Geological, Geochemical and Geophysical

Assessment Report

on the

***Pearson PGE* Property**

Abbey, Bingo, Cedar, Coho, Coho #4 - #6, Coho 2 – 3, Dan 1 –11, EFR, EFR 1 – 6, Galleon 53, Galleon 57, Galleon 70 – 71, Galleon 80, Jack, Jack 2, Jan 7, Jan 8, Jan 8, Jay Jay, Nabay 1 – 11, Obin, Outhouse, Pacmist 2 – 4, Princess, Princess 2, Ralph 1 – 2, Ran, Ran 1 – 16, Roccod, Timber, Ultra 1 –6, Whistle 1 – 2, Woody claims

and

***Karen* Property**

Karen 1 – 5 claims

Port Renfrew Area
Victoria Mining Division

Latitude and Longitude: *Pearson PGE* 48° 35' - 48° 41' N; 124° 13' - 124° 31' W
Karen 48° 26' - 48° 28' N; 124° 04' - 124° 08' W

Map Sheets: *Pearson PGE* 092C.059, 068, 069 92C09, 10E
Karen 092C.050 92C08E

Claim Owners: Emerald Fields Resource Corp. and Gary Pearson

Operator: Emerald Fields Resource Corp.

Consultants: Sean D. McKinley, P. Geo. and Discovery Consultants

Authors: Sean D. McKinley, P. Geo. and William R. Gilmour, P.Geo.

Date: October 10, 2003

27280

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Introduction

In May 2003, Emerald Fields Resource Corp. undertook an exploration program on their mineral claims, the *Pearson PGE* and *Karen* properties, near Port Renfrew, B.C. The primary target of this exploration was Ni-Cu-PGE mineralization hosted by intrusive rocks.

Emerald Fields approved the initial work program and budget, specifically by Mr. Alasdair Mowat, President, and Mr. Perry Heatherington, Chief Operating Officer. Subsequently, Emerald Fields approved minor program and budget changes. This report was prepared at the request of Emerald Fields to meet assessment work requirements. Reconnaissance geological mapping of logging roads on the *Pearson PGE* property was conducted at a scale of 1:10,000 and was accompanied by rock sampling for major and trace element geochemistry and petrographic analysis. This mapping and rock sampling was conducted by consultant geologists Sean McKinley, P.Geo. and Chris Sebert, P.Eng.

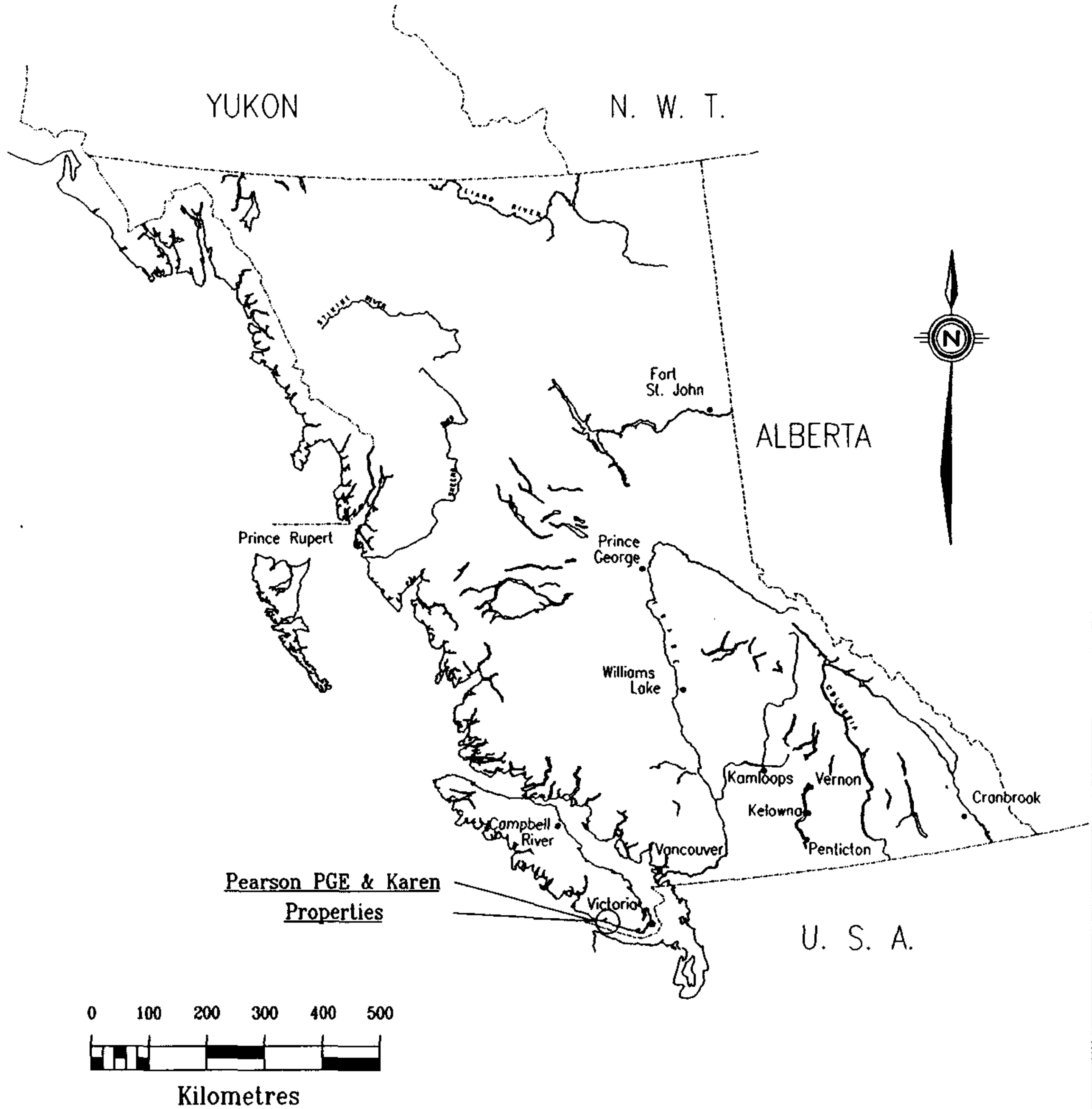
Discovery Consultants conducted a stream sediment sampling program that covered most of the major drainages on the *Pearson PGE* and *Karen* properties with the aim of identifying prospective targets for mineralization.

In addition, an orientation VLF-EM and magnetometer survey was conducted in the vicinity of a massive sulphide showing in the Renfrew Creek area. This assessment report also includes the results of April 2003 exploration by prospectors working directly for Emerald Fields (Appendix F), and not under the supervision of Messrs. McKinley or Sebert.

Location, Access and Physiography

The community of Port Renfrew is located on the southwest coast of Vancouver Island approximately 100 km WNW from the city of Victoria (Figures 1 and 2). The *Pearson PGE* property is located near Port Renfrew, north of the San Juan River in the vicinity of Gordon River, Fairy Creek and Renfrew Creek. The roughly rectangular claim block is approximately 22 km east to west by approximately 10 km north to south. The *Karen* property is southeast of Port Renfrew, and a few kilometres west of the Jordan River.

The area comprises some quite rugged and steep topography, heavy west coast rain forest vegetation, second-growth forests and logging clear-cuts. Despite the remote and rugged location, the area is relatively easily accessed via paved Highway 14 from Victoria and Sooke or from the northeast from Lake Cowichan by gravel logging road. The claims themselves can be reasonably accessed via a network of active and partially deactivated logging roads that also provide some excellent geological exposures.



DISCOVERY Consultants				Emerald Fields Resource Corp.			
Pearson PGE & Karen Properties				LOCATION MAP			
Date: Aug. 30/2003	Project: 726	Scale: 1:10,000,000		N.T.S.: B.C.	Mining Div: Victoria	Figure: 1	

Claims

The *Pearson PGE* property comprises 87 contiguous four-post and two-post claims, totalling 620 claim units. The *Karen* property comprises 5 contiguous four-post and two-post claims totalling 65 claim units. All the claims are in the Victoria Mining Division.

The following tables summarize the pertinent claim information. The claims registered in the name of Emerald Fields are 100% owned by the company. The claims registered to Gary Pearson are subject to an option agreement between himself and Emerald Fields. The expiry date, as shown, is subject to the approval of this assessment report.

Pearson PGE Property

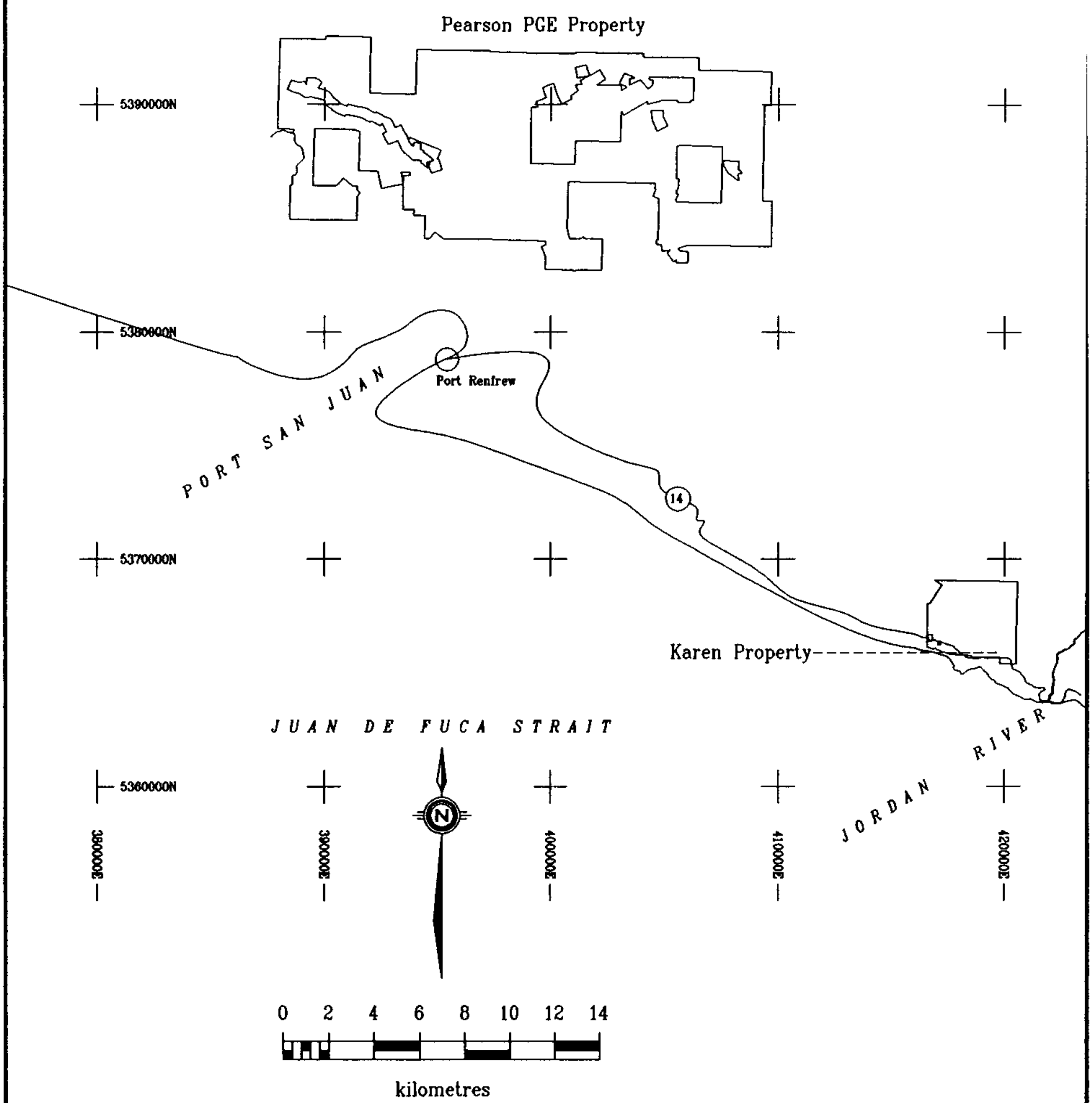
Claim Name	Tenure No.	Units	Expiry Date	Registered Owner
Abbey	379141	1	2005.06.27	Pearson, Gary Michael
Bingo	374411	1	2005.06.27	Pearson, Gary Michael
Cedar	377112	1	2005.06.27	Pearson, Gary Michael
Coho	390304	1	2004.06.27	Pearson, Gary Michael
Coho #4	390462	1	2004.06.27	Pearson, Gary Michael
Coho #5	390463	1	2004.06.27	Pearson, Gary Michael
Coho #6	390464	1	2004.06.27	Pearson, Gary Michael
Coho 2	390305	1	2004.06.27	Pearson, Gary Michael
Coho 3	390306	1	2004.06.27	Pearson, Gary Michael
Dan 1	374714	1	2005.06.27	Pearson, Gary Michael
Dan 2	374410	1	2004.06.27	Pearson, Gary Michael
Dan 3	378448	1	2004.06.27	Pearson, Gary Michael
Dan 4	375070	1	2005.06.27	Pearson, Gary Michael
Dan 5	375324	1	2004.06.27	Pearson, Gary Michael
Dan 6	375325	1	2005.06.27	Pearson, Gary Michael
Dan 7	376819	1	2005.06.27	Pearson, Gary Michael
Dan 8	377111	1	2005.06.27	Pearson, Gary Michael
Dan 9	378824	1	2005.06.27	Pearson, Gary Michael
Dan 10	378825	1	2005.06.27	Pearson, Gary Michael
Dan 11	378826	1	2004.06.27	Pearson, Gary Michael
EFR	394701	1	2005.06.27	Emerald Fields Resource Corp.
EFR 1	395053	20	2004.06.27	Emerald Fields Resource Corp.
EFR 2	395054	20	2004.06.27	Emerald Fields Resource Corp.
EFR 3	395055	20	2004.06.27	Emerald Fields Resource Corp.
EFR 4	395056	16	2004.06.27	Emerald Fields Resource Corp.
EFR 5	395119	7	2004.06.27	Emerald Fields Resource Corp.

Claim Name	Tenure No.	Units	Expiry Date	Registered Owner
EFR 6	395120	14	2004.06.27	Emerald Fields Resource Corp.
Galleon 53	370610	1	2005.06.27	Pearson, Gary Michael
Galleon 57	373716	1	2005.06.27	Pearson, Gary Michael
Galleon 70	373375	1	2004.06.27	Pearson, Gary Michael
Galleon 71	373376	1	2004.06.27	Pearson, Gary Michael
Galleon 80	374247	1	2005.06.27	Pearson, Gary Michael
Ghost	379144	1	2005.06.27	Pearson, Gary Michael
Jack	378447	1	2004.06.27	Pearson, Gary Michael
Jack 2	378451	1	2004.06.27	Pearson, Gary Michael
Jan 7	377113	1	2005.06.27	Pearson, Gary Michael
Jan 8	378446	1	2004.06.27	Pearson, Gary Michael
Jan 8	378450	1	2004.06.27	Pearson, Gary Michael
Jay Jay	381143	1	2005.06.27	Pearson, Gary Michael
Nabay 1	394833	10	2004.06.27	Emerald Fields Resource Corp.
Nabay 2	394880	18	2004.06.27	Emerald Fields Resource Corp.
Nabay 3	394893	3	2005.06.27	Emerald Fields Resource Corp.
Nabay 4	394896	16	2004.06.27	Emerald Fields Resource Corp.
Nabay 5	394894	5	2004.06.27	Emerald Fields Resource Corp.
Nabay 6	394895	20	2004.06.27	Emerald Fields Resource Corp.
Nabay 7	394897	20	2004.06.27	Emerald Fields Resource Corp.
Nabay 8	394898	20	2004.06.27	Emerald Fields Resource Corp.
Nabay 9	394991	20	2004.06.27	Emerald Fields Resource Corp.
Nabay 10	394992	15	2004.06.27	Emerald Fields Resource Corp.
Nabay 11	394969	8	2005.06.27	Emerald Fields Resource Corp.
Obin	374409	1	2005.06.27	Pearson, Gary Michael
Outhouse	379146	1	2005.06.27	Pearson, Gary Michael
Pacmist 2	378449	1	2004.06.27	Pearson, Gary Michael
Pacmist 3	379145	1	2005.06.27	Pearson, Gary Michael
Pacmist 4	379142	1	2005.06.27	Pearson, Gary Michael
Princess	379328	1	2004.06.27	Pearson, Gary Michael
Princess 2	379889	1	2005.06.27	Pearson, Gary Michael
Ralph 1	374615	1	2005.06.27	Pearson, Gary Michael
Ralph 2	374614	1	2005.06.27	Pearson, Gary Michael
Ran	394702	1	2005.06.27	Emerald Fields Resource Corp.
Ran 1	394703	16	2005.06.27	Emerald Fields Resource Corp.
Ran 2	394704	16	2004.06.27	Emerald Fields Resource Corp.
Ran 3	394705	20	2004.06.27	Emerald Fields Resource Corp.
Ran 4	394706	16	2004.06.27	Emerald Fields Resource Corp.
Ran 5	394834	16	2004.06.27	Emerald Fields Resource Corp.
Ran 6	394835	16	2004.06.27	Emerald Fields Resource Corp.
Ran 7	394881	8	2004.06.27	Emerald Fields Resource Corp.

Claim Name	Tenure No.	Units	Expiry Date	Registered Owner
Ran 8	394890	16	2004.06.27	Emerald Fields Resource Corp.
Ran 9	395047	15	2005.06.27	Emerald Fields Resource Corp.
Ran 10	395048	20	2005.06.27	Emerald Fields Resource Corp.
Ran 11	395049	20	2005.06.27	Emerald Fields Resource Corp.
Ran 12	395050	18	2005.06.27	Emerald Fields Resource Corp.
Ran 13	395051	10	2005.06.27	Emerald Fields Resource Corp.
Ran 14	395052	4	2005.06.27	Emerald Fields Resource Corp.
Ran 15	395161	5	2005.06.27	Emerald Fields Resource Corp.
Ran 16	395162	10	2004.06.27	Emerald Fields Resource Corp.
Roccod	379890	1	2005.06.27	Pearson, Gary Michael
Timber	381142	1	2005.06.27	Pearson, Gary Michael
Ultra 1	394967	12	2005.06.27	Emerald Fields Resource Corp.
Ultra 2	394968	20	2005.06.27	Emerald Fields Resource Corp.
Ultra 3	394989	12	2005.06.27	Emerald Fields Resource Corp.
Ultra 4	394990	20	2005.06.27	Emerald Fields Resource Corp.
Ultra 5	395057	18	2004.06.27	Emerald Fields Resource Corp.
Ultra 6	395058	12	2004.06.27	Emerald Fields Resource Corp.
Whistle 1	385855	1	2005.06.27	Pearson, Gary Michael
Whistle 2	386342	1	2005.06.27	Pearson, Gary Michael
Woody	379143	1	2005.06.27	Pearson, Gary Michael

Karen Property

Karen 1	395160	1	2004.07.04	Pearson, Gary Michael
Karen 2	395194	20	2004.07.04	Emerald Fields Resource Corp.
Karen 3	395203	20	2004.07.04	Emerald Fields Resource Corp.
Karen 4	395204	12	2004.07.04	Emerald Fields Resource Corp.
Karen 5	395205	12	2004.07.04	Emerald Fields Resource Corp.



DISCOVERY Consultants	Emerald Fields Resource Corp.
Pearson PGE & Karen Properties	LOCATION MAP

Date: Sept.24/2003	Project: 726	Scale: as shown	N.T.S.: 092C	Mining Div: Victoria	Figure: 2

Regional Geology

The geology of southwestern Vancouver Island is composed of three distinctly different terranes:
1) Paleozoic and Mesozoic metamorphic, volcanic, sedimentary and intrusive rocks of the Wrangellia Terrane,
2) Mesozoic volcano-sedimentary rocks of the Pacific Rim Terrane including the mostly sedimentary Leech River Complex, and
3) Tertiary rocks of the Crescent Terrane, including the ophiolitic Metchosin Igneous Complex and the sedimentary Carmanah Group (Yorath and Nasmith, 1995).

The older rocks of Wrangellia were thrust against the younger Leech River rocks along the San Juan Fault that runs roughly east west from Port Renfrew to Cobble Hill. The Leech River Complex (Pacific Rim Terrane) was thrust onto the younger Crescent Terrane rocks along the Leech River Fault. This obduction was accompanied by a magmatic event between 40 and 50 Ma ago.

The geology of the *Pearson PGE* property, situated immediately north of the San Juan Fault, has been mapped in the past as predominantly a mixture of rocks from the West Coast Complex and the younger Island Plutonic Complex. Previous studies of the regional geology include Clapp (1912) and Muller (1977 and 1982). The predominant rocks types are dioritic to gabbroic intrusions with ultramafic phases within the West Coast Complex and granodioritic intrusions of the early to middle Jurassic Island Intrusive Suite. Easterly and southeasterly trending bodies of recrystallized limestone are common throughout the area. These limestone bodies and associated skarn zones are engulfed as pendants within the West Coast Complex intrusive rocks. They have been interpreted as remnants of the Triassic Quatsino Formation limestones. Lesser lithologies include Triassic volcanics of the Karmutsen Formation (not recognized in this study) and Triassic sedimentary rocks of the Vancouver Group. More extensive areas of Triassic Karmutsen basalts and Jurassic Bonanza volcanics are found north of the *Pearson PGE* property.

To the south of the *Pearson PGE* property, and separated from the rocks described above by the San Juan Fault, are Jurassic to Cretaceous metasediments of the Leech River Complex. Further south again, and to the east (*Karen* property) are the Metchosin ophiolite, Sooke gabbro and Carmanah sedimentary rocks.

Mineralization

Pearson PGE property

In the past 30 to 40 years, this area has received considerable exploration attention by companies (including Noranda, 1960s) searching for skarn-type Fe and/or Cu deposits. Skarn deposits are a logical exploration target here given the presence of both limestones and intrusive rocks. Indeed numerous skarn zones have been identified including a number of bodies of massive sulphide (pyrrhotite, chalcopyrite +/- magnetite, pyrite). The most significant of these occurrences are perhaps the Reko deposits (MINFILE nos. 092C090, -091, -110 and -146). Other occurrences of what are reported as iron/magnetite skarns from within the property include the following: Bugaboo (MINFILE 092C022), David (092C023), Elijah (092C024), Sirdar (092C025), Baden Powell (092C027) and Rose/Thorn (092C030). Little or no reporting of Ni and/or PGE exploration exists for this area.

Disseminated to net-texture pyrrhotite with lesser pyrite and chalcopyrite is quite common in the ultramafic rocks on the claim block. However, exposures of semi-massive to massive sulphides were observed on the Fairy Main and Granite Creek Main logging roads. The latter was the more impressive of the two, comprising a several metre-wide outcrop of massive pyrrhotite with blebs of chalcopyrite; the true extent of this mineralization was not exposed. This mineralization was documented by Reako Explorations Ltd. during their exploration in the 1970s and is described in more detail below. Reako interpreted the sulphides to be skarns.

During the 1980s, prospector Matti Tavela discovered several pieces of mineralized float in the area east of Fairy Creek, several kilometres to the southwest of the massive pyrrhotite occurrences. Two of these samples graded 0.5% Ni, 0.6% Cu, 0.07-0.1% Co and >200ppb Pd. A third sample graded 0.66% Ni, 0.25% Cu, 0.07% Co, 75ppb Pt and 520ppb Pd. Follow-up prospecting by Gary Pearson confirmed the presence of the mineralized float. Pearson has extensively sampled this belt of ultramafic rocks and has returned many assays in excess of several hundred ppb Pt+Pd.

Karen Property

The only recorded MINFILE occurrence on the *Karen* property is the Wolf showing (MINFILE 092C 094). At the Wolf showing disseminated pyrite and pyrrhotite with lesser chalcopyrite, bornite and magnetite are hosted by sheared and altered volcanic rocks of the Metchosin Igneous Complex which are cut by gabbroic intrusions thought to be comagmatic with the volcanic rocks.

The past producing Sunro Mine (MINFILE 092C 073) is located 3 km to the east of the Karen claims. Mineralization there comprises veinlets and irregular masses of chalcopyrite, pyrite and pyrrhotite with traces of molybdenite, cubanite and pentlandite. The sulphides are hosted by sheared and hornblende-altered Metchosin basalts and are spatially associated with Sooke gabbro intrusions that are possibly comagmatic with the volcanic rocks. This deposit produced 1.3 million tones of ore between 1962 and 1978 and recovered 13.75 million kilograms of copper and over 203,000 grams of gold.

Three to four kilometres northwest of the *Karen* property are the Ren/Mead (MINFILE 092C 137) and John 1 (MINFILE 092C 138) showings. These show similar styles of mineralization and geological associations to those described above. A grab sample from the John showing graded 0.4% Cu and 0.34 g/t Au.

Regional Stream Geochemistry

The B.C. Ministry of Energy and Mines conducts regional reconnaissance-scale stream sediment and water geochemical surveys (RGS). The samples are analysed for numerous elements including Au, Ag, Cu, Pb, Zn and Ni (Note: PGEs are not reported in the datasets). This data is available on the Ministry website. Approximately 20 of these samples have been taken from within the properties with numerous more existing in the surrounding areas. Of particular note to this project are the numerous RGS samples that are anomalous in Ni (>90th percentile) within and close to the claim block. One anomalous sample (RGS ID 92C891386), located just outside of the Emerald Field claims, contained 157 ppm Ni and 426 ppm Cr (It is not clear at this time if these numbers are reflecting the inherent higher amounts of Ni and Cr in the mafic/ultramafic rocks of the area or correspond to mineralization). Although many of the RGS samples within the claim block did not yield particularly high Ni values, a large number of streams remained unsampled, as well as the upstream portions of the sampled streams (usually only one sample was taken from one stream). As such, it was decided that a thorough first pass sampling of all or most of the drainages in the claim block would be beneficial to the advancement of knowledge of this property.

Stream Sediment Geochemistry

As the properties had not received much PGE exploration in the past, a survey was designed to help evaluate the PGE potential. The survey collected the high-energy portion of the streambed, the most favourable setting for PGE deposition. Sieved Silts samples, comprising 2 – 3 kg of –20 mesh field sieved sediments were sieved in a laboratory, producing a –80 mesh sample. Heavy Mineral samples, comprising about 10 kg of –20 mesh sediments were process in another laboratory to give heavy mineral concentrates. The survey details and results are described and discussed below.

Geophysical Surveys

In the valley of Renfrew Creek, along the Granite Main logging road, semi-massive to massive sulphides occur. An orientation magnetometer and VLF_EM survey, totalling about 2000 metres of line, was carried out in the area. The survey details and results are described and discussed below.

Recent Exploration

Pan Island Resource Corp. (1980s)

Pan Island Resource Corporation carried out several years of exploration in the area between Fairy Creek and Harris Creek in the early to mid-1980s (ARIS Reports 12184, 14686, 14968). Pan Island conducted an airborne magnetic and VLF-EM survey, a stream and soil geochemical sampling program as well as additional heavy mineral panning and prospecting. The geophysical survey outlined several "areas of interest" based on inferred intersecting faults, and delineated numerous narrow, elongate east-west trending VLF-EM conductors ranging from around 500 metres to greater than 1000 metres in length in the Fairy Creek and southern Renfrew Creek areas. The geochemical survey outlined several Cu, Ni and Co anomalies. The best geochemical anomalies included Ni values in silt samples from the west side of the Fairy Creek drainage ranging from 146-660 ppm. These anomalies are coincident with an ENE-trending VLF-EM conductor. Two rock chip samples from about a 3 - 4 metre wide ultramafic dike (actual lithology not confirmed from assessment report) from Fairy Creek yielded values of 700 and 680 ppm Ni and 78 and 83 ppm Co respectively. Visible mineralization was not reported for these samples. An additional rock chip sample from Harris Creek yielded values of 2010 ppm Cu, 860 ppm Ni and 100 ppm Co (no geological description given). Pan Island's 1986 report (ARIS 14968) described the geology in the central part of their Lizard claims along Harris Creek as "ultramafic serpentinite and altered intrusives" which have been sheared and contain local pods of pyrrhotite, pyrite and chalcopyrite. They described the rocks on the Renfrew claims as a mixture of intermediate to mafic intrusives and gneisses with 30-90% mafic minerals; the rocks west of Renfrew Creek were reported to be less mafic. Pan Island also stated that the geophysical anomalies could be explained by magnetite-bearing serpentinites.

Matti Tavela (1980s)

As discussed above, Matti Tavela conducted geological mapping, soil sampling and float boulder sampling on his Ebb claims in the Fairy Creek area in the early 1980s. Tavela documented geology dominated by gabbroic/ultramafic rocks containing Cu-Ni-Co mineralization. The mineralization, it should be noted, is restricted to glacial float boulders; a bedrock source was not confirmed. Six float boulders from east of Fay (Fairy) Creek averaged 0.41% Cu, 0.40% Ni and 0.065% Co. Mineralization occurs as disseminations and intergranular networks of pyrrhotite and chalcopyrite with lesser violarite, pyrite and pentlandite.

Gary Pearson (late 1990s-2002)

In the past two years, prospector Gary Pearson (pers. comm.) encountered many occurrences of what he identified as ultramafic rocks. This would not normally be very unusual as they might, at a first pass, be identified as migmatized mafic/ultramafic volcanics forming part of the West Coast Complex. However, following a visit to the area, Dr. Dante Canil, an igneous petrologist from the University of Victoria, identified these rocks as cumulative peridotites having 25-35% fresh olivine surrounded by 60-70% oikocrystic orthopyroxene. A total of 12 specimens from the area were confirmed to be cumulate peridotite. Pearson has since identified over 30 of what he has called peridotite bodies in the area. Additional samples have been analysed by Vancouver Petrographics and some of these have been confirmed to be ultramafic in composition. The author has visited some of these localities and has confirmed the presence of ultramafic rocks for several of them. However, some of the "peridotite" bodies identified by Pearson are mafic rocks such as hornblendite and fine-grained gabbro.

Property Geology (Figures 4a - d)

The geology of this area has not been mapped extensively in detail. Therefore, it was decided that a series of 1:10,000 scale transects would be mapped across the property utilizing the extensive logging road network as a first pass. The goal of this geological work was to: 1) determine the nature and distribution of the major lithologies on the claim block, 2) determine the prevalence and mode of occurrence of the ultramafic rocks, and 3) characterize the trace element geochemistry of these lithologies to help explain the results of the stream geochemical survey. Many of the major logging mainline roads, including Granite Main, Braden Main and Gordon Main, and numerous side roads were mapped over a two week period. Numerous hand samples were collected in the field; of these, a subset of 17 representative samples from the Renfrew Creek area and one sample from Bugaboo Creek were submitted to Vancouver Petrographics for thin section preparation and petrographic analysis. The complete petrographic reports of Bruce Northcote, Ph.D., P.Geo. are included in Appendix A. The principal units encountered are described below.

Limestone (recrystallized) – Map Unit 1

Two main easterly to southeasterly trending bodies of recrystallized limestone or marble were mapped in the northern and eastern parts of the Renfrew Creek drainage in the eastern part of the claim block. Numerous east-southeast trending limestone bodies were mapped in the Bugaboo Creek-Gordon Mainline area on the western part of the property. Many other small isolated occurrences of limestone and skarn exist throughout the property. The limestone or marble is generally coarse grained and white to grayish in colour and appears to be quite pure. Narrow quartz-rich sandy beds are present locally. These rocks have a distinctive bleached white and grey appearance that makes them quite easy to discern from the surrounding intrusive rocks. Fossils were not observed although any that were originally present were likely destroyed by the recrystallization that accompanied metamorphism. Skarn zones comprising irregular lobes of calc-silicate (diopside-garnet-actinolite) metasomatism and massive magnetite lenses are common within this unit especially in the Bugaboo Creek area. Muller (1982) interprets these limestone/marble bodies to represent pendants of metamorphosed Quatsino limestone.

Dioritic Intrusions

Diorite and quartz diorite intrusions are the most common rock units in the map area. In the field these rocks were subdivided macroscopically on the basis of their mafic mineral ± quartz contents and were given the names mafic, intermediate, felsic diorite or quartz diorite. Mafic diorites (map unit 2a) generally contain >50% mafic minerals (hornblende> biotite ± pyroxene) and felsic diorites contain <10% mafic minerals. Quartz diorites generally have >10% quartz content. Petrographic analyses allowed a refining of the nomenclature for the intrusive rocks. Mafic diorites were further subdivided into gabbro, hornblendite, diabase and monzodiorite.

Typical dioritic intrusive rocks contain 40-60% anhedral to subhedral plagioclase crystals up to 2mm in size. Quartz contents are most commonly 5-7% or less. Mafic mineral contents are quite variable, but generally comprise 10-25% hornblende and <10% biotite; more mafic diorites contain up to 45% hornblende and up to 15% biotite. Two samples (GR03-035 and GR03-036) contain up to 15% K-feldspar and are classified as monzodiorite.

A subset of the felsic diorites termed leucogranite was also identified petrographically (samples GR03-005 and GR-030). These samples from the lower elevations in the Renfrew Creek valley are very light in colour having <5% mafic minerals. These rocks contain 40-55% K-feldspar, 30-35% quartz and 15-25% plagioclase with grains generally less than 2mm in size. The only primary mafic mineral identified was biotite.

The dioritic intrusions are generally quite massive and featureless. Locally, however, such as the near southern portion of GR 3000 logging road, a distinctive gneissic banding is present in the rocks. This banding is defined by mafic-rich bands approaching hornblendite in composition and lighter coloured plagioclase-quartz rich bands up to several tens of centimeters wide. The amphibole in the mafic bands is often very coarse, sometimes taking on a pegmatitic appearance. Carson (1973) and Muller (1982) also note gneissic banding in plutonic rocks on southern Vancouver Island. Muller has suggested that this is a metamorphic texture. Observations in the field by the author are consistent with this interpretation. No conclusive evidence of primary igneous layering was observed in the field.

Mafic dioritic to diabasic xenoliths (e.g. sample GR03-011B) supported by a more felsic dioritic intrusive rock are common locally throughout the property and are quite prevalent in the upper parts of the Granite 6000 logging road system. The mafic xenoliths are generally sub-metre size, are angular and vary from tightly packed and jigsaw-fit to "suspended" in the lighter diorite. Invariably the mafic rocks are intruded by the more felsic diorite, but both phases could be part of the same plutonic phase.

Ultramafic Intrusions – Map Unit 2d

Ultramafic rocks are found throughout the property, but do not appear to be very common. They comprise variably serpentinized peridotites that were likely altered from lherzolites and dunites (i.e. olivine-pyroxene-rich intrusive rocks). These rocks are dark green to black in colour and often appear quite fine grained, possibly due to destruction of original textures due to serpentinization. Olivine is often difficult to identify in the field. Sample GR03-008, for example, contains <20% olivine crystals <0.5mm in size, but may have originally contained approximately 75% with crystals possibly up to 3mm in size. Pyroxene (orthopyroxene>clinopyroxene) is the other common mafic phase and can be altered to amphibole.

The ultramafic rocks are not well exposed. They tend to occur in small, deeply weathered outcrops. They are often flanked by the more typical dioritic rocks and as such they likely are limited in size to several tens of metres in width. Their contact relationships with the other intrusive phases are not clear. However, the outcrop hosting sample GR03-008, a serpentinized peridotite, appears to grade into the gabbroic and dioritic rocks that host sample GR03-007. It appears that the ultramafic rocks may have been emplaced as sills or plugs within the dioritic rocks. The strongly weathered and decomposed nature of these rocks may hinder their discovery, and as such they may be more common than it first appears.

Granodioritic Intrusions

For the purposes of this study, this granodioritic subdivision had been reserved for felsic intrusive rocks thought to be part of the Jurassic Island Intrusions. This unit is relatively rare in the study area. Perhaps the best example is exposed along Braden Main logging road (sample BR03-010). This rock consists of coarse, felsic quartz diorite to granodiorite containing 15-20% quartz and less than 10% mafic minerals (mostly hornblende). Crystals reached up to 4mm in size and are generally coarser than those seen elsewhere on the property. The exposure on Braden Main corresponds with the Island Intrusion (Jg) unit on the map of Muller (1982). It is possible, but not clear at this time, that the leucogranites exposed in the Renfrew Creek valley (see above) are part of this younger, more felsic intrusive phase.

Metasedimentary rocks

Metasedimentary rocks are exposed along the southernmost portions of the claim block, but were not examined extensively in this program. These rocks include strongly deformed chert, mudstone and chlorite schist (metavolcanic?). They are well exposed along Fairy Main logging road and its side roads. Muller (1982) included these rocks as part of the Pacific Rim Complex, but they may be part of the Leech River Formation. They are separated from the plutonic rocks of the West Coast Complex to the north by the north-dipping San Juan Fault.

Rock Geochemistry

A set of 18 rock samples that were representative of the major units that were encountered in the field, and that were also visually unmineralized, were submitted for major and trace element geochemical analysis at ALS Chemex Labs in Vancouver, B.C. With the exception of one sample (BU03-029), all samples were taken from the Renfrew Creek area; sample BU03-029 was taken from the Bugaboo Creek area in the west. The same lithologies were observed throughout the study area though. These are the same samples submitted for petrographic analysis and discussed above in the section on property geology. This geochemical data is included in Appendices B and C. Analytical techniques used by ALS Chemex Labs are included in Appendix E; these 18 samples were analysed using packages ME-MS61 (major and trace elements) and PGM-ICP24 (Pt, Pd, Au). The data was intended to provide information on the geochemical composition of 'normal' unmineralized rocks in the study area and to complement the stream sediment geochemical data in an effort to provide a preliminary estimation of what geochemical contribution these 'normal' rocks would make to the composition of the sediments. This helps to determine what values amongst the stream sediment data are background or anomalous.

Few obvious correlations between rock type and geochemical characteristics were observed. Rocks that were mapped as 'most mafic' or ultramafic generally had Mg contents of greater than 5% (e.g. samples BU03-029 – hornblendite, GR03-013A – hornblendite, GR03-007 – altered gabbro, GR03-008 – serpentinized peridotite) and combined Fe+Mg contents of over 10%. The more felsic rocks, i.e. diorites, quartz diorites and monzodiorites, which are volumetrically more common in the study area generally contain less than 4% Mg. In addition, and perhaps most significantly, the more mafic and ultramafic rocks have relatively high contents of Ni, Cr and Co, elements, which were reported as 'anomalous' by previous workers. For these mafic samples, Ni values ranged from 106 to 826 ppm, Cr values ranged from 102 to 1005 ppm and Co values ranged from 38 to 107.5 ppm. In contrast, the more 'felsic' rocks generally contained less than 100 ppm Ni, less than 100 ppm Cr and less than 40 ppm Co, but more commonly <50 ppm Ni and <70 ppm Cr. As such, it is clear that one must be careful in the identification of Ni, Cr and Co 'anomalies'; a particular area that had a predominance of more mafic to ultramafic composition rocks would yield results, both in bedrock and stream sediment geochemistry, that appear anomalously high in these elements since the prevailing rocks in that area were naturally richer in these elements compared with more felsic diorites. Values of several hundreds of ppm Ni or Cr are clearly not necessarily anomalous in an area dominated by ultramafic rocks. Precious and base metals showed no particular correlation with rock type; precious metal contents for these rocks were generally at or close to lower detection limits.

Mineralization

Two principal styles of mineralization are present on the property: 1) skarn-related massive magnetite ± sulphide, and 2) massive sulphide (pyrrhotite-pyrite-chalcopyrite) mineralization of unknown origin. These styles of mineralization were identified in numerous outcrops in the field and have been confirmed by a combination of petrographic analyses and trace element geochemistry. A total of 30 samples of various types of mineralization were analysed at ALS Chemex labs in Vancouver, B.C. using analytical packages ME-ICP61 (major and trace elements), PGM-ICP27 or PGM-ICP24 (Pt, Pd, Au) and Cu-AA62 (high grade Cu samples). This data is included in Appendix D. The technical specifications of the Chemex analytical packages are included in Appendix E.

Skarn-related massive magnetite deposits

Magnetite-rich skarn zones are the most common style of mineralization in this area. Many of these zones were discovered in the course of the geological mapping throughout the entire claim block, but are particularly prevalent and form the largest mineralized zones in the Bugaboo Creek area on the west end of the property and in the headwaters of Renfrew Creek in the eastern part of the property (Reko prospects). The skarn zones tend to have the same general characteristics in all occurrences. The magnetite forms massive or semi-massive pods or veins. Many of the magnetite zones are less than a metre wide, but the largest occurrences in the Bugaboo and Renfrew Creek areas reach up to several 10s of metres in width (see

MINFILE descriptions; 092C022 – Bugaboo; 092C023 – David; 092C025 – Sirdar; 092C027 – Baden Powell; 092C090 – Reko 3; 092C091 – Reko 10; 092C110 - Reko 38; 092C146 – Reko North). These skarn zones can be crudely further subdivided into sulphide-rich and sulphide-poor zones. The most common sulphides are pyrite, pyrrhotite and chalcopyrite that occur as blebs, disseminations and veinlets within the magnetite bodies. The magnetite-rich bodies are often contained within recrystallized limestone or at the contact between limestone and dioritic intrusive rocks. Veins or irregular zones of skarn-related garnet and calc-silicate (diopside) are commonly associated with this style of mineralization. Sample GR03-028 is an example of a sulphide-bearing skarn zone from Granite Main Road. It was analysed petrographically (see Appendix A) and geochemically (see Appendix D). This sample was described as massive garnet (up to 90%) and small amounts of carbonate, chlorite, clinopyroxene, feldspar and epidote with 5-7% chalcopyrite, 3-5% pyrite and 3-5% magnetite occurring mostly as veins and fracture fillings.

Geochemical analyses for numerous skarn mineralized samples are included in Appendix D. The skarn zones contain little or no precious metals (Au-Ag-Pt-Pd). With the exception of copper, they also contain low concentrations of base metals (Zn values reach up to 387ppm; Pb values are mostly below 10 ppm). Copper values are variable in the magnetite zones and reach up to 0.36% Cu. The higher Cu contents are not restricted only to the sulphide-rich skarn zones although the three sulphide-rich skarn samples have elevated Cu contents of 285-3570 ppm Cu. Nickel values are low in all skarn samples; the maximum value is 121 ppm Ni, but generally they are below 75 ppm. Similarly, these samples are also low in chromium with most values being less than 30 ppm Cr.

Massive/semi-massive sulphide deposits

One significant occurrence of semi-massive to massive sulphides was encountered in the project area (Figure 5). This occurrence is located on the east side of Granite Main logging road at coordinates 0404373E, 5389884N. The showing comprises two outcrops: 1) the southern exposure consists of a vertical face 3 metres long and 1.5 metres high composed of massive and semi-massive pyrrhotite and pyrite with patches and stringers of chalcopyrite, and 2) the northern exposure, located 5 metres north of the massive sulphides, consists of a 12 metre long, low relief, linear outcrop of altered intrusive rock with disseminated and stringer sulphides. Petrographic analysis of two samples from the massive sulphide outcrop (105752 and 105753) revealed substantial amounts of garnet (40-60%) that were not completely recognized in the field. These samples contain up to 40% pyrrhotite, 7-15% chalcopyrite, 1-3% pyrite and trace amounts of marcasite, pentlandite and possible sphalerite. Geochemical analyses of these samples and 3 others (105751 to 105755) are included in Appendix D and are summarized in the table below:

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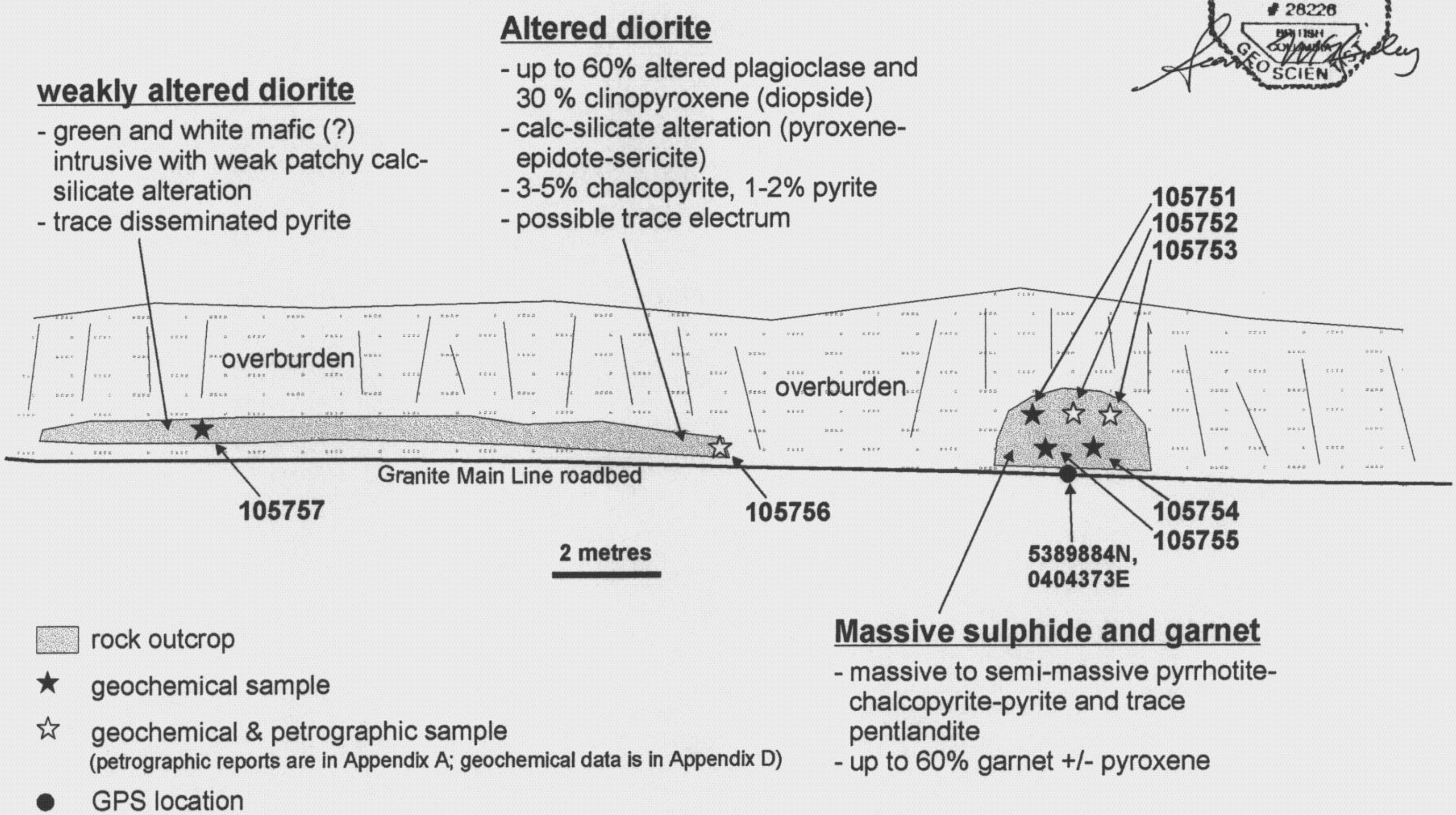

Figure 5: Simplified sketch of massive sulphide showing (facing east), Granite Main Line

Selected assay data for sulphidic samples, Granite Main showing										
Sample No.	Au ppm	Ag ppm	Pt ppm	Pd ppm	Ni ppm	Cr ppm	Co ppm	Cu ppm/%	Pb ppm	Zn ppm
105751	0.53	11.8	<0.03	0.03	854	6	2020	7.45%	8	146
105752	0.08	1.7	<0.03	0.03	359	20	430	9850	5	37
105753	0.12	4.7	<0.03	<0.03	259	22	439	2.6%	<2	65
105754	0.13	3.2	<0.03	0.03	235	22	482	1.66%	8	58
105755	0.12	3.3	<0.03	0.08	642	21	1535	1.2%	6	44
105756	0.05	<0.5	<0.03	<0.03	53	97	46	1425	4	78
105757	<0.03	<0.5	<0.03	<0.03	153	168	41	94	<2	43

Samples 105756 and 105757 are from the outcrop just to the north of the massive sulphide occurrence and contain only disseminated chalcopyrite and pyrite. A petrographic analysis for 105756 described it as a calc-silicate altered diorite. This sample contained up to 60% plagioclase and 30-35% diopside. Sericite was present up to 7% as an alteration product of plagioclase. Epidote was present associated with sulphides in veinlets. Up to 5% pyrite and chalcopyrite (the assay value of 1425ppm Cu suggests only a small amount of chalcopyrite is present). The petrographic work also revealed the possible presence of trace electrum as minute bright yellow grains within pyrite.

None of the sulphide-rich samples contain appreciable amounts of precious metals; Au and Ag contents are generally below 0.15 and 5 ppm respectively and Pt and Pd values are generally below or only slightly above detection limits of 0.03ppm. Ni and Co contents seem to be elevated in the massive sulphide samples; contents range from 235 to 854ppm and Co contents range from 430 to 2020ppm in the five high grade samples (105751-105755). Zn and Pb values for all of the sulphidic samples are quite low.

Stream Sediment Geochemistry

Design of the Survey

Sampling for this survey was conducted at sites characterized by active stream channels containing a range of coarse, immature sediments, dominated by gravels, cobbles and boulders. Sampling of high energy sites contrasts with the standard stream sediment sampling procedure where silt and/or clay are collected from accumulation sites associated with more quiet-water sedimentation.

Nickel - copper - PGE deposits are targeted by this survey, with platinum, palladium, nickel, copper, cobalt and chromium as the primary pathfinder elements. Sampling the high-energy environment is especially important in PGE exploration (Fletcher, 1988). After discussion among Sean McKinley, Emerald Fields and Discovery Consultants, it was decided to employ three sampling methods to sample the high-energy environment:

1. Sieved Silt Survey: Large amounts of high-energy sediment are sieved to obtain a coarse sand and silt sample (minus 20 mesh) of about 2 – 3 kg.
2. Moss Mat Survey: In creek beds where the sediments were scarce, the live moss covering rocks below high water level were collected. Moss mats can be an effective method of trapping heavy sediments (Lett and Jackaman, 2001), especially during high water levels. In discussing the surveys below, the moss mat samples have been included within the Sieved Silt survey.
3. Heavy Mineral Survey: Large amounts of high-energy sediment are sieved to obtain a coarse sand and silt sample (minus 20 mesh).

Although this was a preliminary survey to identify anomalous areas for further exploration, to speed up the exploration process, the emphasis shifted from a standard first-pass heavy mineral survey to a significant component of Sieved Silt sampling of order 1 and order 2 creeks. Many of these low order creeks are less that 1 km^2, although drainages up to about 3 km^2 were sampled by this method. Also, most small drainages contain small amount of –20 mesh sediment, making the collection of large Heavy Mineral samples too costly, due to lengthy sample time required.

Heavy Mineral sampling generally is more suited to larger order creeks where more fine-grained sediments are present. One of the advantages of Heavy Mineral method is that the contrast between anomalous and non-anomalous tends to be significantly higher.

For efficiency reasons, most of the sample sites were accessed from trucks along logging roads. The Sieved Silt samples on Fairy Creek were accessed by foot traverse.

Local stream drainages are developed in bedrock and in areas of incised colluvium, glacial till and glaciofluvial outwash deposits. In this survey, gravel bars within active stream channels were sampled at the appropriate location (Fletcher, 1990) – at the bar head. Fletcher (Fletcher and Wolcott, 1989) has demonstrated that gold is mainly transported during freshets when bar sediments are eroded and later re-deposited. Sampling of a freshet bar requires a vertical profile be sampled. Erratic winnowing of, and re-deposition of, light sediments at the surface of the bars also necessitates sampling at depth.

The high-energy environment provides the best setting for obtaining the needed consistent quantities of physically transported precious metals, sulphides and other heavy mineral materials. The same high-energy sediments contain precipitates of hydromorphically-transported precious metals, iron oxide and partly weathered sulphides.

Collection Methods

The stream sediments were generally notably angular in the survey area. The samples were collected by carefully shovelling the sediments into a -20 mesh stainless steel sieve (diameter 36 cm, depth 17 cm) that rests in a large aluminum pan containing water. Some liquid detergent was added to the wash water to prevent flotation of small metallic mineral grains. Using handles on the sieve, a rotary-type motion like a washing machine was used to sieve the sediments. In this manner 2 – 3 kg of sediment was collected for Sieved Silt samples and about 10 kg for Heavy Mineral samples. The sieves and pans were carefully cleaned between samples to prevent contamination. About 40 % of the Sieved Silt samples contain some component of moss mats.

Methods of Sample Preparation and Analysis

In total, 97 Sieved Silt and/or moss mat samples were collected and sent to Acme Analytical Laboratories, in Vancouver, BC, for sample preparation and analysis. After drying and sieving to -80 mesh, a splitter was used to create a 30g sub-sample, for aqua regia digestion and ICP-MS analysis.

In total, 38 Heavy Mineral samples were sent to C.F. Mineral Research Ltd., in Kelowna, BC, for the preparation of heavy mineral concentrates. The samples were wet sieved, then subjected to a 2.96 specific gravity (intermediate) heavy liquid separation, followed by a 3.27 specific gravity (heavy) separation. The heavy fraction was then separated by magnetic susceptibility into magnetic, paramagnetic and nonmagnetic fractions. Due to the low weights of the -150 mesh fractions, the samples were coarsened to -80 mesh.

The -80HN (heavy, nonmagnetic) fraction averaged 3.8g per sample – analysis was on either 1g or 0.5g samples. Fletcher (1988) has shown that for some deposits platinum values can be higher in the magnetic fraction than in the non-magnetic, but with both fractions still being anomalous. Therefore, the entire HP, heavy paramagnetic, and some of the HM, heavy magnetic, fractions were analysed.

Analytical Results

The results for the Sieved Silt and Heavy Mineral and Sieved Silt samples are in Appendices G and H, respectively. The sample locations are plotted on 1:20,000 maps, Figures 7a and 7b, for the *Pearson PGE* and the *Karen* properties, respectively. Platinum, palladium and gold values are displayed on Figures 8a and 8b for the *Pearson PGE* and the *Karen* properties, respectively. The copper, nickel, cobalt and chromium values are on Figures 9a and 9b, respectively.

The Heavy Mineral gold values are also reported as micrograms of gold; the weight of gold in a particular fraction, standardized to a 10 kg, -20 mesh field sample. The non-magnetic fraction is the most suitable for interpreting results. The background value for gold is < 1 microgram. Microgram values of greater than 4 combined with a corresponding concentration value of > 500 ppb are definitely anomalous.

Due to the relatively small number of samples collected, a rigorous statistical analysis is not valid. Background, threshold and anomalous classifications for selected elements were determined from histograms.

The following are background, threshold and anomalous values for selected elements for Sieved Silt and Heavy Mineral (-80HN) samples:

Platinum and Palladium

Almost all of the platinum and palladium values were either below detection limits or only a few ppb above detection limits. In interpreting geochemical results it is statistically difficult to assign threshold values to such just-above-detection samples. However, one Heavy Mineral sample on the east side of the *Karen* property returned 12 ppb palladium in both the HN and HM fractions, giving some credence to a threshold classification. The presence of 13 ppb Pd and 8 ppb Pt in a Heavy Mineral sample at the mouth of Braden could also be classified as a PGE threshold sample. There is only one anomalous PGE value, 46 ppb Pd in Sieved Silt.

Copper

Sieved Silts:	background	< 60 ppm
	threshold	60 – 80
	anomalous	> 80

Heavy Minerals:	background	< 150 ppm
	threshold	150 – 200
	anomalous	> 200

Gold

Sieved Silts:	background	< 6 ppb
	threshold	6 – 10
	anomalous	> 10

Heavy Minerals:	background	< 2 micrograms
	threshold	2 – 5
	anomalous	> 5

Nickel

Sieved Silts:	background	< 60 ppm
	threshold	60 – 100
	anomalous	> 100

Chromium

Sieved Silts:	background	< 70 ppm
	threshold	70 – 100
	anomalous	> 100

Cobalt

Sieved Silts:	background	< 30 ppm
	threshold	30 – 40
	anomalous	> 40

There is a strong correlation among nickel, chromium and cobalt values in Sieved Silts. The correlation coefficient (r) for Ni : Cr is 0.96, and for Ni: Co is 0.76.

Some Sieved Silt and Heavy Mineral samples contain mercury values significantly above the background of about < 200 ppb Hg. The source of the mercury is not known.

Quality Control

Duplicate Field Samples

Being a small survey, only one duplicate field sample was collected during the Heavy Mineral sampling. The analytical results show excellent agreement between the samples (H35, H36), except notably for gold values. One sample contained anomalous gold, while the other returned background values. Silver and mercury values were also significantly different. The samples were small, only 1.5 and 1.4 g of -80 HN sediment. The size of the analytical sample was 1.0 g. and although the samples were carefully split, using a microsplitter, to produce the 1.0 g, it is possible that non-heterogeneous sub-samples were produced. Also, one sample may have had significantly more gold. This discrepancy, while fairly common in silt samples, is quiet rare in heavy mineral sampling.

In the Sieved Silt survey, a silt sample and a moss mat sample were collected at one site (S095, S096). The variation in analytical results is not statistically significant.

Any difference between the original and duplicate samples will measure precision in sample collection, sample preparation and sample analysis. However, generally the sampling procedure will account for most of the differences between samples.

Field Blank Samples

Samples containing low levels of precious and base metals were prepared from stream sediments. Pre-testing indicates that minor anomalous gold values can occur in these blanks. Also, being natural sediments, variations are more likely to be greater than with laboratory blank pulps.

The purpose of these blanks, which are submitted 'blind' to the laboratory, is to monitor possible contamination during the sample preparation (sieving, splitting). There is no evidence of contamination problems during the processing.

Laboratory Duplicate Samples

Every 20 samples, the laboratory analyses another split of -80 mesh sediment. It is expected that erratic gold results will occur in the analysis of 30g sub-samples.

The three laboratory duplicate Sieved Silt samples show excellent correlation, except in gold. This variation is due to the inhomogeneous distribution of gold in the sample, not to analytical error.

Laboratory Blank Samples

Blank pulp samples are inserted by the laboratory to determine any analytical problems. These samples do not go through the sample preparation process, so any errors are usually analytical. The results demonstrate that there is no problem with the analytical results.

Laboratory Standards

In contrast to duplicate and blank standards, the purpose of analytical standards is to determine accuracy, as opposed to precision (repeatability) of results. In geochemical stream sediment surveys accuracy of results is generally not the issue it is in ore grade determination. The results do not show any significant variations that indicate an accuracy problem.

Geophysical Surveys

Magnetometer and VLF-EM reading were taken at 10-metre intervals with a GEM Systems GSM – 19v5.0 magnetometer. The location of the three lines of the survey is shown on Figure 7a. The resultant data are shown in a table in Appendix K, along with line profiles of the data.

The orientation survey results show both VLF and anomalies, although follow-up exploration would be required to determine the source of the anomalies.

Discussion

Geology

The geology of the study area is dominated by massive dioritic to gabbroic intrusions with lesser granodioritic and ultramafic phases. Except in the cases where intrusive breccias were observed, contact and intrusive relationships were not observed in this study. In addition, there was little evidence of layering within the intrusions themselves; the intrusions appear to be emplaced as stocks and possibly as sills. As such, the possibility of finding Ni-PGE mineralization hosted by a layered mafic intrusion in this area seems to be quite low. At the same time, however, the lack of a layered mafic intrusion does not preclude the possibility of the presence of Ni-PGE mineralization.

In British Columbia such mineralization is most commonly associated with: 1) Alaskan-type, zoned mafic-ultramafic intrusive complexes (e.g. Tulameen Complex), 2) with gabbroid intrusions (e.g. Giant Mascot Mine) and 3) with flood basalts provinces such as the Karmutsen Formation (e.g. Tofino Nickel) (Lefebure, 2000). The identification of felsic, mafic and ultramafic intrusive phases suggests the possibility of at least a zoned intrusive complex in the study area. However, there are several pieces of evidence that suggest these rocks may be quite different from a typical Alaskan-type complex, namely the prevalence and size of the ultramafic phases and the overall age of the intrusions. Nixon et al. (1997) describe numerous Alaskan-type ultramafic-mafic complexes in British Columbia. In general these complexes are found within volcanic arc terranes of the Intermontane Belt and are considered to be coeval with the early Mesozoic arc volcanic rocks of the Quesnel and Stikine terranes (Nixon et al., 1997). The intrusive rocks in this project area are considered to be Paleozoic age. In addition well known layered intrusions (as opposed to zoned intrusions such as the Alaskan type) that host PGE deposits such as the Bushveld Complex and the Stillwater Complex are much older being 2050 Ma and 2700 Ma respectively (Hulbert et al., 1988). These types of large Precambrian to Archean age intrusive complexes have not been reported in the Cordillera of British Columbia. The ultramafic rocks within the project area appear not to exceed a thickness of at most 100-200 metres. By comparison, the ultramafic rocks of the Alaskan-type complexes are mappable over thicknesses of several 1000s of metres; Archean intrusive complexes such as the Bushveld and the Stillwater Complexes are even larger still with thicknesses in excess of 7000 metres. These intrusive complexes also commonly display primary igneous textures such as cumulate layering that seem to be lacking in the project area. Cumulate textures apparently have been documented petrographically within some of the ultramafic rocks here (G. Pearson, pers. comm.), but they appear to be relatively rare; any layering observed in the field could be attributed to metamorphic processes. Although conjectural , it is possible that the intrusive rocks exposed in the project area represent the upper parts of a large intrusion with earlier crystallizing ultramafic phases existing at greater depths and thus not being widely exposed. The ultramafic rocks could in fact be large rafts of previously crystallized cumulate rocks that were engulfed by later pulses of more felsic magmas. Where intrusive breccias were observed, most commonly more mafic composition diorites were intruded by more felsic composition rocks. By comparison, the upper parts of the Bushveld Complex are gabbroic to dioritic in composition.

Although the identification of ultramafic rocks in the project area is significant, it is by no means unusual within intrusive suites on western Vancouver Island. Carson (1973) writes that all compositions of plutonic rocks from peridotite to granite occur in the western third of Vancouver Island. Carson documents medium grained, dark green to black peridotite exposed over several hundred feet within a gneiss complex on Meares Island near Tofino northwest of the project area and suggests that they may be part of the same intrusion as the gneiss and equivalent to the basic sills of the Sicker Group. Carson also quotes that Muller suggested that the peridotite bodies were equivalent to the Karmutsen Formation and were therefore Triassic in age; Carson documented a 75 foot-wide peridotite dike intruding the Bedwell Batholith of west-central Vancouver Island which would give it a post-Jurassic age. Carson (1973) describes Tertiary intrusions (such as those near Sooke south of the project area) as mainly unaltered to moderately altered gabbro, quartz diorite and dacite porphyry with lesser granodiorite and quartz monzonite and no gneisses, whereas the older Jurassic intrusions are mainly granodiorite to quartz diorite with common gneissic structures and moderate to strong alteration. These descriptions seem also to describe all of the rocks in the study area. This might suggest that there are intrusive rocks of completely different ages within this area with the more granodioritic and more altered rocks being possibly Jurassic and older (i.e. West Coast Complex and Island Intrusions) whereas the fresher gabbroic to dioritic, and possibly the ultramafic, rocks are younger and related to Tertiary intrusive activity. Although this is entirely speculative at this time and would require significant further work to prove, it would be significant for Ni-PGE exploration in the area because J. Houle identified enrichments of Ni and Co at the Sunro deposit south of the project area (MINFILE Report 092C 073). It should also be noted that Rusmore (1982), in a study that included the southernmost portion of the study area, placed the amphibolitic rocks within the West Coast Complex, but placed dioritic to gabbroic rocks with the younger Island Intrusions. Rusmore also documents two phases of deformation accompanied by metamorphism and intrusive activity that ended as recently as about 39-41 Ma. This suggests the possibility of multiple intrusive ages within the study area and the possibility of some much younger intrusions than previously identified. Such an observation is important in that it may open the opportunity, assuming that these younger intrusions exist, for discovery of Cu-Au mineralization similar in style to that at the Sunro Mine associated with Eocene intrusions.

Although it is speculative, the geology of this region might be considered prospective for Ni-Cu sulphide mineralization based on the genetic model for the Aguablanca deposit in Spain. Tornos et al. (2001) describe Aguablanca as a magmatic Ni-Cu sulphide deposit hosted by diorites and gabbros intruded during a subduction/collision event. Part of this new model includes the late emplacement of intrusive breccias containing fragments of consolidated layered cumulate rocks. The Aguablanca model has recently been proposed for the Giant Mascot Ni-Cu mine near Hope, southwestern B.C. (Metcalfe et al., 2003). Interestingly, Nixon (2003) has inferred from research into the compositions of spinels from ores at the Giant Mascot Mine that that deposit may have formed within an eastern extension of Wrangellia Terrane as opposed to the younger intrusive rocks with which it has normally been genetically linked. The Aguablanca model may have implications for exploration in the areas discussed in this report; the geological units hosting that deposit appear to have similarities to some of the rocks on the *Pearson PGE* property while the Sooke gabbro on the *Karen*, associated with an obducted ophiolite complex, may be of similar tectonic affinity to Aguablanca. The linking of the Giant Mascot deposit to Wrangellia may prove to have interesting implications for exploration within the rocks of the West Coast Complex which are also generally included as part of Wrangellia.

<u>Discussion of Cu/Pd ratios</u>

Various authors including Barnes and Meier (1999) and Keays and Lightfoot (2002) have discussed the use of ratios of metals such as Cu and Ni to the noble metals (e.g. Pt, Pd) in exploration for platinum group elements (PGEs). Since PGEs are strongly fractionated into sulphide minerals, as soon as even a small amount of sulphides start to fractionate from a magma, the remaining residual melt will be strongly depleted in PGEs, that is, the fractionating sulphide phase(s) efficiently extract available PGEs from the melt. Pt and Pd are more strongly fractionated into sulphides than Cu and Ni and therefore will appear to be more strongly depleted than these elements. As such, Barnes and Meier (1999) state that if, for example, the Cu/Pd ratio of a magma or intrusive rock is greater than the Cu/Pd ratio for the mantle (i.e. the assumed original source of the parent magma) then the magma has already segregated sulphides or platinum group minerals and thus fractionated the PGEs such that any remaining magmas are depleted in Pd, or other PGEs, thus yielding a high Cu/Pd ratio compared to the mantle. Barnes and Meier (1999) state that Cu/Pd or Cu/Pt ratios greater than mantle ratios sulphide segregation has already occurred and that, therefore, there is a possibility of a PGE-rich ore deposit at a stratigraphically lower position i.e. earlier segregated PGE-rich sulphides depleted the melt of PGEs such that later phases of the magma were relatively depleted on those metals. Thus, low values of Pt and Pd in a rock can actually have positive implications in PGE exploration. Barnes and Meier (1999) use mantle Cu/Pd ratios ranging from 1000 to 10,000. Thus, a ratio greater than 10,000 suggests depletion of Pd relative to Cu has occurred and that sulphides may have segregated at depth. It should be noted that the Cu/Pd ratios for rocks above the PGE-rich Merensky Reef of the Bushveld Complex are much higher than those below the Reef (Keays and Lightfoot, 2002). The same is true for basalts and intrusive rocks above the Noril'sk deposits in Siberia (Barnes and Meier, 1999).

Of the 18 representative geochemical samples taken and discussed in the rock geochemistry section above, 10 had Pd values above detection and thus were usable in a Cu/Pd ratio calculation. Cu/Pd ratios for these samples ranged from 3900 to 63300. Interestingly, the three samples with ratios of less than 10,000 (i.e. the mantle ratio discussed above) are mafic to ultramafic rocks (hornblendites and peridotite), rock types that are often more closely associated with Ni-PGE deposits, whereas the 'depleted' ratios of greater than 10,000 are associated with the typical dioritic rocks. As such, one might characterize the rocks in this area as depleted in Pd relative to Cu and relative to the mantle. Given the very small number of samples in this dataset, however, such conclusions at this stage are largely speculative and would need considerably more sampling to be considered reliable. In addition, it should be noted that although 'depleted' Cu/Pd ratios generally are indicative of the fractionation and segregation of PGE and Ni-Cu minerals at a lower stratigraphic level, they do not necessarily imply that these minerals have been concentrated in a particular economically viable layer or 'reef' (Note: reef-type Ni-PGE deposits are not a known ore deposit type in British Columbia). The mechanisms of magma emplacement may cause the Ni-Cu-PGE-bearing minerals to remain disseminated within the rocks. Barnes and Meier (1999) suggest that tectonic settings where the crust is thin, such as a rift environment, or where major crust-penetrating faults are present, are the most favourable settings for PGE ore deposits. Such settings allow for significant amounts of magma to be emplaced rapidly at higher crustal levels prior to the segregation of sulphides. While the Cu/Pd ratios from the dataset in this study should be used with caution, they may provide a very useful tool for future Ni-Cu-PGE exploration in the area.

Mineralization

By far the most common style of mineralization in this area is skarn magnetite deposits related to the interaction of the intrusions with the older limestones. Most of the mineral occurrences in the area can be attributed to skarns. The copper-rich massive sulphide occurrence described along Granite Main logging road is slightly enigmatic. Upon first examination of this occurrence, the sulphides by virtue of their mineralogy and textures could easily be considered magmatic in origin and therefore very important in the exploration of Ni-PGEs. However, there are several pieces of evidence that the sulphides are skarn-related. The local geology is highly permissive for skarn mineralization; limestone is common to the north, south and east of the sulphide outcrop and altered diorite is present in the immediate vicinity of the outcrop. The well documented Reko skarn iron-ore deposits are in all within several hundred metres of this occurrence; a magnetite-chalcopyrite-bearing massive garnet occurrence (sample GR03-028) which is most likely skarn-related exists 125 metres north of this along the Granite Main road. The presence of up to 60% garnet and the calc-silicate alteration on the adjacent dioritic rocks are also indicative of skarn mineralization.

No Ni-PGE mineralization was discovered in the field. However, as discussed above, if such mineralization exists within these rocks, it will likely be at depth and therefore will not be exposed unless the host rocks are steeply folded or faulted whereby they are brought to the current erosion level. The general lack of internal structure within the largely massive dioritic intrusions did not allow for an assessment of the degree of deformation within the intrusive rocks.

Stream Sediment Geochemistry

The presence of anomalous gold values in the Heavy Mineral samples demonstrates that sample collection and preparation recovered heavy minerals. This, combined with the absence of any anomalous platinum or palladium, strongly indicates that PGE significant occurrences are not likely to occur in the Heavy Mineral sampled basins. However, sampling of some very large basins sampled by a single Heavy Mineral sample will not always detect local mineralization in an order 1 creek. Such an order 1 creek draining eastward into Fairy Creek produced the only PGE stream sediment anomaly – 46 ppb palladium.

Threshold or anomalous copper values in Sieved Silt or Heavy Minerals samples occur in 12 catchments in the northeast corner of the *Pearson PGE* property. The Granite Main copper showing is within this area, as well as 4 MINFILE copper +/- magnetite showings. In this copper area, 4 catchments have threshold or anomalous values in gold.

In the Fairy Creek area, there are six catchments with threshold or anomalous copper values. Two threshold-copper northwesterly draining tributaries of Braden Creek adjoin the Fairy Creek area to the northwest.

A southeast draining tributary to the Gordon River is strongly anomalous in gold - Heavy Mineral sample H031. A Sieved Silt site (S070) about 2 km to the southeast shows anomalous gold (in lab duplicate analysis). These catchments are adjoining at their headwaters.

By the southern boundary of the property along the Harris Creek logging road, one Heavy Mineral sample returned anomalous gold, although this was not confirmed by a duplicate field sample.

Reid Creek, a tributary to Braden Creek, has above background gold values. However, most of the catchment is not covered by *Pearson PGE* claims.

On the *Karen*, gold anomalies are common with anomalies in 7 catchments. Copper is also anomalous, with 4 catchments. As well one creek contains above background Pt and Pd values.

On the *Pearson PGE*, there is a concentration of above-threshold nickel values in tributaries to Renfrew Creek. The northern portion of this area overlaps part of the above-mentioned copper +/- gold area.

Anomalous mercury values occur in the Heavy Mineral and Sieved Silt surveys.

Geophysical Surveys

Magnetometer surveys may be a method to trace known sulphide zones and to delineate targets in geochemically anomalous areas where outcrop is scarce.

Conclusions

- *Preliminary but cost effective geological mapping along logging roads has not* discovered any evidence for significant layered intrusions that could host nickel-copper-PGE mineralization.
- Most of the semi-massive to massive sulphides seem to be genetically related to skarn development.
- Copper is the main metal of economic significance in these skarn showings.
- The *known skarn zones* in the *area have not demonstrated significant size* potential to date.
- The stream sediment survey demonstrates that the PGE mineralization is not widely present or is of high tenor. Except for one small tributary of Fairy Creek on the *Pearson PGE*, no other PGE anomalies were noted.
- The stream sediments on the *Karen* are significantly anomalous in gold and copper.
- One catchment on the *Karen* has a threshold value in palladium and platinum.
- The source of the gold on the *Karen* may be from the Tertiary Carmanah Group conglomerates, although further upstream gabbros and ophiolites may be the source of the gold, copper +/- PGEs; anomalous Cu and Au values in this area may be indicative of mineralization of a similar style to the Sunro Mine (B.C. MINFILE 092C 073), a past producing Cu-Au deposit hosted by a Eocene volcanic rocks and located 3 km to the east of the *Karen* property.
- The high correlation among nickel, chromium and cobalt, and the relatively low values can be indicative of the geochemistry of widely distributed mafic rock units, not significant mineralization; the relatively high Ni, Cr and Co contents inherent to the mafic and ultramafic intrusions in the area are likely sufficient to yield the values considered anomalous in previous geochemical surveys.
- Recent developments in the genetic models for the Giant Mascot deposit of southwestern B.C. and the Aguablanca deposit of Spain may have similarities and applications to the geology and future exploration in the study area.

Recommendations

- The foremost recommendation is that Emerald Fields reviews the data and conclusions of this report, and with other data that it may have, evaluate its exploration strategy on the large (685 claim units) project.
- Without negating serendipity, there should be a clear understanding of the types of mineral deposits that could reasonably occur and their economic potential.
- On the *Pearson PGE*, one drainage catchment is worthy of follow-up exploration for PGEs and three for gold.
- In the northeast corner of the *Pearson PGE*, the area of copper +/- gold enrichment may be worthy of follow up exploration.
- In the Fairy Creek area of the *Pearson PGE*, the area of copper +/- gold +/- PGE enrichment may be worthy of follow up exploration; the Cu-Ni sulphides discovered by Tavela near Fairy Creek remain unexplained and further prospecting for a bedrock source for Tavela's mineralized float boulders is recommended.
- On the *Karen*, the source of the gold and copper in the stream sediments should be determined – firstly, by follow-up sampling upstream, then by prospecting, mapping and geochemistry in anomalous catchments.
- On the *Karen*, the above-background PGE site is a lower priority for further exploration.
- Any exploration on showings of copper sulphides with possible PGEs and/or gold, such as the Granite Main showing, should utilize follow-up stream sediments surveys, soil surveys and geophysics.
- The Granite Main massive sulphide showing should be trenched and then mapped and sampled in detail to give a better understanding of the size, genesis and geological relationships of this interesting occurrence.
- Skarn-hosted copper sulphide mineralization should be considered a viable exploration target on the *Pearson PGE* property, especially in the Granite Main area.
- Any future exploration efforts for intrusion-hosted Ni-Cu-PGE deposits should consider using geochronology to help determine the relative ages and relationships of the different intrusive rock types in the area.
- A more detailed rock geochemical sampling program would provide a useful complement to any geochronological work and could provide useful information as to the "fertility" of these intrusive rocks for Ni-PGE mineralization at depth.
- As a part of any future rock sampling and petrographic analysis, it is recommended that attention be given to the identification and determination of

the composition of spinels as a potential pathfinder for Ni-Cu-PGE deposits as outlined by Nixon (2003).

- Trenching across some of the ultramafic rock occurrences would yield more *information on their size and contact relationships with the more common diorite* intrusions.

Respectfully submitted,

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S. D. McKINLEY
28228
BRITISH COLUMBIA
GEOSCIENTIST

Sean D. McKinley, P. Geo.

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PROVINCE OF
W. R. GILMOUR
BRITISH COLUMBIA
GEOSCIENTIST

William R. Gilmour, P.Geo.

October 10, 2003

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Statement of Qualifications

I, Sean D. McKinley do hereby certify that:

I am a Consulting Geologist residing at 804-220 Townsite Road, Nanaimo, B.C., V9S 5S8.

I am a graduate of Queen's University, Kingston, Ontario where I received a Bachelor of Science degree in 1992, and the University of British Columbia, Vancouver, B.C. where I received a Master of Science degree in 1996. I have practiced my profession continuously since graduation.

I am a Professional Geoscientist in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

This report is based on my knowledge of the regional geology in the area and on my geological mapping of the *Pearson PGE* property.

I have no interests in Emerald Fields Resource Corp. nor in the property reported on herein.

I consent to the use of this report for submission for assessment requirement for the *Pearson PGE* property.

Dated on October 10, 2003, in Nanaimo, British Columbia.

Sean D. McKinley, M.Sc., P.Geo.

PROFESSIONAL
PROVINCE OF
S. D. McKINLEY
28228
BRITISH COLUMBIA
GEOSCIENTIST

Statement of Qualifications

I, William R. Gilmour, of 13511 Sumac Lane, Coldstream, BC, V1B 1A1, do hereby certify that:

I am a consulting geologist in mineral exploration associated with Discovery Consultants of Vernon, BC.

I am a graduate of the University of British Columbia, with a Bachelor of Science degree in geology.

I have been practising my profession continuously since graduation in 1970.

I am a Professional Geoscientist in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

This report is based on a major involvement in the planning of the stream sediment survey, a thorough review of the fieldwork carried out by Discovery Consultants personnel, and an interpretation of the geochemical results.

I consent to the use of this report for submission for assessment requirement for the *Pearson PGE* and *Karen* properties.

William R. Gilmour, P.Geo.

PROFESSIONAL PROVINCE OF W. R. GILMOUR BRITISH COLUMBIA GEOSCIENTIST

October 10, 2003

Pearson PGE Property

1. Professional Services				
W.R. Gilmour (P.Geo.)				
Planning, Supervision				
1.75 days @$500/day			$875.00	
Data Compilation & Report Writing				
5 days @$500/day			2,500.00	
S. D. McKinley (P.Geo.)				
Project Planning				
2 days @$500/day			1,000.00	
Geological Mapping (May 6 - 25)				
16 days @$500/day			8,000.00	
Data Compilation & Report Writing				
7 days @$500/day			3,500.00	
C. Sebert (P.Eng.)				
Geological Mapping (May 9 - 20)				
12.0 days @$500/day			6,000.00	
A. P. Pryslak (P.Geo.)				
Geological Mapping & Prospecting (Apr. 15 - 22)				
8.0 days @$450/day			3,600.00	
			-------------	$25,475.00
2. Field Personnel				
Prospecting (Apr 15 - 29)				
P. Heatherington (Prospector)				
10.0 days @$350/day		$3,500.00		
Stephen Stares				
10.0 days @$270.25/day		2,702.50		
Michael Stares				
10.0 days @$270.25/day		2,702.50		
Cliff Hickman				
10.0 days @$270.25/day		2,702.50		
Jeff Stares				
10.0 days @$270.25/day		2,702.50		
		-------------	14,310.00	
Stream Sediment Sampling (May 6-12, 14-17, 19-22, 24) plus mob/demob				
Rick Mitchell	16 days @$358.46/day	$5,735.36		
Dave Strain	16 days @$358.46/day	5,735.36		
stat. Rick Mitchell	1 day @ 224.04	224.04		
holiday Dave Strain	1 day @ 224.04	224.04		
		-------------	11,918.80	
Geophysics Survey (May 23)				
Rick Mitchell	1 day @$358.46/day	358.46		
Dave Strain	1 day @$358.46/day	358.46		
		-------------	716.92	
			-------------	26,945.72
3. Office Personnel				
Drafting			3,143.92	
Field Prep/Demob			372.40	
Data Compilation			324.00	
Data Compilation - Zone 14			2,044.40	
Secretarial			51.80	
			-------------	5,936.52

4. Expenses

Analysis		
ACME Lab		
59 silt samples @$27.00/sample	1,593.00	
40 mossmat samples @$29.00/sample	1,160.00	
31 Heavy Mineral samples @$25.00/sample	620.00	
5 blank samples @ $27.00/sample	135.00	
ALS Chemex Lab		
30 Rock samples @$29.50/sample	885.00	
18 Rock samples @$37.00/sample	666.00	
X-RAL - submitted by EFR		
Rock samples	5,004.83	
CF Mineral Research		
31 HM sample preparation @$171.75/sample	5,324.25	
Preparation of -80HM, HP fractions	139.50	
Vancouver Petrographic		
thin-section work	4,246.91	
Shipping	179.68	
	-------------	19,954.17
Communications		418.33
Communications - EFR		398.86
Field Supplies		246.30
Field Supplies - EFR		953.02
Equipment Rentals		962.70
Office General		182.20
Lodging & Meals		1,486.30
Lodging & Meals - EFR		3,960.27
Maps & Publications, Map prints		1,282.69
Transportation - 4x4 trucks		
17 days @ $ 40/day (May 6 - May 24)	$680.00	
2,208km @ $ 0.40/km	883.20	
fuel	539.78	
highway & ferry tolls	185.82	
truck (Apr - Jun) - EFR	3,673.48	
fuel - EFR	522.19	
Transportation - car		
250 km @ 0.40/km	100.00	
	-------------	6,584.47
Travel - Air - EFR		4,552.98
Emerald Fields Resource Corp. Administrative Costs		7,000.00
Discovery Consultant Management Fees (10% of disbursements)		1,800.00

	Total Assessment Work:	$108,139.53

Karen Property

1. Professional Services			
W.R. Gilmour (P.Geo)			
Planning & Supervision			
0.25 days @$500/day		$125.00	
Data Compilation and Report Writing			
1.0 day @$500/day		500.00	
S.D. McKinley (P.Geo.)			
Data Compilation and Report Writing			
1 day @ $500/day		500.00	
		-------------	$1,125.00
2. Field Personnel			
Stream Sediment Sampling (May 13, 18 & 24)			
Rick Mitchell 2.0 days @$358.46/day		716.92	
Dave Strain 2.0 days @$358.46/day		716.92	
		-------------	1,433.84
3. Office Personnel			
Drafting		400.00	
Field Prep/demob		50.00	
Data Compilation		50.00	
Secretarial		25.00	
		-------------	525.00
4. Expenses			
Analysis			
ACME Lab			
3 silt samples @$27.00/sample	77.25		
7 Heavy Mineral samples @$25.00/sample	140.00		
CF Mineral Research			
7 HM sample preparation @$171.75/sample	1,202.25		
Preparation for -80HM, HP, HN fractions			
Shipping	19.46		
	-------------	1,438.96	
Communications		50.00	
Field Supplies		27.36	
Equipment Rentals		109.19	
Office General		50.00	
Lodging & Meals		60.84	
Maps & Publications, Map prints		200.00	
Transportation			
a) Truck			
4x4 2 days @$40/day	$80.00		
189km @40¢/km	75.60		
fuel	16.13		
highway & ferry tolls	11.93		
	-------------	$183.66	
Emerald Field Resource Cort. Administrative Costs		1,000.00	
Discovery Consultants Management Fees (10% of disbursements)		200.00	
		---------------	3,320.01

Total Assement Work:			$6,403.85

Geological, Geochemical and Geophysical

Assessment Report

on the

***Pearson PGE* Property**

Abbey, Bingo, Cedar, Coho, Coho #4 - #6, Coho 2 – 3, Dan 1 –11, EFR, EFR 1 – 6, Galleon 53, Galleon 57, Galleon 70 – 71, Galleon 80, Jack, Jack 2, Jan 7, Jan 8, Jan 8, Jay Jay, Nabay 1 – 11, Obin, Outhouse, Pacmist 2 – 4, Princess, Princess 2, Ralph 1 – 2, Ran, Ran 1 – 16, Roccod, Timber, Ultra 1 –6, Whistle 1 – 2, Woody claims

and

***Karen* Property**

Karen 1 – 5 claims

Port Renfrew Area
Victoria Mining Division

<u>Latitude and Longitude</u>: *Pearson PGE* 48° 35' - 48° 41' N; 124° 13' - 124° 31' W
Karen 48° 26' - 48° 28' N; 124° 04' - 124° 08' W

<u>Map Sheets</u>: *Pearson PGE* 092C.059, 068, 069 92C09, 10E
Karen 092C.050 92C08E

<u>Claim Owners</u>: Emerald Fields Resource Corp. and Gary Pearson

<u>Operator</u>: Emerald Fields Resource Corp.

<u>Consultants</u>: Sean D. McKinley, P. Geo. and Discovery Consultants

<u>Authors</u>: Sean D. McKinley, P. Geo. and William R. Gilmour, P.Geo.

<u>Date</u>: October 10, 2003

Volume 2 of 3

Appendix A

Petrographic reports

for

selected samples

[1] 105752 Garnet and sulfide

Summary Description

Fine granular garnet in sieve textured pyrrhotite-chalcopyrite. Overall estimated to contain more than 50% sulfide, with the balance mostly fine garnet.

Microscopic Description

Transmitted Light

Garnet; 40-45%, anhedral to subhedral (0.1 to 1.5 mm). Sieve textured sulfide contains dark brown garnet, pale red in thin section. Garnet is generally fresh, but with some very minor Fe oxide in fractures.

Pyroxene; 1-2%, anhedral (0.01 to 0.3 mm). Minor, mostly very fine grained clinopyroxene. Possibly some orthopyroxene.

Feldspar(?); traces, anhedral (0.01 to 0.1 mm). Colourless, lower relief. Biaxial.

Apatite(?); traces, anhedral to subhedral (0.01 to 0.1 mm). Featureless, uniaxial(-) inclusions in the garnet.

Reflected Light

Pyrrhotite; 35-40%, anhedral (0.01 to several mm). Abundant, in sieve or mesh texture surrounding the granular garnet. Some larger irregular clots. Pyrrhotite locally has some bird's eye pyrite-marcasite alteration.

Chalcopyrite; 10-15%, anhedral (0.01 to ~5 mm). Occurrence similar to the more abundant pyrrhotite. Forms some simple intergrowths with the pyrrhotite. Fills some of the smaller intergranular crevices among the garnet. Some "chalcopyrite" develops a pink tarnish . Bornite considered, but chalcopyrite is visible under the incomplete pink coating.

Pyrite; 2%, euhedral to anhedral (0.01 to ~4 mm). Most common in chalcopyrite.

Pyrite/marcasite; 1%, microcrystalline. Some alteration "spots" of pyrite-marcasite. Bird's eye texture. Locally abundant.

Pentlandite; traces, anhedral (0.01 to 0.2 mm). More common as irregular grains and blebs than typical pentlandite flames.

Unknown; trace, anhedral (~0.01 mm). Grey, isotropic possibly sphalerite, but appears slightly light in colour. Tennantite tetrahedrite also considered.

Unknown; trace, anhedral (<0.01 mm). Pale yellow, bright, isotropic, in the grey unknown – possibly pentlandite appears brighter in the grey mineral.

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[2] 105753 Garnet and sulfide

Summary Description

Fine granular garnet and minor clinopyroxene with interstitial pyrrhotite and chalcopyrite, forming a discontinuous sulfide mesh. Garnet is estimated to be more abundant than the sulfide in this sample.

Microscopic Description

Transmitted Light

Garnet; 55-60%, anhedral to subhedral (0.1 to ~3 mm). Fine granular garnet is pale red in thin section, dark red-brown in hand sample.

Clinopyroxene; 5-7%, anhedral (0.1 to ~1 mm). Minor fine granular clinopyroxene. Commonly forming small irregular aggregates. Very pale green colour in thin section. Probably diopside.

Feldspar; traces+, anhedral (0.1 to 0.5 mm). Featureless. Relatively low relief.

Apatite; traces, anhedral (0.1 to 0.2 mm). Uniaxial(-), with high relief.

Reflected Light

Pyrrhotite; 20-25%, anhedral (0.01 to ~1 mm). Mesh texture is not quite continuous, *i.e.* irregular clots interstitial to, and partly enclosing the fine granular garnet. Some bird's eye alteration spots.

Chalcopyrite; 7-12%, anhedral (0.01 to ~1 mm). Occurrence similar to the pyrrhotite. Forms simple intergrowths with pyrrhotite. Some lamellar exsolution (?). A small minority of the chalcopyrite shows the pink tarnish described above for sample [1]. Appears to be localized.

Pyrite (±marcasite); 1-3%, anhedral to euhedral (<0.01 to 0.5 mm). Bird's eye alteration spots (microcrystalline), as well as coarser pyrite crystals, some of which have formed within the spots. Pyrite also found in a narrow vein.

Oxides; 1-2%, amorphous. Dark, poorly reflective, opaque, probably mostly Fe oxide in *veins/fractures*.

Pentlandite; traces, anhedral (<0.01 mm). Very sparse in pyrrhotite. Small irregular blebs rather than typical pentlandite flames.

Vein:

A narrow (<0.1 mm) vein contains mainly pyrite and unidentified semiopaque oxide. Other smaller veins contain mainly oxides.

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[3] 105756 Altered diorite

Summary Description

Probably originally dioritic rock with calc-silicate alteration. The rock consists mainly of sericite-dusted plagioclase and pale green clinopyroxene. Chalcopyrite and pyrite are introduced along irregular veins. A few very small (3-5 μ) bright pale yellow grains with pyrite are suspected electrum, but microanalysis is recommended for confirmation.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, anhedral to subhedral (0.02 to ~3 mm). Interlocking, strongly dusted with very fine sericite ±clay alteration. Albite twins generally not visible, but estimate oligoclase-andesine composition from surviving twins.

Clinopyroxene (diopside); 30-35%, anhedral (0.1 to 1.2 mm). In scattered aggregates several mm in *diameter, as well as in a vein. Pale green calcic clinopyroxene, biaxial+* with 2V ~60°, *maximum* extinction angle over 40°, probably diopside. Some also found in veins.

Sericite; 5-7%, microcrystalline. Alteration of plagioclase, locally strong.

Epidote/epidote group; 1%, anhedral (0.01 to 0.5 mm). In the veins with sulfide. [box symbol?]

Prehnite(?); traces+, anhedral (0.01 to 0.3 mm). Sheaflike aggregates with high birefringence, moderate-to-high relief, in some veins.

Albite; traces, anhedral (0.01 to 0.3 mm). Minor, in veins.

Zeolite, traces, anhedral (0.01 to 0.1 mm). In narrow veins.

Veins:

Irregular veins containing chalcopyrite and pyrite also contain diopside, secondary albite, prehnite(?), possible epidote. One veinlet in the section swells to greater than 1 mm wide.

Some very fine (<0.2 mm). subparallel, apparently late-stage veins contain zeolite.

Reflected Light

Chalcopyrite; 3-5%, anhedral (<0.01 to ~2 mm). Mostly in and around an irregular epidote+prehnite(?) vein. Most develops a pinkish tarnish, as seen in several other samples of this suite.

Pyrite; 1-2%, euhedral (0.01 to 0.8 mm). Mostly euhedral crystals, following epidote veins, in one case with more-abundant chalcopyrite.

Sphalerite; traces+, anhedral (<0.01 to 0.2 mm). Exsolution blebs in and around chalcopyrite, including some sphalerite stars.

Covellite+chalcocite/digenite; traces+, anhedral (0.01 mm). In fractures in chalcopyrite and forming rims around chalcopyrite.

Electrum(?); trace (1-5 microns). Minute bright yellow grains in a cavity in pyrite. Also some thin rims on pyrrhotite, minute blebs encapsulated in the pyrrhotite. Brighter, more reflective than the pyrite or chalcopyrite, but colour probably too pale for pure Au. Requires SEM or microprobe for confirmation.

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[4] GR03-028 Garnet

Summary Description

Massive garnet with some magnetite veining, magnetite+pyrite and epidote+carbonate+pyrite+chalcopyrite veining/healing of localized crushing.

Microscopic Description

Transmitted Light

Garnet; 85-90%, subhedral (0.1 to several mm). massive reddish brown garnet, fractured, with magnetite, sulfides, staining in fractures.

Carbonate; 1-2%, anhedral (0.01 to 0.5 mm). Fills some fractures, veins with epidote, intergranular crevices, other spaces.

Chlorite; 1%, anhedral (0.01 to 0.1 mm). Small clusters of dark green chlorite in fractures, interstices among the garnet.

Clinopyroxene; traces+, anhedral (0.01 to 0.5 mm). Minor clinopyroxene in the garnet.

Feldspar; traces+, anhedral (0.01 to 0.4 mm). Featureless, in garnet.

Epidote; traces+, anhedral to subhedral (0.05 to 0.3 mm). In veins, with carbonate.

<u>Veins</u>:

As noted, some carbonate and epidote veins up to 2-3 mm (the largest) with sulfides and some opaque, nonreflective material – probably oxides after the sulfides. The sulfides are pyrite and chalcopyrite as noted below. Part of the section has a network of very fine pyrite and magnetite microbreccia. Magnetite belongs to a separate, apparently earlier stage of veining than that involving chalcopyrite.

Reflected Light

Chalcopyrite; 5-7%, anhedral (<0.01 to ~2 mm). Filling small zones of crushing and other fractures, intergranular spaces.

Magnetite; 3-5%, subhedral (<0.01 to 0.8 mm). Magnetite is found in veins and more irregular areas of fracturing or crushing. Much of the magnetite is strongly fractured.

Pyrite; 3-5%, anhedral (<0.01 to 0.3 mm). Filling veins/fractures, some small areas of crushing and intergranular spaces. Generally with chalcopyrite.

Oxides (Fe oxides); 2-4%, amorphous/anhedral. Some dark, probably mostly Fe oxide in fractures.

Sphalerite; traces, anhedral (<0.01 to 0.3 mm). Minor, found in/with chalcopyrite.

Covellite±chalcocite; trace, anhedral (<0.01 mm). Minor, presumably after chalcopyrite.

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[5] BU03-029 Hornblendite

Summary Description

Coarse grained rock consisting largely of hornblende. Also present are some clinopyroxene (probably both remnants of original pyroxene and some diopside), tremolite-actinolite, serpentine after olivine and sericite after feldspar.

Microscopic Description

Transmitted Light

Amphibole (dark - hornblende); 75-80%, anhedral to subhedral (0.2 to ~8 mm). Green and brown amphibole forms large patches, enclosing pseudomorphs after olivine and containing remnants of clinopyroxene.

Amphibole (pale); 7-10%, anhedral (0.01 to 1 mm). Finer and paler green amphibole (tremolite-actinolite), commonly fibrous, replacing olivine and pyroxene.

Pyroxene; 7-10%, anhedral (0.01 to ~1 mm). Ragged remnants of clinopyroxene in tremolite-actinolite, or hornblende. While some clinopyroxene looks like altered remnants, some better-formed grains may be secondary diopside.

Iddingsite/serpentine; 5-7%, microcrystalline. Fine fibrous iron-stained material forming pseudomorphs after olivine. A mixture consisting mostly of serpentine.

Olivine; remnants not identified.

Sericite; 3-5%, microcrystalline. Apparently some sericite after feldspar, although difficult to distinguish from talc. Some bird's eye texture characteristic of mica and apparent pseudomorphs after feldspar.

Chlorite; 1-2%, anhedral (0.01 to 0.5 mm). Minor chlorite associated with the amphibole, serpentine, sericite.

Talc; <1%, microcrystalline. Apparently after pyroxene and olivine, with some of the pale amphibole. Talc is difficult to distinguish from sericite in what was probably originally feldspar.

Opaques; traces, anhedral (0.01 to 0.8 mm). Generally very finely, sparsely and unevenly scattered.

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[6] GR03-028B Altered diorite/mafic hornfels

Summary Description

This sample consists mainly of fine crystalloblastic diopside+plagioclase, with lenses of coarser plagioclase and clinopyroxene. Suspect it represents the product of shearing and Ca-metasomatism in a mafic rock such as diorite or gabbro.

Cut by numerous later prehnite+carbonate and epidote veins.

Microscopic Description

Transmitted Light

Plagioclase Phenocrysts/porphyroclasts; 7-10%, anhedral (0.3 to ~2 mm). Coarser plagioclase grains and lenses consisting mainly of plagioclase. Apparently representing uncrushed material on a sheared and recrystallized rock. Fine sericite + epidote or zoisite alteration.

Groundmass plagioclase; 35-40%, anhedral (0.05 to 0.3 mm). Fine, mostly featureless feldspar with crystalloblastic texture. Intermixed with fine clinopyroxene. Estimate calcic compositions labradorite/bytownite, although few measurable examples.

Clinopyroxene (diopside); 30-35%, anhedral (0.05 to 0.3 mm). Pale green clinopyroxene intermixed with plagioclase, forming some small elongated aggregates, giving the rock a weak microscopic planar fabric. Fine crystalloblastic fabric.

Amphibole (hornblende); 20-25%, anhedral (0.01 to 0.5 mm). Portions of the sample contain ragged crystals and small aggregates of dark green amphibole intermixed with the clinopyroxene. The amphibole has a preferred orientation.

Epidote; 1%, anhedral (0.01 to 0.2 mm). Found in narrow veins/microveins

Prehnite(?); 1%, anhedral (0.01 to 0.3 mm). In numerous narrow veins and microveins. Probably prehnite – not positively identified. Biaxial (+) with moderately high relief, up to mid second order birefringence colours.

Sphene; 1%, anhedral (0.01 to 0.3 mm). Scattered throughout.

Carbonate; traces, anhedral (0.01 to 0.1 mm). Minor, in veins.

Veins:

As noted, prehnite with minor carbonate fills numerous narrow veins (<0.2 mm wide). These cut across earlier epidote veins.

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[7] GR03-002 Altered diorite/mafic hornfels

Summary Description

Calc silicate altered rock consisting of plagioclase, diopside, hornblende, biotite and opaques (magnetite). There is a coarser portion with interlocking texture containing patches of finer rock, similar in composition, but with fine crystalloblastic texture. Probably originally a gabbro or diorite, possibly subjected to contact metamorphism.

Microscopic Description

Transmitted Light

Medium-grained:

Plagioclase; 65-70%, anhedral (0.2 to ~2 mm). Interlocking, albite twinned, weakly dusted with sericite. Andesine compositions estimated optically, appears slightly more sodic than plagioclase in the fine grained portions of the section.

Clinopyroxene (diopside); 10-15%, subhedral (0.1 to 0.5 mm). Stubby prismatic crystals of clinopyroxene. Red-brown/very pale green pleochroism. Optical properties of a calcic clinopyroxene and pale green colour consistent with diopside.

Hornblende; 10-15%, anhedral (0.1 to 1 mm). Irregular grains and small aggregates of dark green amphibole.

Orthopyroxene; 1-3%, subhedral (0.2 to 0.5 mm). A few short prismatic crystals of orthopyroxene.

Biotite; 1-3%, anhedral (0.01 to 0.8 mm). Ragged irregular flakes of red-brown biotite, associate with the hornblende.

Opaques; 3-5%, anhedral (0.01 to 0.8 mm). Irregular grains. Attracts a magnet.

Tourmaline; trace, euhedral (0.1 mm). A single crystal of blue tourmaline.

Fine-grained:

Plagioclase; 52-57%, anhedral (0.1 to 0.4 mm). Both plagioclase and pyroxene have crystalloblastic texture, with fine, roughly equant and equigranular crystals. Andesine compositions estimated optically. Much of the plagioclase is untwinned - there may be some intermixed more sodic feldspar (?)

Clinopyroxene (diopside); 33-38%, anhedral (0.05 to 0.3 mm). As for the plagioclase, mostly fine, equant and equigranular grains, with a few small irregular aggregates. Red-brown / very pale green pleochroism.

Opaques; 7-10%, anhedral (0.01 to 0.3 mm). Abundant, finely and evenly scattered. Attracts a magnet.

Hornblende; 1-2%, anhedral (0.01 to 0.3 mm). Minor dark green amphibole associated with the pyroxene.

Biotite; traces, anhedral (0.01 to 0.3 mm). Sparse flakes of dark red-brown biotite.

Veins:

Several sets of fine parallel or subparallel actinolite or hornblende (green amphibole) veins, 0.1 mm wide. The individual veins are typically discontinuous.

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[8] GR03-005 Leucogranite

Summary Description

Felsic, potassic rock with fine anhedral interlocking groundmass. Granitic composition (leucogranite) with K-feldspar, quartz, plagioclase and only minor biotite, chlorite and opaques. K-feldspar surrounds and partially replaces plagioclase. Feldspars are dusted with fine clay and/or sericite.

Microscopic Description

Transmitted Light

K-feldspar; 40-45%, anhedral to subhedral (0.01 to ~2 mm). Mostly anhedral grains with irregular edges, including a few phenocrysts. Also surrounds and partly replaces plagioclase. K-feldspar is dusted with fine clay alteration. Some finer groundmass K-spar is microcline.

Quartz; 30-35%, anhedral (0.01 to 1 mm). Strained, interlocking with feldspar, irregular contacts between quartz crystals. There has been some partial recrystallization.

Albite/Plagioclase; 20-25%, subhedral to anhedral (0.01 to 2.5 mm). Plagioclase phenocrysts are surrounded by K-feldspar, and partly replaced by K-feldspar. Remaining plagioclase is dusted with fine sericite alteration.

Biotite; 1-2%, anhedral (0.01 to 2 mm). Ragged flakes and small clusters of dark red-brown biotite. Some chloritization.

Chlorite; 1%, anhedral (0.01 to 0.1 mm). As noted, some of the biotite is altering to chlorite.

Opaques; 1-2%, subhedral to euhedral (0.01 to 0.5 mm). Finely and fairly evenly scattered. The sample is magnetic.

Allanite?; traces, anhedral (0.01 to ~2 mm). Irregular patch of optically continuous dark brown to yellow pleochroic, high relief mineral. Probably allanite – not confirmed.

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[9] GR03-003 Diorite

Summary Description

Medium grained diorite, consisting of plagioclase, anhedral hornblende, ragged biotite and opaques including magnetite. A few irregular grains of clinopyroxene in the hornblende suggest the original magmatic rock may have contained more pyroxene. Alteration in plagioclase is weak, consisting of very fine sericite.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, subhedral (0.2 to 2.5 mm). Interlocking texture, with some very weak sericite alteration. Andesine compositions estimated optically (Michel-Levy method).

Hornblende; 20-25%, anhedral, rarely subhedral (0.1 to 2.5 mm). Dark green to yellow-green pleochroic amphibole forms irregular aggregates with biotite and opaques.

Biotite; 10-15%, anhedral (0.1 to ~3 mm). Ragged flakes of dark brown biotite, commonly with the hornblende and opaques.

Opaques; 3-5%, anhedral to euhedral (0.01 to 0.5 mm). Abundant, typically irregular grains, concentrated with the hornblende and the biotite. Some grains are equant and subhedral or euhedral. The sample is magnetic.

Albite; 2-3%, anhedral (0.1 to 0.3 mm). Fine, interstitial albite grains with minor quartz. Both albite twinned and featureless crystals. Fresh, with no alteration.

Sericite/clays; <0.5%, microcrystalline. Weak alteration of plagioclase.

Quartz; 1%, anhedral (0.1 to 0.3 mm). Minor, mostly interstitial, with some albite.

Clinopyroxene; traces+, anhedral (<0.01 to 0.2 mm). Small irregular, presumed remnants in hornblende.

Apatite; traces, euhedral to subhedral (0.01 to 0.2 mm). Scattered narrow prismatic accessory apatite.

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[10] GR03-010 Diorite

Summary Description

Fine grained altered dioritic rock. Porphyritic, with phenocrysts of plagioclase and hornblende in a groundmass of plagioclase, hornblende, quartz and biotite. Some of the hornblende "phenocrysts" are actually aggregates, possibly pseudomorphs. Plagioclase has moderate to strong sericite alteration. Narrow, discontinuous veins contain quartz, carbonate, prehnite.

Microscopic Description

Transmitted Light

<u>Phenocrysts</u>:

Plagioclase; originally 7-10%, euhedral to subhedral (0.6 to 2.5 mm). With moderate to strong sericite alteration, particularly of cores. Surviving albite twins indicate labradorite core compositions. Phenocrysts appear to have overall normal zoning.

Hornblende; 7-10%, subhedral (0.5 to 2 mm). Phenocrysts and glomerocrysts, or clots of hornblende crystals 2-3 mm in diameter.

<u>Groundmass</u>:

Plagioclase; originally 30-35%, anhedral (0.1 to 0.5 mm). Interlocking, with fine sericite alteration.

Hornblende; 20-25%, 0.01 to 0.5 mm). Dark green/yellowish green pleochroic amphibole, forming small irregular aggregates, commonly with biotite.

Quartz; 8-12%, anhedral (0.1 to 0.3 mm). Scattered throughout. Commonly interstitial to the plagioclase.

Biotite; 7-10%, anhedral (0.01 to 0.3 mm). Ragged red-brown biotite, typically with the hornblende.

Opaques; 1-2%, anhedral (<0.01 to 0.2 mm). Finely scattered opaques. The sample is weakly magnetic.

Alteration:

Sericite; ~10%, anhedral, microcrystalline. Fine alteration of plagioclase

Prehnite; traces, anhedral (0.01 to 0.1 mm). In a few narrow veins – probably prehnite.

Carbonate; trace, anhedral (<0.01 to 0.1 mm). Minor, in a vein and traces in and with the hornblende.

Epidote; trace, anhedral (0.01 to 0.1 mm). Very sparse.

Veins:

There are a few very narrow veins (0.1mm). These appear to contain mostly prehnite. There is some sericite and quartz in a vein cut by a prehnite-only vein. Some dark staining is associated with the earlier vein. Carbonate+quartz veins/microveins are very narrow, apparently discontinuous.

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[11] GR03-011B Altered fine diorite or diabase

Summary Description

Fine grained rock consisting of lathy plagioclase, amphibole, clinopyroxene and opaques. At least some of the amphibole is after pyroxene. Plagioclase is sericite altered. The original texture appears to have been subophitic (large irregular amphibole partly enclosing plagioclase), like a diabase, but the plagioclase may have been more sodic.

Microscopic Description

Transmitted Light

Plagioclase (altered); originally 45-50%, euhedral to subhedral (0.1 to 1.5 mm). Lath shaped randomly oriented plagioclase is sericite altered. Subophitic (or diabasic) texture with amphibole after pyroxene. Very few surviving albite twins, but suspect originally oligoclase-andesine.

Amphibole (hornblende or actinolite); 40-45%, anhedral (0.1 to ~2 mm). Interstitial and irregular grains partially enclosing plagioclase in subophitic texture. The amphibole contains a few remnants of clinopyroxene and is presumably after clinopyroxene. The amphibole is green or less commonly brown in colour. Biaxial- with 2V approx 75°, length slow, max. extinction angle of approx 30°.

Clinopyroxene; 1-3%, anhedral (0.01 to 0.3 mm). Mostly ragged or irregular grains of clinopyroxene in the amphibole. Probably remnants(?).

Sericite; 10-15%, anhedral (microcrystalline). Fairly strong sericite alteration of plagioclase.

Opaques; 3-5%, anhedral (0.01 to 0.4 mm). Irregular grains, fairly evenly scattered. The sample is magnetic.

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[12] GR03-012A Felsic quartz diorite

Summary Description

Medium-grained felsic rock consisting mainly of interlocking plagioclase and quartz. There is some very minor biotite and chlorite after biotite. Does not quite have an aplitic texture, as there are a few plagioclase phenocrysts. The sample is cut by a number of narrow veins and microveins containing epidote, quartz, prehnite and unidentified opaque material and dark staining.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, anhedral to subhedral (0.2 to 2 mm, rarely to 4 mm). Interlocking sodic plagioclase. Some albite twinning. Moderately dusted with very fine sericite. There are a few sparse phenocrysts to approximately 4 mm.

Quartz; 38-43%, anhedral (0.01 to 2 mm). Interlocking strained, with some sutured contacts, partial recrystallization.

Sericite; 3-4%, anhedral (<0.01 to 0.2 mm). Fine alteration in plagioclase and some replacement of biotite.

Biotite (altered); 2-3%, anhedral (0.01 to 0.5 mm). Ragged grains and small aggregates, with some alteration to sericite or chlorite.

Chlorite; 1-2%, anhedral (0.01 to 0.2 mm). Some alteration of biotite.

Epidote; traces, anhedral (<0.01 to 0.1 mm). Minor, in and associated with narrow quartz-epidote veins.

Prehnite (?); traces, anhedral (0.01 to 0.2 mm). Late veining. Probably prehnite, but has a pebbly grainy appearance – possibly due to minute inclusions.

Veins:

An epidote+quartz vein is irregular, approximately 0.1 mm wide at widest point.

This is cut by narrower prehnite veining, generally less than 0.5 mm wide.

The hand sample contains a number of thin dark veins. Some of the veins/microveins in the thin section have some dark staining associated, some opaque material in the vein, along with some prehnite or epidote. Not identified in the covered slide.

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[13] GR03-013A Hornblendite

Summary Description

Medium-grained mafic rock dominated by dark green hornblende with lesser sericite-altered plagioclase. The hornblende forms large patches to approximately 1 cm, with smaller aggregates of plagioclase between them. Opaques are virtually absent. A few very narrow veins cut the section, including probable prehnite and sericite.

Microscopic Description

Transmitted Light

Hornblende; 75-80%, subhedral (0.2 to ~3 mm). Interlocking dark green amphibole makes up most of the sample. No apparent preferred orientation. Biaxial(-) with 2V approx 80°, length slow with maximum observed extinction angle of approx 24°. Properties consistent with hornblende.

Plagioclase; 12-17%, originally 17-22%, anhedral (0.1 to 2 mm). Interlocking plagioclase in irregular patches several mm in diameter. Much of the plagioclase is altered to sericite. Where twinned crystals survive, Labradorite composition is estimated (Michel-Levy)

Sericite; 5-7%, anhedral (microcrystalline to 0.1 mm). Strong sericite alteration of plagioclase. Some appears to be replacing biotite.

Pale amphibole (tremolite-actinolite); <5%, anhedral (0.01 to 0.2 mm). Patches of pale amphibole to ~1 mm in diameter. Possibly after pyroxene or olivine (?)

Chlorite; 1%, anhedral (0.01 to 0.2 mm). Chlorite, apparently after biotite.

Talc(?); traces+, microcrystalline. May be present, but not reliably distinguishable from fine sericite.

Biotite/phlogopite; traces, anhedral (0.01 to 0.5 mm). Small clusters of pale reddish brown biotite survive. Most has been altered to chlorite or sericite.

Epidote/epidote group mineral; traces, anhedral (microcrystalline). Some epidote in altered plagioclase.

Veins:

A few very narrow (<0.1 mm) and typically discontinuous veins contain sericite and probably some contain prehnite.

[14] GR03-006 Diorite

Summary Description

Medium grained diorite consisting of hornblende, plagioclase, quartz and minor biotite. The plagioclase has some sericite alteration. Traces of clinopyroxene in the hornblende suggest that at least some of it is after pyroxene.

Microscopic Description

Transmitted Light

Plagioclase; 40-45%, subhedral to anhedral (0.2 to 2 mm). Interlocking, albite twinned, normally zoned. Some sericite alteration, particularly of calcic cores. Andesine compositions estimated optically (Michel-Levy)

Hornblende; 40-45%, anhedral (0.2 to ~2 mm). Dark green /yellowish green pleochroic amphibole forms irregular clots several mm across, with lesser biotite, sphene and opaques.

Quartz; 5-7%, anhedral (0.01 to ~2 mm). Interlocking with plagioclase and hornblende. Most of the quartz is strained.

Sericite; 5-7%, anhedral (microcrystalline). Alteration of plagioclase. Some cores appear completely sericite-altered.

Biotite; 2-3%, anhedral (0.01 to 1.3 mm). Ragged reddish brown flakes and small clusters, mostly in hornblende.

Chlorite; <1%, anhedral (0.01 to 0.1 mm). Some minor alteration of biotite.

Clinopyroxene; traces, anhedral (0.01 to ~1 mm). Irregular remnants found in cores of some hornblende crystals.

Epidote; traces, anhedral (0.01 to 0.1 mm). Minor, found mainly in the hornblende.

Opaques; traces+, anhedral to euhedral (0.01 to 0.5 mm). Mostly irregular grains in hornblende, commonly surrounded by sphene. There are a few sparse euhedral, equant grains as well. The sample does not attract a magnet.

Sphene; traces+, anhedral (0.01 to 0.3 mm). Mostly as rims around opaque grains in hornblende.

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[15] GR03-007 Altered Gabbro

Summary Description

Coarse grained, altered olivine gabbro. Originally consisting of plagioclase, clinopyroxene, orthopyroxene and olivine. Original relative proportions of pyroxenes and olivine are not completely clear after alteration, but orthopyroxene was probably sparse. While the plagioclase is relatively fresh, part of the olivine has altered to serpentine and probably some talc. Much of the clinopyroxene appears to have altered to pale fibrous amphibole and probably some minor talc also.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, subhedral (0.3 to 4 mm). Interlocking, albite twinned, normally zoned plagioclase. Labradorite compositions are measured and are probably as calcic as bytownite in plagioclase cores.

Amphibole1 (tremolite-actinolite); 15-20%, anhedral (0.01 to 1 mm). Pale, commonly ragged or fibrous amphibole replaces pyroxene. Forms some pseudomorphs after irregular grains surrounding olivine.

Olivine; 7-10%, originally greater (0.5 to ~4 mm). partly altered to serpentine and magnetite.

Clinopyroxene; 2-3%, anhedral (0.1 to ~2 mm). Altering to pale amphibole with fibrous appearance.

Orthopyroxene; traces, anhedral (0.1 to ~1 mm). A few remnants, altering to talc or serpentine.

Talc; 3-5%, anhedral (microcrystalline). Some patches of very fine talc replacing olivine and pyroxene.

Serpentine; 3-5%, anhedral (<0.01 to 0.1 mm). Most of the serpentine is an alteration product of the olivine.

Amphibole2 (hornblende); 2-3%, anhedral (0.1 to 1 mm). Patches of more massive, brown amphibole in the pale green amphibole.

Chlorite; 1-3%, anhedral (0.01 to 0.1 mm). Some chlorite with the amphibole, and in abundant small, commonly discontinuous veinlets in plagioclase.

Carbonate; 2%, anhedral (0.01 to 0.1 mm). Mainly in small veins, like the chlorite.

Opaques; 1-2%, anhedral to subhedral (<0.01 to 0.4 mm). Fine opaques in altered olivine are probably magnetite. There are a few scattered coarser, roughly equant grains as well. The sample is magnetic.

Phlogopite; traces anhedral (0.01 to ~1 mm). Some ragged pale reddish brown mica in amphibole.

Garnet; trace, anhedral (0.4 mm). A dark green garnet.

Tourmaline; traces, anhedral (0.1 to 0.3 mm). Patch of blue and green zoned pleochroic mineral in plagioclase, near a chlorite+carbonate vein. Uniaxial (-).

Veins:

There are abundant very fine veinlets throughout the section, most readily visible in plagioclase. Many of these are discontinuous, but they form a network, as if the feldspar has been shattered. They contain chlorite, carbonate and some amphibole.

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[16] GR03-008 Serpentinized peridotite

Summary Description

Originally peridotite (lherzolite), dominated by olivine, with plagioclase, clinopyroxene and orthopyroxene. The olivine is largely altered to serpentine, the plagioclase to a fine grained mixture and clinopyroxene partly to amphibole.

Microscopic Description

Transmitted Light

Serpentine; 45-50%, anhedral (<0.01 to 0.1 mm). Platy serpentine with magnetite replaces olivine in a typical mesh pattern.

Olivine; 12-17%, originally ~75% (remnants to 0.5 mm, crystals originally 0.5 to ~3 mm). Altering to serpentine and magnetite.

Altered plagioclase; 7-12%, anhedral (0.3 to ~5 mm). Irregular grains, mostly interstitial to the olivine. Encloses some of the smaller olivine crystals, similar to the orthopyroxene. Strongly altered to a very fine grained material. Appears to include sericite, probably prehnite, some carbonate, possibly minor epidote, zoisite or clinozoisite. A few patches of plagioclase with surviving twinning indicate bytownite compositions (calcic).

Orthopyroxene; 5-7%, anhedral (0.2 to 3 mm). Irregular grains interstitial to, enclosing, or partly enclosing olivine. Some alteration to amphibole. Properties consistent with bronzite (biaxial (-), 2V nearly 90°).

Hornblende; 5-7%, anhedral (0.1 to ~1 mm). Brown amphibole after pyroxene, probably replacing an earlier generation of tremolite-actinolite. Some possibly deuteric. Forms irregular patches, interstitial to, or partly enclosing olivine.

Amphibole (pale); 5-7%, anhedral (0.01 to 0.5 mm). Pale ragged tremolite-actinolite after pyroxene. Appears to be partly replaced by more massive brown hornblende.

Opaques; 5-7%, anhedral (<0.01 to 0.3 mm). Mostly after olivine. The sample is magnetic.

Clinopyroxene; <1%, anhedral (0.01 to 0.5 mm). A few remnants in amphibole.

Biotite/phlogopite; <0.5%, anhedral (0.1 to 0.8 mm). Scattered ragged flakes of pale brown or reddish brown mica, with the amphibole.

Garnet; traces, anhedral (0.01 to 0.3 mm). Small aggregates of dark green garnet.

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[17] GR03-016 Monzodiorite

Summary Description

A fine grained monzodiorite, cut by a narrow vein, with a zone of alteration spreading approximately 1-2 cm into the wall rock. The hand sample also shows this narrow vein with a pale green selvage. Diopside is the principal mafic mineral near the vein and hornblende elsewhere. Apart from the secondary albite in the vein, plagioclase is uniformly dusted with sericite. Interstitial K-feldspar is found away from the vein. The vein itself contains albite, prehnite and quartz.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, anhedral to subhedral (0.2 to 2 mm). Interlocking. Dusted with sericite. The very few surviving albite twins indicate fairly sodic compositions.

Hornblende; 15-20%, anhedral (0.01 to ~1 mm). Dark green amphibole forms irregular aggregates several mm across. This is the main mafic mineral away from the vein (1 cm away). A few hornblende crystals contain some clinopyroxene.

Clinopyroxene (diopside); 10-15%, anhedral (0.01 to 0.5 mm). Clinopyroxene is found in place of the hornblende in a selvage around a vein containing quartz, albite and prehnite(?). The clinopyroxene is biaxial+ with 2V approximately 50°, max. extinction angle 45°, length slow, pale green colour in thin section. Probably diopside. Some minor clinopyroxene found in hornblende.

K-feldspar; 5-7%, anhedral (0.01 to 0.5 mm). Featureless feldspar, interstitial to the plagioclase. Absent near veins.

Sericite; 3-5%, anhedral (microcrystalline). Fine dusting of sericite in all of the plagioclase. A few larger irregular patches of coarser sericite occur with minor carbonate.

Albite; 1-2%, anhedral (0.1 to 0.2 mm). Featureless or albite twinned feldspar in and near the vein.

Opaques; 1-2%, anhedral to subhedral (0.01 to 0.4 mm). Mostly irregular grains, some subhedral and equant, scattered in the hornblende part of the sample. Absent from the vein selvage, although some opaques are found in the vein itself. The sample attracts a magnet in areas away from the vein.

Sphene; <1%, anhedral to subhedral (0.01 to 0.4 mm). Commonly found in the hornblende.

Prehnite(?); <0.5%, anhedral (0.1 to 0.5 mm). In a vein with quartz and albite. First to second order birefringence, biaxial(+). Forms radiating sheaves, with parallel extinction along crystal contacts.

Brucite/talc (?); traces, fibrous (<0.01 to 0.3 mm). Small patches of radiating aggregates, commonly found with some carbonate.

Apatite; traces, subhedral to euhedral (0.05 to 02 mm). Sparse accessory.

Carbonate; traces, anhedral (<0.01 to 0.3 mm). Sparsely scattered patches of carbonate.

Epidote; trace, anhedral (<0.01 to 0.1 mm). Minor, with the hornblende.

Vein:

A vein 1-2 mm wide contains albite, prehnite and quartz. Probably a reactivated vein, with these minerals as the latest stage(s).

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[18] GR03-029 Diorite

Summary Description

Medium grained, weakly porphyritic diorite (possibly originally gabbro, if the amphibole has replaced pyroxene). The rock consists of interlocking plagioclase and aggregates of hornblende, with some minor biotite. Opaques are sparse. The plagioclase has some sericite alteration. There is some very minor interstitial quartz in intergrowths with feldspar.

Microscopic Description

Transmitted Light

Plagioclase; 45-50%, anhedral to subhedral (0.2 to ~5 mm). Interlocking, with a strong dusting of sericite alteration. Some of the larger crystals form glomerocrysts. Labradorite core compositions estimated optically in some surviving albite twins.

Hornblende; 40-45% , anhedral (0.01 to 2 mm). Irregular clusters of ragged crystals, interlocking with the plagioclase. Dark green colour, max. extinction angle approx 30°, biaxial-, with 2V approx. 70-80° consistent with hornblende.

Biotite; 3-5%, anhedral (0.01 to 0.5 mm). Ragged patches of dark red-brown biotite in the hornblende.

Sericite; 3-5%, anhedral (microcrystalline-0.2 mm). Alteration of the plagioclase, particularly in cores.

Opaques; 1%, anhedral (0.05 to 0.3 mm). Sparsely scattered, mostly in the hornblende. The sample does not attract a magnet.

Chlorite; <1%, anhedral (0.01 to 0.3 mm). Some chlorite after biotite

Quartz; <1%, anhedral (0.01 to 0.3 mm). Scattered, interstitial among the plagioclase, with some intergrowths with plagioclase or albite.

Sphene; <0.5%, anhedral (0.01 to 0.1 mm). Irregular grains/aggregates in the amphibole.

Epidote; traces, anhedral (0.01 to 0.1 mm). Sparse, mainly with the hornblende.

Veins:

Sparse, narrow veins/microveins (<0.05 mm wide) appear to contain mainly quartz. Some are partially open.

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[19] GR03-030 Fine leucogranite

Summary Description

Felsic fine grained rock with granitic composition. Similar to [8], the rock consists of K-feldspar, quartz and plagioclase, with only minor biotite. The K-feldspar surrounds plagioclase phenocrysts, and there has been some partial replacement of the plagioclase by K-feldspar. The feldspars are dusted with fine clay and sericite alteration. The quartz has a strained, recrystallized appearance.

Microscopic Description

Transmitted Light

K-feldspar; 50-55%, anhedral to subhedral (0.05 to ~3 mm). Interlocking, microperthitic, dusted with clay alteration. Overgrowing and replacing plagioclase. Edges of crystals are irregular.

Quartz; 25-30%, anhedral (0.01 to 1.5 mm). Strained, appears recrystallized, with finely sutured contacts between quartz crystals.

Plagioclase (Phenocrysts); 15-20%, subhedral (0.2 to ~2 mm). Dusted with clay-sericite alteration. Plagioclase has overgrowths of K-feldspar, as well as some replacement by K-feldspar.

Biotite; 1-3%, anhedral (0.01 to 0.8 mm). Clots of ragged biotite, partly altered to chlorite. Commonly with some opaques.

Sphene; <0.5%, anhedral (0.01 to 0.2 mm). Found in biotite/chlorite. In some cases forming rim around opaque grain.

Chlorite; <1%, anhedral (0.01 to 0.1 mm). Chlorite alteration of biotite.

Opaques; 1%, anhedral to euhedral (0.01 to 0.5 mm). Fairly sparse, commonly with the biotite. The sample is magnetic.

Sericite/clays; 1%, microcrystalline. Dusting of very fine alteration in the feldspars.

Zircon; trace, subhedral (0.1 mm). Very sparse accessory, found with biotite.

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[20] GR03-034 Altered diabase

Summary Description

Fine grained altered diabase consisting of hornblende, lath-shaped plagioclase and biotite. The hornblende and plagioclase form the ophitic texture characteristic of pyroxene and plagioclase in a diabase – *i.e.* the mafic mineral encloses the lathy plagioclase. A few irregular patches of clinopyroxene in the hornblende, interpreted as remnants, also suggest that this is an altered diabase.

Microscopic Description

Transmitted Light

Hornblende; 62-67%, anhedral (0.01 to 1 mm). Dark green amphibole, forming ophitic texture with the plagioclase, presumably after original pyroxene in a diabase.

Plagioclase; originally 30-35%, euhedral to subhedral (0.1 to 1.5 mm). Mainly lath-shaped, randomly-oriented, with moderately strong sericite alteration.

Biotite; 5-7%, anhedral (0.01 to 0.4 mm). Red-brown biotite intermixed with the hornblende.

Sericite; 5-10%, microcrystalline. Alteration of plagioclase.

Opaques; 1-2%, anhedral to euhedral (0.01 to 0.2 mm). Fine opaques are unevenly scattered. Parts of the sample are magnetic.

Clinopyroxene; traces, anhedral (<0.01 to 0.2 mm). Ragged remnants in hornblende.

<u>Veins</u>:

A 1 mm wide hornblende vein cuts across the section. A narrow (0.03 mm). sericite vein is also noted.

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[21] GR03-035 Monzodiorite

Summary Description

Medium grained diorite or borderline monzodiorite, consisting of plagioclase, hornblende, minor quartz and minor K-feldspar. The plagioclase is dusted with sericite alteration. There is some textural and minor compositional variation across the section, with a coarser, more quartz-rich segregation at one end.

Microscopic Description

Transmitted Light

Plagioclase; originally 45-50%, subhedral (0.1 to ~2.5 mm). Dusted with sericite alteration. Andesine compositions estimated where some albite twinning has survived. A plagioclase and quartz-rich segregation, slightly coarser than the rest of the sample, runs through one end of the section.

Hornblende; 40-45%, anhedral to subhedral (0.2 to ~2 mm). Dark green / yellowish green pleochroic amphibole forms irregular aggregates several mm in diameter, partially enclosing plagioclase.

Sericite; 5-10%, anhedral (microcrystalline). Fine alteration in the plagioclase.

Quartz; 5-7%, anhedral (0.2 to ~1.5 mm). Commonly interstitial. Most abundant in a slightly coarser quartz and plagioclase rich segregation near one end of the section.

K-feldspar; 3-5%, anhedral (0.2 to ~2.5 mm). Irregular, interstitial to plagioclase and enclosing some smaller crystals of plagioclase and amphibole.

Opaques; 1%, anhedral (0.01 to 0.5 mm). Finely, somewhat unevenly scattered, mainly in the hornblende. Commonly with rims of sphene. The sample is magnetic.

Sphene; <0.5%, anhedral to subhedral (0.01 to 0.8 mm). Mostly with the amphibole aggregates. Some thin rims on the opaques.

Apatite; traces, euhedral to subhedral (0.1 to 0.5 mm). Accessory, prismatic, found most commonly with the amphibole.

Epidote; traces, anhedral (0.01 to 0.2 mm). Very minor epidote found in the hornblende.

Chlorite; trace, anhedral (<0.01 to 0.1 mm). Very minor chlorite with the hornblende.

Veins:

A few narrow (<0.05 mm) , localized veins contain prehnite, traces of carbonate.

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[22] GR03-036 Monzodiorite

Summary Description

Medium grained monzodiorite, consisting of interlocking plagioclase, K-feldspar, quartz, hornblende and biotite. The amount of quartz places it close to a granodiorite in composition. Quartz and K-feldspar commonly form interstitial granophyric intergrowths. Sericite alteration in plagioclase is patchy.

Microscopic Description

Transmitted Light

Plagioclase; 55-60%, subhedral to anhedral (0.3 to ~4 mm). Interlocking and partly interlocking texture, leaving some interstitial spaces where quartz and K-feldspar concentrate. Patchy sericite alteration. Albite twinning not well developed, but the few measurable examples suggest sodic compositions (albite-oligoclase).

K-feldspar; 10-15%, anhedral (0.2 to 4 mm). Featureless, or with some microperthitic textures. Some smaller interstitial grains are micrographic intergrowths with quartz.

Quartz; 10-15%, anhedral (0.05 to 0.8 mm). Mostly fine, interstitial to the coarser feldspars and even the hornblende. Forms some intergrowths with feldspar.

Hornblende; 7-12%, anhedral to subhedral (0.1 to 2 mm). In irregular mafic clots with opaques, biotite, sphene. Dark green colour consistent with hornblende.

Biotite; 3-5%, anhedral (0.01 to 1 mm). Ragged flakes of dark brown biotite, generally found with the other mafic minerals.

Sericite/clay; <5%, microcrystalline. Very fine alteration in cores of plagioclase.

Opaques; 1-2%, anhedral to subhedral (0.01 to 1 mm). Mostly irregular grains, but some equant subhedral as well. The sample is magnetic.

Sphene; 1-2%, anhedral to euhedral (0.01 to 0.8 mm). Relatively abundant in this sample. Some euhedral crystals, as well as rims around opaques. Typically with the mafic minerals.

Appendix B

Major element geochemical data

for

representative unmineralized samples

Emerald Fields Resource Corp. **Port Renfrew Project**

Major element geochemistry for representative unmineralized samples

Sample No.	Lab No.	TS	Petrographic Name	Al %	Ca %	Fe %	K %	Mg %	Na %	Ti %	S %
BU03-029	105780	Y	hornblendite	5.25	7.82	5.56	0.42	9.27	0.81	0.23	0.01
GR03-002	105782	Y	altered diorite	9.71	5.86	5.95	0.25	3.06	2.88	0.64	0.13
GR03-003	105784	Y	diorite	9.45	4.79	5.51	0.67	1.85	3.28	0.75	0.07
GR03-005	105783	Y	leucogranite	7.36	0.73	1.40	3.56	0.21	2.98	0.17	0.06
GR03-006	105789	Y	diorite	8.27	5.91	5.00	0.88	3.42	2.07	0.45	0.02
GR03-007	105790	Y	altered gabbro	8.03	5.62	5.82	0.22	9.23	0.78	0.19	0.02
GR03-008	105791	Y	serpentinized peridotite	4.07	2.61	7.83	0.08	15.00	0.36	0.08	0.01
GR03-010	105785	Y	diorite	8.33	4.80	5.36	1.18	3.02	2.15	0.42	0.02
GR03-011B	105786	Y	altered f.g. diorite/diabase	8.22	6.56	7.89	0.70	5.43	1.53	0.57	0.05
GR03-012A	105787	Y	felsic qtz. diorite	7.80	1.76	1.26	0.66	0.40	3.65	0.10	0.01
GR03-013A	105788	Y	hornblendite	7.71	6.93	4.95	0.45	5.63	1.59	0.23	<0.01
GR03-016	105792	Y	monzodiorite	8.50	6.19	5.66	0.90	2.49	3.20	0.62	0.55
GR03-028B	105781	Y	altered diorite	8.86	11.05	5.07	0.25	3.22	1.18	0.52	0.21
GR03-029	105793	Y	diorite	8.92	5.88	4.99	1.02	3.99	2.35	0.43	0.07
GR03-030	105794	Y	fine gr. leucogranite	7.33	0.62	1.43	3.09	0.21	3.22	0.18	<0.01
GR03-034	105795	Y	altered diabase	8.48	5.66	5.73	0.99	3.06	2.60	0.56	0.12
GR03-035	105796	Y	monzodiorite	8.30	2.46	2.17	1.84	0.64	3.70	0.49	0.01
GR03-036	105797	Y	monzodiorite	8.76	6.23	5.99	1.07	4.23	2.30	0.54	0.06

TS = thin section; Y = yes, N = no
ME-MS61 = Chemex analystical package code

Appendix C

Trace element geochemical data

for

representative unmineralized samples

Emerald Fields Resource Corp. **Port Renfrew Project**

Major element geochemistry for representative unmineralized samples

Sample No.	Lab No.	TS	Petrographic Name	Au ppm	Pt ppm	Pd ppm	Ag ppm	As ppm	Ba ppm	Be ppm	Bi ppm	Cd ppm	Co ppm	Cr ppm	Cu ppm
BU03-029	105780	Y	hornblendite	<0.001	<0.005	0.002	0.02	0.5	160	0.17	0.03	0.07	50.1	646	18.6
GR03-002	105782	Y	altered diorite	<0.001	<0.005	0.001	0.03	0.6	240	0.54	0.01	0.10	22.2	47	24.2
GR03-003	105784	Y	diorite	<0.001	<0.005	<0.001	0.02	<0.2	400	0.80	0.02	0.10	16.4	11	30.8
GR03-005	105783	Y	leucogranite	<0.001	<0.005	<0.001	<0.02	1.1	920	2.00	0.04	0.07	2.0	7	31.4
GR03-006	105789	Y	diorite	<0.001	<0.005	<0.001	0.02	<0.2	440	0.69	0.03	0.10	27.3	93	50.5
GR03-007	105790	Y	altered gabbro	0.002	<0.005	0.001	<0.02	<0.2	70	0.20	0.02	0.06	68.3	428	24.4
GR03-008	105791	Y	serpentinized peridotite	<0.001	<0.005	0.001	<0.02	<0.2	40	0.10	0.01	0.04	107.5	1005	6.5
GR03-010	105785	Y	diorite	<0.001	<0.005	0.001	0.03	<0.2	540	0.65	0.06	0.10	26.3	67	63.3
GR03-011B	105786	Y	altered f.g. diorite/diabase	0.002	0.005	0.004	0.09	<0.2	210	0.28	0.07	0.12	44.8	102	124.5
GR03-012A	105787	Y	felsic qtz. diorite	<0.001	<0.005	<0.001	<0.02	<0.2	240	0.52	0.01	0.04	2.4	4	3.9
GR03-013A	105788	Y	hornblendite	<0.001	<0.005	0.001	<0.02	<0.2	110	0.39	0.03	0.11	38.0	352	3.9
GR03-016	105792	Y	monzodiorite	<0.001	<0.005	<0.001	0.03	1.0	190	0.87	0.07	0.04	20.2	28	63.2
GR03-028B	105781	Y	altered diorite	0.001	<0.005	0.005	0.05	<5.0	50	0.44	0.04	0.07	31.2	75	208.0
GR03-029	105793	Y	diorite	<0.001	<0.005	<0.001	0.02	<0.2	280	0.69	0.02	0.06	32.3	95	62.4
GR03-030	105794	Y	fine gr. leucogranite	<0.001	<0.005	<0.001	<0.02	0.6	840	1.71	0.02	0.07	2.0	5	4.9
GR03-034	105795	Y	altered diabase	<0.001	<0.005	0.002	0.02	<0.2	270	0.63	0.02	0.06	27.9	56	55.6
GR03-035	105796	Y	monzodiorite	<0.001	<0.005	<0.001	<0.02	0.8	650	1.14	0.01	0.02	4.3	4	3.7
GR03-036	105797	Y	monzodiorite	<0.001	<0.005	0.003	<0.02	<0.2	210	0.56	0.03	0.08	33.7	118	34.7

TS = thin section; Y = yes, N = no

Sample No.	Mn ppm	Mo ppm	Ni ppm	P ppm	Pb ppm	Sb ppm	Sr ppm	V ppm	W ppm	Zn ppm	Ce ppm	Cs ppm	Ga ppm	Ge ppm	Hf ppm	In ppm	La ppm
BU03-029	1205	0.26	220.0	280	1.8	0.15	138.5	175	0.9	54	6.72	0.18	8.53	0.11	1.6	0.048	3.1
GR03-002	1540	0.15	36.1	1680	1.9	0.15	640.0	191	0.3	90	17.35	0.14	17.30	0.14	2.5	0.058	8.2
GR03-003	1225	0.42	7.3	2120	2.6	0.09	541.0	158	0.2	82	36.50	0.49	18.80	0.18	0.8	0.061	16.2
GR03-005	297	1.14	4.0	130	3.1	0.11	214.0	17	0.3	24	31.00	0.67	16.65	0.13	0.5	0.016	15.8
GR03-006	1185	0.29	50.5	410	2.9	0.08	358.0	199	0.2	77	20.40	0.89	13.55	0.13	3.1	0.065	9.1
GR03-007	985	0.11	464.0	230	1.4	0.08	383.0	102	0.1	51	4.84	0.37	11.00	0.14	1.5	0.025	2.2
GR03-008	1330	0.11	826.0	180	0.7	0.06	205.0	54	<0.1	69	2.78	0.12	5.73	0.16	0.8	0.018	1.3
GR03-010	1045	0.36	48.4	770	3.7	0.10	444.0	190	0.4	63	22.80	1.15	15.15	0.14	3.3	0.047	12.0
GR03-011B	1495	0.22	106.0	160	2.0	0.08	412.0	373	0.2	76	5.36	0.55	13.55	0.15	1.4	0.055	2.2
GR03-012A	379	<0.05	2.8	130	4.0	0.09	535.0	16	0.1	35	25.00	1.02	11.35	0.07	0.4	0.014	14.2
GR03-013A	1145	0.05	153.5	190	1.6	0.05	295.0	170	0.2	58	12.10	0.46	13.25	0.14	2.5	0.044	5.0
GR03-016	978	1.62	18.3	1000	1.9	0.19	451.0	249	1.1	53	21.30	0.41	17.95	0.12	2.3	0.056	10.5
GR03-028B	1285	1.32	58.3	710	0.8	0.30	755.0	205	0.6	44	18.10	0.34	14.45	0.13	3.0	0.137	9.6
GR03-029	1090	0.27	68.2	760	1.7	0.09	460.0	173	0.2	64	23.80	0.92	16.40	0.16	2.8	0.055	10.7
GR03-030	285	1.23	1.8	130	4.0	0.06	199.5	10	0.1	29	49.50	0.31	14.90	0.12	0.7	0.023	25.3
GR03-034	1165	0.83	24.7	970	1.9	0.08	476.0	238	0.2	71	22.10	0.51	16.95	0.16	4.0	0.068	10.1
GR03-035	537	0.31	2.1	660	2.3	0.06	453.0	44	0.1	28	34.40	0.55	15.05	0.12	0.5	0.034	17.4
GR03-036	1260	0.28	97.7	500	1.6	0.10	294.0	204	0.2	65	13.55	0.97	16.40	0.15	3.5	0.066	6.2

Sample No.	Li ppm	Nb ppm	Rb ppm	Re ppm	Se ppm	Sn ppm	Ta ppm	Te ppm	Th ppm	Tl ppm	U ppm	Y ppm	Zr ppm
BU03-029	3.8	1.2	12.0	0.002	<1	0.8	0.05	<0.05	1.6	0.05	0.2	7.8	47.5
GR03-002	3.1	2.0	2.1	0.003	1	0.4	0.08	<0.05	1.0	0.02	0.1	13.9	89.8
GR03-003	3.6	6.1	14.8	0.003	2	0.9	0.17	<0.05	1.6	0.07	0.5	23.9	32.8
GR03-005	5.0	3.5	105.0	0.004	2	0.6	<0.05	<0.05	9.9	0.32	4.1	15.2	42.8
GR03-006	5.0	3.6	23.8	0.002	2	1.0	0.10	<0.05	4.4	0.10	1.0	19.2	93.5
GR03-007	2.2	0.9	6.8	0.002	1	0.2	<0.05	<0.05	0.5	0.04	0.1	4.3	52.8
GR03-008	2.3	0.4	2.5	0.002	<1	<0.2	<0.05	<0.05	0.2	0.02	0.1	2.2	27.9
GR03-010	6.5	4.4	39.9	0.002	1	0.6	0.22	<0.05	4.9	0.20	1.5	11.5	110.5
GR03-011B	7.5	0.6	23.3	0.003	1	0.3	<0.05	<0.05	0.4	0.11	0.1	7.6	44.5
GR03-012A	2.8	0.9	11.4	<0.002	1	0.2	<0.05	<0.05	1.3	0.04	0.1	3.5	25.1
GR03-013A	3.0	1.4	11.2	0.002	1	0.6	0.07	<0.05	0.7	0.05	0.2	12.6	74.5
GR03-016	2.7	4.8	24.0	0.004	2	0.8	0.26	0.05	2.1	0.10	1.1	13.5	65.2
GR03-028B	7.3	2.9	8.5	0.003	2	1.0	0.09	<0.05	1.9	0.05	1.5	13.2	85.3
GR03-029	3.9	4.7	36.8	0.004	2	0.9	0.20	<0.05	1.7	0.17	0.6	16.2	73.1
GR03-030	2.5	2.3	77.6	0.002	2	0.7	0.08	<0.05	9.1	0.21	3.1	29.9	168.5
GR03-034	1.8	3.7	25.1	0.003	2	0.9	0.13	<0.05	2.5	0.10	1.1	17.0	100.0
GR03-035	7.0	4.7	46.9	0.002	2	1.2	<0.05	<0.05	4.1	0.13	1.7	19.5	31.9
GR03-036	5.0	3.0	40.4	0.002	2	0.8	0.11	<0.05	1.9	0.13	0.8	19.4	103.5

Appendix D

Geochemical data

for

mineralized samples

Emerald Fields Resource Corp.

Geochemical data for mineralized samples

Sample No.	Lab No.	TS	Description	Au ppm	Pt ppm	Pd ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm
Granite Main	B105751	N	mass. sulphide showing - po, py,cpy (upper, north sample)	0.53	<0.03	0.03	11.8	0.15	<5	10	<0.5
Granite Main	B105752	Y	mass. sulphide showing - po, py,cpy (upper, middle sample)	0.08	<0.03	0.03	1.7	2.60	27	10	<0.5
Granite Main	B105753	Y	mass. sulphide showing - po, py,cpy (upper, south sample)	0.12	<0.03	<0.03	4.7	2.49	12	10	<0.5
Granite Main	B105754	N	mass. sulphide showing - po, py,cpy (lower, south sample)	0.13	<0.03	0.03	3.2	2.90	6	20	<0.5
Granite Main	B105755	N	mass. sulphide showing - po, py,cpy (lower, north sample)	0.12	<0.03	0.08	3.3	2.04	6	50	<0.5
Granite Main	B105756	Y	diss. sulphides (py-cpy), 5m north of mass. sulphides	0.05	<0.03	<0.03	<0.5	7.66	<5	290	0.8
Granite Main	B105757	N	trace sulphides, 16m north of mass. sulphides	<0.03	<0.03	<0.03	<0.5	7.78	<5	250	<0.5
BU03-011A	105771	N	Bugaboo Fe-skarn - massive magnetite	0.010	0.012	0.001	<0.5	0.12	<5	10	<0.5
BU03-016	105769	N	intermediate diorite	0.003	<0.005	0.002	<0.5	7.71	<5	330	0.5
BU03-017	105770	N	chlorite-epidote-garnet altered limestone	<0.001	<0.005	0.001	<0.5	1.04	<5	30	<0.5
BU03-019	105768	N	sheared skarn zone with trace py-mag	<0.001	<0.005	0.001	<0.5	7.14	<5	280	<0.5
BU03-020	105767	N	green skarn/hornfels with trace py-cpy	0.001	0.006	0.001	<0.5	8.46	<5	50	<0.5
BU03-021	105766	N	grab sample of sulphide-bearing green hornfels/skarn	0.003	<0.005	0.002	<0.5	7.44	47	20	<0.5
BU03-031	105765	N	hornfels/skarn zone	0.001	<0.005	<0.001	<0.5	8.29	<5	300	0.9
BU03-043A	105764	N	magnetite skarn zone from Princess 2 claim	0.136	0.005	0.001	1.1	0.31	42	10	<0.5
BU03-045	105763	N	massive py-qtz vein near Axe Creek	0.018	<0.005	0.011	<0.5	0.73	10	10	<0.5
BU03-050	105762	N	grab sample	0.002	<0.005	<0.001	<0.5	7.42	10	420	1.0
ED03-003	105774	N	rusty float with goethite and sulphides, above road	0.001	0.010	0.010	<0.5	7.78	<5	150	<0.5
ED03-004A	105775	N	altered mafic dike with 3% py-po in limestone	0.010	0.008	0.001	<0.5	4.13	355	20	<0.5
ED03-004B	105776	N	float from massive magnetite-sulphide skarn pod	0.006	<0.005	0.001	<0.5	1.29	11	20	<0.5
ED03-005A	105777	N	2.5 metre chip sample of massive magnetite vein	0.003	0.008	0.006	<0.5	2.05	<5	10	<0.5
ED03-005B	105778	N	grab sample of pyrrhotite-rich altered diorite adjacent to vein	0.002	<0.005	0.001	<0.5	3.15	<5	10	<0.5
ED03-008A	105779	N	grab sample of qtz-feld-rich dikes with trace py	<0.001	0.005	<0.001	<0.5	6.52	<5	250	1.9
GE03-004	105772	N	10 cm qtz vein with patchy pyrite	0.003	<0.005	0.009	<0.5	9.44	<5	90	1.1
GE03-007	105773	N	fine grained hornfels zone adjacent to limestone	<0.001	<0.005	<0.001	<0.5	7.94	<5	250	1.2
GR03-018B	105759	N	skarn-related py+/-cpy veinlets from ridge E of Renfrew Ck.	0.003	0.007	0.004	<0.5	4.67	17	30	<0.5
GR03-024	105760	N	skarn zone (north end of Renfrew Ck. headwaters)	0.008	<0.005	0.002	<0.5	3.99	141	30	<0.5
GR03-028	B105758	Y	mass. mag-py-cpy skarn zone (Granite Main)	<0.03	<0.03	<0.03	0.6	1.69	9	20	<0.5
GR03-031A	105761	N	skarn zone (limestone knob on HEMM claims)	0.043	<0.005	<0.001	4.6	0.29	45	70	0.5
R066	105798	N	R066 grab sample from creek near Braden Main	<0.001	0.008	0.015	<0.5	6.93	9	30	0.8

TS = thin section; Y = yes, N = no

Sample No.	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm
Granite Main	<2	0.96	6.8	2020	6	>10000	>25.00	<0.01	0.22	194	3	0.01	854	430	8	>10.00	<5
Granite Main	<2	15.05	5.7	430	20	9850	>25.00	<0.01	0.50	2650	<1	0.01	359	1900	5	>10.00	<5
Granite Main	<2	15.05	2.9	439	22	>10000	22.70	0.01	0.51	2390	8	0.02	259	2380	<2	>10.00	<5
Granite Main	<2	15.50	1.9	482	22	>10000	22.30	0.02	0.45	2710	4	0.05	235	1020	8	9.83	<5
Granite Main	<2	6.76	3.9	1535	21	>10000	>25.00	0.11	0.51	1235	4	0.20	642	480	6	>10.00	<5
Granite Main	<2	8.65	0.6	46	97	1425	5.61	0.89	3.31	1335	45	2.40	53	590	4	0.42	<5
Granite Main	<2	6.38	1.2	41	168	94	6.72	0.98	5.08	1000	4	1.74	153	360	<2	0.03	<5
BU03-011A	<2	0.45	13.0	35	5	88	>25.00	0.02	0.57	1150	<1	0.02	7	40	6	0.02	<5
BU03-016	<2	5.00	0.8	31	150	112	6.22	0.24	4.24	1155	7	1.89	70	1200	7	0.07	<5
BU03-017	<2	22.80	<0.5	3	8	11	0.89	0.14	3.59	316	4	0.04	3	70	<2	0.30	<5
BU03-019	<2	6.57	0.9	20	61	21	4.59	0.33	3.19	781	4	2.31	32	1280	2	0.27	<5
BU03-020	<2	15.30	1.0	13	45	35	2.54	0.07	1.68	539	1	0.36	22	1040	9	0.33	<5
BU03-021	<2	14.15	2.3	29	210	59	5.43	0.05	2.23	522	5	0.63	61	680	5	3.49	5
BU03-031	<2	3.42	<0.5	16	30	28	2.93	0.79	1.12	508	<1	3.35	32	470	3	0.12	<5
BU03-043A	<2	0.24	14.8	156	8	1945	>25.00	0.01	0.50	5130	<1	0.01	60	70	7	1.97	<5
BU03-045	<2	0.19	1.6	1955	13	154	>25.00	0.03	0.32	71	<1	0.18	120	120	7	>10.00	<5
BU03-050	<2	1.22	<0.5	9	11	35	2.93	3.44	0.66	359	1	2.18	7	450	6	2.23	<5
ED03-003	<2	5.47	1.5	42	185	259	7.42	0.58	4.36	1090	6	2.22	38	1420	<2	2.25	<5
ED03-004A	<2	7.60	3.5	32	5	285	15.85	0.01	8.06	1115	5	0.03	4	180	7	>10.00	29
ED03-004B	<2	1.78	6.0	36	8	560	>25.00	0.01	2.75	2190	2	0.02	18	40	6	>10.00	<5
ED03-005A	<2	6.24	10.0	126	83	418	>25.00	0.02	0.81	5830	<1	0.03	37	220	12	3.13	<5
ED03-005B	<2	10.65	8.9	51	93	124	>25.00	0.01	1.09	6180	<1	0.01	14	370	8	0.90	<5
ED03-008A	<2	2.01	<0.5	2	8	12	0.96	1.10	0.17	236	<1	3.62	1	90	11	0.17	<5
GE03-004	<2	7.30	0.5	20	60	100	2.56	0.17	1.40	509	2	3.12	97	220	4	0.21	<5
GE03-007	<2	4.15	<0.5	7	4	13	2.06	0.85	0.89	570	1	3.13	4	910	4	0.09	<5
GR03-018B	<2	14.45	1.1	348	24	545	15.90	0.06	1.71	2110	3	0.13	40	860	7	4.48	<5
GR03-024	<2	13.15	1.4	76	29	3420	14.50	0.06	3.18	1675	5	0.10	74	530	8	1.95	5
GR03-028	<2	8.71	11.4	61	26	2790	>25.00	0.01	0.33	2010	<1	0.01	121	660	11	1.41	<5
GR03-031A	<2	2.80	11.4	1270	4	3570	>25.00	0.01	0.27	810	<1	0.01	14	60	8	>10.00	<5
R066	<2	13.55	0.7	93	108	416	8.41	0.02	3.42	1745	2	0.08	88	1050	<2	1.84	<5

Sample No.	Sr ppm	Ti %	V ppm	W ppm	Zn ppm
Granite Main	2	0.01	<1	<10	146
Granite Main	3	0.22	68	<10	37
Granite Main	8	0.17	63	<10	65
Granite Main	15	0.19	78	<10	58
Granite Main	44	0.12	42	<10	44
Granite Main	572	0.95	226	10	78
Granite Main	307	0.46	240	10	43
BU03-011A	4	0.01	<1	20	76
BU03-016	144	0.55	227	10	73
BU03-017	392	0.05	21	<10	19
BU03-019	360	0.49	162	10	60
BU03-020	104	0.30	140	10	95
BU03-021	122	0.43	214	10	65
BU03-031	352	0.33	73	10	45
BU03-043A	4	0.02	65	10	387
BU03-045	18	0.02	15	20	5
BU03-050	196	0.25	60	10	37
ED03-003	639	0.51	276	10	67
ED03-004A	447	0.35	64	10	243
ED03-004B	247	0.17	33	10	307
ED03-005A	21	0.10	80	20	336
ED03-005B	23	0.17	97	20	263
ED03-008A	164	0.06	17	10	17
GE03-004	137	0.20	66	10	33
GE03-007	147	0.38	68	10	37
GR03-018B	254	0.64	314	10	52
GR03-024	249	0.26	224	10	95
GR03-028	22	0.10	717	10	85
GR03-031A	3	0.01	13	20	180
R066	375	0.36	190	10	122

Appendix E

Technical specifications

for

ALS Chemex Laboratories

Geochemical procedures used in this study

Geochemical Procedure – ME-ICP61

Trace Level Methods Using Conventional ICP-AES Analysis

Sample Decomposition: Four Acid Digestion
Analytical Method: Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)

A prepared sample (0.250 gram) is digested with perchloric, nitric, and hydrofluoric acids to near dryness. The sample is then further digested in a small amount of hydrochloric acid. The solution is made up to a final volume of 12.5 ml with 11% hydrochloric acid, homogenized, and analyzed by inductively coupled plasma-atomic emission spectrometry. Results are corrected for spectral inter-element interferences.

Element	Symbol	Lower Reporting Limit	Upper Reporting Limit	Units
Silver	Ag	0.5	100	ppm
Aluminum	Al	0.01	25	%
Arsenic	As	5	10,000	ppm
Barium	Ba	10	10,000	ppm
Beryllium	Be	0.5	1000	ppm
Bismuth	Bi	2	10,000	ppm
Calcium	Ca	0.01	25	%
Cadmium	Cd	0.5	500	ppm
Cobalt	Co	1	10,000	ppm
Chromium	Cr	1	10,000	ppm
Copper	Cu	1	10,000	ppm
Iron	Fe	0.01	25	%
Potassium	K	0.01	10	%
Magnesium	Mg	0.01	15	%
Manganese	Mn	5	10,000	ppm
Molybdenum	Mo	1	10,000	ppm
Sodium	Na	0.01	10	%
Nickel	Ni	1	10,000	ppm
Phosphorus	P	10	10,000	ppm
Lead	Pb	2	10,000	ppm
Sulphur	S	0.01	10	%
Element	**Symbol**	**Lower Reporting Limit**	**Upper Reporting Limit**	**Units**
Antimony	Sb	5	10,000	ppm
Strontium	Sr	1	10,000	ppm
Titanium	Ti	0.01	10	%
Vanadium	V	1	10,000	ppm
Tungsten	W	10	10,000	ppm
Zinc	Zn	2	10,000	ppm

<u>Geochemical Procedure</u> – ME-MS61
Ultra-Trace Level Method Using ICP-MS and ICP-AES

Sample Decomposition: $HF-HNO_3-HClO_4$ acid digestion, HCl leach
Analytical Methods: Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)
Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

A prepared sample (0.250 gram) is digested with perchloric, nitric, and hydrofluoric acids to near dryness. The sample is then further digested in a small amount of hydrochloric acid. The solution is made up to a final volume of 12.5 ml with 11% hydrochloric acid, homogenized, and analyzed by inductively coupled plasma-atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver and tungsten and diluted accordingly. Samples that meet ~~this criteria~~these criteria are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral inter-element interferences.

Element	Symbol	Detection Limit	Upper Limit	Units	Analytical Technique
Silver	Ag	0.01	100	ppm	AES+MS
Aluminum	Al	0.01	25	%	AES
Arsenic	As	0.2	10,000	ppm	AES+MS
Barium	Ba	0.5	10,000	ppm	AES
Beryllium	Be	0.05	1000	ppm	AES+MS
Bismuth	Bi	0.01	10,000	ppm	AES+MS
Calcium	Ca	0.01	25	%	AES
Cadmium	Cd	0.02	500	ppm	AES+MS
Cerium	Ce	0.01	500	ppm	MS
Cobalt	Co	0.1	10,000	ppm	AES+MS
Chromium	Cr	1	10,000	ppm	AES
Cesium	Cs	0.05	500	ppm	MS
Copper	Cu	0.2	10,000	ppm	AES
Iron	Fe	0.01	25	%	AES
Gallium	Ga	0.05	500	ppm	MS
Germanium	Ge	0.05	500	ppm	MS
Hafnium	Hf	0.1	500	ppm	MS
Indium	In	0.005	500	ppm	MS

Element	Symbol	Detection Limit	Upper Limit	Units	Analytical Technique
Potassium	K	0.01	10	%	AES
Lanthanum	La	0.5	500	ppm	MS
Lithium	Li	0.2	500	ppm	MS
Magnesium	Mg	0.01	15	%	AES
Manganese	Mn	5	10,000	ppm	AES
Sodium	Na	0.01	10	%	AES
Niobium	Nb	0.1	500	ppm	MS
Nickel	Ni	0.2	10,000	ppm	AES+MS
Phosphorous	P	10	10,000	ppm	AES
Lead	Pb	0.5	10,000	ppm	AES+MS
Rubidium	Rb	0.1	500	ppm	MS
Rhenium	Re	0.002	50	ppm	MS
Sulfur	S	0.01	10	%	AES
Antimony	Sb	0.05	1000	ppm	MS
Selenium	Se	1	1000	ppm	MS
Tin	Sn	0.2	500	ppm	MS
Strontium	Sr	0.2	10,000	ppm	AES+MS
Tantalum	Ta	0.05	100	ppm	MS
Tellurium	Te	0.05	500	ppm	MS
Thorium	Th	0.2	500	ppm	MS
Titanium	Ti	0.01	10	%	AES+MS
Thallium	Tl	0.02	500	ppm	MS
Uranium	U	0.1	500	ppm	MS
Vanadium	V	1	10,000	ppm	AES
Tungsten	W	0.1	10,000	ppm	AES+MS
Yttrium	Y	0.1	500	ppm	MS
Zinc	Zn	2	10,000	ppm	AES
Zirconium	Zr	0.5	500	ppm	MS

MS - Results are from the ICP-MS scan
AES - Results are from the ICP-AES scan
AES+MS - Results are a combination of ICP-AES and ICP-MS scans

<u>Fire Assay Procedure</u> - PGM-ICP23 and PGM-ICP24
Precious Metals Analysis Methods

Sample Decomposition: Fire Assay Fusion
Analytical Method: Inductively Coupled Plasma – Atomic Emission Spectrometry (ICP-AES)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate and borax silica, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested for 2 minutes at high power by microwave in dilute nitric acid. The solution is cooled and hydrochloric acid is added. The solution is digested for an additional 2 minutes at half power by microwave. The digested solution is then cooled, diluted to 4 ml with 2% hydrochloric acid, homogenized and then analyzed for gold, platinum and palladium by inductively coupled plasma – atomic emission spectrometry.

ALS Chemex Method Code	Element	Symbol	Sample Weight	Detection Limit	Upper Limit	Units
PGM-ICP23	Gold	Au	30 g	0.001	10.0	ppm
	Platinum	Pt	30 g	0.005	10.0	ppm
	Palladium	Pd	30 g	0.001	10.0	ppm
PGM-ICP24	Gold	Au	50 g	0.001	10.0	ppm
	Platinum	Pt	50 g	0.005	10.0	ppm
	Palladium	Pd	50 g	0.001	10.0	ppm

<u>Fire Assay Procedure</u> - PGM-ICP27
Ore Grade Precious Metals Analysis Methods

Sample Decomposition: Fire Assay Fusion
Analytical Method: Inductively Coupled Plasma – Atomic Emission Spectrometry (ICP-AES)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate and borax silica, inquarted ?? with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested for 2 minutes at high power by microwave in dilute nitric acid. The solution is cooled and hydrochloric acid is added. The solution is digested for an additional 2 minutes at half power by microwave. The digested solution is then cooled, diluted to 4 ml with 2% hydrochloric acid, homogenized and then analyzed for gold, platinum and palladium by inductively coupled plasma – atomic emission spectrometry.

ALS Chemex Method Code	Element	Symbol	Sample Weight	Detection Limit	Upper Limit
Au-ICP27	Gold	Au	30 g	0.03 ppm	100 ppm
Pt-ICP27	Platinum	Pt	30 g	0.03 ppm	100 ppm
Pd-ICP27	Palladium	Pd	30 g	0.03 ppm	100 ppm

Assay Procedure - ME-AA62
Evaluation of Ores and High Grade Materials

Sample Decomposition: HNO_3-$HClO_4$-HF-HCl digestion
Analytical Method: Atomic Absorption Spectroscopy (AAS)

A prepared sample (0.2 to 2.0g) is digested with nitric, perchloric, and hydrofluoric acids, and then evaporated to dryness. Hydrochloric acid is added for further digestion, and the sample is again taken to dryness. The residue is dissolved in nitric and hydrochloric acids and transferred to a volumetric flask (100 or 250 ml). The resulting solution is diluted to volume with demineralized water, mixed and then analyzed by atomic absorption spectrometry against matrix-matched standards.

ALS Chemex Method Code	Element	Symbol	Lower Reporting Limit	Upper Reporting Limit	Units
Cu-AA62	Copper	Cu	0.01	50	%

Appendix F

Prospecting Report

by

Stares Contracting Corp.

Stares Contracting Corp
3290 Willard Ave
Thunder Bay ON
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May 2, 2003

PROSPECTING REPORT FOR PORT RENFREW B.C PROPERTY
EMERALD FIELDS RESOURCE CORP.

During the dates between April 15/03 and April 29/03 Stares Contracting Corp. took a contract to prospect and evaluate a property owned by Emerald field resources Corp. on Vancouver island B.C. near the town of Port Renfrew. During our visit we prospected and evaluated several areas using four prospectors Stephen Stares, Michael Stares, Cliff Hickman, and Jeff Skaling. On April 15/03 we traveled all day from Thunder Bay On. To Port Renfrew B.C via air. April 16/03, we prospected quartz veins along strike of gold showings owned by the prospector Gary. The veins were very small usually less then 6 inches wide with no sulfides. The host rock were black shale's with no alteration. Gold assays are pending. April 17/03, we prospected and sampled some old gold platinum palladium showings near Bugaboo creek. We found several massive sulfide boulders on the main Bugaboo road with up to 5 % chalcopyrite. April 18/03, Cliff worked with Tony. Mike, Steve, and Jeff took day off. April 19/03, we drove numerous logging roads and did sampling with Tony and Perry. April 20/03, we went with Garry to some gold platinum palladium showings and did some sampling. April 21/03, Gary took us to a rusty zone on a logging road. The name of the showing is the Pope's nose. The sulfides seem to be magmatic in nature with a secondary zone of high-grade copper garnets near the limestones. Some old drill holes from 1971 indicate the copper zone is fairly large and has very promising potential to host an economic deposit of Cu, Au, and Ag with the possibility of Pt, Ni, and Co. April 22/03, we went back to the Pope's nose to look for more mineralization. Approximately 40-50m East of the road we found some old pits with massive copper. Along strike approximately 200m North we sampled some massive magnetite with some Cu, assays are pending. April 23/03, we went back to the Bugaboo creek area to see if we could identify where the massive sulfide boulder on the road came from. After carefully looking, it looked like the boulders were transported by truck from a local gravel pit but we were not sure of the source. One interesting zone that we did find was an altered limestone that was altered from mafic dykes being injected. These dykes were solidified with 2-3% Py. This unit also had small specks of brilliant emerald green mineral. We are unsure of this mineral. This zone has good promise to become a good gold zone but assays will tell. April 24/03, we prospected and sampled road 2000/elliot road. We took approximately 50 samples in quartz's veins and felsic dykes. The only thing of promise was one felsic dyke approximately 10 m wide with Aspy and Py. If this unit has gold values it could have some potential for size. The veins in the black shale's are small and would have a difficult time to put some tonnage together. Another area along strike from here near the house on the hill has the same type of mineralization in felsic dykes. This area also holds potential if we get gold numbers. April 25/03 we went to Jordan River and prospected the South side of the property and visited one old copper showing 500m North of the highway. The showing is located on the North side of an old logging road. The zone was narrow being about 1 ft. wide with 5% chalcopyrite and 1% pyrite it also appears to be discontinuous. April 26/03, we prospected up Mattie's mountain on some old copper nickel floats. Only one outcrop of interest was found. This outcrop is located about 50m North of the road on the main creek bed where the road switches back to the East from the West. The zone is a small outcrop on the creek about 1m wide with rusty sheared ultramafic rocks with 2% Py, Po and trace Cpy. Assays will tell if the zone is worth chasing. April 27/03, we prospected around Mattie's mountain along strike where Gary had some low Pt, Pd, and Au numbers along the road. The showing is small and could not be chased but the area is favorable for mineralization. Due to heavy overburden and rugged terrain prospecting is limited in this area. We also had done more prospecting on the logging roads around the Pope's nose showing and sampled some rusty zones with Py, Po, and Cpy in the limestones. These zones should be investigated by geophysics and geochem. April28/03, we prospected on the North side of the Jordan River property. We located two areas of Cu mineralization in old pits. The copper mineralization consists of Cpy in fractured filled rusty zones about 2-3 m wide. The Cu content was less then 1%. Several samples were taken for Au, Pt, Pd. These zones are in fine grain mafic volcanic not gabbros. There are some gabbros dykes in the area but they are dry and no sulfides. This property was surveyed in the past with geophysics with no significant anomalies. This property should be prospected further and if no significant assays are returned no further work is recommended. April29/03, we sent samples to Als chemex in the morning and flew from Victoria to Thunder Bay.

CONCLUSIONS AND RECOMMENDATIONS

During our prospecting the most promising thing we had seen by far was the Pope's nose showing. This zone has huge potential to become a very profitable deposit. The first thing that should be done on this property is to complete airborne geophysics, Mag/EM. The anomalies should be followed up by prospecting geochem trenching and drilling.

The Jordan River property looks very interesting but most of the mineralization are in mafics and show little potential for size. Further prospecting on this property is recommended to evaluate if the gabbros on this property could carry significant Pt, Pd, and Au.

The gold claims near Port Renfrew that carry gold in small quartz's veins hosted by shale's are interesting but the potential to build a sizeable deposit in this environment would be tough. In my opinion this area has some chance to host a sizeable deposit in altered felsic dykes cutting through the shale's. These dykes are between 1-15m wide and carry Aspy, and Py with some Au. The dykes should be looked at more closely especially in areas of major structural intersections to see if Au values can become consistent. A grid should be cut and more soil sampling should be done to see if any areas with enriched gold anomalies would be found. These areas should be trenched or drilled.

The area of Bugaboo creek should be prospected and evaluated more closely. The whole area seems to be pregnant in Cu, Ni, Co, Au, Pt, and Pd. An airborne geophysical survey should be done in this area to further evaluate its full potential. All anomalies should be prospected and soiled and eventually drilled.

Sample description sheets accompany this report with GPS locations for all the sample taken on this visit.

Appendix G

Stream Sediment Heavy Mineral Survey

Analytical Results

Emerald Fields Resource Corp. **Port Refrew Project**

Heavy Mineral Stream Sediment Survey

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
-80HN																	
726-H001 -80HN	10.2	6.7	1.0	< 10	< 2	9.2	11.4	8.3	22.14	0.2	0	109	4.67	21.8	0.09	16.5	0.21
726-H002 -80HN	9.9	1.6	1.0	10	< 2	36.2	14.2	129.3	317.38	108.9	0	245	4.32	24.8	0.12	20.0	7.84
726-H003 -80HN	9.0	16.1	1.0	< 10	< 2	9.1	9.8	11.3	58.53	1.8	0	83	8.00	16.2	0.08	43.8	0.14
726-H004 -80HN	9.6	11.1	1.0	< 10	< 2	7.2	15.5	8.9	30.97	0.9	0	65	1.02	14.4	0.07	8.2	0.56
726-H005 -80HN	8.3	11.5	1.0	< 10	2	17.8	14.5	35.7	73.03	298.4	4	190	0.76	24.6	0.04	11.6	0.60
726-H006 -80HN	9.6	3.2	1.0	< 10	< 2	11.1	6.0	42.2	44.36	7733.4	26	854	1.49	12.9	0.13	23.9	5.93
726-H007 -80HN	11.2	19.4	1.0	< 10	< 2	8.2	10.0	12.0	24.15	1.3	0	52	1.06	22.6	0.06	9.5	0.25
726-H008 -80HN	7.7	0.5	0.5	< 10	3	139.6	11.2	279.0	244.54	1945.8	1	401	2.42	18.0	0.09	8.2	3.70
726-H009 -80HN	8.1	4.7	1.0	< 10	2	54.1	14.6	117.8	134.07	11.0	0	122	1.73	18.2	0.04	20.1	3.87
726-H010 -80HN	10.8	6.9	1.0	< 10	< 2	45.7	14.8	78.4	111.22	9.5	0	113	1.61	13.4	0.06	29.3	3.05
726-H011 -80HN	7.9	2.5	1.0	< 10	< 2	3.6	8.1	3.8	19.07	6.7	0	29	2.32	17.0	0.04	7.7	0.22
726-H012 -80HN	9.3	1.1	0.5	< 10	< 2	3.1	4.7	104.3	110.10	1.4	0	51	5.85	20.3	0.07	15.6	0.83
726-H013 -80HN	8.5	0.9	0.5	< 10	< 2	13.9	10.7	39.0	32.80	19355.4	21	3665	2.21	13.4	0.05	8.5	0.29
726-H014 -80HN	8.2	1.1	0.5	< 10	< 2	23.3	9.8	85.2	417.64	6972.5	10	539	36.55	21.7	0.16	9.1	0.30
726-H015 -80HN	11.6	2.7	1.0	< 10	< 2	6.3	8.0	2.6	12.81	11284.1	26	2385	6.59	11.4	0.06	7.2	0.36
726-H016 -80HN	8.4	0.7	0.5	< 10	< 2	38.5	10.4	86.4	390.45	4.4	0	74	2.59	77.6	1.01	8.8	0.51
726-H017 -80HN	8.3	2.0	1.0	< 10	< 2	18.4	9.4	31.7	75.42	6615.5	16	801	2.17	17.8	0.06	9.2	0.26
726-H018 -80HN	10.0	1.7	1.0	< 10	2	57.7	10.3	119.1	205.96	5039.7	9	397	1.67	18.8	0.10	9.8	0.40
726-H019 -80HN	9.2	5.8	1.0	< 10	< 2	23.2	16.5	68.5	102.32	4.8	0	139	2.46	33.9	0.18	17.0	0.94
726-H020 -80HN	9.3	1.4	1.0	< 10	4	21.5	13.2	60.8	105.52	398.3	1	205	3.55	26.6	0.18	14.5	2.88
726-H021 -80HN	8.4	6.2	1.0	< 10	< 2	19.6	14.3	19.8	38.03	498.5	4	239	1.77	21.9	0.04	19.3	0.28
726-H022 -80HN	10.4	6.4	1.0	< 10	< 2	37.3	45.1	20.6	31.58	15.0	0	109	1.46	92.5	0.04	14.2	0.54
726-H023 -80HN	7.4	2.2	1.0	< 10	< 2	6.8	6.1	19.8	33.65	1.0	0	139	1.28	17.5	0.07	35.0	0.70
726-H024 -80HN	8.3	2.5	1.0	< 10	< 2	29.5	10.4	98.8	131.60	6213.1	19	1169	2.83	19.2	0.08	21.7	1.06
726-H025 -80HN	7.7	0.3	0.1	< 10	< 2	9.0	7.7	35.3	96.89	0.2	0	70	4.09	34.1	0.12	20.6	1.09
726-H026 -80HN	8.1	1.5	1.0	< 10	3	32.5	4.7	171.5	152.53	31.0	0	218	1.59	19.1	0.13	18.3	0.28
726-H027 -80HN	9.6	2.2	1.0	< 10	< 2	28.4	13.9	61.9	162.72	1041.4	2	314	2.14	60.2	0.70	34.1	0.30
726-H028 -80HN	8.8	2.4	1.0	< 10	3	20.6	9.9	54.1	88.53	0.9	0	179	2.70	14.2	0.07	12.9	2.61
726-H029 -80HN	10.6	2.3	1.0	13	8	144.0	8.7	445.5	509.41	14.0	0	364	4.16	20.7	0.33	14.9	6.44
726-H030 -80HN	9.2	1.4	1.0	12	< 2	29.9	10.1	96.1	367.98	22375.7	34	3290	2.33	32.8	0.17	8.7	0.30
726-H031 -80HN	8.5	4.2	1.0	< 10	< 2	6.9	2.3	41.1	68.51	6704.0	33	788	2.77	18.7	0.13	33.5	0.81
726-H032 -80HN	9.1	0.8	0.5	< 10	2	29.8	13.5	124.6	62.37	2.7	0	96	1.54	12.1	0.06	20.3	0.83
726-H033 -80HN	8.3	2.1	1.0	< 10	2	36.5	19.5	136.2	120.27	2.0	0	181	2.30	11.9	0.04	8.6	0.41
726-H034 -80HN	9.8	0.9	0.5	< 10	< 2	10.2	26.1	46.0	38.34	5.3	0	595	4.78	27.3	0.07	26.0	0.19
726-H035 -80HN	9.8	1.5	1.0	< 10	2	28.0	18.2	50.2	104.11	15220.9	23	1723	4.00	30.4	0.28	13.2	1.43
726-H036 -80HN	9.7	1.4	1.0	< 10	2	22.1	13.3	41.9	96.21	2.8	0	67	2.62	43.1	0.45	16.6	1.46
726-H037 -80HN	9.5	2.9	1.0	< 10	2	62.3	11.4	95.2	308.52	3.8	0	163	5.94	72.2	0.68	21.1	10.11
726-H038 -80HN	7.3	0.6	0.5	< 10	< 2	5.0	12.6	14.8	42.95	1.9	0	74	6.25	16.0	0.01	16.3	7.74

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
-80HN																		
726-H001 -80HN	264	1.09	2.8	0.15	12	1.4	0.7	0.04	3	27	86.0	1.03	0.120	0.85	0.119	1.11	0.005	0.01
726-H002 -80HN	186	5.98	5.4	0.17	109	2.3	12.1	0.78	14	28	45.9	1.50	0.242	0.43	0.124	1.06	0.006	0.01
726-H003 -80HN	151	0.92	5.0	0.16	21	0.6	0.5	0.04	19	16	42.2	0.78	0.061	0.43	0.083	0.69	0.004	0.01
726-H004 -80HN	142	0.80	8.7	0.21	7	5.4	1.7	0.08	9	19	60.3	2.33	0.464	0.73	0.046	0.81	0.004	0.01
726-H005 -80HN	151	1.07	3.5	0.07	60	1.9	2.8	0.05	37	15	25.1	0.97	0.105	0.51	0.108	0.67	0.004	0.01
726-H006 -80HN	136	1.25	1.2	0.03	37	2.8	11.0	0.04	2	23	26.5	1.63	0.315	0.22	0.107	1.01	0.010	0.02
726-H007 -80HN	139	0.89	7.0	0.27	6	2.0	2.8	0.11	26	17	66.3	1.29	0.106	1.13	0.102	0.98	0.007	0.01
726-H008 -80HN	83	3.28	5.3	0.13	58588	4.0	11.0	0.30	23	39	21.0	1.09	0.120	0.27	0.245	0.68	0.003	0.01
726-H009 -80HN	168	2.57	14.8	0.06	3369	9.2	14.9	0.08	9	22	57.0	2.22	0.303	0.58	0.077	1.60	0.037	0.02
726-H010 -80HN	198	2.29	1.8	0.04	970	5.0	22.3	0.06	51	27	59.1	2.58	0.355	0.38	0.084	1.77	0.031	0.02
726-H011 -80HN	160	0.69	1.8	0.13	26	1.6	3.0	0.04	3	23	83.3	1.04	0.104	0.28	0.138	0.90	0.003	0.01
726-H012 -80HN	153	1.31	2.2	0.05	30	5.7	17.5	0.06	20	25	63.4	1.66	0.426	0.14	0.122	0.88	0.006	0.01
726-H013 -80HN	65	0.57	0.4	0.03	239	2.2	14.5	0.04	1	25	13.7	0.47	0.035	0.13	0.288	0.45	0.017	< .01
726-H014 -80HN	84	1.19	13.5	1.44	7	3.7	33.2	0.09	1	27	12.3	0.55	0.067	0.18	0.281	0.46	0.014	0.01
726-H015 -80HN	63	0.32	0.3	0.11	38	2.6	18.3	0.04	1	23	14.3	0.45	0.029	0.11	0.246	0.46	0.005	0.01
726-H016 -80HN	85	1.12	3.4	0.07	5	2.3	19.0	0.05	6	26	13.6	0.66	0.068	0.29	0.259	0.59	0.027	0.01
726-H017 -80HN	72	0.69	1.3	0.05	< 5	3.6	35.6	0.03	1	25	13.0	0.52	0.042	0.18	0.271	0.50	0.017	0.01
726-H018 -80HN	110	1.87	9.5	0.08	8	4.4	42.7	0.08	2	22	17.7	0.78	0.149	0.42	0.154	0.54	0.026	0.01
726-H019 -80HN	257	3.42	20.0	0.13	5147	2.5	4.4	0.24	100	38	90.7	2.44	0.212	0.67	0.097	1.70	0.010	0.02
726-H020 -80HN	149	1.87	2.9	0.28	2538	5.3	24.4	0.05	83	38	40.4	1.60	0.185	0.27	0.179	0.97	0.004	0.01
726-H021 -80HN	156	0.92	1.7	0.08	2358	3.0	22.6	0.06	6	18	71.7	1.36	0.242	0.39	0.085	1.16	0.015	0.01
726-H022 -80HN	201	1.25	4.3	0.13	18965	2.1	9.1	0.09	21	26	97.1	1.47	0.144	0.73	0.138	1.26	0.006	0.01
726-H023 -80HN	181	1.05	1.1	0.03	5850	1.4	5.7	0.04	3	23	71.5	1.30	0.195	0.30	0.088	1.41	0.037	0.03
726-H024 -80HN	170	2.40	5.4	0.08	136	10.0	63.0	0.13	19	22	63.5	2.29	0.499	0.31	0.087	1.26	0.016	0.02
726-H025 -80HN	147	1.12	0.4	0.09	80	11.1	39.1	0.07	69	55	51.1	1.84	0.230	0.16	0.570	1.09	0.008	0.01
726-H026 -80HN	162	4.00	2.3	0.03	14926	6.4	58.9	0.05	57	34	68.0	1.73	0.296	0.29	0.140	1.27	0.044	0.01
726-H027 -80HN	132	1.63	2.7	0.12	1520	7.0	15.6	0.04	39	17	36.5	1.25	0.147	0.29	0.103	1.01	0.020	0.01
726-H028 -80HN	129	1.78	7.9	0.37	33	7.6	18.2	0.03	26	22	35.9	1.40	0.159	0.23	0.132	0.73	0.013	0.01
726-H029 -80HN	116	10.23	22.4	24.45	38608	6.6	28.0	0.20	59	25	34.0	1.36	0.198	0.21	0.086	0.91	0.027	0.01
726-H030 -80HN	81	1.15	2.6	0.05	19	5.3	30.7	0.05	2	28	14.2	0.65	0.056	0.19	0.298	0.53	0.025	0.01
726-H031 -80HN	279	1.78	2.5	0.07	18009	4.2	18.1	1.17	667	44	108.0	5.51	1.202	0.23	0.049	2.23	0.060	0.02
726-H032 -80HN	179	2.35	17.3	0.21	898	3.3	12.4	0.04	42	38	50.8	3.81	0.658	0.24	0.072	1.71	0.020	0.01
726-H033 -80HN	108	3.04	3.1	0.13	19	62.8	41.7	0.04	2	28	29.3	0.93	0.142	0.25	0.167	0.49	0.004	< .01
726-H034 -80HN	223	1.56	0.5	0.07	27105	0.9	3.3	0.02	7	85	56.4	2.01	0.144	0.34	0.382	1.55	0.019	0.01
726-H035 -80HN	134	1.73	4.3	0.83	200	13.1	28.6	0.05	4	28	29.9	0.95	0.080	0.32	0.161	0.78	0.005	0.01
726-H036 -80HN	122	1.43	3.3	0.16	26	6.1	28.8	0.04	4	24	26.3	0.93	0.093	0.27	0.167	0.70	0.004	0.01
726-H037 -80HN	117	3.54	9.1	1.23	73	5.7	30.8	0.09	18	17	34.6	0.96	0.164	0.23	0.123	0.60	0.006	< .01
726-H038 -80HN	146	1.00	0.8	0.03	42049	4.7	21.6	0.02	< 1	62	77.4	0.87	0.069	0.20	0.331	0.75	0.004	< .01

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
-80HN																		
726-H001 -80HN	< .1	0.2	2.4	< .02	0.19	0.03	2.4	0.19	< .1	0.06	2.4	3.9	0.27	0.9	0.2	< .05	5.00	7.9
726-H002 -80HN	11.8	4.5	2.2	0.04	4.69	0.63	2.5	0.10	0.1	0.10	2.0	6.3	0.55	0.9	0.4	< .05	6.03	13.0
726-H003 -80HN	0.1	0.7	2.0	0.02	0.27	0.03	1.4	0.14	< .1	0.08	3.4	2.2	0.17	0.3	4.7	< .05	2.73	4.4
726-H004 -80HN	2.3	0.5	1.6	< .02	0.14	0.03	1.9	0.09	< .1	0.08	2.9	9.6	0.23	0.5	0.2	< .05	9.65	10.9
726-H005 -80HN	0.6	0.6	1.2	< .02	0.40	0.02	1.7	0.16	0.1	0.11	3.4	5.2	0.59	0.9	0.3	< .05	4.08	10.4
726-H006 -80HN	0.5	0.7	1.5	< .02	0.56	0.05	2.9	0.18	0.1	0.08	1.9	14.9	0.70	1.4	0.4	< .05	11.53	28.3
726-H007 -80HN	0.4	0.5	1.7	< .02	0.28	0.03	2.3	0.20	< .1	0.11	3.3	6.2	0.76	1.0	0.4	< .05	5.33	11.9
726-H008 -80HN	3.9	3.0	2.1	< .02	2.62	0.26	1.8	0.10	< .1	0.23	5.2	10.1	2.32	0.6	1.1	< .05	14.63	23.4
726-H009 -80HN	0.6	2.1	1.6	0.02	1.65	0.11	3.3	0.21	< .1	0.08	1.8	12.6	0.44	1.2	0.3	< .05	9.11	23.6
726-H010 -80HN	31.5	1.6	1.8	< .02	1.18	0.09	3.8	0.27	< .1	0.08	1.6	11.7	0.37	1.8	0.4	< .05	8.90	21.3
726-H011 -80HN	1.4	0.3	2.5	0.02	< .01	0.02	2.7	0.11	< .1	0.11	2.7	8.9	0.96	0.8	0.8	< .05	12.04	17.2
726-H012 -80HN	0.2	0.4	2.3	0.02	0.44	0.03	3.0	0.12	0.1	0.17	4.8	24.3	1.06	1.3	1.5	< .05	19.55	48.0
726-H013 -80HN	< .1	0.6	1.0	< .02	0.17	0.02	1.2	0.12	< .1	0.22	5.3	6.3	1.27	0.3	0.6	< .05	9.29	14.9
726-H014 -80HN	0.3	1.6	1.2	< .02	0.59	0.04	1.3	0.09	0.1	0.20	4.1	5.5	1.63	0.4	1.2	< .05	10.35	13.1
726-H015 -80HN	0.7	0.2	1.3	< .02	< .01	< .02	1.4	0.11	< .1	0.16	3.4	6.4	1.54	0.4	3.3	< .05	9.16	15.1
726-H016 -80HN	2.1	1.7	1.2	< .02	0.54	0.05	1.4	0.06	0.1	0.16	3.4	5.8	1.02	0.3	1.7	< .05	8.68	12.9
726-H017 -80HN	1.0	0.7	1.0	< .02	0.25	0.03	1.3	0.09	< .1	0.15	3.4	4.2	1.36	0.4	0.5	< .05	7.68	10.3
726-H018 -80HN	1.1	2.3	1.4	0.02	1.10	0.10	1.4	0.05	< .1	0.09	2.4	4.9	0.70	0.5	0.3	< .05	7.51	10.5
726-H019 -80HN	12.5	2.0	3.0	0.02	2.02	0.27	4.0	0.18	0.1	0.13	3.0	8.8	0.31	1.2	1.1	< .05	10.17	17.4
726-H020 -80HN	0.2	1.2	2.2	< .02	0.83	0.08	2.7	0.06	0.1	0.05	2.3	6.5	0.42	0.3	0.4	< .05	9.32	13.3
726-H021 -80HN	0.1	0.5	2.0	< .02	0.27	0.05	2.3	0.11	< .1	0.06	1.3	12.6	0.40	1.0	0.3	< .05	13.22	26.1
726-H022 -80HN	0.2	0.4	2.6	< .02	0.36	0.13	2.7	0.10	< .1	0.11	2.7	9.4	0.54	0.5	0.5	< .05	7.86	16.6
726-H023 -80HN	< .1	0.5	2.4	< .02	0.20	0.05	3.3	0.21	< .1	0.05	1.2	7.4	0.29	1.8	0.2	< .05	7.37	14.3
726-H024 -80HN	0.3	1.9	1.9	0.02	1.61	0.14	2.8	0.13	0.1	0.06	1.6	26.6	0.69	1.1	0.5	< .05	22.85	50.8
726-H025 -80HN	0.3	0.9	2.7	< .02	0.31	0.05	3.4	0.14	0.1	1.23	23.6	20.4	2.92	0.8	1.2	< .05	23.08	42.7
726-H026 -80HN	4.1	3.3	2.2	< .02	2.52	0.15	2.6	0.09	0.1	0.07	1.7	7.5	0.26	0.2	0.1	< .05	6.61	14.5
726-H027 -80HN	2.7	1.5	1.4	< .02	0.80	0.09	2.1	0.11	< .1	0.07	1.4	6.8	0.71	0.5	0.3	< .05	7.94	13.0
726-H028 -80HN	2.0	1.6	1.3	< .02	0.99	0.04	1.7	0.06	< .1	0.10	2.9	7.8	0.83	0.4	0.6	< .05	8.70	14.8
726-H029 -80HN	5.3	12.1	1.3	0.06	7.26	0.42	2.0	0.09	0.1	0.11	2.4	9.1	0.87	0.5	0.4	< .05	8.64	19.6
726-H030 -80HN	2.3	1.8	1.0	< .02	0.53	0.05	1.3	0.07	< .1	0.16	3.6	4.7	1.62	0.4	2.0	< .05	9.09	11.2
726-H031 -80HN	0.2	1.3	2.8	< .02	0.58	0.81	4.9	0.17	0.1	0.06	1.5	37.8	0.14	0.8	0.2	< .05	24.54	77.0
726-H032 -80HN	10.1	1.7	2.3	< .02	1.13	0.05	4.4	0.09	0.1	0.05	1.4	15.9	0.14	0.7	0.3	< .05	14.33	31.7
726-H033 -80HN	1.1	3.4	1.3	< .02	1.86	0.07	1.4	0.07	0.1	0.11	2.9	5.7	1.12	0.3	0.4	< .05	9.57	12.9
726-H034 -80HN	< .1	0.2	5.0	< .02	0.32	< .02	4.2	0.09	0.1	0.11	3.1	6.3	0.20	0.3	0.4	< .05	9.94	14.0
726-H035 -80HN	1.6	1.5	1.8	< .02	0.99	0.07	1.9	0.07	0.1	0.09	3.4	4.7	0.65	0.4	1.0	< .05	7.68	9.8
726-H036 -80HN	1.4	1.3	1.4	< .02	0.82	0.06	1.6	0.06	0.1	0.11	3.6	4.0	0.70	0.4	0.4	< .05	7.99	8.8
726-H037 -80HN	6.3	5.4	1.2	0.05	2.56	0.10	1.2	0.06	0.1	0.09	2.1	6.3	0.67	0.3	0.3	< .05	6.70	12.7
726-H038 -80HN	0.6	1.5	1.3	< .02	0.24	< .02	2.3	0.09	0.1	0.29	10.5	7.6	1.12	0.6	0.5	< .05	8.04	15.8

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
-80HN				
726-H001 -80HN	< .02	< 1	0.1	2.0
726-H002 -80HN	< .02	3	0.2	1.8
726-H003 -80HN	< .02	< 1	< .1	1.3
726-H004 -80HN	< .02	2	0.2	1.9
726-H005 -80HN	< .02	< 1	0.2	2.5
726-H006 -80HN	< .02	1	0.2	1.9
726-H007 -80HN	< .02	< 1	0.2	2.5
726-H008 -80HN	< .02	< 1	0.2	3.0
726-H009 -80HN	< .02	7	0.2	2.5
726-H010 -80HN	< .02	4	0.2	2.6
726-H011 -80HN	0.02	< 1	0.2	1.6
726-H012 -80HN	< .02	3	0.2	1.6
726-H013 -80HN	< .02	< 1	0.1	2.8
726-H014 -80HN	< .02	1	0.1	1.8
726-H015 -80HN	< .02	< 1	0.1	1.7
726-H016 -80HN	< .02	< 1	< .1	1.8
726-H017 -80HN	< .02	< 1	0.1	2.3
726-H018 -80HN	< .02	< 1	0.1	1.9
726-H019 -80HN	0.02	3	0.4	2.6
726-H020 -80HN	< .02	3	0.2	1.8
726-H021 -80HN	< .02	< 1	0.2	2.2
726-H022 -80HN	< .02	2	0.2	3.4
726-H023 -80HN	< .02	< 1	0.3	1.9
726-H024 -80HN	< .02	< 1	0.2	2.2
726-H025 -80HN	< .02	13	0.2	1.4
726-H026 -80HN	< .02	1	0.2	1.5
726-H027 -80HN	< .02	< 1	0.1	2.5
726-H028 -80HN	< .02	16	0.2	1.2
726-H029 -80HN	< .02	37	< .1	1.5
726-H030 -80HN	< .02	2	0.1	1.6
726-H031 -80HN	< .02	2	0.3	1.6
726-H032 -80HN	< .02	2	0.4	1.4
726-H033 -80HN	< .02	1	0.1	1.8
726-H034 -80HN	< .02	< 1	0.2	1.6
726-H035 -80HN	< .02	4	0.1	1.9
726-H036 -80HN	< .02	< 1	< .1	1.4
726-H037 -80HN	< .02	6	0.1	1.7
726-H038 -80HN	< .02	1	0.5	0.8

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
median				< 10	< 2	22	11	52	97	13	0	186	2	20			1
mean						29	12	76	131	2945	6	534	4	27			2
SD						31	7	83	126	5626	10	856	6	19			3
mean + 2SD						91	26	242	382	14198		2246	15	64			7

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
median		1.4	3	0.1	109			0.05										
mean		2.0	5	0.8	6543			0.12										
SD		1.8	6	3.9	13781			0.22										
mean + 2SD		5.5	16	8.7	34105			0.55										

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
median																		
mean																		
SD																		
mean + 2SD																		

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
median				
mean				
SD				
mean + 2SD				

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
-80HP first analysis																	
726-H001 -80HP	10.2	73.4	1.0	< 10	< 2	18.2	20.6	16.8	41.48	1.3	0	118	2.92	26.7	0.11	12.7	0.59
726-H002 -80HP	9.9	27.1	1.0	< 10	< 2	23.1	34.5	29.9	65.98	5.7	0	130	2.65	23.8	0.07	12.1	1.14
726-H003 -80HP	9.0	74.7	1.0	< 10	< 2	19.1	21.6	24.8	62.35	1.3	0	124	2.39	25.6	0.13	17.8	0.32
726-H004 -80HP	9.6	35.1	1.0	< 10	< 2	24.4	26.5	29.1	56.42	2.7	0	185	4.35	31.3	0.25	11.0	1.49
726-H005 -80HP	8.3	87.7	1.0	< 10	2	28.7	23.8	38.1	63.50	6.0	1	98	1.67	18.7	0.09	8.1	0.43
726-H006 -80HP	9.6	29.9	1.0	< 10	< 2	36.0	17.3	66.3	66.71	65.8	2	173	2.99	19.2	0.07	18.1	0.47
726-H007 -80HP	11.2	98.4	1.0	< 10	< 2	14.4	14.4	19.1	37.49	0.9	0	55	1.61	25.8	0.12	6.0	0.44
726-H008 -80HP	7.7	14.5	1.0	< 10	3	45.7	41.8	55.5	78.98	18.8	0	88	2.59	24.0	0.08	10.7	1.65
726-H009 -80HP	8.1	43.8	1.0	< 10	< 2	111.6	45.3	38.1	56.33	4.3	0	91	1.62	30.9	0.05	13.8	0.29
726-H010 -80HP	10.8	67.9	1.0	< 10	2	77.9	30.9	62.1	66.12	4.7	0	118	2.46	29.2	0.06	18.2	0.69
726-H011 -80HP	7.9	31.7	1.0	< 10	< 2	8.4	21.4	12.3	27.21	2.0	0	43	3.72	27.0	0.09	8.7	0.50
726-H012 -80HP	9.3	26.7	1.0	< 10	< 2	12.7	15.3	31.8	83.50	2.5	0	62	9.21	35.4	0.17	11.6	2.12
726-H013 -80HP	8.5	20.2	1.0	< 10	< 2	18.1	36.2	9.2	22.54	0.6	0	39	2.33	23.2	0.05	11.0	0.43
726-H014 -80HP	8.2	19.0	1.0	< 10	2	31.7	26.5	14.7	36.94	0.6	0	41	2.86	20.7	0.05	9.7	0.24
726-H015 -80HP	11.6	37.5	1.0	< 10	< 2	13.2	21.8	5.2	15.26	0.3	0	23	2.91	15.0	0.06	6.6	0.28
726-H016 -80HP	8.4	15.2	1.0	< 10	< 2	75.9	29.6	24.3	34.01	0.9	0	41	1.68	21.9	0.05	7.5	0.26
726-H017 -80HP	8.3	30.2	1.0	< 10	< 2	58.5	26.6	16.3	23.88	0.5	0	36	2.28	21.6	0.04	10.1	0.19
726-H018 -80HP	10.0	24.9	1.0	< 10	< 2	32.5	24.2	20.2	34.96	1.3	0	51	1.48	18.1	0.06	10.9	0.26
726-H019 -80HP	9.2	40.7	1.0	< 10	< 2	27.0	30.5	34.7	69.05	9.4	0	123	3.18	56.7	0.12	18.9	0.81
726-H020 -80HP	9.3	43.0	1.0	< 10	2	21.0	22.7	30.8	56.28	1.8	0	69	3.62	27.3	0.10	13.6	0.46
726-H021 -80HP	8.4	33.6	1.0	< 10	< 2	39.1	25.9	57.3	77.68	52.2	2	223	2.98	27.4	0.08	20.1	0.87
726-H022 -80HP	10.4	43.6	1.0	< 10	< 2	20.8	30.4	25.1	28.03	5.3	0	89	1.63	16.3	0.04	8.8	0.79
726-H023 -80HP	7.4	38.7	1.0	< 10	2	26.2	20.0	46.8	57.31	2.9	0	143	2.67	28.4	0.08	22.5	0.51
726-H024 -80HP	8.3	28.7	1.0	< 10	< 2	32.5	20.9	46.5	70.94	11.1	0	155	2.93	29.2	0.07	21.3	0.76
726-H025 -80HP	7.7	7.9	1.0	< 10	< 2	22.5	14.2	60.2	61.22	4.9	0	113	5.16	26.1	0.12	22.8	0.79
726-H026 -80HP	8.1	38.9	1.0	< 10	3	31.7	11.6	120.1	137.01	9.3	0	354	2.26	24.1	0.19	15.0	0.41
726-H027 -80HP	9.6	17.0	1.0	< 10	3	39.1	16.9	61.2	111.11	9.9	0	187	5.41	27.6	0.13	23.2	0.66
726-H028 -80HP	8.8	39.4	1.0	< 10	< 2	71.0	21.6	41.3	53.36	1.7	0	130	3.01	20.9	0.08	12.5	0.49
726-H029 -80HP	10.6	16.9	1.0	< 10	2	41.6	26.7	53.5	98.58	13.6	0	158	2.68	28.7	0.09	16.1	0.60
726-H030 -80HP	9.2	28.2	1.0	< 10	< 2	35.6	30.5	19.2	50.12	1.4	0	85	2.46	19.1	0.07	7.7	0.26
726-H031 -80HP	8.5	80.9	1.0	< 10	< 2	7.7	9.6	23.7	61.20	0.6	0	41	1.80	41.2	0.06	22.1	0.22
726-H032 -80HP	9.1	34.9	1.0	< 10	2	51.1	43.6	56.1	59.89	0.9	0	91	1.49	23.2	0.05	17.8	0.26
726-H033 -80HP	8.3	26.8	1.0	< 10	2	28.7	27.2	57.1	59.03	1.5	0	66	3.06	20.0	0.05	9.6	0.46
726-H034 -80HP	9.8	24.9	1.0	< 10	< 2	23.2	35.9	38.1	43.46	3.9	0	58	4.67	31.9	0.05	19.9	0.37
726-H035 -80HP	9.8	10.6	1.0	< 10	3	72.0	43.2	63.7	100.62	3.8	0	117	5.42	28.8	0.08	17.6	0.80
726-H036 -80HP	9.7	17.9	1.0	< 10	4	75.5	39.7	59.6	94.86	4.9	0	113	3.74	30.1	0.08	22.4	0.77
726-H037 -80HP	9.5	24.0	1.0	< 10	2	50.4	22.7	36.1	72.80	4.6	0	87	2.87	23.3	0.06	15.7	0.59
726-H038 -80HP	7.3	12.1	1.0	< 10	2	19.7	13.9	37.9	44.72	2.2	0	56	9.11	24.7	0.11	11.5	0.92
median				< 10	< 2	30	25	37	59	3	0	91	3	26			
mean						36	26	39	60	7	0	105	3	26			
SD						23	9	22	26	13	0	64	2	7			

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
-80HP first analysis																		
726-H001 -80HP	893	4.50	8.5	0.22	31	0.5	0.3	0.08	1	54	95.2	2.92	0.023	0.73	0.109	1.11	0.003	< .01
726-H002 -80HP	588	4.31	1.9	< .02	21	0.5	0.7	0.14	1	60	74.5	2.43	0.027	0.66	0.138	1.15	0.004	0.01
726-H003 -80HP	339	2.90	6.3	0.51	102	0.3	0.2	0.07	2	55	110.7	1.08	0.025	0.67	0.108	1.04	0.004	0.01
726-H004 -80HP	436	4.60	14.4	0.57	26	1.6	0.8	0.11	2	43	44.9	2.63	0.057	0.46	0.082	0.97	0.004	0.01
726-H005 -80HP	637	3.84	3.8	< .02	42	0.6	0.6	0.07	2	38	36.1	3.21	0.015	0.45	0.086	0.89	0.003	0.01
726-H006 -80HP	331	3.16	1.9	< .02	25	0.6	2.7	0.08	1	44	41.3	0.79	0.048	0.49	0.187	0.80	0.005	0.01
726-H007 -80HP	483	2.82	6.5	0.10	18	0.9	0.8	0.08	2	31	51.0	2.15	0.030	0.42	0.073	0.88	0.004	0.01
726-H008 -80HP	593	3.09	1.8	< .02	4357	0.9	1.7	0.10	2	48	38.0	1.72	0.028	0.47	0.240	0.73	0.005	0.01
726-H009 -80HP	417	2.75	1.7	< .02	15	0.4	0.7	0.04	1	41	26.9	0.90	0.047	1.56	0.149	0.95	0.009	0.01
726-H010 -80HP	405	3.39	1.1	< .02	32	0.5	2.5	0.09	2	46	42.1	0.69	0.059	1.40	0.150	0.97	0.011	0.02
726-H011 -80HP	866	2.97	2.8	0.07	13	1.1	4.9	0.08	< 1	52	114.1	2.12	0.044	0.43	0.177	1.21	0.003	0.01
726-H012 -80HP	*621*	*4.50*	*8.8*	*0.19*	*48*	*1.6*	*10.1*	*0.24*	*1*	*66*	*57.7*	*2.29*	*0.045*	*0.33*	*0.214*	*1.04*	*0.003*	*0.01*
726-H013 -80HP	232	1.83	1.0	0.07	< 5	0.2	0.7	0.03	1	73	17.0	0.43	0.010	0.27	0.192	0.59	0.015	0.01
726-H014 -80HP	248	1.77	1.3	0.08	7	0.2	1.2	0.03	< 1	61	17.1	0.42	0.014	0.54	0.188	0.55	0.009	0.01
726-H015 -80HP	209	1.41	0.7	0.04	6	0.2	1.5	0.02	1	60	21.9	0.44	0.009	0.23	0.198	0.55	0.006	0.01
726-H016 -80HP	308	2.16	1.2	0.03	8	0.1	1.1	0.05	< 1	48	13.4	0.37	0.015	1.37	0.141	0.47	0.010	0.01
726-H017 -80HP	274	1.95	1.1	0.07	6	0.2	1.2	0.03	1	55	17.4	0.42	0.009	0.93	0.176	0.56	0.011	0.01
726-H018 -80HP	226	1.78	1.9	0.09	< 5	0.2	1.2	0.03	1	56	17.2	0.48	0.023	0.51	0.163	0.54	0.015	0.01
726-H019 -80HP	746	4.16	5.8	0.16	45	0.7	3.5	0.14	6	69	144.8	1.55	0.059	1.19	0.193	1.73	0.007	0.01
726-H020 -80HP	266	2.21	1.5	0.29	21	0.4	1.2	0.07	3	71	65.7	0.79	0.036	0.33	0.326	0.77	0.004	0.01
726-H021 -80HP	378	3.83	4.5	0.24	64	0.6	2.0	0.19	2	45	55.5	0.70	0.068	0.54	0.161	0.75	0.006	0.01
726-H022 -80HP	553	2.93	4.6	0.10	36	1.2	1.2	0.08	1	38	70.4	2.59	0.038	0.37	0.090	0.90	0.002	< .01
726-H023 -80HP	338	3.10	2.6	0.11	40	0.4	1.5	0.12	1	53	95.1	0.54	0.027	0.70	0.167	1.12	0.007	0.01
726-H024 -80HP	376	3.18	3.7	0.16	62	0.6	2.3	0.13	2	51	55.0	0.72	0.061	0.60	0.185	0.84	0.006	0.02
726-H025 -80HP	332	3.13	3.3	0.12	60	0.4	3.6	0.19	2	67	77.3	0.54	0.026	0.36	0.256	0.75	0.006	0.01
726-H026 -80HP	256	4.78	4.3	0.11	112	0.1	0.3	0.14	3	59	110.4	0.59	0.044	0.56	0.145	1.00	0.006	< .01
726-H027 -80HP	362	4.14	5.2	0.63	122	0.4	3.4	0.09	3	47	62.0	0.67	0.034	0.57	0.185	0.71	0.005	0.01
726-H028 -80HP	369	2.77	2.7	0.32	38	0.5	2.5	0.05	3	55	49.3	0.78	0.036	1.13	0.197	0.58	0.004	< .01
726-H029 -80HP	384	3.22	3.7	0.63	55	0.4	2.1	0.08	3	63	45.3	0.83	0.040	0.72	0.209	0.76	0.007	0.01
726-H030 -80HP	255	1.80	1.1	0.10	< 5	0.2	1.1	0.03	< 1	55	19.7	0.49	0.013	0.69	0.176	0.55	0.009	0.01
726-H031 -80HP	456	2.73	1.3	0.08	54	0.2	0.5	0.03	15	75	73.9	0.73	0.042	0.84	0.185	1.37	0.013	0.01
726-H032 -80HP	264	2.16	1.2	0.07	36	0.3	1.0	0.03	2	49	33.4	0.67	0.068	0.72	0.170	0.85	0.009	0.01
726-H033 -80HP	297	3.03	2.4	0.16	18	0.8	6.5	0.05	2	69	63.1	0.97	0.028	0.42	0.195	0.69	0.006	0.01
726-H034 -80HP	326	2.42	0.5	0.13	673	0.3	0.8	0.03	4	115	31.9	0.71	0.018	0.55	0.465	0.95	0.008	0.01
726-H035 -80HP	534	3.94	2.7	0.24	25	0.4	3.0	0.05	3	89	34.2	0.81	0.034	1.01	0.280	0.79	0.006	0.01
726-H036 -80HP	641	3.54	2.4	0.21	35	0.5	3.1	0.05	2	81	36.7	0.83	0.037	1.02	0.260	0.78	0.006	0.01
726-H037 -80HP	272	2.33	2.7	0.22	36	0.3	1.9	0.06	5	45	44.6	0.68	0.038	0.79	0.177	0.59	0.004	0.01
726-H038 -80HP	359	3.12	2.7	0.14	104	0.6	2.2	0.11	2	67	142.2	0.69	0.026	0.39	0.271	0.86	0.005	0.01
median																		
mean																		
SD																		

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
-80HP first analysis																		
726-H001 -80HP	1.4	0.5	3.3	< .02	0.08	0.06	3.8	0.09	0.1	0.05	1.9	2.5	0.12	0.4	0.5	< .05	3.16	4.7
726-H002 -80HP	1.7	0.7	3.8	< .02	0.29	0.13	4.7	0.06	0.1	0.08	2.3	4.5	0.21	0.5	0.9	< .05	3.94	7.9
726-H003 -80HP	0.3	1.0	3.7	< .02	0.05	0.08	2.8	0.12	0.1	0.09	3.4	2.0	0.09	0.3	0.3	< .05	3.10	3.3
726-H004 -80HP	1.1	1.7	2.8	0.02	0.05	0.12	3.5	0.08	0.1	0.09	4.2	4.8	0.19	0.5	1.1	< .05	5.30	7.4
726-H005 -80HP	1.9	0.7	2.6	< .02	0.10	0.05	3.6	0.07	0.1	0.11	5.1	1.9	0.12	0.5	0.8	< .05	3.50	4.0
726-H006 -80HP	0.2	0.8	2.5	< .02	0.10	0.14	2.9	0.10	0.1	0.10	2.6	11.4	0.47	0.9	0.5	< .05	6.23	21.2
726-H007 -80HP	0.8	0.5	2.6	< .02	0.05	0.06	3.1	0.11	0.1	0.08	3.9	3.8	0.22	0.7	1.9	< .05	3.82	6.6
726-H008 -80HP	2.9	0.6	2.4	< .02	0.25	0.08	2.9	0.13	0.1	0.10	2.6	5.2	0.49	0.9	1.1	< .05	5.29	10.1
726-H009 -80HP	0.3	0.5	2.8	< .02	0.12	0.04	3.0	0.12	0.1	0.07	1.9	4.5	0.31	0.8	0.5	< .05	4.02	8.2
726-H010 -80HP	0.4	0.8	3.5	< .02	0.08	0.13	3.4	0.15	0.1	0.04	1.3	10.2	0.27	1.1	0.3	< .05	4.22	16.8
726-H011 -80HP	0.4	0.5	4.4	0.02	< .01	0.07	4.6	0.06	0.1	0.09	3.3	33.9	0.69	0.5	1.9	< .05	13.63	66.0
726-H012 -80HP	0.1	0.7	4.0	< .02	0.05	0.06	5.1	0.07	0.1	0.13	4.2	43.7	0.52	0.7	1.2	< .05	9.81	82.2
726-H013 -80HP	< .1	0.2	1.9	< .02	0.01	< .02	2.5	0.10	0.1	0.07	2.5	4.1	0.39	0.4	0.4	< .05	3.13	6.3
726-H014 -80HP	< .1	0.3	2.3	< .02	0.03	0.02	2.1	0.08	0.1	0.06	2.2	5.6	0.51	0.5	0.3	< .05	3.70	9.6
726-H015 -80HP	< .1	0.2	2.0	< .02	< .01	< .02	2.3	0.07	0.1	0.05	2.1	7.7	0.46	0.3	0.4	< .05	3.64	12.7
726-H016 -80HP	< .1	0.3	1.9	< .02	0.04	0.02	1.8	0.05	< .1	0.05	1.8	4.6	0.24	0.3	0.3	< .05	2.74	7.6
726-H017 -80HP	< .1	0.3	2.5	< .02	< .01	0.02	2.2	0.06	0.1	0.07	2.1	5.7	0.42	0.4	0.3	< .05	3.55	10.0
726-H018 -80HP	< .1	0.3	2.3	< .02	0.07	0.02	2.0	0.05	< .1	0.09	2.7	5.9	0.33	0.5	0.3	< .05	3.92	10.0
726-H019 -80HP	0.4	0.6	5.4	< .02	0.17	0.10	5.2	0.10	0.1	0.15	4.7	22.0	0.29	0.7	0.8	< .05	10.08	38.7
726-H020 -80HP	< .1	0.5	2.9	< .02	0.09	0.05	3.0	0.05	0.1	0.08	2.0	7.0	0.42	0.3	0.3	< .05	5.67	12.4
726-H021 -80HP	< .1	1.1	3.3	< .02	0.07	0.19	2.6	0.11	0.1	0.05	1.5	9.3	0.28	0.9	0.4	< .05	6.94	16.3
726-H022 -80HP	0.3	0.5	3.3	< .02	0.09	0.07	2.8	0.07	0.1	0.08	3.7	6.5	0.19	0.4	0.6	< .05	5.81	10.7
726-H023 -80HP	< .1	0.6	3.6	< .02	0.03	0.07	3.4	0.10	0.1	0.05	1.7	7.8	0.18	1.0	0.3	< .05	3.97	13.3
726-H024 -80HP	0.1	0.7	3.6	< .02	0.12	0.11	3.1	0.11	0.1	0.07	1.9	8.5	0.33	1.2	0.4	< .05	6.24	14.8
726-H025 -80HP	< .1	0.8	2.4	< .02	0.08	0.10	3.0	0.12	0.1	0.08	2.4	15.6	0.30	0.5	0.4	< .05	4.20	26.3
726-H026 -80HP	0.2	1.9	3.0	< .02	0.27	0.27	2.9	0.04	0.1	0.07	2.1	2.0	0.12	0.1	0.1	< .05	3.00	3.5
726-H027 -80HP	0.2	1.2	2.0	< .02	0.15	0.14	2.8	0.07	0.1	0.06	1.3	12.3	0.42	0.4	0.4	< .05	5.48	21.6
726-H028 -80HP	0.1	0.7	2.4	< .02	0.10	0.04	2.1	0.05	0.1	0.05	1.6	10.6	0.36	0.3	0.3	< .05	4.71	19.3
726-H029 -80HP	0.1	0.9	2.9	< .02	0.39	0.08	2.8	0.06	0.1	0.07	2.3	9.0	0.33	0.5	0.4	< .05	5.10	15.8
726-H030 -80HP	< .1	0.3	2.4	< .02	0.02	0.02	2.0	0.06	< .1	0.08	2.3	5.3	0.38	0.4	0.3	< .05	3.56	9.1
726-H031 -80HP	< .1	0.4	5.3	< .02	0.03	0.04	4.0	0.08	0.1	0.11	4.0	2.8	0.11	0.5	0.2	< .05	4.38	5.5
726-H032 -80HP	< .1	0.3	3.0	< .02	0.10	0.04	2.6	0.07	0.1	0.08	2.3	4.8	0.24	0.4	0.2	< .05	5.71	9.6
726-H033 -80HP	0.2	0.7	2.4	< .02	0.18	0.05	2.7	0.09	0.1	0.07	2.5	17.7	0.32	0.4	0.5	< .05	4.43	27.2
726-H034 -80HP	< .1	0.3	5.4	< .02	0.05	0.02	3.6	0.06	< .1	0.22	5.0	5.7	0.19	0.2	0.5	< .05	4.22	11.3
726-H035 -80HP	< .1	1.1	3.6	< .02	0.12	0.11	2.9	0.07	< .1	0.09	2.7	9.5	0.26	0.3	0.6	< .05	5.04	16.6
726-H036 -80HP	< .1	0.9	3.7	< .02	0.14	0.13	2.9	0.08	0.1	0.09	2.8	10.7	0.29	0.3	0.4	< .05	5.40	18.3
726-H037 -80HP	0.2	0.7	2.6	< .02	0.20	0.06	2.1	0.06	0.1	0.07	1.6	5.9	0.35	0.3	0.7	< .05	3.20	10.8
726-H038 -80HP	< .1	0.6	2.7	< .02	0.07	0.06	3.6	0.07	0.1	0.12	2.9	7.6	0.42	0.5	0.5	< .05	3.88	12.2
median																		
mean																		
SD																		

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
-80HP first analysis				
726-H001 -80HP	0.18	2	0.1	1.6
726-H002 -80HP	0.08	< 1	0.2	2.4
726-H003 -80HP	0.02	2	0.2	2.0
726-H004 -80HP	0.07	< 1	0.3	1.9
726-H005 -80HP	0.08	1	0.2	2.3
726-H006 -80HP	0.02	< 1	0.3	2.5
726-H007 -80HP	0.08	1	0.2	2.5
726-H008 -80HP	0.08	2	0.1	3.3
726-H009 -80HP	0.03	1	0.1	3.7
726-H010 -80HP	< .02	1	0.2	4.0
726-H011 -80HP	0.11	1	0.2	2.4
726-H012 -80HP	0.06	< 1	0.2	2.6
726-H013 -80HP	< .02	1	< .1	3.9
726-H014 -80HP	< .02	< 1	0.1	2.6
726-H015 -80HP	< .02	1	< .1	1.8
726-H016 -80HP	< .02	1	< .1	1.9
726-H017 -80HP	< .02	< 1	0.1	2.9
726-H018 -80HP	< .02	< 1	0.1	2.6
726-H019 -80HP	0.05	1	0.3	4.7
726-H020 -80HP	0.02	< 1	0.1	1.9
726-H021 -80HP	0.02	1	0.2	2.5
726-H022 -80HP	0.07	2	0.1	1.9
726-H023 -80HP	0.02	< 1	0.1	2.6
726-H024 -80HP	0.02	< 1	0.1	3.0
726-H025 -80HP	0.02	1	0.1	2.4
726-H026 -80HP	< .02	< 1	0.1	2.3
726-H027 -80HP	< .02	< 1	0.2	3.2
726-H028 -80HP	< .02	< 1	0.1	1.7
726-H029 -80HP	0.02	< 1	0.1	2.3
726-H030 -80HP	< .02	1	0.1	1.9
726-H031 -80HP	< .02	< 1	0.1	3.7
726-H032 -80HP	< .02	1	0.2	2.4
726-H033 -80HP	0.02	< 1	0.1	2.9
726-H034 -80HP	0.02	< 1	0.2	2.1
726-H035 -80HP	0.02	< 1	0.2	2.5
726-H036 -80HP	0.03	< 1	0.1	2.6
726-H037 -80HP	< .02	< 1	0.1	2.5
726-H038 -80HP	0.02	< 1	0.1	1.7
median				
mean				
SD				

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
-80HP second analysis																	
726-H001 -80HP	10.2	73.4	30.0	< 10	< 2	20.0	19.9	19.1	48.73	2.8	0	141	4.06	26.4	0.15	15.3	0.68
726-H002 -80HP	9.9	27.1	15.0	< 10	3	28.0	45.2	31.6	74.86	13.8	0	108	3.38	25.4	0.07	13.7	1.50
726-H003 -80HP	9.0	74.7	30.0	< 10	< 2	21.4	23.5	26.5	60.62	1.4	0	138	2.98	25.6	0.13	19.9	0.36
726-H004 -80HP	9.6	35.1	15.0	< 10	2	28.6	26.8	30.9	65.75	10.2	0	212	5.83	28.7	0.25	12.4	1.70
726-H005 -80HP	8.3	87.7	30.0	< 10	< 2	33.4	25.3	36.7	62.80	30.0	3	97	1.75	18.6	0.09	9.3	0.51
726-H006 -80HP	9.6	29.9	15.0	< 10	< 2	41.7	25.9	69.9	80.84	127.6	4	203	3.69	21.5	0.08	21.4	0.61
726-H007 -80HP	11.2	98.4	30.0	< 10	< 2	15.5	20.5	20.3	34.96	2.0	0	66	1.85	24.9	0.11	7.1	0.53
726-H008 -80HP		14.5	7.5	< 10	2	45.3	42.2	59.0	83.96	56.5	1	99	3.17	26.2	0.06	12.2	0.87
726-H009 -80HP		43.8	30.0	< 10	< 2	122.6	64.0	39.9	56.47	10.7	1	92	1.67	29.8	0.06	14.5	0.43
726-H010 -80HP	10.8	67.9	30.0	< 10	2	77.5	37.3	56.4	63.71	7.6	0	104	2.37	30.2	0.04	18.5	0.78
726-H011 -80HP	7.9	31.7	15.0	< 10	< 2	8.1	26.8	12.4	27.98	3.2	0	46	4.20	25.8	0.11	9.1	0.53
726-H012 -80HP	9.3	26.7	15.0	< 10	2	12.6	16.7	33.1	87.29	2.6	0	69	11.41	32.9	0.18	13.0	2.18
726-H013 -80HP	8.5	20.2	15.0	< 10	< 2	22.7	49.8	9.1	24.01	0.5	0	41	2.62	25.3	0.05	10.5	1.17
726-H014 -80HP	8.2	19.0	15.0	< 10	< 2	34.0	41.4	15.6	40.73	3.5	0	43	3.41	22.2	0.06	9.7	0.36
726-H015 -80HP	11.6	37.5	30.0	< 10	< 2	13.4	35.1	5.4	17.48	3.4	0	23	3.30	18.4	0.06	7.3	0.28
726-H016 -80HP	8.4	15.2	7.5	< 10	2	85.7	42.5	24.9	37.09	0.9	0	37	2.12	23.8	0.08	9.0	0.31
726-H017 -80HP	8.3	30.2	15.0	< 10	2	60.3	47.8	17.2	26.50	1.9	0	34	2.46	20.8	0.05	10.4	0.26
726-H018 -80HP	10.0	24.9	15.0	< 10	< 2	35.1	41.0	20.3	38.27	1.8	0	49	1.56	20.7	0.08	11.8	0.45
726-H019 -80HP	9.2	40.7	30.0	< 10	< 2	30.0	36.4	36.7	77.09	5.2	0	131	3.73	52.6	0.12	21.6	0.86
726-H020 -80HP	9.3	43.0	30.0	< 10	2	23.5	31.8	31.6	55.41	2.4	0	68	3.87	25.1	0.09	13.0	0.67
726-H021 -80HP	8.4	33.6	15.0	< 10	2	42.8	39.1	52.5	77.80	27.1	1	202	3.48	29.7	0.08	21.5	1.07
726-H022 -80HP	10.4	43.6	30.0	< 10	< 2	22.5	45.5	23.7	29.87	8.4	0	95	1.82	15.1	0.07	9.6	0.83
726-H023 -80HP	7.4	38.7	30.0	< 10	< 2	26.8	26.8	45.1	56.56	2.5	0	134	2.95	26.8	0.06	23.0	0.47
726-H024 -80HP	8.3	28.7	15.0	< 10	< 2	34.7	25.6	46.2	72.86	11.8	0	155	3.39	32.6	0.08	23.2	0.80
726-H025 -80HP	7.7	7.9	1.0	< 10	< 2	22.5	14.2	60.2	61.22	4.9	0	113	5.16	26.1	0.12	22.8	0.79
726-H026 -80HP	8.1	38.9	30.0	< 10	< 2	31.2	16.1	117.1	137.97	10.7	1	325	2.59	24.9	0.18	15.8	0.53
726-H027 -80HP	9.6	17.0	7.5	< 10	< 2	35.0	21.3	53.5	96.56	5.1	0	156	5.47	25.9	0.15	22.0	0.60
726-H028 -80HP	8.8	39.4	30.0	< 10	< 2	75.3	25.6	44.0	57.18	5.8	0	115	3.23	22.4	0.06	13.3	0.54
726-H029 -80HP	10.6	16.9	7.5	< 10	< 2	41.8	26.4	50.6	100.09	4.4	0	143	2.77	27.4	0.07	16.6	0.92
726-H030 -80HP	9.2	28.2	15.0	< 10	2	37.6	35.4	20.4	46.59	4.3	0	70	2.62	20.0	0.08	8.2	0.29
726-H031 -80HP	8.5	80.9	30.0	< 10	< 2	8.0	11.2	24.3	56.85	0.4	0	34	1.80	42.5	0.06	23.1	0.25
726-H032 -80HP	9.1	34.9	30.0	< 10	< 2	53.5	63.9	58.6	61.46	1.6	0	85	1.51	24.2	0.06	17.8	0.25
726-H033 -80HP	8.3	26.8	15.0	< 10	< 2	36.7	49.9	55.0	60.84	2.8	0	53	3.80	22.7	0.05	11.7	1.74
726-H034 -80HP	9.8	24.9	15.0	< 10	< 2	23.1	28.9	34.4	44.06	1.0	0	65	5.04	29.2	0.06	19.6	0.46
726-H035 -80HP	9.8	10.6	1.0	< 10	3	72.0	43.2	63.7	100.62	3.8	0	117	5.42	28.8	0.08	17.6	0.80
726-H036 -80HP	9.7	17.9	15.0	< 10	2	70.3	39.9	53.3	101.38	4.6	0	111	4.26	31.0	0.07	21.3	0.70
726-H037 -80HP	9.5	24.0	7.5	< 10	< 2	53.5	21.5	36.4	79.66	3.8	0	104	3.02	26.1	0.09	19.4	0.65
726-H038 -80HP	7.3	12.1	7.5	< 10	2	20.9	14.1	38.0	48.18	0.5	0	58	10.08	23.3	0.08	11.0	0.86
median				< 10	< 2	34	30	37	61	4	0	98	3	26			
mean						39	33	39	62	10	0	104	4	26			
SD						24	13	21	26	22	1	61	2	7			

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
-80HP second analysis																		
726-H001 -80HP	886	5.02	8.8	0.25	34	0.6	0.4	0.11	2	56	101.5	3.42	0.022	0.77	0.093	1.10	0.005	0.01
726-H002 -80HP	567	4.93	1.7	0.10	27	0.5	0.9	0.12	2	75	82.0	2.67	0.027	0.69	0.148	1.18	0.005	0.01
726-H003 -80HP	320	3.02	6.5	0.50	99	0.3	0.3	0.08	2	61	111.4	1.13	0.024	0.70	0.101	1.03	0.006	0.01
726-H004 -80HP	408	4.90	14.9	0.51	32	1.9	1.4	0.14	3	48	48.7	2.79	0.059	0.47	0.083	0.91	0.006	0.01
726-H005 -80HP	588	3.76	3.0	0.08	45	0.7	0.7	0.07	3	39	38.7	3.50	0.014	0.49	0.080	0.90	0.005	0.01
726-H006 -80HP	348	3.53	1.6	0.05	44	0.7	2.3	0.10	1	59	40.6	0.91	0.053	0.53	0.208	0.82	0.008	0.02
726-H007 -80HP	511	3.10	6.3	0.12	20	0.9	1.0	0.08	2	36	59.0	2.78	0.028	0.42	0.076	0.96	0.007	0.01
726-H008 -80HP	631	3.35	1.9	0.08	1935	1.0	1.8	0.11	3	57	52.9	2.14	0.028	0.48	0.272	0.81	0.009	0.01
726-H009 -80HP	422	2.99	1.3	0.04	35	0.5	1.1	0.04	2	52	30.4	1.06	0.048	1.65	0.151	0.97	0.015	0.02
726-H010 -80HP	411	3.37	0.8	0.05	38	0.5	2.1	0.08	1	56	46.3	0.80	0.055	1.43	0.141	0.99	0.016	0.02
726-H011 -80HP	944	3.33	2.6	0.14	18	1.3	5.4	0.08	1	56	138.4	2.74	0.041	0.42	0.190	1.27	0.005	0.01
726-H012 -80HP	687	5.18	8.1	0.22	99	1.9	11.2	0.31	1	69	73.9	3.07	0.044	0.33	0.221	1.08	0.006	0.01
726-H013 -80HP	*267*	*1.94*	*1.0*	*0.12*	*< 5*	*0.2*	*1.3*	*0.03*	*2*	*77*	*23.1*	*0.58*	*0.011*	*0.28*	*0.219*	*0.67*	*0.021*	*0.01*
726-H014 -80HP	290	2.14	1.4	0.15	8	0.2	1.8	0.04	1	83	22.8	0.56	0.015	0.53	0.224	0.64	0.016	0.01
726-H015 -80HP	257	1.73	0.6	0.10	8	0.2	1.7	0.03	1	80	29.0	0.59	0.010	0.23	0.229	0.64	0.010	0.01
726-H016 -80HP	327	2.40	1.2	0.09	7	0.1	1.1	0.03	2	66	19.3	0.51	0.014	1.38	0.167	0.54	0.018	0.01
726-H017 -80HP	299	2.23	0.9	0.11	< 5	0.2	1.4	0.03	1	79	23.6	0.57	0.009	0.92	0.198	0.61	0.017	0.01
726-H018 -80HP	253	2.15	1.7	0.11	7	0.2	1.4	0.03	1	79	22.6	0.67	0.024	0.54	0.197	0.68	0.026	0.02
726-H019 -80HP	761	4.46	4.8	0.18	63	0.9	3.7	0.20	6	79	171.2	1.90	0.060	1.18	0.188	1.79	0.011	0.02
726-H020 -80HP	273	2.27	1.5	0.28	65	0.3	1.0	0.05	2	77	76.6	0.94	0.034	0.32	0.338	0.77	0.007	0.01
726-H021 -80HP	393	3.93	3.7	0.20	57	0.6	2.0	0.21	2	58	68.3	0.87	0.065	0.55	0.171	0.82	0.009	0.02
726-H022 -80HP	639	3.38	4.1	0.11	42	1.2	1.3	0.09	1	45	87.1	3.60	0.035	0.37	0.099	1.05	0.004	0.01
726-H023 -80HP	347	3.33	2.2	0.11	57	0.4	1.6	0.13	1	68	110.7	0.72	0.027	0.68	0.175	1.13	0.011	0.02
726-H024 -80HP	405	3.39	3.1	0.17	48	0.8	2.8	0.14	2	63	69.1	0.93	0.063	0.60	0.209	0.93	0.011	0.02
726-H025 -80HP	332	3.13	3.3	0.12	60	0.4	3.6	0.19	2	67	77.3	0.54	0.026	0.36	0.256	0.75	0.006	0.01
726-H026 -80HP	247	4.90	3.4	0.10	112	0.1	0.6	0.13	3	67	142.2	0.78	0.039	0.55	0.160	1.02	0.010	0.01
726-H027 -80HP	324	3.78	4.0	0.47	219	0.3	3.0	0.10	3	50	67.0	0.73	0.032	0.51	0.166	0.72	0.008	0.01
726-H028 -80HP	363	2.85	2.0	0.25	107	0.5	2.8	0.05	3	70	62.6	0.95	0.038	1.07	0.208	0.66	0.007	0.01
726-H029 -80HP	364	3.11	2.8	0.47	59	0.4	2.2	0.09	3	70	50.1	0.90	0.043	0.67	0.201	0.78	0.011	0.01
726-H030 -80HP	267	1.96	1.3	0.10	11	0.2	1.4	0.03	1	67	26.7	0.65	0.013	0.65	0.194	0.64	0.014	0.01
726-H031 -80HP	454	2.75	0.9	0.06	131	0.2	0.5	0.04	14	83	82.8	0.87	0.041	0.84	0.201	1.36	0.022	0.02
726-H032 -80HP	260	2.24	1.0	0.07	31	0.3	1.0	0.03	3	59	40.5	0.84	0.068	0.73	0.184	0.89	0.017	0.01
726-H033 -80HP	341	3.25	2.2	0.15	14	1.4	6.6	0.07	2	83	81.7	1.27	0.029	0.44	0.229	0.85	0.014	0.01
726-H034 -80HP	287	2.36	0.5	0.10	55	0.2	0.5	0.03	3	111	25.4	0.56	0.020	0.52	0.454	0.92	0.008	0.01
726-H035 -80HP	534	3.94	2.7	0.24	25	0.4	3.0	0.05	3	89	34.2	0.81	0.034	1.01	0.280	0.79	0.006	0.01
726-H036 -80HP	568	3.55	2.2	0.23	23	1.5	5.1	0.06	2	79	31.1	0.67	0.037	0.95	0.248	0.75	0.006	0.01
726-H037 -80HP	268	2.32	2.3	0.25	35	0.5	2.4	0.08	6	44	38.1	0.57	0.038	0.79	0.158	0.58	0.005	0.01
726-H038 -80HP	367	3.21	2.1	0.13	284	0.5	2.1	0.12	2	67	138.0	0.62	0.026	0.38	0.289	0.89	0.005	0.01
median																		
mean																		
SD																		

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
-80HP second analysis																		
726-H001 -80HP	1.2	0.6	3.4	0.03	0.02	0.08	4.1	0.10	0.2	0.05	1.8	3.1	0.12	0.4	0.7	< .05	3.67	4.9
726-H002 -80HP	1.8	0.6	4.0	< .02	0.27	0.10	5.0	0.06	0.1	0.09	2.6	5.0	0.21	0.6	1.1	< .05	4.44	7.8
726-H003 -80HP	0.2	1.0	4.4	< .02	0.05	0.07	2.9	0.13	0.1	0.11	3.5	2.4	0.11	0.3	0.3	< .05	3.53	3.5
726-H004 -80HP	1.2	2.0	2.8	0.02	0.05	0.12	3.7	0.09	0.1	0.12	4.8	7.2	0.16	0.5	1.2	< .05	6.16	9.8
726-H005 -80HP	1.7	0.7	2.2	< .02	0.05	0.05	3.9	0.08	0.1	0.12	4.9	2.4	0.13	0.6	0.9	< .05	4.19	4.3
726-H006 -80HP	0.2	0.7	3.0	< .02	0.08	0.11	3.1	0.11	0.1	0.12	2.7	10.2	0.51	0.9	0.6	< .05	7.66	17.6
726-H007 -80HP	0.9	0.4	2.6	< .02	0.04	0.05	3.5	0.13	0.1	0.09	4.3	5.5	0.19	0.7	2.6	< .05	4.88	8.7
726-H008 -80HP	3.1	0.5	2.8	< .02	0.26	0.08	3.2	0.14	0.2	0.10	3.5	7.2	0.63	0.9	1.3	< .05	7.63	12.6
726-H009 -80HP	0.3	0.4	2.9	< .02	0.13	0.05	3.2	0.12	0.1	0.07	2.1	4.9	0.29	0.8	0.6	< .05	4.79	8.3
726-H010 -80HP	0.3	0.5	3.8	< .02	0.04	0.10	3.6	0.15	0.1	0.06	1.3	8.4	0.24	1.1	0.3	< .05	4.71	13.0
726-H011 -80HP	0.5	0.2	5.1	< .02	< .01	0.05	4.9	0.06	0.2	0.13	3.8	41.5	0.75	0.5	2.4	< .05	16.59	67.8
726-H012 -80HP	0.1	0.8	4.7	< .02	< .01	0.09	5.7	0.07	0.2	0.17	5.6	49.5	0.56	0.7	1.6	< .05	12.03	74.5
726-H013 -80HP	< .1	0.1	2.7	< .02	< .01	< .02	2.7	0.10	0.1	0.09	2.9	6.3	0.47	0.4	0.5	< .05	4.00	9.1
726-H014 -80HP	< .1	0.3	2.8	< .02	0.01	< .02	2.6	0.07	0.1	0.07	2.8	7.9	0.56	0.5	0.5	< .05	4.69	12.1
726-H015 -80HP	< .1	0.1	2.6	< .02	< .01	< .02	2.7	0.07	0.1	0.07	2.6	9.0	0.50	0.3	0.8	< .05	4.71	13.6
726-H016 -80HP	< .1	0.2	2.9	< .02	< .01	0.02	2.2	0.05	0.1	0.06	2.4	5.8	0.37	0.4	0.3	< .05	3.55	8.9
726-H017 -80HP	< .1	0.2	3.0	< .02	< .01	< .02	2.4	0.06	0.1	0.08	2.6	7.0	0.44	0.4	0.4	< .05	4.32	10.7
726-H018 -80HP	< .1	0.3	3.2	< .02	0.03	0.03	2.5	0.05	0.1	0.12	3.8	7.2	0.39	0.5	0.4	< .05	5.24	11.0
726-H019 -80HP	0.4	0.7	7.0	< .02	0.18	0.09	5.8	0.11	0.2	0.16	4.9	24.3	0.31	0.8	1.1	< .05	11.78	39.7
726-H020 -80HP	< .1	0.4	3.5	< .02	0.05	0.03	3.1	0.05	0.1	0.08	2.3	6.4	0.46	0.3	0.5	< .05	6.45	10.5
726-H021 -80HP	< .1	0.8	4.5	< .02	0.04	0.19	3.0	0.11	0.1	0.06	1.8	9.3	0.26	1.0	0.6	< .05	7.66	15.5
726-H022 -80HP	0.3	0.4	3.5	< .02	0.04	0.09	3.4	0.07	0.2	0.09	4.5	7.8	0.18	0.4	0.8	< .05	7.22	11.7
726-H023 -80HP	< .1	0.6	4.5	< .02	0.01	0.07	3.8	0.10	0.1	0.06	1.9	7.8	0.20	0.9	0.3	< .05	4.28	11.7
726-H024 -80HP	0.1	0.7	4.7	< .02	0.10	0.10	3.5	0.12	0.2	0.10	2.5	10.7	0.37	1.1	0.6	< .05	8.02	16.9
726-H025 -80HP	< .1	0.8	2.4	< .02	0.08	0.10	3.0	0.12	0.1	0.08	2.4	15.6	0.30	0.5	0.4	< .05	4.20	26.3
726-H026 -80HP	< .1	1.9	4.0	< .02	0.24	0.27	3.3	0.04	0.1	0.09	2.4	2.8	0.15	0.2	0.1	< .05	3.86	4.5
726-H027 -80HP	0.1	1.1	2.5	< .02	0.11	0.11	2.8	0.07	0.1	0.05	1.6	13.1	0.28	0.3	0.4	< .05	5.51	20.9
726-H028 -80HP	0.1	0.6	2.7	< .02	0.09	0.04	2.5	0.05	0.2	0.07	1.9	12.5	0.36	0.3	0.3	< .05	5.69	20.1
726-H029 -80HP	0.1	0.8	3.7	< .02	0.37	0.06	2.9	0.06	0.1	0.09	2.6	10.3	0.28	0.5	0.4	< .05	5.30	16.5
726-H030 -80HP	< .1	0.3	2.9	< .02	< .01	0.02	2.5	0.06	0.1	0.07	2.9	7.1	0.49	0.4	0.3	< .05	4.66	10.4
726-H031 -80HP	< .1	0.3	7.2	< .02	< .01	0.03	4.2	0.07	0.1	0.15	4.7	3.3	0.14	0.5	0.2	< .05	4.85	5.9
726-H032 -80HP	< .1	0.5	4.0	< .02	0.09	0.03	2.9	0.07	0.1	0.08	2.7	6.7	0.26	0.4	0.3	< .05	6.09	11.5
726-H033 -80HP	0.2	0.8	3.3	< .02	0.17	0.06	3.4	0.09	0.1	0.10	3.5	21.5	0.37	0.4	0.6	< .05	5.85	30.0
726-H034 -80HP	< .1	0.3	5.3	< .02	0.03	0.04	3.3	0.06	0.1	0.19	4.0	3.6	0.24	0.2	0.5	< .05	3.67	7.6
726-H035 -80HP	< .1	1.1	3.6	< .02	0.12	0.11	2.9	0.07	< .1	0.09	2.7	9.5	0.26	0.3	0.6	< .05	5.04	16.6
726-H036 -80HP	< .1	0.9	3.8	< .02	0.15	0.09	2.7	0.08	0.1	0.09	2.3	9.4	0.26	0.3	0.4	< .05	4.99	15.9
726-H037 -80HP	0.1	0.8	2.5	< .02	0.18	0.06	1.9	0.06	0.1	0.07	1.5	6.2	0.37	0.3	0.3	< .05	3.17	10.5
726-H038 -80HP	< .1	0.4	2.9	< .02	0.02	0.03	3.6	0.06	0.1	0.10	2.8	8.0	0.56	0.5	0.4	< .05	4.25	12.4
median																		
mean																		
SD																		

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
-80HP second analysis				
726-H001 -80HP	0.25	< 1	0.2	1.7
726-H002 -80HP	0.10	1	0.2	2.7
726-H003 -80HP	0.02	< 1	0.1	2.1
726-H004 -80HP	0.08	< 1	0.1	2.3
726-H005 -80HP	0.11	< 1	0.1	2.7
726-H006 -80HP	0.04	< 1	0.1	3.0
726-H007 -80HP	0.12	< 1	0.2	2.7
726-H008 -80HP	0.12	< 1	0.1	3.2
726-H009 -80HP	0.03	< 1	0.1	3.7
726-H010 -80HP	0.02	< 1	0.1	4.2
726-H011 -80HP	0.15	< 1	0.2	2.2
726-H012 -80HP	0.10	< 1	0.3	2.6
726-H013 -80HP	< .02	< 1	< .1	3.7
726-H014 -80HP	< .02	< 1	0.1	2.4
726-H015 -80HP	0.02	< 1	0.1	2.1
726-H016 -80HP	< .02	< 1	0.1	2.2
726-H017 -80HP	0.02	< 1	0.1	3.0
726-H018 -80HP	< .02	< 1	0.1	2.8
726-H019 -80HP	0.08	< 1	0.2	4.7
726-H020 -80HP	0.02	< 1	0.1	1.8
726-H021 -80HP	0.03	< 1	0.2	2.3
726-H022 -80HP	0.10	< 1	0.1	1.8
726-H023 -80HP	0.02	< 1	0.2	2.3
726-H024 -80HP	0.03	< 1	0.2	3.2
726-H025 -80HP	0.02	1	0.1	2.4
726-H026 -80HP	0.02	< 1	0.1	2.2
726-H027 -80HP	0.02	< 1	0.1	2.8
726-H028 -80HP	0.02	< 1	0.1	1.9
726-H029 -80HP	0.02	< 1	0.2	2.6
726-H030 -80HP	0.02	< 1	< .1	1.7
726-H031 -80HP	0.02	< 1	0.2	3.9
726-H032 -80HP	< .02	< 1	0.1	2.2
726-H033 -80HP	0.03	< 1	0.1	2.9
726-H034 -80HP	0.02	< 1	0.1	2.1
726-H035 -80HP	0.02	< 1	0.2	2.5
726-H036 -80HP	0.02	< 1	0.1	2.6
726-H037 -80HP	< .02	1	0.1	3.3
726-H038 -80HP	< .02	< 1	0.1	2.3
median				
mean				
SD				

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
-80HM																	
726-H002 -80HM	9.9		1	< 10	< 2	123.4	497.5	29.4	46.36	0.4	0	67	2.68	46.2	0.05	18.7	2.29
726-H008 -80HM	7.7		1	< 10	< 2	82.6	460.4	24.7	42.07	2.1	0	50	1.63	31.2	0.05	10.7	1.33
726-H009 -80HM	8.1		15	< 10	< 2	89.7	439.0	24.3	28.20	0.6	0	47	1.11	33.4	0.02	9.9	0.41
726-H014 -80HM	8.2		1	< 10	< 2	100.3	499.5	24.4	35.85	1.6	0	53	5.02	57.3	0.04	12.7	1.91
726-H016 -80HM	8.4		1	< 10	2	85.8	468.5	23.3	35.43	0.3	0	36	2.43	55.8	0.05	10.7	2.18
726-H021 -80HM	8.4		30	< 10	< 2	32.1	229.1	16.7	28.79	3.0	0	72	1.79	30.1	0.03	16.7	1.00
726-H029 -80HM	10.6		15	< 10	< 2	35.2	248.0	26.4	39.90	0.8	0	58	1.29	36.3	0.03	17.1	1.09
726-H030 -80HM	9.2		1	12	3	71.4	527.7	23.6	34.26	0.6	0	94	2.81	55.8	0.05	11.1	1.07
726-H037 -80HM	9.5		1	< 10	< 2	90.9	445.2	25.8	53.46	0.9	0	43	2.52	43.9	0.05	28.2	3.44
median				< 10	< 2	86	460	24	36	1		53	2	44			1
mean						79	424	24	38	1		58	2	43			2
SD						29	109	3	8	1		18	1	11			1

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
-80HM																		
726-H002 -80HM	517	26.43	0.9	0.07	15	0.3	0.7	0.04	1	1367	14.0	0.52	0.019	0.60	0.297	1.05	0.004	0.01
726-H008 -80HM	522	22.55	0.7	0.03	18	0.2	0.4	0.03	< 1	847	7.5	0.30	0.020	0.51	0.129	0.50	0.003	0.01
726-H009 -80HM	497	23.93	0.5	0.02	23	0.3	0.5	< .02	1	1055	7.0	0.34	0.069	0.82	0.086	0.38	0.003	< .01
726-H014 -80HM	453	22.45	1.3	0.13	5	0.1	0.3	0.02	< 1	1631	5.6	0.39	0.019	0.27	0.391	0.46	0.007	0.01
726-H016 -80HM	429	22.49	1.1	0.10	5	0.1	0.3	< .02	1	1794	5.1	0.41	0.020	0.36	0.374	0.40	0.007	0.01
726-H021 -80HM	371	18.24	1.0	0.04	42	0.4	1.1	0.05	< 1	725	12.1	0.42	0.089	0.25	0.111	0.52	0.004	0.01
726-H029 -80HM	421	23.93	1.1	1.17	37	0.5	1.5	0.02	2	1371	12.2	0.41	0.054	0.36	0.151	0.48	0.007	0.01
726-H030 -80HM	449	22.27	0.9	0.08	14	0.2	0.3	0.02	1	1431	5.5	0.52	0.017	0.35	0.488	0.43	0.006	0.01
726-H037 -80HM	516	23.30	0.9	0.07	40	0.3	0.8	0.03	2	1335	14.9	0.40	0.048	0.60	0.135	0.60	0.006	0.01
median	453	23	0.9	0.1	18					1367								
mean	464	23	0.9	0.2	22					1284								
SD	52	2	0.2	0.4	14					349								

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
-80HM																		
726-H002 -80HM	< .1	0.1	2.8	< .02	0.01	0.03	11.1	0.09	0.2	0.10	3.0	1.7	0.12	0.8	0.6	< .05	3.15	3.4
726-H008 -80HM	0.2	0.1	0.9	< .02	0.02	0.03	9.3	0.12	0.2	0.02	0.6	1.9	0.10	0.7	0.4	< .05	1.75	3.4
726-H009 -80HM	< .1	0.1	1.0	< .02	< .01	< .02	11.9	0.07	0.3	0.02	0.4	5.2	0.10	0.6	0.3	< .05	2.55	8.5
726-H014 -80HM	< .1	< .1	2.0	< .02	< .01	< .02	13.2	0.08	0.2	0.25	7.1	2.0	0.29	0.5	1.9	< .05	4.02	4.5
726-H016 -80HM	< .1	0.1	1.6	< .02	< .01	< .02	14.7	0.07	0.2	0.19	6.5	1.7	0.24	0.5	1.4	< .05	3.87	3.9
726-H021 -80HM	< .1	0.1	2.1	< .02	< .01	0.04	10.4	0.10	0.2	0.04	0.5	6.1	0.14	1.2	0.3	< .05	6.35	11.9
726-H029 -80HM	< .1	0.2	1.5	< .02	0.12	0.02	12.5	0.09	0.3	0.03	0.8	4.2	0.13	0.6	0.3	< .05	4.13	7.9
726-H030 -80HM	< .1	< .1	1.7	< .02	< .01	< .02	11.5	0.07	0.2	0.32	7.8	2.0	0.36	0.6	1.1	< .05	5.28	4.5
726-H037 -80HM	0.1	0.2	1.3	< .02	0.07	0.02	12.3	0.17	0.2	0.03	0.8	3.9	0.09	0.6	0.4	< .05	3.18	7.2
median																		
mean																		
SD																		

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
-80HM				
726-H002 -80HM	0.02	2	0.2	2.7
726-H008 -80HM	0.02	< 1	< .1	3.0
726-H009 -80HM	< .02	< 1	< .1	1.8
726-H014 -80HM	< .02	< 1	0.1	2.8
726-H016 -80HM	< .02	< 1	0.2	2.2
726-H021 -80HM	< .02	< 1	0.1	1.9
726-H029 -80HM	< .02	1	0.1	2.4
726-H030 -80HM	< .02	2	0.2	2.4
726-H037 -80HM	< .02	< 1	< .1	4.1
median				
mean				
SD				

Sample Number	-20 mesh kg	Sample g	Analysed Sample g	Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Au ug	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm
Field Duplicate Samples																	
726-H035 -80HN	9.8	1.5	1.0	< 10	2	28.0	18.2	50.2	104.11	15220.9	23	1723	4.00	30.4	0.28	13.2	1.43
726-H036 -80HN	9.7	1.4	1.0	< 10	2	22.1	13.3	41.9	96.21	2.8	0	67	2.62	43.1	0.45	16.6	1.46
726-H035 -80HP	9.8	10.6	1.0	< 10	3	72.0	43.2	63.7	100.62	3.8	0	117	5.42	28.8	0.08	17.6	0.80
726-H036 -80HP	9.7	17.9	1.0	< 10	4	75.5	39.7	59.6	94.86	4.9	0	113	3.74	30.1	0.08	22.4	0.77
726-H035 -80HP	9.8	10.6	1.0	< 10	3	72.0	43.2	63.7	100.62	3.8	0	117	5.42	28.8	0.08	17.6	0.80
726-H036 -80HP	9.7	17.9	15.0	< 10	2	70.3	39.9	53.3	101.38	4.6	0	111	4.26	31.0	0.07	21.3	0.70
Laboratory Duplicate Samples																	
726-H007 -80HN	11.2	19.4	1.0	< 10	< 2	8.2	10.0	12.0	24.15	1.3	0	52	1.06	22.6	0.06	9.5	0.25
RE 726-H007 -80HN	11.2	19.4	1.0	< 10	< 2	8.5	10.1	13.1	26.64	1.1	0	58	1.11	22.3	0.06	8.8	0.23
726-H007 -80HP	11.2	98.4	1.0	< 10	< 2	14.4	14.4	19.1	37.49	0.9	0	55	1.61	25.8	0.12	6.0	0.44
RE 726-H007 -80HP	11.2	98.4	1.0	< 10	< 2	14.3	16.3	19.5	33.74	1.2	0	54	1.51	27.5	0.09	6.7	0.52
726-H007 -80HP	11.2	98.4	30.0	< 10	< 2	15.5	20.5	20.3	34.96	2.0	0	66	1.85	24.9	0.11	7.1	0.53
RE 726-H007 -80HP	11.2	98.4	30.0	< 10	< 2	18.1	22.4	21.0	37.30	1.4	0	59	1.81	29.0	0.12	7.4	0.66
Laboratory Standards																	
STANDARD DS4				521	182	36.2	169.4	12.8	128.36	27.1		295	31.38	160.8	5.04	140.6	6.87
STANDARD DS4				543	174	36.0	165.2	12.3	130.05	26.7		282	30.27	160.8	5.47	140.8	6.80
STANDARD DS4				531	179	34.0	166.7	11.7	120.94	25.9		284	29.48	153.9	5.37	138.8	6.76
STANDARD DS4				543	174	36.0	165.2	12.3	130.05	26.7		282	30.27	160.8	5.47	140.8	6.80
STANDARD DS4				537	196	34.5	167.2	11.7	126.25	27.3		298	31.88	160.9	5.45	140.3	6.74
STANDARD DS4				520	167	33.7	164.4	11.5	123.82	25.7		290	32.18	160.8	5.34	140.3	6.80
STANDARD DS5				190	42	24.3	185.3	12.6	140.01	41.2		272	24.14	133.0	5.43	133.3	12.47
STANDARD DS5				185	38	24.3	181.3	12.1	142.02	41.2		280	23.56	131.3	5.60	134.8	12.47
STANDARD DS5				190	39	24.0	183.0	11.8	137.79	43.0		288	24.12	134.1	5.71	136.2	13.08

Stream Sediment Survey: Heavy Mineral, -80HN (-80 mesh, >3.2 sg, nonmagnetic), -80HP (paramagnetic), and -80HM (magnetic) Fractions
Acme files:A302131, 302748, 302749, 302750
Analysis: Group 1F; aqua regia digestion, followed by ICP Mass Spec analysis
Au ug is mircograms of gold in fraction, normalized to 10 kg of -20 mesh stream sediment
Discovery Consultants
W.R. Gilmour, P.Geo.
August 22, 2003

Sample Number	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb	U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %
Field Duplicate Samples																		
726-H035 -80HN	134	1.73	4.3	0.83	200	13.1	28.6	0.05	4	28	29.9	0.95	0.080	0.32	0.161	0.78	0.005	0.01
726-H036 -80HN	122	1.43	3.3	0.16	26	6.1	28.8	0.04	4	24	26.3	0.93	0.093	0.27	0.167	0.70	0.004	0.01
726-H035 -80HP	534	3.94	2.7	0.24	25	0.4	3.0	0.05	3	89	34.2	0.81	0.034	1.01	0.280	0.79	0.006	0.01
726-H036 -80HP	641	3.54	2.4	0.21	35	0.5	3.1	0.05	2	81	36.7	0.83	0.037	1.02	0.260	0.78	0.006	0.01
726-H035 -80HP	534	3.94	2.7	0.24	25	0.4	3.0	0.05	3	89	34.2	0.81	0.034	1.01	0.280	0.79	0.006	0.01
726-H036 -80HP	568	3.55	2.2	0.23	23	1.5	5.1	0.06	2	79	31.1	0.67	0.037	0.95	0.248	0.75	0.006	0.01
Laboratory Duplicate Sam																		
726-H007 -80HN	139	0.89	7.0	0.27	6	2.0	2.8	0.11	26	17	66.3	1.29	0.106	1.13	0.102	0.98	0.007	0.01
RE 726-H007 -80HN	138	0.86	9.1	0.29	5	2.0	3.8	0.11	22	16	68.0	1.29	0.103	1.08	0.100	0.95	0.007	0.01
726-H007 -80HP	483	2.82	6.5	0.10	18	0.9	0.8	0.08	2	31	51.0	2.15	0.030	0.42	0.073	0.88	0.004	0.01
RE 726-H007 -80HP	490	2.86	6.5	0.07	9	1.1	0.8	0.06	1	32	49.7	2.18	0.028	0.42	0.074	0.91	0.005	0.01
726-H007 -80HP	511	3.10	6.3	0.12	20	0.9	1.0	0.08	2	36	59.0	2.78	0.028	0.42	0.076	0.96	0.007	0.01
RE 726-H007 -80HP	509	3.10	6.2	0.13	21	0.9	0.9	0.08	2	39	60.7	2.67	0.029	0.46	0.078	1.00	0.008	0.01
Laboratory Standards																		
STANDARD DS4	837	3.21	22.9	4.32	302	6.4	3.9	5.11	2	76	27.4	0.54	0.086	0.61	0.083	1.81	0.030	0.16
STANDARD DS4	824	3.19	23.6	4.67	285	6.2	3.8	4.90	1	78	28.3	0.55	0.091	0.60	0.086	1.80	0.028	0.16
STANDARD DS4	844	3.23	23.3	4.60	274	6.4	3.6	4.97	1	78	28.2	0.55	0.090	0.61	0.086	1.81	0.032	0.15
STANDARD DS4	824	3.19	23.6	4.67	285	6.2	3.8	4.90	1	78	28.3	0.55	0.091	0.60	0.086	1.80	0.028	0.16
STANDARD DS4	783	3.23	23.5	4.68	295	6.4	3.9	5.24	2	76	29.4	0.58	0.088	0.61	0.086	1.83	0.029	0.16
STANDARD DS4	789	3.18	22.9	4.83	283	6.6	3.7	5.21	2	73	26.8	0.51	0.090	0.57	0.086	1.69	0.030	0.15
STANDARD DS5	776	3.00	18.1	3.69	166	5.8	2.8	5.83	16	64	47.0	0.73	0.094	0.66	0.090	2.01	0.030	0.14
STANDARD DS5	762	2.86	18.4	3.82	173	5.8	2.7	6.22	17	57	46.6	0.71	0.093	0.65	0.092	1.99	0.032	0.13
STANDARD DS5	765	2.84	17.5	3.72	169	5.9	2.7	6.00	16	57	46.6	0.71	0.093	0.64	0.091	1.98	0.032	0.13

Sample Number	W ppm	Se ppm	Sc ppm	Tl ppm	S %	Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm
Field Duplicate Samples																		
726-H035 -80HN	1.6	1.5	1.8	< .02	0.99	0.07	1.9	0.07	0.1	0.09	3.4	4.7	0.65	0.4	1.0	< .05	7.68	9.8
726-H036 -80HN	1.4	1.3	1.4	< .02	0.82	0.06	1.6	0.06	0.1	0.11	3.6	4.0	0.70	0.4	0.4	< .05	7.99	8.8
726-H035 -80HP	< .1	1.1	3.6	< .02	0.12	0.11	2.9	0.07	< .1	0.09	2.7	9.5	0.26	0.3	0.6	< .05	5.04	16.6
726-H036 -80HP	< .1	0.9	3.7	< .02	0.14	0.13	2.9	0.08	0.1	0.09	2.8	10.7	0.29	0.3	0.4	< .05	5.40	18.3
726-H035 -80HP	< .1	1.1	3.6	< .02	0.12	0.11	2.9	0.07	< .1	0.09	2.7	9.5	0.26	0.3	0.6	< .05	5.04	16.6
726-H036 -80HP	< .1	0.9	3.8	< .02	0.15	0.09	2.7	0.08	0.1	0.09	2.3	9.4	0.26	0.3	0.4	< .05	4.99	15.9
Laboratory Duplicate Sam																		
726-H007 -80HN	0.4	0.5	1.7	< .02	0.28	0.03	2.3	0.20	< .1	0.11	3.3	6.2	0.76	1.0	0.4	< .05	5.33	11.9
RE 726-H007 -80HN	0.2	0.4	1.8	< .02	0.28	0.03	2.2	0.20	< .1	0.12	3.4	6.7	0.73	0.9	0.5	< .05	5.53	12.4
726-H007 -80HP	0.8	0.5	2.6	< .02	0.05	0.06	3.1	0.11	0.1	0.08	3.9	3.8	0.22	0.7	1.9	< .05	3.82	6.6
RE 726-H007 -80HP	1.0	0.5	2.5	< .02	0.05	0.05	3.2	0.12	0.1	0.07	3.9	4.4	0.22	0.6	2.0	< .05	4.18	7.8
726-H007 -80HP	0.9	0.4	2.6	< .02	0.04	0.05	3.5	0.13	0.1	0.09	4.3	5.5	0.19	0.7	2.6	< .05	4.88	8.7
RE 726-H007 -80HP	0.9	0.3	2.8	< .02	0.01	0.05	3.7	0.14	0.1	0.09	4.4	5.3	0.19	0.8	2.5	< .05	4.94	8.4
Laboratory Standards																		
STANDARD DS4	3.8	1.2	3.6	1.18	0.02	0.72	6.4	5.53	< .1	0.06	3.1	15.6	1.63	14.0	6.0	< .05	8.02	30.4
STANDARD DS4	3.8	1.3	3.5	1.15	0.05	0.71	6.2	5.55	< .1	0.05	2.9	16.1	1.56	14.3	5.8	< .05	8.02	30.2
STANDARD DS4	3.6	1.2	3.5	1.19	0.03	0.70	6.0	5.27	< .1	0.06	3.0	16.0	1.56	14.6	5.9	< .05	7.95	29.9
STANDARD DS4	3.8	1.3	3.5	1.15	0.05	0.71	6.2	5.55	< .1	0.05	2.9	16.1	1.56	14.3	5.8	< .05	8.02	30.2
STANDARD DS4	3.8	1.3	3.7	1.10	0.02	0.73	6.1	5.49	0.1	0.05	2.8	17.2	1.63	14.1	6.2	< .05	8.17	29.7
STANDARD DS4	4.0	1.2	3.5	1.10	0.05	0.75	5.9	5.55	0.1	0.07	3.0	16.4	1.67	13.6	5.9	< .05	7.99	29.5
STANDARD DS5	4.4	4.9	3.3	1.01	0.03	0.84	6.5	5.84	< .1	0.05	4.0	11.3	1.65	14.3	6.1	< .05	5.91	22.0
STANDARD DS5	4.9	4.9	3.2	1.04	0.04	0.82	6.5	6.05	< .1	0.06	3.6	11.6	1.67	14.2	6.2	< .05	6.17	22.2
STANDARD DS5	4.8	4.9	3.4	1.05	0.03	0.80	6.8	6.15	< .1	0.06	3.6	12.0	1.67	14.5	6.5	< .05	6.01	22.3

Sample Number	In ppm	Re ppb	Be ppm	Li ppm
Field Duplicate Samples				
726-H035 -80HN	< .02	4	0.1	1.9
726-H036 -80HN	< .02	< 1	< .1	1.4
726-H035 -80HP	0.02	< 1	0.2	2.5
726-H036 -80HP	0.03	< 1	0.1	2.6
726-H035 -80HP	0.02	< 1	0.2	2.5
726-H036 -80HP	0.02	< 1	0.1	2.6
Laboratory Duplicate Sam				
726-H007 -80HN	< .02	< 1	0.2	2.5
RE 726-H007 -80HN	< .02	< 1	0.2	2.5
726-H007 -80HP	0.08	1	0.2	2.5
RE 726-H007 -80HP	0.07	< 1	0.2	2.8
726-H007 -80HP	0.12	< 1	0.2	2.7
RE 726-H007 -80HP	0.12	< 1	0.2	3.1
Laboratory Standards				
STANDARD DS4	2.12	1	2.7	14.6
STANDARD DS4	2.01	< 1	2.6	14.8
STANDARD DS4	2.00	< 1	2.6	14.7
STANDARD DS4	2.01	< 1	2.6	14.8
STANDARD DS4	2.21	< 1	2.4	15.4
STANDARD DS4	2.11	< 1	2.5	14.9
STANDARD DS5	1.19	< 1	1.1	15.9
STANDARD DS5	1.22	< 1	1.1	16.1
STANDARD DS5	1.30	< 1	1.5	16.0

Appendix H

Stream Sediment Sieved Silt Survey

Analytical Results

Emerald Field Resource Corp. **Port Renfrew Project**

Stream Sediment Survey: Sieved Silts and Moss Mats

Sample Number		Pd	Pt	Ni	Cr	Co	Cu	Au	Ag	Pb	Zn	Cd	Ba	Mo	Mn	Fe	As	Sb	Hg
		ppb	ppb	ppm	ppm	ppm	ppm	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb
726-S001		< 10	< 2	53.2	81.1	32.1	91.15	2.5	44	3.82	73.4	0.54	86.8	0.67	881	6.07	1.8	0.09	57
726-S002		< 10	< 2	35.2	105.1	32.9	66.66	8.8	40	2.70	70.5	0.16	84.7	0.38	958	8.06	2.1	0.09	68
726-S003		< 10	< 2	26.1	49.2	22.1	71.10	1.3	66	2.27	66.1	0.27	95.1	0.55	744	3.82	10.5	0.15	107
726-S004		< 10	< 2	15.2	30.4	12.6	26.57	1.2	17	3.61	40.2	0.05	77.3	0.56	515	3.50	1.7	0.10	63
726-S005		< 10	2	34.4	59.3	21.0	102.58	2.9	44	4.09	58.6	0.11	48.3	1.97	632	3.93	1.3	0.08	69
726-S006		< 10	2	41.2	63.9	18.9	62.84	2.2	34	2.67	55.6	0.10	49.8	0.62	582	3.92	1.4	0.09	41
726-S007		< 10	< 2	65.3	64.9	24.3	82.30	1.7	36	2.67	109.7	0.11	54.3	0.75	666	4.65	1.8	0.07	64
726-S008		< 10	< 2	30.6	45.6	18.8	66.23	3.0	30	5.48	57.3	0.09	98.0	1.21	722	4.22	3.2	0.11	85
726-S009		< 10	< 2	27.9	36.0	21.5	63.60	1.4	67	3.11	69.0	0.29	79.9	0.70	814	4.27	2.3	0.06	120
726-S010	m	< 10	< 2	29.0	54.9	18.7	42.54	6.4	39	2.70	46.0	0.12	56.3	0.68	956	5.04	5.9	0.20	95
726-S011	m	< 10	< 2	25.6	40.2	11.5	40.84	3.2	84	5.25	95.4	0.65	53.1	1.05	1219	3.04	5.7	0.14	107
726-S012		< 10	< 2	25.5	34.1	14.3	39.54	2.2	43	6.08	59.2	0.20	78.4	0.65	648	3.34	3.7	0.15	72
726-S013		< 10	< 2	24.2	39.0	14.0	35.71	21.6	50	3.65	63.9	0.16	61.3	0.87	831	3.57	3.4	0.14	73
726-S014		< 10	< 2	22.1	37.7	13.0	37.58	5.2	40	3.25	65.0	0.18	43.5	0.77	857	3.51	3.4	0.08	60
726-S015		< 10	< 2	22.0	33.8	17.0	49.38	1.7	48	4.51	64.0	0.10	85.4	1.25	909	4.03	6.0	0.37	91
726-S016	m	< 10	< 2	13.3	22.4	10.0	31.91	1.3	45	3.60	44.8	0.20	38.2	0.89	645	2.30	4.6	0.14	59
726-S017		< 10	< 2	103.5	177.9	33.5	114.81	5.9	67	2.39	44.2	0.08	45.4	0.73	529	4.38	2.0	0.19	154
726-S018		< 10	< 2	24.2	34.6	14.6	30.82	3.6	38	3.70	70.0	0.21	81.9	0.70	1051	3.89	3.7	0.16	73
726-S019	m	< 10	< 2	15.3	26.5	12.1	35.21	1.9	47	4.09	56.4	0.28	44.3	0.73	803	2.95	5.2	0.25	91
726-S020		< 10	< 2	16.9	37.9	13.2	28.59	2.4	39	4.07	47.0	0.05	46.2	6.10	560	3.49	3.7	0.18	103
726-S021	m	< 10	2	23.0	37.8	14.7	33.22	42.5	48	3.52	41.3	0.08	42.4	0.96	613	3.45	3.3	0.15	52
726-S022		< 10	< 2	31.1	43.1	14.4	45.16	2.1	41	4.68	59.9	0.13	55.5	0.75	621	3.45	2.7	0.11	64
726-S023		< 10	< 2	63.6	74.7	19.0	26.87	9.7	30	2.48	69.2	0.08	69.2	0.49	497	3.71	0.8	0.04	56
726-S024		< 10	< 2	101.2	129.4	24.6	83.31	21.9	48	1.93	55.4	0.15	76.9	0.30	602	3.37	2.7	0.04	48
726-S025	m	< 10	< 2	31.1	37.1	20.2	126.23	5.3	80	2.77	78.0	0.42	43.1	0.49	755	2.91	4.8	0.09	67
726-S026		< 10	< 2	81.2	147.5	17.2	55.02	3.1	29	1.42	31.9	0.07	23.6	0.37	385	3.15	2.2	0.05	157
726-S027		< 10	2	30.1	58.9	15.3	36.47	6.7	20	1.92	31.5	0.04	88.1	0.51	441	3.09	1.2	0.05	1227
726-S028		< 10	< 2	62.6	84.2	17.8	44.12	1.5	34	2.16	54.8	0.10	31.8	0.74	516	3.19	2.3	0.08	42
726-S029		< 10	< 2	215.8	212.5	29.5	34.80	2.5	20	1.81	49.4	0.06	60.6	0.45	643	3.82	0.8	0.06	33
726-S030		< 10	2	79.2	84.0	27.4	85.16	1.7	44	2.82	57.7	0.08	220.8	0.56	618	3.88	1.0	0.04	56
726-S031		< 10	3	351.8	281.9	42.2	85.43	1.7	31	1.87	41.1	0.04	119.2	0.34	484	5.24	0.5	0.02	36
726-S032		< 10	< 2	49.7	47.3	15.0	33.32	1.3	23	3.21	45.5	0.06	85.0	0.50	473	3.34	0.8	0.03	65
726-S033		< 10	< 2	30.4	67.2	14.3	22.83	2.7	19	2.73	37.3	0.05	75.0	0.43	406	3.53	0.8	0.03	63
726-S034		< 10	< 2	32.3	54.5	16.7	33.16	1.4	23	2.64	45.1	0.06	86.1	0.42	525	4.00	0.8	0.04	90
726-S035	m	< 10	< 2	18.2	30.6	14.8	30.67	1.1	35	2.70	33.5	0.05	101.7	0.47	383	3.93	1.0	0.05	63
726-S036		< 10	< 2	82.5	93.1	20.9	30.73	1.7	24	3.00	41.7	0.05	227.8	0.47	469	4.47	1.0	0.07	57
726-S037	m	< 10	< 2	590.9	484.3	70.5	18.55	0.5	33	1.94	41.2	0.08	97.4	0.21	1095	4.77	0.7	0.03	56
726-S038		< 10	2	320.3	419.0	48.6	34.46	3.0	17	1.39	43.6	0.04	87.3	0.24	548	4.43	0.2	0.02	32

Sample Number		U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %	W ppm	Se ppm	Sc ppm	Tl ppm	S %
726-S001		0.2	0.5	0.06	2	234	56.5	0.98	0.042	1.78	0.192	3.30	0.043	0.02	< .1	0.6	8.2	0.03	< .01
726-S002		0.4	0.5	0.03	2	397	74.3	1.09	0.035	2.00	0.218	3.75	0.038	0.03	< .1	0.4	9.2	0.02	< .01
726-S003		0.5	0.9	0.04	171	125	65.9	1.89	0.068	1.51	0.115	2.54	0.027	0.02	0.2	0.6	8.5	0.02	0.03
726-S004		1.9	4.1	0.03	3	111	37.1	0.63	0.044	0.72	0.132	1.65	0.013	0.04	0.1	0.3	4.0	0.03	< .01
726-S005		0.4	0.6	0.05	24	146	33.6	0.89	0.041	0.92	0.197	2.75	0.015	0.02	0.2	1.0	6.0	0.03	< .01
726-S006		0.9	1.0	0.04	3	129	37.9	0.89	0.040	1.09	0.174	2.14	0.018	0.03	0.2	0.5	5.4	0.02	< .01
726-S007		1.4	1.0	0.03	5	139	46.6	1.12	0.056	1.61	0.171	2.58	0.027	0.04	0.3	0.7	5.5	0.04	< .01
726-S008		2.0	4.3	0.08	4	133	46.6	0.81	0.076	1.34	0.183	3.28	0.012	0.04	0.2	0.6	6.7	0.05	< .01
726-S009		2.6	1.7	0.04	7	148	95.6	1.59	0.066	1.30	0.153	3.23	0.026	0.04	0.3	1.1	7.1	0.05	0.01
726-S010	m	2.2	1.4	0.03	2	194	45.3	1.62	0.080	1.18	0.166	2.19	0.019	0.04	0.2	0.3	7.3	0.02	0.01
726-S011	m	6.5	1.0	0.06	22	84	50.4	2.01	0.198	4.11	0.073	2.65	0.009	0.05	0.6	1.6	5.0	0.09	0.05
726-S012		1.6	1.4	0.07	8	87	60.0	1.12	0.098	0.93	0.141	2.75	0.022	0.05	0.4	0.7	6.3	0.06	< .01
726-S013		1.8	1.2	0.27	10	83	42.7	1.29	0.081	1.25	0.152	2.57	0.022	0.05	0.3	0.8	6.6	0.06	< .01
726-S014		2.3	1.5	0.07	23	77	44.8	1.69	0.071	1.46	0.179	2.41	0.011	0.06	0.4	0.5	7.0	0.06	< .01
726-S015		1.6	2.0	0.08	7	86	41.5	1.06	0.094	0.94	0.147	2.98	0.012	0.06	0.3	0.8	7.5	0.09	0.04
726-S016	m	1.7	0.5	0.05	13	54	36.6	1.56	0.078	0.50	0.089	1.69	0.010	0.05	0.4	0.8	4.3	0.06	0.04
726-S017		0.7	0.7	0.05	5	94	42.9	1.10	0.034	1.55	0.151	2.45	0.013	0.03	0.3	1.0	6.5	0.04	0.36
726-S018		1.5	1.1	0.09	4	86	67.0	1.90	0.056	2.13	0.128	2.77	0.009	0.03	0.6	0.6	6.9	0.06	0.01
726-S019	m	2.6	0.9	0.06	6	74	68.5	2.00	0.083	1.52	0.096	2.19	0.010	0.07	0.7	1.4	5.2	0.06	0.06
726-S020		6.1	3.0	0.09	5	96	27.3	0.44	0.050	0.70	0.125	3.01	0.008	0.03	0.3	0.4	6.8	0.08	< .01
726-S021	m	1.5	1.4	0.04	4	114	40.8	1.06	0.057	0.92	0.176	1.95	0.017	0.04	0.2	0.6	5.1	0.04	0.03
726-S022		2.2	2.1	0.06	7	85	58.7	1.48	0.062	1.54	0.164	2.68	0.012	0.04	0.3	0.6	5.6	0.06	0.01
726-S023		0.7	1.0	0.03	3	106	31.0	0.75	0.042	1.19	0.115	2.52	0.014	0.03	0.1	0.5	3.7	0.02	0.01
726-S024		1.8	0.7	0.03	6	66	69.4	1.66	0.063	2.61	0.161	2.59	0.028	0.04	0.3	0.5	5.2	0.05	0.01
726-S025	m	2.8	0.7	0.04	11	57	65.4	2.13	0.079	3.30	0.090	2.14	0.014	0.05	0.6	1.4	5.4	0.08	0.06
726-S026		0.9	0.6	0.04	5	64	49.6	1.27	0.044	1.71	0.098	1.92	0.021	0.03	0.4	0.4	4.1	0.04	0.01
726-S027		0.4	0.9	0.02	84	119	48.2	1.00	0.047	1.13	0.116	2.23	0.022	0.04	0.2	0.4	6.3	0.02	< .01
726-S028		1.2	0.8	0.04	7	75	38.3	1.04	0.037	1.23	0.117	1.94	0.016	0.03	0.3	0.6	4.2	0.04	0.01
726-S029		0.5	0.7	0.02	36	87	38.3	0.91	0.035	4.47	0.145	1.97	0.013	0.03	0.2	0.5	5.2	0.03	< .01
726-S030		1.1	1.4	0.03	4	111	68.4	0.99	0.044	1.92	0.186	3.04	0.033	0.06	0.2	0.5	7.5	0.03	< .01
726-S031		0.2	0.4	0.03	2	137	59.9	0.65	0.084	2.72	0.097	2.33	0.035	0.02	< .1	0.8	2.7	0.02	0.05
726-S032		0.5	0.9	0.03	6	104	38.2	0.72	0.062	0.89	0.156	2.56	0.015	0.04	< .1	0.5	4.4	0.03	< .01
726-S033		0.4	0.6	0.03	3	113	24.4	0.60	0.042	0.71	0.119	1.94	0.012	0.03	< .1	0.5	3.7	0.02	< .01
726-S034		0.6	1.0	0.03	5	134	29.9	0.71	0.062	0.89	0.164	2.09	0.013	0.05	0.1	0.6	3.7	0.03	0.01
726-S035	m	0.4	0.7	0.03	1	153	27.3	0.66	0.060	0.65	0.141	1.98	0.012	0.05	< .1	0.8	3.7	0.02	0.01
726-S036		0.3	0.7	0.03	5	148	34.4	0.70	0.068	1.06	0.141	2.16	0.013	0.04	< .1	0.6	4.4	0.02	0.01
726-S037	m	0.6	0.6	<.02	2	59	32.0	0.81	0.058	4.67	0.069	2.59	0.010	0.04	< .1	1.0	2.9	0.06	0.01
726-S038		0.3	0.7	0.02	1	78	48.2	0.85	0.060	3.70	0.096	2.68	0.028	0.02	< .1	0.6	3.0	0.03	< .01

Sample Number		Te	Ga	Cs	Ge	Hf	Zr	La	Nb	Rb	Sn	Ta	Y	Ce	In	Re	Be	Li	Sample
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	gm
726-S001		0.03	8.9	0.44	< .1	0.09	4.2	3.2	0.50	2.4	0.4	< .05	5.74	7.9	0.02	1	0.3	6.4	30
726-S002		< .02	10.2	0.50	< .1	0.08	3.9	2.6	0.21	2.1	0.3	< .05	4.47	6.6	0.03	1	0.2	6.9	30
726-S003		< .02	6.2	0.50	< .1	0.09	3.9	3.7	0.17	1.3	0.5	< .05	5.25	7.7	0.03	1	0.2	6.3	30
726-S004		< .02	6.2	0.49	< .1	0.05	2.0	7.9	0.69	4.7	0.4	< .05	4.82	13.7	< .02	1	0.4	6.5	30
726-S005		0.02	9.0	0.49	< .1	0.06	3.1	4.1	1.40	3.2	0.6	< .05	5.79	9.7	0.03	1	0.4	7.2	30
726-S006		< .02	7.2	0.41	< .1	0.08	3.0	4.2	0.61	3.2	0.4	< .05	5.45	8.3	0.02	1	0.4	7.2	30
726-S007		< .02	7.8	0.52	< .1	0.06	2.3	4.7	0.64	3.8	0.4	< .05	5.93	9.2	0.02	< 1	0.3	9.7	30
726-S008		0.03	10.2	0.73	< .1	0.07	2.9	10.6	1.12	5.2	0.5	< .05	7.39	21.3	0.03	1	0.6	10.7	30
726-S009		< .02	8.2	0.51	< .1	0.04	1.8	6.7	0.91	3.6	0.5	< .05	7.29	11.8	0.02	1	0.4	7.5	30
726-S010	m	0.02	7.2	0.25	0.1	0.12	5.6	7.9	0.54	3.1	2.8	< .05	9.15	14.6	0.13	< 1	0.4	6.5	30
726-S011	m	0.04	6.7	1.05	0.1	0.03	1.8	10.2	0.91	4.7	0.5	< .05	13.74	11.6	0.04	1	0.8	18.3	30
726-S012		0.03	8.4	0.89	< .1	0.03	1.4	6.9	0.81	5.9	0.4	< .05	8.39	13.1	0.02	1	0.4	9.7	30
726-S013		0.12	8.5	0.93	< .1	0.03	1.4	6.7	0.95	6.0	0.6	< .05	7.94	13.1	0.03	< 1	0.5	10.3	30
726-S014		0.03	8.5	0.87	< .1	0.03	1.5	6.6	0.75	5.8	0.6	< .05	7.78	12.5	0.03	< 1	0.7	9.8	30
726-S015		0.05	10.2	1.04	< .1	0.02	1.0	8.5	0.87	6.6	0.5	< .05	10.80	17.5	0.03	< 1	0.8	10.6	30
726-S016	m	0.02	4.7	0.61	< .1	0.03	0.9	5.3	0.73	3.4	0.3	< .05	6.19	9.7	0.02	2	0.4	5.9	30
726-S017		0.03	7.0	0.69	< .1	0.05	1.9	3.2	0.58	3.2	0.4	< .05	5.29	6.6	0.03	1	0.3	9.4	30
726-S018		0.05	7.9	0.69	< .1	0.04	1.6	5.7	0.65	4.7	0.4	< .05	6.39	11.1	0.04	1	0.5	7.0	30
726-S019	m	0.03	5.8	0.52	0.1	0.04	1.6	6.5	1.21	4.2	0.4	< .05	6.83	10.6	0.03	3	0.3	6.3	30
726-S020		0.03	10.0	1.13	< .1	0.03	1.2	11.9	1.23	7.6	0.5	< .05	11.49	17.7	0.02	< 1	1.0	10.3	30
726-S021	m	0.02	6.4	0.48	0.1	0.08	3.3	6.6	1.51	3.7	0.5	< .05	6.46	14.2	0.02	2	0.4	7.0	30
726-S022		0.03	7.9	0.75	< .1	0.05	2.3	7.1	1.25	5.8	0.5	< .05	6.75	13.9	0.03	< 1	0.4	9.0	30
726-S023		< .02	7.2	0.62	< .1	0.03	0.9	3.8	0.69	3.5	0.4	< .05	4.16	8.4	0.02	< 1	0.4	8.6	30
726-S024		0.03	6.4	0.52	< .1	0.06	2.9	4.1	0.30	3.0	0.4	< .05	5.71	6.9	0.03	1	0.4	14.3	30
726-S025	m	0.03	5.5	0.57	0.1	0.05	2.5	6.5	0.69	3.6	0.5	< .05	7.50	10.1	0.06	1	0.5	9.9	30
726-S026		0.03	5.2	0.79	< .1	0.03	1.5	3.1	0.28	3.0	0.3	< .05	4.05	5.2	0.02	< 1	0.3	12.3	30
726-S027		< .02	6.2	0.61	< .1	0.04	1.6	3.2	0.39	3.1	0.3	< .05	3.46	6.0	0.02	< 1	0.3	8.1	30
726-S028		0.02	6.0	0.78	< .1	0.03	1.4	3.8	0.56	3.1	0.5	< .05	4.25	7.8	0.03	2	0.4	8.8	30
726-S029		< .02	5.7	0.79	0.1	0.04	1.6	3.2	0.38	2.6	0.3	< .05	4.41	6.9	< .02	< 1	0.4	19.5	30
726-S030		< .02	8.5	0.85	< .1	0.06	2.2	3.9	0.42	3.5	0.3	< .05	5.91	8.3	0.03	1	0.3	11.7	30
726-S031		0.02	6.5	0.57	< .1	< .02	0.5	3.4	0.20	2.1	0.2	< .05	3.54	7.6	< .02	< 1	0.2	6.7	30
726-S032		< .02	8.3	0.82	< .1	0.02	1.0	4.6	0.81	4.3	0.4	< .05	5.63	11.8	0.02	1	0.4	9.9	30
726-S033		< .02	6.6	0.58	< .1	0.03	0.9	3.3	0.67	2.9	0.3	< .05	4.06	7.5	0.02	< 1	0.3	7.1	30
726-S034		< .02	7.5	0.63	< .1	0.03	1.1	4.9	0.88	4.5	0.4	< .05	5.43	11.5	0.02	< 1	0.5	8.8	30
726-S035	m	< .02	7.7	0.47	< .1	0.03	1.2	4.5	1.18	3.1	0.3	< .05	5.26	10.7	0.02	< 1	0.4	7.3	30
726-S036		< .02	8.2	1.25	< .1	0.03	1.1	4.3	0.60	3.8	0.4	< .05	5.88	9.7	0.02	< 1	0.4	8.7	30
726-S037	m	< .02	5.0	0.40	0.1	< .02	0.3	3.1	0.38	2.3	0.2	< .05	3.37	5.9	< .02	1	0.3	5.8	30
726-S038		< .02	5.8	0.56	0.1	0.02	0.8	2.8	0.12	1.6	0.1	< .05	2.60	5.8	< .02	< 1	0.2	7.9	30

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
726-S039		< 10	< 2	85.4	88.4	28.3	62.62	66.8	75	5.32	108.7	0.32	121.8	0.60	634	4.41	1.2	0.05	71
726-S040		< 10	< 2	15.6	30.5	12.4	19.77	6.1	37	4.69	51.8	0.09	45.3	0.61	573	2.72	1.2	0.05	60
726-S041		< 10	< 2	20.4	38.0	22.1	68.74	4.3	48	4.89	57.4	0.09	47.0	1.69	915	3.99	2.5	0.09	39
726-S042		< 10	< 2	26.3	47.7	12.4	21.80	2.0	66	4.64	57.2	0.06	45.7	1.25	680	3.69	1.3	0.10	50
726-S043		< 10	< 2	12.1	42.2	15.1	35.70	1.4	23	4.39	57.3	0.11	63.8	0.50	627	3.98	1.3	0.05	37
726-S044		< 10	< 2	9.0	25.6	15.8	32.22	0.9	32	6.85	64.2	0.13	52.3	1.20	726	3.62	1.6	0.07	75
726-S045	m	< 10	< 2	7.1	18.9	14.3	47.12	1.1	34	9.78	68.4	0.18	53.4	1.47	819	3.63	1.8	0.08	85
726-S046	m	< 10	< 2	68.4	86.6	23.9	29.87	1.2	31	7.10	45.9	0.08	71.2	0.79	832	3.00	1.5	0.06	190
726-S047	m	< 10	< 2	10.1	25.4	17.8	52.02	1.0	50	10.55	71.1	0.20	238.4	0.75	1461	3.82	2.7	0.08	778
726-S048	m	< 10	< 2	9.9	22.2	13.5	44.97	0.8	30	5.41	50.0	0.09	127.5	1.05	796	3.23	1.8	0.08	105
726-S049	m	< 10	< 2	24.6	33.7	17.8	46.05	7.1	25	7.44	33.6	0.09	34.9	0.21	649	2.12	1.5	0.06	46
726-S050		< 10	2	41.3	68.6	24.7	66.49	3.9	45	4.05	75.7	0.14	111.8	0.56	904	5.11	4.4	0.21	268
726-S051		< 10	< 2	46.4	80.8	26.7	74.88	6.3	46	2.67	59.1	0.10	78.3	0.57	733	4.44	3.9	0.26	367
726-S052		< 10	< 2	48.4	77.0	25.1	51.96	2.3	37	3.30	61.7	0.08	95.2	0.68	664	4.82	5.6	0.23	443
726-S053	m	< 10	< 2	18.0	42.4	23.3	31.90	9.1	35	5.84	55.0	0.10	92.8	0.43	967	4.45	1.5	0.13	288
726-S054	m	< 10	< 2	12.9	30.9	15.9	22.66	3.0	33	3.79	38.3	0.09	127.0	0.68	638	3.68	1.2	0.08	140
726-S055		< 10	< 2	26.2	40.2	24.7	32.67	2.2	33	5.37	48.3	0.08	48.9	2.62	896	3.67	1.2	0.09	94
726-S056	m	< 10	< 2	15.8	31.0	14.0	38.24	1.0	22	2.40	41.3	0.09	62.9	0.30	477	2.94	1.4	0.13	80
726-S057		< 10	< 2	9.6	19.6	10.8	18.08	4.9	24	3.73	41.1	0.06	154.8	0.70	499	3.16	2.0	0.11	80
726-S058		< 10	< 2	18.0	35.0	11.5	18.42	1.1	18	2.50	38.8	0.04	75.6	0.66	440	3.29	1.4	0.07	92
726-S059	m	< 10	< 2	7.9	21.7	12.0	26.63	0.4	24	5.04	42.3	0.08	86.7	0.50	573	3.02	1.6	0.07	104
726-S060	m	< 10	< 2	9.4	28.4	17.6	36.85	1.4	66	4.21	48.8	0.10	91.3	1.08	859	3.85	2.0	0.15	134
726-S061		< 10	< 2	19.1	52.3	20.6	50.16	8.3	23	2.60	54.8	0.07	74.8	0.58	741	5.02	1.5	0.33	518
726-S062	m	< 10	< 2	10.8	35.8	24.4	49.92	7.0	39	4.09	54.9	0.07	98.6	0.50	894	4.95	2.6	5.55	154
726-S063	m	< 10	< 2	8.2	21.4	20.0	38.29	1.4	53	5.59	57.4	0.14	179.3	2.06	1606	3.99	2.6	1.15	2296
726-S064	m	< 10	< 2	5.2	18.3	8.0	15.75	1.9	31	5.34	43.8	0.08	122.8	0.39	892	2.76	1.8	0.19	184
726-S065		< 10	< 2	19.4	39.4	11.4	21.44	0.6	16	2.56	44.9	0.03	50.3	0.28	464	3.07	1.4	0.13	56
726-S066		< 10	2	20.1	33.8	18.8	46.82	1.4	34	2.79	40.4	0.26	54.9	0.99	527	3.89	18.7	0.42	85
726-S067		< 10	< 2	21.8	50.0	17.5	32.66	1.0	23	2.35	56.0	0.06	57.4	0.46	505	3.78	2.2	0.11	48
726-S068	m	< 10	< 2	20.6	49.8	17.6	31.43	0.4	22	1.86	46.9	0.06	57.6	0.36	425	3.87	1.7	0.10	44
726-S069		< 10	< 2	10.3	23.9	9.1	23.48	1.4	32	5.61	56.0	0.11	540.9	0.85	830	3.02	7.3	2.94	723
726-S070		< 10	< 2	8.9	23.6	10.6	34.12	1.6	32	4.69	57.5	0.08	337.8	0.72	845	3.57	3.3	1.09	6575
726-S071	m	< 10	< 2	11.3	23.7	55.6	73.62	11.7	52	5.10	78.0	0.14	98.1	1.98	1384	6.14	34.0	0.76	263
726-S072	m	< 10	< 2	13.0	27.5	12.7	38.39	1.6	38	5.19	45.9	0.12	257.2	0.36	1056	2.81	5.0	1.10	663
726-S073		< 10	< 2	20.3	33.0	8.6	25.58	112.8	46	1.76	34.9	0.06	85.4	0.23	340	2.05	1.8	0.06	7
726-S074		< 10	< 2	30.6	38.4	11.8	43.58	0.2	19	2.13	43.1	0.09	140.0	0.22	451	2.42	1.8	0.05	< 5
726-S075	m	< 10	< 2	10.6	38.6	17.4	35.15	0.4	25	4.35	44.9	0.08	215.1	0.54	681	4.84	1.5	0.09	179
726-S076	m	< 10	< 2	6.8	22.2	11.7	21.35	1.7	37	7.05	36.5	0.09	280.8	0.65	1142	2.69	1.8	0.16	761
726-S077	m	< 10	< 2	7.0	21.9	16.9	26.90	0.4	40	6.11	36.1	0.13	63.4	0.74	977	3.71	1.0	0.10	1567
726-S078		< 10	< 2	16.8	34.5	29.3	52.39	5.3	29	2.41	48.7	0.08	68.4	0.73	485	6.72	2.2	0.11	250
726-S079	m	< 10	< 2	8.3	21.9	17.9	26.83	0.3	23	5.28	39.5	0.11	97.8	0.49	834	3.74	0.9	0.07	356
726-S080	m	< 10	2	8.5	22.2	21.4	34.58	0.8	32	4.37	48.6	0.10	57.7	0.71	991	4.06	0.7	0.08	126
726-S081		< 10	< 2	36.0	63.4	32.8	50.01	1.6	47	6.85	118.4	0.16	124.0	0.84	1701	5.42	3.6	1.60	799

Sample Number		U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %	W ppm	Se ppm	Sc ppm	Tl ppm	S %
726-S039		0.7	0.9	0.03	5	129	64.8	1.14	0.064	1.95	0.162	3.20	0.028	0.04	0.2	0.8	6.4	0.03	0.02
726-S040		1.7	4.0	0.05	1	50	50.3	0.75	0.056	0.87	0.138	1.76	0.008	0.03	0.5	0.3	5.9	0.03	0.03
726-S041		2.7	1.9	0.15	1	67	71.1	1.28	0.054	1.00	0.127	2.24	0.008	0.03	0.5	0.5	6.0	0.03	0.09
726-S042		1.1	1.9	0.06	<1	67	39.3	0.67	0.043	0.67	0.131	1.82	0.012	0.03	0.3	0.6	3.8	0.03	0.02
726-S043		0.6	2.3	0.05	2	149	88.1	1.33	0.070	1.12	0.195	2.38	0.011	0.04	0.2	0.3	8.0	0.02	<.01
726-S044		1.1	1.9	0.08	<1	130	67.3	0.72	0.054	0.80	0.184	2.77	0.016	0.03	0.2	0.8	5.5	0.04	<.01
726-S045	m	4.7	2.4	0.10	3	128	71.5	0.81	0.064	0.85	0.189	2.75	0.009	0.04	0.2	0.9	5.9	0.03	0.02
726-S046	m	1.1	1.3	0.05	3	65	31.7	0.57	0.060	1.41	0.095	1.98	0.012	0.04	0.1	0.8	4.1	0.04	0.02
726-S047	m	1.1	0.7	0.17	11	130	62.0	1.22	0.081	1.03	0.178	2.48	0.015	0.08	0.2	0.7	7.5	0.04	0.03
726-S048	m	0.6	1.2	0.08	3	117	41.4	0.73	0.065	0.63	0.140	2.05	0.014	0.04	0.1	0.6	5.0	0.03	0.02
726-S049	m	0.1	0.3	0.03	<1	81	23.6	0.58	0.037	0.43	0.104	1.59	0.075	0.05	<.1	0.6	3.4	<.02	0.02
726-S050		1.8	0.9	0.07	14	131	109.0	1.64	0.071	1.95	0.187	2.82	0.012	0.03	0.3	0.7	7.3	0.04	0.07
726-S051		0.9	0.9	0.05	17	140	78.4	1.64	0.073	1.70	0.184	2.65	0.013	0.03	0.2	0.5	7.7	0.03	0.04
726-S052		1.5	0.6	0.04	49	169	91.8	1.57	0.079	1.51	0.163	2.76	0.018	0.03	<.1	0.8	6.8	0.02	0.14
726-S053	m	0.1	0.3	0.04	7	201	42.8	1.30	0.068	0.83	0.165	2.37	0.022	0.03	<.1	0.8	6.1	0.02	0.04
726-S054	m	0.3	0.3	0.04	8	145	35.8	0.83	0.063	0.52	0.129	2.14	0.016	0.05	<.1	0.9	4.4	0.02	0.03
726-S055		0.2	0.3	0.04	3	144	46.0	1.11	0.052	0.82	0.147	2.15	0.021	0.02	<.1	0.6	4.9	<.02	0.02
726-S056	m	0.4	0.7	0.02	4	111	50.7	1.11	0.074	0.80	0.125	2.03	0.024	0.05	<.1	0.5	5.3	<.02	0.02
726-S057		1.3	2.5	0.06	2	90	28.2	0.44	0.057	0.58	0.121	1.59	0.008	0.07	0.1	0.3	4.8	0.04	<.01
726-S058		0.7	1.8	0.05	2	112	48.1	0.65	0.042	0.65	0.103	2.22	0.016	0.03	<.1	0.4	4.8	0.02	<.01
726-S059	m	1.5	0.6	0.06	2	103	27.5	0.47	0.056	0.52	0.104	1.70	0.007	0.05	<.1	0.7	3.3	0.03	0.02
726-S060	m	0.9	1.2	0.07	4	130	39.8	0.84	0.095	0.64	0.128	2.80	0.013	0.13	0.1	1.3	5.3	0.04	0.05
726-S061		0.2	0.5	0.02	4	218	80.4	1.17	0.058	1.19	0.162	2.90	0.041	0.02	0.1	0.4	9.2	<.02	<.01
726-S062	m	0.3	0.5	0.09	16	229	58.0	1.13	0.063	0.97	0.128	2.52	0.019	0.04	0.2	0.8	7.5	0.02	0.04
726-S063	m	0.5	0.3	0.09	16	145	84.7	1.20	0.095	0.92	0.106	2.75	0.011	0.05	0.2	1.1	7.5	0.03	0.06
726-S064	m	0.4	0.5	0.05	6	92	36.4	0.57	0.052	0.40	0.067	2.10	0.014	0.04	0.1	0.7	2.9	0.03	0.03
726-S065		0.3	0.6	0.02	5	106	32.4	0.67	0.031	0.62	0.092	1.62	0.013	0.03	<.1	0.3	3.3	<.02	<.01
726-S066		3.0	0.8	0.03	9	138	36.5	1.21	0.054	1.26	0.098	2.20	0.014	0.02	0.1	0.9	4.9	0.04	0.04
726-S067		0.5	0.7	0.02	6	153	34.0	1.00	0.054	0.97	0.126	1.96	0.021	0.03	<.1	0.4	5.0	<.02	<.01
726-S068	m	0.5	0.6	0.02	6	167	31.0	0.89	0.054	0.96	0.129	1.85	0.014	0.02	<.1	0.3	4.8	<.02	0.02
726-S069		0.5	0.8	0.10	16	98	35.5	0.55	0.040	0.42	0.054	1.74	0.014	0.06	0.3	0.6	3.3	0.03	0.01
726-S070		0.7	1.1	0.22	86	142	48.7	0.90	0.059	0.61	0.087	1.91	0.030	0.06	1.0	0.5	5.1	0.03	<.01
726-S071	m	0.7	0.2	0.05	5	125	47.4	1.36	0.118	0.34	0.062	1.75	0.009	0.03	<.1	2.2	2.7	0.03	0.07
726-S072	m	0.8	0.2	0.04	114	92	64.5	1.04	0.059	0.44	0.058	1.72	0.016	0.04	0.1	1.2	3.5	0.02	0.08
726-S073		0.2	0.5	0.03	3	68	38.5	0.45	0.021	0.45	0.134	1.73	0.116	0.03	<.1	0.5	3.6	0.02	<.01
726-S074		0.2	0.6	0.02	3	78	211.9	0.75	0.025	0.72	0.093	2.03	0.234	0.06	<.1	0.3	4.4	0.02	<.01
726-S075	m	0.6	0.9	0.04	15	223	50.0	0.93	0.048	0.79	0.124	2.05	0.016	0.06	<.1	0.6	6.1	0.02	0.02
726-S076	m	0.3	0.1	0.08	20	116	47.5	0.75	0.064	0.46	0.053	1.68	0.020	0.06	0.4	0.9	2.4	0.03	0.05
726-S077	m	0.3	0.2	0.05	6	178	65.8	0.84	0.066	0.53	0.105	2.26	0.015	0.04	0.1	1.2	3.9	0.02	0.05
726-S078		0.4	0.9	0.03	6	442	41.1	0.89	0.079	0.80	0.164	1.92	0.015	0.03	<.1	0.5	5.2	0.02	0.05
726-S079	m	0.2	0.2	0.04	6	168	83.0	0.89	0.057	0.81	0.141	2.24	0.016	0.04	0.1	0.7	5.1	0.02	0.03
726-S080	m	0.3	0.3	0.06	4	194	53.0	0.75	0.058	0.65	0.132	2.46	0.015	0.04	<.1	1.2	5.1	0.02	0.03
726-S081		0.2	0.2	0.06	23	186	37.9	0.76	0.084	1.12	0.073	3.05	0.010	0.03	<.1	1.1	12.1	0.02	0.03

Sample Number		Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm	In ppm	Re ppb	Be ppm	Li ppm	Sample gm
726-S039		0.03	8.5	0.72	0.1	0.05	1.9	4.0	0.44	2.8	0.4	< .05	6.27	9.1	0.02	< 1	0.4	10.6	30
726-S040		0.07	7.5	0.41	0.1	0.04	1.3	17.7	1.01	2.6	0.6	< .05	16.74	35.4	0.03	6	0.9	8.2	30
726-S041		0.49	7.4	0.47	0.1	0.04	1.6	7.2	0.77	2.7	0.7	< .05	10.41	15.9	0.05	3	0.7	8.3	30
726-S042		0.03	7.7	0.59	< .1	0.03	1.1	9.3	1.22	3.3	0.7	< .05	9.48	19.8	0.04	2	0.6	7.2	30
726-S043		0.02	8.4	0.33	0.1	0.09	2.5	8.5	0.70	3.0	0.4	< .05	8.99	16.6	0.02	2	0.5	6.3	30
726-S044		< .02	9.6	0.56	0.1	0.06	1.8	7.9	1.84	3.6	0.7	< .05	8.24	17.3	0.02	3	0.7	7.2	30
726-S045	m	0.02	8.8	0.45	0.1	0.06	2.2	9.6	2.38	3.6	0.7	< .05	9.18	22.9	0.02	2	0.6	8.1	30
726-S046	m	< .02	5.6	0.53	0.1	0.02	1.2	6.9	1.18	4.4	0.4	< .05	5.79	17.4	< .02	< 1	0.5	7.8	30
726-S047	m	0.02	8.4	0.46	0.1	0.05	1.9	8.8	1.56	6.1	0.7	< .05	10.53	21.9	0.03	< 1	0.5	7.8	30
726-S048	m	< .02	7.0	0.53	< .1	0.04	1.8	7.7	1.54	4.7	0.5	< .05	6.94	16.0	0.03	< 1	0.4	6.1	30
726-S049	m	< .02	4.5	0.27	< .1	0.03	1.5	2.1	0.85	1.5	0.3	< .05	3.15	4.5	< .02	< 1	0.1	5.8	30
726-S050		0.03	9.1	0.88	0.1	0.06	2.0	4.8	0.42	2.8	0.5	< .05	9.97	10.3	0.03	2	0.5	12.6	30
726-S051		0.02	8.4	1.19	0.1	0.07	2.7	4.2	0.38	2.2	0.4	< .05	8.54	9.6	0.03	3	0.4	11.1	30
726-S052		0.03	8.4	0.69	0.1	0.05	2.2	3.6	0.45	1.6	0.4	< .05	7.47	8.8	0.03	2	0.4	11.7	30
726-S053	m	< .02	8.2	0.41	0.1	0.03	1.6	3.1	0.69	1.3	0.3	< .05	6.85	7.2	0.02	1	0.2	5.7	30
726-S054	m	< .02	7.7	0.40	< .1	0.03	1.0	3.4	0.96	2.1	0.4	< .05	5.77	7.8	0.02	< 1	0.3	4.6	30
726-S055		< .02	7.9	0.43	0.1	0.03	1.4	2.6	0.50	1.1	0.3	< .05	5.29	6.1	0.02	1	0.2	4.7	30
726-S056	m	< .02	5.9	0.26	0.1	0.05	2.0	4.9	0.83	2.2	0.2	< .05	6.26	10.4	0.02	2	0.3	4.8	30
726-S057		0.02	6.3	0.56	0.1	0.02	0.7	7.8	0.85	5.4	0.5	< .05	8.43	17.8	0.02	1	0.7	7.6	30
726-S058		< .02	6.7	0.40	< .1	0.02	0.8	6.2	0.85	3.5	0.3	< .05	5.26	12.9	< .02	1	0.4	5.2	30
726-S059	m	< .02	5.3	0.40	0.1	0.02	1.2	4.1	1.11	3.8	0.3	< .05	4.10	10.6	< .02	1	0.3	6.3	30
726-S060	m	< .02	7.9	0.43	< .1	0.04	1.4	8.6	1.85	4.9	0.4	< .05	7.56	18.1	0.02	1	0.6	7.0	30
726-S061		0.02	8.3	0.48	0.1	0.07	2.9	3.3	0.45	1.3	0.3	< .05	6.13	7.7	0.02	2	0.2	5.8	30
726-S062	m	0.04	7.1	0.49	0.1	0.04	2.2	3.8	0.62	1.6	0.3	< .05	5.34	8.4	0.02	< 1	0.2	7.3	30
726-S063	m	0.04	7.0	0.77	0.1	0.03	1.4	5.1	0.98	1.4	0.4	< .05	9.82	13.8	0.03	2	0.5	8.8	30
726-S064	m	< .02	5.8	0.64	< .1	< .02	0.6	6.8	1.62	3.1	0.3	< .05	4.95	15.6	< .02	< 1	0.6	8.4	30
726-S065		< .02	5.8	0.39	0.1	0.02	0.9	3.5	0.45	1.9	0.2	< .05	3.76	7.1	< .02	1	0.2	6.3	30
726-S066		< .02	6.0	0.41	< .1	0.03	1.3	4.3	0.46	2.2	0.3	< .05	6.04	9.1	< .02	2	0.4	6.9	30
726-S067		< .02	6.7	0.33	< .1	0.03	1.0	3.5	0.36	1.7	0.3	< .05	5.40	7.5	< .02	< 1	0.3	5.8	30
726-S068	m	< .02	6.3	0.25	0.1	0.02	1.0	3.0	0.49	1.2	0.2	< .05	5.06	6.5	0.02	< 1	0.3	5.0	30
726-S069		0.03	5.8	0.99	< .1	< .02	0.4	7.6	0.65	4.2	0.3	< .05	5.72	16.6	< .02	1	0.5	10.2	30
726-S070		0.08	6.6	0.92	0.1	0.02	0.6	8.5	0.62	3.8	0.4	< .05	6.72	17.0	0.02	1	0.5	14.3	30
726-S071	m	0.05	4.5	0.37	0.1	< .02	0.5	6.3	0.53	1.8	0.6	< .05	7.82	12.0	0.03	2	0.5	4.5	30
726-S072	m	0.02	4.7	0.55	0.1	< .02	0.4	5.8	0.70	2.2	0.3	< .05	5.78	11.1	< .02	< 1	0.5	8.7	30
726-S073		< .02	4.8	0.38	< .1	0.04	1.8	2.7	0.74	2.4	0.3	< .05	3.68	6.1	< .02	1	0.3	9.5	30
726-S074		< .02	4.6	0.41	< .1	0.05	2.2	2.4	0.41	3.4	0.2	< .05	3.57	5.4	< .02	< 1	0.1	12.3	30
726-S075	m	< .02	6.8	0.33	0.1	0.04	2.0	4.5	0.70	2.4	0.3	< .05	5.20	9.1	< .02	< 1	0.3	5.8	30
726-S076	m	0.02	5.4	0.68	< .1	< .02	0.4	5.1	0.76	3.6	0.3	< .05	4.59	10.9	< .02	< 1	0.4	7.5	30
726-S077	m	< .02	6.7	0.60	0.1	0.02	1.2	3.8	0.82	2.1	0.3	< .05	4.87	9.3	0.02	< 1	0.4	6.0	30
726-S078		< .02	8.6	0.43	0.1	0.06	2.1	4.0	0.42	2.3	0.3	< .05	6.15	9.1	0.02	< 1	0.4	5.9	30
726-S079	m	< .02	6.4	0.45	< .1	0.04	1.9	3.0	0.67	1.2	0.3	< .05	4.27	6.7	0.02	< 1	0.2	5.1	30
726-S080	m	< .02	6.8	0.41	0.1	0.05	1.9	4.2	0.79	1.7	0.3	< .05	5.46	9.2	0.02	< 1	0.4	5.0	30
726-S081		0.02	9.8	1.31	< .1	0.02	0.7	4.3	0.49	2.1	0.5	< .05	11.82	13.6	0.04	1	0.5	11.3	30

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
726-S082		< 10	< 2	51.1	68.8	26.5	66.85	2.1	31	2.06	48.0	0.06	55.6	0.24	510	3.97	4.4	0.09	61
726-S083	m	< 10	< 2	7.7	11.6	4.5	13.38	10.4	25	5.56	50.7	0.09	235.6	0.14	1077	1.75	1.2	0.15	131
726-S084	m	< 10	2	93.7	92.9	25.9	133.52	1.8	38	5.22	47.2	0.26	547.1	0.52	636	2.68	1.9	0.15	59
726-S085	m	< 10	< 2	27.0	54.2	10.8	28.98	6.2	29	6.78	65.3	0.14	249.2	0.28	979	1.97	2.2	0.16	201
726-S086	m	< 10	< 2	30.3	34.9	15.1	56.19	1.5	38	6.09	58.6	0.29	146.4	0.56	768	2.35	3.0	0.14	79
726-S087	m	< 10	< 2	21.1	55.9	15.7	36.92	3.5	28	2.55	32.8	0.04	79.1	0.39	421	4.06	0.7	0.06	168
726-S088	m	46	2	89.3	112.5	20.6	110.38	1.2	35	2.24	33.9	0.11	55.9	0.19	389	2.63	1.3	0.07	46
726-S089	m	< 10	2	51.3	63.9	24.1	84.73	1.3	45	5.40	44.6	0.11	63.3	0.38	951	2.48	0.4	0.11	98
726-S090		< 10	< 2	43.1	44.6	20.8	74.22	1.5	46	3.80	54.1	0.15	122.4	0.47	507	3.08	1.0	0.04	52
726-S091	m	< 10	2	89.0	87.0	24.0	100.52	4.1	31	3.01	39.6	0.15	50.7	0.26	437	2.36	0.3	0.06	40
726-S092	m	< 10	< 2	6.9	16.1	11.9	27.03	0.7	17	3.43	41.7	0.03	67.9	0.72	463	3.17	0.9	0.10	151
726-S093		< 10	< 2	10.2	27.7	14.1	34.38	2.2	28	3.03	46.6	0.11	106.9	0.50	569	3.79	1.4	0.05	77
726-S094		< 10	< 2	6.3	21.8	14.0	44.00	< .2	28	3.60	46.1	0.05	95.0	1.12	625	3.60	2.3	0.06	150
726-S095	m	< 10	< 2	14.7	30.5	14.1	42.92	1.8	31	2.08	43.5	0.12	34.3	0.43	382	3.54	0.6	0.08	53
726-S096		< 10	< 2	30.0	58.4	16.4	53.09	1.4	28	3.01	48.6	0.08	42.9	0.75	477	3.98	1.2	0.07	65
726-S097	m	< 10	< 2	28.2	53.7	17.0	54.01	1.6	31	2.96	46.0	0.09	25.9	0.60	440	4.17	0.7	0.09	52
mean				44.4	61.1	19.5	47.3	5.4	37	3.93	53.2	0.12	101.7	0.74	715	3.74	2.7	0.25	257
median				24.2	39.4	17.4	38.3	1.9	34	3.61	48.7	0.09	78.3	0.60	645	3.69	1.8	0.09	80
sd				77.2	70.1	9.6	25.2	13.9	14	1.74	16.0	0.10	88.0	0.69	268	1.00	4.0	0.66	730
mean+2sd				198.7	210.4	28.9	75.5	33.3	65	7.42	85.3	0.32	277.8	2.13	1251	5.73	10.7	1.57	1717
mean + 2 sd excld				>199	>210	>39	>98	>100	>65	>7.4	>85	>.32	>275	>2.1	>1250	>5.7	>10.7	>1.6	>1700

Field Blank Samples

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
726-S010A		< 10	< 2	17.7	20.1	7.5	20.55	0.5	55	3.46	28.1	0.15	50.4	0.35	214	1.46	0.9	0.07	6
726-S025A		< 10	< 2	18.9	22.9	7.8	20.26	0.3	50	3.34	26.9	0.14	45.8	0.35	209	1.47	0.8	0.07	7
726-S049A		< 10	< 2	18.9	18.4	7.4	19.46	1.2	51	3.53	25.7	0.12	49.6	0.37	201	1.39	0.8	0.06	< 5
726-S068A		< 10	< 2	20.7	24.1	8.2	21.41	0.7	56	3.69	28.8	0.14	51.2	0.40	226	1.65	1.0	0.08	< 5
726-S092A		< 10	< 2	21.9	21.4	8.1	22.08	4.2	54	3.77	28.2	0.15	51.8	0.41	224	1.58	1.1	0.08	6

Field Duplicate Samples

none collected, although samples 95 and 96 collected at same site

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
726-S095	m	< 10	< 2	14.7	30.5	14.1	42.92	1.8	31	2.08	43.5	0.12	34.3	0.43	382	3.54	0.6	0.08	53
726-S096		< 10	< 2	30.0	58.4	16.4	53.09	1.4	28	3.01	48.6	0.08	42.9	0.75	477	3.98	1.2	0.07	65

Laboratory Duplicate Samples

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
726-S028		< 10	< 2	62.6	84.2	17.8	44.12	1.5	34	2.16	54.8	0.10	31.8	0.74	516	3.19	2.3	0.08	42
RE 726-S028		< 10	< 2	61.1	86.2	17.4	43.12	18.3	30	2.09	53.1	0.10	31.6	0.71	508	3.23	2.2	0.08	77
726-S062	m	< 10	< 2	10.8	35.8	24.4	49.92	7.0	39	4.09	54.9	0.07	98.6	0.50	894	4.95	2.6	5.55	154

Sample Number		U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %	W ppm	Se ppm	Sc ppm	Tl ppm	S %
726-S082		0.1	0.3	0.02	4	146	28.5	0.96	0.056	1.32	0.121	2.01	0.027	0.02	< .1	0.5	5.5	< .02	0.01
726-S083	m	1.0	0.6	0.03	5	27	27.8	0.43	0.034	0.30	0.053	1.70	0.008	0.05	< .1	0.5	2.0	0.03	0.01
726-S084	m	0.6	0.7	0.04	118	74	40.0	1.34	0.062	1.65	0.108	2.63	0.022	0.04	0.1	0.8	6.1	0.02	0.02
726-S085	m	2.2	0.7	0.04	24	44	40.6	0.87	0.042	0.64	0.107	2.05	0.010	0.05	0.1	1.0	4.0	0.03	0.02
726-S086	m	1.7	0.7	0.05	15	66	28.0	1.22	0.060	1.05	0.123	2.03	0.011	0.05	0.1	0.9	5.6	0.03	0.03
726-S087	m	0.6	1.6	0.04	20	196	38.2	0.83	0.070	0.67	0.114	1.39	0.022	0.04	0.2	0.4	3.5	< .02	0.05
726-S088	m	0.5	0.5	0.02	7	90	25.9	0.67	0.038	0.93	0.113	1.83	0.019	0.03	< .1	0.4	4.1	0.02	< .01
726-S089	m	0.6	0.2	0.04	6	80	59.8	1.41	0.064	0.93	0.120	2.31	0.016	0.05	< .1	0.9	4.5	0.03	0.02
726-S090		0.5	0.9	0.03	6	84	22.5	0.84	0.062	0.98	0.115	1.91	0.016	0.05	0.1	1.1	4.9	0.03	0.05
726-S091	m	0.6	0.4	0.02	5	64	42.9	1.14	0.038	1.14	0.103	2.36	0.016	0.03	< .1	0.7	4.7	0.02	< .01
726-S092	m	0.6	2.4	0.04	2	111	47.4	0.55	0.034	0.60	0.126	2.10	0.009	0.05	0.1	0.4	4.6	0.02	< .01
726-S093		0.5	1.7	0.04	2	154	38.2	0.73	0.042	0.70	0.110	1.95	0.010	0.04	< .1	0.6	5.6	0.02	0.01
726-S094		0.6	1.5	0.03	25	135	93.8	1.64	0.047	0.90	0.150	3.25	0.010	0.05	0.2	0.5	6.6	0.03	0.01
726-S095	m	0.4	0.7	0.02	6	170	34.4	1.10	0.069	0.69	0.128	1.67	0.028	0.05	< .1	0.4	4.8	< .02	0.04
726-S096		0.3	0.6	0.03	8	191	28.6	0.80	0.049	0.84	0.138	2.17	0.018	0.02	< .1	0.5	5.3	< .02	< .01
726-S097	m	0.2	0.6	0.04	6	236	26.0	0.79	0.043	0.83	0.152	1.95	0.019	0.03	< .1	0.6	4.6	< .02	< .01
mean		1.1	1.0	0.05	13	126	50.2	1.02	0.060	1.183	0.130	2.291	0.021	0.041		0.7	5.3		
median		0.6	0.7	0.04	6	116	42.9	0.91	0.058	0.930	0.128	2.190	0.015	0.040		0.6	5.1		
sd		1.1	0.8	0.04	26	63	24.9	0.39	0.022	0.830	0.036	0.475	0.026	0.016		0.3	1.7		
mean+2sd		3.3	2.6	0.13	65	251	100.0	1.80	0.105	2.843	0.203	3.240	0.072	0.072		1.3	8.7		
mean + 2 sd excld		>3.3			>65	>250	>100												
Field Blank Samples																			
726-S010A		0.5	2.8	0.16	< 1	26	8.5	0.14	0.046	0.31	0.032	0.56	0.005	0.09	< .1	0.3	2.3	0.06	< .01
726-S025A		0.6	2.6	0.15	2	26	8.5	0.14	0.045	0.31	0.032	0.55	0.005	0.09	< .1	0.2	2.4	0.06	< .01
726-S049A		0.5	2.5	0.14	< 1	24	9.8	0.14	0.043	0.31	0.031	0.55	0.005	0.09	< .1	0.2	2.2	0.06	< .01
726-S068A		0.6	2.9	0.17	< 1	29	10.6	0.16	0.049	0.32	0.034	0.58	0.005	0.09	< .1	0.2	2.5	0.06	< .01
726-S092A		0.6	2.5	0.18	1	28	10.1	0.15	0.050	0.32	0.032	0.58	0.004	0.09	< .1	0.2	2.6	0.06	< .01
Field Duplicate Samples																			
none collected, although																			
726-S095	m	0.4	0.7	0.02	6	170	34.4	1.10	0.069	0.69	0.128	1.67	0.028	0.05	< .1	0.4	4.8	< .02	0.04
726-S096		0.3	0.6	0.03	8	191	28.6	0.80	0.049	0.84	0.138	2.17	0.018	0.02	< .1	0.5	5.3	< .02	< .01
Laboratory Duplicate Sar																			
726-S028		1.2	0.8	0.04	7	75	38.3	1.04	0.037	1.23	0.117	1.94	0.016	0.03	0.3	0.6	4.2	0.04	0.01
RE 726-S028		1.1	0.8	0.05	7	76	38.1	1.06	0.036	1.19	0.117	1.89	0.016	0.03	0.2	0.6	4.0	0.04	0.01
726-S062	m	0.3	0.5	0.09	16	229	58.0	1.13	0.063	0.97	0.128	2.52	0.019	0.04	0.2	0.8	7.5	0.02	0.04

Sample Number		Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm	In ppm	Re ppb	Be ppm	Li ppm	Sample gm
726-S082		< .02	6.3	0.21	0.1	0.06	1.8	2.3	0.22	0.9	0.2	< .05	4.72	5.4	0.02	1	0.2	4.9	30
726-S083	m	< .02	5.3	1.03	< .1	< .02	0.2	9.0	1.39	3.4	0.3	< .05	5.61	16.6	< .02	< 1	0.7	9.9	30
726-S084	m	0.04	6.0	0.74	0.1	0.03	0.9	3.4	0.50	2.0	0.3	< .05	5.60	6.4	< .02	< 1	0.3	13.4	30
726-S085	m	< .02	6.0	0.56	0.1	0.03	0.7	7.1	1.82	2.6	0.4	< .05	6.82	14.3	< .02	< 1	0.7	11.8	30
726-S086	m	0.04	5.7	0.56	< .1	0.03	1.1	5.3	1.10	2.6	0.4	< .05	7.42	9.2	0.02	< 1	0.4	11.8	30
726-S087	m	0.04	5.0	0.36	0.1	0.03	1.0	4.6	0.57	2.1	0.2	< .05	4.79	8.3	< .02	< 1	0.1	5.5	30
726-S088	m	< .02	5.4	0.34	0.1	0.03	1.0	2.3	0.66	2.1	0.2	< .05	3.79	4.0	< .02	< 1	0.2	6.2	30
726-S089	m	0.02	6.1	0.56	< .1	0.04	1.4	2.9	0.93	2.6	0.4	< .05	5.63	6.0	0.02	< 1	0.3	7.8	30
726-S090		0.06	5.9	0.53	0.1	0.03	0.9	4.5	0.54	3.4	0.3	< .05	5.54	8.4	0.02	1	0.3	8.0	30
726-S091	m	0.02	5.6	0.47	< .1	0.03	1.0	2.5	0.56	2.1	0.2	< .05	4.11	5.0	< .02	< 1	0.2	7.4	30
726-S092	m	< .02	7.1	0.34	< .1	0.05	1.7	7.2	1.24	2.9	0.5	< .05	5.02	14.6	0.02	< 1	0.3	4.0	30
726-S093		< .02	6.6	0.30	0.1	0.06	1.9	5.4	0.65	3.0	0.4	< .05	5.10	11.1	0.02	< 1	0.5	5.0	30
726-S094		< .02	9.6	0.38	< .1	0.07	2.8	5.2	0.91	2.8	0.4	< .05	6.38	11.4	0.02	1	0.5	5.2	30
726-S095	m	0.03	5.3	0.19	0.1	0.05	1.4	4.2	0.64	1.5	0.3	< .05	6.58	8.0	0.02	< 1	0.2	4.6	30
726-S096		0.02	7.8	0.37	< .1	0.04	1.7	3.4	0.58	1.7	0.3	< .05	5.31	7.6	0.02	< 1	0.5	6.3	30
726-S097	m	0.02	7.1	0.28	< .1	0.04	1.7	3.7	0.74	1.4	0.4	< .05	5.47	7.2	0.02	2	0.2	5.9	30
mean																			
median																			
sd																			
mean+2sd																			
mean + 2 sd excld																			
Field Blank Samples																			
726-S010A		< .02	2.2	0.76	< .1	0.03	1.6	8.8	0.15	6.9	0.2	< .05	4.43	15.3	< .02	< 1	0.2	7.2	30
726-S025A		< .02	2.1	0.73	< .1	0.03	1.7	8.2	0.13	6.6	0.2	< .05	4.40	14.3	< .02	< 1	0.3	7.0	30
726-S049A		0.03	2.1	0.77	0.1	0.03	1.7	8.6	0.15	6.6	0.1	< .05	4.59	14.7	< .02	< 1	0.2	6.9	30
726-S068A		< .02	2.2	0.78	< .1	0.04	1.9	9.3	0.17	6.6	0.2	< .05	4.96	16.5	< .02	< 1	0.3	6.6	30
726-S092A		0.02	2.2	0.82	< .1	0.04	1.9	9.0	0.16	6.8	0.2	< .05	4.74	15.6	< .02	< 1	0.3	6.9	30
Field Duplicate Samples																			
none collected, although																			
726-S095	m	0.03	5.3	0.19	0.1	0.05	1.4	4.2	0.64	1.5	0.3	< .05	6.58	8.0	0.02	< 1	0.2	4.6	30
726-S096		0.02	7.8	0.37	< .1	0.04	1.7	3.4	0.58	1.7	0.3	< .05	5.31	7.6	0.02	< 1	0.5	6.3	30
Laboratory Duplicate Sar																			
726-S028		0.02	6.0	0.78	< .1	0.03	1.4	3.8	0.56	3.1	0.5	< .05	4.25	7.8	0.03	2	0.4	8.8	30
RE 726-S028		< .02	5.8	0.74	< .1	0.04	1.5	3.6	0.55	3.0	0.5	< .05	4.42	7.8	0.03	1	0.3	8.3	30
726-S062	m	0.04	7.1	0.49	0.1	0.04	2.2	3.8	0.62	1.6	0.3	< .05	5.34	8.4	0.02	< 1	0.2	7.3	30

Sample Number		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
RE 726-S062	m	< 10	< 2	10.8	35.7	24.3	49.44	4.7	43	4.12	54.9	0.09	98.2	0.53	881	5.02	2.5	6.09	178
726-S070		< 10	< 2	8.9	23.6	10.6	34.12	1.6	32	4.69	57.5	0.08	337.8	0.72	845	3.57	3.3	1.09	6575
RE 726-S070		< 10	< 2	8.4	22.2	9.9	32.83	1110.0	154	4.35	55.1	0.08	333.6	0.71	827	3.41	3.3	1.08	4484

Laboratory Standards

		Pd ppb	Pt ppb	Ni ppm	Cr ppm	Co ppm	Cu ppm	Au ppb	Ag ppb	Pb ppm	Zn ppm	Cd ppm	Ba ppm	Mo ppm	Mn ppm	Fe %	As ppm	Sb ppm	Hg ppb
STANDARD DS4		527	184	35.0	165.9	12.2	128.23	27.6	293	30.47	160.9	5.41	143.7	6.76	808	3.23	23.7	4.66	289
STANDARD DS4		537	176	34.5	165.8	11.8	128.79	28.0	295	30.72	158.6	5.35	141.9	6.86	816	3.22	23.2	4.55	277
STANDARD DS4		528	180	35.0	163.1	12.0	129.27	28.0	290	30.10	159.0	5.45	141.0	6.64	811	3.18	23.2	4.72	291
STANDARD DS4		515	173	33.4	163.5	11.7	123.24	31.3	294	30.47	150.7	5.37	138.7	6.63	795	3.05	22.9	4.65	291

m = moss mat sample

Discovery Consultants
W.R. Gilmour, P.Geo.
June 13, 2003

Sample Number		U ppm	Th ppm	Bi ppm	B ppm	V ppm	Sr ppm	Ca %	P %	Mg %	Ti %	Al %	Na %	K %	W ppm	Se ppm	Sc ppm	Tl ppm	S %
RE 726-S062	m	0.3	0.5	0.08	17	236	59.2	1.16	0.065	0.98	0.131	2.53	0.020	0.04	0.2	0.8	7.8	< .02	0.04
726-S070		0.7	1.1	0.22	86	142	48.7	0.90	0.059	0.61	0.087	1.91	0.030	0.06	1.0	0.5	5.1	0.03	< .01
RE 726-S070		0.7	1.0	0.08	81	132	45.5	0.85	0.056	0.60	0.080	1.86	0.028	0.05	1.1	0.5	4.9	0.03	< .01
Laboratory Standards																			
STANDARD DS4		6.2	3.6	5.09	2	73	27.0	0.53	0.089	0.57	0.087	1.69	0.031	0.15	4.3	1.3	3.7	1.15	0.05
STANDARD DS4		6.3	3.6	5.15	< 1	75	27.6	0.54	0.087	0.59	0.087	1.71	0.031	0.15	4.2	1.3	3.7	1.15	0.04
STANDARD DS4		6.2	3.5	4.79	2	74	26.8	0.52	0.089	0.57	0.085	1.72	0.030	0.15	4.3	1.3	3.7	1.13	0.05
STANDARD DS4		6.2	3.6	5.16	2	74	27.0	0.52	0.087	0.57	0.086	1.69	0.029	0.16	4.0	1.3	3.7	1.13	0.05

m = moss mat sample

Sample Number		Te ppm	Ga ppm	Cs ppm	Ge ppm	Hf ppm	Zr ppm	La ppm	Nb ppm	Rb ppm	Sn ppm	Ta ppm	Y ppm	Ce ppm	In ppm	Re ppb	Be ppm	Li ppm	Sample gm
RE 726-S062	m	0.02	7.2	0.50	0.1	0.04	2.2	3.8	0.61	1.6	0.3	< .05	5.41	8.7	0.02	< 1	0.4	7.2	30
726-S070		0.08	6.6	0.92	0.1	0.02	0.6	8.5	0.62	3.8	0.4	< .05	6.72	17.0	0.02	1	0.5	14.3	30
RE 726-S070		0.03	6.3	0.88	< .1	< .02	0.6	8.0	0.61	3.6	0.4	< .05	6.30	15.7	0.02	< 1	0.5	13.0	30
Laboratory Standards																			
STANDARD DS4		0.75	6.1	5.57	< .1	0.05	2.8	15.8	1.57	14.3	6.0	< .05	7.98	29.7	1.99	1	2.5	14.7	30
STANDARD DS4		0.72	6.0	5.54	< .1	0.04	2.7	15.6	1.54	13.6	5.9	< .05	7.93	29.6	2.00	3	2.4	14.5	30
STANDARD DS4		0.70	6.0	5.59	< .1	0.04	2.7	15.3	1.58	13.7	6.1	< .05	7.99	30.0	1.98	2	2.5	14.9	30
STANDARD DS4		0.70	5.9	5.58	< .1	0.04	2.8	16.9	1.56	14.1	6.0	< .05	8.08	30.2	2.04	1	2.4	14.5	30

m = moss mat sample

Appendix I

Technical specifications

for

ACME Laboratories

Geochemical procedures used in this study

Analytical Method: **ACME Laboratories Ltd.**

Inductively Coupled Plasma Emission Mass Spectrometry (ICP-MS) analysis
(Group 1F-MS)

The ICP-MS method is used to provide lower detection limits, and is intented for lean material.

Samples underwent a primary ICP-ES (Emission Spectrometry) scan. This analysis was used for elements above ICP-MS upper-limits values.

Digestion: Aqua regia (hydrochoric and nitric acids) extraction is used to leach sulphides, some oxides and some silicates.

Mineral phases which are hardly (if at all) attacked include barite, zircon, monazite, sphene, chromite, gahnite, garnet, ilmenite, rutile and cassiterite.

The balance of the silicates and oxides are only slightly to moderately attacked, depending on the degree of alteration.

Generally, but not always, most base metals and gold are usually dissolved.

Elements marked with * may only be partially extracted. For example, zinc in gahnite of shene will not be soluble.

As and Sb may be partially lost due to volatilization.

Element		Detection Limit	Element		Detection Limit
Au		0.2 ppb	Cr	*	0.5 ppm
Ag		2 ppb	Fe	*	0.01 %
Cu		0.01 ppm	Ga		0.1 ppm
Cd		0.01 ppm	K	*	0.01 %
Mn	*	1 ppm	La	*	0.5 ppm
Mo		0.01 ppm	Mg	*	0.01 %
Pb		0.01 ppm	Na	*	0.001 %
Ni	*	0.1 ppm	P	*	0.001 %
Zn		0.1 ppm	S	*	0.02 %
Hg		5 ppb	Sc	*	0.1 ppm
As	*	0.1 ppm	Se	*	0.1 ppm
B	*	1 ppm	Sr	*	0.5 ppm
Ba	*	0.5 ppm	Te		0.02 ppm
Sb	*	0.02 ppm	Th	*	0.1 ppm
W	*	0.1 ppm	Ti	*	0.001 %
Al	*	0.01 %	Tl		0.02 ppm
Bi		0.02 ppm	U	*	0.1 ppm
Ca	*	0.01 %	V	*	2 ppm
Co		0.1 ppm	Be	*	0.1 ppm
Pt	*	10 ppb	Ce	*	0.1 ppm
Pd	*	2 ppb	Cs	*	0.02 ppm
Zr	*	0.1 ppm	Ge	*	0.1 ppm
Y	*	0.01 ppm	Hf	*	0.02 ppm
Ta	*	0.05 ppm	In		0.02 ppm
Sn	*	0.1 ppm	Li	*	0.1 ppm
Re		1 ppb	Nb	*	0.02 ppm
			Rb	*	0.1 ppm

Appendix J

Magnetometer and VLF-EM

Tables of readings

and

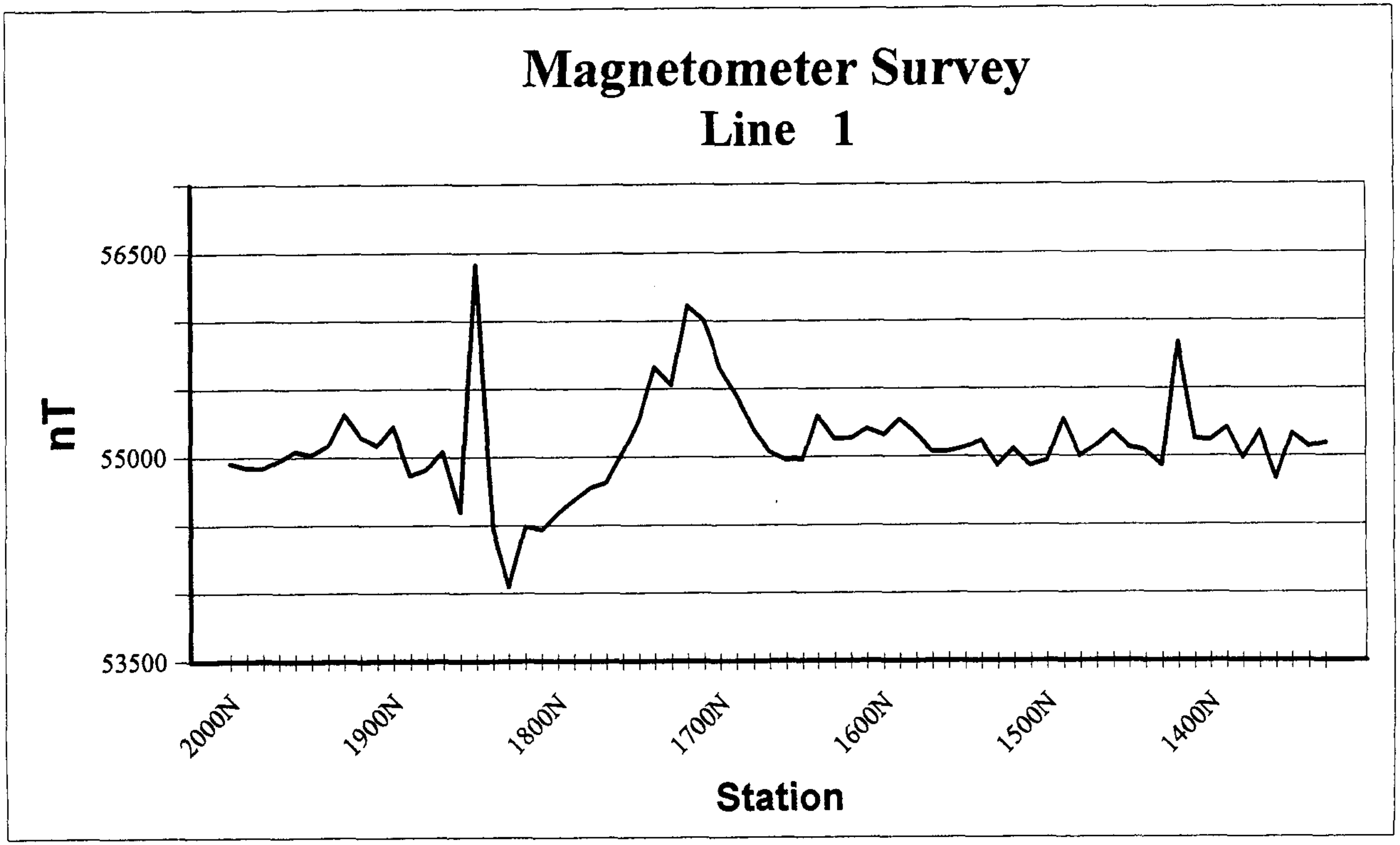
Profiles of readings

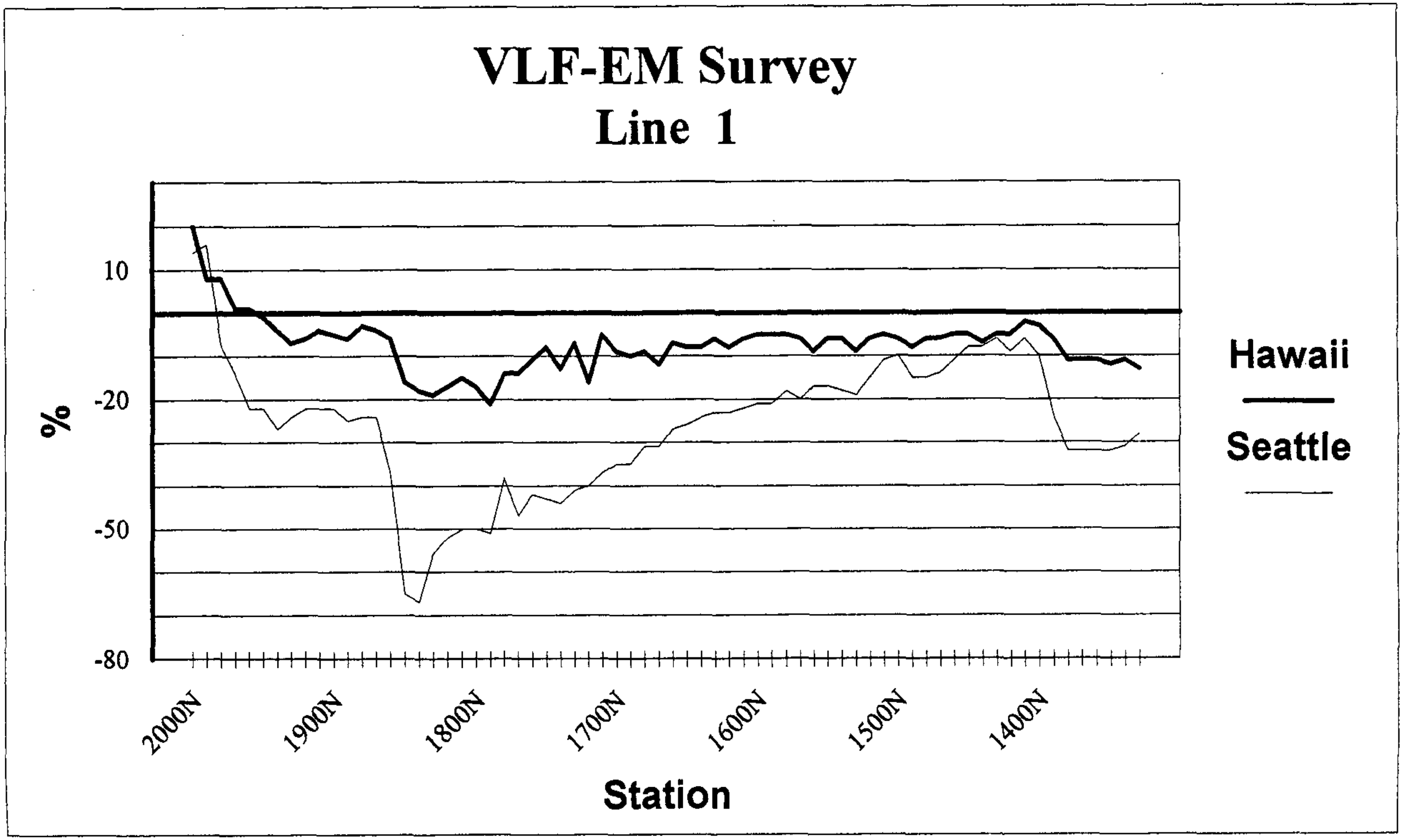
Magnetometer & VLF-EM Orientation Survey

LINE 1

Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	VLF (Hawaii) In-Phase (%)	VLF (Hawaii) Out-Phase (%)	VLF (Seattle) freq kHz	VLF (Seattle) In-Phase (%)	VLF (Seattle) Out-Phase (%)
2000N	54958	21.4	20	-5	24.8	14	-12
1990N	54923	21.4	8	-4	24.8	16	-17
1980N	54919	21.4	8	-5	24.8	-7	-14
1970N	54977	21.4	1	-6	24.8	-14	-13
1960N	55043	21.4	1	-6	24.8	-22	-9
1950N	55018	21.4	-1	-8	24.8	-22	-10
1940N	55087	21.4	-4	-7	24.8	-27	-4
1930N	55315	21.4	-7	-7	24.8	-24	-15
1920N	55151	21.4	-6	-5	24.8	-22	-12
1910N	55085	21.4	-4	-3	24.8	-22	-11
1900N	55224	21.4	-5	-3	24.8	-22	-9
1890N	54866	21.4	-6	-3	24.8	-25	-8
1880N	54909	21.4	-3	2	24.8	-24	-4
1870N	55039	21.4	-4	0	24.8	-24	-2
1860N	54598	21.4	-6	5	24.8	-37	-1
1850N	56414	21.4	-16	-4	24.8	-65	-14
1840N	54474	21.4	-18	-3	24.8	-67	-14
1830N	54048	21.4	-19	-1	24.8	-56	-6
1820N	54487	21.4	-17	4	24.8	-52	-6
1810N	54468	21.4	-15	-1	24.8	-50	-10
1800N	54582	21.4	-17	-2	24.8	-50	-10
1790N	54687	21.4	-21	1	24.8	-51	-6
1780N	54775	21.4	-14	2	24.8	-38	-7
1770N	54813	21.4	-14	2	24.8	-47	-5
1760N	55033	21.4	-11	3	24.8	-42	-5
1750N	55270	21.4	-8	-2	24.8	-43	-5
1740N	55657	21.4	-13	4	24.8	-44	-5
1730N	55526	21.4	-7	-2	24.8	-41	-4
1720N	56112	21.4	-16	4	24.8	-40	-4
1710N	56008	21.4	-5	-2	24.8	-37	-3
1700N	55650	21.4	-9	3	24.8	-35	-4
1690N	55453	21.4	-10	5	24.8	-35	-4
1680N	55198	21.4	-9	5	24.8	-31	-3
1670N	55041	21.4	-12	4	24.8	-31	-4
1660N	54980	21.4	-7	7	24.8	-27	-3
1650N	54979	21.4	-8	3	24.8	-26	-3
1640N	55298	21.4	-8	1	24.8	-24	-5
1630N	55133	21.4	-6	3	24.8	-23	-5
1620N	55135	21.4	-8	4	24.8	-23	-6
1610N	55206	21.4	-6	3	24.8	-22	-6
1600N	55159	21.4	-5	5	24.8	-21	-8
1590N	55273	21.4	-5	2	24.8	-21	-9
1580N	55170	21.4	-5	3	24.8	-18	-8
1570N	55035	21.4	-6	3	24.8	-20	-7
1560N	55035	21.4	-9	3	24.8	-17	-8
1550N	55065	21.4	-6	4	24.8	-17	-7
1540N	55116	21.4	-6	3	24.8	-18	-8
1530N	54933	21.4	-9	1	24.8	-19	-7
1520N	55059	21.4	-6	4	24.8	-15	-6

Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	In-Phase (%)	Out-Phase (%)	VLF (Seattle) freq kHz	In-Phase (%)	Out-Phase (%)
1510N	54933	21.4	-5	4	24.8	-11	-2
1500N	54970	21.4	-6	3	24.8	-10	-3
1490N	55272	21.4	-8	4	24.8	-15	-8
1480N	55001	21.4	-6	3	24.8	-15	-5
1470N	55079	21.4	-6	0	24.8	-14	-5
1460N	55182	21.4	-5	9	24.8	-11	-4
1450N	55065	21.4	-5	5	24.8	-8	-3
1440N	55044	21.4	-7	3	24.8	-8	-3
1430N	54933	21.4	-5	7	24.8	-6	-1
1420N	55834	21.4	-5	7	24.8	-9	0
1410N	55128	21.4	-2	9	24.8	-6	1
1400N	55117	21.4	-3	11	24.8	-10	-1
1390N	55207	21.4	-6	6	24.8	-24	-6
1380N	54983	21.4	-11	5	24.8	-32	-9
1370N	55182	21.4	-11	8	24.8	-32	-8
1360N	54836	21.4	-11	8	24.8	-32	-7
1350N	55162	21.4	-12	11	24.8	-32	-5
1340N	55067	21.4	-11	8	24.8	-31	-5
1330N	55091	21.4	-13	11	24.8	-28	-5


Magnetometer Survey
Line 1
nT
56500
55000
53500
2000N
1900N
1800N
1700N
1600N
1500N
1400N
Station



VLF-EM Survey
Line 1
%
10
-20
-50
-80
2000N
1900N
1800N
1700N
1600N
1500N
1400N
Station
Hawaii
Seattle

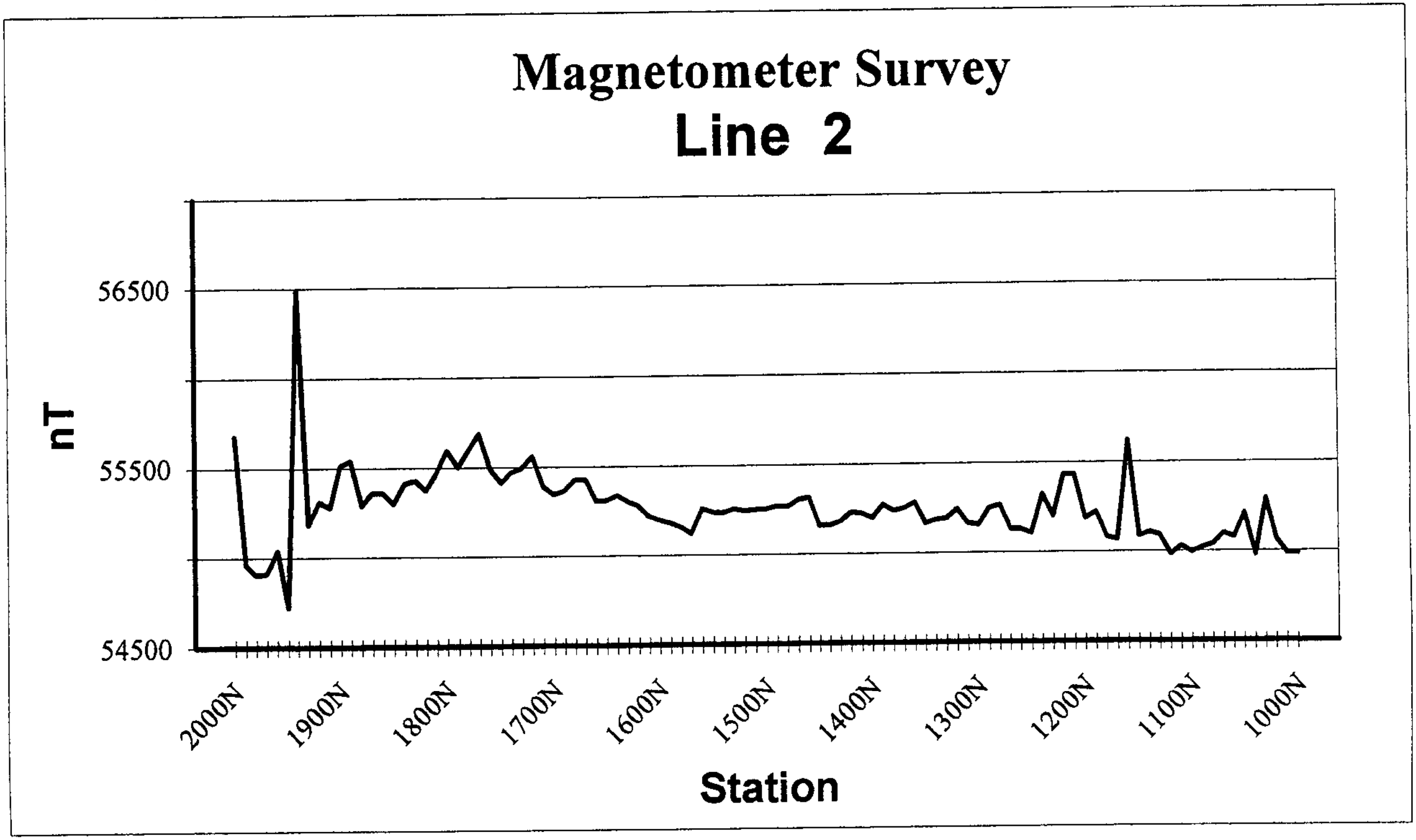
Magnetometer & VLF-EM Orientation Survey

LINE 2

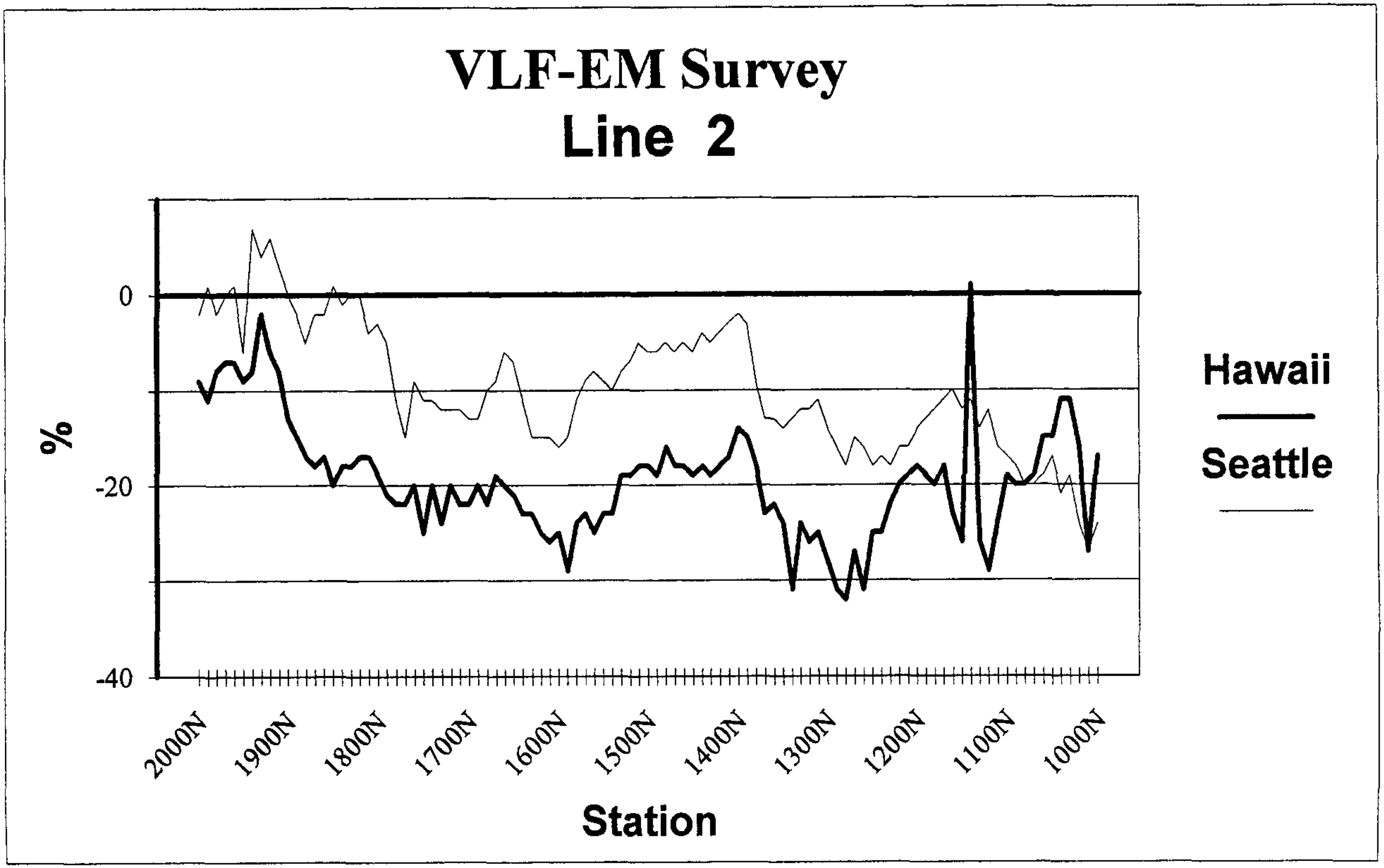
Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	In-Phase (%)	Out-Phase (%)	VLF (Seattle) freq kHz	In-Phase (%)	Out-Phase (%)
2000N	55676	21.4	-9	3	24.8	-2	1
1990N	54960	21.4	-11	8	24.8	1	0
1980N	54903	21.4	-8	7	24.8	-2	4
1970N	54911	21.4	-7	7	24.8	0	-1
1960N	55038	21.4	-7	11	24.8	1	-2
1950N	54720	21.4	-9	14	24.8	-6	0
1940N	56492	21.4	-8	9	24.8	7	-1
1930N	55183	21.4	-2	5	24.8	4	-1
1920N	55311	21.4	-6	7	24.8	6	2
1910N	55279	21.4	-8	5	24.8	3	1
1900N	55513	21.4	-13	3	24.8	0	1
1890N	55541	21.4	-15	7	24.8	-2	1
1880N	55289	21.4	-17	3	24.8	-5	0
1870N	55361	21.4	-18	7	24.8	-2	1
1860N	55360	21.4	-17	7	24.8	-2	1
1850N	55298	21.4	-20	7	24.8	1	2
1840N	55412	21.4	-18	7	24.8	-1	4
1830N	55428	21.4	-18	9	24.8	0	3
1820N	55373	21.4	-17	3	24.8	0	1
1810N	55468	21.4	-17	7	24.8	-4	0
1800N	55594	21.4	-19	10	24.8	-3	-2
1790N	55502	21.4	-21	11	24.8	-5	-2
1780N	55597	21.4	-22	11	24.8	-11	-1
1770N	55688	21.4	-22	9	24.8	-15	-3
1760N	55492	21.4	-20	7	24.8	-9	-4
1750N	55413	21.4	-25	5	24.8	-11	-5
1740N	55469	21.4	-20	5	24.8	-11	-3
1730N	55491	21.4	-24	10	24.8	-12	-4
1720N	55558	21.4	-20	7	24.8	-12	-3
1710N	55390	21.4	-22	6	24.8	-12	-3
1700N	55347	21.4	-22	13	24.8	-13	-3
1690N	55365	21.4	-20	10	24.8	-13	-2
1680N	55428	21.4	-22	12	24.8	-10	-1
1670N	55429	21.4	-19	15	24.8	-9	-1
1660N	55308	21.4	-20	10	24.8	-6	-1
1650N	55311	21.4	-21	9	24.8	-7	-1
1640N	55337	21.4	-23	6	24.8	-11	-4
1630N	55303	21.4	-23	9	24.8	-15	-5
1620N	55279	21.4	-25	14	24.8	-15	-5
1610N	55221	21.4	-26	10	24.8	-15	-4
1600N	55195	21.4	-25	7	24.8	-16	-5
1590N	55180	21.4	-29	5	24.8	-15	-8
1580N	55155	21.4	-24	8	24.8	-11	-6
1570N	55121	21.4	-23	8	24.8	-9	-5

Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	VLF (Hawaii) In-Phase (%)	VLF (Hawaii) Out-Phase (%)	VLF (Seattle) freq kHz	VLF (Seattle) In-Phase (%)	VLF (Seattle) Out-Phase (%)
1560N	55260	21.4	-25	9	24.8	-8	-4
1550N	55240	21.4	-23	9	24.8	-9	-5
1540N	55237	21.4	-23	10	24.8	-10	-5
1530N	55257	21.4	-19	8	24.8	-8	-4
1520N	55246	21.4	-19	9	24.8	-7	-4
1510N	55251	21.4	-18	13	24.8	-5	-2
1500N	55256	21.4	-18	12	24.8	-6	-2
1490N	55270	21.4	-19	11	24.8	-6	-2
1480N	55268	21.4	-16	13	24.8	-5	-1
1470N	55305	21.4	-18	13	24.8	-6	-2
1460N	55317	21.4	-18	11	24.8	-5	-2
1450N	55158	21.4	-19	14	24.8	-6	-1
1440N	55159	21.4	-18	12	24.8	-4	-1
1430N	55180	21.4	-19	12	24.8	-5	0
1420N	55230	21.4	-18	11	24.8	-4	0
1410N	55225	21.4	-17	11	24.8	-3	1
1400N	55197	21.4	-14	14	24.8	-2	1
1390N	55274	21.4	-15	12	24.8	-3	0
1380N	55240	21.4	-18	9	24.8	-9	-3
1370N	55252	21.4	-23	7	24.8	-13	-6
1360N	55285	21.4	-22	5	24.8	-13	-7
1350N	55166	21.4	-24	11	24.8	-14	-8
1340N	55184	21.4	-31	10	24.8	-13	-6
1330N	55189	21.4	-24	11	24.8	-12	-1
1320N	55243	21.4	-26	14	24.8	-12	-1
1310N	55164	21.4	-25	15	24.8	-11	-2
1300N	55153	21.4	-28	13	24.8	-14	-4
1290N	55246	21.4	-31	17	24.8	-16	-4
1280N	55266	21.4	-32	18	24.8	-18	-4
1270N	55130	21.4	-27	16	24.8	-15	-3
1260N	55129	21.4	-31	17	24.8	-16	-3
1250N	55107	21.4	-25	12	24.8	-18	-3
1240N	55324	21.4	-25	10	24.8	-17	-3
1230N	55200	21.4	-22	10	24.8	-18	-2
1220N	55433	21.4	-20	12	24.8	-16	-3
1210N	55434	21.4	-19	14	24.8	-16	-3
1200N	55188	21.4	-18	14	24.8	-14	-2
1190N	55223	21.4	-19	14	24.8	-13	-3
1180N	55083	21.4	-20	17	24.8	-12	-3
1170N	55067	21.4	-18	20	24.8	-11	-1
1160N	55621	21.4	-23	24	24.8	-10	-1
1150N	55084	21.4	-26	27	24.8	-12	1
1140N	55107	21.4	1	0	24.8	-11	0
1130N	55093	21.4	-26	24	24.8	-14	0
1120N	54984	21.4	-29	28	24.8	-12	-1
1110N	55030	21.4	-24	27	24.8	-16	-1
1100N	54993	21.4	-19	16	24.8	-17	-2

Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	VLF (Hawaii) In-Phase (%)	VLF (Hawaii) Out-Phase (%)	VLF (Seattle) freq kHz	VLF (Seattle) In-Phase (%)	VLF (Seattle) Out-Phase (%)
1090N	55020	21.4	-20	23	24.8	-18	-1
1080N	55040	21.4	-20	19	24.8	-20	-2
1070N	55100	21.4	-19	16	24.8	-20	-2
1060N	55078	21.4	-15	16	24.8	-19	-1
1050N	55212	21.4	-15	12	24.8	-17	-1
1040N	54978	21.4	-11	12	24.8	-21	2
1030N	55292	21.4	-11	11	24.8	-19	1
1020N	55063	21.4	-16	17	24.8	-24	32
1010N	54985	21.4	-27	26	24.8	-27	-4
1000N	54986	21.4	-17	19	24.8	-24	-3


Magnetometer Survey
Line 2
nT
56500
55500
54500
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
1000N
Station

C C C



VLF-EM Survey
Line 2
0
-20
-40
%
2000N
1900N
1800N
1700N
1600N
1500N
1400N
1300N
1200N
1100N
1000N
Station
Hawaii
Seattle

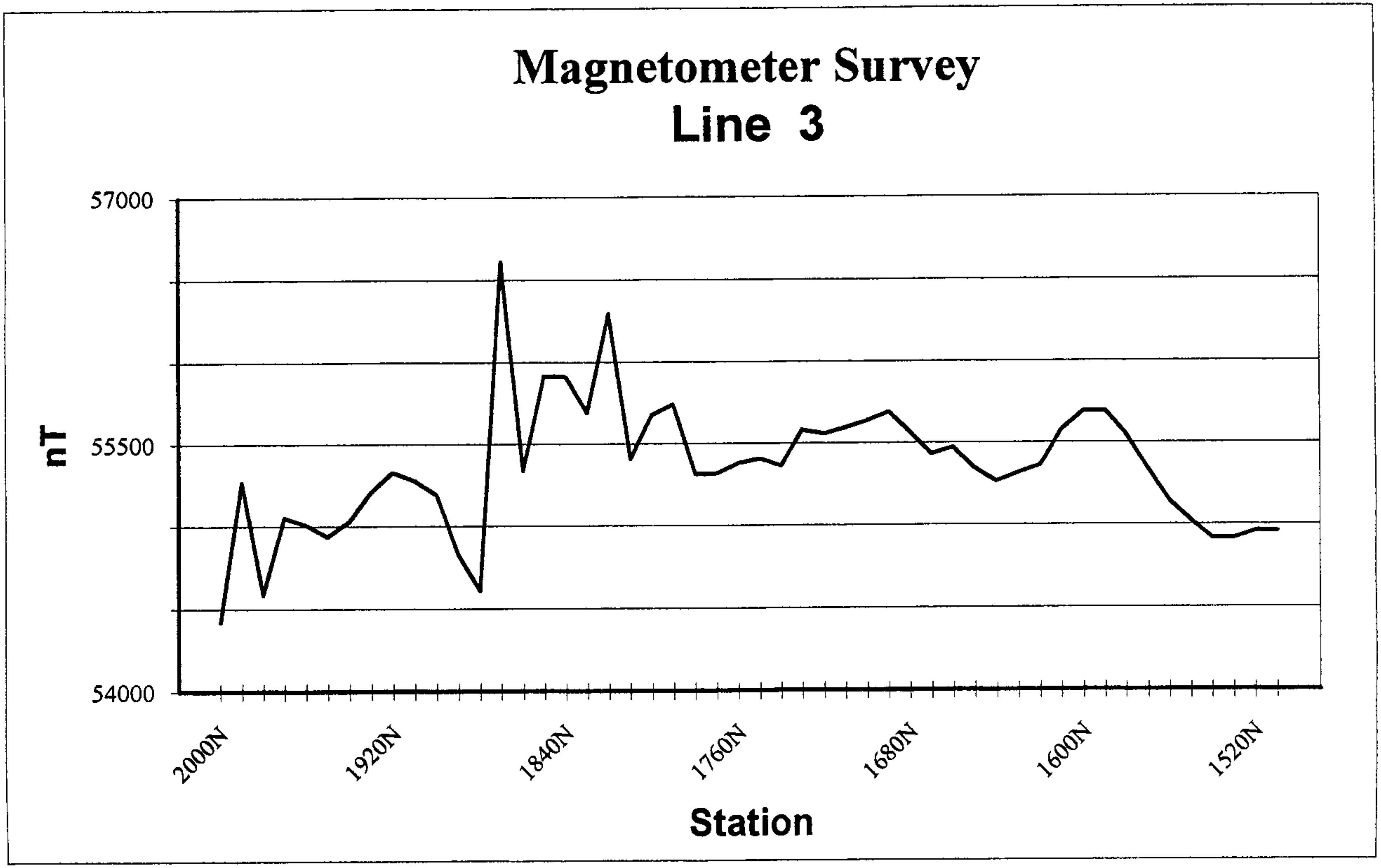
Magnetometer & VLF-EM Orientation Survey

LINE 3

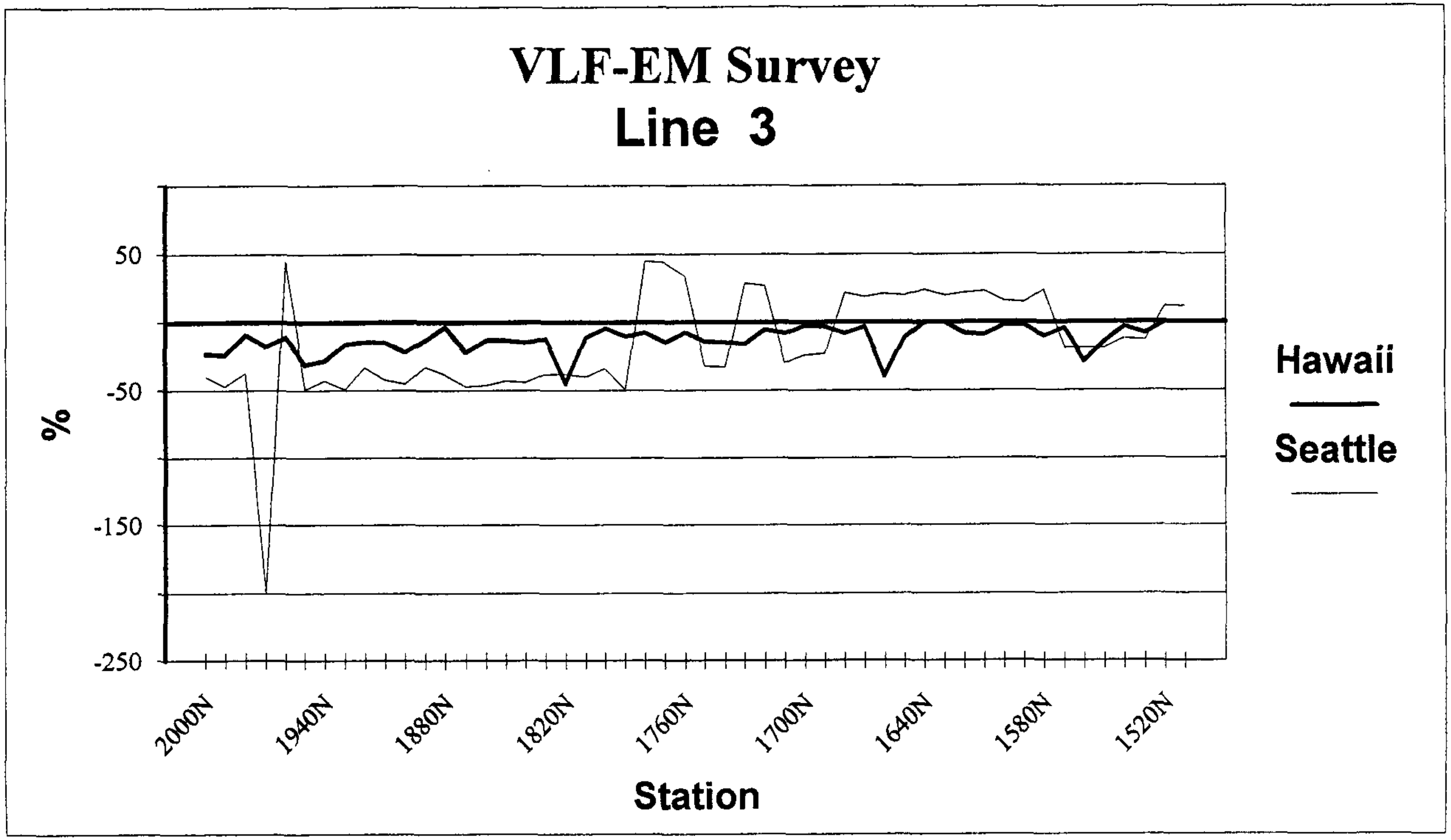
Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	In-Phase (%)	Out-Phase (%)	VLF (Seattle) freq kHz	In-Phase (%)	Out-Phase (%)
2000N	54420	21.4	-23	-1	24.8	-40	-2
1990N	55266	21.4	-24	1	24.8	-47	-7
1980N	54585	21.4	-9	19	24.8	-37	-13
1970N	55057	21.4	-18	1	24.8	-200	200
1960N	55009	21.4	-11	-8	24.8	45	13
1950N	54938	21.4	-31	13	24.8	-49	-4
1940N	55030	21.4	-28	14	24.8	-43	-10
1930N	55207	21.4	-16	3	24.8	-49	8
1920N	55327	21.4	-14	6	24.8	-33	-17
1910N	55278	21.4	-15	3	24.8	-42	-14
1900N	55192	21.4	-22	12	24.8	-45	-12
1890N	54828	21.4	-13	3	24.8	-33	-9
1880N	54611	21.4	-3	5	24.8	-38	0
1870N	56611	21.4	-22	13	24.8	-47	1
1860N	55336	21.4	-13	3	24.8	-46	-15
1850N	55916	21.4	-13	4	24.8	-43	-13
1840N	55911	21.4	-15	5	24.8	-44	-12
1830N	55690	21.4	-12	2	24.8	-38	-16
1820N	56295	21.4	-45	35	24.8	-38	-9
1810N	55406	21.4	-11	3	24.8	-40	-12
1800N	55676	21.4	-4	-3	24.8	-34	-8
1790N	55738	21.4	-10	17	24.8	-49	-12
1780N	55314	21.4	-7	-5	24.8	45	10
1770N	55317	21.4	-15	-1	24.8	44	18
1760N	55379	21.4	-7	-1	24.8	34	11
1750N	55406	21.4	-14	6	24.8	-32	-5
1740N	55362	21.4	-15	5	24.8	-33	-10
1730N	55582	21.4	-16	18	24.8	29	8
1720N	55558	21.4	-5	0	24.8	27	10
1710N	55595	21.4	-8	-1	24.8	-30	-1
1700N	55636	21.4	-2	0	24.8	-24	-11
1690N	55689	21.4	-3	0	24.8	-23	-7
1680N	55566	21.4	-8	1	24.8	22	21
1670N	55432	21.4	-3	-1	24.8	19	7
1660N	55473	21.4	-40	23	24.8	21	4
1650N	55341	21.4	-11	7	24.8	20	3
1640N	55263	21.4	0	-1	24.8	24	3
1630N	55317	21.4	0	-1	24.8	20	6
1620N	55361	21.4	-8	2	24.8	22	5
1610N	55579	21.4	-9	3	24.8	23	5
1600N	55689	21.4	-2	-1	24.8	16	8
1590N	55694	21.4	-2	0	24.8	15	7
1580N	55549	21.4	-10	2	24.8	24	7
1570N	55335	21.4	-4	3	24.8	-19	-10

Station	Mag (nT) uncorrected	VLF (Hawaii) freq kHz	VLF (Hawaii) In-Phase (%)	VLF (Hawaii) Out-Phase (%)	VLF (Seattle) freq kHz	VLF (Seattle) In-Phase (%)	VLF (Seattle) Out-Phase (%)
1560N	55142	21.4	-29	24	24.8	-19	-9
1550N	55024	21.4	-14	7	24.8	-19	-5
1540N	54916	21.4	-3	-1	24.8	-12	-4
1530N	54916	21.4	-8	3	24.8	-13	-3
1520N	54959	21.4	0	-1	24.8	12	-6
1510N	54959	21.4	0	-2	24.8	12	1

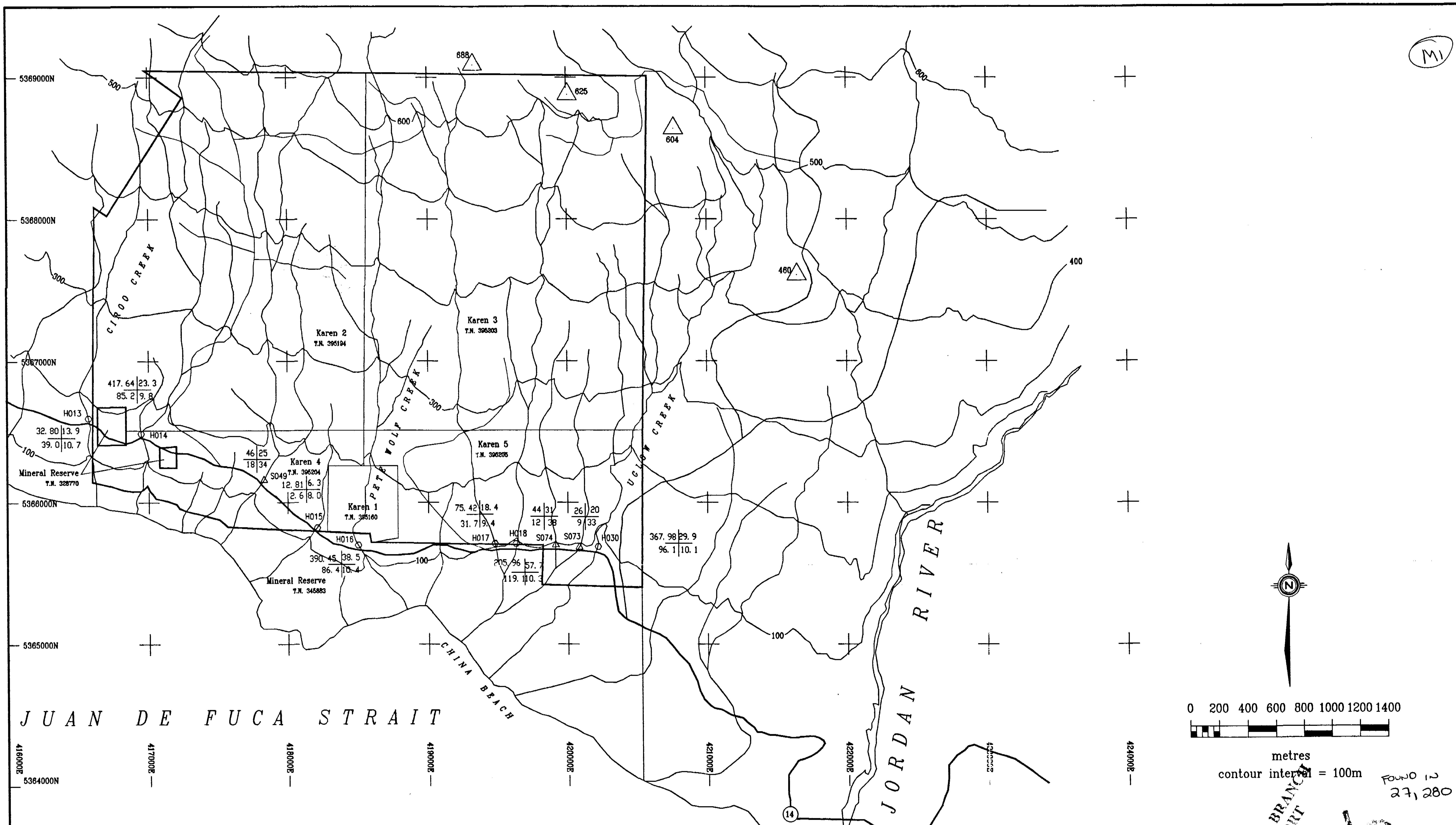
C C C



Magnetometer Survey
Line 3
57000
55500
54000
nT
2000N
1920N
1840N
1760N
1680N
1600N
1520N
Station



VLF-EM Survey
Line 3
50
-50
-150
-250
%
2000N
1940N
1880N
1820N
1760N
1700N
1640N
1580N
1520N
Station
Hawaii
Seattle



M1

FOUND IN 27,280

Heavy Mineral (-80HN) Sample Location

H032

Value in ppm copper — 308. 52 | 62. 3 — Value in ppm nickel

Value in ppm cobalt — 95. 2 | 11. 4 — Value in ppm chromium

-80HN: -80 mesh, >3.2 sg, nonmagnetic fraction

Silt Sample Location

S081

Value in ppm copper — 56 | 30 — Value in ppm nickel

Value in ppm cobalt — 15 | 35 — Value in ppm chromium

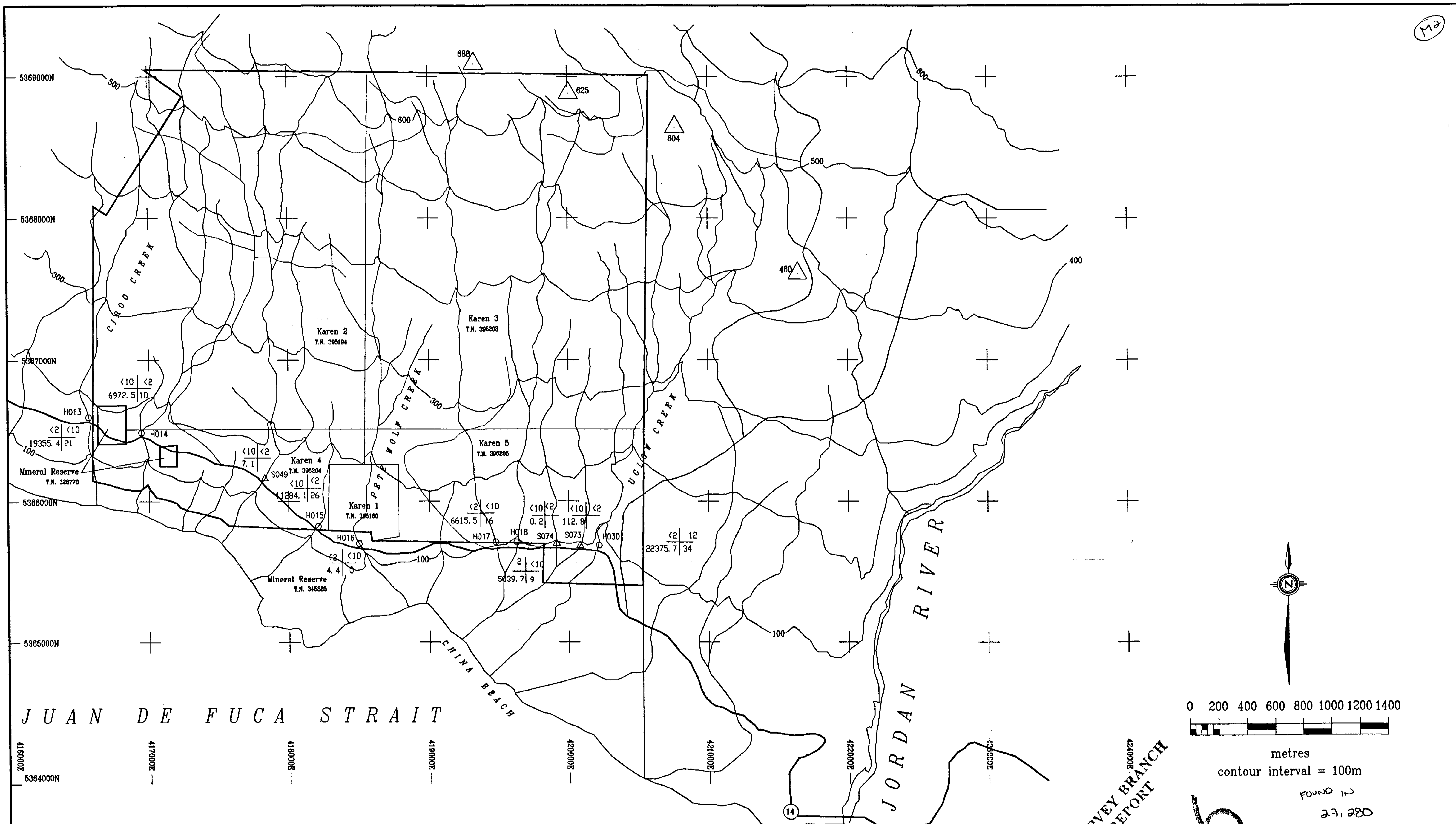
DRAWN:		June 4/2003
REVISION DATE	REVISED BY	REVISION
Sept14/2003	RM	Data HM + Silt
Path:		C:\726\Karen

DISCOVERY Consultants

Emerald Fields Resource Corp.

Karen Property
Stream Sediment Sampling
Cu, Ni, Co, Cr Values

Location: Jordan R.		Mining Jurisdiction: Victoria	
Datum: NAD83	Map Ref.: 092C.050	Scale: 1:20000	UTM: 10
Project: 726	Date: June 4/2003	Drawn By: RM	Figure: 9b



FOUND IN 27,280

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

27216

○ H032 Heavy Mineral (-80HN) Sample Location

Value in ppb palladium — Value in ppb platinum

Value in ppb gold — Value in micrograms gold

(2 | 10 / 3.8 | 0)

-80HN: -80 mesh, >3.2 sg, nonmagnetic fraction

△ S081 Silt Sample Location

Value in ppb palladium — Value in ppb platinum

Value in ppb gold

(10 | <2 / 1.5)

DRAWN:		June 4/2003
REVISION DATE	REVISED BY	REVISION
Sept14/2003	RM	Data HM + Silt
Path:		C:\726\Karen

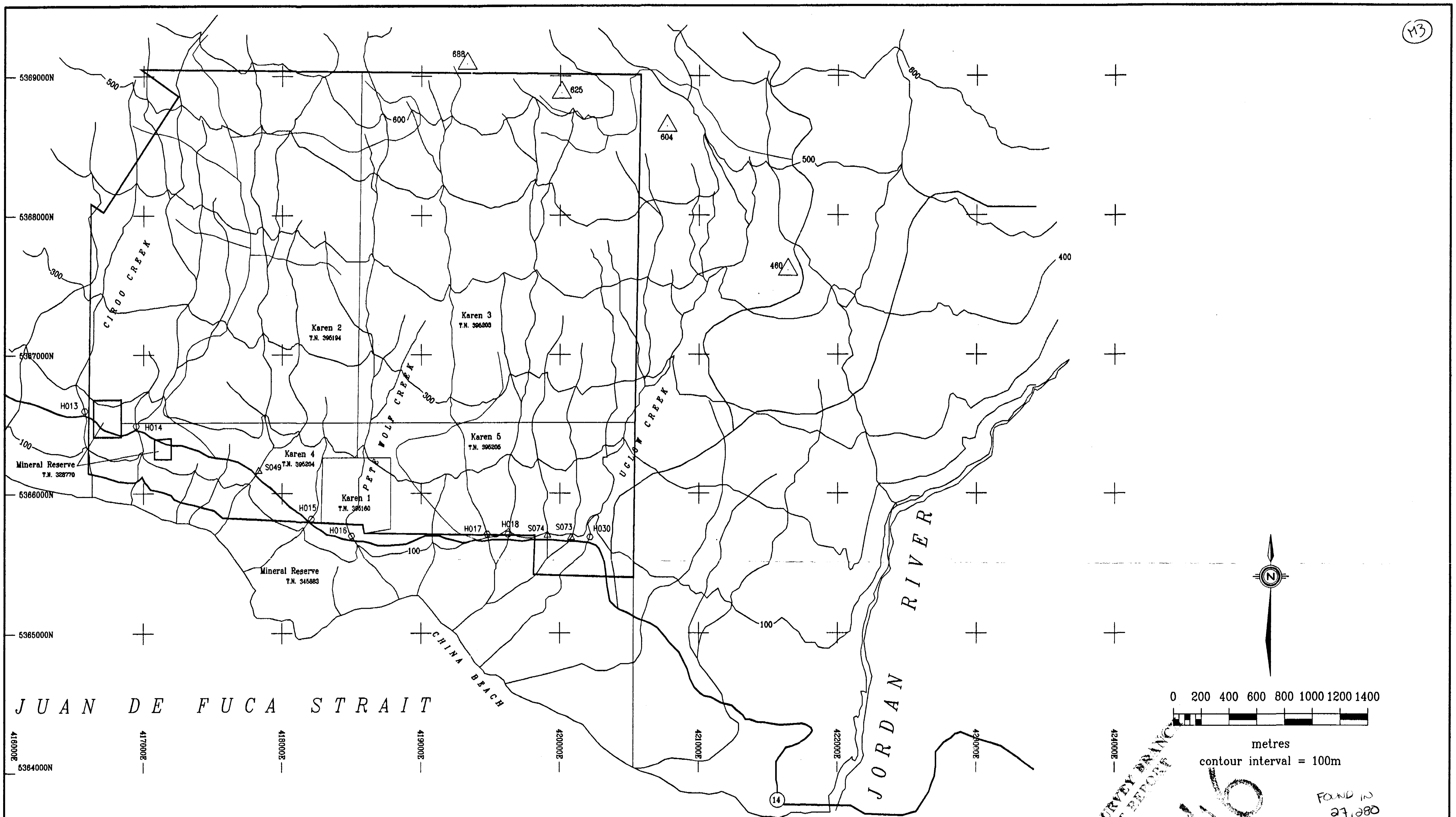
DISCOVERY Consultants

Emerald Fields Resource Corp.

Karen Property
Stream Sediment Sampling
Pt, Pd, Au Values

Location: Jordan R.		Mining Jurisdiction: Victoria	
Datum: NAD83	Map Ref.: 092C.050	Scale: 1:20000	UTM: 10
Project: 726	Date: June 4/2003	Drawn By: RM	Figure: 8b

PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA W. R. GILMOUR



○ H032 Heavy Mineral (-80HN) Sample Location

△ S081 Silt Sample Location

DRAWN:	June 4/2003	
REVISION DATE	REVISED BY	REVISION
Sept14/2003	RM	Data HM + Silt
Path:	C:\726\Karen	

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

27,146

FOUND IN 27,280

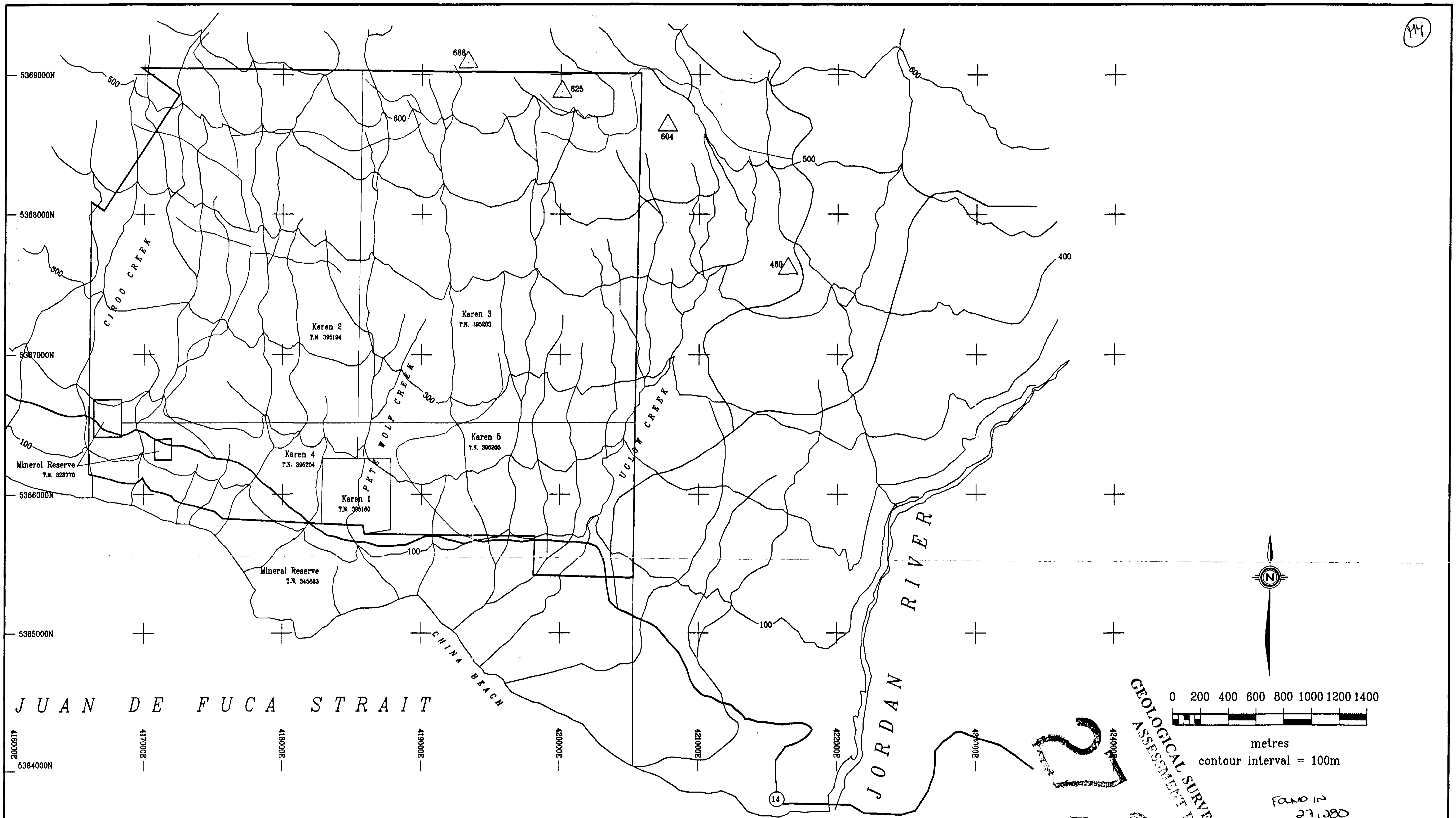
DISCOVERY Consultants

Emerald Fields Resource Corp.

Karen Property
Stream Sediment Sampling
Sample Location Map

PROFESSIONAL PROVINCE OF W. R. GILMOUR BRITISH COLUMBIA GEOSCIENTIST

Location: Jordan R.		Mining Jurisdiction: Victoria	
Datum: NAD83	Map Ref.: 092C.050	Scale: 1:20000	UTM: 10
Project: 726	Date: June 4/2003	Drawn By: RM	Figure: 7b



GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,280

FOUND IN 27,280

DRAWN:	June 4/2003	
REVISION DATE	REVISED BY	REVISION
Sept14/2003	RM	Data HM + Silt
Path:	C:\726\Karen	

PROFESSIONAL PROVINCE OF W. R. GILMOUR BRITISH COLUMBIA GEOSCIENTIST

DISCOVERY Consultants

Emerald Fields Resource Corp.

Karen Property
Claim Location Map

Location: Jordan R.	Mining Jurisdiction: Victoria		
Datum: NAD83	Map Ref.: 092C.050	Scale: 1:20000	UTM: 10
Project: 726	Date: June 4/2003	Drawn By: RM	Figure: 3b