01
S006	**398928**	**6808818**	6.72	0.11	2.52	715	1	0.64	40	500	24			0.02
S015	**398274**	**6809698**	1.36	3.02	0.32	1320	1	0.12	6	940	10			0.01
S044	**394572**	**6803877**	0.89	3.03	0.35	251	2	1.36	7	240	37			0.01
S047	**394479**	**6803824**	2.1	0.54	0.19	578	3	0.01	10	60	455			1.02
S050	**394316**	**6803857**	0.5	3.43	0.11	115	1	1.82	5	390	48			0.01
S052	**396229**	**6802631**	1.38	1.32	0.23	150	1	0.02	20	270	15			0.16
S053	**398922**	**6808811**	3.88	0.44	1.88	608	1	4.19	22	660	32			0.04
S055	**385282**	**6819068**	3.82	0.02	>15	511	1	0.01	1300	10	2	0.0031	0.002	0.04
S057	**385115**	**6818942**	0.91	3.26	0.11	28	1	1.52	11	300	6	0.0005	0.001	0.15
S059	**384303**	**6818640**	0.42	0.02	0.08	16	3	0.01	14	20	564	0.0005	0.001	0.07
S060	**383765**	**6818731**	3.61	0.05	14.35	418	1	0.01	1220	10	2	0.0012	0.001	0.28
S062	**383117**	**6818640**	3.07	0.26	1.78	563	1	0.01	19	90	1330	0.0005	0.001	0.14
S064	**382908**	**6819206**	2.07	0.97	0.65	346	1	3.27	22	420	15	0.0005	0.001	0.01
S065	**382891**	**6819288**	1.79	0.05	5.95	409	1	0.01	605	10	3	0.0017	0.001	0.06
T003	**393896**	**6802796**	2.14	0.98	0.72	341	1	3.26	22	440	12			0.01
T004	**393893**	**6802801**	13.1	0.12	0.1	74	15	0.32	28	130	110			6.88
T009	**393960**	**6800238**	4.16	1.16	1.14	231	1	0.63	27	360	10			0.01
T022	**394608**	**6804049**	0.91	3.53	0.22	182	1	1.31	5	480	56			0.01
T023	**394568**	**6803966**	0.88	1.02	0.27	158	2	1.51	7	150	19			0.01
T024	**394530**	**6803957**	0.89	2.65	0.22	118	1	2.68	5	220	38			0.01
T025	**394052**	**6800329**	6.34	0.05	0.17	43	1	0.08	16	130	6			2.71
T026	**394021**	**6800333**	3.45	0.72	1.05	195	1	0.90	16	640	13			0.02
T027	**394001**	**6800260**	4.75	2.45	1.08	404	1	0.48	20	340	11			0.02
T028	**393952**	**6800246**	2.1	0.71	0.3	136	1	0.55	48	100	4			0.24
T029	**393857**	**6803015**	1.16	0.06	0.04	49	2	0.12	87	20	2			0.45
T030	**394750**	**6803093**	4.6	4.02	0.84	843	1	1.44	19	1760	21			1.19
T031	**394986**	**6803230**	0.8	2.67	0.04	2020	1	2.88	8	490	22			0.01
T032	**375048**	**6820026**	2.62	0.27	5.38	1015	3	0.01	843	30	5	0.0021	0.002	0.01
T033	**375153**	**6819854**	5.18	0.05	14.05	726	1	0.01	1270	20	4	0.0042	0.002	0.01
T034	**375818**	**6820964**	3.8	0.14	14.55	526	1	0.01	1505	20	2	0.0031	0.002	0.01

SAMPLE	Easting	Northing	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
K023	**398430**	**6810610**	5	1385	0.4	94	10	58
K027	**399826**	**6807828**	5	180	0.17	86	10	83
K029	**393785**	**6804068**	13	2450	0.37	68	10	310
K046	**397462**	**6802840**	5	148	0.07	137	10	165
K047	**397486**	**6802990**	5	66	0.03	74	10	2990
K048	**395301**	**6804036**	5	18	0.03	2	10	40
K049	**395281**	**6804033**	5	37	0.06	2	10	73
K050	**395275**	**6803973**	5	23	0.2	48	10	48
K051	**395418**	**6803936**	5	5	0.02	4	10	52
L018	**400024**	**6807600**	6	420	0.46	66	10	56
L020A	**399934**	**6807447**	5	447	0.18	31	10	22
L020B	**399934**	**6807447**	6	188	0.26	35	10	28
L020C	**399975**	**6807442**	0.4	64	10	85	0.1	30
L020D	**399975**	**6807442**	0.14	32	10	30	9.7	85
L021	**400044**	**6807249**	9	762	0.3	131	10	88
L040	**395313**	**6804018**	5	11	0.05	3	10	37
L041	**395265**	**6803967**	5	3	0.01	2	10	52
L042	**395250**	**6803941**	5	10	0.01	4	10	15
L043	**395240**	**6803944**	5	165	0.03	13	380	2090
L045	**395428**	**6803893**	5	9	0.03	6	20	36
L046	**395375**	**6803901**	5	19	0.04	1	10	25
M019A	**396065**	**6808288**	39	31	0.01	2	10	36
M019B	**396065**	**6808288**	108	4	0.01	1	10	29
M019C	**396065**	**6808288**	17	16	0.01	1	10	7
M019D	**396065**	**6808288**	77	1	0.01	1	10	7
M019E	**396065**	**6808288**	58	1	0.01	3	10	7
M019F	**396065**	**6808288**	12	8	0.01	5	10	6
M027	**393928**	**6803830**	5	19	0.01	3	10	19
M028A	**393888**	**6803844**	6	833	0.26	60	40	192
M028B	**393888**	**6803844**	7	1530	0.34	67	10	365
M029	**393975**	**6804039**	6	124	0.2	76	10	80
M030	**393870**	**6804036**	7	1215	0.13	50	10	224
M037	**394657**	**6803967**	5	12	0.04	2	10	38
M038	**394846**	**6804462**	5	11	0.05	5	10	16
M044	**376238**	**6822381**	57	27	0.13	16	10	10000
M045	**375539**	**6822141**	5	152	0.01	56	10	29
M046	**375391**	**6821877**	5	833	0.36	68	10	41
M047	**375305**	**6821776**	5	13	0.01	21	10	27
M048	**375292**	**6821707**	11	16	0.01	19	10	22
M049	**375464**	**6821594**	16	134	0.01	8	10	14
M050A	**375430**	**6821616**	32	19	0.01	17	10	34

SAMPLE	Easting	Northing	Sb ppm	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
M050B	**375430**	**6821616**	19	47	0.01	13	10	33
M051	**383032**	**6819149**	34	224	0.01	14	10	18
M052	**383040**	**6819152**	26	584	0.01	12	10	7
M053	**382967**	**6819340**	9	7	0.01	20	10	24
M054	**382950**	**6819312**	22	55	0.01	15	10	26
S001	**398392**	**6808838**	5	452	0.07	25	10	14
S006	**398928**	**6808818**	5	1185	0.21	115	10	99
S015	**398274**	**6809698**	5	228	0.17	39	10	14
S044	**394572**	**6803877**	5	59	0.03	5	10	9
S047	**394479**	**6803824**	8	30	0.05	17	10	61
S050	**394316**	**6803857**	5	13	0.02	2	10	11
S052	**396229**	**6802631**	5	12	0.13	93	10	73
S053	**398922**	**6808811**	5	894	0.45	83	10	61
S055	**385282**	**6819068**	5	58	0.01	17	10	18
S057	**385115**	**6818942**	5	66	0.07	14	10	8
S059	**384303**	**6818640**	5	1	0.01	2	10	841
S060	**383765**	**6818731**	28	15	0.01	11	10	33
S062	**383117**	**6818640**	93	158	0.05	27	10	326
S064	**382908**	**6819206**	5	45	0.12	22	10	46
S065	**382891**	**6819288**	5	309	0.01	9	10	55
T003	**393896**	**6802796**	5	46	0.14	24	10	48
T004	**393893**	**6802801**	42	69	0.09	13	70	11
T009	**393960**	**6800238**	5	93	0.29	67	10	77
T022	**394608**	**6804049**	5	101	0.06	9	10	16
T023	**394568**	**6803966**	5	56	0.05	8	10	17
T024	**394530**	**6803957**	5	97	0.04	8	10	23
T025	**394052**	**6800329**	7	15	0.03	10	10	14
T026	**394021**	**6800333**	5	128	0.31	56	10	77
T027	**394001**	**6800260**	5	93	0.39	81	10	66
T028	**393952**	**6800246**	5	47	0.13	28	10	20
T029	**393857**	**6803015**	5	12	0.02	4	10	5
T030	**394750**	**6803093**	5	142	0.82	49	10	46
T031	**394986**	**6803230**	5	7	0.01	1	10	51
T032	**375048**	**6820026**	92	386	0.03	28	10	33
T033	**375153**	**6819854**	105	192	0.01	27	10	33
T034	**375818**	**6820964**	51	80	0.01	31	10	30

SAMPLE	Easting	Northing	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
K001	**400245**	**6807195**	0.5	9.12	90	600	2.5	2	2.47	0.5	13	47	26
K003	**400195**	**6807629**	0.5	9.22	85	580	2.3	2	3.13	0.5	20	56	36
K004	**400216**	**6807649**	0.5	9.24	18	570	2.6	2	3.30	0.5	20	62	28
K005	**400173**	**6807795**	0.5	9.38	27	500	2.5	2	4.16	0.5	16	48	25
K007	**400095**	**6808038**	0.5	10.40	15	520	2.1	2	6.18	0.5	29	126	39
K009	**400014**	**6808376**	0.5	9.39	11	400	2.1	2	5.29	0.5	25	101	30
K011	**399858**	**6808755**	0.5	9.44	25	470	2.2	2	4.52	0.5	23	93	35
K013	**399588**	**6809100**	0.5	9.48	26	440	2.2	2	4.48	0.5	23	88	33
K015	**399331**	**6809514**	0.5	8.82	21	390	2.1	2	4.55	0.5	19	83	27
K016	**399290**	**6809528**	0.5	8.52	161	380	2.0	2	4.55	0.5	19	90	29
K017	**399131**	**6809687**	0.5	9.28	58	450	2.1	2	4.62	0.5	21	91	34
K019	**398855**	**6810024**	0.5	9.18	44	480	2.2	2	4.33	0.5	23	92	35
K022	**398475**	**6810497**	0.5	8.90	49	480	2.1	2	4.17	0.5	23	86	34
K024	**399657**	**6807573**	0.5	9.12	54	630	3.0	2	2.98	0.5	30	95	51
K025	**399667**	**6807611**	0.5	9.84	30	780	2.6	2	4.70	0.5	24	75	44
K030	**393794**	**6804055**	0.5	9.48	374	830	9.6	3	1.45	0.5	23	44	78
K033	**394503**	**6804239**	0.5	15.70	11	360	11.7	2	0.26	0.5	3	5	4
K034	**394907**	**6804390**	0.5	12.05	581	670	15.3	4	0.73	0.5	13	23	83
K036	**394885**	**6804260**	0.5	11.75	636	600	12.9	3	0.82	0.7	16	31	68
K038	**395242**	**6804511**	0.5	8.57	147	600	8.7	4	0.53	0.7	4	5	14
K040	**395536**	**6804541**	0.5	8.31	109	550	12.8	2	0.71	0.5	4	6	9
K042	**395880**	**6804515**	0.5	8.07	71	600	8.2	22	0.59	0.5	2	5	6
K044	**396299**	**6804171**	0.5	8.19	61	610	8.2	2	0.57	0.5	2	4	7
L023	**396892**	**6804136**	0.5	7.22	128	980	3.1	2	1.92	2.1	16	43	79
L025	**396923**	**6802936**	0.5	6.61	43	1550	1.7	2	1.03	0.5	10	55	37
L026	**396811**	**6802952**	0.5	5.98	43	950	1.5	2	2.05	0.5	7	22	34
L028	**396628**	**6803032**	0.5	6.15	68	1980	1.6	2	1.47	0.5	16	59	68
L030	**396405**	**6802998**	0.5	5.70	78	1770	1.5	2	1.21	0.5	12	62	51
L031	**396237**	**6803119**	0.5	5.20	87	1520	1.7	2	1.41	0.6	13	50	51
L032	**397193**	**6802344**	0.5	9.51	126	2180	2.9	2	1.06	0.5	21	65	110
L033	**396529**	**6802527**	0.5	8.54	114	1880	2.6	2	1.13	0.5	20	56	93
L036	**396343**	**6802827**	0.5	6.28	63	2540	1.9	2	1.29	0.5	17	55	79

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm
K001	**400245**	**6807195**	4.50	1.74	1.34	779	1	1.82	37	1130	33	0.03	5
K003	**400195**	**6807629**	5.17	1.82	1.58	800	1	1.69	50	1160	39	0.03	5
K004	**400216**	**6807649**	5.47	1.83	1.68	1045	1	1.79	40	1440	29	0.02	5
K005	**400173**	**6807795**	4.84	1.71	1.51	925	1	1.81	38	1140	30	0.02	5
K007	**400095**	**6808038**	7.65	1.53	3.61	1245	1	1.90	73	1510	13	0.01	5
K009	**400014**	**6808376**	6.19	1.33	2.80	1025	1	1.95	57	1540	18	0.02	5
K011	**399858**	**6808755**	6.21	1.53	2.71	977	1	1.85	61	1500	16	0.02	5
K013	**399588**	**6809100**	6.16	1.47	2.69	970	1	1.92	56	1390	19	0.02	5
K015	**399331**	**6809514**	5.72	1.26	2.47	1005	1	1.86	54	1520	15	0.02	5
K016	**399290**	**6809528**	5.36	1.28	2.50	914	1	1.75	70	1720	24	0.02	5
K017	**399131**	**6809687**	5.86	1.45	2.50	991	1	1.84	56	1740	16	0.03	5
K019	**398855**	**6810024**	5.93	1.58	2.60	952	1	1.77	66	1480	21	0.03	5
K022	**398475**	**6810497**	5.81	1.51	2.54	946	1	1.75	64	1390	17	0.03	5
K024	**399657**	**6807573**	7.01	2.05	2.65	1140	1	1.44	65	1270	8	0.02	5
K025	**399667**	**6807611**	6.28	1.87	2.57	956	1	1.55	48	1370	12	0.02	5
K030	**393794**	**6804055**	5.18	2.89	1.79	1510	2	0.87	47	1120	71	0.08	5
K033	**394503**	**6804239**	2.65	5.55	0.58	538	1	0.12	2	1520	139	0.02	5
K034	**394907**	**6804390**	4.64	3.92	1.33	1240	2	1.23	27	1050	104	0.06	5
K036	**394885**	**6804260**	4.70	3.91	1.73	1475	4	0.41	25	1130	65	0.04	5
K038	**395242**	**6804511**	1.99	3.65	0.43	742	1	1.74	6	880	101	0.03	5
K040	**395536**	**6804541**	1.84	3.35	0.48	493	1	1.83	8	870	54	0.02	5
K042	**395880**	**6804515**	1.57	3.57	0.38	552	1	1.91	6	850	52	0.01	5
K044	**396299**	**6804171**	1.61	3.66	0.37	503	1	1.96	6	740	50	0.01	5
L023	**396892**	**6804136**	4.25	2.15	1.72	1640	1	1.43	35	1220	32	0.07	5
L025	**396923**	**6802936**	3.52	1.67	1.12	860	1	1.18	45	1150	18	0.02	5
L026	**396811**	**6802952**	2.31	1.19	0.59	1730	3	1.22	24	4650	12	0.20	5
L028	**396628**	**6803032**	3.70	1.53	1.33	1520	1	0.90	58	1540	21	0.06	5
L030	**396405**	**6802998**	3.33	1.37	1.11	1265	10	0.84	46	1460	20	0.07	5
L031	**396237**	**6803119**	3.07	1.57	1.14	1315	1	0.81	45	1270	22	0.07	5
L032	**397193**	**6802344**	5.11	2.73	1.52	1610	2	0.85	59	1200	40	0.05	5
L033	**396529**	**6802527**	4.43	2.35	1.43	1505	1	0.69	51	1130	36	0.11	5
L036	**396343**	**6802827**	3.97	1.85	1.33	2130	1	0.73	52	1550	20	0.04	5

SAMPLE	Easting	Northing	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
K001	**400245**	**6807195**	507	0.61	101	10	98
K003	**400195**	**6807629**	663	0.57	103	10	154
K004	**400216**	**6807649**	622	0.75	147	10	92
K005	**400173**	**6807795**	800	0.62	101	10	113
K007	**400095**	**6808038**	367	0.63	169	10	96
K009	**400014**	**6808376**	432	0.76	181	10	88
K011	**399858**	**6808755**	439	0.79	173	10	95
K013	**399588**	**6809100**	477	0.84	173	10	95
K015	**399331**	**6809514**	428	0.82	165	10	85
K016	**399290**	**6809528**	353	0.88	177	10	81
K017	**399131**	**6809687**	451	0.87	168	10	90
K019	**398855**	**6810024**	423	0.84	173	10	95
K022	**398475**	**6810497**	412	0.78	160	10	95
K024	**399657**	**6807573**	192	0.78	276	10	139
K025	**399667**	**6807611**	316	0.78	200	10	106
K030	**393794**	**6804055**	192	0.45	108	10	367
K033	**394503**	**6804239**	98	0.41	57	10	91
K034	**394907**	**6804390**	146	0.36	81	10	316
K036	**394885**	**6804260**	114	0.49	98	20	297
K038	**395242**	**6804511**	180	0.2	30	10	153
K040	**395536**	**6804541**	209	0.21	36	10	77
K042	**395880**	**6804515**	198	0.18	28	10	67
K044	**396299**	**6804171**	196	0.18	27	10	63
L023	**396892**	**6804136**	154	0.63	110	10	682
L025	**396923**	**6802936**	146	0.42	118	10	79
L026	**396811**	**6802952**	316	0.19	61	10	96
L028	**396628**	**6803032**	144	0.4	123	10	164
L030	**396405**	**6802998**	134	0.34	105	10	150
L031	**396237**	**6803119**	118	0.39	89	10	171
L032	**397193**	**6802344**	178	0.38	147	10	184
L033	**396529**	**6802527**	157	0.31	120	10	132
L036	**396343**	**6802827**	120	0.39	118	10	110

SAMPLE	Easting	Northing	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
A002	**394806**	**6803281**	0.5	8.40	926	1120	6.4	2	0.59	0.5	11	37	163
A005	**394809**	**6803024**	0.5	6.55	26	810	2.2	2	1.57	0.5	3	14	23
A006	**394808**	**6802828**	0.5	6.25	138	700	2.3	3	0.95	0.5	6	29	21
A007	**394803**	**6802652**	0.5	8.01	5	220	3.1	2	3.67	0.5	26	36	27
A009	**394751**	**6802479**	0.5	7.55	97	720	2.2	2	1.16	0.5	7	35	28
A012	**394742**	**6802234**	0.5	6.63	15	610	2.9	2	2.15	0.5	8	15	19
A014	**394731**	**6801180**	0.5	5.73	30	1060	1.9	2	1.16	0.5	7	30	21
A015	**394742**	**6800973**	0.5	5.74	18	990	1.4	2	0.76	0.5	5	20	16
A016	**394732**	**6800074**	0.5	7.13	17	470	3.3	2	1.02	0.5	9	23	24
A017	**394731**	**6800309**	0.5	7.77	7	550	2.7	2	1.29	0.5	12	42	19
A018	**394742**	**6800515**	0.5	6.63	5	540	1.4	2	1.41	0.5	6	43	9
A019	**394731**	**6800757**	0.5	5.82	5	520	1.3	2	0.96	0.5	4	37	9
A022	**395640**	**6800072**	0.5	7.58	5	530	2.7	2	0.59	0.5	7	20	17
A023	**395634**	**6800244**	0.5	7.72	5	540	2.6	2	1.12	0.5	12	24	15
A024	**395639**	**6800515**	0.5	7.14	5	590	2.4	2	1.23	0.5	12	33	16
A025	**395628**	**6800712**	0.5	6.81	5	540	1.8	2	1.01	0.5	3	20	9
A026	**395639**	**6800973**	0.5	7.50	57	1570	1.9	2	1.23	0.5	20	46	95
A027	**395658**	**6801210**	0.5	6.59	12	1260	1.2	2	2.09	0.5	42	126	198
A029	**395614**	**6801641**	0.5	6.37	61	2220	2.2	2	0.25	0.5	8	25	31
A030	**395652**	**6801876**	0.5	6.45	48	2110	2.4	2	0.49	0.5	10	31	31
A031	**395641**	**6802115**	0.5	5.16	15	1340	1.1	2	0.80	0.5	5	20	11
A032	**395645**	**6802295**	0.5	6.98	39	1520	1.7	2	1.28	0.5	10	29	44
A033	**395626**	**6803197**	0.5	6.24	53	1740	2.3	2	1.13	0.5	11	52	60
A034	**395673**	**6804271**	0.5	7.56	18	770	1.9	2	2.14	0.5	7	14	20
A035	**395658**	**6804084**	0.5	7.65	174	790	5.2	2	1.69	0.5	12	36	40
A036	**395654**	**6803843**	0.5	8.19	172	650	5.6	2	1.40	0.5	10	31	25
A037	**395654**	**6803629**	0.5	7.36	170	600	4.4	2	1.54	0.5	10	22	40
A038	**395654**	**6803388**	0.5	7.34	33	590	5.4	2	1.18	0.5	4	13	9
L001	**398199**	**6808832**	0.5	7.32	5	690	2.3	2	1.53	0.5	33	85	29
L002	**398005**	**6808836**	0.5	7.69	5	600	2.3	2	2.56	0.5	24	103	30
L003	**397810**	**6808829**	0.5	7.50	59	420	1.8	2	2.82	0.5	35	283	60
L004	**397586**	**6808846**	0.5	7.08	9	510	1.6	2	3.22	0.5	33	144	41
L005	**398809**	**6807936**	0.5	5.12	5	590	1.1	2	1.67	0.5	6	7	34
L006	**398588**	**6807932**	0.5	7.32	5	420	1.5	2	3.23	0.5	26	83	24
L007	**398373**	**6807970**	0.5	8.19	5	500	1.2	2	4.07	0.5	44	184	61
L008	**398158**	**6807973**	0.5	9.24	39	500	3.5	2	1.63	0.5	17	80	46

SAMPLE	Easting	Northing	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
L009	**397940**	**6807967**	0.5	8.08	5	520	1.9	2	3.75	0.5	21	116	39
L010	**397643**	**6807987**	0.5	7.54	5	740	1.3	2	1.81	0.5	6	7	16
L011	**399009**	**6807953**	0.5	8.66	5	510	1.6	2	4.62	0.5	43	144	138
L012	**399285**	**6807967**	0.5	7.34	5	670	1.8	2	2.45	0.5	28	93	73
L013	**399504**	**6807918**	0.5	8.15	16	580	2.1	2	3.04	0.5	25	190	74
L014	**400045**	**6808095**	0.5	8.16	5	500	1.8	2	2.76	0.5	20	106	27
L015	**400005**	**6807936**	0.5	8.00	5	440	1.8	2	4.33	0.5	27	126	38
L016	**400205**	**6807871**	0.5	8.16	60	490	2.2	2	2.50	0.5	22	58	37
M021	**393929**	**6803557**	0.5	6.68	67	700	3.6	2	1.31	0.5	31	83	130
M026	**393936**	**6803776**	0.7	8.21	181	720	4.2	2	1.06	0.5	22	81	184
M032	**396134**	**6808103**	1.0	7.17	217	440	7.3	47	1.32	1.0	85	458	213
M033	**396313**	**6808981**	0.5	9.40	57	1360	6.0	2	3.12	0.5	32	52	17
M034	**396141**	**6809229**	1.1	7.98	201	430	3.0	2	0.15	0.5	5	11	92
M036	**394652**	**6804171**	0.5	10.85	49	450	20.5	3	0.60	0.5	13	32	13
S001	**398392**	**6808838**	0.5	8.17	5	570	1.8	2	1.41	0.5	26	149	22
S003	**398701**	**6808808**	0.5	8.59	7	730	4.3	2	2.18	0.5	19	81	39
S005	**398828**	**6808842**	0.5	8.86	9	590	3.0	2	3.45	0.5	23	132	42
S006	**398928**	**6808818**	0.5	7.19	40	310	1.3	2	3.94	0.5	44	330	130
S007	**399262**	**6808808**	0.5	7.40	87	500	1.6	2	3.85	0.5	10	61	16
S008	**399453**	**6808754**	0.5	8.27	70	420	1.5	2	4.60	0.5	51	100	85
S009	**399621**	**6808730**	0.5	8.26	5	390	1.9	2	3.53	0.5	35	97	27
S010	**400110**	**6808794**	0.5	7.95	5	590	1.8	2	2.15	0.5	13	50	19
S011	**399926**	**6808817**	0.5	8.90	5	440	1.9	2	2.17	0.5	16	91	14
S017	**398559**	**6809653**	0.5	8.41	5	650	2.3	2	3.53	0.5	28	98	38
S018	**398812**	**6809666**	0.5	7.40	6	430	1.5	2	3.90	0.5	30	212	30
S019	**398978**	**6809679**	0.5	7.54	128	650	2.1	2	2.13	0.5	19	102	34
S020	**399267**	**6809684**	0.5	6.70	7	460	1.2	2	3.22	0.5	47	530	104
S022	**399984**	**6809666**	0.5	8.64	11	1100	2.1	2	3.33	3.9	33	118	71
S023	**399689**	**6809679**	0.5	7.64	19	490	1.8	2	4.37	0.5	22	75	24
S029	**396426**	**6802744**	0.5	5.08	5	1330	0.9	2	0.68	0.5	4	21	12
S030	**396455**	**6802848**	0.5	4.97	35	1660	1.1	2	0.59	0.5	8	58	21
S031	**396453**	**6803172**	0.5	5.09	6	1440	1.0	2	0.61	0.5	3	29	5
S032	**396458**	**6803384**	0.5	7.13	243	1800	2.6	2	1.09	0.5	20	60	71
S034	**396432**	**6801358**	0.5	6.22	8	1200	1.3	2	1.00	0.5	5	12	12
S037	**396408**	**6800882**	0.5	6.55	167	1730	1.7	2	1.28	0.5	10	39	59
S039	**396396**	**6800460**	0.5	7.85	8	960	2.1	2	1.19	0.5	17	50	22

SAMPLE	Easting	Northing	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm
S041	**396383**	**6800044**	0.5	10.65	6	1260	2.5	2	2.01	0.5	28	56	58
T001	**393931**	**6803192**	0.5	6.51	40	700	2.5	2	1.56	0.5	11	29	21
T002	**393930**	**6803009**	0.5	9.17	49	580	6.0	2	2.86	0.5	29	156	49
T005	**393916**	**6802785**	0.5	6.19	41	550	2.6	2	1.43	0.5	7	29	17
T006	**393951**	**6802575**	0.5	7.75	89	760	2.5	2	1.22	0.5	10	56	34
T008	**393853**	**6800079**	0.5	7.41	6	740	2.0	2	1.53	0.5	14	56	22
T010	**393884**	**6800509**	0.5	7.25	5	600	1.5	2	2.26	0.5	9	16	31
T011	**393836**	**6800668**	0.5	8.67	17	510	2.6	3	0.61	0.5	4	22	13
T012	**393896**	**6800947**	0.5	9.99	21	660	2.9	2	1.19	0.5	18	50	32
T017	**397256**	**6801340**	0.5	7.84	10	2420	2.0	2	0.53	0.5	6	29	44
T019	**397211**	**6799991**	0.5	7.20	5	530	1.6	2	1.98	0.5	18	81	16

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm
A002	**394806**	**6803281**	5.20	3.08	1.45	1045	2	0.68	28	840	51	0.08	5
A005	**394809**	**6803024**	2.35	1.99	0.62	736	5	1.86	11	750	17	0.05	5
A006	**394808**	**6802828**	3.50	2.29	0.86	635	1	1.22	9	1380	24	0.04	5
A007	**394803**	**6802652**	4.76	0.86	1.06	1115	1	0.49	46	1700	20	0.13	5
A009	**394751**	**6802479**	3.21	1.93	0.85	519	1	1.56	22	1100	19	0.02	5
A012	**394742**	**6802234**	2.25	1.89	0.81	512	1	1.98	14	840	18	0.06	5
A014	**394731**	**6801180**	2.74	1.69	0.81	605	1	1.16	21	460	22	0.02	5
A015	**394742**	**6800973**	2.26	1.66	0.53	538	1	1.24	14	650	16	0.01	5
A016	**394732**	**6800074**	3.28	2.55	0.70	550	1	1.00	28	910	32	0.05	5
A017	**394731**	**6800309**	3.50	2.41	1.04	502	1	1.21	38	870	19	0.04	5
A018	**394742**	**6800515**	3.20	1.92	0.71	666	1	1.00	19	550	20	0.01	5
A019	**394731**	**6800757**	2.60	1.85	0.49	309	1	1.08	13	490	18	0.02	5
A022	**395640**	**6800072**	2.60	3.11	0.60	363	1	1.22	30	770	24	0.01	5
A023	**395634**	**6800244**	3.09	2.65	0.84	407	1	1.27	24	780	20	0.04	5
A024	**395639**	**6800515**	3.67	2.28	1.12	521	1	1.09	28	760	16	0.07	5
A025	**395628**	**6800712**	2.15	2.20	0.59	353	1	1.31	15	810	20	0.04	5
A026	**395639**	**6800973**	4.67	1.83	1.15	1805	3	1.01	54	940	37	0.04	5
A027	**395658**	**6801210**	6.89	1.03	3.06	1780	1	0.73	92	1110	19	0.04	5
A029	**395614**	**6801641**	2.52	2.48	0.58	929	1	0.82	23	530	26	0.02	5
A030	**395652**	**6801876**	2.66	2.43	0.85	1100	1	0.72	35	230	24	0.01	5
A031	**395641**	**6802115**	1.51	1.41	0.45	758	1	1.22	13	790	12	0.03	5
A032	**395645**	**6802295**	3.01	1.83	0.91	1420	1	1.52	28	630	26	0.02	5
A033	**395626**	**6803197**	3.19	1.84	1.35	1010	1	1.02	43	640	27	0.05	5
A034	**395673**	**6804271**	2.45	1.96	0.89	495	1	2.36	16	620	17	0.05	5
A035	**395658**	**6804084**	3.85	2.37	1.28	767	1	1.37	31	1180	33	0.07	5
A036	**395654**	**6803843**	3.42	2.69	1.12	511	1	1.58	31	820	40	0.04	5
A037	**395654**	**6803629**	3.29	2.03	0.98	638	1	1.44	32	620	34	0.04	5
A038	**395654**	**6803388**	1.68	2.76	0.54	312	1	1.70	11	530	26	0.01	5
L001	**398199**	**6808832**	6.88	2.30	2.49	1980	1	0.92	47	1060	11	0.06	5
L002	**398005**	**6808836**	6.09	2.10	2.41	913	1	1.12	51	890	11	0.03	5
L003	**397810**	**6808829**	6.61	1.28	5.01	895	2	1.00	224	830	18	0.03	5
L004	**397586**	**6808846**	5.91	1.26	3.49	918	1	1.03	116	1210	11	0.03	5
L005	**398809**	**6807936**	1.48	1.21	0.43	323	1	1.60	11	690	8	0.06	5
L006	**398588**	**6807932**	7.10	1.26	2.70	1340	1	1.06	36	1550	10	0.07	5
L007	**398373**	**6807970**	7.67	1.48	4.21	1190	1	0.88	124	940	13	0.03	5
L008	**398158**	**6807973**	5.92	2.92	2.38	793	1	0.78	55	1200	25	0.03	5

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm
L009	**397940**	**6807967**	5.85	1.71	3.44	783	1	1.18	81	1800	32	0.01	5
L010	**397643**	**6807987**	1.90	2.14	0.64	381	1	2.61	5	340	14	0.01	5
L011	**399009**	**6807953**	7.77	1.68	3.87	1340	1	0.93	97	1110	17	0.06	5
L012	**399285**	**6807967**	6.13	1.89	2.56	1125	1	0.93	64	1410	32	0.06	5
L013	**399504**	**6807918**	6.68	1.74	3.60	975	1	1.15	121	1910	22	0.03	5
L014	**400045**	**6808095**	6.11	1.33	2.54	833	1	1.38	52	1240	16	0.04	5
L015	**400005**	**6807936**	6.23	1.51	3.11	997	1	1.50	64	1290	11	0.01	5
L016	**400205**	**6807871**	4.88	1.84	1.53	782	1	1.38	53	910	40	0.02	5
M021	**393929**	**6803557**	5.17	1.59	2.43	940	2	1.01	70	1140	31	0.04	5
M026	**393936**	**6803776**	6.09	3.31	2.50	1455	3	0.75	98	1060	49	0.09	5
M032	**396134**	**6808103**	9.03	3.13	4.31	1845	4	0.53	460	620	57	0.02	5
M033	**396313**	**6808981**	5.70	2.43	1.96	2500	1	0.77	48	910	23	0.01	5
M034	**396141**	**6809229**	6.24	4.53	0.49	310	5	0.27	27	940	102	0.75	13
M036	**394652**	**6804171**	3.44	4.22	1.00	1190	1	1.28	40	1200	83	0.02	5
S001	**398392**	**6808838**	7.08	1.77	2.58	720	1	0.96	57	1210	18	0.03	5
S003	**398701**	**6808808**	5.53	2.06	1.80	1015	1	1.84	47	1270	18	0.03	5
S005	**398828**	**6808842**	6.40	1.81	2.94	985	1	1.71	80	1250	21	0.02	5
S006	**398928**	**6808818**	6.76	0.93	5.41	1010	1	1.30	345	1280	14	0.02	5
S007	**399262**	**6808808**	4.06	1.42	1.22	619	1	1.21	32	1190	76	0.05	5
S008	**399453**	**6808754**	7.80	1.22	2.43	1440	1	1.34	95	1540	134	0.03	5
S009	**399621**	**6808730**	5.23	1.17	2.40	849	1	1.68	67	1100	22	0.03	5
S010	**400110**	**6808794**	4.11	1.77	1.22	599	1	2.01	27	820	82	0.06	5
S011	**399926**	**6808817**	5.76	1.71	3.15	577	1	1.45	45	1080	19	0.03	5
S017	**398559**	**6809653**	7.23	1.65	2.65	1400	1	1.62	43	1730	13	0.01	5
S018	**398812**	**6809666**	5.70	1.12	3.85	968	1	1.38	175	1050	16	0.02	5
S019	**398978**	**6809679**	4.98	1.95	2.17	666	1	1.17	76	880	16	0.09	5
S020	**399267**	**6809684**	5.78	0.99	6.15	807	1	1.02	386	680	9	0.06	5
S022	**399984**	**6809666**	6.00	2.17	2.81	1275	1	1.21	94	870	24	0.06	5
S023	**399689**	**6809679**	6.45	1.90	2.28	1035	2	1.48	36	1280	18	0.02	5
S029	**396426**	**6802744**	1.57	1.42	0.34	1215	1	1.50	9	420	15	0.01	5
S030	**396455**	**6802848**	2.61	1.36	0.68	822	1	0.73	21	1220	11	0.02	5
S031	**396453**	**6803172**	1.00	1.60	0.40	477	1	1.12	11	370	11	0.01	5
S032	**396458**	**6803384**	4.58	1.97	1.24	2580	6	0.92	62	1560	34	0.06	5
S034	**396432**	**6801358**	1.69	1.97	0.46	605	1	1.72	8	510	14	0.03	5
S037	**396408**	**6800882**	3.31	1.82	0.98	1190	1	1.28	40	860	20	0.05	5
S039	**396396**	**6800460**	5.87	3.03	0.99	1255	1	1.04	30	1570	22	0.06	5

SAMPLE	Easting	Northing	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm
S041	**396383**	**6800044**	5.70	2.05	2.45	516	1	0.70	90	460	14	0.03	5
T001	**393931**	**6803192**	2.93	1.74	0.81	703	1	1.75	21	1260	17	0.06	5
T002	**393930**	**6803009**	6.81	1.77	2.82	1185	1	1.29	100	1230	24	0.02	5
T005	**393916**	**6802785**	2.41	1.41	0.83	439	1	1.56	22	1650	16	0.08	5
T006	**393951**	**6802575**	4.15	1.82	0.96	676	1	1.48	27	610	18	0.01	5
T008	**393853**	**6800079**	4.17	1.64	1.06	644	1	1.15	45	660	20	0.04	5
T010	**393884**	**6800509**	3.00	1.79	0.74	775	1	1.85	22	730	20	0.07	5
T011	**393836**	**6800668**	2.92	2.64	0.61	308	1	0.87	13	940	42	0.04	5
T012	**393896**	**6800947**	5.41	2.56	1.37	718	1	1.02	54	1140	23	0.05	5
T017	**397256**	**6801340**	3.16	2.19	0.56	1310	1	1.44	18	1030	17	0.03	5
T019	**397211**	**6799991**	6.17	1.40	1.90	862	1	1.26	43	1130	10	0.04	5

SAMPLE	Easting	Northing	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
A002	**394806**	**6803281**	92	0.40	84	10	193
A005	**394809**	**6803024**	395	0.30	66	10	99
A006	**394808**	**6802828**	237	0.47	96	10	84
A007	**394803**	**6802652**	643	0.41	72	10	124
A009	**394751**	**6802479**	295	0.62	98	10	56
A012	**394742**	**6802234**	455	0.29	55	10	52
A014	**394731**	**6801180**	193	0.39	84	10	62
A015	**394742**	**6800973**	228	0.29	77	10	43
A016	**394732**	**6800074**	185	0.27	60	20	79
A017	**394731**	**6800309**	258	0.40	74	10	69
A018	**394742**	**6800515**	365	0.54	94	10	41
A019	**394731**	**6800757**	253	0.44	87	10	31
A022	**395640**	**6800072**	119	0.25	45	10	62
A023	**395634**	**6800244**	272	0.31	60	10	93
A024	**395639**	**6800515**	190	0.43	87	10	89
A025	**395628**	**6800712**	237	0.34	59	10	42
A026	**395639**	**6800973**	226	0.32	128	10	134
A027	**395658**	**6801210**	190	0.70	209	10	381
A029	**395614**	**6801641**	58	0.20	67	10	72
A030	**395652**	**6801876**	72	0.23	67	10	70
A031	**395641**	**6802115**	206	0.24	62	10	36
A032	**395645**	**6802295**	316	0.28	80	10	81
A033	**395626**	**6803197**	133	0.41	101	10	101
A034	**395673**	**6804271**	547	0.31	65	10	68
A035	**395658**	**6804084**	260	0.45	92	30	160
A036	**395654**	**6803843**	257	0.47	87	10	101
A037	**395654**	**6803629**	315	0.29	67	10	170
A038	**395654**	**6803388**	260	0.35	49	10	48
L001	**398199**	**6808832**	117	0.82	183	10	225
L002	**398005**	**6808836**	167	0.77	190	10	84
L003	**397810**	**6808829**	187	0.74	188	10	86
L004	**397586**	**6808846**	239	0.68	190	10	90
L005	**398809**	**6807936**	369	0.16	37	10	30
L006	**398588**	**6807932**	199	0.88	257	10	67
L007	**398373**	**6807970**	248	0.80	216	10	107
L008	**398158**	**6807973**	139	0.68	180	10	113

SAMPLE	Easting	Northing	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
L009	**397940**	**6807967**	268	0.82	198	10	90
L010	**397643**	**6807987**	551	0.25	46	10	51
L011	**399009**	**6807953**	216	0.85	224	10	94
L012	**399285**	**6807967**	169	0.87	205	10	82
L013	**399504**	**6807918**	213	0.92	237	10	154
L014	**400045**	**6808095**	257	0.81	189	10	76
L015	**400005**	**6807936**	260	1.04	200	10	86
L016	**400205**	**6807871**	631	0.55	100	10	159
M021	**393929**	**6803557**	170	0.58	141	90	131
M026	**393936**	**6803776**	129	0.69	156	10	287
M032	**396134**	**6808103**	123	0.67	172	30	271
M033	**396313**	**6808981**	110	0.50	130	10	164
M034	**396141**	**6809229**	86	0.28	43	10	386
M036	**394652**	**6804171**	122	0.46	70	20	88
S001	**398392**	**6808838**	132	0.90	251	10	83
S003	**398701**	**6808808**	195	0.78	162	10	101
S005	**398828**	**6808842**	224	0.82	218	10	96
S006	**398928**	**6808818**	230	0.94	187	10	88
S007	**399262**	**6808808**	572	0.63	131	10	90
S008	**399453**	**6808754**	668	0.95	205	10	111
S009	**399621**	**6808730**	321	0.83	151	10	70
S010	**400110**	**6808794**	283	0.60	116	10	53
S011	**399926**	**6808817**	164	0.69	158	10	56
S017	**398559**	**6809653**	215	0.98	254	10	113
S018	**398812**	**6809666**	252	0.75	176	10	89
S019	**398978**	**6809679**	210	0.49	139	10	89
S020	**399267**	**6809684**	204	0.31	97	10	69
S022	**399984**	**6809666**	281	0.52	142	10	224
S023	**399689**	**6809679**	203	1.08	281	10	81
S029	**396426**	**6802744**	183	0.29	67	10	26
S030	**396455**	**6802848**	90	0.38	122	10	50
S031	**396453**	**6803172**	142	0.43	68	10	22
S032	**396458**	**6803384**	143	0.33	112	10	282
S034	**396432**	**6801358**	285	0.21	53	10	38
S037	**396408**	**6800882**	209	0.32	96	10	118
S039	**396396**	**6800460**	174	0.63	202	10	57

SAMPLE	Easting	Northing	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
S041	**396383**	**6800044**	270	0.37	90	10	100
T001	**393931**	**6803192**	352	0.36	71	10	65
T002	**393930**	**6803009**	311	0.84	148	10	140
T005	**393916**	**6802785**	349	0.30	61	10	62
T006	**393951**	**6802575**	282	0.45	113	10	86
T008	**393853**	**6800079**	525	0.37	100	10	81
T010	**393884**	**6800509**	598	0.23	49	10	67
T011	**393836**	**6800668**	184	0.31	66	10	61
T012	**393896**	**6800947**	357	0.49	110	10	116
T017	**397256**	**6801340**	173	0.37	122	10	60
T019	**397211**	**6799991**	197	0.73	177	10	68

APPENDIX C

ASSAY CERTIFICATES

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

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE VA03035288

Project :

P.O. No:

This report is for 83 SOIL samples submitted to our lab in North Vancouver, BC, Canada on 10-Sep-2003.

The following have access to data associated with this certificate:

MARK FEKETE		

SAMPLE PREPARATION

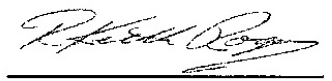
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	27 element four acid ICP-AES	ICP-AES

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
ATTN: MARK FEKETE
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

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: 

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144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Recvd Wt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%
	LOR	0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	0.01	0.01
A002		0.48	<0.5	8.40	926	1120	6.4	<2	0.59	<0.5	11	37	163	5.20	3.08	1.45
A005		0.36	<0.5	6.55	26	810	2.2	<2	1.57	<0.5	3	14	23	2.35	1.99	0.62
A006		0.40	<0.5	6.25	138	700	2.3	3	0.95	<0.5	6	29	21	3.50	2.29	0.86
A007		0.52	<0.5	8.01	5	220	3.1	<2	3.67	<0.5	26	36	27	4.76	0.86	1.06
A009		0.36	<0.5	7.55	97	720	2.2	<2	1.16	<0.5	7	35	28	3.21	1.93	0.85
A012		0.26	0.5	6.63	15	610	2.9	<2	2.15	<0.5	8	15	19	2.25	1.89	0.81
A014		0.52	<0.5	5.73	30	1060	1.9	<2	1.16	<0.5	7	30	21	2.74	1.69	0.81
A015		0.42	<0.5	5.74	18	990	1.4	<2	0.76	<0.5	5	20	16	2.26	1.66	0.53
A016		0.64	<0.5	7.13	17	470	3.3	<2	1.02	<0.5	9	23	24	3.28	2.55	0.70
A017		0.62	<0.5	7.77	7	550	2.7	<2	1.29	<0.5	12	42	19	3.50	2.41	1.04
A018		0.48	<0.5	6.63	<5	540	1.4	<2	1.41	<0.5	6	43	9	3.20	1.92	0.71
A019		0.40	<0.5	5.82	<5	520	1.3	<2	0.96	<0.5	4	37	9	2.60	1.85	0.49
A022		0.56	<0.5	7.58	<5	530	2.7	<2	0.59	<0.5	7	20	17	2.60	3.11	0.60
A023		0.28	<0.5	7.72	<5	540	2.6	<2	1.12	<0.5	12	24	15	3.09	2.65	0.84
A024		0.34	<0.5	7.14	<5	590	2.4	<2	1.23	<0.5	12	33	16	3.67	2.28	1.12
A025		0.42	<0.5	6.81	<5	540	1.8	<2	1.01	<0.5	3	20	9	2.15	2.20	0.59
A026		0.34	<0.5	7.50	57	1570	1.9	<2	1.23	<0.5	20	46	95	4.67	1.83	1.15
A027		0.46	<0.5	6.59	12	1260	1.2	<2	2.09	<0.5	42	126	198	6.89	1.03	3.06
A029		0.54	<0.5	6.37	61	2220	2.2	<2	0.25	<0.5	8	25	31	2.52	2.48	0.58
A030		0.60	<0.5	6.45	48	2110	2.4	<2	0.49	<0.5	10	31	31	2.66	2.43	0.85
A031		0.44	<0.5	5.16	15	1340	1.1	<2	0.80	<0.5	5	20	11	1.51	1.41	0.45
A032		0.46	<0.5	6.98	39	1520	1.7	<2	1.28	<0.5	10	29	44	3.01	1.83	0.91
A033		0.48	<0.5	6.24	53	1740	2.3	<2	1.13	<0.5	11	52	60	3.19	1.84	1.35
A034		0.46	0.5	7.56	18	770	1.9	<2	2.14	<0.5	7	14	20	2.45	1.96	0.89
A035		0.54	0.5	7.65	174	790	5.2	<2	1.69	<0.5	12	36	40	3.85	2.37	1.28
A036		0.40	<0.5	8.19	172	650	5.6	<2	1.40	<0.5	10	31	25	3.42	2.69	1.12
A037		0.34	<0.5	7.36	170	600	4.4	<2	1.54	<0.5	10	22	40	3.29	2.03	0.98
A038		0.38	<0.5	7.34	33	590	5.4	<2	1.18	<0.5	4	13	9	1.68	2.76	0.54
L001		0.24	<0.5	7.32	<5	690	2.3	<2	1.53	<0.5	33	85	29	6.88	2.30	2.49
L002		0.36	<0.5	7.69	<5	600	2.3	<2	2.56	<0.5	24	103	30	6.09	2.10	2.41
L003		0.42	<0.5	7.50	59	420	1.8	<2	2.82	<0.5	35	283	60	6.61	1.28	5.01
L004		0.28	<0.5	7.08	9	510	1.6	<2	3.22	<0.5	33	144	41	5.91	1.26	3.49
L005		0.16	<0.5	5.12	<5	590	1.1	<2	1.67	<0.5	6	7	34	1.48	1.21	0.43
L006		0.38	<0.5	7.32	<5	420	1.5	<2	3.23	<0.5	26	83	24	7.10	1.26	2.70
L007		0.50	<0.5	8.19	<5	500	1.2	<2	4.07	<0.5	44	184	61	7.67	1.48	4.21
L008		0.50	<0.5	9.24	39	500	3.5	<2	1.63	<0.5	17	80	46	5.92	2.92	2.38
L009		0.50	<0.5	8.08	<5	520	1.9	<2	3.75	<0.5	21	116	39	5.85	1.71	3.44
L010		0.22	<0.5	7.54	<5	740	1.3	<2	1.81	<0.5	6	7	16	1.90	2.14	0.64
L011		0.40	<0.5	8.66	<5	510	1.6	<2	4.62	<0.5	43	144	138	7.77	1.68	3.87
L012		0.38	<0.5	7.34	<5	670	1.8	<2	2.45	<0.5	28	93	73	6.13	1.89	2.56

ALS Chemex
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212 Brooksbank Avenue
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To: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Recvd Wt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%
	LOR	0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	0.01	0.01
L013		0.44	<0.5	8.15	16	580	2.1	<2	3.04	<0.5	25	190	74	6.68	1.74	3.60
L014		0.44	<0.5	8.16	<5	500	1.8	<2	2.76	<0.5	20	106	27	6.11	1.33	2.54
L015		0.44	<0.5	8.00	<5	440	1.8	<2	4.33	<0.5	27	126	38	6.23	1.51	3.11
L016		0.36	<0.5	8.16	60	490	2.2	<2	2.50	<0.5	22	58	37	4.88	1.84	1.53
M021		0.30	<0.5	6.68	67	700	3.6	<2	1.31	<0.5	31	83	130	5.17	1.59	2.43
M026		0.34	0.7	8.21	181	720	4.2	<2	1.06	<0.5	22	81	184	6.09	3.31	2.50
M032		0.38	1.0	7.17	217	440	7.3	47	1.32	1.0	85	458	213	9.03	3.13	4.31
M033		0.40	<0.5	9.40	57	1360	6.0	<2	3.12	<0.5	32	52	17	5.70	2.43	1.96
M034		0.32	1.1	7.98	201	430	3.0	<2	0.15	<0.5	5	11	92	6.24	4.53	0.49
M036		0.34	<0.5	10.85	49	450	20.5	3	0.60	<0.5	13	32	13	3.44	4.22	1.00
S001		0.34	<0.5	8.17	<5	570	1.8	<2	1.41	<0.5	26	149	22	7.08	1.77	2.58
S003		0.26	<0.5	8.59	7	730	4.3	<2	2.18	<0.5	19	81	39	5.53	2.06	1.80
S005		0.50	<0.5	8.86	9	590	3.0	<2	3.45	<0.5	23	132	42	6.40	1.81	2.94
S006		0.42	<0.5	7.19	40	310	1.3	<2	3.94	<0.5	44	330	130	6.76	0.93	5.41
S007		0.36	<0.5	7.40	87	500	1.6	<2	3.85	<0.5	10	61	16	4.06	1.42	1.22
S008		0.40	0.5	8.27	70	420	1.5	<2	4.60	<0.5	51	100	85	7.80	1.22	2.43
S009		0.38	<0.5	8.26	<5	390	1.9	<2	3.53	<0.5	35	97	27	5.23	1.17	2.40
S010		0.30	<0.5	7.95	<5	590	1.8	<2	2.15	<0.5	13	50	19	4.11	1.77	1.22
S011		0.38	<0.5	8.90	<5	440	1.9	<2	2.17	<0.5	16	91	14	5.76	1.71	3.15
S017		0.46	<0.5	8.41	<5	650	2.3	<2	3.53	<0.5	28	98	38	7.23	1.65	2.65
S018		0.40	<0.5	7.40	6	430	1.5	<2	3.90	<0.5	30	212	30	5.70	1.12	3.85
S019		0.36	<0.5	7.54	128	650	2.1	<2	2.13	<0.5	19	102	34	4.98	1.95	2.17
S020		0.34	<0.5	6.70	7	460	1.2	<2	3.22	<0.5	47	530	104	5.78	0.99	6.15
S022		0.30	<0.5	8.64	11	1100	2.1	<2	3.33	3.9	33	118	71	6.00	2.17	2.81
S023		0.38	<0.5	7.64	19	490	1.8	<2	4.37	<0.5	22	75	24	6.45	1.90	2.28
S029		0.40	<0.5	5.08	<5	1330	0.9	<2	0.68	<0.5	4	21	12	1.57	1.42	0.34
S030		0.34	<0.5	4.97	35	1660	1.1	<2	0.59	<0.5	8	58	21	2.61	1.36	0.68
S031		0.36	<0.5	5.09	6	1440	1.0	<2	0.61	<0.5	3	29	5	1.00	1.60	0.40
S032		0.32	<0.5	7.13	243	1800	2.6	<2	1.09	<0.5	20	60	71	4.58	1.97	1.24
S034		0.24	<0.5	6.22	8	1200	1.3	<2	1.00	<0.5	5	12	12	1.69	1.97	0.46
S037		0.36	<0.5	6.55	167	1730	1.7	<2	1.28	<0.5	10	39	59	3.31	1.82	0.98
S039		0.40	<0.5	7.85	8	960	2.1	<2	1.19	<0.5	17	50	22	5.87	3.03	0.99
S041		0.40	<0.5	10.65	6	1260	2.5	<2	2.01	<0.5	28	56	58	5.70	2.05	2.45
T001		0.26	<0.5	6.51	40	700	2.5	<2	1.56	<0.5	11	29	21	2.93	1.74	0.81
T002		0.46	<0.5	9.17	49	580	6.0	<2	2.86	<0.5	29	156	49	6.81	1.77	2.82
T005		0.26	<0.5	6.19	41	550	2.6	<2	1.43	<0.5	7	29	17	2.41	1.41	0.83
T006		0.42	<0.5	7.75	89	760	2.5	<2	1.22	<0.5	10	56	34	4.15	1.82	0.96
T008		0.52	<0.5	7.41	6	740	2.0	<2	1.53	<0.5	14	56	22	4.17	1.64	1.06
T010		0.34	<0.5	7.25	<5	600	1.5	<2	2.26	<0.5	9	16	31	3.00	1.79	0.74
T011		0.64	<0.5	8.67	17	510	2.6	3	0.61	<0.5	4	22	13	2.92	2.64	0.61

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144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt kg 0.02	ME-ICP61 Ag ppm 0.5	ME-ICP61 Al % 0.01	ME-ICP61 As ppm 5	ME-ICP61 Ba ppm 10	ME-ICP61 Be ppm 0.5	ME-ICP61 Bi ppm 2	ME-ICP61 Ca % 0.01	ME-ICP61 Cd ppm 0.5	ME-ICP61 Co ppm 1	ME-ICP61 Cr ppm 1	ME-ICP61 Cu ppm 1	ME-ICP61 Fe % 0.01	ME-ICP61 K % 0.01	ME-ICP61 Mg % 0.01
T012		0.54	<0.5	9.99	21	660	2.9	<2	1.19	<0.5	18	50	32	5.41	2.56	1.37
T017		0.42	<0.5	7.84	10	2420	2.0	<2	0.53	<0.5	6	29	44	3.16	2.19	0.56
T019		0.50	<0.5	7.20	5	530	1.6	<2	1.98	<0.5	18	81	16	6.17	1.40	1.90

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Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn
	Units	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOR	5	1	0.01	1	10	2	0.01	5	1	0.01	1	10	2
A002		1045	2	0.68	28	840	51	0.08	<5	92	0.40	84	10	193
A005		736	5	1.86	11	750	17	0.05	<5	395	0.30	66	<10	99
A006		635	<1	1.22	9	1360	24	0.04	<5	237	0.47	96	<10	84
A007		1115	<1	0.49	46	1700	20	0.13	<5	643	0.41	72	10	124
A009		519	<1	1.56	22	1100	19	0.02	<5	295	0.62	98	<10	56
A012		512	<1	1.98	14	840	18	0.06	<5	455	0.29	55	10	52
A014		605	<1	1.16	21	460	22	0.02	<5	193	0.39	84	10	62
A015		538	<1	1.24	14	650	16	0.01	<5	228	0.29	77	10	43
A016		550	<1	1.00	28	910	32	0.05	<5	185	0.27	60	20	79
A017		502	<1	1.21	38	870	19	0.04	<5	258	0.40	74	10	69
A018		686	<1	1.00	19	550	20	0.01	<5	365	0.54	94	<10	41
A019		309	<1	1.08	13	490	18	0.02	<5	253	0.44	87	10	31
A022		363	<1	1.22	30	770	24	0.01	<5	119	0.25	45	10	62
A023		407	<1	1.27	24	780	20	0.04	<5	272	0.31	60	10	93
A024		521	<1	1.09	28	760	16	0.07	<5	190	0.43	87	10	89
A025		353	<1	1.31	15	810	20	0.04	<5	237	0.34	59	10	42
A026		1805	3	1.01	54	940	37	0.04	<5	226	0.32	128	10	134
A027		1780	<1	0.73	92	1110	19	0.04	<5	190	0.70	209	<10	381
A029		929	<1	0.82	23	530	26	0.02	<5	58	0.20	67	10	72
A030		1100	<1	0.72	35	230	24	0.01	<5	72	0.23	67	10	70
A031		758	<1	1.22	13	790	12	0.03	<5	206	0.24	62	<10	36
A032		1420	<1	1.52	28	630	26	0.02	<5	316	0.28	80	10	81
A033		1010	<1	1.02	43	640	27	0.05	<5	133	0.41	101	10	101
A034		495	<1	2.36	16	620	17	0.05	<5	547	0.31	65	<10	68
A035		767	1	1.37	31	1180	33	0.07	<5	260	0.45	92	30	160
A036		511	<1	1.58	31	820	40	0.04	<5	257	0.47	87	10	101
A037		638	<1	1.44	32	620	34	0.04	<5	315	0.29	67	10	170
A038		312	<1	1.70	11	530	26	0.01	<5	260	0.35	49	10	48
L001		1980	<1	0.92	47	1060	11	0.06	<5	117	0.82	183	10	225
L002		913	1	1.12	51	890	11	0.03	<5	167	0.77	190	10	84
L003		895	2	1.00	224	830	18	0.03	<5	187	0.74	188	10	86
L004		918	1	1.03	116	1210	11	0.03	<5	239	0.68	190	<10	90
L005		323	1	1.60	11	690	8	0.06	<5	369	0.16	37	10	30
L006		1340	<1	1.06	36	1550	10	0.07	<5	199	0.88	257	10	67
L007		1190	<1	0.88	124	940	13	0.03	<5	248	0.80	216	<10	107
L008		793	<1	0.78	55	1200	25	0.03	<5	139	0.68	180	10	113
L009		783	<1	1.18	81	1800	32	0.01	<5	268	0.82	198	<10	90
L010		381	<1	2.61	5	340	14	0.01	<5	551	0.25	46	<10	51
L011		1340	<1	0.93	97	1110	17	0.06	<5	216	0.85	224	<10	94
L012		1125	1	0.93	64	1410	32	0.06	<5	169	0.87	205	<10	82

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

To: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Tl	V	W	Zn
	Units	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOR	5	1	0.01	1	10	2	0.01	5	1	0.01	1	10	2
L013		975	<1	1.15	121	1910	22	0.03	<5	213	0.92	237	10	154
L014		833	<1	1.38	52	1240	16	0.04	<5	257	0.81	189	<10	76
L015		997	<1	1.50	64	1290	11	0.01	<5	260	1.04	200	<10	86
L016		782	<1	1.38	53	910	40	0.02	<5	631	0.55	100	<10	159
M021		940	2	1.01	70	1140	31	0.04	<5	170	0.58	141	90	131
M026		1455	3	0.75	98	1060	49	0.09	<5	129	0.69	156	10	287
M032		1845	4	0.53	460	620	57	0.02	<5	123	0.67	172	30	271
M033		2500	<1	0.77	48	910	23	0.01	<5	110	0.50	130	10	164
M034		310	5	0.27	27	940	102	0.75	13	86	0.28	43	10	386
M036		1190	<1	1.28	40	1200	83	0.02	<5	122	0.46	70	20	88
S001		720	<1	0.96	57	1210	18	0.03	<5	132	0.90	251	10	83
S003		1015	<1	1.84	47	1270	18	0.03	<5	195	0.78	162	<10	101
S005		985	<1	1.71	80	1250	21	0.02	<5	224	0.82	218	<10	96
S006		1010	<1	1.30	345	1280	14	0.02	<5	230	0.94	187	<10	88
S007		619	<1	1.21	32	1190	76	0.05	<5	572	0.63	131	10	90
S008		1440	<1	1.34	95	1540	134	0.03	<5	668	0.95	205	<10	111
S009		849	<1	1.68	67	1100	22	0.03	<5	321	0.83	151	<10	70
S010		599	<1	2.01	27	820	82	0.06	<5	283	0.60	116	10	53
S011		577	<1	1.45	45	1080	19	0.03	<5	164	0.69	158	<10	56
S017		1400	<1	1.62	43	1730	13	0.01	<5	215	0.98	254	<10	113
S018		968	<1	1.38	175	1050	16	0.02	<5	252	0.75	176	10	89
S019		666	<1	1.17	76	880	16	0.09	<5	210	0.49	139	<10	89
S020		807	<1	1.02	386	680	9	0.06	<5	204	0.31	97	10	69
S022		1275	1	1.21	94	870	24	0.06	<5	281	0.52	142	10	224
S023		1035	2	1.48	36	1280	18	0.02	<5	203	1.08	281	10	81
S029		1215	1	1.50	9	420	15	0.01	<5	183	0.29	67	10	26
S030		822	1	0.73	21	1220	11	0.02	<5	90	0.38	122	10	50
S031		477	<1	1.12	11	370	11	0.01	<5	142	0.43	68	10	22
S032		2580	6	0.92	62	1560	34	0.06	<5	143	0.33	112	10	282
S034		605	<1	1.72	8	510	14	0.03	<5	285	0.21	53	10	38
S037		1190	1	1.28	40	860	20	0.05	<5	209	0.32	96	<10	118
S039		1255	1	1.04	30	1570	22	0.06	<5	174	0.63	202	10	57
S041		516	<1	0.70	90	460	14	0.03	<5	270	0.37	90	10	100
T001		703	<1	1.75	21	1260	17	0.06	<5	352	0.36	71	10	65
T002		1185	<1	1.29	100	1230	24	0.02	<5	311	0.84	148	10	140
T005		439	<1	1.56	22	1650	16	0.08	<5	349	0.30	61	10	62
T006		676	1	1.48	27	810	18	0.01	<5	282	0.45	113	10	86
T008		644	<1	1.15	45	660	20	0.04	<5	525	0.37	100	10	81
T010		775	<1	1.85	22	730	20	0.07	<5	598	0.23	49	<10	67
T011		308	<1	0.87	13	940	42	0.04	<5	184	0.31	66	10	61

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To: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 15-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035288

Sample Description	Method Analyte Units LOR	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sr ppm 1	ME-ICP61 Tl % 0.01	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2
T012		718	<1	1.02	54	1140	23	0.05	<5	357	0.49	110	10	116
T017		1310	<1	1.44	18	1030	17	0.03	<5	173	0.37	122	10	60
T019		862	<1	1.26	43	1130	10	0.04	<5	197	0.73	177	10	68

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TO: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 16-Sep-2003
Account: BREAK

CERTIFICATE VA03035287

Project :

P.O. No:

This report is for 32 SEDIMENT samples submitted to our lab in North Vancouver, BC, Canada on 10-Sep-2003.

The following have access to data associated with this certificate:

MARK FEKETE		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	27 element four acid ICP-AES	ICP-AES

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
ATTN: MARK FEKETE
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

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:

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Date : 16-Sep-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03035287

Sample Description	Method	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Recvd Wt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Mg
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	%	%
	LOR	0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	0.01	0.01
K001		0.46	<0.5	9.12	90	600	2.5	<2	2.47	<0.5	13	47	26	4.50	1.74	1.34
K003		0.32	<0.5	9.22	85	580	2.3	<2	3.13	<0.5	20	56	36	5.17	1.82	1.58
K004		0.44	<0.5	9.24	18	570	2.6	<2	3.30	<0.5	20	62	28	5.47	1.83	1.68
K005		0.42	<0.5	9.38	27	500	2.5	<2	4.16	<0.5	16	48	25	4.84	1.71	1.51
K007		0.46	<0.5	10.40	15	520	2.1	<2	6.18	<0.5	29	126	39	7.65	1.53	3.61
K009		0.44	<0.5	9.39	11	400	2.1	<2	5.29	<0.5	25	101	30	6.19	1.33	2.80
K011		0.48	<0.5	9.44	25	470	2.2	<2	4.52	<0.5	23	93	35	6.21	1.53	2.71
K013		0.46	<0.5	9.48	26	440	2.2	<2	4.48	<0.5	23	88	33	6.16	1.47	2.69
K015		0.44	<0.5	8.82	21	390	2.1	<2	4.55	<0.5	19	83	27	5.72	1.26	2.47
K016		0.48	<0.5	8.52	161	380	2.0	<2	4.55	<0.5	19	90	29	5.36	1.28	2.50
K017		0.44	<0.5	9.28	58	450	2.1	<2	4.62	<0.5	21	91	34	5.86	1.45	2.50
K019		0.44	<0.5	9.18	44	480	2.2	<2	4.33	<0.5	23	92	35	5.93	1.58	2.60
K022		0.48	<0.5	8.90	49	480	2.1	<2	4.17	<0.5	23	86	34	5.81	1.51	2.54
K024		0.34	<0.5	9.12	54	630	3.0	<2	2.98	<0.5	30	95	51	7.01	2.05	2.65
K025		0.44	<0.5	9.84	30	780	2.6	<2	4.70	<0.5	24	75	44	6.28	1.87	2.57
K030		0.48	<0.5	9.48	374	830	9.6	3	1.45	<0.5	23	44	78	5.18	2.89	1.79
K033		0.50	<0.5	15.70	11	360	11.7	<2	0.26	<0.5	3	5	4	2.65	5.55	0.58
K034		0.44	<0.5	12.05	581	670	15.3	4	0.73	<0.5	13	23	83	4.64	3.92	1.33
K036		0.40	<0.5	11.75	636	600	12.9	3	0.82	0.7	16	31	68	4.70	3.91	1.73
K038		0.36	<0.5	8.57	147	600	8.7	4	0.53	0.7	4	5	14	1.99	3.65	0.43
K040		0.46	<0.5	8.31	109	550	12.8	<2	0.71	<0.5	4	6	9	1.84	3.35	0.48
K042		0.42	<0.5	8.07	71	600	8.2	22	0.59	<0.5	2	5	6	1.57	3.57	0.38
K044		0.60	<0.5	8.19	61	610	8.2	<2	0.57	<0.5	2	4	7	1.61	3.66	0.37
L023		0.50	<0.5	7.22	128	980	3.1	<2	1.92	2.1	16	43	79	4.25	2.15	1.72
L025		0.42	<0.5	6.61	43	1550	1.7	<2	1.03	<0.5	10	55	37	3.52	1.67	1.12
L026		0.22	0.5	5.98	43	950	1.5	<2	2.05	<0.5	7	22	34	2.31	1.19	0.59
L028		0.36	<0.5	6.15	68	1980	1.6	<2	1.47	<0.5	16	59	68	3.70	1.53	1.33
L030		0.44	<0.5	5.70	78	1770	1.5	<2	1.21	<0.5	12	62	51	3.33	1.37	1.11
L031		0.44	<0.5	5.20	87	1520	1.7	<2	1.41	0.6	13	50	51	3.07	1.57	1.14
L032		0.40	0.5	9.51	126	2180	2.9	<2	1.06	<0.5	21	65	110	5.11	2.73	1.52
L033		0.34	<0.5	8.54	114	1880	2.6	<2	1.13	<0.5	20	56	93	4.43	2.35	1.43
L036		0.38	<0.5	6.28	63	2540	1.9	<2	1.29	<0.5	17	55	79	3.97	1.85	1.33

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VAL-D'OR PQ J9P 2G3

Date : 16-Sep-2003
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CERTIFICATE OF ANALYSIS VA03035287

Sample Description	Method Analyte Units LOR	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sr ppm 1	ME-ICP61 Ti % 0.01	ME-ICP61 V ppm 1	ME-ICP61 W ppm 10	ME-ICP61 Zn ppm 2
K001		779	<1	1.82	37	1130	33	0.03	<5	507	0.61	101	<10	98
K003		800	<1	1.69	50	1160	39	0.03	<5	663	0.57	103	<10	154
K004		1045	<1	1.79	40	1440	29	0.02	<5	622	0.75	147	<10	92
K005		925	<1	1.81	38	1140	30	0.02	<5	800	0.62	101	<10	113
K007		1245	<1	1.90	73	1510	13	0.01	<5	367	0.63	169	<10	96
K009		1025	<1	1.95	57	1540	18	0.02	<5	432	0.76	181	<10	88
K011		977	<1	1.85	61	1500	16	0.02	<5	439	0.79	173	<10	95
K013		970	<1	1.92	56	1390	19	0.02	<5	477	0.84	173	<10	95
K015		1005	<1	1.86	54	1520	15	0.02	<5	428	0.82	165	<10	85
K016		914	<1	1.75	70	1720	24	0.02	<5	353	0.88	177	<10	81
K017		991	<1	1.84	56	1740	16	0.03	<5	451	0.87	168	10	90
K019		952	<1	1.77	66	1480	21	0.03	<5	423	0.84	173	<10	95
K022		946	<1	1.75	64	1390	17	0.03	<5	412	0.78	160	<10	95
K024		1140	<1	1.44	65	1270	8	0.02	<5	192	0.78	276	<10	139
K025		956	<1	1.55	48	1370	12	0.02	<5	316	0.78	200	<10	106
K030		1510	2	0.87	47	1120	71	0.08	<5	192	0.45	108	<10	367
K033		538	<1	0.12	2	1520	139	0.02	<5	98	0.41	57	10	91
K034		1240	2	1.23	27	1050	104	0.06	<5	146	0.36	81	<10	316
K036		1475	4	0.41	25	1130	65	0.04	<5	114	0.49	98	20	297
K038		742	<1	1.74	6	880	101	0.03	<5	180	0.20	30	<10	153
K040		493	<1	1.83	8	870	54	0.02	<5	209	0.21	36	10	77
K042		552	<1	1.91	6	850	52	0.01	<5	198	0.18	28	10	67
K044		503	<1	1.96	6	740	50	0.01	<5	196	0.18	27	<10	63
L023		1640	<1	1.43	35	1220	32	0.07	<5	154	0.63	110	<10	682
L025		860	<1	1.18	45	1150	18	0.02	<5	146	0.42	118	<10	79
L026		1730	3	1.22	24	4650	12	0.20	<5	316	0.19	61	<10	96
L028		1520	<1	0.90	58	1540	21	0.06	<5	144	0.40	123	<10	164
L030		1265	10	0.84	46	1460	20	0.07	<5	134	0.34	105	<10	150
L031		1315	1	0.81	45	1270	22	0.07	<5	118	0.39	89	<10	171
L032		1610	2	0.85	59	1200	40	0.05	<5	178	0.38	147	<10	184
L033		1505	1	0.69	51	1130	36	0.11	<5	157	0.31	120	10	132
L036		2130	<1	0.73	52	1550	20	0.04	<5	120	0.39	118	<10	110

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

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 3-Oct-2003
Account: BREAK

CERTIFICATE VA03037725

Project :

P.O. No:

This report is for 67 ROCK samples submitted to our lab in North Vancouver, BC, Canada on 24-Sep-2003.

The following have access to data associated with this certificate:

MARK FEKETE

SAMPLE PREPARATION

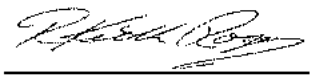
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
CRU-31	Fine crushing - 70% <2mm
LOG-22	Sample login - Rcd w/o BarCode
PUL-31	Pulverize split to 85% <75 um
SPL-21	Split sample - riffle splitter

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Ag-AA62	Ore grade Ag - four acid / AAS	AAS
Au-AA23	Au 30g FA-AA finish	AAS
ME-ICP61	27 element four acid ICP-AES	ICP-AES

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
ATTN: MARK FEKETE
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

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: 

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144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 3-Oct-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03037725

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP61 Ag ppm 0.5	ME-ICP61 Al % 0.01	ME-ICP61 As ppm 5	ME-ICP61 Ba ppm 10	ME-ICP61 Be ppm 0.5	ME-ICP61 Bi ppm 2	ME-ICP61 Ca % 0.01	ME-ICP61 Cd ppm 0.5	ME-ICP61 Co ppm 1	ME-ICP61 Cr ppm 1	ME-ICP61 Cu ppm 1	ME-ICP61 Fe % 0.01	ME-ICP61 K % 0.01
K023		1.14	<0.005	<0.5	9.36	<5	1100	1.8	<2	7.78	<0.5	21	146	94	5.26	1.96
K027		1.24	<0.005	<0.5	1.74	<5	140	0.5	<2	16.15	<0.5	19	48	42	8.27	0.06
K029		0.48	<0.005	<0.5	7.67	8	410	10.8	43	14.70	<0.5	13	80	12	3.10	1.19
K046		2.60	<0.005	<0.5	1.44	<5	700	<0.5	<2	2.85	<0.5	14	337	160	7.19	0.14
K047		2.90	0.021	<0.5	0.57	<5	160	<0.5	<2	1.40	15.8	17	265	124	3.06	0.10
K048		1.74	0.009	<0.5	7.10	45	220	10.7	<2	0.04	<0.5	1	98	25	0.94	4.51
K049		0.96	<0.005	<0.5	7.38	<5	170	6.2	<2	0.07	<0.5	2	69	22	0.71	4.10
K050		0.90	0.011	<0.5	5.77	178	850	3.6	<2	0.02	<0.5	3	84	18	2.54	3.65
K051		0.96	<0.005	<0.5	0.99	48	100	2.2	<2	0.01	0.5	4	165	4	0.83	0.41
L018		0.68	<0.005	<0.5	11.25	<5	210	3.7	<2	2.07	<0.5	16	77	66	4.29	1.51
L020A		0.66	<0.005	<0.5	3.09	<5	<10	<0.5	<2	24.1	<0.5	4	84	2	2.09	0.01
L020B		0.46	<0.005	<0.5	3.35	<5	<10	<0.5	<2	21.6	<0.5	11	113	2	2.61	<0.01
L021		0.52	<0.005	<0.5	4.28	<5	10	3.1	<2	9.74	<0.5	17	116	6	5.84	0.03
L040		1.28	0.009	<0.5	5.90	26	160	5.4	<2	0.16	<0.5	1	106	21	1.04	3.55
L041		1.08	<0.005	<0.5	0.72	155	30	9.4	<2	0.03	<0.5	2	218	4	0.95	0.25
L042		0.50	<0.005	<0.5	4.05	29	330	46.5	<2	0.12	<0.5	1	187	3	0.65	2.95
L043		0.62	<0.005	<0.5	1.37	35	120	8.7	<2	11.15	17.8	9	16	62	2.97	0.79
L045		0.58	<0.005	0.7	6.59	238	70	14.3	<2	0.23	<0.5	2	89	3	0.71	3.54
L046		1.18	<0.005	0.5	7.14	<5	60	9.1	8	0.28	<0.5	<1	81	2	0.50	3.27
M027		0.76	<0.005	<0.5	3.18	<5	110	73.5	2	0.04	<0.5	1	186	18	0.97	2.67
M028A		1.18	<0.005	<0.5	7.45	8380	370	4.3	<2	11.55	<0.5	15	83	89	3.85	2.37
M028B		1.42	<0.005	<0.5	7.70	21	250	6.2	3	14.35	<0.5	17	126	5	5.36	0.73
M029		1.28	<0.005	<0.5	2.89	164	90	3.7	2	8.70	<0.5	134	1105	294	7.69	2.29
M030		1.08	0.036	1.1	5.53	3470	160	7.1	<2	15.65	<0.5	7	43	43	3.87	2.62
M037		1.24	<0.005	<0.5	7.47	68	210	5.6	<2	0.30	<0.5	2	79	5	0.69	4.01
M038		1.60	<0.005	<0.5	6.82	1895	320	4.6	<2	0.08	<0.5	<1	110	50	0.64	3.27
M045		1.56	<0.005	<0.5	1.11	105	200	0.5	<2	2.71	<0.5	50	1145	11	4.08	0.41
M046		1.52	0.006	0.6	2.74	188	550	0.7	<2	14.50	<0.5	18	198	25	5.31	1.14
M047		1.60	<0.005	<0.5	0.31	11	20	<0.5	<2	0.13	<0.5	81	1595	3	4.66	0.01
M048		1.70	<0.005	<0.5	0.38	27	110	<0.5	<2	0.22	<0.5	60	1590	3	4.64	0.08
M049		1.28	<0.005	<0.5	0.07	6	760	0.5	<2	2.55	<0.5	46	786	3	1.96	0.01
M050A		1.54	0.006	<0.5	0.17	76	60	0.6	<2	0.10	<0.5	112	1325	11	4.00	0.05
M050B		2.08	<0.005	<0.5	0.26	24	90	<0.5	<2	0.48	<0.5	55	1115	2	3.55	0.05
M051		2.20	<0.005	<0.5	0.17	86	50	0.5	<2	5.50	<0.5	41	499	7	2.80	0.03
M052		1.60	<0.005	<0.5	0.09	98	30	<0.5	<2	13.35	<0.5	11	160	6	1.83	0.02
M053		1.76	<0.005	<0.5	0.14	285	20	<0.5	<2	0.14	<0.5	72	1130	5	3.88	0.03
M054		2.16	<0.005	<0.5	0.24	58	120	<0.5	<2	0.27	<0.5	67	1155	2	2.39	0.01
S001		0.58	<0.005	<0.5	2.18	16	40	<0.5	<2	>25	<0.5	5	21	4	1.14	0.19
S006		0.18	<0.005	0.8	6.20	13	20	1.9	<2	8.03	<0.5	15	210	43	6.72	0.11
S015		0.68	<0.005	<0.5	2.86	<5	1240	0.5	<2	11.20	<0.5	4	83	4	1.36	3.02

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To: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 3-Oct-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03037725

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Ag-AA62
	Analyte	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Ti	V	W	Zn	Ag
	Units	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOR	0.01	5	1	0.01	1	10	2	0.01	5	1	0.01	1	10	2	1
K023		2.15	787	1	0.87	38	540	24	0.66	<5	1385	0.40	94	<10	58	
K027		6.66	3350	<1	0.17	14	130	10	0.15	<5	180	0.17	86	<10	83	
K029		0.88	1130	<1	1.92	47	430	16	0.08	13	2450	0.37	68	10	310	
K046		0.77	>10000	5	0.05	98	1720	11	1.13	<5	148	0.07	137	<10	165	
K047		0.14	1495	63	<0.01	87	1140	10	1.21	<5	66	0.03	74	<10	2990	
K048		0.23	116	3	1.14	3	260	90	0.03	<5	18	0.03	2	10	40	
K049		0.18	369	2	1.65	5	270	65	0.01	<5	37	0.06	2	<10	73	
K050		0.29	78	5	0.11	7	150	24	0.02	<5	23	0.20	48	10	48	
K051		0.08	428	5	0.01	5	60	20	<0.01	<5	5	0.02	4	10	52	
L018		1.59	606	<1	3.87	38	480	34	0.12	6	420	0.46	66	<10	56	
L020A		0.50	608	1	0.01	18	300	17	<0.01	<5	447	0.18	31	10	22	
L020B		0.77	1010	<1	0.01	24	340	11	<0.01	6	188	0.26	35	<10	28	
L021		3.10	985	1	0.13	27	420	34	0.03	9	762	0.30	131	<10	88	
L040		0.22	186	2	0.66	2	680	65	0.01	<5	11	0.05	3	10	37	
L041		0.09	259	4	<0.01	5	40	19	<0.01	<5	3	<0.01	2	<10	52	
L042		0.07	114	5	0.08	6	610	49	<0.01	<5	10	0.01	4	<10	15	
L043		7.47	4210	1	0.05	10	40	8	0.35	5	165	0.03	13	380	2090	
L045		0.14	617	2	1.72	3	370	60	0.01	<5	9	0.03	6	20	36	
L046		0.09	214	<1	2.25	2	340	42	<0.01	<5	19	0.04	1	10	25	
M027		0.07	87	3	0.16	3	320	24	0.05	<5	19	0.01	3	10	19	
M028A		0.93	1100	1	0.32	34	400	26	0.81	6	833	0.26	60	40	192	
M028B		1.34	1530	1	1.73	39	480	12	<0.01	7	1530	0.34	67	10	365	
M029		7.48	1520	1	0.05	1200	190	6	1.74	8	124	0.20	76	10	80	
M030		0.56	2610	<1	0.03	17	500	25	1.95	7	1215	0.13	50	<10	224	
M037		0.14	379	<1	0.10	12	460	39	0.03	<5	12	0.04	2	10	38	
M038		0.28	127	<1	0.02	5	170	51	0.10	<5	11	0.05	5	<10	16	
M045		13.30	725	<1	0.01	858	10	2	0.17	<5	152	0.01	56	<10	29	
M046		5.86	1385	<1	0.02	105	900	8	<0.01	<5	833	0.36	68	<10	41	
M047		>15	547	<1	<0.01	1840	10	<2	<0.01	<5	13	<0.01	21	<10	27	
M048		>15	516	<1	<0.01	1035	10	<2	<0.01	11	16	0.01	19	<10	22	
M049		>15	455	<1	0.01	955	10	<2	0.02	16	134	<0.01	8	<10	14	
M050A		>15	909	<1	0.01	1140	10	<2	0.03	32	19	<0.01	17	<10	34	
M050B		>15	473	<1	0.01	1005	10	<2	<0.01	19	47	<0.01	13	<10	33	
M051		>15	435	2	0.01	895	10	<2	0.05	34	224	<0.01	14	<10	18	
M052		>15	296	3	0.01	359	20	<2	0.02	26	584	<0.01	12	<10	7	
M053		>15	720	2	<0.01	1070	<10	<2	<0.01	9	7	<0.01	20	<10	24	
M054		>15	611	<1	<0.01	1680	<10	<2	0.01	22	55	<0.01	15	<10	26	
S001		0.62	2060	<1	1.00	17	150	8	0.01	<5	452	0.07	25	<10	14	
S006		2.52	715	<1	0.64	40	500	24	0.02	<5	1185	0.21	115	<10	99	
S015		0.32	1320	<1	0.12	6	940	10	<0.01	<5	228	0.17	39	<10	14	

ALS Chemex

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144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 3-Oct-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03037725

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt kg 0.02	Au-AA23 Au ppm 0.005	ME-ICP61 Ag ppm 0.5	ME-ICP61 Al % 0.01	ME-ICP61 As ppm 5	ME-ICP61 Ba ppm 10	ME-ICP61 Be ppm 0.5	ME-ICP61 Bi ppm 2	ME-ICP61 Ca % 0.01	ME-ICP61 Cd ppm 0.5	ME-ICP61 Co ppm 1	ME-ICP61 Cr ppm 1	ME-ICP61 Cu ppm 1	ME-ICP61 Fe % 0.01	ME-ICP61 K % 0.01
S044		0.78	<0.005	<0.5	5.67	<5	220	10.2	<2	0.95	<0.5	1	124	3	0.89	3.03
S047		0.92	0.010	4.3	1.21	>10000	60	1.1	10	1.64	<0.5	4	177	8	2.10	0.54
S050		1.06	<0.005	<0.5	6.38	76	170	13.7	11	0.28	<0.5	1	49	3	0.50	3.43
S052		0.64	<0.005	<0.5	2.95	4460	560	3.7	<2	0.12	<0.5	4	125	41	1.38	1.32
S053		1.42	<0.005	0.6	8.49	30	90	1.6	<2	7.07	<0.5	11	133	19	3.88	0.44
S055		0.94	<0.005	<0.5	0.23	20	70	0.8	<2	4.64	<0.5	82	729	4	3.82	0.02
S057		1.42	0.012	<0.5	5.39	41	2470	0.6	<2	0.05	<0.5	1	78	3	0.91	3.26
S059		1.16	0.007	3.9	0.05	534	20	<0.5	<2	0.02	13.4	1	112	4	0.42	0.02
S060		2.04	0.006	0.6	0.15	605	20	0.6	<2	0.53	<0.5	67	1075	3	3.61	0.05
S062		1.20	0.141	>100	0.68	1680	90	<0.5	<2	4.71	4.1	3	194	246	3.07	0.26
S064		2.30	<0.005	<0.5	7.34	47	60	16.1	<2	0.26	<0.5	9	106	18	2.07	0.97
S065		1.68	0.202	<0.5	0.10	527	30	<0.5	<2	2.24	<0.5	25	561	4	1.79	0.05
T003		1.90	<0.005	<0.5	7.44	39	70	16.0	<2	0.26	<0.5	11	82	20	2.14	0.98
T009		2.22	<0.005	<0.5	7.56	15	150	4.0	<2	0.20	<0.5	7	117	28	4.16	1.16
T022		0.92	<0.005	<0.5	6.33	14	560	3.7	63	1.08	<0.5	2	87	2	0.91	3.53
T023		0.86	<0.005	<0.5	4.60	5	70	5.9	<2	0.71	<0.5	2	122	4	0.88	1.02
T024		1.10	<0.005	<0.5	7.57	6	270	10.2	<2	0.81	<0.5	2	48	3	0.89	2.65
T025		1.64	0.008	<0.5	0.91	>10000	10	0.5	3	0.04	<0.5	77	228	16	6.34	0.05
T026		1.58	<0.005	<0.5	6.65	268	130	3.3	<2	0.30	<0.5	5	121	21	3.45	0.72
T027		2.26	<0.005	<0.5	8.32	123	650	3.1	<2	0.23	<0.5	8	122	34	4.75	2.45
T028		1.82	<0.005	<0.5	3.05	8	190	0.9	<2	0.48	<0.5	13	157	57	2.10	0.71
T029		1.46	<0.005	<0.5	0.39	27	10	<0.5	<2	0.13	<0.5	24	160	141	1.16	0.06
T030		0.96	<0.005	<0.5	7.13	16	490	10.8	<2	3.35	<0.5	10	97	77	4.60	4.02
T031		1.10	<0.005	<0.5	6.95	20	40	25.3	5	0.16	<0.5	<1	98	10	0.80	2.67
T032		2.28	0.026	<0.5	0.84	509	170	<0.5	<2	9.42	<0.5	39	680	2	2.62	0.27
T033		2.52	0.148	<0.5	0.44	138	90	<0.5	<2	2.79	<0.5	70	1525	16	5.18	0.05
T034		2.62	0.020	<0.5	0.57	73	100	0.6	<2	1.42	<0.5	73	1450	6	3.80	0.14

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144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 3-Oct-2003
Account: BREAK

CERTIFICATE OF ANALYSIS VA03037725

Sample Description	Method	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Ag-AA62
	Analyte	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sr	Tl	V	W	Zn	Ag
	Units	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOR	0.01	5	1	0.01	1	10	2	0.01	5	1	0.01	1	10	2	1
S044		0.35	251	2	1.36	7	240	37	0.01	<5	59	0.03	5	<10	9	
S047		0.19	578	3	0.01	10	60	455	1.02	8	30	0.05	17	<10	61	
S050		0.11	115	<1	1.82	5	390	48	0.01	<5	13	0.02	2	<10	11	
S052		0.23	150	1	0.02	20	270	15	0.16	<5	12	0.13	93	10	73	
S053		1.88	608	<1	4.19	22	860	32	0.04	<5	894	0.45	83	<10	61	
S055		>15	511	<1	0.01	1300	10	<2	0.04	<5	58	<0.01	17	<10	18	
S057		0.11	28	<1	1.52	11	300	6	0.15	<5	66	0.07	14	<10	8	
S059		0.08	16	3	<0.01	14	20	564	0.07	<5	<1	<0.01	2	<10	841	
S060		14.35	418	<1	<0.01	1220	10	2	0.28	28	15	<0.01	11	<10	33	
S062		1.78	563	1	0.01	19	90	1330	0.14	93	158	0.05	27	<10	326	191
S064		0.65	346	<1	3.27	22	420	15	0.01	<5	45	0.12	22	<10	46	
S065		5.95	409	<1	0.01	605	10	3	0.06	<5	309	<0.01	9	<10	55	
T003		0.72	341	<1	3.26	22	440	12	0.01	<5	46	0.14	24	<10	48	
T009		1.14	231	<1	0.63	27	360	10	0.01	<5	93	0.29	67	<10	77	
T022		0.22	182	<1	1.31	5	480	56	<0.01	<5	101	0.06	9	<10	16	
T023		0.27	158	2	1.51	7	150	19	0.01	<5	56	0.05	8	<10	17	
T024		0.22	118	<1	2.68	5	220	38	<0.01	<5	97	0.04	8	<10	23	
T025		0.17	43	1	0.08	16	130	6	2.71	7	15	0.03	10	<10	14	
T026		1.05	195	<1	0.90	16	640	13	0.02	<5	128	0.31	56	<10	77	
T027		1.08	404	<1	0.48	20	340	11	0.02	<5	93	0.39	81	<10	66	
T028		0.30	136	1	0.55	48	100	4	0.24	<5	47	0.13	28	<10	20	
T029		0.04	49	2	0.12	87	20	2	0.45	<5	12	0.02	4	<10	5	
T030		0.64	843	<1	1.44	19	1760	21	1.19	<5	142	0.82	49	<10	46	
T031		0.04	2020	<1	2.88	8	490	22	0.01	<5	7	0.01	1	<10	51	
T032		5.38	1015	3	0.01	843	30	5	0.01	92	386	0.03	28	<10	33	
T033		14.05	726	1	0.01	1270	20	4	<0.01	105	192	0.01	27	<10	33	
T034		14.55	526	1	0.01	1505	20	2	0.01	51	80	0.01	31	<10	30	

145, AVENUE PERREAULT
VAL D'OR (QUÉBEC)
J9P 4P5
TEL.: (819) 8
FAX: (819) 8

LABORATOIRE D'ANALYSE BOURLAMAQUE L
BOURLAMAQUE ASSAY LABORATORIES LTD

Breakaway Exploration Management Inc.

PY-Ye

ÉCHANTILLONS SAMPLES: Rock

REÇU DE RECEIVED FROM: Mark Pekete

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

N° 79686

VAL D'OR (QUÉBEC): September 9, 20

ANALYSES ASSAYS: 10 Au Py-SAA, 10 Ag
5 Au Py-Gr.

Sample No.	Au ppb	Au ppm	Ag g/t
MO19A	>1000	2.23	49
MO19B	>1000	4.27	44
MO19C	>1000	5.03	58
MO19D	>1000	4.60	46
MO19E	>1000	4.17	46
MO19F	245		44
MO44	13		56
DO23B	<5		<1
DO20C	<5		9
T004	41		3

Sample No.	Au ppb	Ag g/t
T004 dup.	42	3

ALS Chemex
Chimitec

Rapport Lab Geochimie
Geochemical Lab Report

RAPPORT: C03-64182.0 (COMPLET)

RÉFÉRENCE: P.O. #307524

CLIENT: LABORATOIRE D'ANALYSES BOURLAMAQUE LTEE

SOUMIS PAR:

PROJET: AUCUN

DATE RECU: 05-SEP-03 DATE DE L'IMPRESSION: 29-SEP-03

DATE APPROUVÉ	COMMANDE	ÉLÉMENT	NOMBRE D'ANALYSES	LIMITE INFÉRIEURE DE DETECTION		EXTRACTION	MÉTHODE
030929	1 AuGrav	Au - FA10/11	10	0.07	G/T	PYRO ANALYSE	GRAVIMETRIE
030929	2 Ag	AG-ICP61	10	0.5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	3 Al	AL-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	4 As	AS-ICP61	10	5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	5 Ba	BA-ICP61	10	10	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	6 Be	BE-ICP61	10	0.5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	7 Bi	BI-ICP61	10	2	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	8 Ca	CA-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	9 Cd	CD-ICP61	10	0.5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	10 Co	CO-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	11 Cr	CR-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	12 Cu	CU-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	13 Fe	FE-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	14 K	K -ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	15 Mg	MG-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	16 Mn	MN-ICP61	10	5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	17 Mo	MO-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	18 Na	NA-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	19 Ni	NI-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	20 P	P -ICP61	10	10	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	21 Pb	PB-ICP61	10	2	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	22 S	S -ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	23 Sb	SB-ICP61	10	5	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	24 Sr	SR-ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	25 Ti	TI-ICP61	10	0.01	PCT	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	26 V	V -ICP61	10	1	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	27 W	W -ICP61	10	10	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	28 Zn	ZN-ICP61	10	2	PPM	HF-HNO3-HCLO4-HCL	INDUC. COUP. PLASMA
030929	29 Ag	Ag - GA01	10	0.1	PPM	HCL:HNO3 (3:1)	ABSORPTION ATOMIQUE

TYPES D'ÉCHANTILLONS	NOMBRE	FRACTION UTILISÉE	NOMBRE	PRÉP. DE L'ÉCHAN.	NO
PULPE PREPAREE	10	TEL QUE RECU	10	TEL QUE RECU	

COPIES DU RAPPORT À: 148 Ave Perreault

FACTURE À: 148 Ave Perreault

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Rapport Lab Geochimie
Geochemical Lab Report

CLIENT : LABORATOIRE D'ANALYSES BOURLAMAQUE LTEE — PROJET: AUCUN
RAPPORT: C03-64182.0 (COMPLET) — DATE RECU : 05-SEP-03 — DATE DE L'IMPRESSION: 29-SEP-03 — PAGE 1 DE 3

NUMÉRO DE L'ÉCHANTILLON	ÉLÉMENT UNITÉS	AuGrav G/T	Ag PPM	Al PCT	As PPM	Ba PPM	Be PPM	Bi PPM	Ca PCT	Cd PPM	Co PPM	Cr PPM	Cu PPM	Fe PCT	K PCT	Mg PCT	Mn PPM	Mo PPM	Na PCT	Ni PPM	P PPM	Pb PPM	S PCT	Sb PPM	Sr PPM	Ti PCT	V PPM	W PPM	Zn PPM	Ag PPM
L020B		0.14	0.6	8.21	41	30	1.6	3	5.77	<0.5	44	124	52	4.96	0.12	1.77	593	9	3.34	79	710	130	0.52	<5	848	0.40	64	<10	85	<0.1
L020C		0.21	9.5	9.24	26	20	0.8	16	2.83	2.4	9	58	22	2.29	0.09	0.76	278	6	5.94	18	590	8470	0.17	<5	412	0.14	32	<10	30	9.7
M019A		1.92	27.3	0.06	>10000	<10	<.5	565	19.60	<0.5	95	79	46	9.48	0.01	<.01	200	8	0.01	6	30	733	5.52	39	31	<.01	2	<10	36	28.7
M019B		3.22	42.9	0.02	>10000	<10	<.5	1200	0.66	<0.5	156	62	213	24.50	<.01	<.01	<5	7	<.01	1	10	761	>10.00	108	4	<.01	1	<10	29	45.5
M019C		4.49	30.0	0.02	>10000	<10	<.5	1145	18.40	<0.5	14	112	270	5.50	0.01	<.01	7	11	<.01	5	20	258	2.33	17	16	<.01	1	<10	7	31.6
M019D		2.09	43.5	0.03	>10000	10	<.5	1555	0.28	<0.5	37	90	116	20.00	0.02	<.01	<5	8	<.01	9	30	543	8.96	77	<1	<.01	1	<10	7	48.5
M019E		3.53	43.6	0.02	>10000	10	<.5	1170	0.63	0.6	57	122	303	15.65	<.01	<.01	6	11	<.01	5	20	364	6.31	58	1	<.01	3	<10	7	43.4
M019F		0.21	26.3	0.03	>10000	<10	<.5	185	3.95	<0.5	9	179	26	3.74	<.01	<.01	44	16	<.01	6	10	898	1.86	12	8	<.01	5	<10	6	27.0
M044		0.27	58.3	4.93	210	440	1.4	<2	0.31	>500.0	5	101	27	0.86	1.56	0.21	21	10	1.39	4	1410	>10000	2.22	57	27	0.13	16	<10	>10000	55.1
T004		0.14	3.2	1.08	>10000	40	1.4	13	0.29	0.8	15	166	2	13.10	0.12	0.10	74	15	0.32	28	130	110	6.88	42	69	0.09	13	70	11	3.0

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Rapport Lab Geochimie
Geochemical Lab Report

CLIENT : LABORATOIRE D'ANALYSES BOURLAMAQUE LTEE
RAPPORT: C03-64182.0 (COMPLET)

PROJET: AUCUN
DATE RECU : 05-SEP-03 DATE DE L'IMPRESSION: 29-SEP-03 PAGE 2 DE 3

# MESURE / STANDARD	ÉLÉMENT / UNITÉS	AuGrav G/T	Ag PPM	Al PCT	As PPM	Ba PPM	Be PPM	Bi PPM	Ca PCT	Cd PPM	Co PPM	Cr PPM	Cu PPM	Fe PCT	K PCT	Mg PCT	Mn PPM	Mo PPM	Na PCT	Ni PPM	P PPM	Pb PPM	S PCT	Sb PPM	Sr PPM	Ti PCT	V PPM	W PPM	Zn PPM	Ag PPM
OXM16		14.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nombre d'analyses		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeur de moyenne		14.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Écart-type		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeur acceptee		15.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CANMET LKSD-2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Nombre d'analyses		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Valeur de moyenne		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7
Écart-type		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeur acceptee		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8
BLANC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
Nombre d'analyses		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Valeur de moyenne		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1
Écart-type		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeur acceptee		<0.01	<0.1	<.01	<1	<1	<.1	<1	<0.01	<0.1	<1	<1	<1	<0.01	<.01	<.01	<1	<1	<.01	<1	<1	<1	<0.01	<1	<1	<.01	<1	<1	<1	0.1

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Rapport Lab Geochimie
Geochemical Lab Report

CLIENT : LABORATOIRE D'ANALYSES BOURLAMAQUE LTEE
PROJET: AUCUN
RAPPORT: C03-64182.0 (COMPLET)
DATE RECU : 05-SEP-03 DATE DE L'IMPRESSION: 29-SEP-03 PAGE 3 DE 3

NUMÉRO DE L'ÉCHANTILLON	ÉLÉMENT UNITÉS	AuGrav G/T	Ag PPM	Al PCT	As PPM	Ba PPM	Be PPM	Bi PPM	Ca PCT	Cd PPM	Co PPM	Cr PPM	Cu PPM	Fe PCT	K PCT	Mg PCT	Mn PPM	Mo PPM	Na PCT	Ni PPM	P PPM	Pb PPM	S PCT	Sb PPM	Sr PPM	Ti PCT	V PPM	W PPM	Zn PPM	Ag PPM
L020B		0.14	0.6	8.21	41	30	1.6	3	5.77	<0.5	44	124	52	4.96	0.12	1.77	593	9	3.34	79	710	130	0.52	<5	848	0.40	64	<10	85	<0.1
Duplicata																													<0.1

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

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

Date : 27-Oct-2003
Account: BREAK

CERTIFICATE VA03043328

Project :

P.O. No:

This report is for 67 PULP samples submitted to our lab in North Vancouver, BC, Canada on 24-Oct-2003.

The following have access to data associated with this certificate:

MARK FEKETE		

SAMPLE PREPARATION

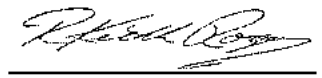
ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-MS23	Pt,Pd, Au 30g FA ICP-MS	ICP-MS

To: **BREAKAWAY EXPLORATION MANAGEMENT INC.**
ATTN: MARK FEKETE
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

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: 

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

To: BREAKAWAY EXPLORATION MANAGEMENT INC.
144-D, PERREAULT AVE.
VAL-D'OR PQ J9P 2G3

CERTIFICATE OF ANALYSIS VA03043328

Sample Description	Method Analyte Units LOR	PGM-MS23 Au ppm 0.001	PGM-MS23 Pt ppm 0.0005	PGM-MS23 Pd ppm 0.001
M045		0.002	0.0035	0.003
M046		0.001	<0.0005	<0.001
M047		0.001	0.0041	0.003
M048		0.001	0.0022	0.002
M049		0.001	0.0007	<0.001
M050A		0.001	0.0014	0.001
M050B		<0.001	0.0010	<0.001
M051		0.003	0.0022	0.001
M052		0.004	0.0008	0.001
M053		0.003	0.0033	0.003
M054		0.002	0.0044	0.003
S055		0.001	0.0031	0.002
S057		0.007	<0.0005	<0.001
S059		0.007	<0.0005	<0.001
S060		0.006	0.0012	0.001
S062		0.144	<0.0005	<0.001
S064		0.002	<0.0005	<0.001
S065		0.209	0.0017	0.001
T032		0.032	0.0021	0.002
T033		0.120	0.0042	0.002
T034		0.034	0.0031	0.002

APPENDIX D

LEE GROAT LETTER
(XRD Scans)

Earth and Ocean Sciences

THE UNIVERSITY OF BRITISH COLUMBIA

6339 Stores Road
Vancouver, BC Canada
V6T 1Z4

Tel: 604-822-2449
Fax: 604-822-6088
http://www.eos.ubc.ca/

October 1st, 2003

Mark Fekete
Hinterland Metals Inc.
144-D Perreault Avenue
Val d'Or
Quebec J9P 2G3

Dear Mark:

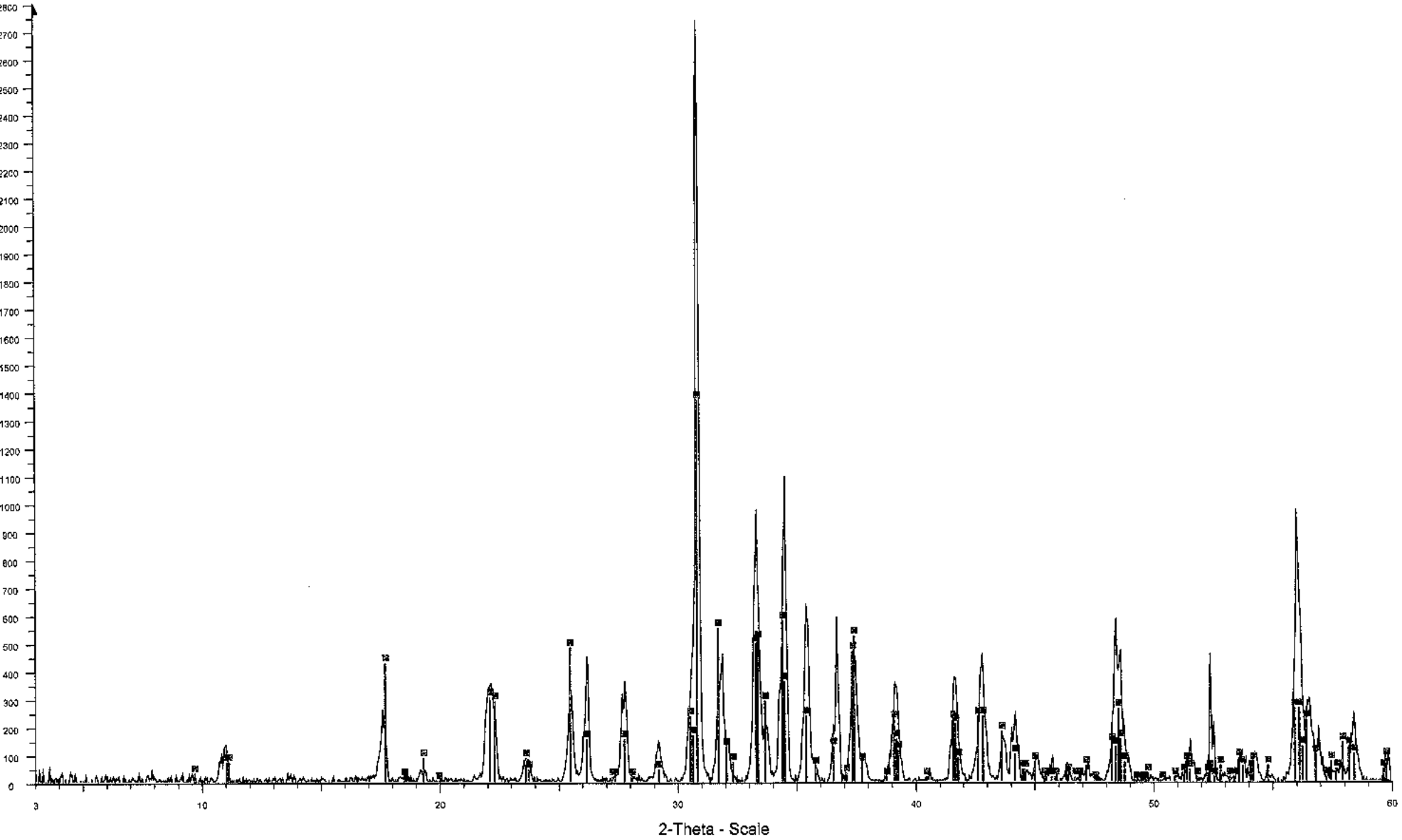
Please find enclosed the X-ray spectra of the two mineral samples you asked me to identify. The spectra were collected with a Siemens D5000 powder diffractometer using CuKα radiation (40 kV, 40 mA). Both patterns were collected from 3 to 60° 2θ, with a step size of 0.04° 2θ and a count time of 2 seconds. The spectra show that the first sample (large green crystals) is epidote, and the second (green material) is quartz. Visual examination confirmed that the latter is actually chalcedony, variety chrysoprase.

If you have any questions about the analyses please call me at 604-822-4525. My fax number is 822-6088, and my e-mail address is lgroat@eos.ubc.ca.

Best regards,

Lee A. Groat
Professor

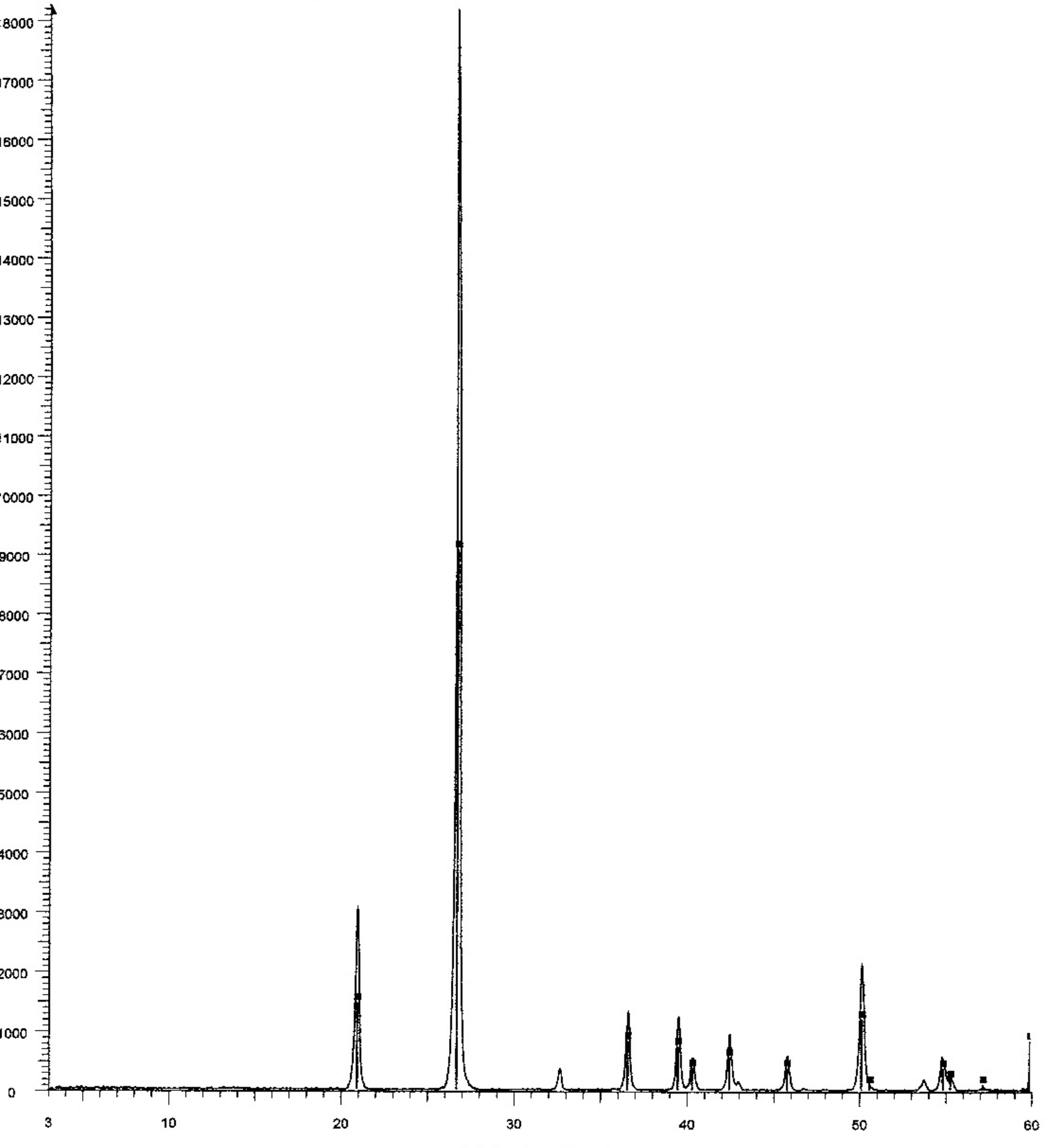
green mineral



green mineral - File: gmshk1.RAW - Type: 2Th/Th locked - Start: 3.000 ° - End: 60.000 ° - Step: 0.040 ° - Step time: 2. s - Temp.: 25 °C (Room) - Time Started: 2 s - 2-Theta: 3.000 ° - Theta: 1.500 °
Operations: Background 1.000,1.000 | Import

71-2387 (C) - Epidote - Ca2Al0.93Fe0.05AlAl0.24Fe0.76Si3O13H - Y: 50.00 % - d x by: 1. - WL: 1.54056 - Monoclinic - I/Ic PDF 0.9 -

green mineral - h



green mineral - h - File: gmh1.raw - Type: 2Th/Th locked - Start: 3.000 ° - End: 60.000 ° - Step: 0.040 ° - Step time: 2. s - Temp.: 25 °C (Roo
Operations: Background 1.000,1.000 | Import

APPENDIX E

MILLER REPORT

(Petrography, Ore Microscopy and S.E.M. Studies)

PETROGRAPHY, ORE MICROSCOPY AND SCANNING ELECTRON MICROSCOPE INVESTIGATION of samples from the HELEN Au-Ag PROSPECT and CHRIS CHRYSOPRASE PROSPECT YUKON

for

Hinterland Metals Inc.
144-D Perreault Avenue
Val-d'Or Quebec
J9P 2G3

by
Miller and Associates
A.R. Miller. PhD, P Geol
87 Findlay Avenue
Ottawa, Ontario
K1S 2V1

October 17, 2003

Statement of limitation

Miller & Associates was requested to examine two specimens taken from mineral prospects owned by Hinterland Metals Inc: one sample is from the Helen Au-Ag prospect and the second sample from the Chris Chrysoprase prospect, both from the Yukon Territory. Miller & Associates was not involved with any facet of the exploration program on this property nor has Miller & Associates worked in this area.

Objective of the project

The objectives of this geological investigation were:

Helen Au-Ag prospect

- to document the mineralogy and textural relationships between silicates and opaques in the sample from the Helen Au-Ag prospect;
- using a scanning electron microscope document ore textures in ultra fine metallic aggregates and interpret the mineralogy of these ultra fine-grained aggregates based on energy dispersive spectral images of the phases

Chris Chrysoprase

- using a scanning electron microscope, document the elemental composition of the two distinctive coloured domains and identify the element that imparts the distinctive apple green hue to one of the coloured domains;
- to identify the ultra fine-grained metallic minerals in these two coloured domains
- infer the protolith that hosts or from which these chrysoprase veins were formed.

This report is comprised of two parts. Part I presents a summary of the petrographic data and interpretations of the data collected during the scanning electron microscope investigation. Part II presents the petrographic data. One polished thin section was made from the Helen Au-Ag sample. The petrographic analysis includes close-up photographs of the hand specimen and polished thin section, a brief summary highlighting the important features of that petrographic description with interpretations and is followed by sections that describe in detail the mineralogy, visual modal estimate, texture and fabric, alteration, metamorphism and the inferred protolith. Photomicrographs are taken in order to document features as hypogene mineralogy and textures as well as textures formed due to oxidation. The investigation on the chrysoprase sample used a polished rock chip and focused on determining the elemental signature of selected colour domains and minute opaque minerals using a scanning electron microscope.

Both samples have very complex mineralogy and with the limited time devoted to the scanning electron microscope investigation, the following results with interpretations should be regarded as first-order insights towards understanding the processes that formed these prospects.

Part I: Discussion

Scanning electron microscope methodology and investigation

Methodology

The laboratory where this investigation was performed is equipped with a Cambridge S-360 scanning electron microscope (SEM), to which is attached an Oxford Link Analytical eXL-II integrated energy dispersive spectrometer (EDS) or analyzer. The SEM uses a rastered electron beam to produce a variety of imaging modes from rough and polished samples. This SEM is configured to produce several image types: 1) conventional topographic (secondary electron), 2) atomic number contrast (backscattered electron) and 3) cathodoluminescence images. All images reproduced in Part II of this report are backscattered electron images. Backscattered electron image utilizes grey level intensity shading and this shading or intensity level is related to average atomic number. High resolution digital SEM images were captured and stored at 2992x2272 resolution in jpeg format, edited in image-based software and then reproduced in Part II of this report. Energy Dispersive X-Ray Spectrometer (EDS) is an instrument attached to an electron beam instrument and is used to detect and analyze x-rays emitted from the sample surface when impinged upon by the primary electron beam. The SEM allows for complete integration with the EDS system for image and x-ray analysis. Emitted x-rays were captured and displayed as energy dispersive spectral image. Individual energy peaks within a spectral image are compared to data files that identify a peak or peaks according to energy levels and geometric configuration. The element specific to that energy peak is then embedded in the energy dispersive spectral image.

The elements that comprise the ore minerals have energy levels that are similar and consequently the major energy peaks that characterize an element can overlap when viewed on an energy dispersive spectral image. Because peaks overlaps did occur, it was essential to carefully examine the geometry of individual peaks in order to ascertain if the peak shape was a combination of two elements i.e. Bi or Bi and S. This type of peak investigation is time consuming and consequently the total amount of work planned on this polished thin section was not achieved.

Helen Au-Ag prospect

Petrography and ore microscopy

Hypogene assemblage

This sample is mineralogically simple and comprised of approximately 65% arsenopyrite and 35% quartz. The distribution of arsenopyrite and quartz is uneven. The result are domains comprised of fine-grained aggregates of arsenopyrite that form semi-massive arsenopyrite (Plate 1A, 5B) whereas other domains are comprised of arsenopyrite hosted in anhedral quartz (Plate 6). An unusual mineralogical attribute of this sample is that there is an absence of hydrothermal carbonate, white mica (sericite, illite/muscovite or kaolinite) or chlorite.

The accessory opaque minerals associated with arsenopyrite are ultra fine-grained and are present either as inclusions in arsenopyrite or as ultra fine-grained aggregates interstitial to arsenopyrite+quartz. Trace quantities of very fine-grained pyrrhotite are present only as armoured grains in arsenopyrite (Plate 4). This textural association implies early co-crystallization of arsenopyrite+pyrrhotite. The lack of pyrrhotite coexisting interstitial to arsenopyrite suggests the main stage of metallic crystallization occurred primarily within the arsenopyrite compositional field.

Ultra fine-grained gray metallic aggregates are interstitial to arsenopyrite and quartz (Plates 2A-D). The textural association of these ultra fine-grained aggregates as inclusions in arsenopyrite, interstitial to and intergrown with very fine-grained arsenopyrite suggests that these metallic aggregates are coeval with main stage arsenopyrite crystallization (Plates 2A, 2B, 9). These ultra fine-grained interstitial aggregates are comprised of the following minerals based on interpretation of the energy dispersive spectral images: native bismuth (Plate 10C), bismuthinite, alloys of silver-bismuth (Plate 10B, 12B, C) and silver-bismuth-lead mineral(?) and galena (Plates 10-12). The gold-bearing mineral or minerals were not identified during this scanning electron microscope investigation.

If this sample is representative of the vein complex, this hydrothermal vein complex has been deformed. Deformation is recorded by an intense fracturing/scattering of brittle arsenopyrite, particularly in the semi-massive arsenopyrite domains. Brittle deformation has hastened in part the oxidation of the arsenopyrite component in this arsenopyrite+quartz rock.

Supergene assemblage

The hackly fresh surface on the sample is oxidized and is characterized by a bluish green to emerald green coating. Macroscopic and microscopic examination of this arsenopyrite+quartz rock revealed that the oxidation process is present throughout the semi-massive arsenopyrite and is controlled by macro- and micro-scale fractures (Hand specimen and thin section images; Plates 1B, 3, 5A, 6). Fractures, filaments that conform to grain boundaries between quartz-quartz and quartz-arsenopyrite and irregular-shaped aggregates interstitial to quartz have been filled with a high relief very fine-grained mineral. Hypogene arsenopyite has been corroded by this secondary mineral (Plate 7). The edges of hypogene arsenopyrite are serrated or ragged when in contact with this secondary mineral. These ragged edges contrast with the smooth edges present in unoxidized subhedral arsenopyrite (Plate 2D, extreme right side of image).

The energy dispersive spectral image of this fracture-filling secondary mineral revealed that it is comprised of arsenic+iron+oxygen and only trace sulphur (Plate 8A). This spectral image contrasts with the spectral image of the immediately adjacent arsenopyrite (Plate 8B).This mineral is inferred to be a hydroxide, possibly scorodite [FeAsO4.2H2O]. This identification should be regarded as tentative until verified by X-Ray powder diffraction techniques because there are several other As-Fe-O-H bearing minerals. However the colour of the secondary crust/film that has formed on the semi-massive arsenopyrite hand specimen corresponds to the colour range listed for scorodite in mineralogy reference manuals.

Chris chrysoprase prospect

The energy dispersive spectral images of the apple green and tan domains are markedly different as indicated by the different gray scale shown in the backscattered image (Plate 13A). The apple green domain is comprised of silica, i.e. chalcedony and the energy dispersive spectral image displays no significant contribution from elements with higher energy levels above background noise i.e. elements with a higher energy level than Si, to the right (Plate 13B). In contrast the tan domain has a spectral image that is dominated by magnesium and oxygen with subordinate iron (Plate 13C). This combination of elements might suggest that this tan domain is comprised of periclase [MgO] or brucite [$Mg(OH)_2$] and possibly derived from olivine. The tan domains do not polish to a high gloss as do the harder apple green chalcedony domains. The tan domains also display a lower relief in relation to the chalcedony domains.

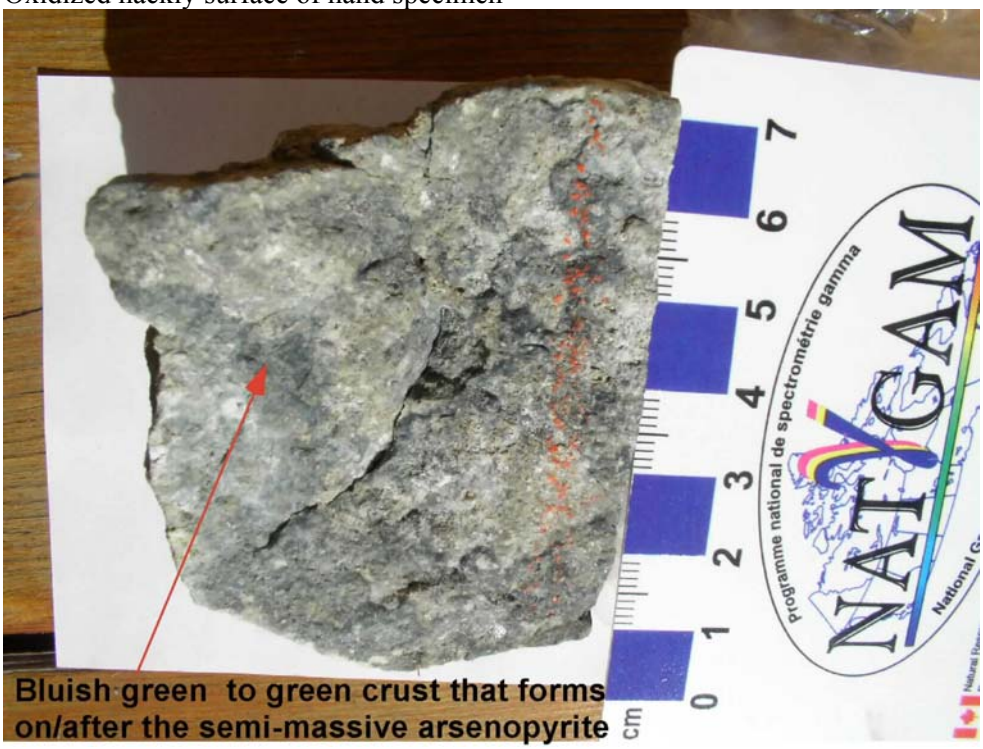
Importantly the tan domain hosts minute opaque grains either as disseminations or filling minute fractures/seams. These opaque grains are compositionally variable and include the elements: Ni, Fe, Cr, Si, Al. The morphology of some grains, i.e. pseudomorphs and the elemental composition clearly indicate derivation from a spinel, most probably from the chromite series (Plate 14). These pseudomrphs are termed ferrichromite and conclusively indicate that the chrysoprase was developed from and within an ultramafic protolith. All ultramafic units in the region that have a similar geological-structural setting to the Chris chrysoprase prospect should be evaluated, claimed or permitted, as potential targets for gem quality material.

Thus it is assumed that the element that imparts the apple green colour to the chrysoprase is most likely Cr, Fe, Ni or V. Another analytical technique must be utilized to determine what element is responsible for the distinctive colour, possibly an electron microprobe or proton microprobe. Whole rock chemistry would not be appropriate because of the minute Ni-Cr-Fe bearing phases disseminated through the chrysoprase.

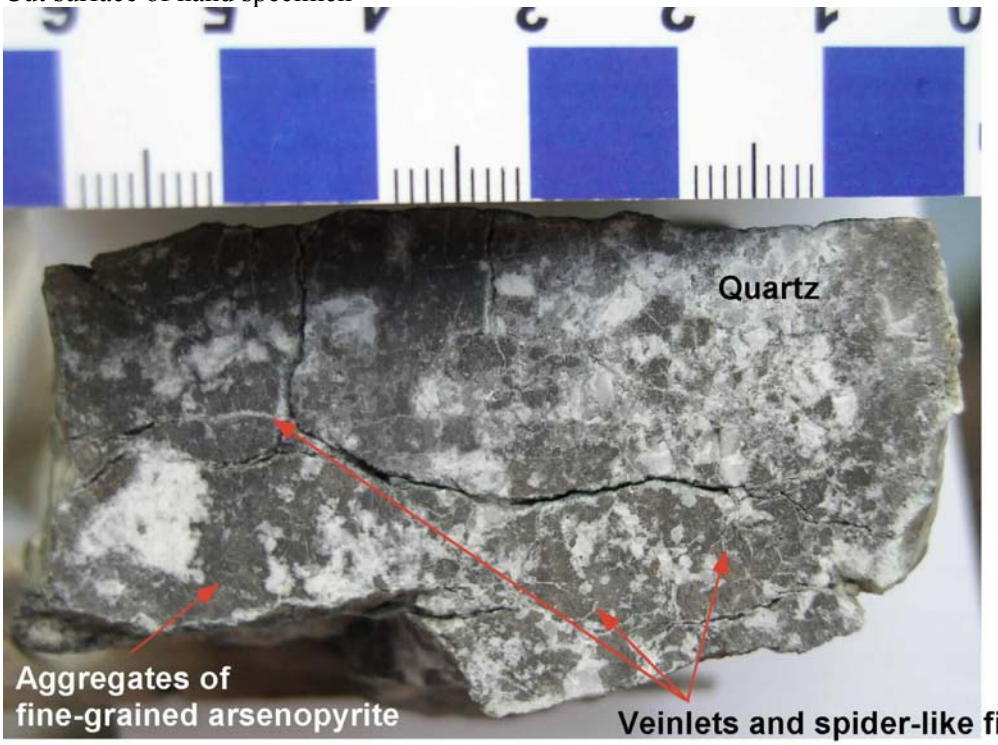
PART II: Petrography-ore microscopy

Sample #: a sample from the Helen Au-Ag prospect, Yukon Territory

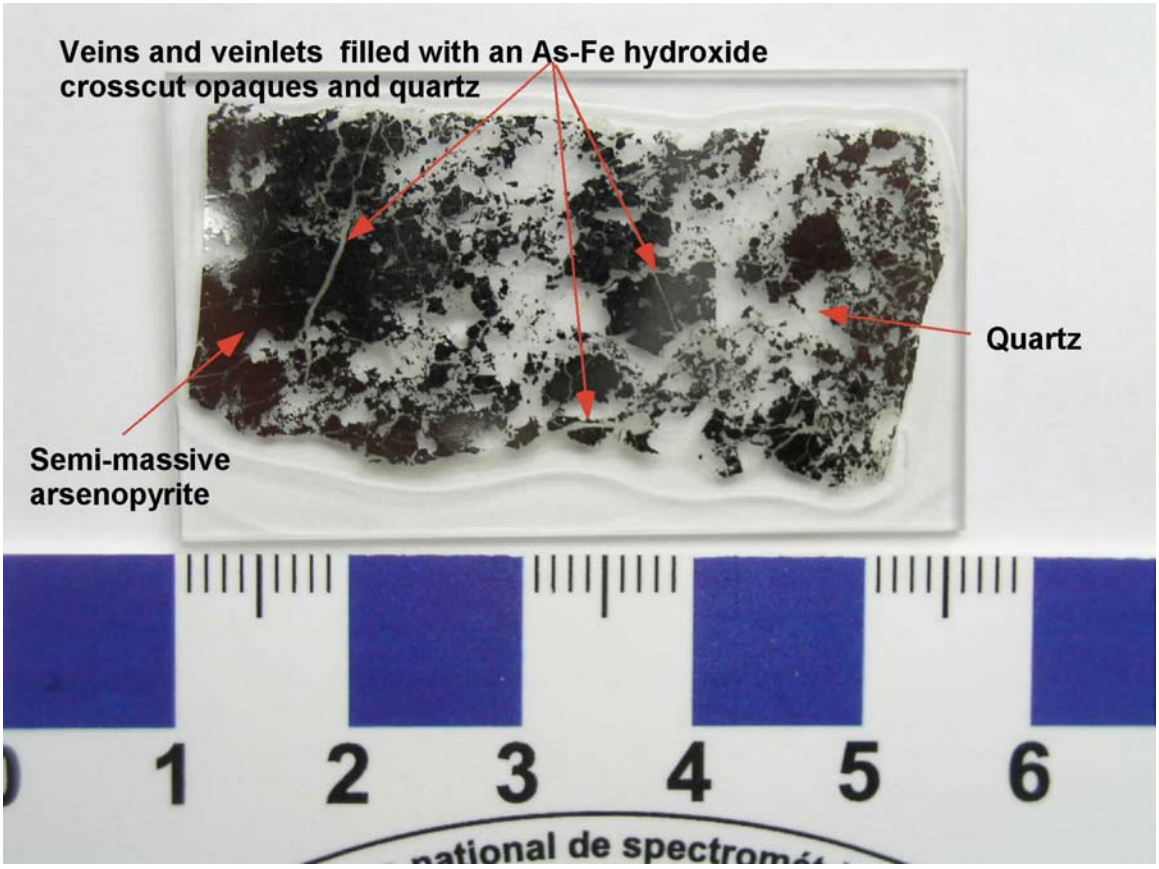
Oxidized hackly surface of hand specimen



Cut surface of hand specimen



Polished thin section



SUMMARY: ***weakly deformed hydrothermal vein comprised of semi-massive arsenopyrite with quartz***. This vein displays three striking mineralogical attributes. These are: 1) arsenopyrite and quartz constitute >99% of the hypogene mineral assemblage; 2) there is an absence of typical hydrothermal minerals as carbonate, illite/muscovite, kaolinite, and chlorite and 3) the opaque mineral assemblage is dominated by arsenopyrite with trace amounts of early pyrrhotite as armoured inclusions in arsenopyrite and trace amounts of Ag, Bi and Pb-bearing minerals. The latter minerals are present as inclusions in arsenopyrite and interstitial to arsenopyrite and quartz. These ultra fine-grained metallic aggregates are comprised of native bismuth, bismuthinite, alloys of Bi+Ag and galena. The quartz+arsenopyrite assemblage is weakly deformed, i.e. scattered/fractured and has undergone weak oxidation.

TYPE: PTS (polished thin section)
ASSEMBLAGE: quartz, metallic opaques (arsenopyrite, pyrrhotite, ultra fine-grained mats comprised of metallic minerals, unknown fracture-filling mineral
VISUAL MODAL ESTIMATE (only hypogene minerals): 35% quartz, 65% arsenopyrite, trace pyrrhotite, trace ultra fine-grained mats of metallic minerals
ASSEMBLAGE: 35% quartz, 65% arsenopyrite, trace pyrrhotite, trace ultra fine-grained mats of metallic minerals

MINERALOGY:

Essential:

Quartz: grain size highly variable from 3.0 to 0.2 mm; grains are anhedral. Depending on the proportion of quartz to metallic minerals, the quartz is either interstitial to opaques or is the matrix/host to opaques.

Arsenopyrite: most abundant metallic mineral. Subhedral grains to 0.4 mm but most commonly arsenopyrite forms irregular shaped aggregates up to 8 mm in longest dimension. These aggregates with subordinate quartz form semi-massive arsenopyrite domains. Some arsenopyrite grains are rimmed or partially rimmed by the mineral that fills fractures. The edges of these mantled arsenopyrite grains are commonly minutely serrated, a textural relationship that implies that the arsenopyrite has been corroded/dissolved. This same textural relation, i.e. ragged fracture walls, is present along the walls of fractures that crosscut arsenopyite. sand Arsenopyrite grains and there are aggregates

Accessory:

Unknown fracture-filling mineral: fills anastomosing veins and veinlets that transect both quartz and opaques. Inn plane light, this mineral has a light pale tan to light brown hue and in crossed nicols it has a first order gray black interference colour and there are minute domains that have higher interference colours similar to sericite.

Unknown opaque: have a gray reflectance colour and occur as ultra fine-grained mats interstitial to arsenopyrite and quartz. These mats range up to 0.2 mm in longest dimension. (Identification is required with a microprobe or scanning electron microscope).

Pyrrhotite: trace amount; only present as anhedral grains armoured in arsenopyrite.

TEXTURE & FABRIC:

No penetrative fabric developed in the arsenopyrite+quartz vein material. This hydrothermal vein assemblage has been overprinted by a brittle deformation event. This deformation event is recorded by anastomosing unoriented fractures that locally shatter semi-massive arsenopyrite and quartz. These fractures have been filled with a secondary As-Fe oxide or hydroxide as well as this same mineral lining the boundary between quartz-quartz and quartz-arsenide.

ALTERATION: This semi-massive arsenopyrite samples is inferred to be from a vein. The lack of wall rock attached to the metallic-rich sample as well as fragments of wall rock incorporated within the vein material do not allow identification of the type of alteration associated with this arsenopyrite-rich sample. In this sample there is a lack of carbonate sericite, chlorite and possibly adularia, common hydrothermal minerals associated with epithermal vein-type precious metal deposit.

METAMORPHISM: no applicable based on the character of this sample.

INFERRED PROTOLITH: hydrothermal vein comprised of semi-massive arsenopyrite with quartz

Hypogene minerals and textural relationships

Plate 1. Photomicrographs, **A**-reflected light, **B**-plane light, show the semi-massive arsenopyrite (Apy)-rich portion with minor quartz (Q). An inferred arsenic-iron (AF) hydroxide fills fractures of various dimensions and fills irregular shaped domains in quartz. FOV = 11 mm.

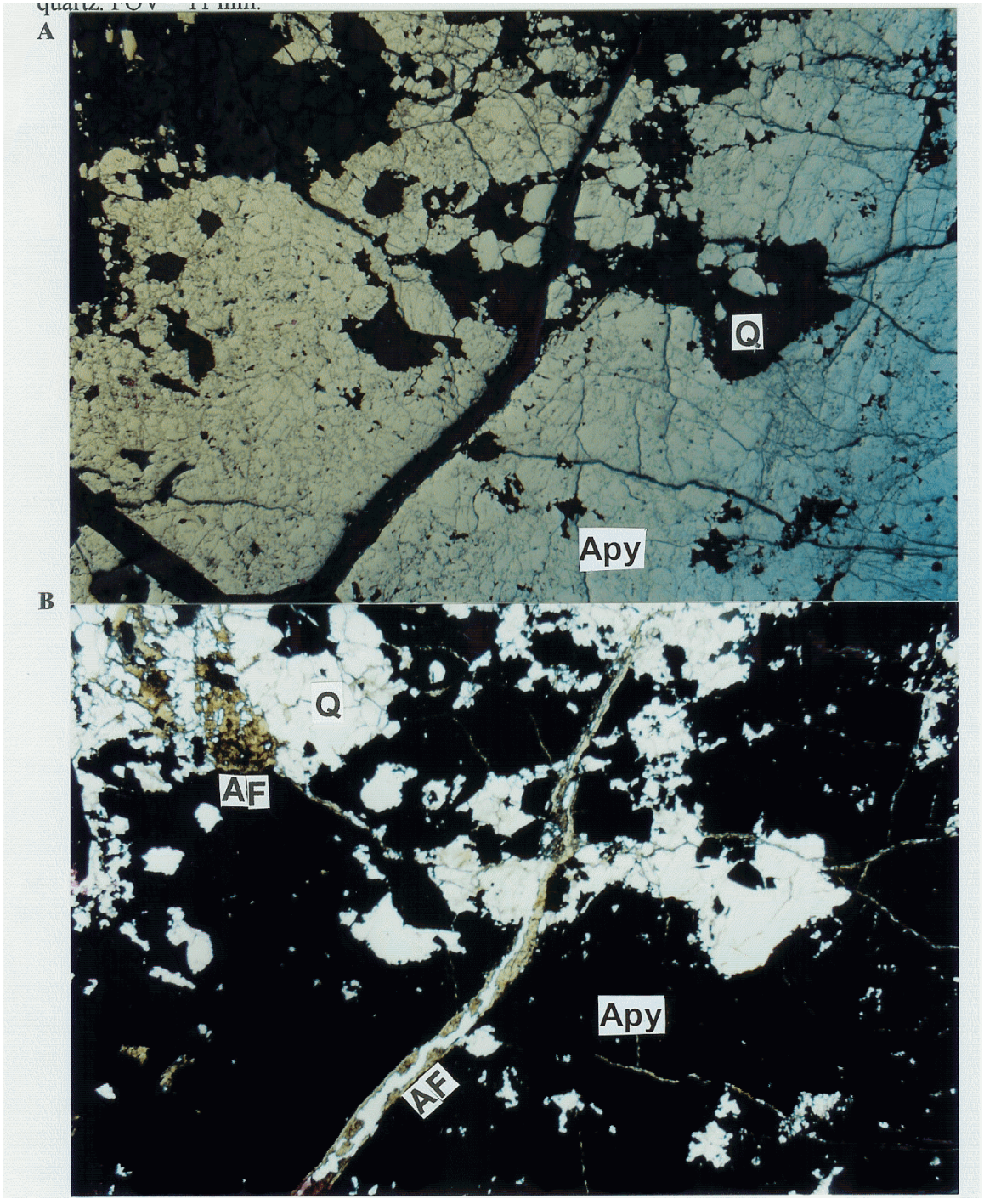


Plate 2. Photomicrographs, **A** & **B**-reflected light, show ultra fine-grained mat of bismuth (B)-bearing minerals interstitial to arsenopyrite (Apy) and quartz (Q). Ultra fine-grained arsenopyrite in the bismuth-rich mats suggests that the arsenopyrite and bismuth minerals are coeval. In **B**, galena (G) is associated with the mat of bismuth-bearing minerals. The black band in the upper left corner is part of an ink circle used to aid positioning during the SEM investigation. The textural complexity in these bismuth-rich mats is shown in the images from the scanning electron microscope. **A**-FOV = 1.35 mm; **B**-FOV = 0.67 mm.

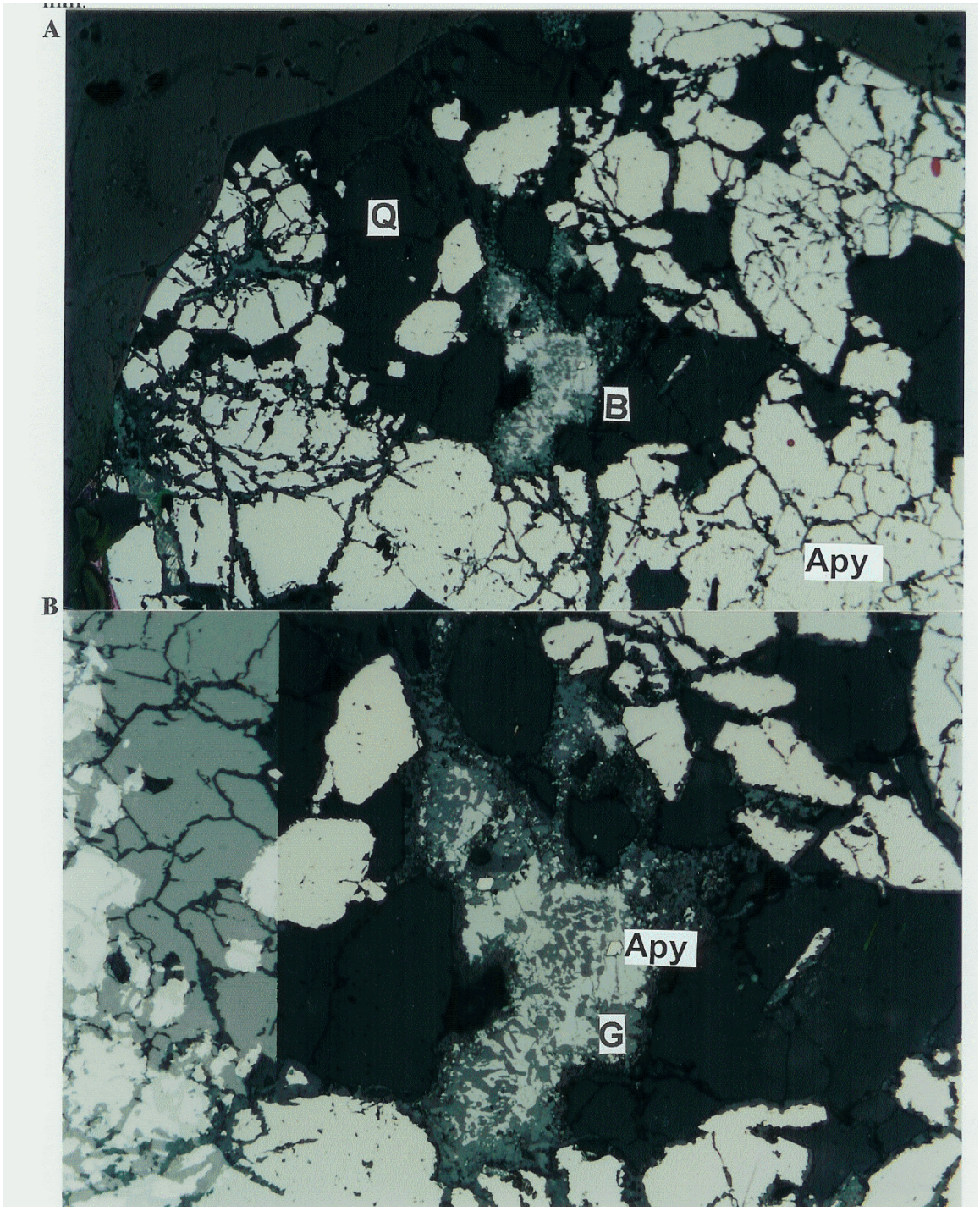


Plate 2**C**. Photomicrograph, **C** & **D**-reflected light, shows the ultra fine-grained mat of bismuth (B)-bearing minerals interstitial to quartz (Q). The black band in the right side is part of an ink circle used to aid positioning during the SEM investigation.
C, **D**-FOV = 0.67 mm.

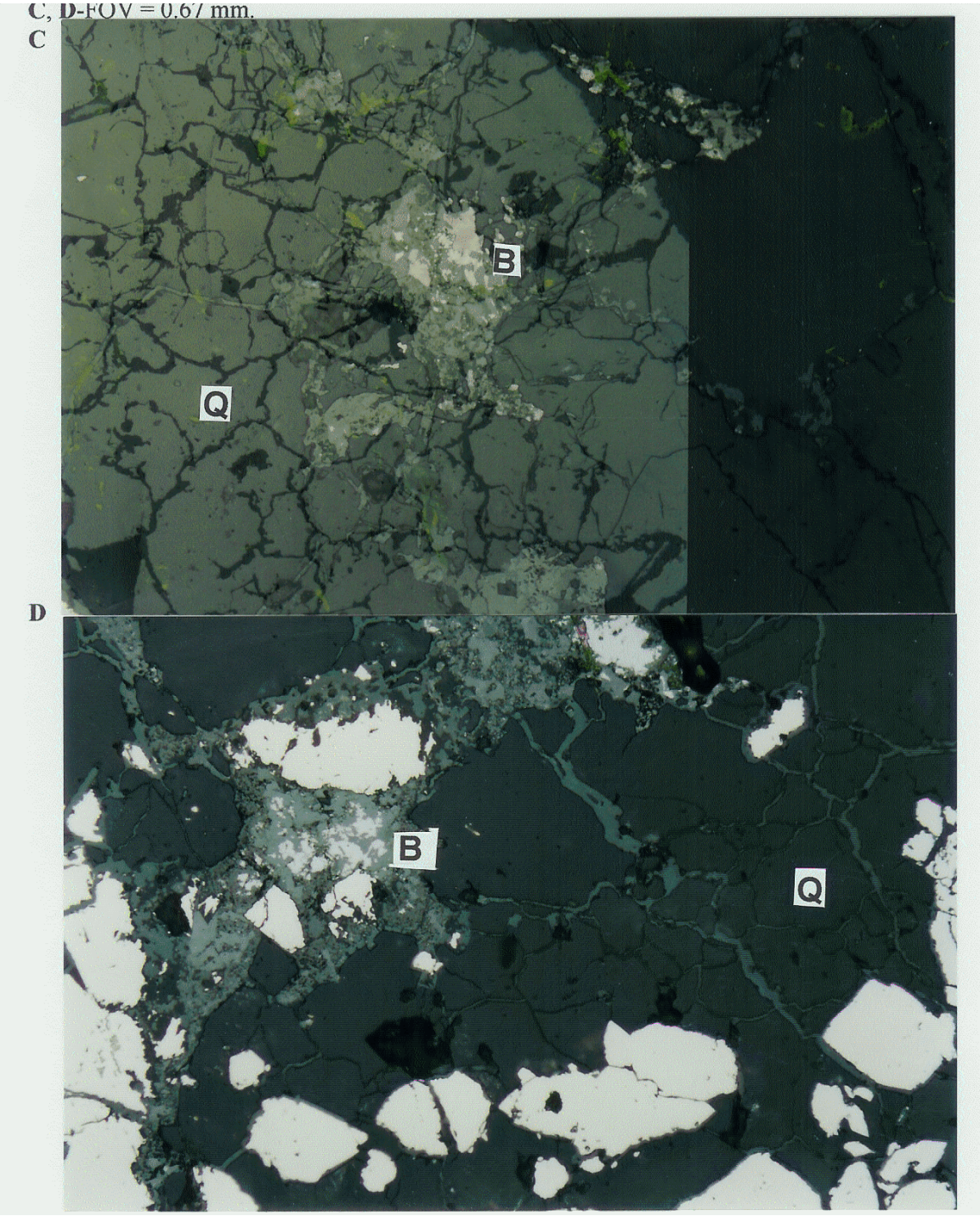


Plate 3. Photomicrograph, crossed nicols, shows an area of the rock that is comprised of approximately equal proportions of arsenopyrite (Apy) and quartz (Q), in contrast to semi-massive arsenopyrite in Plate 1. Veinlets and irregular-shaped domains filled with a secondary arsenic-iron hydroxide (AF) are present in the hypogene assemblage. This inferred secondary mineral, an As-Fe hydroxide, displays high order interference colours resulting in a mottled pearly appearance in polarized light. The red-black circle was placed on the section surface in order to aid positioning during the SEM investigation. FOV = 5.5 mm.

FOV = 5.5 mm.

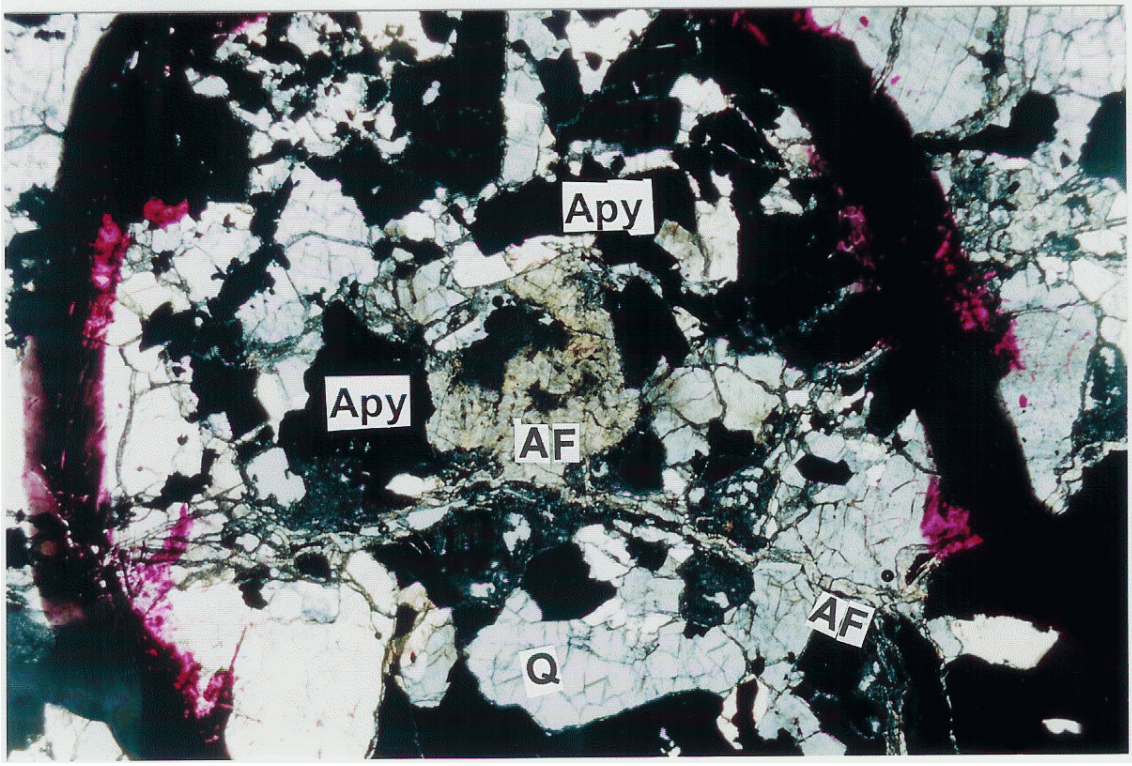


Plate 4. Photomicrograph, reflected light, shows minute inclusions of anhedral subequant pyrrhotite (Po) armoured in arsenopyrite (Apy). The textural restriction of pyrrhotite in arsenopyrite suggests that the hydrothermal systems began within a two phased field but moved into a one-phase field, crystallization of arsenopyrite to form an essentially mono-mineralic metallic-bearing assemblage of semi-massive arsenopyrite. FOV = 0.67 mm.

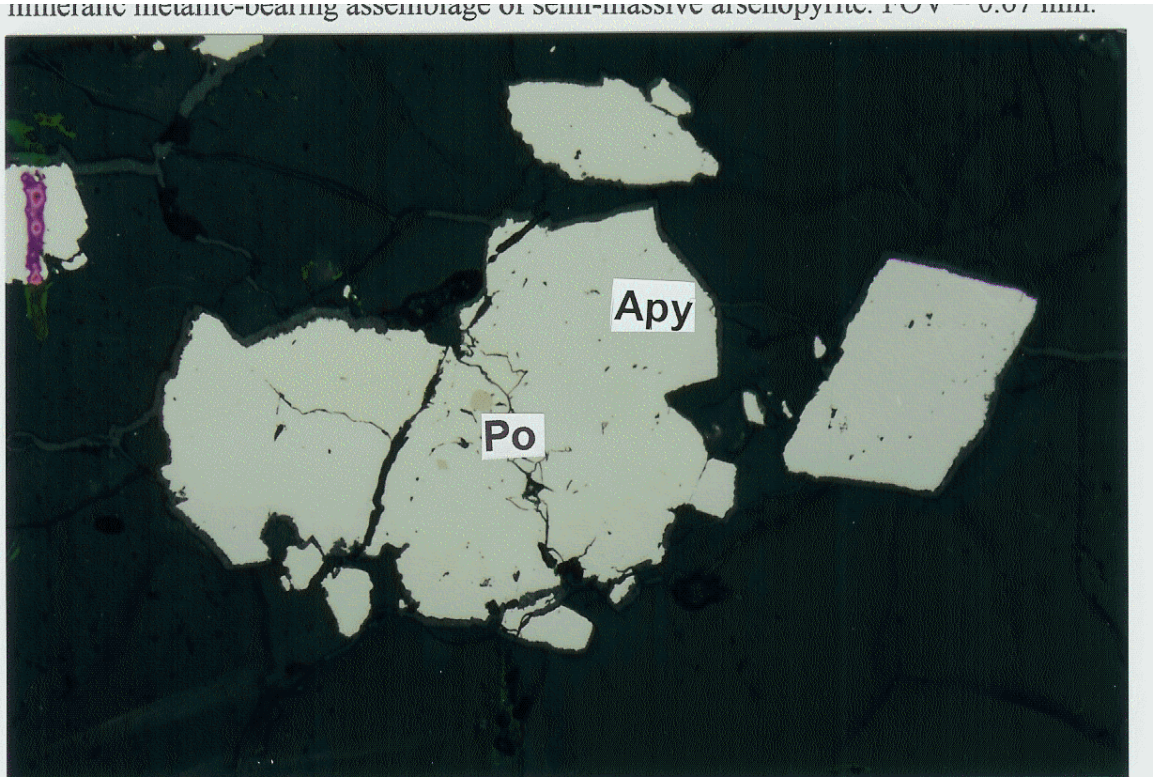
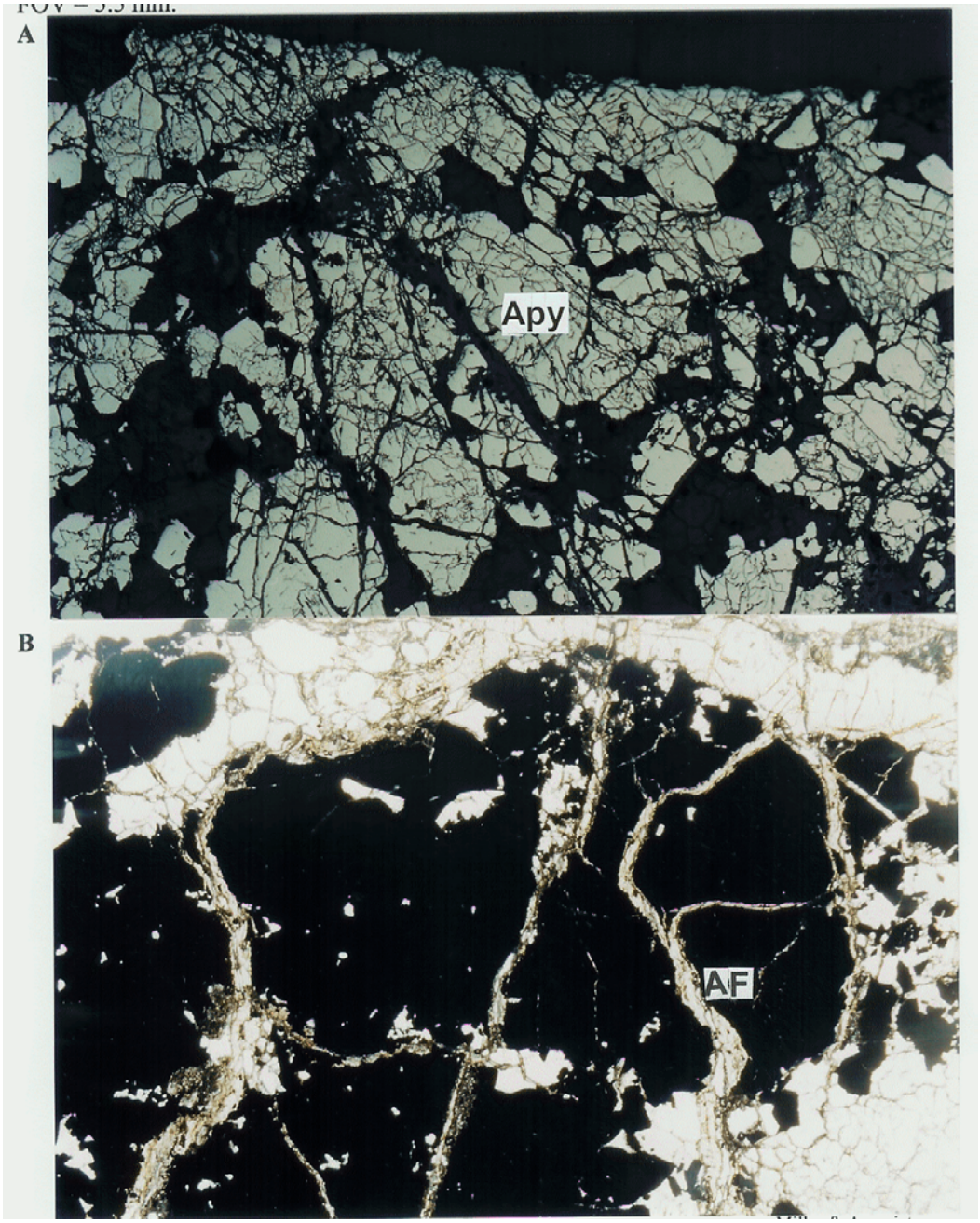


Plate 5. Photomicrographs, **A**-reflected light, **B**-plane light, show the local intense scattering of the semi-massive arsenopyrite (Apy). Clearly this mineralization has sustained post-mineralization deformation and possible extensions of this vein or hydrothermal system should be explored utilizing an understanding of regional and local fault kinematics. Fracturing of the semi-massive arsenopyrite has enhanced the secondary oxidation processes and the filling of fractures with arsenic+iron hydroxide (AF). FOV = 5.5 mm.



Supergene replacement and textural relationships

Plate 6. Photomicrographs, **A**-plane light, **B**-crossed nicols, show the primary fine-grained hypogene assemblage comprised of approximately equal proportions of anhedral arsenopyrite (Apy) and quartz (Q). Veinlets of an inferred As-Fe hydroxide (AF) crosscut the hypogene assemblage and also occur along grain boundaries between quartz and arsenopyrite. **A**-FOV = 11 mm; **B**-FOV = 1.35 mm.

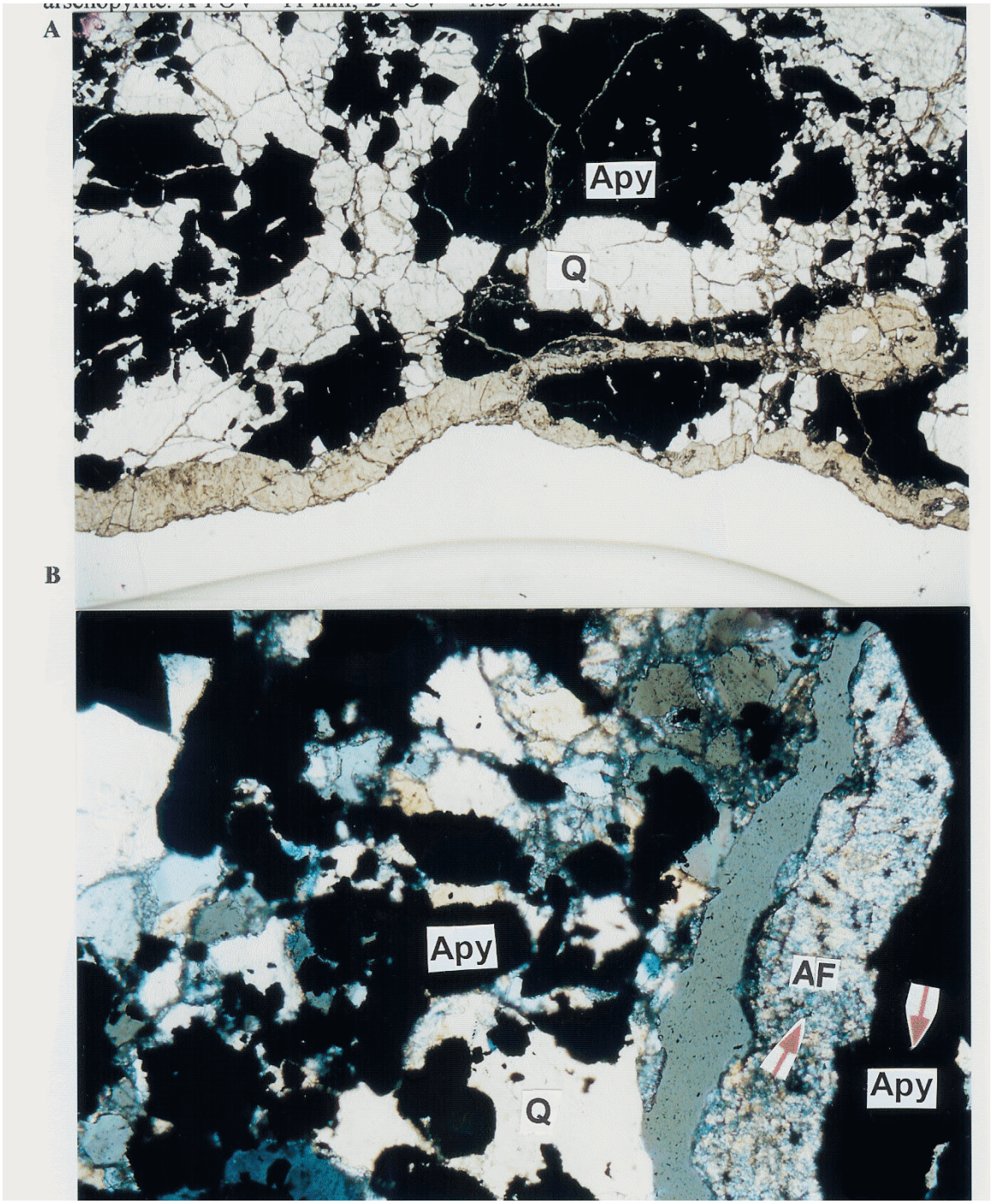


Plate 7. Photomicrographs, **A**-reflected light, **B**-plane light, **C**-reflected light, show the ragged corroded edges of arsenopyrite (Apy) when crosscut and mantled by the inferred arsenic-iron (AF) hydroxide. **A**, **B**-FOV = 11 mm; **C**-FOV = 1.35 mm.

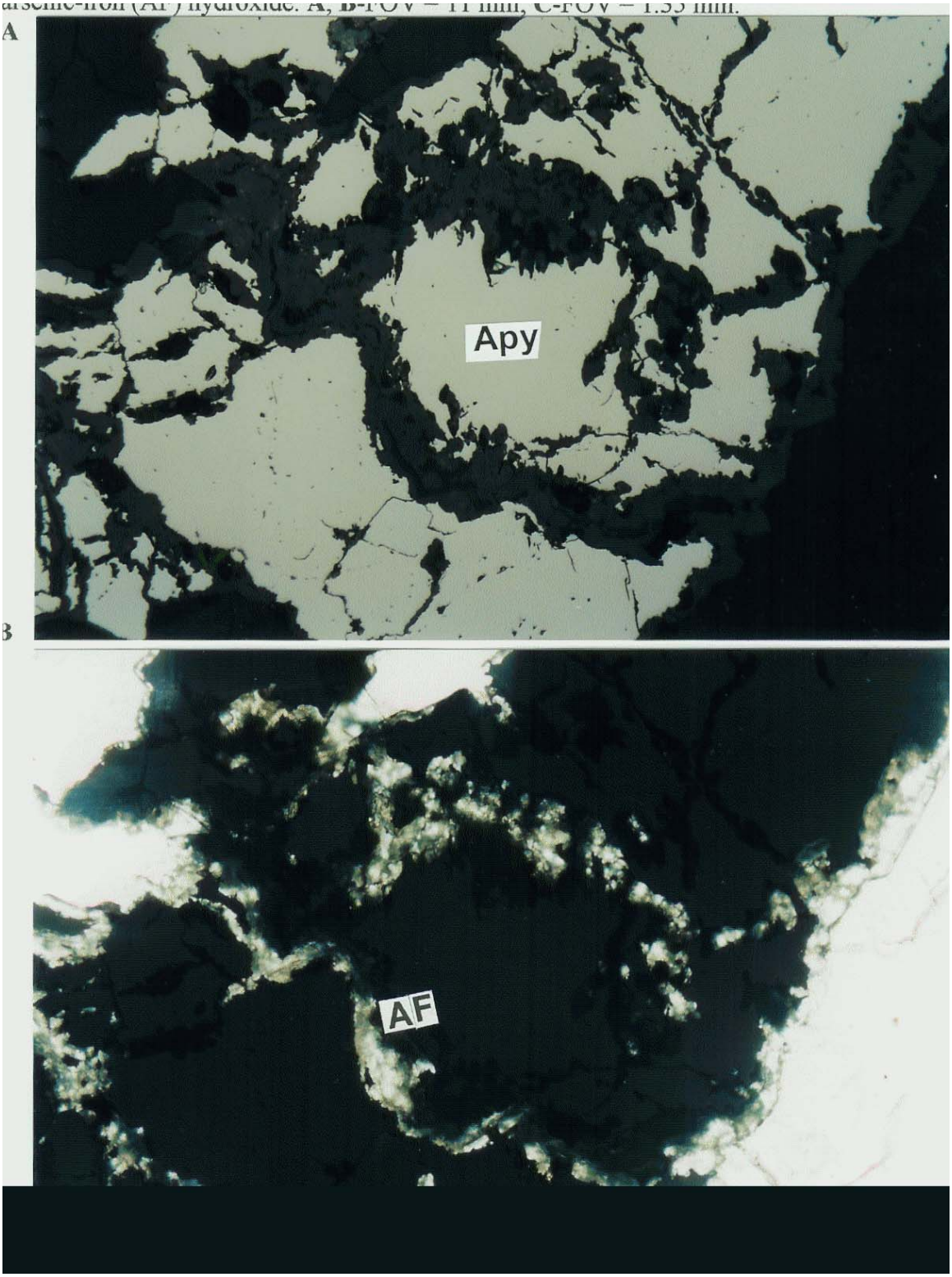


Plate 7**C**.

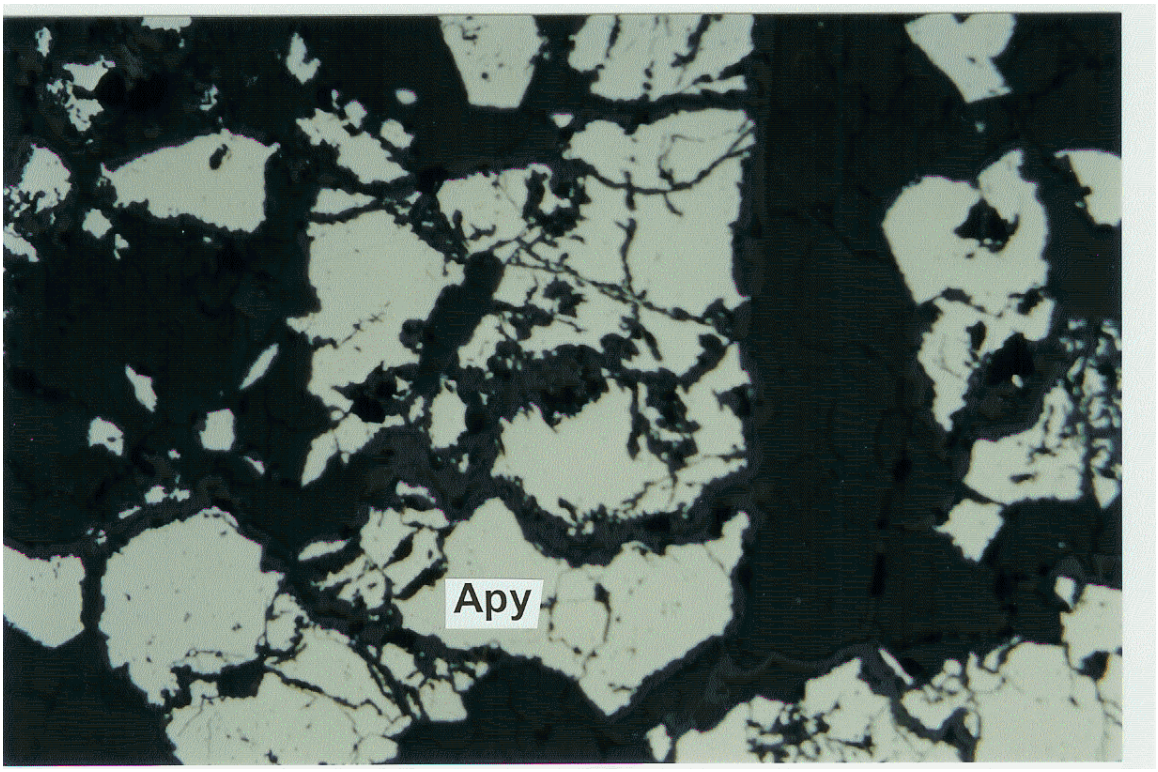
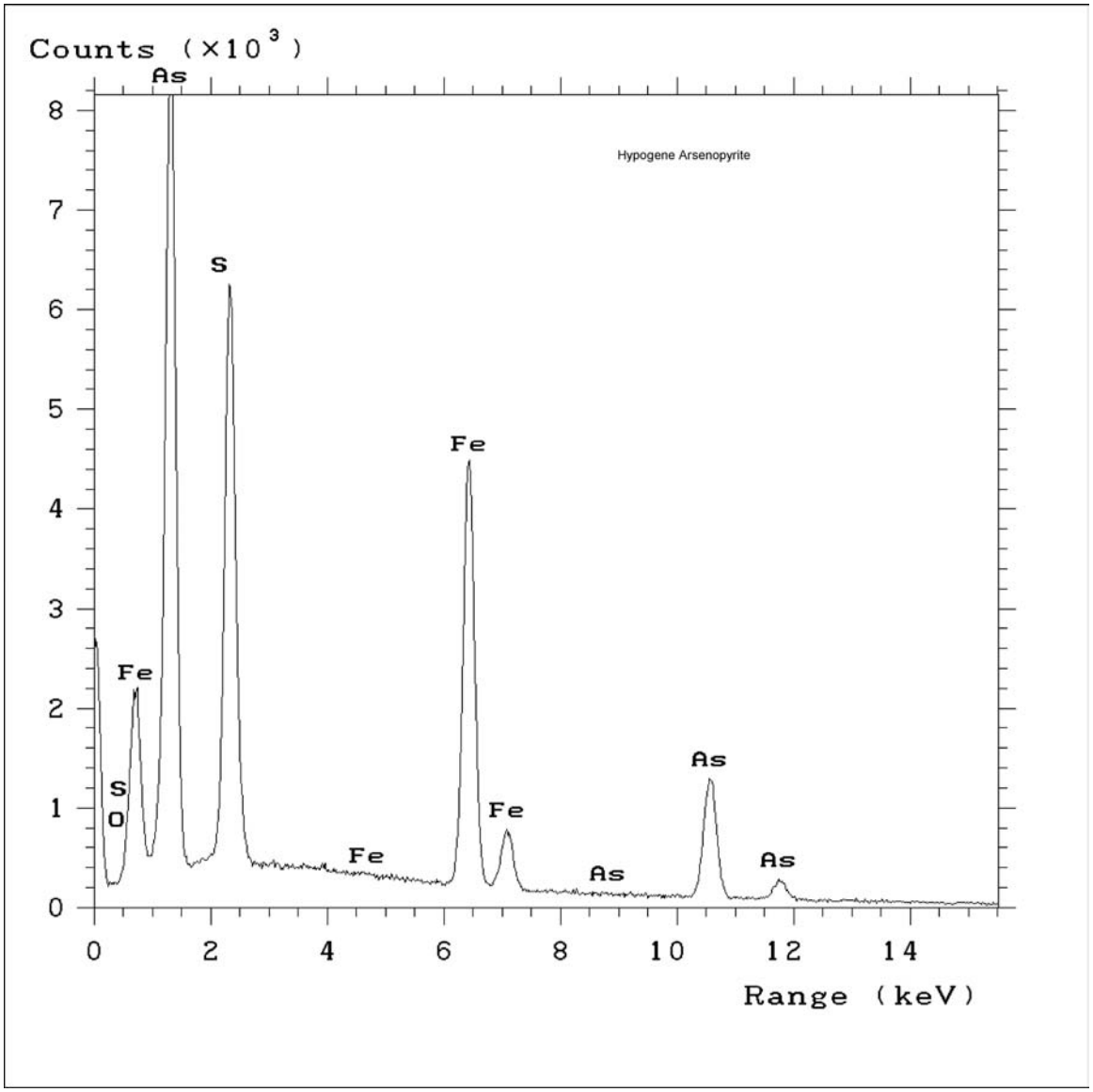


Plate 8. Energy dispersive spectral images show the contrast in elemental composition between hypogene arsenopyrite (**A**) and the adjacent secondary mineral, inferred to as a hydroxide (**B**). In **A**, the arsenopyrite is comprised of only As, Fe and S. In **B**, the secondary mineral is comprised of As, Fe and O (oxygen) and only trace sulphur. The major oxygen peak is used as the principal criteria for inferring a hydroxide or possibly an oxide. The location of these two spectral images are shown on Plate 6B and are marked as **A** and **B**.

A



B

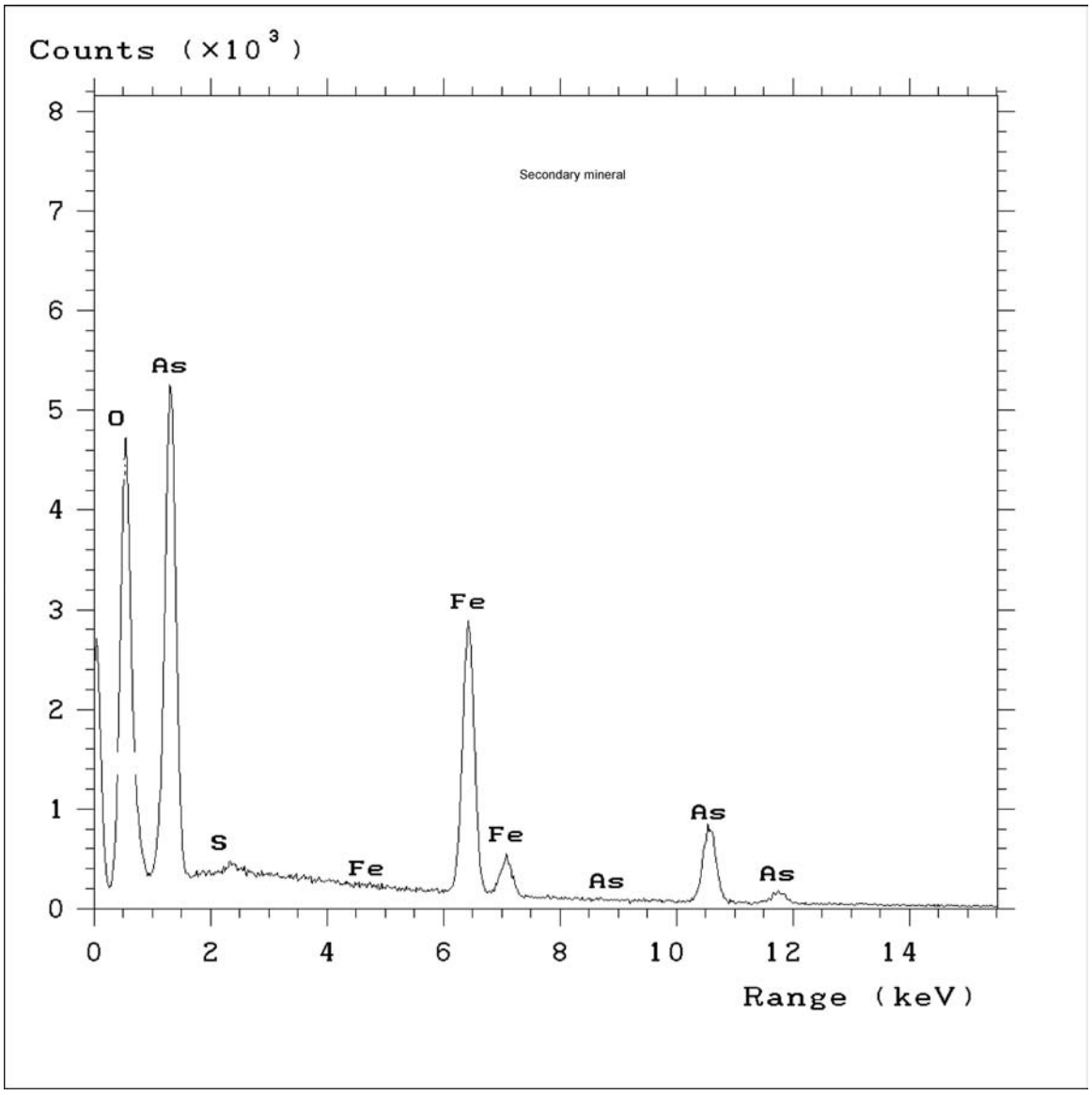

Counts (×10³)
Secondary mineral
O
As
S
Fe
Fe
Fe
As
As
As
0
1
2
3
4
5
6
7
8
0
2
4
6
8
10
12
14
Range (keV)

Plate 9. Backscattered electron image of arsenopyrite hosting ultra fine-grained inclusions of galena, a Bi+S phase inferred to be bismuthinite and a Bi+Ag phase.
The bar scale is 100 microns.

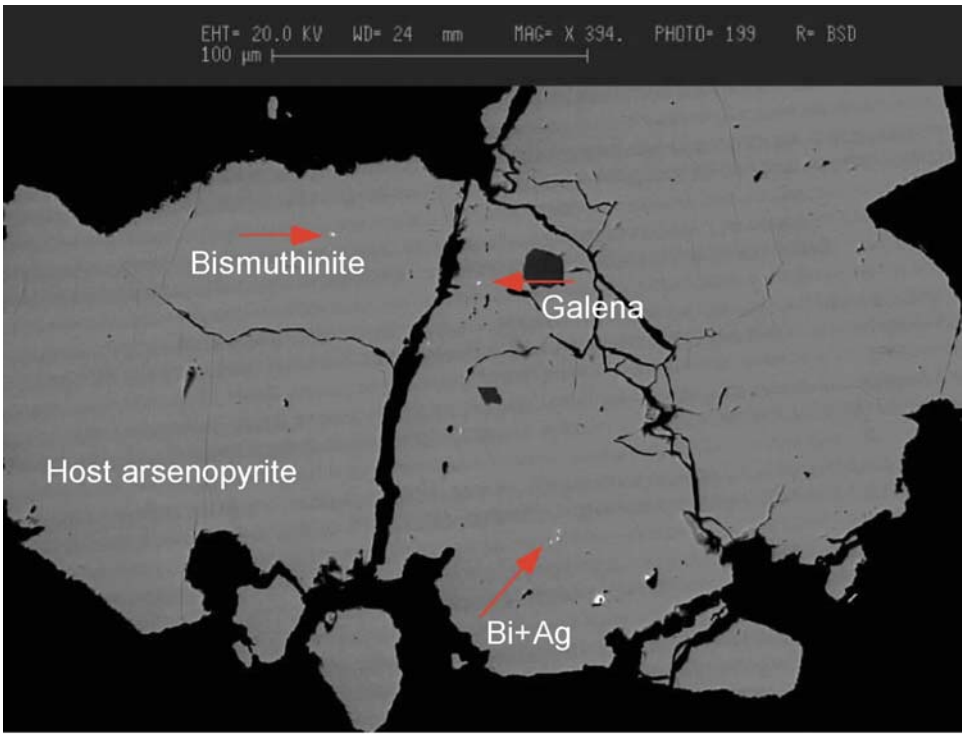


Plate 10**A**.Backscattered electron image of the ultra fine-grained metallic aggregate that is interstitial to arsenopyrite+quartz. This aggregate is comparable to the aggregates shown in Plates 2A-D. This ultra fine-grained aggregate is comprised of galena, bismuthinite, native bismuth and a Bi+Ag alloy/mineral. The bar scale is 20 microns.

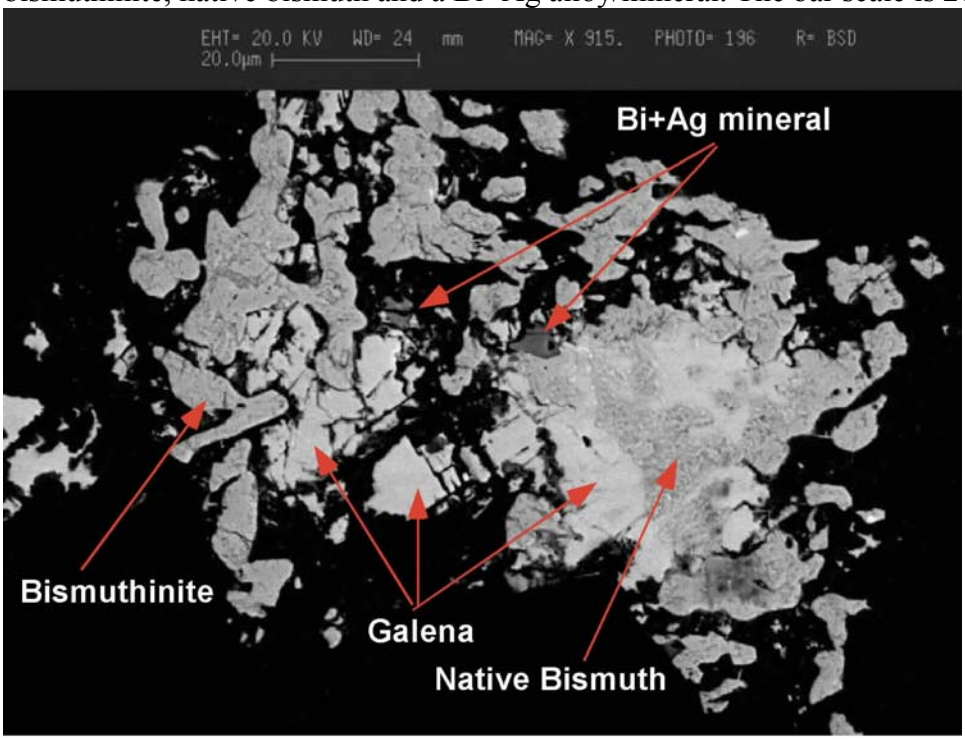


Plate 10**B**. The energy dispersive spectral images display the compositional differences between the two Bi-bearing minerals.
Spectra #1

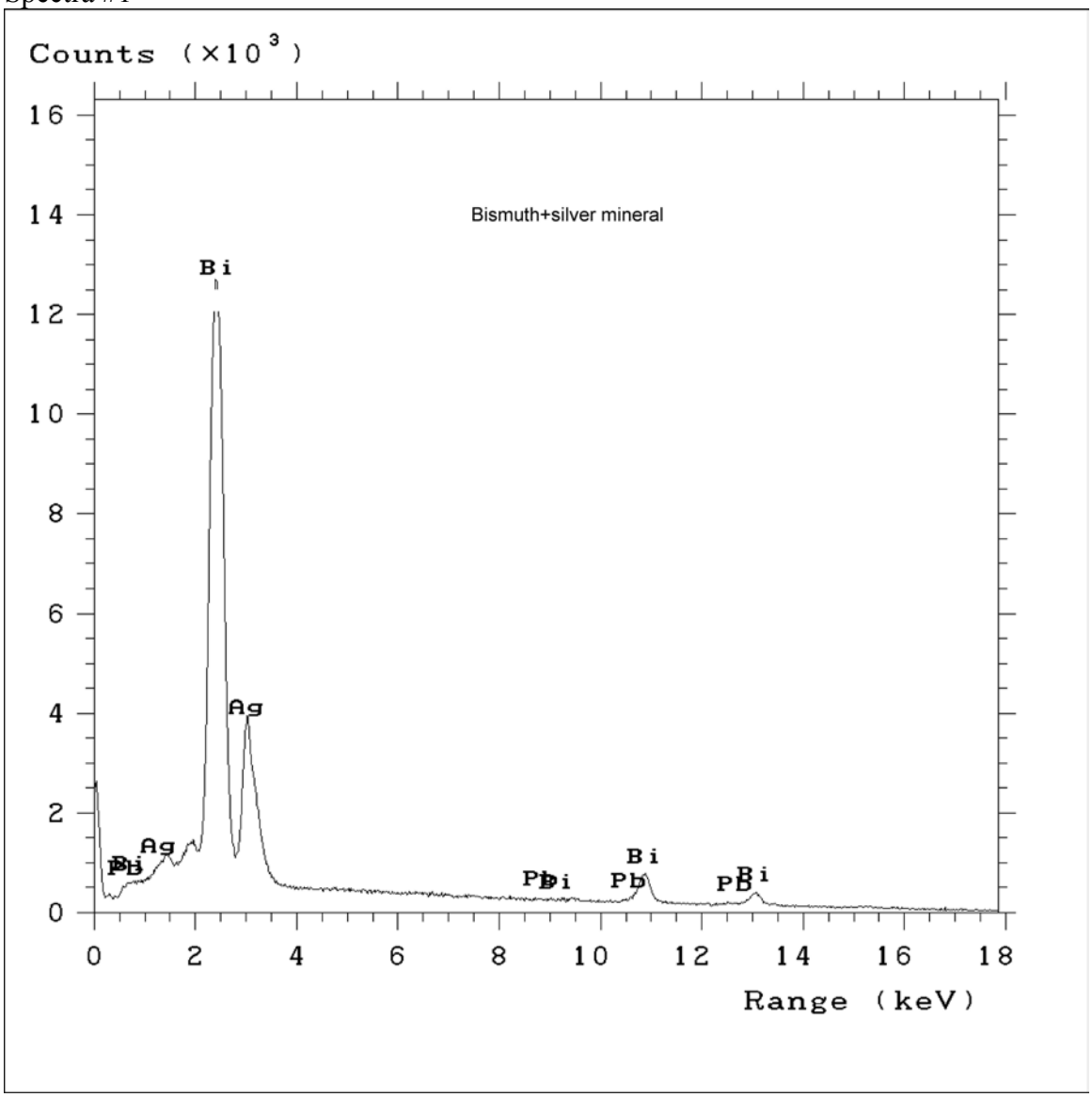


Plate 10C. Spectra #2

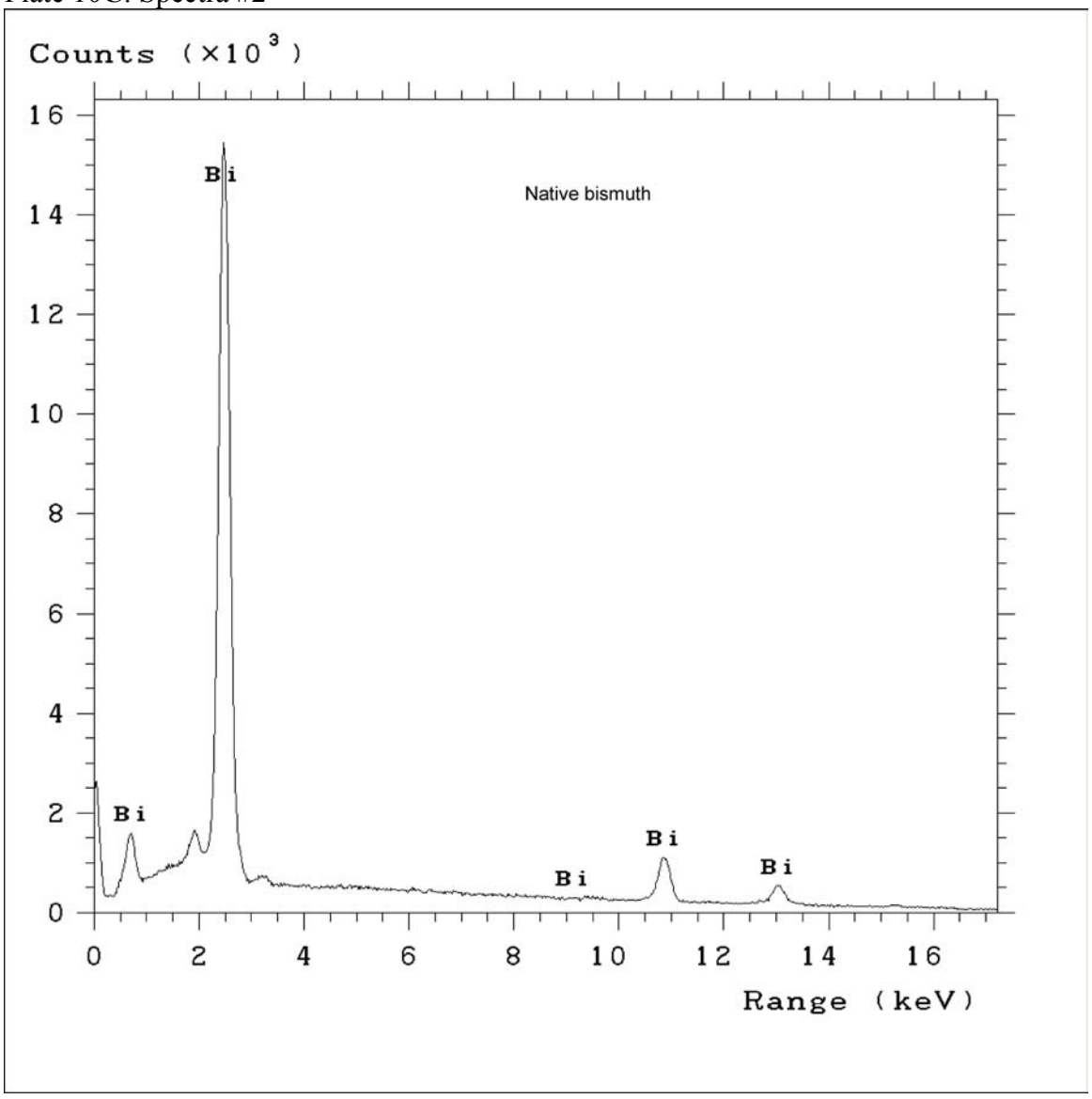
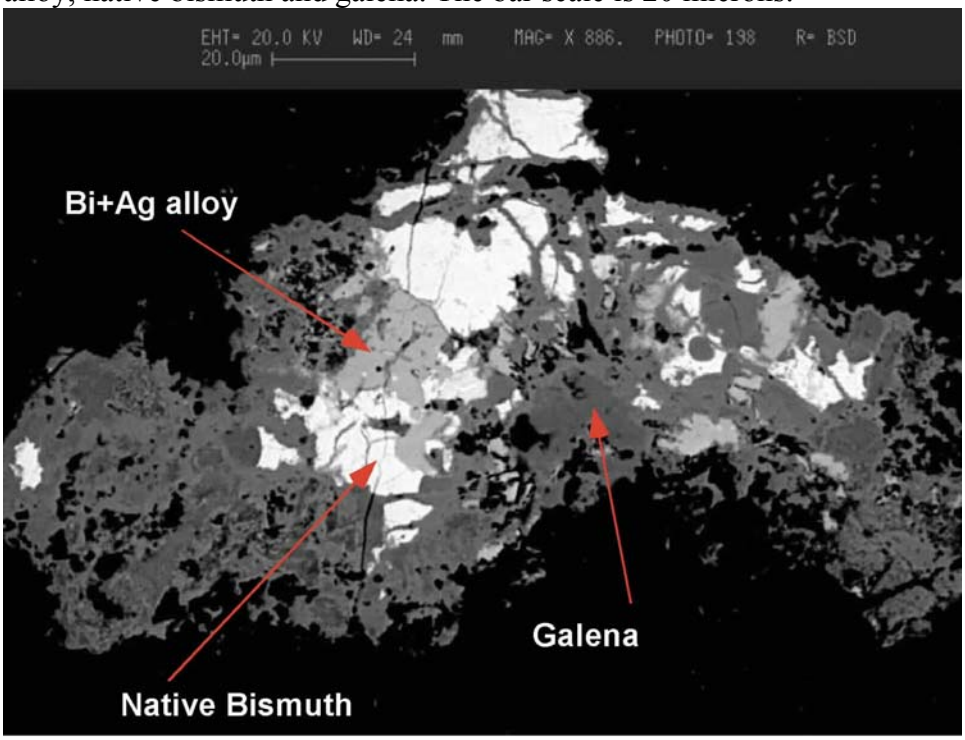


Plate 11. Backscattered electron image of the ultra fine-grained intergrowth of Bi+Ag alloy, native bismuth and galena. The bar scale is 20 microns.



12**A**. Backscattered electron image of the ultra fine-grained intergrowth comprised of bismuthinite, native bismuth and a Bi+Ag+S mineral. This aggregate is mantled by a As+Bi oxide or hydroxide. The bar scale is 20 microns.

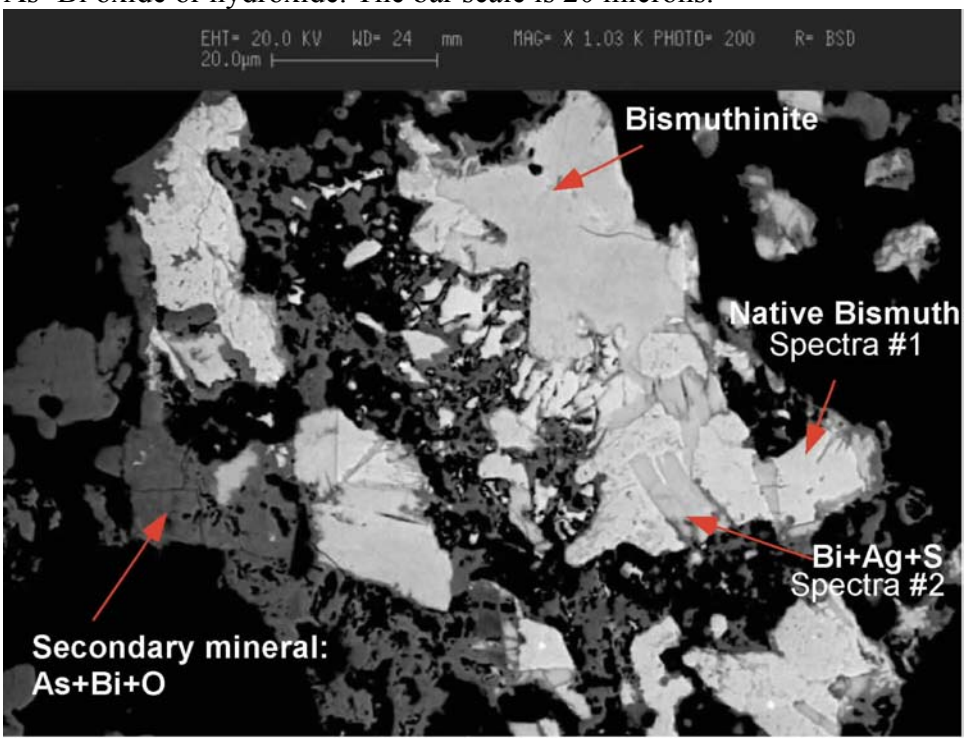


Plate 12**B**. Spectra #1

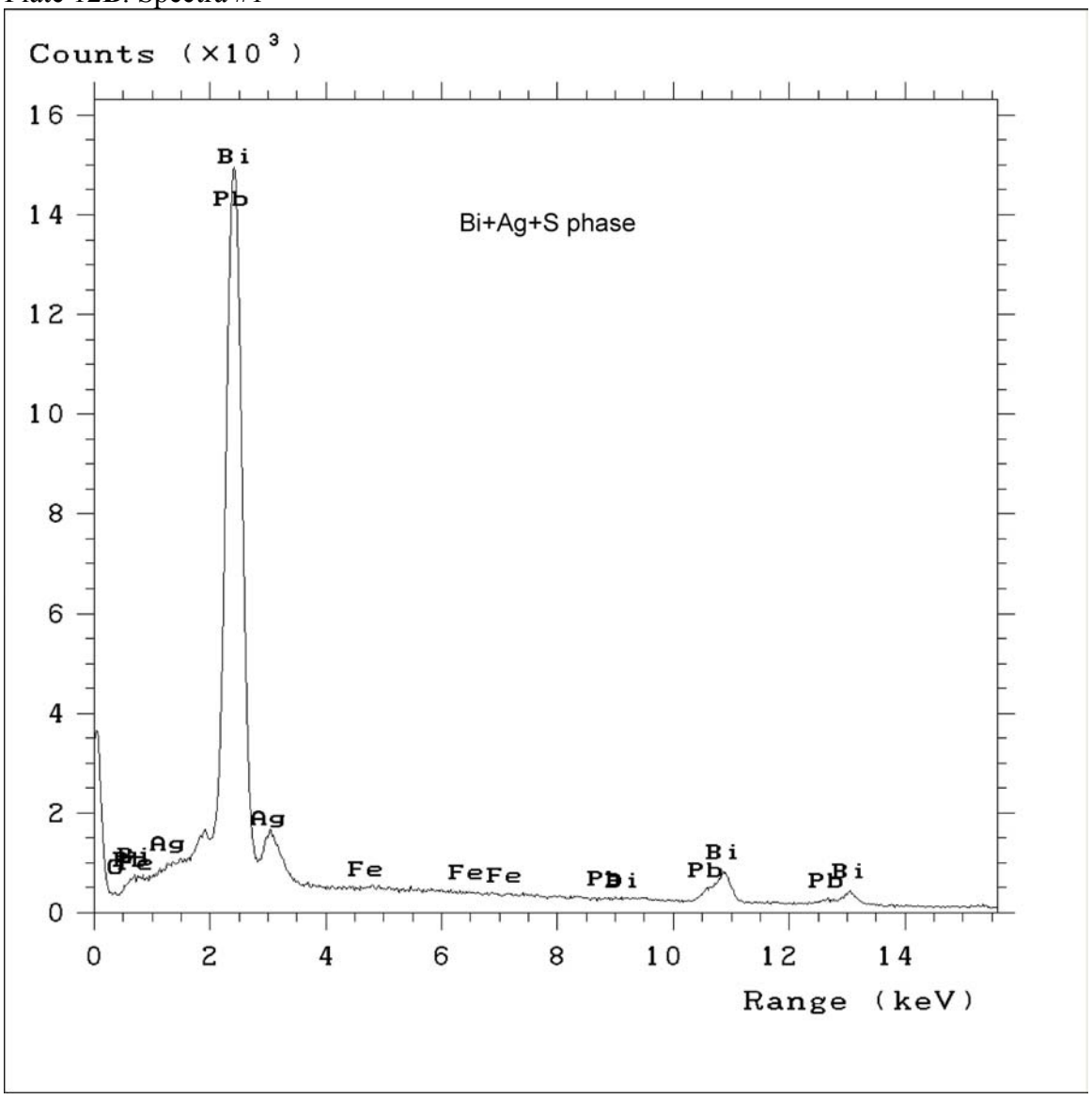
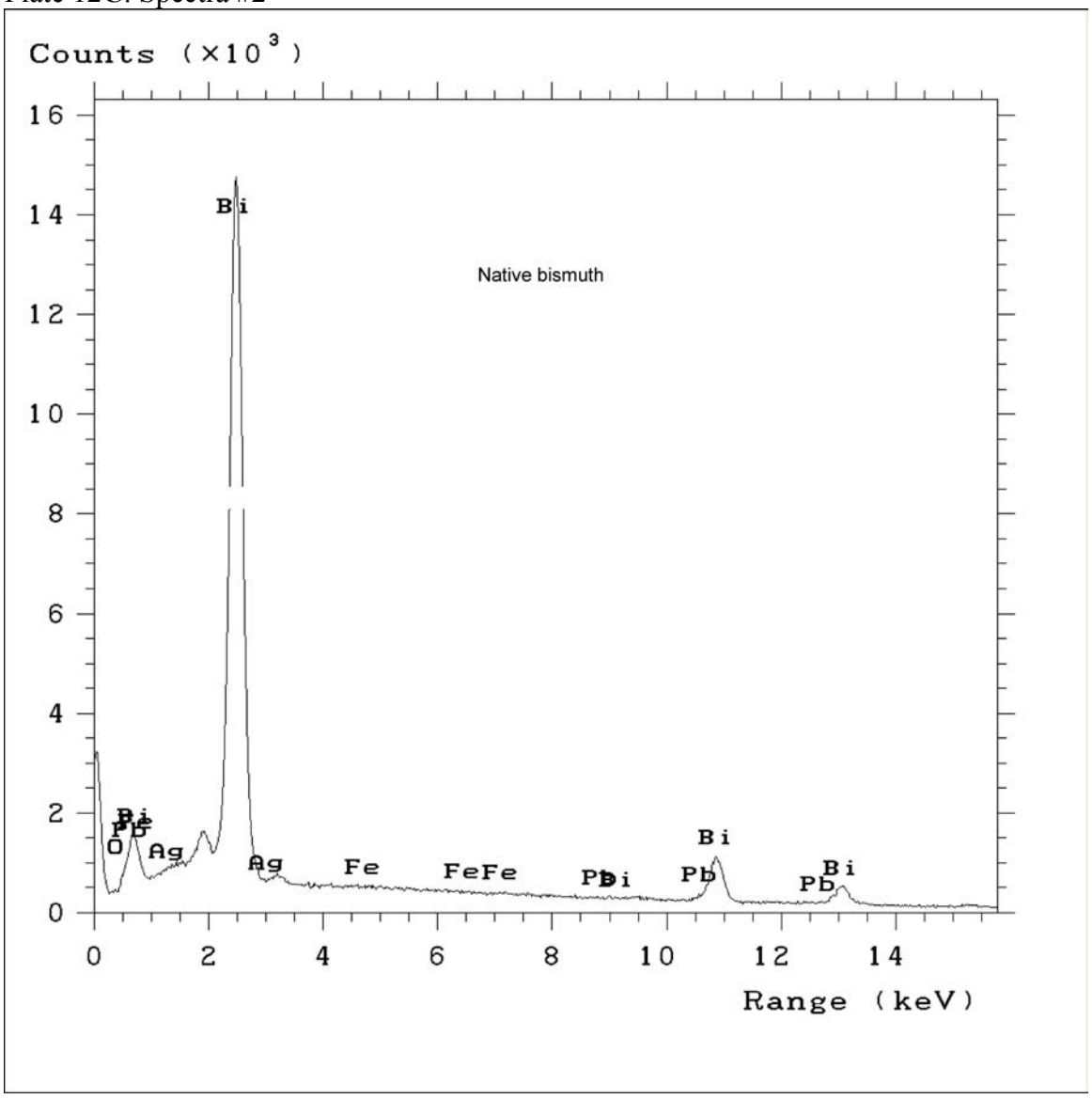


Plate 12**C**. Spectra #2



Sample #: chrysoprase sample from the Chris Chrysoprase prospect, Yukon Territory

Plate 13**A**. Backscattered electron image shows the textural relationship between the apple green and tan domains. The difference in gray scale clearly demonstrates a significant compositional difference between the two coloured domains. The tan domain have been replaced apple green domain and relict Ni+Fe+Cr-bearing minerals remain in the relict tan domain. The bar scale is 1.0 mm.

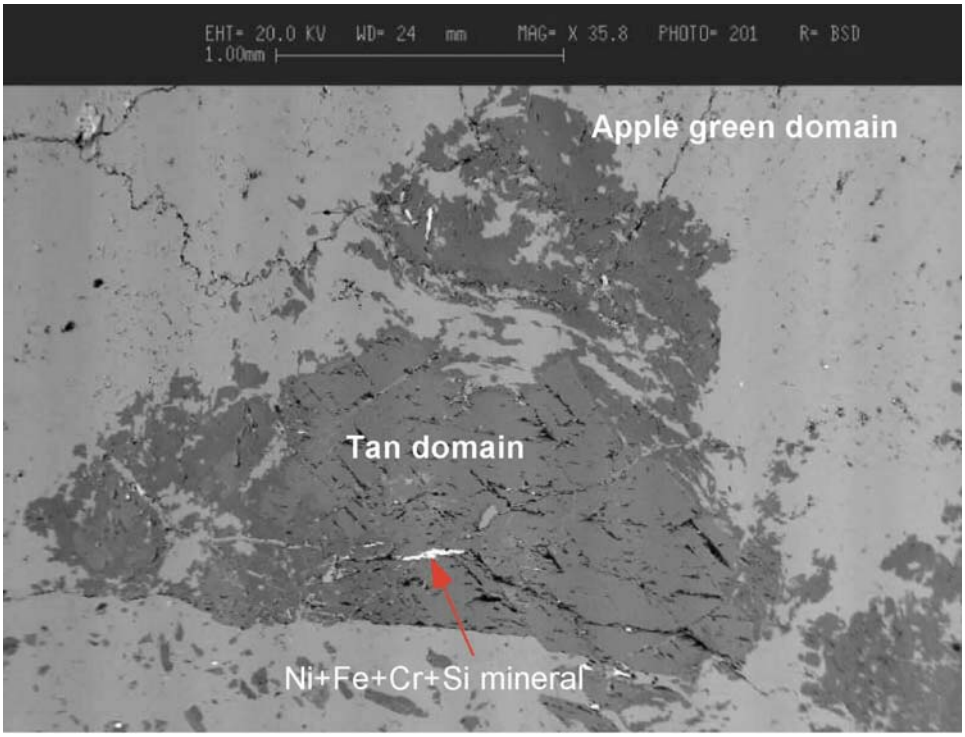


Plate 13**B**. The energy dispersive spectral images show the compositional differences between the two different coloured domains.
B-Apple green domain

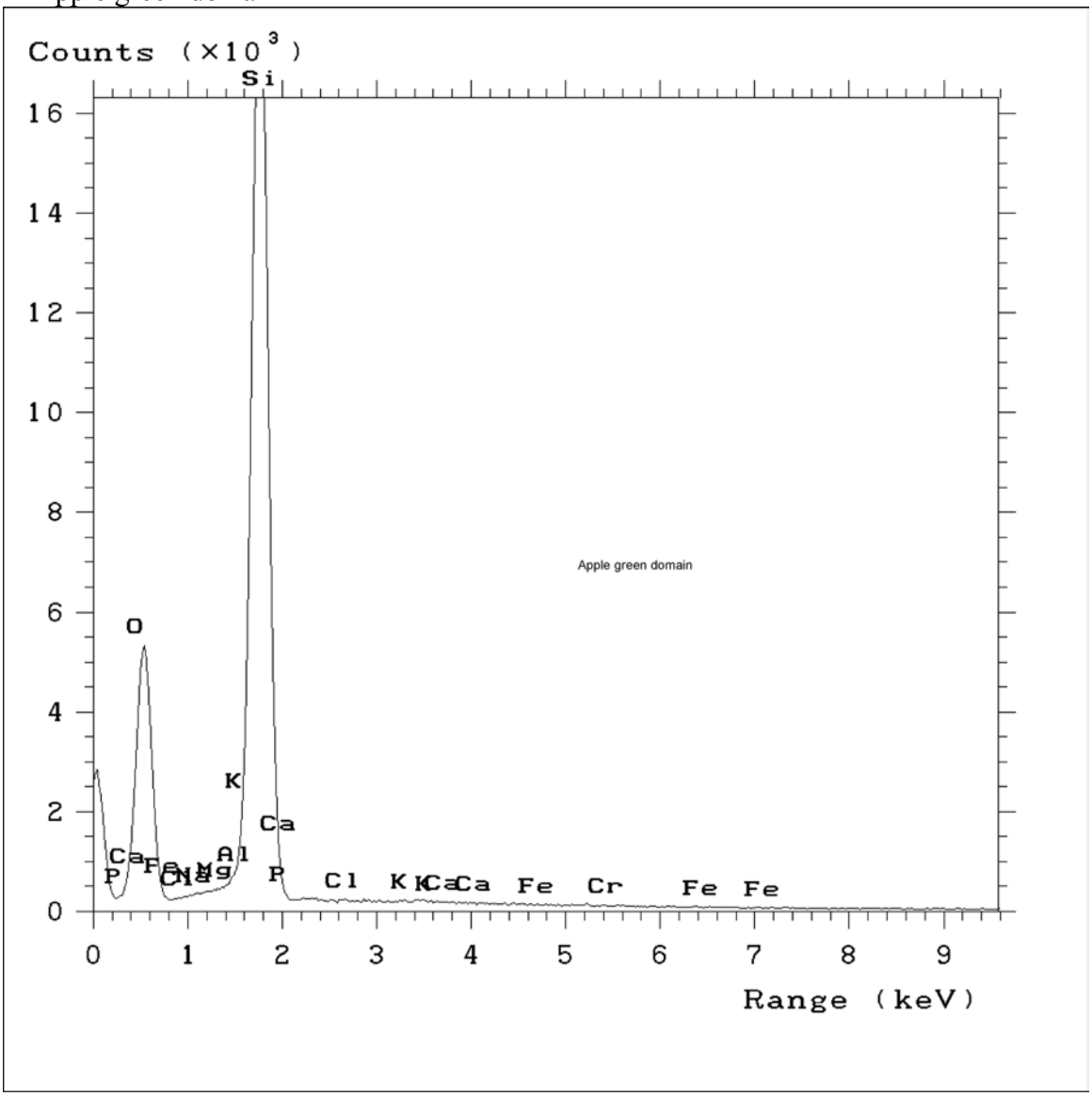


Plate 13**C**.
C-Tan domain

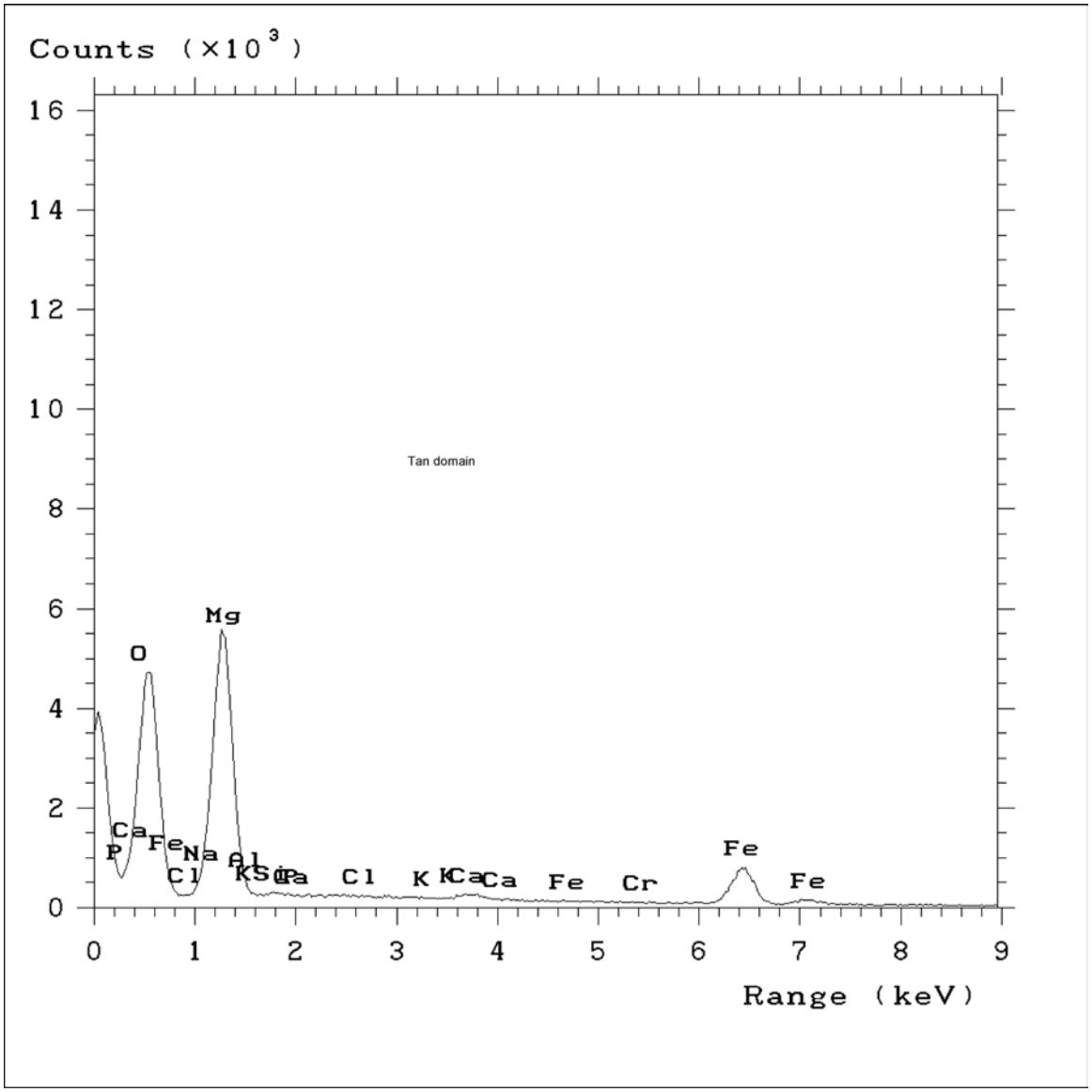


Plate 14. Backscattered electron image of intensely altered and compositionally different spinel, ferrichromite, within a tan coloured domain. These ferrichromite pseudomorphs after chromite are comprised of varying proportions of Fe-Cr-Al and are conclusively indicate that the chrysoprase veins were developed in and from an ultramafic protolith. The bar scale is 50 microns.