

**GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL  
ASSESSMENT REPORT**

**JASON CLAIM GROUP**

**New Westminster Mining Division**

**Lat. 49° 33' 20", Long. 121° 42'**

**NTS 92/H/12 (NTS)**

**92H052 (BCGS)**

**By**

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**Work done from**

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**GEOLOGICAL SURVEY BRANCH  
SHERBROOKE OFFICE**

**26,510**

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## MAPS (In Pocket)

- Drawing 1: Geology
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## ASSESSMENT REPORT JASON CLAIM GROUP

### INTRODUCTION

The following paragraphs describe the results of work that was done in 2000 on the Jason claim group. The work includes detailed geology, multi-media geochemical sampling and analysis, and results from magnetometer and self potential surveys. In 1999 the claim group consisted of claims Jason 1 to 12. This year (2000) six additional claims were staked to form a total of 18 claims. The report herein presented describes new detailed data, which lead to the staking of additional claims and describes two self potential anomalies which could be caused by a massive sulphide occurrence. Consequently, this years work has defined a possible drill target on the Jason claims.

### LOCATION AND ACCESS

The Jason claim group is now composed of 18 contiguous claims. They lie within the New Westminster mining division in the east half of NTS map sheet 92H (92H/12~~3~~) (BCGS index, 92H052). Figure 1 illustrates that the claims lie north-northeast of Harrison Hot Springs. Access to the claims is via 28 kilometres of winding, mainly unpaved road along the east shore of Harrison Lake to Lakeside Pacific's log sorting yard and administration office at Bear Creek camp. The yard lies on the east shore of Harrison Lake directly southwest of the Junction of Cogburn and Talc Creeks. From the yard, a logging road runs the length of Cogburn Creek. At a distance of approximately 7.4 kilometres from the yard, along the Cogburn Creek logging road, a section of deactivated logging road branches off to the southeast and provides access to an old timber bridge crossing Cogburn Creek. Although deactivated, this road is accessible by 4x4 vehicle to the bridge. Drawing #1 (in pocket) shows this logging road and illustrates that it is about a 450 metre walk to the claims from the bridge.

Three of the claims straddle Cogburn Creek and three lie on the north side of Cogburn Creek, but the remainder lie on the south side of the creek on the steeply sloping valley wall. Timber on claims Jason 5 & 7 has been clearcut but second growth is extensive and well established in the remainder of the claims. Property elevation ranges from approximately 200 metres at Cogburn Creek to 1100 metres at the southern extent of the claims. Drawing #1 illustrates that access to the claims is possible by means of two trails (old logging roads) which may be traversed by walking. Because of the steep slopes and dense undergrowth, access to many of the claims is difficult.

Maps: Drawings #1, 2 & 3 were constructed from a 1:20,000 scale TRIM map expanded to 1: 5000 scale by scanning and enlarging the map. Air photos at a scale of 1:20,000 were used to locate logging roads and geographic features. Ground measurements were made using GPS instruments, Brunton compass and hip chain.

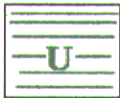
# FIGURE 1 INDEX MAP & GENERAL GEOLOGY

## Cenezoic & Mesozoic: Tertiary & Cretaceous



Granite, Quartz Diorite, Granodiorite

## Mesozoic: Middle & Late Cretaceous

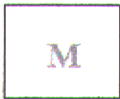


Ultramafic Intrusions including:

Diorite, Norite, Gabbro, pyroxenite, hornblendite, peridotite, dunite

Peridotites and dunites may be altered to serpentinite

## Paleozoic: Carboniferous or Permian (Chilliwack Group)



Chilliwack Group includes:

Metasedimentary rocks: argillite, slate, phyllite, cherty to arenaceous

Metavolcanic rocks: fine grained metavolcanic rocks with disseminated pyrite

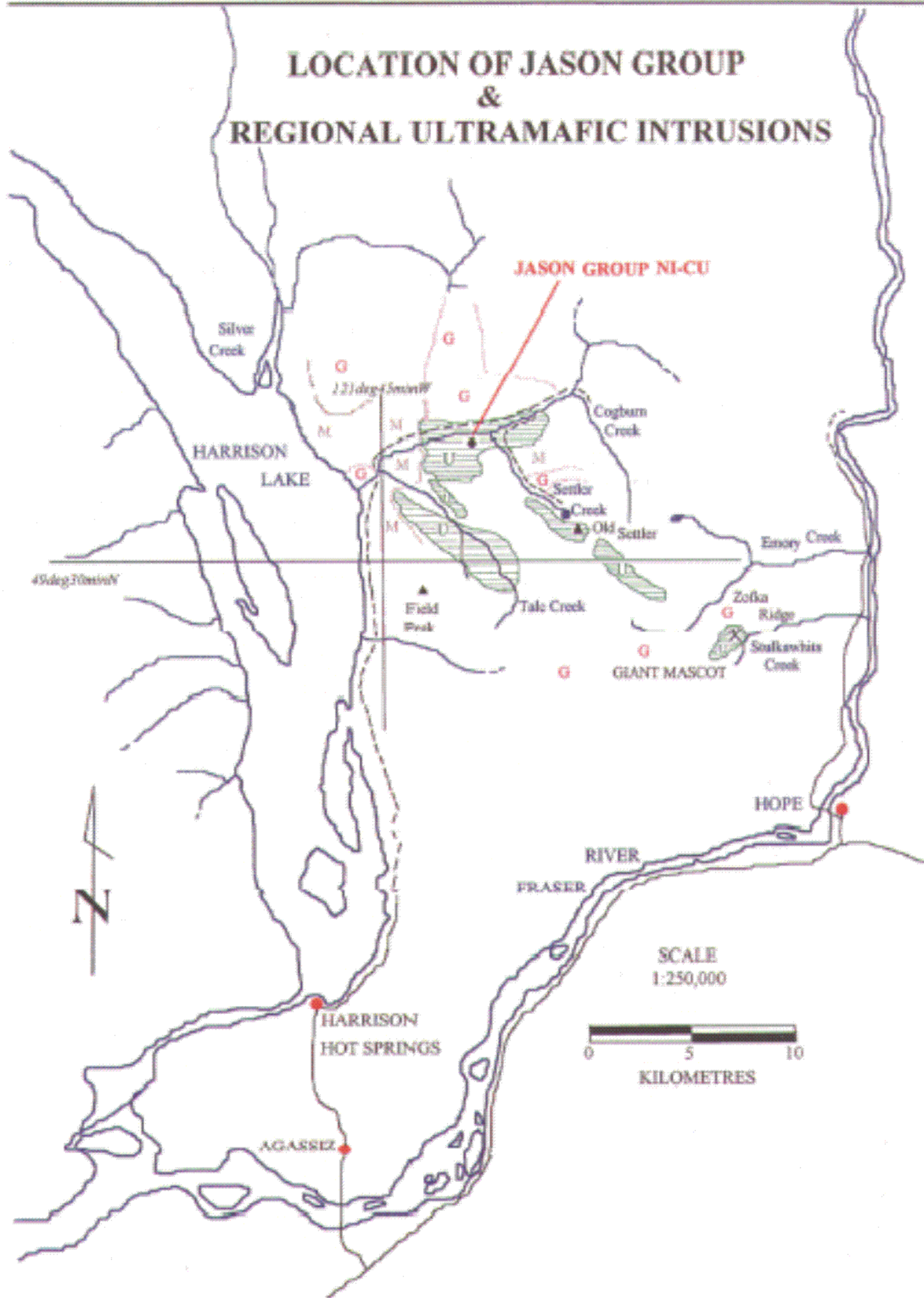
### REFERENCES:

Eastwood, G.E.P. 1972, Ni; B.C. Ministry of Energy, Mines and Petroleum Resources; Geology Exploration and Mining in British Columbia; pp258-264.

Haughton, D.R., 1999, Unpublished report

Monger, J.W.H., 1989, Geology, Hope, British Columbia; Geological Survey of Canada, Map 41-1989.

# LOCATION OF JASON GROUP & REGIONAL ULTRAMAFIC INTRUSIONS



## EXPLORATION TARGETS

The prospecting targets are mineral deposits containing massive and disseminated nickel and copper bearing sulphides that have crystallized from a liquid Fe-S-O melt, immiscible with a host magmatic silicate liquid. These deposits are presumed similar to those found in the Giant Mascot Mine about 10 kilometres north of Hope at the eastern end of the Nickel Belt.

## COMMODITIES

Geology studies in this report indicate that the prospect area and the Giant Mascot mine are in the same zone of ultramafic rocks. Therefore, ore values at the Giant Mascot are considered to indicate economic metal values to be found in the sulphide mineral deposits of the prospect area.

Nickel and copper were the prime metallic products at the Giant Mascot mine, with ore averages grading 0.77 per cent nickel and 0.34 per cent copper. Principal ore minerals, at the Giant Mascot, hosting nickel and copper were pyrrhotite, pentlandite, and chalcopyrite.

Literature review indicates that platinum and palladium associated with sulphide ore at the Giant Mascot have reported grades of approximately 3 to 4 grams per tonne of platinum and palladium and 1 to 8 grams per tonne of gold. Not only platinum, palladium and gold were present but also cobalt, chromium, and silver were present in the ore in economic quantities.

In summary, exploration efforts using geology, geophysics and geochemical analysis can be directed to locate platinum, palladium, gold, nickel and copper as primary commodities.

## DEPOSIT TYPE

The claims are included in the northwest extension of the ultramafic intrusive units that host the Giant Mascot mine. Table 1 lists the Minfile occurrences related to this zone of ultramafics and therefore to the Giant Mascot Mine. These occurrences are scattered along a zone extending from American Creek (north of Hope) to the junction of Cogburn and Talc Creeks on the east shore of Harrison Lake.

**Table 1: Minfile Cu-Ni Occurrences Within the Hope to Harrison Lake Ni Belt (92HW).**

MINFILE #	NAME	COMMODITIES	MINFILE CLASSIFICATION
092HNW039	VICTOR NI	Ni, Cu	Tholeiitic Intrusion -hosted
092HNW040	AL	Cu, Ni	Tholeiitic Intrusion -hosted
092HNW045	SETTLER CREEK	Ni, Cu	Tholeiitic Intrusion -hosted
092HNW046	CITATION	Ni, Cu, Zn	Tholeiitic Intrusion -hosted
092HSW004*	PRIDE OF EMORY*	Ni, Cu, Au, Ag	Tholeiitic Intrusion -hosted
092HSW005	BEA	Ni, Cu	Tholeiitic Intrusion -hosted
092HSW081	NI	Ni, Cu	Tholeiitic Intrusion -hosted
092HSW082	SWEDE	Ni, Cu	Tholeiitic Intrusion -hosted
092HSW093*	STAR OF EMORY*	Ni, Cu, Cr, Pt, Pd	Tholeiitic Intrusion -hosted
092HSW125*	CHOATE*	Ni, Cu, Cr, Co	Tholeiitic Intrusion -hosted

\* These deposits form part of the Giant Mascot Mine

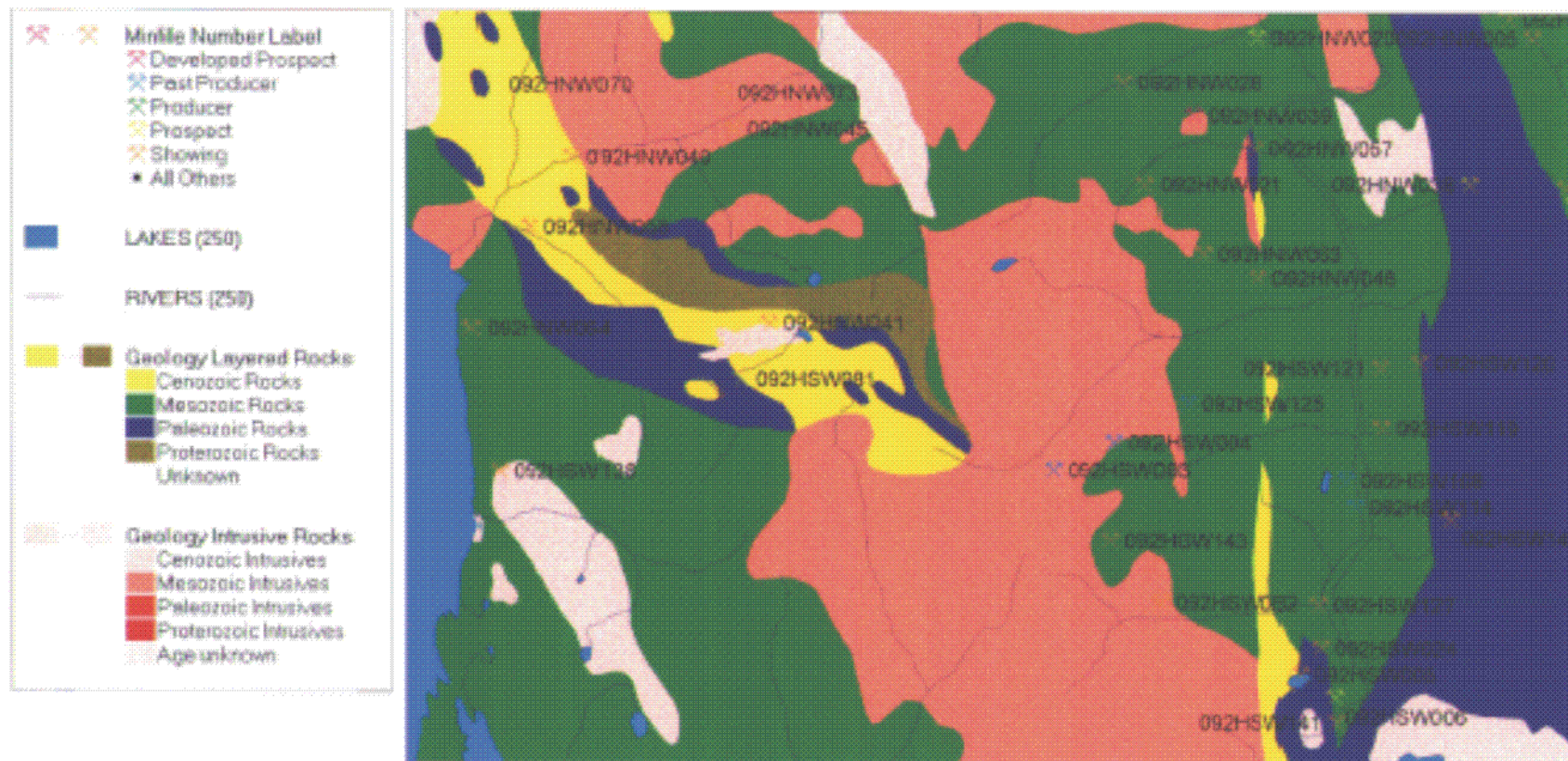
**Figure 2: Minfile occurrences related to the prospect area.**

- 1) Victor Ni (092HNW039)
  - 2) Al (092HNW040)
  - 3) Settler Creek (092HNW045)
  - 4) Citation (092HNW046)
  - 5) Pride of Emory (092HSW004)\*
  - 6) BEA (092HSW005)
  - 7) NI (092HSW081)
  - 8) Swede (092HSW082)
  - 9) Star of Emory (092HSW093)\*
  - 10) Choate (092HSW125)\*
- (All of the above are Cu-Ni deposits related to ultramafic intrusions.)
- 11) North Fork-Besshi massive sulphide Cu-Zn in Chilliwack metasediments (092HNW070)
  - 12) Cogburn Creek – Kyanite and sillimanite in schists (092HNW073)
  - 13) Ox – Cu-Au-Ag skarn deposit (092HNW041)

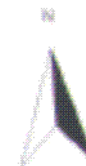
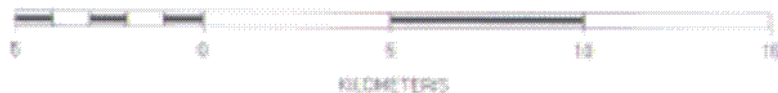
\* Note the Giant Mascot Mine is located on Zofka Ridge 9.6 Km northwest of Hope.



# B.C. Ministry of Energy and Mines



SCALE 1 : 200,000



All of the Minfile occurrences listed are described by the provincial geological survey as tholeiitic intrusion-hosted Ni-Cu deposits, indicating the uniformity of mineralization associated with this zone of mafic intrusions. Three of these Minfile occurrences formed part of the Giant Mascot Mine.

## GEOLOGY OF THE GIANT MASCOT DEPOSITS

The Giant Mascot deposits lie 9.6 km northwest of Hope, in Zofka Ridge, between Emory Creek on the north and Stulkawhits Creek on the south. The Giant Mascot mine lies within a northwest trending belt of basic to ultramafic intrusive rocks. This distinctive assemblage is hereafter referred to as the Hope to Harrison Lake Nickel Belt or simply the Nickel Belt. The mine has changed names during its evolution. Such names include: Pride of Emory, Giant Mascot, Giant Nickel, B.C. Nickel, Pacific Nickel, Western Nickel. The mine has the distinction of having been the only significant economic producer of Nickel within B.C.

From 1958 to 1974, approximately 4,315,296 tonnes of ore was mined from this property. Nickel and copper were the prime metallic products with the ore grading 0.77 per cent nickel and 0.34 per cent copper with cobalt as a byproduct. However, chromium oxide, platinum, gold and silver are also present (Minfile Assessment Report 16553). Higher grades of both Ni and Cu occur within ore zones at the mine. For example, in 1936, eighteen samples of ore were taken by the Mines Branch from several different sulphide bodies. Analysis yielded an average of 18.38 per cent iron, 1.89 per cent nickel, 0.14 per cent cobalt, 0.31 per cent chromium, 10.87 per cent sulphur, 0.7 per cent copper and only a trace of arsenic (Minister of Mines Annual Report 1936, page F64). One 22.7 tonne bulk sample averaged 2.74 grams per tonne platinum and palladium and 0.68 grams per tonne gold. In 1937, B.C. Nickel Mines had developed 1.2 million tons of ore at 1.38 per cent nickel and 0.5 per cent copper (B.C.GEM, 1974, pg.105). Early records of samples of ore yielded 3.98 grams per tonne platinum and palladium and 7.89 grams per tonne gold. The chromium content of the ore averaged 0.2 to 0.4 per cent (Minfile report 092HSW004). Aho (1952) lists estimates of developed ore for the various orebodies in the mine. Percentage Cu ranged from 0.36 to 0.77. Percentage Ni ranged from 0.92 to 2.37. The mine closed in 1974 with reserves of 863,000 tonnes grading 0.75 per cent nickel, 0.3 per cent copper and 0.03 per cent cobalt. The cumulative nickel and copper production from the mine was 26.8 million kilograms of nickel and 14 million kilograms of copper (Nixon & Hammack, 1991) from 26 distinct orebodies.

Knowledge of the origin of the deposit is embodied in its classification or type. A clear understanding of the origin of the targeted ultramafic deposits and their associated sulphides will greatly assist in the future location of these deposits. The target deposits are magmatic ultramafic intrusives containing sulphides which when emplaced had separated as an immiscible iron-sulphur-oxygen liquid from an ultrabasic silicate melt. This type of deposit is classified simply as a Ni-Cu magmatic deposit. The deposits at the Giant Mascot Mine are crudely zoned, steeply dipping, intrusions, which in some cases are roughly concentric in cross section. Petrologic descriptions of associated rock types include: peridotite, olivine pyroxenite, pyroxenite, hornblendic pyroxenite, hornblendite and gabbro. Crude zonation from a peridotite core to a hornblendite rim has been observed in some of the deposits. However, in some deposits reverse zonation also occurs. Therefore, the core of the orebody may be olivine barren or else olivine rich (Muir, 1971). The ore bodies are close to vertical in orientation, are pipelike in form and have diameters of approximately 10 to 50 meters.

Unlike Alaskan type intrusions, at the Giant Mascot, the orebodies contain abundant orthopyroxene in ultramafic rocks. Because of the orthopyroxene content, the gabbro present may be classified as norite as found in other Cu-Ni deposits such as the Sudbury or the Lynne Lake deposits. Because of the presence of Ca poor pyroxene and orthopyroxene in ultramafic rocks, the lack of podiform chromite deposits and the high content of nickel sulphide, the deposit is not classified either as an Alpine ultramafic or as an Alaskan ultramafic complex. However, because of the pipelike form, the deposits of the Giant Mascot are structurally similar to the Alaskan type deposits emplaced in an orogenic environment. Nixon and Hammack, 1991, describe the Giant Mascot as a synorogenic-synvolcanic Cu-Ni gabbroid associated deposit. They state that Rana (Norway) and Moxie (U.S.A) are deposits in this same classification.

Review of the literature indicates that faulting exhibits some significant control on this type of deposit. Also ore association with brecciation has been mentioned briefly in some reports. Four fault systems have been recognized (Clarke, 1971). One fault group striking  $N45^{\circ}-5^{\circ}W$  and dipping  $50^{\circ}-75^{\circ}NE$  is concluded to be pre-ore in age, with minor post ore movement. The second group of faults ( $N15^{\circ}-30^{\circ}E$ ,  $70^{\circ}SE-70^{\circ}NW$ ) are closely associated with tabular ore bodies. The faults of group three ( $N10^{\circ}W-10^{\circ}E$ ,  $55^{\circ}E-55^{\circ}W$ ) are considered related to the second group and are common to all mineralized zones examined. The above three fault systems are all considered pre-ore and are postulated, by Clarke, to have established complicated zones of fracturing favourable to ore deposition. A fourth fault system ( $N30^{\circ}W-N30^{\circ}E$ ,  $20-30^{\circ}E$  or  $W$ ) is considered to be post ore. It has been reported that certain ore shoots have terminated against this fault type.

## REGIONAL GEOLOGY

Figure 1 and Figure 3 illustrate the geology of the area. The regional geology is complex as the area contains unconsolidated surficial deposits and metasedimentary rocks, metavolcanic rocks, acid-igneous rocks and basic to ultrabasic intrusive rocks. The surficial deposits include alluvium, colluvium, glacial-fluvial and glacial deposits. Rock types are granodiorite, quartz diorite, diorite, gabbro, hornblendite, hornblende pyroxenite, pyroxenite, peridotite, metavolcanics and metasediments.

Thick surficial deposits mantle more than sixty per cent of the bedrock to depths greater than 30 metres in the valley bottoms. Much thinner deposits occur on higher slopes where outcrop is more abundant.

Dioritic rocks of the Spuzzum pluton surround the mafic and ultramafic intrusive rocks of the prospect area. The mafic and ultramafic igneous rocks intrude metapelites, shale, slate and pyrite bearing metasediments. These metasedimentary rock types have been mapped in larger quantities south and north of the Nickel Belt. The Nickel Belt is truncated on the west by the right-lateral strike-slip Harrison Lake fault (Late Cretaceous to Tertiary) and on the east by the Fraser River fault (25 Ma).

**FIGURE 3**  
**EXPLANATION: GEOLOGY TALC-COGBURN CREEK AREA**

Recent and Quaternary Deposits



Alluvium or fluvial deposits, colluvium, glaciofluvial deposits, glacial till

Cenozoic: Tertiary (Oligocene)



Granite, quartz diorite, granodiorite, diorite

Mesozoic: Middle to Late Cretaceous



Quartz diorite and granodiorite (Settler Creek body of Spuzzum Pluton)

Mesozoic: Middle Cretaceous



Dunite, peridotite, pyroxenite, hornblende, gabbro, diorite, altered pyroxenite & peridotite

Mesozoic: Early to Middle Cretaceous



Shale, phyllite and schist with local metavolcanic and metadiorite (Slovicum Schist)

Mesozoic: Triassic



Arenaceous metasediment, shale and schist with abundant pyrite (Settler Schist)

Paleozoic: Carboniferous



Shale and schistose metasediment (Cogburn Group, tectonic mélange)

Paleozoic and Proterozoic



Metavolcanic and Metadiorite (includes Baird Diorite in Settler Mountain)

Symbol

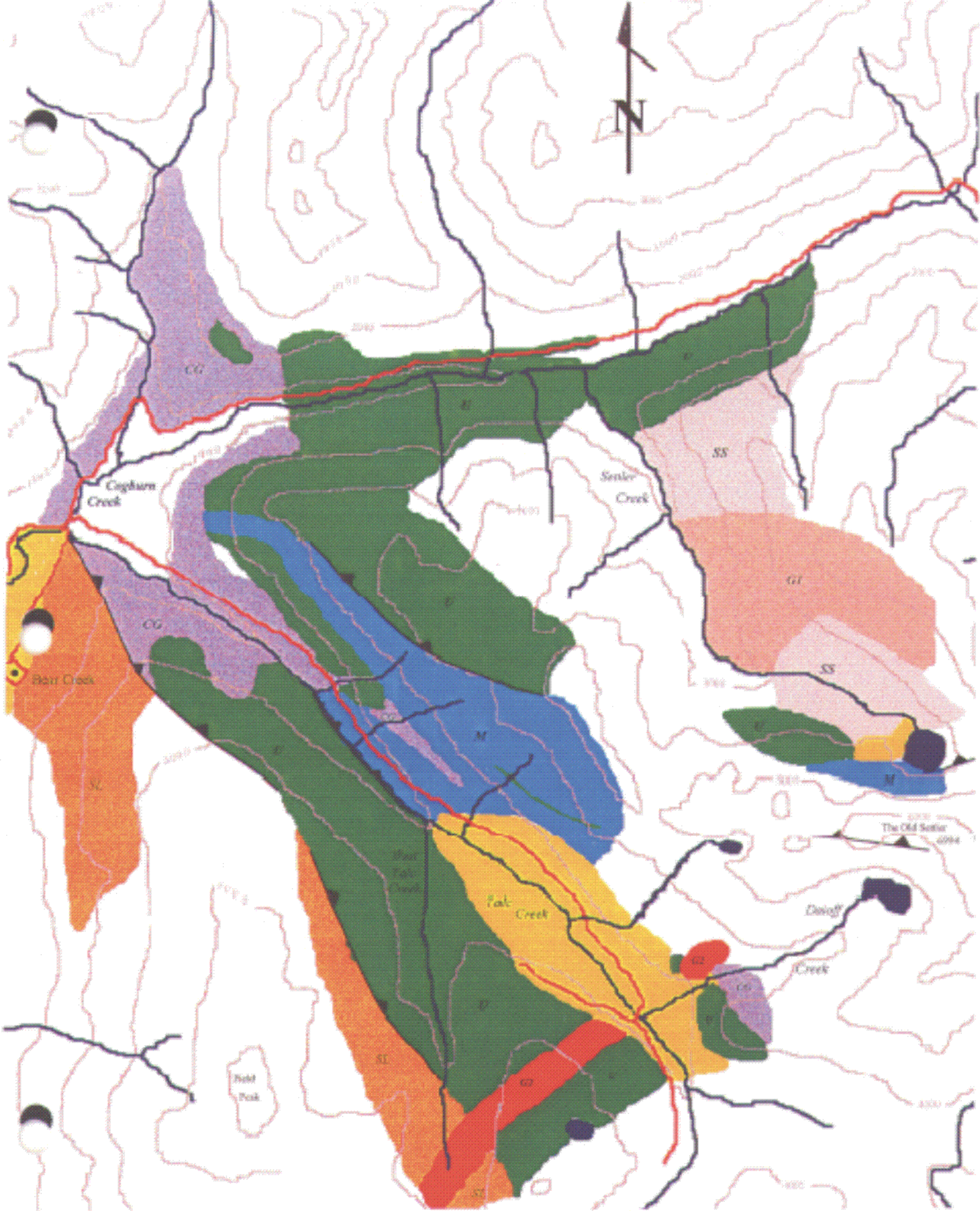
Thrust Fault



Scale & Contour Interval

Scale: 1:50,000  
 1 inch = 0.79 miles; 1 centimetre = 0.5 kilometres

Contour Interval: 1000 feet



The oldest rocks in the area are the metasediments and the metavolcanics. The metasediments occur in the Slollicum Schist, the Settler Schist and the Cogburn Group. These metasediments range in age from early Cretaceous to Carboniferous. The specific age of the metavolcanics is unknown. However, Figure 3 illustrates that they have been included with the Baird Diorite of Settler Mountain. This group may range in age from Paleozoic to Proterozoic. The Baird Diorite in the old Settler Mountain is Precambrian (Monger, 1989). The age of the basic intrusive rocks which host the nickel and copper bearing sulphides was estimated by McLeod (1975) to be 119Ma (Middle Cretaceous). The age of the Spuzzum batholith was estimated as 89 Ma (McLeod, 1975). The former ultramafite was considered to represent the earliest phase of the predominately dioritic Spuzzum pluton (Monger, 1989). Within the Cogburn to Talc Creek area, Lowes (1972) mapped the ultramafic rocks as being separated into subparallel segments by the Shuksan Fault Zone, shown in Figure 3. The age of this thrust fault was stated to be Albian (Gabites, 1985) (Middle Cretaceous, 97.5 to 113 Ma).

High magnetic relief occurs to over 3,500 gammas throughout the area and over the Giant Mascot deposit. This was determined from an airborne magnetometer survey, flown at 300 ft. (1970), for the Ni Syndicate, an exploration group formed by the Giant Mascot mine (1969-1974). Magnetite in the peridotite was observed by the Ni Syndicate geologists and is considered the probable cause of the high magnetic relief. Metasediments and biotite phase diorite exhibit lower relief in the 1500 to 2000 gamma range.

## PREVIOUS WORK

### Prospecting 1999

In 1999 the author conducted a prospecting program to define target areas for more detailed work in the area drained by the Cogburn and Talc Creeks (Figure 1). As a result, 12 claims, the Jason claims were staked (Figure 4). Rock samples (float and outcrop) were so abundant that they were collected as the primary sample type throughout the area. Sample type, location and description were recorded on field cards. Samples from areas of favourable rock type (ultramafic rocks) and potential Ni-Cu mineralization were collected. From these samples a suite of samples from potential exploration targets were analyzed by ICP multi-element analysis. Polished thin sections were made of samples from a new Ni-Cu mineral occurrence in ultramafic rocks on the Jason claims. These sections were examined by an independent expert in the microscopic determination of ore minerals, Dr. J. Lusk. Examination of the polished thin sections indicated that the sulphides discovered were of magmatic origin. Twelve two-post claims, the Jason claims, were staked in the area where new sulphide mineralization had been discovered.

### Polished Thin Section Examination:

Examination of polished thin sections of hornblende pyroxenites, (D.R. Haughton, 1999 assessment report) shows evidence that sulphides from the Jason claims are magmatic in origin. The photomicrographs clearly show sharp grain boundaries between pyrite, pyrrhotite, chalcopyrite, and pentlandite. Pentlandite grains and exsolution textures showing flame texture where pentlandite has exsolved from pyrrhotite are indicative that nickel is contained in sulphides rather than just in silicate minerals. Textures showing sulphides interstitial to silicate phases are clearly shown. In addition, in other samples, circular cross sections of sulphides show clearly that immiscible sulphide globules have been trapped during quenching from a sulphur-saturated melt. These textural relationships are similar to those seen at Sudbury where sulphides are magmatic in origin. Consequently, the mineralogy and textural relationships confirm that the sulphide phases are magmatic in origin.

**Ore Dogs in Sulphide Exploration:**

In 1962, Dr. A. Kahma of the Geological Survey of Finland initiated the use of dogs to detect weathered sulphide bearing boulders. Since that time, dogs were trained in Finland, Sweden and Russia to detect sulphides during prospecting programs. Reports indicate that the governments of Finland and Sweden used dogs for about 20 years with great success.

As part of the preparation for prospecting the project area, the author trained an Alsatian dog as an "ore dog". After initial reconnaissance of the prospect area, and after target areas were defined for prospecting, the ore dog was brought into the area and used as part of the prospecting team. Subsequently, the dog played an important role in detecting mineralized boulders that lead to the staking of the Jason claims in 1999.

**EXPLORATION RESULTS 2000**

In 2000 the author conducted a follow-up exploration program to evaluate targets defined in 1999 and to evaluate in more detail the 12 Jason claims and a new discovery of magmatic Cu-Ni mineralization. Samples collected outside of the Jason Claims were outcrop samples. Samples collected from the Jason Claims included outcrop, float, overburden and stream sediment samples. Sample type, location and description were recorded on field cards. Summary descriptions are listed in Tables 2, 3, and 4. From these listed samples, a suite of samples were analyzed.

**Sample Location Maps**

Sample location maps were prepared from 1:5,000 scale maps of the Jason Claims. The resulting maps are presented in and Drawings #2 and #3.

**Figure 4: Location of the Jason claims.**

**Scale 1: 31,680 (approx.)**

**1cm = 316.8 metres**



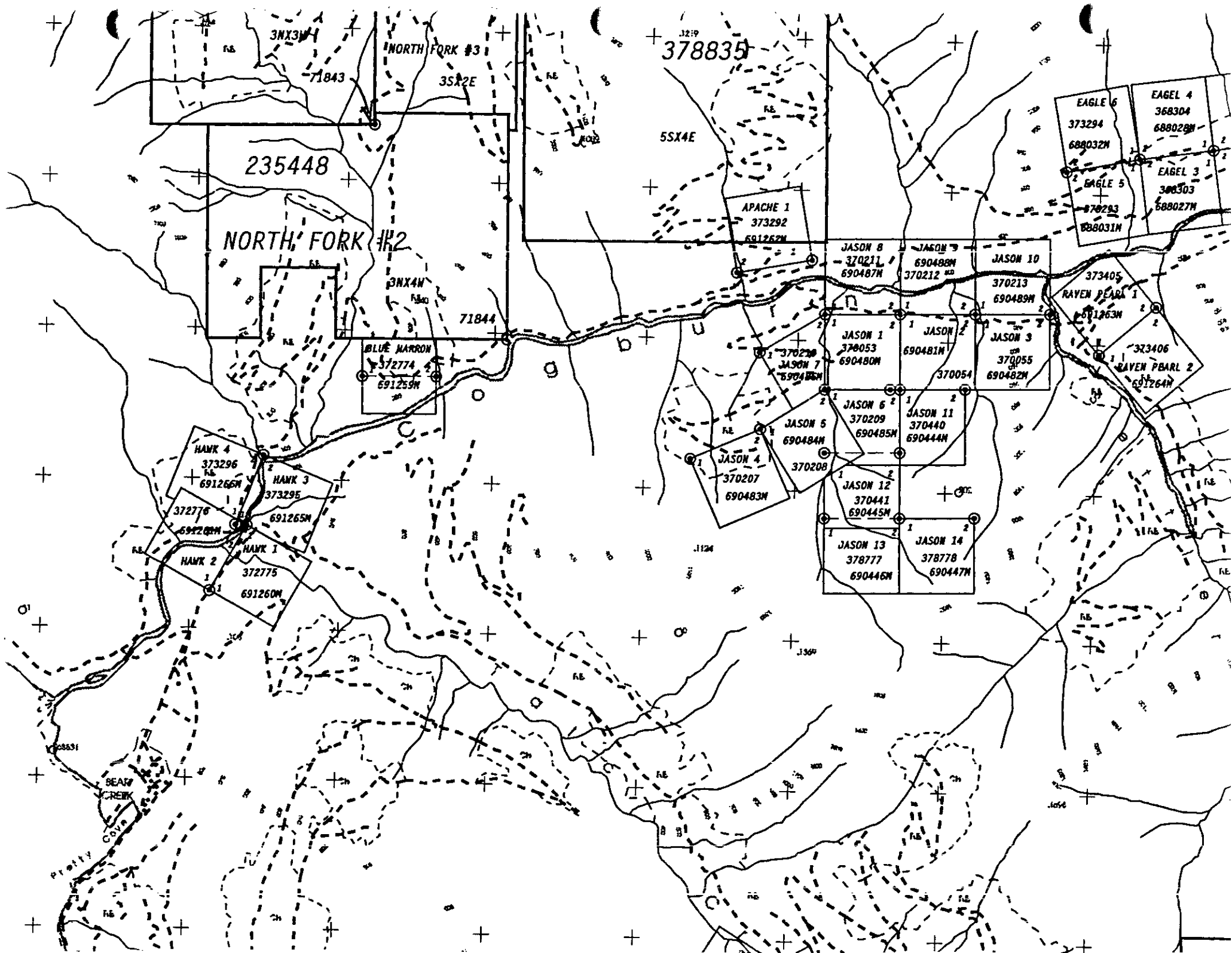


TABLE 2 - OUTCROP AND FLOAT SAMPLES COLLECTED IN 2000

NO.	DATE	SOURCE	GRAIN SIZE	COLOUR	ROCK NAME	DESCRIPTORS	MINERALS	REMARKS
1	12-Jul	out.rop	coarse	pale brown yellow	altered peridotite	massive altered		
3	14-Jul	out.rop	coarse	dark green black	hornblende	massive altered	pyrrhotite	
4	14-Jul	float	coarse	dark green black	hornblende	massive altered	pyrrhotite	
6	14-Jul	out.rop	coarse	dark green black	hornblende	massive altered	pyrrhotite	
7	14-Jul	float	coarse	dark green	hornblende	altered	pyrrhotite	
9	14-Jul	out.rop	coarse	dark green	hornblende	altered	pyrrhotite	
10	14-Jul	float	coarse	dark green brown	hornblende	sheared altered	pyrite	abundant sulphides on shear face
12	15-Jul	out.rop	coarse	dark green gray	hornblende	fresh	pyrrhotite	
13	15-Jul	float	coarse	dark green brown	hornblende	altered	pyrrhotite	
14	15-Jul	float	coarse	dark brown	hornblende	altered	chalcopyrite pyrrhotite	
16	15-Jul	out.rop	coarse	dark green brown	hornblende	altered	pyrrhotite	
17	15-Jul	float	coarse	dark green	hornblende	massive altered		
19	15-Jul	out.rop	coarse	dark green	hornblende	altered	pyrrhotite	
20	15-Jul	float	coarse	dark green	hornblende	altered	pyrrhotite	
21	15-Jul	out.rop	fine	medium green	metavolcanic	sheared	pyrite	contains pyrite in shear zones
22	15-Jul	out.rop	fine	medium green	metavolcanic	sheared altered	pyrite	
23	15-Jul	out.rop	fine	medium green	metavolcanic	sheared altered	pyrite	
24	15-Jul	float	fine	medium green	metavolcanic	sheared altered	pyrite	
25	15-Jul	out.rop	fine	medium green	metavolcanic	sheared altered	pyrite	
26	15-Jul	out.rop	fine	medium green	metavolcanic	sheared altered	pyrite	
27	15-Jul	float	coarse	pale green	peridotite	altered		yellow brown gossanous surface
28	15-Jul	float	fine	medium green	metavolcanic	sheared altered	pyrite	
29	15-Jul	out.rop	medium	dark green black	peridotite	massive altered		
30	16-Jul	out.rop	coarse	dark green gray	hornblende	massive fresh		hornblende breccia
31	16-Jul	out.rop	coarse	dark green gray	peridotite	massive fresh		
32	16-Jul	out.rop	medium	dark green gray	peridotite	brecciated fresh		no sulphides observed
33	18-Jul	out.rop	medium	medium green gray	peridotite	brecciated fresh	pyrrhotite	contains magnetite test for chrome
34	19-Jul	float	medium	dark green black	hornblende	altered	pyrrhotite	small amount of disseminated pyrrhotite
36	19-Jul	out.rop	medium	pale red white	leucodiorite	massive altered		
37	19-Jul	float	coarse	black	hornblende	massive altered	chalcopyrite pyrrhotite	
39	19-Jul	out.rop	medium	dark brown black	hornblende	massive altered		no visible sulphides although rusty surface
40	19-Jul	float	coarse	dark green black	hornblende	massive altered	chalcopyrite pyrrhotite	good specimen showing dissem. Sulphides
41	19-Jul	float	coarse	dark green black	hornblende	massive altered	chalcopyrite pyrrhotite	sulphides sparse & disseminated
43	19-Jul	float	coarse	dark green black	hornblende	massive fresh	chalcopyrite pyrrhotite	good specimen for thin section abund. sulph.
44	19-Jul	out.rop	fine	dark white & black	hornblende	massive sheared altered		
47	19-Jul	float	coarse	black	hornblende	fresh	chalcopyrite pyrrhotite	sparse disseminated sulphides
48	20-Jul	float	medium	dark gray	peridotite	massive fresh		interior fresh outside altered
49	20-Jul	float	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
50	20-Jul	float	all sizes	dark green	teconic breccia	altered	pyrite	taic alteration
51	20-Jul	float	medium	dark gray	peridotite	fresh		outside altered interior fresh
52	20-Jul	float	medium	dark white & gray	metasediment?	altered	pyrite	texture looks magmatic but uncertain
54	20-Jul	float	medium	dark gray	pyroxenite	massive altered		gossanous exterior fresh interior
58	22-Jul	out.rop	coarse	pale brown white	quartz vein	altered	chalcopyrite pyrrhotite	road cut at approx 8 km from gate
59	22-Jul	out.rop	coarse	medium gray	migmatite	sheared & brecciated	pyrite arsenopyrite	contact between metaseds & diorite
60	22-Jul	out.rop	coarse	dark green white	migmatite	sheared & altered	pyrite	7km Charles Ck road
61	22-Jul	out.rop	coarse	green & white	migmatite	sheared & brecciated	pyrite arsenopyrite	well developed crystal faces on arsenopyrite
62	22-Jul	out.rop	coarse	pale white gray	migmatite	sheared & brecciated	pyrite	
63	22-Jul	out.rop	coarse	brown white black	migmatite	sheared & brecciated	pyrite pyrrhotite	
64	22-Jul	out.rop	coarse	pale brown	migmatite	sheared & brecciated	pyrite	minerals at site: as, py, cp, po
65	23-Jul	out.rop	medium	medium green	arenite			
66	23-Jul	out.rop	medium	black	shale			sample with gossanous metasediments
67	25-Jul	out.rop	medium	black	hornblende	massive	pyrite	
68	25-Jul	out.rop	coarse	dark white black	quartz diorite	massive fresh	pyrite	contains small grains of disseminated pyrite
69	25-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
70	25-Jul	out.rop	coarse	dark green black	hornblende	altered	pyrrhotite chalcopyrite	
71	25-Jul	out.rop	coarse	dark green	hornblende	altered	pyrrhotite chalcopyrite	contains po, py, cp, pn?
72	26-Jul	out.rop	coarse	dark brown black	hornblende	altered	pyrrhotite chalcopyrite	
73	26-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
74	26-Jul	out.rop	coarse	dark green	hornblende	altered	chalcopyrite pyrrhotite	
75	26-Jul	out.rop	coarse	dark green	hornblende	altered	chalcopyrite pyrrhotite	
76	26-Jul	out.rop	coarse	medium green	hornblende	altered	chalcopyrite pyrrhotite	
77	26-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
77A	26-Jul	out.rop	medium	dark brown	hornblende	altered	chalcopyrite pyrrhotite	
93	29-Jul	out.rop	medium	dark green gray	peridotite	foliated		no visible sulphides although rusty exterior
94	29-Jul	out.rop	medium	dark gray	peridotite	massive fresh		
95	29-Jul	out.rop	medium	dark green gray	peridotite	massive altered		
96	30-Jul	out.rop	medium	medium green	metavolcanic	foliated, altered	pyrite	
97	30-Jul	out.rop	fine	dark green	metavolcanic	foliated altered	pyrite	
98	30-Jul	out.rop	fine	medium gray	metavolcanic?	sheared foliated	pyrite	quartz lenses throughout
99	30-Jul	out.rop	medium	medium green gray	metasediment		pyrite	
100	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
101	31-Jul	out.rop	coarse	green brown black	hornblende	altered	chalcopyrite pyrrhotite	sample shows textural relations
102	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
103	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
104	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
105	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
106	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
108	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
109	31-Jul	out.rop	coarse	dark green black	hornblende	altered	chalcopyrite pyrrhotite	
115	16-Jul	out.rop	fine	medium gray	schist	sheared	pyrite	
116	16-Jul	out.rop	medium	medium gray	peridotite	altered		abundant olivine no sulphides visible

**TABLE 3 - STREAM SEDIMENT SAMPLES COLLECTED IN 2000**

NO.	DATE	UNCONSOLIDATED SEDIMENTS	COLOUR	WATER FEATURES	REMARKS
2	14-Jul	10% gravel, 90% sand	dark green brown	young strm, < 1m depth, <1m width	
5	14-Jul	10% gravel, 80% sand, 10% silt	dark brown	young strm, < 1m depth, <1m width	
8	14-Jul	90% sand, 10% silt	dark brown	young strm, < 1m depth, <1m width	
11	15-Jul	90% sand, 10% silt	dark brown	young strm, < 1m depth, <1m width	
15	15-Jul	90% sand, 10% silt	dark brown	young strm, < 1m depth, <1m width	
18	15-Jul	80% sand, 20% silt	dark brown	young strm, < 1m depth, <1m width	
35	19-Jul	80% sand, 20% silt	dark brown	young strm, <1m depth, 5m width	
38	19-Jul	80% sand, 20% silt	dark brown	young strm, <1m depth, 5m width	
42	19-Jul	80% sand, 20% silt	dark brown	young stream, <1m depth 10m width	dry stream bed
45	19-Jul	80% sand, 20% silt	dark brown	young stream, <1m depth 10m width	creek bed almost dry
46	19-Jul	80% sand, 20% silt	dark brown	young stream, <1m depth 30m wide	creek bed almost dry
53	20-Jul	80% sand, 20% silt	dark brown	young stream, <1m depth 30m wide	
55	20-Jul	80% sand, 20% silt	dark brown	young stream <1m depth 20m wide	
56	20-Jul	80% sand, 20% silt	dark brown	young stream <1m depth 30m wide	
57	20-Jul	80% sand, 20% silt	dark brown	young stream <1m depth 30m wide	sample collected at old logging road
107	31-Jul	80% sand, 20% silt	medium brown	young stream <1m depth <1m wide	
110	31-Jul	80% sand, 20% silt	dark brown	young stream <1m depth <1m wide	
111	31-Jul	80 % sand, 20% silt	medium brown	young stream <1m depth <1m wide	
112	31-Jul	80 % sand, 20% silt	medium brown	young stream <1m depth <1m wide	
113	31-Jul	80 % sand, 20% silt	medium brown	young stream <1m depth <1m wide	
114	31-Jul	80 % sand, 20% silt	medium brown	young stream <1m depth <1m wide	

**TABLE 4 - OVERBURDEN SAMPLES COLLECTED IN 2000**

NO.	DATE	UNCONSOLIDATED SEDIMENT	COLOUR	GLACIAL & RECENT DEPOSITS
78	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
79	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
80	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
81	26-Jul	B1, 70% sand, 30% silt	dark brown	well sorted
82	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
83	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
84	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
85	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
86	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
87	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
88	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
89	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
90	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
91	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted
92	26-Jul	B1, 90% sand, 10% silt	dark brown	well sorted

### Chemical Analyses of Selected Samples

Ninety-three samples collected this year (2000), from the prospect area, were sent for chemical analysis to ACME Analytical Laboratories Ltd., Vancouver. Twelve rock samples 1, 21, 22, 23, 29, 33, 59, 60, 61, 62, 63 and 64 listed on the chemical analysis certificates are regional samples and are not from the Jason claims. Fifty-six outcrop and float samples were submitted for 30 element ICP analysis. Elements included nickel, copper, cobalt and chromium. Twelve of these samples were analyzed using fire assay and analysis by ultra/ICP for Au, Pt, Pd. Sixteen overburden samples and twenty-one stream sediment samples were analyzed using ICP analysis (30 elements). Stream sediment samples were also analyzed using fire assay and analysis by ultra/ICP for Au, Pt, Pd. Geochemical analysis certificates are presented in Table 5. These certificates also include analytical results for the twelve samples collected off the Jason claims.

### Rock Samples:

Typically peridotite samples in this area may have Ni values of the order of 1000 to 2000 ppm. If no sulphides are observed in such samples, the Ni is primarily dissolved in the silicates. Because Cu is not commonly found in silicates, ultramafic samples anomalous in both Cu and Ni are considered to indicate the presence of sulphides retaining these elements.

Outcrop and float samples were collected on the Jason claims when sulphides were observed. Although the term hornblendite was used in the field to describe rocks containing hornblende and pyroxene, all pyroxene bearing rocks containing about 10 to 90% hornblende are grouped together and are described in this report, as hornblending pyroxenites. Numerous observations were made of hornblende and pyroxene bearing samples with no visible sulphides. Such samples were not collected. Consequently, only magmatic ultramafic rocks containing chalcopyrite and pyrrhotite were collected and because of their sulphide content, are considered anomalous and of exploration interest. The Jason claims are the only locality, in this area, where the author has observed an abundance of magmatic sulphides in hornblending pyroxenite.

Sulphide bearing hornblending pyroxenite samples, collected in 2000, which contain anomalous values of both Cu (>150 ppm) and Ni (>170ppm) include the following samples: 3, 6, 10, 13, 14, 16, 17, 20, 41, 43, 47, 49, 71, 72, 76, 77, 100(100A), 102, 103, 104, 108, 109. All of these hornblending pyroxenites have similar mineralogy. Their location and distribution indicate that they may have come from a large zone of pyroxenite on the Jason claims, that contains interstitial magmatic sulphides. It is the author's opinion, based on the geology and geophysical measurements, that these sulphide bearing pyroxenites are representative of a large zone of pyroxenite containing interstitial magmatic sulphides emplaced as an immiscible sulphide (Fe-S-O) liquid which drained through a crystal cumulate toward the footwall of an intrusive body.

Samples of outcrop and float were collected from the Jason claims in association with sampling for overburden and stream sediment samples. Rock sample locations and their Cu and Ni values are presented in Drawing #2.

Comments describing the analyzed rock samples follow:

Some samples are anomalous with respect to Au, Pt, and Pd. Samples considered to be anomalous with respect to these elements include :

Sample JH4 (collected in 1999, analyzed in 2000) – This float sample was located on the Jason claims and contains 0.14% copper and is also anomalous with respect to Pb, Zn, Ag, Sr, V. Unfortunately, the source of this sample was not located.

Sample 10 – This hornblende-pyroxenite float sample is anomalous with respect to Cu, Ni, Co, Au. It is from Discovery Creek on the Jason claims. The sample contains pyrrhotite, chalcopyrite and possibly pentlandite.

Sample 48 – This fresh peridotite float sample is anomalous with respect to Ni but does not contain any visible sulphides. The nickel is presumably contained in the silicates. The sample is from West Fault Creek on the Jason claims.

Sample 93 – This outcrop sample of peridotite is anomalous with respect to Cu and Ni.

Sample 100 – This outcrop sample of hornblende pyroxenite is anomalous with respect to Cu, Ag, Ni, Co, Sr and V. The sample is on the west side of West Fault Creek in claim Jason 7.

#### **Stream Sediment Samples:**

In order to define the probable extent of the bedrock source containing magmatic sulphides, stream sediment samples were collected on the Jason claims. The location of these samples and their Ni and Cu values are indicated on Drawing #3. Unfortunately, large segments of creeks in this area are located in vertically walled rock cuts with numerous steep waterfalls and steep rock gradients. Attempts to traverse the length of such streams would be dangerous and require rock climbing equipment. Therefore, sampling was done where possible but was limited to the extent shown on the maps.

Stream sediment samples from Discovery Creek have two times the magnitude of Ni and Cu concentration of samples collected from East Creek or West Fault Creek. Samples from Discovery Creek all lie over sulphide bearing hornblende pyroxenite producing anomalous Cu and Ni values. Therefore, because of low Cu and Ni values, it is assumed that the stream sediment samples over sampled lower portions of East and West Fault Creeks do not lie over rocks bearing anomalous amounts of Cu and Ni bearing magmatic sulphides.

However, the stream sediment samples 107, 111, 113 and 114 primarily from the Jason 7 claim, collectively have the highest Ni, Cu, Au, Pt and Pd values of any of the stream samples collected. These high values may reflect the sulphide content of hornblende pyroxenite rocks identified in outcrop samples collected in the south-central portion of Claim "Jason 7".

**Table 5: Chemical analysis certificates for Ni Belt samples collected in 2000.**

**File #A002998 Outcrop and Float Samples**

**File #A002999 Stream Sediment Samples**

**File #A003000 Overburden Samples**

**Note: All sample numbers without leading initials are MH samples as listed in the following tables.**

GEOCHEMICAL ANALYSIS CERTIFICATE

Haughton, David R. File # A002998 Page 1  
2760 Dooley Road, Victoria BC V8Y 1R7 Submitted by: David R. Haughton



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**	Pt**	Pd**
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb	ppb	ppb
JH4	1	1369	15	63	.7	45	31	210	6.26	<2	<8	<2	<2	284	.9	<3	<3	131	4.05	.119	2	125	.27	93	.08	<3	5.19	.48	.03	<2	44	3	1
MH1	<1	55	3	8	<.3	702	74	764	3.74	14	<8	<2	<2	3	.2	<3	<3	6	.15	.003	<1	571	9.63	9<.01	8	.16	.01	.02	<2	1	25	13	
MH10	1	1270	9	31	.4	1156	176	133	4.66	<2	<8	<2	<2	14	<.2	5	<3	58	.95	.004	<1	176	.93	8	.05	<3	.38	.06	.01	3	11	4	4
MH29	1	36	6	12	<.3	1942	128	993	5.10	7	<8	<2	<2	<1	.3	7	<3	8	.04	.003	<1	927	20.97	3<.01	19	.07	<.01	<.01	<2	3	3	5	
MH33	1	17	4	6	<.3	1538	94	822	3.38	10	<8	<2	<2	<1	.3	8	<3	<1	.21	.003	<1	539	21.72	1<.01	17	.05	<.01	<.01	<2	4	6	10	
MH43	1	155	<3	10	<.3	321	53	160	2.08	<2	<8	<2	<2	13	<.2	<3	<3	38	.57	.010	1	189	1.30	9	.04	3	.36	.08	.02	<2	2	7	4
MH48	<1	29	<3	15	<.3	1744	111	898	5.64	10	<8	<2	<2	1	.4	7	<3	<1	.03	.004	1	176	22.22	2<.01	16	.06	<.01	<.01	<2	2	10	17	
MH61	4	229	9	96	.8	38	12	1186	4.45	6706	<8	<2	2	43	.5	12	<3	64	1.62	.070	8	28	1.25	149	.01	6	1.18	.07	.28	<2	177	7	4
RE MH61	6	222	12	95	.7	36	12	1154	4.35	6605	<8	<2	<2	43	.4	11	<3	62	1.58	.067	8	28	1.21	147	.02	6	1.17	.07	.28	2	185	5	5
MH67	1	71	3	42	<.3	50	20	219	2.01	36	<8	<2	<2	25	<.2	<3	<3	54	1.04	.097	1	15	.80	31	.10	4	1.07	.16	.04	<2	2	7	2
MH69	2	230	3	11	<.3	128	24	132	1.83	21	<8	<2	<2	6	<.2	<3	<3	20	.30	.004	<1	227	1.02	50	.04	<3	.49	.06	.02	<2	5	7	5
MH93	<1	162	<3	4	<.3	623	52	613	2.18	7	<8	2	<2	35	<.2	<3	3	39	6.03	.002	<1	1192	6.35	3<.01	3	.30	<.01	<.01	<2	5	29	24	
MH100	2	2458	9	9	.8	662	320	67	8.01	<2	<8	<2	<2	304	.6	<3	<3	24	2.49	.002	1	74	.50	19	.02	<3	3.64	.41	.01	<2	56	13	18
STANDARD C3/FA-10R	28	69	38	171	5.9	39	12	835	3.37	61	19	3	22	29	25.4	21	25	81	.57	.088	19	170	.62	147	.08	23	1.82	.04	.16	17	473	464	478
STANDARD G-2	2	4	<3	45	<.3	8	4	572	2.05	2	<8	<2	4	71	<.2	<3	<3	42	.66	.094	7	74	.62	230	.13	9	.95	.08	.46	2	<1	2	5

GROUP 10 - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.  
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
- SAMPLE TYPE: ROCK R150 60C AU\*\* PT\*\* PD\*\* GROUP 3B BY FIRE ASSAY & ANALYSIS BY ULTRA/ICP.(30 gm)  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 14 2000 DATE REPORT MAILED: *Aug 25/00* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS





SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
MH3	<1	377	<3	8	<.3	355	58	93	1.90	2	<8	<2	<2	17	<.2	<3	<3	17	.63	.109	3	84	.71	30	.03	3	.26	.05	.04	<2
MH4	2	164	<3	9	<.3	89	24	131	1.55	<2	<8	<2	<2	10	<.2	<3	<3	17	.37	.017	1	112	.73	14	.03	5	.39	.06	.02	<2
MH6	<1	206	3	16	<.3	220	46	94	1.54	2	<8	<2	<2	12	<.2	3	<3	44	.40	.009	<1	236	1.59	69	.04	5	.72	.07	.02	<2
MH7	1	114	3	24	<.3	67	22	166	1.62	<2	<8	<2	<2	8	.2	<3	<3	39	.72	.010	<1	117	1.13	8	.07	6	.61	.09	.02	<2
MH12	<1	147	6	22	.3	245	42	152	1.77	<2	<8	<2	<2	15	<.2	<3	<3	25	.37	.006	<1	100	1.32	26	.03	5	.23	.05	.03	<2
MH13	1	211	<3	7	<.3	172	56	105	2.66	<2	<8	<2	<2	19	<.2	<3	<3	36	.49	.010	<1	90	.80	14	.05	3	.46	.09	.02	<2
MH14	<1	866	<3	10	.3	412	103	119	3.62	<2	<8	<2	<2	23	.3	<3	<3	59	.67	.007	<1	92	1.04	33	.08	3	.59	.11	.03	2
MH16	1	197	<3	17	.3	274	44	154	1.87	2	<8	<2	<2	19	<.2	<3	<3	27	.52	.018	1	146	1.39	22	.03	6	.34	.08	.03	<2
MH17	<1	180	<3	23	<.3	255	42	186	2.02	<2	<8	<2	<2	26	<.2	3	<3	48	.62	.009	<1	156	1.89	26	.06	6	.43	.11	.03	<2
MH19	<1	133	3	15	<.3	133	37	113	1.54	<2	<8	<2	<2	18	<.2	<3	<3	38	.60	.013	1	140	1.21	55	.05	3	.61	.10	.08	<2
MH20	<1	210	<3	9	<.3	250	40	120	1.60	<2	<8	<2	<2	16	<.2	<3	<3	27	.47	.011	<1	109	.95	26	.04	4	.29	.06	.03	<2
MH21	5	123	8	58	<.3	36	22	340	2.68	3	<8	<2	<2	5	.4	<3	<3	99	1.33	.075	1	24	.95	11	.10	4	1.19	.17	.05	2
MH22	<1	492	6	75	<.3	29	29	456	4.26	2	<8	<2	<2	5	.3	<3	<3	117	1.17	.068	<1	28	1.70	15	.11	<3	1.94	.16	.04	2
MH23	2	579	4	89	<.3	40	41	473	4.67	3	<8	<2	<2	2	.3	<3	<3	79	.67	.068	1	33	2.22	9	.08	13	2.27	.08	.03	3
MH25	<1	126	3	73	<.3	29	24	323	2.82	2	<8	<2	<2	4	<.2	<3	<3	67	1.31	.087	<1	24	.77	16	.22	<3	.94	.16	.09	2
MH32	1	24	<3	5	<.3	1508	92	854	3.61	8	<8	<2	<2	<1	.2	5	<3	<1	.11	.005	<1	525	22.98	5	<.01	17	.06	<.01	<.01	<2
MH34	<1	117	<3	10	<.3	47	32	120	1.49	<2	<8	<2	<2	60	.2	<3	<3	49	1.00	.016	1	15	.92	35	.06	4	1.24	.19	.06	<2
MH37	1	137	4	31	<.3	70	53	278	2.92	<2	<8	<2	<2	24	<.2	<3	<3	121	1.81	.163	1	80	1.70	9	.16	4	1.31	.20	.04	<2
MH40	<1	212	<3	9	<.3	106	34	84	1.39	<2	<8	<2	<2	7	<.2	<3	<3	19	.41	.020	<1	96	.65	6	.03	3	.29	.05	.01	<2
MH41	9	268	<3	36	.3	204	52	125	2.57	<2	<8	<2	<2	201	.3	<3	<3	145	1.81	.004	2	105	.57	121	.16	4	3.42	.56	.22	<2
MH44	1	23	<3	24	<.3	19	9	66	1.34	<2	<8	<2	<2	76	<.2	<3	<3	56	.83	.045	2	14	.38	340	.11	3	1.72	.30	.28	3
MH47	<1	324	<3	12	<.3	540	88	148	2.52	<2	<8	<2	<2	29	.2	3	<3	14	.48	.017	1	183	2.44	115	.04	3	.70	.12	.23	<2
MH49	<1	187	<3	19	<.3	337	44	247	2.50	<2	<8	<2	<2	16	<.2	3	<3	29	.47	.004	<1	190	2.47	71	.04	3	.33	.08	.01	3
MH50	2	40	<3	23	<.3	1337	99	837	4.80	7	<8	<2	<2	1	.2	<3	<3	15	.02	.004	<1	941	14.60	19	<.01	8	.49	<.01	<.01	2
MH59	<1	169	8	67	.7	29	14	985	3.93	12249	<8	<2	<2	47	.3	12	<3	52	2.08	.041	7	34	.97	73	.01	6	1.01	.06	.16	4
MH60	2	41	4	38	<.3	25	11	514	2.02	846	<8	<2	<2	15	<.2	4	<3	28	.47	.027	5	32	.55	89	<.01	8	.85	.05	.13	<2
RE MH60	3	42	3	38	<.3	26	11	525	2.07	875	<8	<2	<2	15	.2	4	<3	30	.49	.028	6	32	.56	90	<.01	7	.88	.05	.13	<2
MH62	2	319	6	95	1.1	21	23	1019	4.97	21176	<8	<2	<2	43	.3	15	<3	49	1.86	.062	7	20	.99	107	<.01	7	.92	.05	.20	4
MH63	3	117	8	79	.6	23	12	891	2.55	1513	<8	<2	<2	13	.3	6	<3	41	.45	.038	8	30	.74	118	.01	6	1.28	.06	.16	<2
MH64	2	70	11	151	<.3	95	24	1515	5.61	266	<8	<2	3	14	<.2	61	<3	37	.16	.083	9	24	.22	190	<.01	18	.55	<.01	.30	3
MH70	<1	155	<3	13	<.3	170	32	99	1.33	6	<8	<2	<2	6	<.2	3	<3	25	.39	.016	<1	220	1.33	14	.03	4	.70	.06	.02	<2
MH71	<1	198	<3	10	<.3	183	44	120	1.60	8	<8	<2	<2	10	<.2	<3	<3	17	.45	.014	<1	84	.71	6	.02	3	.24	.05	.02	<2
MH72	1	284	<3	15	<.3	250	57	112	2.04	2	<8	<2	<2	12	<.2	<3	<3	22	.43	.016	<1	102	.78	8	.03	<3	.29	.06	.01	<2
MH100A	1	1205	<3	11	.4	383	151	93	5.57	4	<8	<2	<2	230	.3	<3	<3	36	2.10	.059	2	106	.63	15	.03	<3	2.68	.33	.01	<2
STANDARD C3	28	69	39	183	5.9	40	12	845	3.35	63	20	2	22	28	25.9	17	25	80	.57	.087	18	168	.62	144	.07	24	1.79	.04	.15	18
STANDARD G-2	1	4	3	48	<.3	9	5	588	2.06	<2	<8	<2	4	73	<.2	<3	<3	42	.66	.094	7	77	.62	235	.12	5	.97	.08	.48	2

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
MH102	7	434	5	23	.3	357	79	124	3.84	4	<8	<2	<2	204	.6	<3	<3	97	2.56	.058	1	113	.38	22	.04	<3	3.55	.36	.01	<2
MH103	2	337	5	26	.4	233	64	168	3.36	5	<8	<2	<2	163	.3	<3	<3	56	1.88	.023	1	127	1.01	16	.06	<3	2.17	.34	.02	3
MH104	4	464	4	23	<.3	173	73	242	4.09	2	<8	<2	<2	20	.3	<3	<3	54	1.44	.103	2	51	1.46	10	.09	3	.82	.17	.03	<2
MH105	1	175	<3	24	<.3	67	32	175	4.22	3	<8	<2	<2	43	<.2	<3	<3	82	.87	.018	<1	166	1.42	17	.10	<3	1.39	.15	.02	2
MH108	4	492	<3	14	.3	326	102	168	4.38	5	<8	<2	<2	527	.6	<3	<3	48	4.31	.005	1	93	.85	76	.06	<3	6.16	.58	.04	2
MH109	3	1428	10	22	.7	371	155	155	5.25	7	<8	<2	<2	307	.5	<3	<3	115	2.70	.003	1	155	.85	27	.05	<3	3.69	.57	.03	3
M73	3	183	4	15	<.3	153	39	156	1.78	<2	<8	<2	<2	21	<.2	<3	<3	32	.68	.012	<1	144	1.17	10	.04	3	.42	.09	.02	<2
M74	<1	172	<3	13	<.3	148	38	124	1.63	<2	<8	<2	<2	14	<.2	<3	<3	23	.46	.017	1	106	.86	13	.03	3	.33	.07	.01	<2
RE M74	1	168	<3	13	<.3	144	37	125	1.61	<2	<8	<2	<2	14	<.2	<3	<3	24	.47	.017	<1	107	.87	12	.03	<3	.33	.07	.01	<2
M75	4	124	<3	41	<.3	196	38	239	2.47	<2	<8	<2	<2	18	<.2	<3	<3	37	.50	.006	<1	194	1.91	22	.04	3	.41	.06	.01	<2
M76	2	176	<3	24	<.3	270	47	307	3.58	<2	<8	<2	<2	14	<.2	<3	<3	51	.45	.008	<1	343	3.11	28	.04	3	.48	.07	.02	2
M77	3	376	<3	37	<.3	565	84	559	4.37	2	<8	<2	<2	18	<.2	<3	<3	22	.43	.014	1	223	5.53	32	.03	<3	.35	.08	.02	<2
STANDARD C3	27	69	37	172	5.9	38	12	850	3.38	61	22	4	22	28	25.3	17	25	83	.56	.088	19	181	.62	147	.08	24	1.80	.04	.16	17
STANDARD G-2	2	4	3	44	<.3	8	4	593	2.05	<2	<8	<2	5	72	<.2	<3	<3	43	.66	.094	8	81	.62	230	.13	<3	.96	.08	.45	2

Sample type: ROCK R150 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



GEOCHEMICAL ANALYSIS CERTIFICATE



Haughton, David R. File # A002999  
2760 Dooley Road, Victoria BC V8Y 1R7 Submitted by: David R. Haughton

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au**	Pt**	Pd**
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb	ppb	ppb
MH2	<1	182	<3	33	<.3	208	49	295	2.96	<2	<8	<2	<2	25	<.2	<3	<3	42	.28	.057	2	131	1.94	76	.06	3	1.12	.02	.09	<2	4	2	3
MH5	<1	187	<3	36	<.3	213	50	310	2.95	<2	<8	<2	<2	29	<.2	<3	<3	44	.30	.053	2	137	1.94	76	.06	3	1.34	.03	.08	<2	3	<1	2
MH8	<1	228	4	32	<.3	241	57	315	2.90	<2	<8	<2	<2	29	<.2	<3	<3	40	.30	.054	2	132	1.77	69	.06	4	1.21	.02	.06	<2	4	5	3
MH11	<1	197	<3	31	<.3	210	52	295	2.87	<2	<8	<2	<2	24	<.2	<3	<3	39	.27	.052	2	135	1.93	64	.05	3	1.07	.02	.07	<2	3	5	7
MH15	<1	189	<3	27	<.3	205	52	302	3.00	<2	<8	<2	<2	18	<.2	<3	<3	38	.23	.043	1	125	1.94	67	.05	<3	.93	.02	.09	<2	4	4	3
MH18	<1	147	<3	32	<.3	199	47	313	2.97	<2	<8	<2	<2	22	<.2	<3	<3	32	.22	.046	1	129	2.37	41	.04	3	.92	.02	.04	<2	1	5	7
MH35	1	105	3	26	<.3	105	28	166	2.05	<2	<8	<2	<2	51	<.2	<3	<3	43	.63	.096	2	68	.79	49	.05	3	1.13	.07	.04	<2	2	<1	1
MH38	1	99	3	24	<.3	94	25	149	2.08	<2	<8	<2	<2	62	<.2	<3	<3	45	.71	.098	1	64	.81	52	.06	<3	1.22	.08	.04	<2	1	6	6
MH42	<1	96	<3	21	<.3	85	23	134	2.00	<2	<8	<2	<2	54	<.2	<3	<3	45	.63	.091	1	57	.73	44	.05	<3	1.11	.07	.03	<2	3	<1	5
MH45	<1	104	4	25	<.3	99	28	163	2.01	<2	<8	<2	<2	57	<.2	<3	<3	47	.63	.090	2	60	.74	51	.06	<3	1.20	.07	.04	<2	3	2	1
MH46	1	111	5	23	<.3	98	26	142	2.15	<2	<8	<2	<2	53	<.2	<3	<3	46	.64	.103	2	64	.77	46	.05	<3	1.11	.07	.03	<2	<1	9	7
MH53	<1	58	3	23	<.3	73	17	191	1.87	<2	<8	<2	<2	39	<.2	<3	<3	54	.52	.100	2	47	.66	97	.07	<3	1.20	.05	.10	<2	2	<1	1
MH55	<1	64	4	25	<.3	99	21	222	1.85	3	<8	<2	<2	38	<.2	<3	<3	43	.49	.086	2	52	1.01	103	.07	<3	1.23	.05	.10	<2	<1	<1	2
MH56	<1	91	4	35	<.3	156	29	289	2.55	5	<8	<2	<2	41	<.2	<3	<3	53	.51	.076	2	73	1.70	125	.08	<3	1.49	.05	.14	<2	1	5	4
MH57	<1	68	<3	28	<.3	126	23	217	2.00	3	<8	<2	<2	32	<.2	<3	<3	46	.45	.085	2	57	1.33	93	.07	<3	1.12	.04	.10	<2	3	1	4
RE MH57	<1	65	3	27	<.3	122	22	214	1.96	3	<8	<2	<2	31	<.2	<3	<3	45	.43	.082	2	55	1.31	92	.06	<3	1.10	.03	.09	<2	<1	2	10
MH107	<1	368	<3	29	.3	445	36	354	2.56	<2	<8	<2	<2	43	<.2	<3	<3	48	.55	.093	2	145	1.55	124	.07	<3	1.33	.03	.06	<2	17	43	36
MH110	<1	58	<3	29	<.3	84	21	202	2.32	<2	<8	<2	<2	40	<.2	<3	<3	69	.60	.128	2	38	.71	88	.05	<3	1.62	.05	.03	<2	4	10	12
MH111	<1	351	<3	29	.3	429	34	325	2.64	<2	<8	<2	<2	36	<.2	<3	<3	52	.49	.091	2	153	1.62	104	.07	<3	1.21	.03	.05	<2	18	72	23
MH112	<1	61	5	40	<.3	83	19	190	2.24	<2	<8	<2	<2	29	<.2	<3	<3	68	.62	.071	3	84	1.13	179	.12	<3	1.75	.03	.33	<2	<1	3	2
MH113	<1	204	<3	34	<.3	298	29	312	2.40	2	<8	<2	<2	36	<.2	<3	<3	51	.52	.092	2	112	1.52	119	.07	<3	1.34	.03	.09	<2	6	22	14
MH114	<1	62	<3	44	<.3	121	23	266	2.44	8	<8	<2	<2	36	.2	<3	<3	69	.73	.078	3	82	1.49	197	.12	<3	1.95	.03	.33	2	4	<1	2
STANDARD C3/FA-10R	27	68	35	167	5.7	37	12	805	3.48	60	18	<2	21	28	24.8	18	22	76	.56	.092	17	164	.59	151	.09	24	1.76	.04	.16	17	505	493	511
STANDARD G-2	1	4	3	44	<.3	9	4	542	2.05	<2	<8	<2	3	82	<.2	<3	<3	38	.65	.098	6	71	.58	258	.12	<3	1.08	.13	.52	2	1	2	3

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.  
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
- SAMPLE TYPE: SILT S140 60C AU\*\* PT\*\* & PD\*\* GROUP 3B BY FIRE ASSAY & ANALYSIS BY ULTRA/ICP.  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 14 2000

DATE REPORT MAILED: Aug 25/00

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS



GEOCHEMICAL ANALYSIS CERTIFICATE



Haughton, David R. File # A003000  
2760 Dooley Road, Victoria BC V8Y 1R7 Submitted by: David R. Haughton

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm
MH77A	2	32	6	36	<.3	33	7	130	3.28	2	<8	<2	2	9	<.2	<3	<3	108	.15	.083	5	76	.70	147	.16	<3	3.78	.02	.25	<2
MH78	3	36	7	30	<.3	44	11	213	2.22	2	<8	<2	<2	14	<.2	3	<3	68	.17	.062	5	46	.34	78	.11	3	2.77	.01	.09	<2
MH79	2	151	7	46	<.3	174	33	167	2.86	<2	<8	<2	<2	20	<.2	<3	<3	72	.23	.139	3	96	.71	45	.08	<3	5.38	.03	.03	<2
MH80	2	145	<3	37	<.3	124	34	277	2.52	4	<8	<2	<2	28	<.2	3	<3	73	.45	.139	4	80	1.03	120	.10	5	3.32	.06	.20	<2
MH81	3	135	<3	31	<.3	119	27	225	2.38	4	<8	<2	<2	41	<.2	<3	<3	75	.60	.136	3	83	1.09	95	.09	4	2.77	.09	.15	<2
MH82	1	254	4	42	<.3	289	57	293	2.78	4	<8	<2	<2	27	<.2	4	<3	80	.49	.158	5	93	1.05	97	.11	3	3.48	.05	.15	<2
MH83	3	145	8	28	<.3	141	26	226	2.10	2	<8	<2	<2	23	<.2	<3	<3	44	.35	.104	3	70	.54	53	.07	4	3.26	.04	.04	<2
MH84	1	145	8	48	<.3	188	44	411	2.82	3	<8	<2	<2	30	.2	<3	<3	56	.44	.105	4	79	.47	81	.09	3	2.59	.03	.04	<2
MH85	1	110	10	43	<.3	138	33	396	3.02	2	<8	<2	<2	24	.2	<3	<3	59	.37	.097	4	68	.56	53	.08	3	3.01	.02	.04	<2
MH86	3	78	5	35	<.3	75	29	276	3.01	2	<8	<2	<2	30	<.2	<3	<3	49	.27	.122	5	63	.31	56	.08	3	4.99	.02	.02	<2
MH87	1	194	7	61	<.3	381	68	610	4.18	5	<8	<2	<2	14	<.2	3	<3	57	.26	.075	4	127	3.68	105	.10	3	2.25	.02	.11	<2
MH88	1	188	4	41	<.3	233	48	356	2.74	6	<8	<2	<2	17	<.2	3	<3	48	.32	.093	4	108	1.47	71	.08	3	2.39	.02	.08	<2
RE MH88	1	192	3	42	<.3	239	49	366	2.81	4	<8	<2	<2	18	<.2	3	<3	50	.33	.097	4	108	1.49	73	.08	3	2.46	.03	.08	<2
MH89	2	84	6	50	<.3	122	26	418	2.75	6	<8	<2	<2	26	.2	3	<3	60	.37	.088	4	67	.77	74	.09	3	2.82	.02	.06	<2
MH90	1	55	10	39	<.3	112	23	451	2.65	8	<8	<2	<2	23	<.2	<3	<3	64	.32	.081	3	65	.54	61	.09	<3	2.02	.02	.04	<2
MH91	1	85	9	61	<.3	158	30	509	2.90	11	<8	<2	<2	18	<.2	4	<3	73	.37	.075	5	106	1.42	144	.14	<3	2.72	.03	.20	<2
MH92	2	56	<3	36	<.3	93	20	267	3.23	3	<8	<2	<2	24	<.2	3	<3	83	.19	.051	3	84	.52	50	.12	<3	2.80	.03	.02	<2
STANDARD C3	28	69	38	171	5.9	39	12	835	3.37	61	19	3	22	29	25.4	21	25	81	.57	.088	19	170	.62	147	.08	23	1.82	.04	.16	17
STANDARD G-2	2	4	<3	45	<.3	8	4	572	2.05	2	<8	<2	4	71	<.2	<3	<3	42	.66	.094	7	74	.62	230	.13	9	.95	.08	.46	2

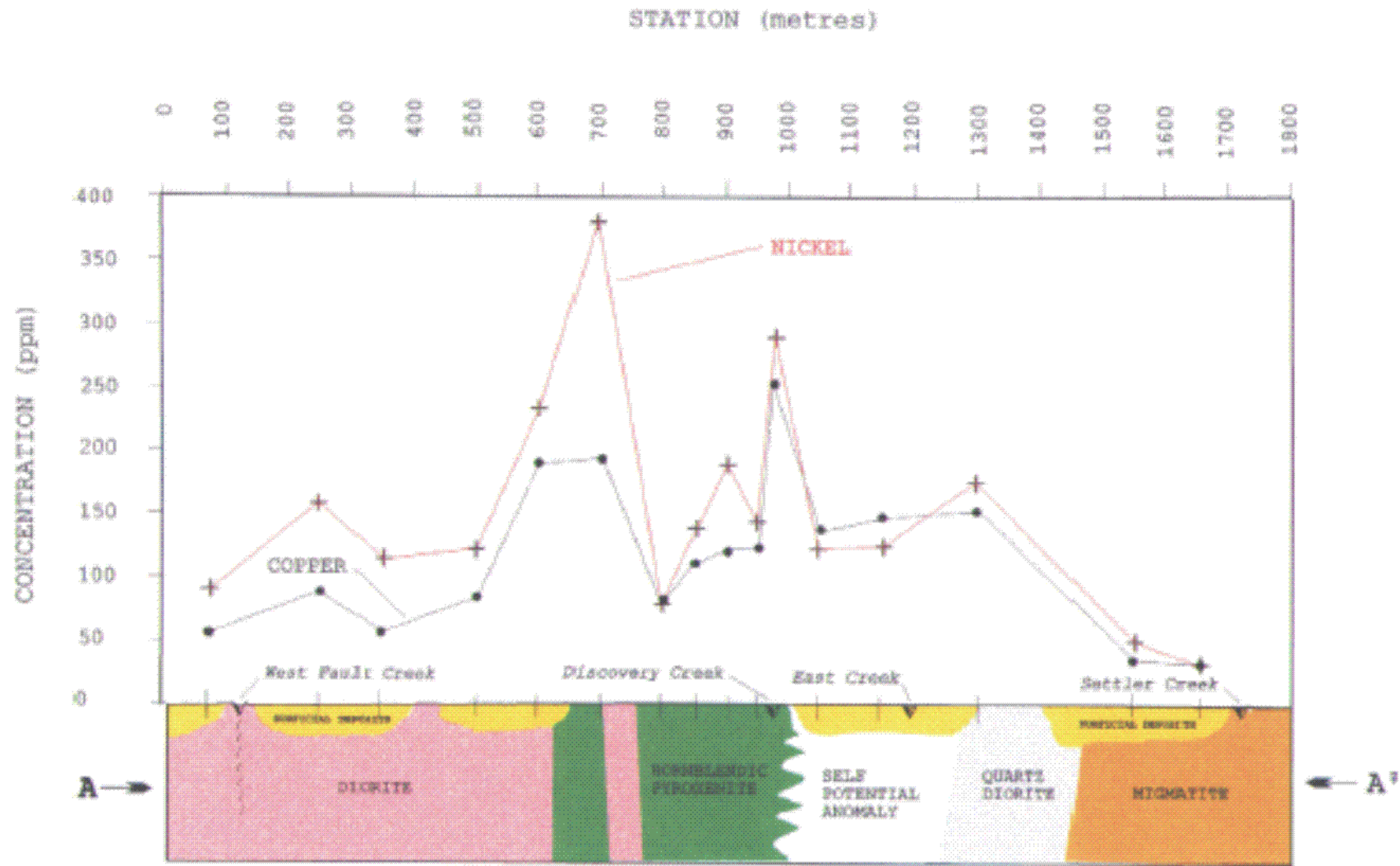
GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.  
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.  
- SAMPLE TYPE: TILL S230 60C Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 14 2000

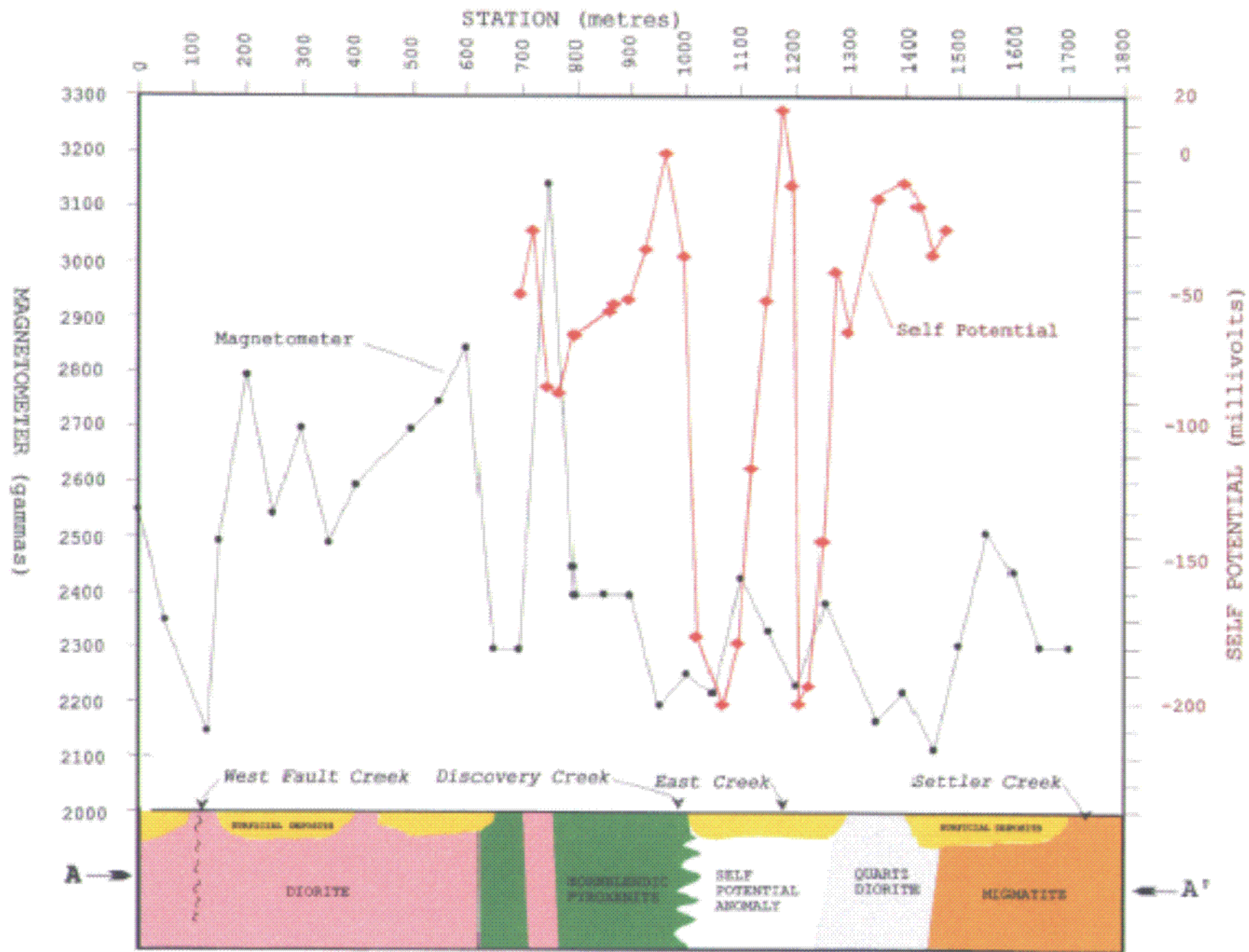
DATE REPORT MAILED: *Aug 26/00*

SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

**Figure 5: Cu and Ni values in overburden samples along traverse A-A'.**



**Figure 6: Results of geologic, magnetometer and self potential surveys along traverse A-A'.**



GEOLOGICAL INTERPRETATION



### Overburden Samples:

Overburden samples were obtained from the B<sub>1</sub> soil horizon and were collected along a trail (old logging road) designated A-A' illustrated in Drawing #1. A plot of Cu and Ni concentrations for these overburden samples is presented in Figure 5.

### Integrated Geological, Geophysical and Geochemical Surveys

Drawing #1 (in pocket) shows an east-west section extending over approximately 1800 metres along a trail forming the boundary between Jason claims 1, 2, 3 and Jason claims 8, 9, 10. The geology of this section was mapped. Along this section samples of outcrop and overburden were collected. In addition, a magnetometer survey was conducted at stations 50 metres apart. Magnetometer readings were taken with a McPhar fluxgate magnetometer (M-700). Readings were corrected for diurnal variation based on an hourly check of base station readings. Since sulphide bearing hornblende pyroxenite was located along this section a self potential survey was conducted from station 700 to 1475 at stations 25 metres apart. Values obtained from the magnetometer and self potential surveys are presented in Table 6. Cu and Ni values in overburden samples and outcrop samples are plotted above a schematic section drawn to represent the geology mapped (Figure 5). Magnetometer and Self potential surveys are portrayed in Figure 6.

**Table 6: Magnetometer and Self Potential Survey Results**

STATION metres	MAG RDG gammas	SP RDG mv	STATION metres	MAG RDG gammas	SP RDG mv	STATION metres	MAG RDG gammas	SP RDG mv
0	2550		775		-77	1200	2226	-11
50	2350		800	2400	-65	1205		-200
100	2150		850	2400	-56	1225		-192
150	2500		875		-53	1250	2385	-141
200	2800		900	2400	-53	1275		-42
250	2550		925		-33	1300		-65
300	2700		950	2200	-29	1350	2173	-15
350	2500		975		0	1400	2226	-10
400	2600		1000	2250	-37	1425		-18
500	2700		1025		-175	1450	2120	-37
550	2750		1050	2226	-194	1475		-27
600	2850		1075		-200	1500	2306	
650	2300		1100	2438	-177	1550	2528	
700	2300	-51	1125		-114	1600	2438	
725		-29	1150	2332	-53	1650	2306	
750	3150	-74	1175		16	1700	2306	

**Note: Magnetometer readings were corrected for diurnal variation.**

The charts portraying the geology, geophysics and Cu and Ni values over the traverse, indicate the surface extent of the hornblende pyroxenite and illustrate that along this east-west section, this sulphide bearing unit extends over approximately 400 metres. This suggests that the area over which this rock unit is exposed is very large. This is illustrated in the detailed geology map in Drawing #1.

The Cu values in overburden and outcrop when compared to the geology show a close correlation with hornblende pyroxenite. Although not as consistent, Ni values also reflect this. The highest Ni values are also associated with hornblende pyroxenite. In overburden samples, the higher copper values extend to a point just east of East Creek. Although surficial deposits mantle much of the traverse between Discovery Creek and East Creek, the Cu values in overburden samples suggest that bedrock in this section is also hornblende pyroxenite.

Magnetometer readings reflect rock type with sufficient consistency to be used to assist in assigning a probable bedrock type. Magnetometer readings above diorite are the highest with a range of 2150 to 3150 gammas. Readings over hornblende pyroxene show less variation and range from 2200 to 2300 gammas. Readings over quartz diorite were the lowest measured and ranged from 2125 to 2175 gammas. Readings over rocks of varied composition including migmatite yielded magnetic readings of 2300 to 2525 gammas approximately. This ground data was compared to the airborne magnetic data produced for the Ni Syndicate in 1970. The ground survey results indicated that the hornblende pyroxenite layer produces magnetic intensity values ranging from 2200 to 2300. These values seem to correlate fairly well with airborne readings ranging from approximately 1900 to 2000 gammas. This comparison suggests that a linear zone of hornblende pyroxene extends from Discovery Creek in a southwest direction toward the south half of Jason 7 claim. This interpretation is presented in the geology map labeled Drawing #1.

The self potential survey (SP) revealed two well developed and distinct self potential anomalies each with a magnitude of approximately -200 millivolts. Negative readings of this magnitude are typical of SP readings over massive sulphides. It is of particular interest that the western half of the west SP anomaly commences at a value of 0 mv (Figure 6) over hornblende pyroxenite containing disseminated magmatic sulphides. The anomaly drops in value to -200 mv to the east of this outcrop. Unfortunately, the site of the anomaly is mantled by fluvial deposits. However, as mentioned previously, high Cu values in overburden suggest that at the anomaly site, bedrock, at surface, may be sulphide bearing hornblende pyroxenite.

The geology, geochemistry and geophysical surveys conducted on this traverse are complementary and produced results which are compatible and which permit interpretation of the data produced. Therefore, it is concluded that the self potential anomalies may result from concentrated sulphides at shallow depth beneath or within the hornblende pyroxenite and adjacent to the unit mapped as quartz diorite.

### **Sulphide Deposition Model**

In order to develop a strategy for evaluating the SP anomaly and determining its cause, it is desirable to develop and consider a geological model explaining the formation of a possible sulphide deposit at the site of the SP anomaly.

The geology map in Drawing #1 illustrates a possible large zone of hornblende pyroxenite. This zone extends for approximately 1000 metres and contains disseminated magmatic sulphides. In addition, this zone is judged, on the basis of airborne magnetic data (1970), to be the southern edge of a large diapiric ultramafic intrusion, dipping to the northwest. It is considered that the layer of hornblende pyroxenite (mapped) was originally a crystal cumulate (pyroxene) from this intrusion. It is possible that magmatic sulphides have drained by gravity through the silicate crystal cumulate to the footwall of the ultramafic diapir. The footwall of the diapir may be the quartz diorite layer. Consequently, if this model is correct, concentrations of massive sulphides may lie along the footwall of the diapir. Therefore, the SP anomalies represent a drill target to determine if the anomalies are due to an economic concentration of Ni/Cu bearing sulphides.

### **SUMMARY OF RESULTS, JASON CLAIMS**

- Prospecting was done in the vicinity of a magnetic anomaly in the southern portion of the Jason claims. Unfortunately, it proved to be unsafe and therefore unwise to enter steep vertical rock walled gorges. Consequently prospecting was limited to ridges between creeks. No massive sulphides were observed in the area of the magnetic anomaly. Peridotite was observed in the vicinity of the magnetic anomaly but no sulphides.
- The source of sulphide mineralized boulders located in 1999 on claim Jason7 was determined to be outcrop located in a zone of hornblende pyroxenite. This location and that at Discovery Creek (Jason 2) provide two distinct but widely separated outcrops of the same rock type.
- The location of additional sulphide bearing hornblende pyroxenite was mapped (Jason 2).
- A ground based magnetic survey was undertaken which correlates well with the airborne magnetic survey conducted for the Ni Syndicate (1970). This survey, along with petrographic and geochemical analysis of outcrop samples, enabled definition of a possible, large zone of hornblende pyroxenite.
- A self potential anomaly was located adjacent to an outcrop composed of sulphide bearing hornblende pyroxenite (Jason 2). This may indicate the presence of massive sulphides adjacent to the disseminated sulphide. Therefore, a drill target to evaluate the self potential anomaly has been developed.

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**APPENDIX I: PERSONNEL AND TIME WORKED  
ON JASON CLAIMS  
GEOLOGY, GEOCHEMISTRY AND GEOPHYSICS**

Personnel	Days
D.R. Haughton, M.Sc., Ph.D., P.Eng.	15
M.K. Haughton, B.Ed.	14

## APPENDIX II: COSTS EXPENDED ON JASON CLAIMS

### Project Costs

#### Explanation:

The author and partner worked together in the general area for 25 days. On 15 of those days work was done on the Jason claims. The work included geophysical surveys, geochemical sampling and geological mapping. Project costs for these items are defined below.

#### Personnel

D.R. Haughton, M.Sc., Ph.D., 15 days @ \$500/day \$7,500.00

M.K. Haughton B.Ed., 14 days @ \$200/day \$2,800.00

Food & Accomodation @ \$60/day/person \$1,740.00

Mobilization and Demobilization \$200.00

Vehicle Rental (4X4 truck @ \$60/day x 15 days) \$900.00

Equipment & Supplies @ \$150/day x 15 days \$2,250.00

#### Laboratory Analysis:

##### *Rock Samples*

Rock sample prep. 45 samples @ \$4.50 each \$202.50

30 element ICP 36 samples @\$5.80 \$208.80

30 element ICP + Au, Pt, Pd, 9 samples @\$16.65 \$149.85

GST \$39.28

##### *Stream Sediment Samples*

Silt sample prep. 21 samples @ \$1.80 \$37.80

30 element ICP + Au, Pt, Pd, 21 samples @ 16.65 \$349.65

GST \$27.12

##### *Overburden Samples*

Sieving 16 samples @ \$2.50 \$40.00

30 element ICP 16 samples @ \$5.80 \$92.80

GST \$9.30

Shipping costs \$16.20

Ore Dog Costs \$500.00

Report Preparation \$1000.00

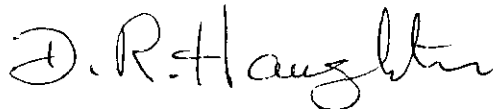
**TOTAL COSTS** \$18,063.30

### APPENDIX III: STATEMENT OF QUALIFICATIONS

David R. Haughton, B.Sc. (Eng.), M.Sc., Ph.D.  
Geological Engineer  
Address: 2760 Dooley Road, Victoria, B.C., V8Y 1R7  
Telephone: (250) 652-1448

I David R. Haughton of Victoria, B.C. do hereby certify that:

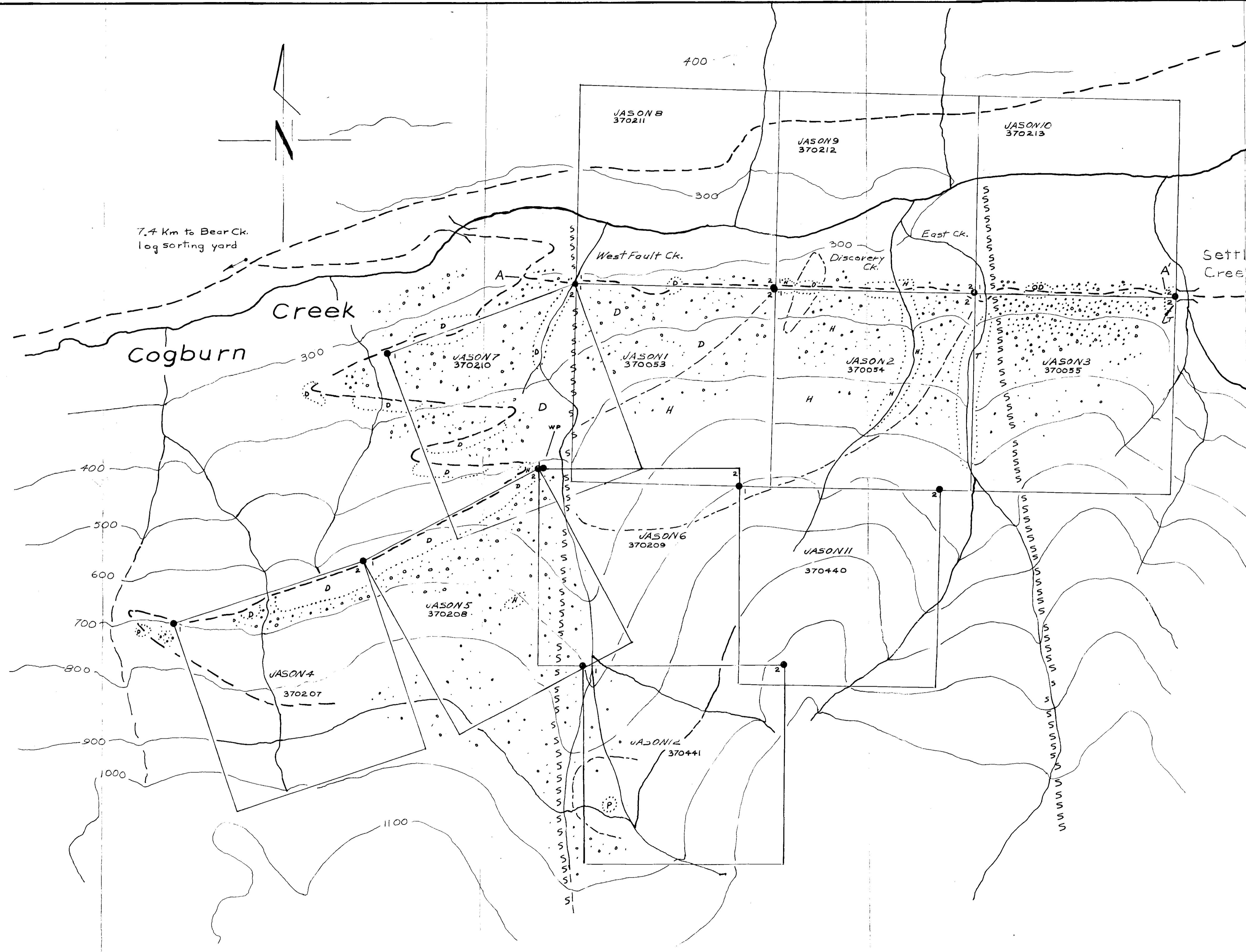
- 1) I am a self employed Geological Engineer residing at the above address.
- 2) I am a graduate of Queen's University, Kingston, Ontario, where I obtained a B.Sc. (Eng.) in Geological Engineering, 1965 and a Ph.D. in Geology in 1971.
- 3) I am a graduate of McMaster University, in Hamilton, Ontario, where I obtained a M.Sc. in Geology, 1967.
- 4) I have been actively involved in geological and geotechnical work for 28 years since graduation in 1971.
- 5) I am author of this report which is based on an exploration program carried out by myself with the assistance of one individual knowledgeable in geology.



David R. Haughton, P.Eng., Ph.D.  
Geological Engineer

January, 2001  
Victoria, British Columbia





SCALE 1:5000

0 1 2 3 4 5  
METERS x 100

Contour Interval 100 Meters  
Elevation in Meters Above M. Sea Level

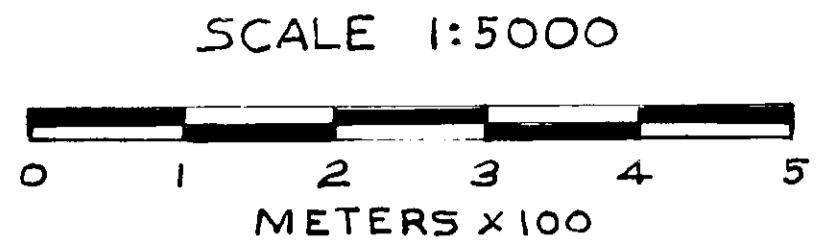
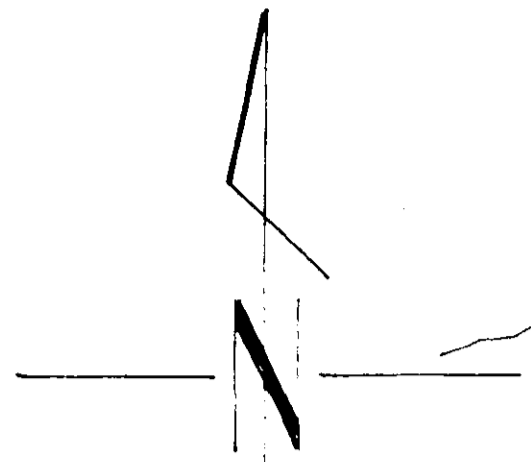
- Geology
- Recent & Quaternary
- Alluvium or fluvial, colluvium, glacial till deposits
- Mesozoic: Cretaceous
- Peridotite
  - Pyroxenite-Hornblendite
  - Diorite
  - Quartz Diorite
  - Tectonic Melange: leucodiorite, hornblendite migmatite

- Symbols
- Assumed geological boundary
  - Assumed fault
  - Outcrop
- Note: A-A' marks section traversed

GEOLOGICAL SURVEY BRANCH  
1900 FT

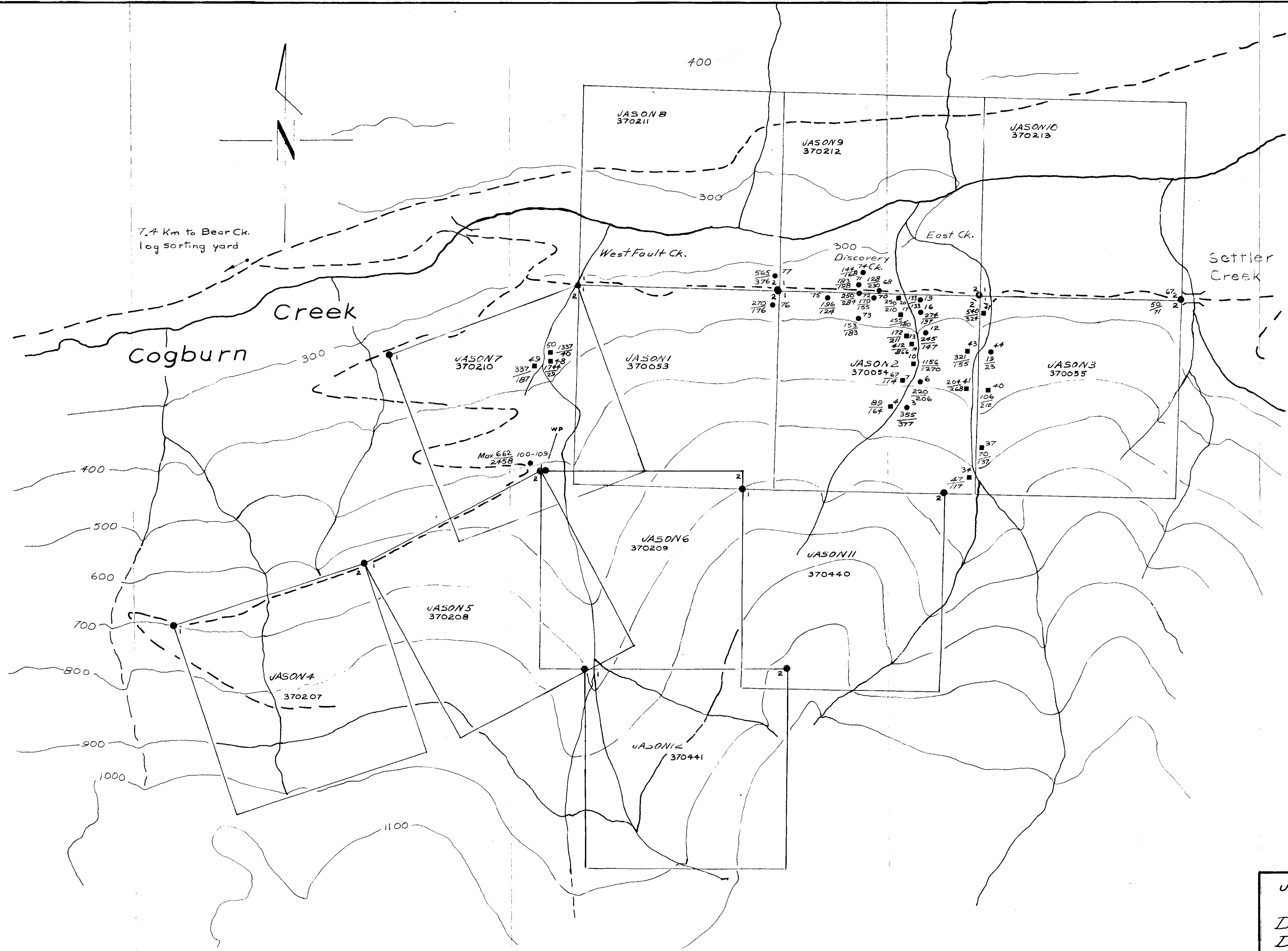
26,519

JASON CLAIMS  
GEOLOGY  
Date: Sept. 2000 Drwg. # ①  
Drawn by: D.R. Haughton P. Eng.



Contour Interval 100 Meters  
Elevation in Meters Above M. Sea Level

7.4 Km to Bear Ck.  
log sorting yard



Outcrop & Float

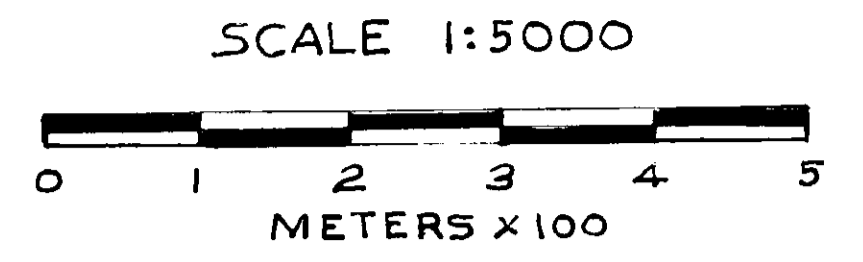
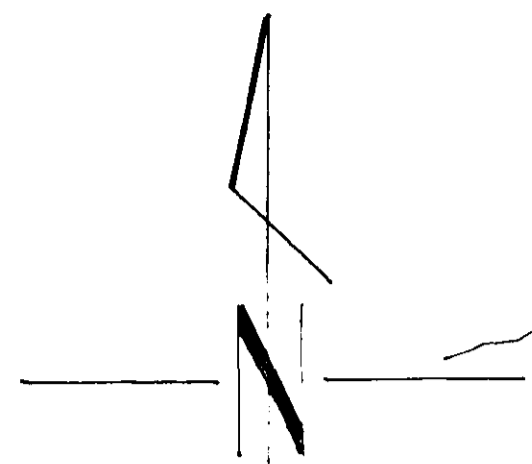
Ni/Cu<sup>1</sup> Outcrop Samples

Ni/Cu<sup>10</sup> Float Samples

GEOLOGICAL SURVEY BRANCH  
PROPERTY REPORT

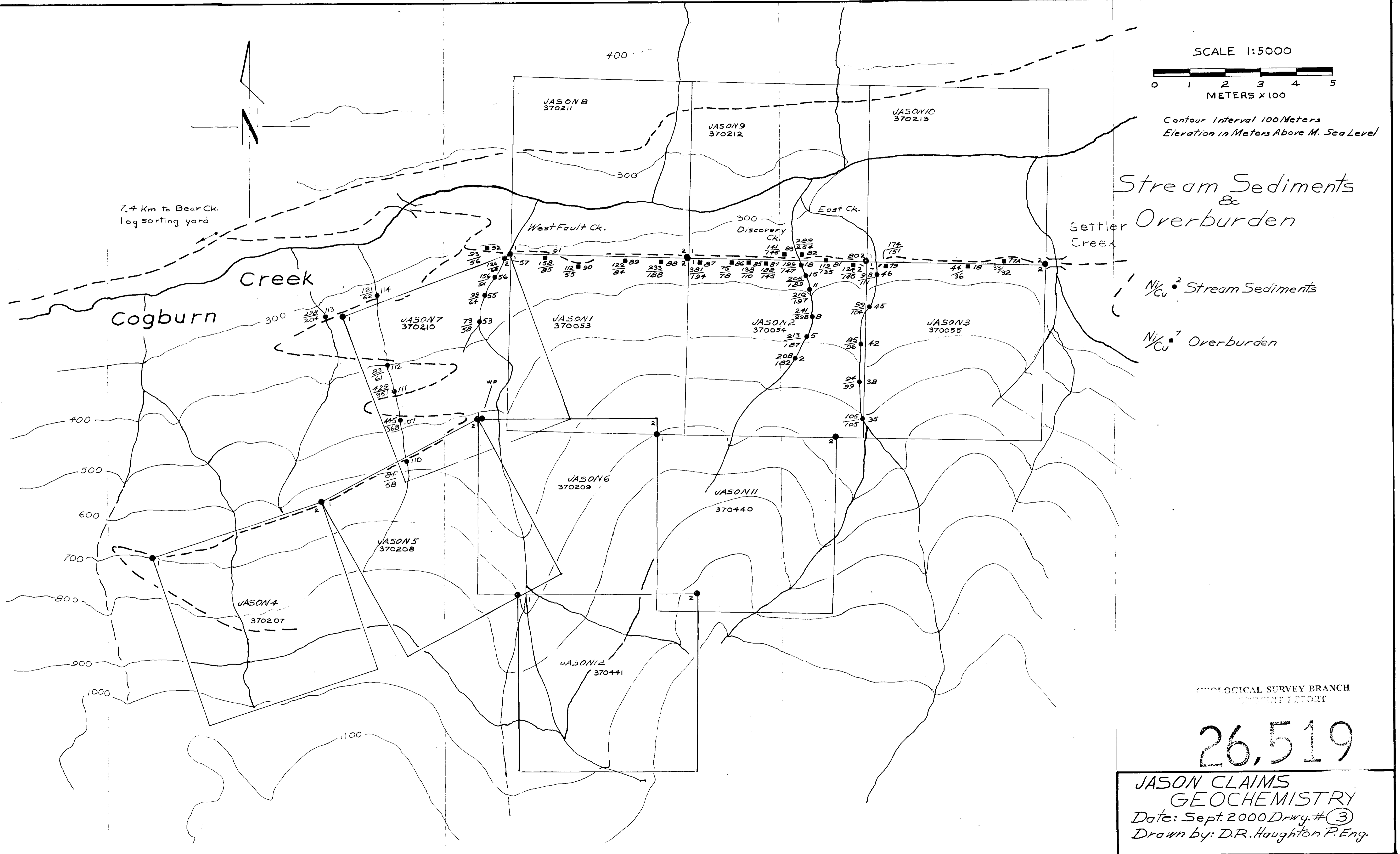
26,519

JASON CLAIMS  
GEOCHEMISTRY  
Date: Sept. 2000 Drwg. #2  
Drawn by: D.R. Houghton P. Eng.



Contour Interval 100 Meters  
Elevation in Meters Above M. Sea Level

7.4 Km to Bear Ck.  
log sorting yard



Stream Sediments  
&  
Overburden

Ni/Cu<sup>2</sup> Stream Sediments  
Ni/Cu<sup>7</sup> Overburden

GEOLOGICAL SURVEY BRANCH  
MINING REPORT

26,519

JASON CLAIMS  
GEOCHEMISTRY  
Date: Sept. 2000 Drwg. # ③  
Drawn by: D.R. Houghton P. Eng.