N.T.S. 103 A/8
LATITUDE 52° 29'N
LONGITUDE 128° 10' W

GEOLOGICAL AND GEOCHEMICAL

REPORT ON THE

HEBREW CLAIM BLOCK (302 686)

DON PENINSULA AREA

BELLA COOLA, B.C.

SKEENA MINING DIVISION

CASCADIA-1 SYNDICATE
3872 Garden Grove
Burnaby, B.C.
V5G 4A7

TERRA NOVA EXPLORATION CONSULTANTS
RR-1, L-9
Bowen Island, B.C.
V0N 1G0

November 20, 1991

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INTRODUCTION

As a result of research conducted on the behalf of the Cascadia-Prospecting Syndicate it was decided to stake and carry out a work program on the Hebrew Claims. Initially it was thought this property may have the potential for being a volcanogenic massive sulphide deposit. However, after the completion of this year's work program it is more likely the mineralization represents a skarn. Nevertheless, high zinc grades have been encountered on the property and zinc skarns elsewhere in the world have proved to be profitable.

This year's program consisted of claim staking, soil sampling, silt sampling, prospecting and geological mapping. It commenced on July 17, 1991 and ended on August 6, 1991. The crew consisted of two geologists and a prospector. In total 473 soil samples, 72 stream sediment samples and 55 rock samples were collected. The geological mapping and prospecting was carried out on a scale of 1:2,500 on a grid that was established in 1988 by Lac Minerals Ltd. Some linecutting was also carried out this year, but once the grid by Lac Minerals Ltd. was discovered it was decided to utilize the existing ride. The staking of one 20 unit claim block preceded the field work. The name of the claim block (Hebrew) was that of the original claim block staked in mid-1800's. The baseline for the grid was aligned roughly in the centre of the roof pendant that hosts the mineralization at a bearing of N75W. The cross-lines were orientated north-south and were at 100 m intervals. The length of these lines were designed to cover the stratified rocks of the roof pendant plus about 150 m of the enclosing intrusive rocks. In total approximately $36,000 was expended on this year's program.

The results of this year indicated the presence of zinc-lead-copper skarn mineralization over a strike length of at least 1,600 m. Coincident with this mineralization were anomalous soil values for zinc, copper, silver and to a lesser degree lead. The strike length of this soil anomaly is at least 2,000 m extending off the grid at both-ends to the northwest and southeast. Anomalous stream sediment samples were also present in those drainages which emanated from the areas of known mineralization. High assay values from roughly the centre of the grid (L17E) ranged up to 10.72% zinc. Previous sampling from roughly the same area produced a value of 9.9% zinc over 2.5 m. Whereas approximately 500 m along strike (L24E) at the mouth of an old adit a weighted average of 2.12% zinc over 2.5 m was obtained (Turna, R., 1987).

Further work is recommended on the property. Geophysics could be useful, especially a magnetometer survey, since pyrrhotite was observed. However, the most expedient means to explore the property would be a trenching program. Thick vegetation and overburden covers much of the mineralized trend. Consequently, it is likely thicker and higher grade mineralization could be encountered. Since the mineralization is situated close to tidewater, with a sizable community (Bella Bella) located within 30 km, the economics of placing a mine in production could be quite favourable. Especially considering that most zinc skarns that are in production (i.e. Mt. Hundere, Yukon) tend to be quite high grade.

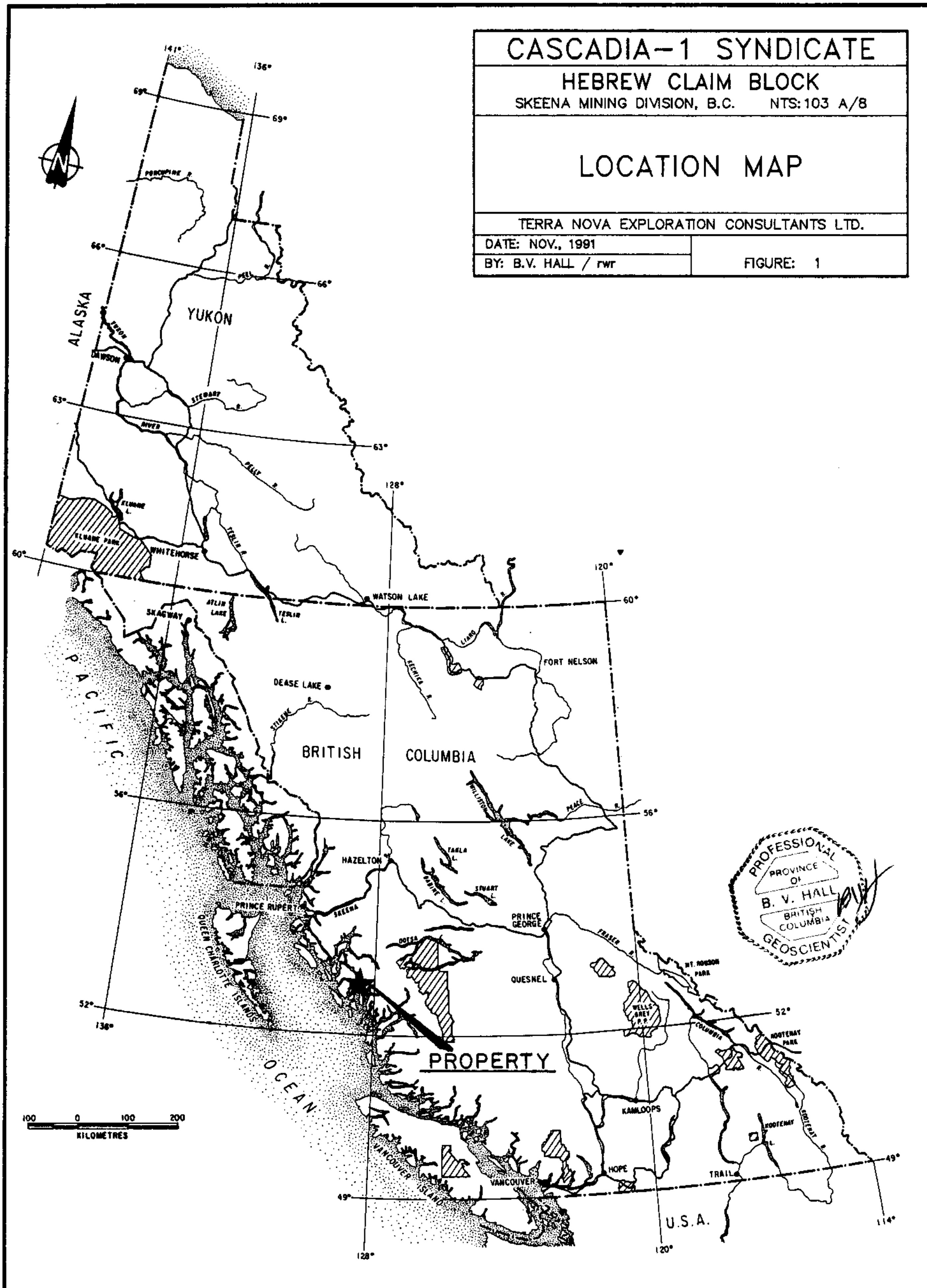
Location and Access

The property is located along the west coast of British Columbia roughly 500 km northwest of Vancouver. More specifically it is located roughly 30 km due north of the town of Bella Bella (population 800), or 100 km east of Bella Coola (population 825). The semi-deserted town of Ocean Falls also occurs 30 km to the east.

To gain access to Bella Bella one must first go to either Prince Rupert or Port Hardy, then travel on the British Columbia Ferry Corp. Daily scheduled airline flights also connect Bella Bella with Vancouver.

Bella Coola is accessed via Highway 20, a secondary highway which originates 350 km to the east, at Williams Lake. Daily scheduled airline flights also connect Bella Coola with Vancouver, as does twice weekly bus and freight services. Deep sea port facilities are also present at Bella Coola, or Bella Bella.

To gain access to the property float planes or boats can be hired either at Bella Bella or Bella Coola. The property occurs immediately to the north arm of Neekas Inlet which in turn is located roughly in the centre of the Don Peninsula, Spiller Channel and Mathieson Channel occur to the east and west respectively. Salmon Bay which occurs at the western boundary of the property appears to be big enough to be able to handle large ships.



R.W.R. MINERAL GRAPHICS LTD.

Physiography and Climate

In general the topography on the property is relatively subdued ranging from sea level to just over 1,500 feet. The dominant topographic features are the north arm of Neekas Inlet, and Salmon Bay which occur at the southeastern and northwestern extremities of the property, plus Neekas Creek which flows along the eastern boundary.

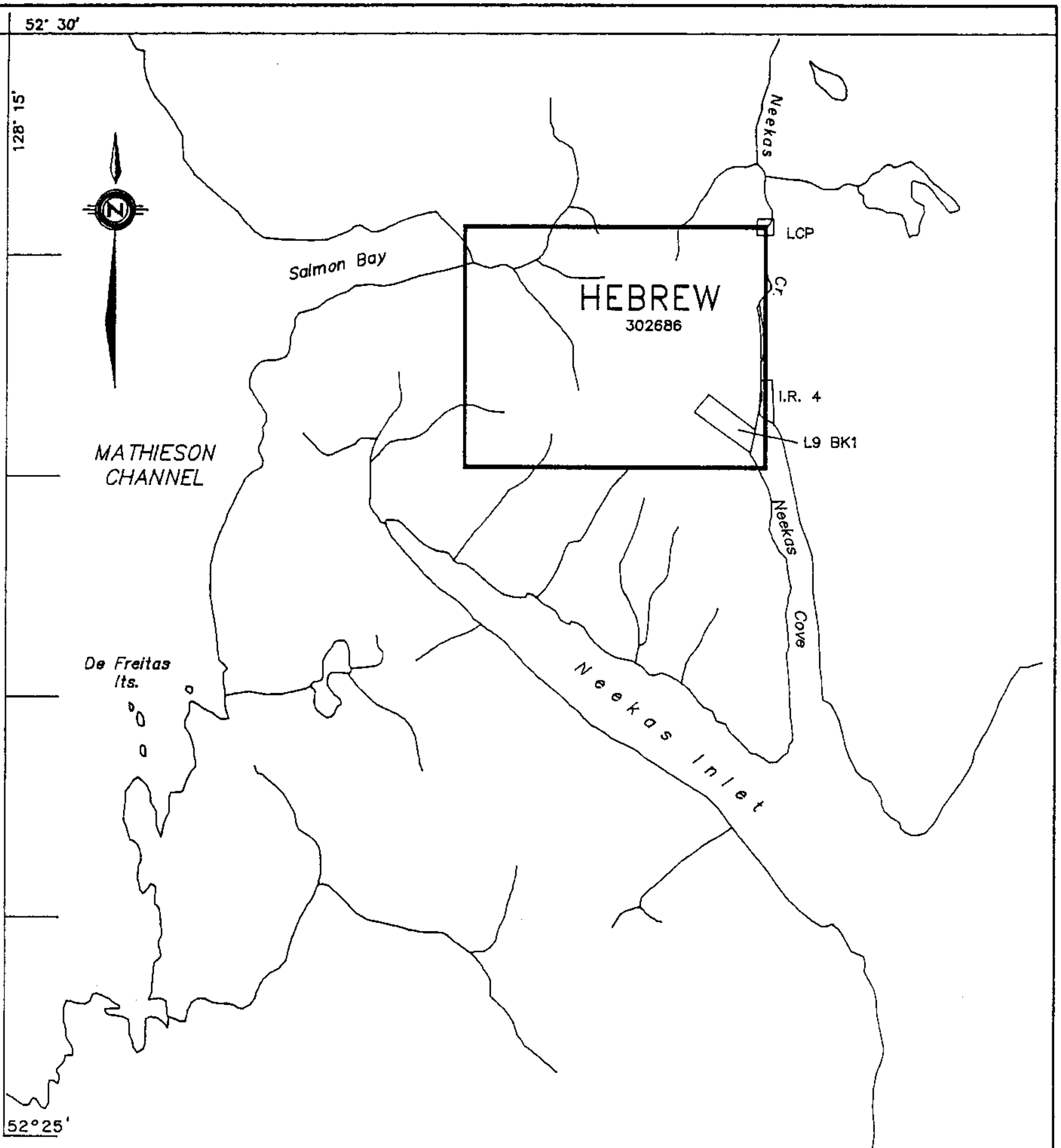
Over the area of the grid the topography varies from sea level to 700 feet. Occupying the centre of the grid is a northwesterly trending valley or saddle which traverses the Don Peninsula connecting Salmon Bay with the north arm of Neekas Inlet. This valley also coincides with the outline of the Paleozoic strata. Whereas the areas of the higher topographic relief corresponds to the intrusive rocks of the Coast Plutonic Complex.

The vegetation is typical of west-coast rain-forest environments consisting of a dense mixture of hemlock, fir, cedar, spruce and devils club. Swampy conditions persist in the central portions of the grid, whereas the valley slopes are generally well-drained. The timber in the area could be considered to be marketable.

The climate is generally mild with the winters being quite wet. Annually the precipitation likely exceeds 250 cm with the bulk of that falling as rain. Winter temperatures seldom go below 0°C, and any snow that does fall seldom lasts for more than two weeks. The working season for this property could, for all intent purposes, be considered to be year-round.

Claim Information

At present the property consists of one 20 unit claim block known as the Hebrew (302686). It was staked on July 23-24, 1991 by Brian V. Hall and is currently being held in trust for the Cascadia-1 Syndicate by Brian V. Hall of RR-1, L-9, Bowen Island, B.C. V0N 1G0. The recording date was August 7, 1991. Pending acceptance of the assessment work described in this report the claims should be valid until July 24, 1999. Shown on Figure 2 is the location of the claim boundaries in relation to local topographic features.



PROFESSIONAL
PROVINCE OF
B. V. HALL
BRITISH COLUMBIA
GEOSCIENTIST

0 1000 2000 metres

SCALE 1:50,000

CASCADIA-1 SYNDICATE

HEBREW CLAIM BLOCK

SKEENA MINING DIVISION, B.C. NTS: 103 A/8

CLAIM MAP

TERRA NOVA EXPLORATION CONSULTANTS LTD.

DATE: NOV., 1991	
BY: B.V. HALL / rwr	FIGURE: 2

One old Crown grant (Section 1, Block 9) known as the Hebrew occurs in the vicinity of the adit. It is not known whether this Crown grant is still valid. In addition, land reserved for the Indians (IR-4) occurs immediately to the east of the property. These lands have never been occupied.

Property History

The earliest known work on the area now occupied by the Hebrew claim block was in the late 1860's. Reference was also made of this property in 1887 in a publication by the City of Vancouver entitled "Mineral Resources of B.C." in which high values in gold and silver are noted. The property was also mentioned by the Geological Survey of Canada in 1887 (BCDM, 1931). In 1896 the property consisting of Section 9, Block 1, was held by Messers. Moss and McKay (BCDM, 1896).

In 1931, a lease on what was called the Hebrew Crown grant was obtained by W.A. Robbins of Victoria. At this time the 30-foot long adit which occurs at the mouth of Neekas Creek was in place. Some prospecting was carried out to the west and above the adit, and on both sides, however no outcrops of importance were observed.

Assay values from two samples exposed in the adit contained: 1) 0.02 oz/ton gold, 0.4 oz/ton silver, trace copper from a sample containing massive pyrrhotite and pyrite with some zinc-blend; and 2) 0.04 oz/ton gold, 0.28 oz/ton silver, trace copper from a schistose rock containing garnetite and epidote, plus veinlets and impregnations of pyrite. The geology was also observed to consist of intercalated limestones and schist of probable Triassic age. Granitic rocks outcrop at intervals, and in places the pendant rocks are decidedly hybrid in appearance. Alteration products of epidote and garnetite are present and overall the mineralization was thought to be contact-metamorphic in origin (BCDM, 1936).

In 1952, the area surrounding the Hebrew Crown grant (Section 9, Block 1) was staked as the Neekas 1-12. Workings on the Neekas claims then consisted of a series of open cuts which exposed the mineralized zone for approximately 4,000 feet to the northwest and 800 feet to the southeast of the adit. A left lateral fault having 900 feet of apparent movement was also recognized along Neekas Creek. Three chip samples were also collected, all of which contained less than 2% zinc and 0.2% copper, with nil silver and gold. Kennco Explorations (Canada) Limited and American Smelting and Refining Company also examined the property in 1953 (BCDM, 1953).

In May of 1987 the property was once again staked. This time as the Neekas claim block by Rein Turna of West Vancouver, B.C., an employee of Lac Minerals Ltd. During the 1987 field season work, from May 6 to 10th, seven kilometres of flag line grid consisting of seven lines 150 to 500 m apart was established over the trend of the volcanic-sedimentary rocks. On this grid 111 soil, 10 stream sediment and 8 rock samples were collected. A preliminary geological map was also constructed. Significant assays included a 2.0 m wide series of grab samples which contained 9.9% zinc (area of L17+10E, 14+22S), plus a 2.5 m wide intersection at the mouth of the adit (L24+00E, 18+00S) which contained 2.12% Zn. The silt sampling indicated anomalously high zinc values along the central portion of volcanic zone, as did the soil sampling. The soil sampling in particular indicated the presence of a 1,800-metre long anomaly which stretched from the adit on Neekas Cove northwestward to Salmon Bay. Background values for zinc averaged 20 ppm with anomalous values ranging up to 998 ppm (Turna, R., 1987).

Further work was carried out on the property in 1988. This time a cut end picketed grid was established over the entire volcanic zone. Soil sampling some trenching, geological mapping and rock sampling was carried out. Unfortunately, the results of this work is not known since it was not recorded for assessment. The Neekas claims were also restaked on January 8, 1988 by Lác Minerals Ltd.

Some work was carried out during the 1991 field season, in the form of cutting access trails. However, it is not known if this work was carried out for the purpose of mineral exploration or by whom.

Regionally, very little work has been carried out along this portion of the coast. The most recent geological mapping was in 1962-1965 (Baer, A.J., 1973). Since then no work has been carried out by either the provincial or federal geological surveys. In addition, no university-funded research has been conducted. With the exception of several large scale regional silt sampling programs, no other mineral exploration work has been carried out.

REGIONAL GEOLOGY

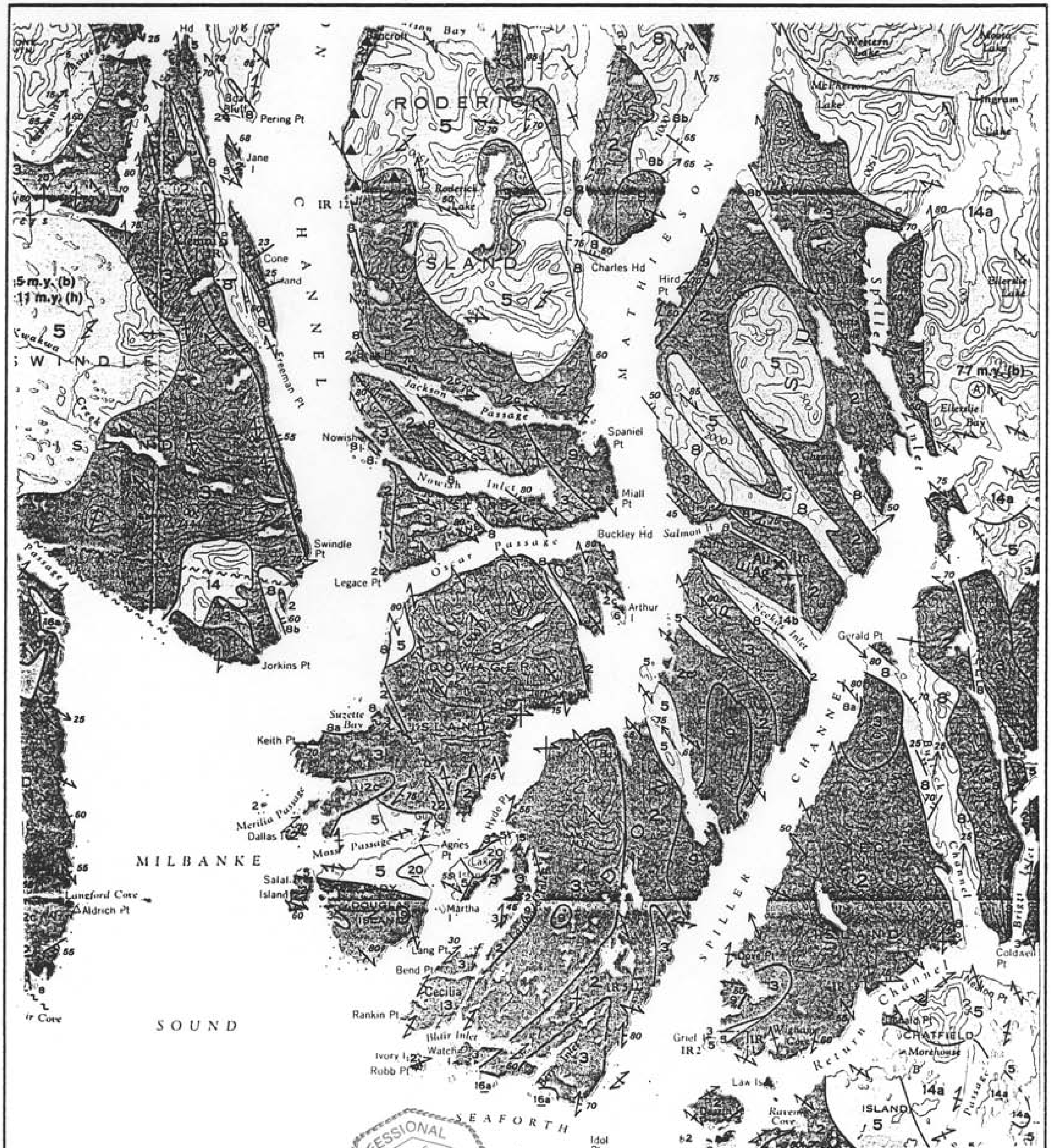
The area of Neekas Inlet occurs within a suite of plutonic and high-grade metamorphic rocks which occur along the outer margin of the west coast of British Columbia. Little is known of these rocks as evidenced by the paucity of research. In addition to the high grade of metamorphism, numerous structural complications also exist. Consequently, this one of the least understood areas in British Columbia.

Stratigraphy

According to the regional mapping of the Geological Survey of Canada (Baer, A.J., 1973), the Laredo Sound area basically consists of a series of pre-middle Triassic intrusives, which contain inliers of Triassic metasediments and volcanics (Figure 3). Age dates are non-existent, consequently, much of the correlations are based upon lithogic similarities.

Regionally most of the older rocks had been thought to belong to Stikinia. However, more recently (Wheeler et. al., 1988) the stratified rocks are thought to belong to the Alexander Terrane and consequently have affinities to the rest of North America.

The dominant rock type in the Laredo Sound area are a series of foliated quartz diorites (unite 3). The outline of this unit is quite irregular since it has been intruded by a number of plutonic rock types. Although three distinct sets of foliation have been identified, the dominant one is steeply dipping and trends



PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
B. V. HALL

NOTE:
SEE LEGEND ON ACCOMPANYING PAGE
GEOLOGY AFTER BAER A.J. 1973

0 5 10 Km

SCALE 1: 250,000

CASCADIA–1 SYNDICATE

HEBREW CLAIM BLOCK

SKEENA MINING DIVISION, B.C. NTS: 103 A/8

LAREDO SOUND REGIONAL GEOLOGY

TERRA NOVA EXPLORATION CONSULTANTS LTD.

DATE: NOV., 1991

BY: B.V. HALL / rwr

FIGURE: 3

LEGEND TO ACCOMPANY FIGURE 3

LEGEND

Map-units shown by uncoloured legend blocks do not appear on this map

CENOZOIC

PLEISTOCENE AND HOLOCENE

21 — *Alluvial and glacial deposits*

20 — *LAKE ISLAND FORMATION basaltic flows, scoriae and ashes*

TERTIARY

UPPER MIOCENE AND/OR LOWER PLIOCENE

19 — *Rhyolite*

18 — *Vesicular basalt, olivine basalt*

MIOCENE

17 — *Rhyolite and quartz-feldspar porphyry*

16 — *Granite and syenite; 16a, granite; 16b, syenite.*

OLIGOCENE AND/OR MIOCENE

15 — *BELLA BELLA FORMATION: andesitic volcanic rocks, minor sediments*

EOCENE OR PALEOCENE

COAST PLUTONIC ROCKS (in part)

14 — *Quartz monzonite; 14a, possibly in part of the same age as map-unit 5*

13 — *Granodiorite*

MESOZOIC

CRETACEOUS

LOWER CRETACEOUS

HAUTERIVIAN AND/OR BARREMIAN

12 — *Andesitic lava; 12a, black slates*

JURASSIC

MIDDLE JURASSIC

HAZELTON GROUP (TIPPER, 1963)

11 — *Andesitic volcanic rocks, minor sediments; 11a, agglomerate; 11b, greywacke*

MIDDLE OR LOWER JURASSIC (?)

10 — *Black slate and argillite; 10a, conglomerate*

MIDDLE AND/OR LOWER JURASSIC

9 — *Purplish, massive diorite, pyroxene diorite, gabbro, norite*

TRIASSIC (?)

8 — *Metasediments, biotite-hornblende-garnet schist, biotite-garnet-sillimanite schist, metavolcanics, limestone, quartzite; 8a, limestone; 8b, conglomerate*

7 — *Greenstone, chlorite schist, areas of abundant andesitic dykes; 7a, quartz diorite; 7b, diorite; 7c, probable eruptive neck*

MIDDLE TRIASSIC (?)

COAST PLUTONIC ROCKS (in part)

6 — *Foliated, chloritized granodiorite, probably retrograde equivalent of unit (5)*

5 — *Foliated granodiorite*

4 — *Foliated, chloritized quartz diorite, probably retrograde equivalent of unit (3); 4a, mainly granodiorite; 4b, mainly diorite; 4c, mainly greenstone; 4d, massive quartz diorite*

3 — *Foliated quartz diorite*

PALEOZOIC

PERMIAN (?) OR OLDER

2 — *Gneissic diorite, with inclusions of metasediments and metavolcanics; 2a, mainly quartz diorite; 2b, mainly greenstone; 2c, massive diorite*

1 — *Feldspar-quartz-biotite gneiss, garnet-biotite gneiss, amphibolite, banded gneiss, veined gneiss*

northwesterly. Contacts with other plutonic rocks are generally gradational or discordant. The time of emplacement followed the deposition of unit 1, but preceded that of the conglomerates of unit 10 and possibly unit 8, thus suggesting a Mid or Late Triassic age.

The oldest rock types are a series of gneisses, greenstones, quartz diorites and massive diorites (units 1 and 2). The gneisses consist of gneissic diorites, feldspar-quartz-biotite gneiss, garnet-biotite gneiss, amphibolite, banded gneiss, and veined gneiss. The banding in these units varies from a few millimeters to over a metre for the quartzofeldspathic layers, whereas the mafic layers are commonly 1 to 2 cm thick. Overall the foliation of the gneisses tends to parallel that of the other rock types. There is also a suggestion that these rocks attained amphibolite grade metamorphism twice with a middle interval of retrograde metamorphism. No direct evidence of the age of these rocks is available. However, lithologically similar gneisses in continuity with the Laredo Sound rocks occupy large areas of Douglas Channel and the Prince Rupert-Skeena map areas. A pre-Permian age has been assigned to these gneisses based upon a similar gneiss which underlies a rock containing late Paleozoic fossils in the White Sails Lake mapsheet.

Intruding the high grade metamorphic rocks are a series of foliated granodiorites (unit 5). This rock type outcrops exclusively to the west and southwest-south Bentict Arm. In some cases, individual plutons are formed, whereas elsewhere this rock type occurs as large irregular bodies. The contacts with the other plutonic rocks are generally gradational. Whereas the contacts with the gneisses are generally discordant, sharp, and marked with narrow agmatite zones. The age of this unit is thought to be middle Triassic.

Triassic(?) strata (unit 8) consisting of metasediments, biotite-hornblende-garnet schist, biotite-garnet-sillimanite schist, metavolcanics, limestone, quartzite, and conglomerate occur throughout the Laredo Sound area. To the north rocks correlative with this unit are thought to represent the Nisling Terrane. However, other than the extreme northeast corner of the Laredo Sound map area, this unit appears to have more in common with the Sicker Group of the Alexander Terrane.

A middle to lower Jurassic unit of basic to ultrabasic rocks (diorite, norite and gabbro) is the next youngest unit (unit a). These form a series of rounded to elongated masses 1-15 km long. Internally some layering is present, which likely represents primary flow banding. Little is also present in the way of a foliation and where visible is quite faint.

The youngest rocks in the Laredo Sound area are represented by a series of Tertiary quartz monzonites (unit 14), andesitic volcanic rocks (unit 15), granite-syenites (unit 16), and Quaternary basaltic flows, scoria and ash (unit 20). In general, the intrusive rocks (units 14 and 16) occur as a series of plutons with the granite-syenite bodies (unit 16) occurring along the southwestern margin of the map area. The volcanic rocks of unit 15 also occur in the southern portion of the map area in close proximity to the intrusives of unit 16. They also appear to represent the volcanic equivalent to this plutonic suite. The Quaternary volcanics of the Lake Island Formation (unit 20) also occur in close proximity to granite-syenite plutons of unit 16. However, this unit is considerably younger, resting unconformably on glacially scoured surfaces (Baer, A.J., 1973).

Metamorphism

Contact metamorphism appears to be essentially absent in the Laredo Sound area, however, the regional metamorphism is both high-grade and widespread. Based upon the regional mapping of the Geological Survey of Canada (Baer, A.J., 1873), it appears probable that on axis of high-grade metamorphism (upper almadine-amphibolite facies) extends southeastward from the area of Mussel Inlet. Away from this axis the grade of metamorphism decreases with the disappearance of garnet and the appearance of chlorite. Occurrences of metamorphic garnet, sillimanite and kyonite are also limited to the central portion of this zone, within a 35 km wide interval The F_2 foliation also appears to follow this northwesterly trend, decreasing in intensity away from this axial zone.

Structural

Structurally the Laredo Sound area is quite complex in that at least three foliations are present along with several phases of faulting. Accompanying the development of the foliation is some small scale folding. In general the biotite or other phyllosilicates defines the foliation in both the plutonic and stratified rocks.

Both the F_1 and F_3 foliations strike northeasterly. The F_1 is a penetrative foliation that is most prevalent in the western part of the Laredo Sound area. It has been crenulated by the F_2 foliation and in places has been completely transposed into the plane of the F_2. The F_3 surfaces are represented by a pronounced cleavage and is limited to the northeast corner of the Laredo Sound map area.

Faulting is most pronounced in the western portion of the Laredo Sound area, away from the axis of the highest-grade metamorphic rocks. One of the large structures is a major lineament which follows the length of Laredo Sound into Milbanke Sound. This linear is clearly visible on topographic maps, and where it outcrops has large zones of fault breccias and shearing.

Several other northwesterly striking faults are also present in the Laredo Sound area. These like the one in Laredo Sound and others along the west coast of British Columbia have a right-lateral sense of transcurrent movement.

Mineral Properties

Within the Laredo Sound map area there are nine mineral occurrences noted in the B.C. Department of Mines Mindep Files. Of these two represent the mineral occurrences on Neekas Inlet, now covered by the Hebrew claim block. Five others are industrial minerals such as limestone, perlite and graphite. The remaining two consist of a skarn zone located on the west side of Pooley Island and a series of pyritic quartz-calcite veins located on the south end of Swindle Island. The relative paucity of metallic mineral occurrences noted in the Laredo Sound area testify to the lack of mineral exploration activity along this portion of British Columbia's west coast.

Elsewhere along the coast volcanogenic massive sulphide, porphyry molybdenum, gold-bearing quartz veins and skarn deposits are present in rocks similar to the Laredo Sound area.

Of the volcanogenic massive sulphide deposits perhaps the closest and most noteable are the Ecstall River occurrences which are located immediately to the north. In total 15 occurrences of stratiform massive sulphide mineralization are known to occur in a package of Paleozoic to Protozoic metavolcanics hosted by the Nisling Terrane (Gareau, S.A., 1991). Equivalents to the Nisling Terrane are thought to be represented by some of the Triassic(?) metasediments and volcanics in the Laredo Sound area. This rock package (unit 8) occurs predominantly in the northern corner of the map area, although small pendants have been mapped elsewhere. The most important of the Ecstall River occurrences is the Packsack zone. It consists of two massive sulphide bodies that occur in a quartz-sericite schist and are associated with a 600 m long shear zone. The southern body is up to 6 m wide and consists of massive pyrite with minor amounts of chalcopyrite, chalcocite and sphalerite. Preliminary reserves indicate 2.7 million tons grading 0.5% copper, 1.1 oz/ton silver, and 0.2% zinc. This mineralized body is open along strike and at depth where it appears to be thickening and becoming more zinc-rich.

Elsewhere along the coast the volcanogenic massive sulphide deposits of Greens Creek, Alaska; Granduc, B.C. and Buttle Lake, B.C. all occur in rock that are Triassic or older. All three of these are considered to be world class examples and two of them (Greens Creek and Buttle Lake) are characterized by extremely high base and precious metal grades. Other examples would include the Duncan Canal, Alaska; Prince of Wales Island, Alaska; Porcher Island, B.C. and Grenville Channel, B.C. occurrences.

Examples of the porphyry molybdenum occurrences include the past producing Kitsault and the almost producing Quartz Hill deposit. The Kitsault mine located at the Observatory Inlet north of the Laredo Sound area has reserves of 95 million tons averaging 0.115% Mo. During the five years (1967-1972) the mine was open 9.3 million tons grading 0.112% Mo was mined. The Quartz Hill deposit located near Ketchikan in Alaska has reserves of 1.5 billion tons grading 0.136% Mo (Bundtzen, T.K. et. al., 1984). Both deposits occur in Oligocene to Eocene granitic bodies which are quite similar to the intrusives which comprise units 14 and 16. Both are characterized by stockworks of quartz-molybdenite mineralization with the highest grade mineralization being present in the zones of most intense fracturing and faulting.

Gold-bearing quartz veins are most notable in the area of Surf Inlet, and on Banks Island, both of which occur to the northwest of Laredo Sound. At Surf Inlet between 1902 and 1943 a total of 1.0 million tons grading 0.35 oz/ton gold, 0.2 oz/ton silver and 0.31% copper was produced from two mines (Surf Inlet and the Pugsley). The gold-bearing quartz veins were up to 12 m wide and up to 300 m long. Associated with the auriferous pyrite were minor amounts of chalcopyrite, chalcocite, bornite, covellite and molybdenite. Gangue minerals include quartz, ankerite and calcite; with sericite and chlorite present as alteration minerals. The host rocks are a series of hornblende-biotite quartz diorites with bands of diorite gneisses. At Banks Island the mode of mineralization is quite similar, although none of the occurrences achieved production.

Skarn deposits consisting of zinc, lead, copper and/or iron occur all along the coast in a number of localities. Perhaps the largest concentration is on Quadra Island where 19 occurrences containing varying amounts of pyrite, pyrrhotite and chalcopyrite are present. The host rock is the Quatsino limestone in contact with diorites and quartz diorites of the coast plutonic complex. Only one, the Lucky Jim achieved one small amount of production (526 tons) between 1909 and 1927 of material grading 0.5 oz/ton gold, 0.5 oz/ton silver and roughly 2% copper. Perhaps one of the best known areas of skarn mineralization is on Texada Island. Between 1896 and 1976, 10 millions tons of magnetite ore, 35,898 tonnes of copper, 39.6 tonnes of silver and 3.3 tonnes of gold were produced from a number of deposits (BCDM Mindep Files 92F).

Other zinc-bearing skarns along the coast include the Knight Inlet. Marble-Copper showing, and the Lynn Creek - Kemptville showings. At the Knight Inlet Marble-Copper showing assays of 5.7% copper, 5.9% zinc, and 2.5 oz/ton silver have been obtained over 1.2 m (BCDM Annual Report, 1928). Assays from the Lynn Creek - Kemptville showing in North Vancouver range up to 2.0 oz/ton silver, and 20.0% zinc. A feasibility study was carried out in 1963 indicated on inferred ore reserve of 272,155 tonnes of 20% zinc (BCDM Mindep Files 92G).

PROPERTY GEOLOGY

During the course of the field work, geological mapping and prospecting was carried out at a scale of 1:2,500 over the entire grid. The aim of this mapping was to determine the structural and stratigraphic relationships of the grid. In addition, all outcrops were mapped for sulphide minerals and/or alteration assemblages. Prospecting was carried out in conjunction with all aspects of the field work. A total of 55 rock samples were also collected and submitted for analysis.

Stratigraphy and Lithology

According to the regional mapping of the Geological Survey of Canada (Baer, A.J., 1973), the stratigraphy consists of a central zone of mixed metasediments, volcanics and limestone (unit 8) which is surrounded by gneissic diorites (unit 2). The stratified rocks (unit 8) strike northwesterly from the mouth of Neekas Creek through to Salmon Bay and average 150 m wide. The enclosing diorites (unit 2) also appear to be younger, suggesting that the stratified rocks may represent a roof pendant. Somewhat substantiating this interpretation is the same attitudes for the F_1 foliation both within the diorites and the stratified rocks. The age of the stratified rocks is also thought to be mid to upper Devonian based on similarities with the Sicker Group on Vancouver Island, plus the Port Refugio Formation in Southeast Alaska (Woodsworth, G.J., personal communication). The age of the diorites (unit 2) are also thought to Mesozoic as opposed to being Permian or older. This Mesozoic age being more in keeping with the ages of the Coast Plutonic Complex.

Structurally the stratified rocks appear to face steeply to the southwest. Based upon this interpretation the oldest rocks on the grid would be a series of Devonian mafic volcanics (Dmv). These are located at the vicinity of the baseline and lines 17 - 24E. This unit is exposed on the grid for roughly 800 m and is at 75 m wide. Characteristically this unit is dark green, melanocratic, foliated, medium-grained and massive. It is also just bordering on being called on amphibolite due to the incipient development of metamorphic hornblende. Some quartzofeldspathic layers are also just beginning to develop. Chlorite is the most abundant mafic mineral constituting 30% of the rock, hornblende is next representing 5-10%. Other units of mafic volcanic occur higher up in the stratigraphic sequence, associated with the limestones. The protolith for this rock type appears to be a series of andesitic to basaltic flows.

Immediately to the south and enclosing other units of mafic volcanics is a mixed package of metasediments and volcanics (Dvs). The distinguishing feature between this unit and the mafic volcanics is the presence of banding on the millimetre to tens of centimetre scale. Although this banding is in part metamorphic in origin, it also appears to be accentuating the relict bedding. In addition to the quartzofeldspathic and melanocratic bands, calcareous bands as well as graphitic bands are also present. Dioritic material (outcrop B-125) is also present suggesting either injection along the bedding planes or preferential replacement. The calcareous or marble bands is the strongest evidence that this unit is in part sedimentary. Metamorphic minerals such as biotite, chlorite, garnet, albite and possibly hornblende are present. The protolith appears to be a mixed sedimentary tuffaceous environment. Overall this unit is also distinctly lighter in colour. Although intruded by younger diorites and enclosing other rock types this unit is roughly 300 m thick, and comprises the bulk of the stratified rocks.

Two, possibly more bands of limestone (D_l) now metamorphosed to marble are present interspersed within the stratified rocks. This unit is distinctive in that it hosts or has in close proximity most of the mineralization on the property. Generally these units average 25 m in thickness. However, if the thickness of the skarn having a calcareous host (Sc) are included then it attains a thickness of 100 m in the vicinity of L22E, 17+50S. In outcrop the marbles are very white and coarse-grained, being composed entirely of calcite. Bedding planes have also been observed. The first of these units occurs at the lower contact of the stratified rocks (L15E, 10+00S). The next and much thicker one occurs toward the hanging wide side. At the eastern end of the grid the marble units are both thickest and most massive. Whereas toward the northwestern end of the grid (L5 to 8E) the marble unit is both thinner and interbedded with amphibolitic bands (outcrops B161 and 178).

Spatially associated with the marble units are the two phases of skarn (Sc and Sm) material. The first (Sc) consists of either limestone or marble that has been affected by the mineralizing solutions, whereas the protolith for the Sm is either metavolcanic and/or metasediment, although some small calcite bands may be present. A mixture of garnets, pyroxenes (diopside and/or johannsenite), epidote, phlogopite, sulphides, plus quartz and calcite are present in the skarns. These minerals have also obscured many of the original textures.

A second area containing mafic volcanics is located at the northeastern margin of the property. This roof pendant is also shown on the regional map by the Geological Survey of Canada (Baer, A.J., 1973) to have a northwesterly strike.

Enclosing the stratified rocks and in places cross-cutting them are a series of diorites (Md, Mdf and Mdp). These rocks are younger than the stratified rocks, and are thought to belong to the Coast Plutonic Complex making them Mesozoic in age.

The diorites (Md) are generally medium-coarse grained, equigranular, being composed of 1-10% biotite, 0-10% hornblende, 10-20% quartz with the remainder plagioclase. Rocks of this unit occur in the southeastern portion of the grid in the vicinity of L19 to 23+50E, 19+00S.

Bordering the upper contact of the stratified rocks elsewhere along the southern margin are a series of foliated tonalites (M+f). This unit distinguished by the presence of a foliation which is outlined by the biotite grains. Some of the plagioclase grains are also aligned parallel to the F_1 foliation. This foliation appears to decrease in intensity to the south away from the contact with the stratified rocks. This rock type is also present in the area of L23E, 13+00S.

Occupying much of the grid north of the stratified rocks are a series of porphyritic tonalites (M+p). This rock type is characterized by the presence of large phenocrysts of plagioclase up to two centimetres long. These phenocrysts are in general randomly orientated and sometimes enclose the hornblende grains. Generally this rock type is lacking a foliation. However, in close proximity to the stratified rocks, a foliation is discernable. This rock type is also present as a dyke (outcrops C-50, 20, and B-43). This establishes the relative age of this rock type as being younger than the stratified rocks.

Aside from the mineralization the youngest rock type on the property is a mafic dykes (Tmd), which occurs in the vicinity of L20E, 14+75S. This dyke is roughly 5-10 m wide strikes northeasterly through both the tonalites and the stratified rocks. Another occurrence of these younger dykes is in outcrop C-13 (L22E, 18+70S). These dykes are generally melanocratic, dark green, fine-grained and unfoliated. Because these dykes cross-cut the tonalites and lack a foliation they are thought to be Tertiary in age.

Structure

Structurally the property is relatively complex, having three recognizable faults, plus at least two phases of folding. The oldest events are the phases of folding. These are represented by pronounced foliation (F_1) which has been later folded.

The first phase of folding has produced the F_1 foliation. This foliation generally strikes to the southeast at an azimuth of 130^o, and dips steeply to the southwest (65-90^o). It has the same attitude in both the tonalites and the stratified rocks, but is absent in the mafic dykes. Where observed the bedding (Fo) is parallel to this foliation, suggesting the bedding has been transposed. It is interesting to note that overall trend of the F_1 foliation is at an acute angle to the contact of the stratified rocks with the tonalites. This suggests the possibility of disharmonic folding within the stratified rocks.

The second phase of folding has resulted in the folding of the F_1 foliation. This has resulted in reversals in dip, plus the observation of small scale folding. Based upon the observations in outcrop B-161, this second phase of folding appears to be co-axial planer to the first phase, with the fold hinges nearly horizontal. The structures shown on Figure 4 in the area of L18 to 24E, 14+00S may be the result of either phase of folding.

The largest fault on the property is presently occupied by Neekas Creek. This structure is orientated north-south and is a pronounced linear for roughly 10 km. According to an old report (BCDM Annual Report 1953) there is roughly 300 m of apparent left lateral movement observed in the skarn units. Whereas this year's mapping only indicated 200 m of displacement.

The next largest fault occurs in the area of L8E. Here a northeasterly striking fault offsets both the tonalites and stratified rocks. The amount of displacement is between 100 and 200 m of right lateral movement. There also appears to be some degree of vertical movement since the limestone present in outcrop B-169 does not outcrop east of this fault.

The third fault to be discussed was observed in outcrop B-159. This fault had an attitude of 100/75S with slickensides at 110/10E. Some faulting was also observed in this area, possibly related to the faulting. A marble was present to the south with a mafic volcanic to the north. The amount of displacement is roughly 100 m of right lateral movement.

Mineralization

During the course of this past year's field work, a number of mineralized zones were encountered. These appear to be aligned in a northwesterly manner and are in part coincident with a series of limestone lenses. In appearance the mineralization consists of a series of sulphide veins (sphalerite and/or pyrite, pyrrhotite, galena and chalcopyrite). Often associated with these sulphide veins are skarn minerals such as garnet, pyroxene, phlogopite and epidote. So far a strike length of 1,600 m (L8E to L24E) has been outlined through the geological mapping, although the mineralization remains open to the southeast. An additional 400 m is inferred to the northwest based upon the results of the soil geochemistry.

Typical of most skarn systems a variety of different types of mineralization were present. In order to facilitate the mapping the various skarn assemblages were divided into two sub-groups (Sc and Sm). The distinguishing feature between these two sub-groups is the protolith. In the case of the Sc sub-group the original rock was thought to be a carbonate, either in the form of a limestone or a marble. As for the Sm sub-group the protolith was either a volcanic or sediment which may have been metamorphosed at the time of the skarn development. Based upon the geological mapping both skarn types hosts the sulphide mineralization. In addition both skarn types occur in close proximity to outcrops consisting of marble.

The Sc skarns generally occur in closest proximity to the marble units. This rock type is generally cream in colour and sometimes contains bands or veins of light green, brown and/or pink minerals. Diopside, quartz, calcite and possibly wollastonite appear to be the main minerals. However, garnets (likely andradite, johannsenite, and phlogopite are also present. Sulphides in the form of sphalerite with lesser amounts of pyrite, chalcopyrite and galena are present generally in bands or disseminated grains. Bands of marble are also present in many of the outcrops containing these skarn minerals.

The Sm skarns are generally more complex consisting of a variety of different skarn assemblages. In addition these skarn minerals are generally present in veins in the form of a stockwork. Spatially the Sm skarns appear to be surrounding the carbonate hosted skarns (Sc) and the marble (D_1) units. Green minerals in the form of epidote, hedenbergite(?) occur along with veins of garnet and quartz. Sulphides in the form of sphalerite occur with lesser amounts of pyrite, pyrrhotite, chalcopyrite and galena. Distinctive from the Sc skarns some veins of mainly pyrite and/or pyrrhotite occur. Garnets also occur, these being mainly pink although, it is suspected that green garnets (possibly grossular) may also be present.

Assay values for the sulphide bearing portions of the skarns average 1 to 2% zinc with the highest sample (91 CR-33B) containing 10.72% zinc. The highest grade samples of 91 CR-33 (8.95%), 91 CR-33A (9.36%) and 91 CR-33B (10.72%) all came from the vicinity of L17E, 14+75S. Here thick (greater than 3 cm wide) irregular veins of brown sphalerite occur, hosted by dark green skarn minerals. These samples all represented grab samples that were collected from a very old blasted outcrop. Sampling in 1987 from the vicinity of this outcrop produced 9.9% zinc over an approximate width of 2.5 m (Turna, R., 1987). The green minerals which host this mineralization appear to be hedenbergite and/or spessartine.

Grab samples from an old blasted outcrop 200 m to the northwest (L15E, 12+50S) also contained reasonably thick concentrations of sphalerite and galena. In this case the mineralization was hosted by a marble and was in the form of small bands and disseminations. Assay samples (91 CR-89 A and B) contained only 1.18% Pb, 1.99% Zn and 0.28% Pb, 1.06% Zn respectively, far below what would be expected based upon the amount of visible galena and sphalerite.

In the vicinity of the old adit located at L24E, 18+00S samples 91 BR-19A and 91 BR-20 produced zinc values of 2.09 and 2.73% respectively. Both these samples came from a skarn hosted by a mafic volcanic which contains coarse veins of brown sphalerite, 1-3% pyrite and trace amounts of chalcopyrite.

Other samples containing greater than 1% zinc (91 BR-57A, 91, 91 CR-2, 21, 91 MR-4, 22, 23 and 26) all occur between L15E and L24E between 100 and 200 m south of the baseline. Actually most mineralized outcrops east of L15E contained greater than 1% zinc. Along strike to the northwest and southeast of the interval represented by L15E to L24E samples 91 CR-77, 91 BR-171, 173 and 192B were all sufficiently anomalous in zinc, and definitely represent extensions to the mineralized zone.

Cadmium was found to be enriched in the samples containing the highest zinc contents. In particular samples 91 CR-33, 33A and 33B contained 217.7, 221.9 and 258.9 ppm Cd respectively. Manganese was also found to be quite high in these samples ranging from 17,204 to 33,009 ppm. Sample 91 CR-34 consisting of a carbonate hosted skarn (Sc) consisting of light green and pink bands contained the highest manganese content 56,345 ppm or roughly 5.6%.

Silver is also found to be enriched in the samples containing the highest zinc values. However, in the case of samples 91 CR-33 A and B, the silver values only ranged between 4.3 and 6.4 ppm. This explains in part the relatively low response for silver in the soil samples. The highest silver values 13.8 and 9.2 ppm came from samples 91 BR-89A and B. Coincidently these were also the two highest samples for lead.

Copper was also elevated in samples 91 CR-33 A and B ranging from 4,385 to 6,309 ppm. Like silver and cadmium copper also tended to highest in the samples that contained the most zinc.

Lead was in general quite low with most of the samples containing less than 100 ppm. Notable exceptions include samples 91 BR-89 A and B which contained 1.18% and 0.28% lead respectively.

Gold values overall were quite low, not exceeding 39 ppb. Consequently, gold was not used as a pathfinder element in the soil or stream sediment geochemistry.

STREAM SEDIMENT GEOCHEMISTRY

During the course of the field work, a total of 72 stream sediment samples were collected. They were collected from all the active drainages. In addition, samples were collected from some of the larger drainages at intervals of roughly 200 m. The purpose behind the stream sediment sampling was to help delineate areas of potential zinc-lead-copper mineralization.

Results

In general, stream sediment proved effective in locating the known areas of mineralization. Zinc, lead and to a lesser degree copper proved to be effective pathfinders.

In general any of the zinc values over 200 ppm were from drainages hosting known mineralization. In particular one drainage located approximately 200 m south of the baseline between lines 17 and 24E contained four samples, all of which were anomalous. This stream drained an area where a number of high grade samples were obtained in outcrop.

Another area of interest was again located immediately south of the baseline but at the eastern end of the grid (L5E to 10E). Here values of 819 and 543 ppm zinc were obtained, as well as slightly anomalous lead values.

The highest values for zinc were 1137 and 1103 ppm. Both these samples were quite anomalous for lead (162 and 220 ppm) and copper (55 and 57 ppm). These samples also appeared to come from the same drainage (L23+50E, 17+50S). They also appear to be emanating from an area of outcrop containing known lead-zinc mineralization.

A fourth area of interest was located by sample 91 MS-7, located at L15+25E, 11+25S. This sample contained 457 ppm zinc and 27 ppm lead. It also drained an area containing known lead-zinc mineralization (L15E, 12+50S).

In general, lead and copper tended to be highest in the samples containing the highest zinc values. Anomalous values for both lead and copper were in general any values over 25 ppm. Background values were in general around 5 ppm for lead and 15 ppm for copper. Silver was also highest in the samples containing the highest zinc values. This being especially true with the samples (91 MS-8 and 91 BS-23) that contained over 1,000 ppm zinc. Here the silver values were 1.0 and 0.5 ppm respectively.

One area outside the known areas of mineralization was found to be anomalous. This stream (91 BS-6) was located along the northern boundary of the claim block. It contained 260 ppm zinc and 113 ppm lead, along with 28 ppm copper. It was also located from a stream which drained a roof pendant consisting of mafic volcanics.

SOIL GEOCHEMISTRY

In total, 473 soil samples were collected at intervals of roughly every 25 m over the entire grid. Some swampy portions were present, however, for the most part samples were obtained over the entire grid. The purpose behind the soil sampling was to outline areas of anomalous geochemistry which could be related to zinc-lead-copper mineralization.

Results

As a result of the soil sampling the trend of known mineralizations appears to be adequately delineated. All the known areas of mineralization were found to be anomalous. In addition, several areas covered with overburden were found to be anomalous. In many cases these were along strike from the areas of known mineralization.

In general the values were not as high as what would be expected considering the high grade nature of the mineralization present on the property. Especially since the mineralized areas are all reasonably large. However, this is to be expected since most coastal areas tend to produce subdued geochemical responses. This being largely a function of the high rainfalls which produce high relatively stable water tables, plus the high rates of erosion. However, sufficient contrast was present between the anomalous values and background to have confidence in the geochemical expressions.

In addition, within the outline of the anomalous areas, a number of samples were found to be of background values. When the sampling notes were reviewed it turned out these areas had a very poor soil development.

Cumulative Frequency-Probability Plots were constructed for all the lead, zinc, copper, silver and iron soil sample data (Appendix E). Using these Frequency-Probability Plots normal populations should plot as straight lines, whereas the boundaries between more than one population will show up as a point of inflection (Sinclair, A.J., 1975). Depending upon where the inflection points occur in relation to the total population the data was then classified as being: 1) definitely anomalous; 2) anomalous; 3) possibly anomalous; 4) above background; or 5) normal. For silver, since a very large proportion of the data was at the detection limit (0.1 ppm), it was decided to truncate the data. This involved removing the 0.1 ppm data and replotting the Frequency-Probability Diagram.

The most pronounced anomaly occurs roughly 200 m south of the baseline between L10+00E to L24+00E, with a continuation between L4+00 to L7+00E. Zinc, silver, lead and copper defined this anomalous area which corresponds precisely with the outline and trend of the known mineralization. In total, this anomalous area is roughly 2,000 m long extending off the grid both to the northwest and southeast. The width of this anomaly is generally around 50 m, however, on some lines it is as wide as 200 m for certain elements.

At six times background zinc provided the best contrast between background (16 ppm) and the anomalous (90 ppm) values. High values for zinc ranged up to 2576 ppm immediately downhill of the showing located at L17E, 13+50S. All of the zinc values which were determined to be "Definitely Anomalous" were located within the confines of the known zinc mineralization.

In general terms the higher zinc values also tended to occur southeast of L10E. As noted by the geological mapping, the highest grades for the mineralization also occurs southeast of L15E. The three highest zinc values (2576, 814 and 987 ppm) were located between L17E, 13+50S, and L19E, 15+50S where some of the best showings are located.

Silver most accurately outlined the trend of the mineralization. Background values were at the detection limit of 0.01 ppm, whereas the "Possibly Anomalous" and "Definitely Anomalous" thresholds were at 0.5 and 1.1 ppm. The highest silver value (6.4 ppm) occurs at L17E, 13+75S; in the immediate vicinity of the three highest assay values for zinc. In addition the four highest silver values (6.4, 2.4, 1.6 and 1.5 ppm) all occur between L17E, 13+50S and L20E, 15+25S.

TABLE 1

SUMMARY OF STATISTICAL POPULATIONS FOR THE SOIL SAMPLE DATA

Element	Above Background		Possibly Anomalous		Anomalous		Definitely Anomalous	
	A	B	A	B	A	B	A	B
Zn					90	88	220	96
Pb	14	80	25	90	38	93	64	96
Cu	7	66	15	85	23	91	28	94
Ag			0.5	86			1.1	96
Fe	21	45	4.0	80	5.2	91		

A = threshold value

B = percentage of data below the threshold value (Zn, Pb, Cu, Ag values quoted in ppm, Fe is in weight percent)

Copper also adequately outlined the trend of the known mineralization. Background values were around 5 ppm with the "Anomalous" threshold value being at 23 ppm, or roughly five times background. The five highest values (245, 527, 505, 488 and 250 ppm) again occurred in the vicinity of the highest grade zinc mineralization (L15E, 12+50S through to L19E, 15+50S).

Lead also outlined in the anomalous trend of the mineralization. However the pattern was not as distinctive as zinc, silver and copper. Interestingly the highest lead values (901 and 206 ppm) occurred at L10E, 9+50S; roughly 700 m northwest of the highest zinc, silver and copper values.

As for iron, a number of clusters of anomalous values are present, however, the patterns are too irregular to be meaningful. Noteable concentrations of anomalous values occur at L16E, 10+00S; L16E, 9+75S, plus south of the baseline between L21E and L24E. In general, the outline of the anomalous zinc, lead and copper values did contain a higher proportion of anomalous iron values. In addition, the stratified rocks tended to be higher in iron that the tonalites.

CONCLUSIONS AND RECOMMENDATIONS

In general terms, the geology of the Hebrew claim block consists of two roof pendants of older stratified rocks that are enclosed by a younger tonalite. The tonalites have the appearance of belonging to the Coast Plutonic Complex. The stratified rocks are likely members of the Alexander Terrane and more specifically may belong to the mid-upper Devonian Sicker Group. This correlation is being made entirely on the basis of certain similarities with the stratigraphy of the Sicker Group and the rocks of the property. The tonalites are interpreted to be younger based upon the presence of dykes which cross-cut the stratified rocks. Structurally two distinct phases of folding, plus faults of various attitudes have affected the property. Both the last phase of folding and the faults are younger in age than the tonalites. The grade of metamorphism appears to be slightly below amphibolite facies. This metamorphic event also appears to predate the mineralization.

The stratigraphy of the southern most roof pendant over which the grid was centered consists of at least two layers of marble, several sequences of mafic volcanics and a large interval of mixed metasediments and volcanics. This roof pendant is roughly 300 m wide and extends across the Don Peninsula from Neekas Cove to Salmon Bay, a distance of roughly 2,400 m.

The mineralization on the property consists of disseminated and veined sphalerite, with lesser amounts of pyrite, chalcopyrite, galena and pyrrhotite. Spatially the mineralization either occurs within or in close proximity to the marble units. Skarn minerals such as garnet, diopside, johannsenite, epidote and possibly wollastonite also occur in close proximity to the marble units. Consequently, the mode of genesis for the mineralization appears to be a skarn.

Overall, the mineralization has been traced for 1,400 m with the southeastern boundary as of yet undefined. The width of the mineralized zone based upon the presence of skarn minerals is generally 50 m, but may attain 100 m. Coincident with the outline of the mineralized zone is a pronounced multi-element (zinc-copper-silver-lead) soil anomaly. This anomaly is at least 2,000 m long extending off the grid to the northwest and southeast. Assay values from the higher grade mineralization range up to 10.72% zinc. Previous sampling indicated values of 9.9% zinc over 2.5 m (Turna, R., 1987). Anomalously high lead 1.18%, silver 13.8 ppm and copper 6,309 ppm values are also present, generally in association with the samples that contain the most zinc.

As a class of deposit, zinc-bearing skarns when put into production tend to be high grade having typical grades of 9% Zn, 6% Pb and 5 oz/ton Ag with tonnages between 0.2 and 3 million tons (Einandi, M.T. et. al., 1981). The largest zinc-lead skarn is at Noica, Mexico. Production, plus reserves of ore stand at 21 million tonnes of 5% lead, 4% zinc, 0.4% copper and 4.5 oz/ton silver. This being the cumulative total of at least 10 mantos and 40 chimneys. In terms of total lateral distance these deposits occupy 700 m and extend for roughly 500 m (Ruiz, J., et. al., 1986). Of the world's major zinc-bearing skarns most have economic constraints defining the bottoms of the ore bodies since the mineralization continues at depth.

Based upon the economic assays attained already and the good likelihood of encountering more high grade mineralization further work is recommended on the Hebrew claim block. Normally geophysical surveys would be the next course of action on a property at this stage of exploration. However, with sphalerite being the main sulphide mineral, and it being not a good conductor both electromagnetic and induced polarization surveys would not likely be of much use. A magnetometer survey could be useful in delineating some of the different rock types, plus the distribution of pyrrhotite. However, the pyrrhotite content does not appear to be great enough, nor is it associated with the higher grade zinc mineralization.

Trenching using a track mounted excavator appears to be the most cost effective means to advance the status of this property. Especially considering the thick coastal vegetation plus the paucity of outcrop over much of the mineralized trend. Channel sampling of mineralized zones would also provide realistic data upon which to base further decisions on the property.

At least 10 trenches 50 m long should be initially contemplated at an approximate spacing of 50 m in between lines 15E and L19E. This would adequately cover the area of highest assay values, plus strongest soil and stream sediment geochemistry. The cost of this initial phase should be roughly $34,400.00.

If the first phase of trenching proves to be successful, then it should be immediately extended to cover other portions of the mineralized trend. To do an additional 10 trenches 50 m long would only cost approximately $17,710.00, since the cost of mobilization and demobilization have already been absorbed by the first phase. In addition, if the results of the first phase are sufficiently encouraging then the grid should be extended southeast of Neekas Cove for at least 500 m along strike of the mineralization. Furthermore, the roof pendant present on the northern boundary of the property should be looked at. Especially the area around silt sample 91 BS-6 (which was anomalous for zinc, lead and copper). An approximate cost for this additional field work would be roughly $14,558.50.

Respectfully submitted,

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APPENDIX A

SAMPLING AND ANALYTICAL PROCEDURES

A-1 Rock Samples

Depending upon the circumstances, three different types of rock samples were collected: 1) grab; 2) chip; and 3) channel.

The use of grab samples was the most prevalent form of sampling carried out this past field season. These samples were generally collected to achieve an approximation as to what sort of values a particular type of mineralization could produce. In general this type of sample consisted of one to ten representative pieces which totalled 0.5 to 1.0 kg in weigth. Often this type of sample contained weathered surfaces which were not totally removed.

Chip samples were commonly taken across the strike of mineralized structures. Samples of this sort generally consist of at least five pieces of rock, all roughly the same size. In addition, the weathered surfaces have in most cases been removed.

The channel samples were always taken in a straight line, perpendicular to the strike of the mineralization, with each piece of rock being roughly the same size. In addition the weathered surfaces were always removed, and particular care was taken to ensure that the sampling was representative of the mineralization.

Upon collection the samples were placed in heavy plastic bags and shipped to Acme Analytical Laboratories of 852 East Hastings Street, Vancouver, B.C. V6A 1R6.

The samples were first pulverized to minus 150 mesh using jaw crushers and a shatter box. For the gold analyses a 10.0 gram portion of the minus 150 mesh material was used. After concentrating the gold through standard fire assay methods, the resulting bead was then dissolved in aqua-regia (3-1-2 HCl-HNO_3-H_2O) for one hour at 95°C. The resulting solution was then analyzed by ICP (Inductivity Coupled Argon Plasma) using a graphite furnace unit. The analytical results were then compared to prepared standards for the determination of the absolute amounts.

For the determination of the remaining trace and major elements Inductivity Coupled Argon Plasma was used. In this procedure a 0.500 gram portion of the minus 150 mesh material is digested with 10 mls of $HClO_3$ - HNO_3 at 200°C to fuming then diluted to 10 mls with diluted aqua-regia (HCl - HNO_3 - H_2O). The resulting solution was then analyzed using Inductivity Coupled Argon Plasma. Again the absolute amounts were determined by comparing the analytical results to those of prepared standards.

A-2 Stream Sediment Samples

Each of the stream sediment samples were collected from the active portions of the channels at a minimum of four different locations. The samples were also taken from the lower energy portions of the streams to ensure as much consistency as possible between the different samples.

Upon collection the samples were placed in high-strength Kraft paper envelopes and field dried for approximately one week. They were then sent to Acme Analytical Laboratories of 852 East Hastings Street, Vancouver, B.C. for analysis.

At Acme Analytical Laboratories the samples were first dried overnight, then sieved to minus 80 mesh. A 0.500 gram portion of the minus 80 mesh material was then digested with 3 mls of 3-1-2 HCl - HNO_3 - H_2O at 95°C for approximately one hour. The resulting solution was then diluted to 10 mls with distilled water, and analyzed using Inductivity Coupled Argon Plasma (ICP). The absolute amounts were then determined by comparing the analytical results to those of prepared standards.

By inspection of the 1987 data generated by Lac Minerals Ltd. (Turna, R., 1987) zinc, lead, copper, silver and iron were considered to be the elements most indicative of the mineralization on the Hebrew claim block.

A-3 Soil Samples

Using a mattock the soil samples were collected for the most part from either the BF, BM or BC horizons. However, in some cases material from either the A and/or C horizons was sometimes included in areas of poor soil development. Generally, the soil profiles in the areas of topographic relief corresponded to luvisols or podzols.

Upon collection the samples were placed in Kraft high-strength paper envelopes and field dried for one week. They were then sent to Acme Analytical Laboratories Ltd. of 852 East Hastings Street, Vancouver, B.C. for analyses. At Acme Analytical the soil samples were analyzed for zinc, lead, copper, iron and silver in the same manner as the stream sediment samples.

APPENDIX B

DESCRIPTION OF ROCK SAMPLES

SUBMITTED FOR ANALYSES AND ASSAY

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 BR-16	L23+90E 18+15S	Grab sample from a coarse-grained amphibolite which is slightly bleached and contains 1-2% pyrite and 1% sphalerite.		1026		3	753	0.4	14	9.71	4.4	3086
91 BR-19A	L24+00E 17+95S at adit	50 cm chip sample of amphibolite which contains a 10 cm wide band of massive py and sphalerite, minor epidote, trace diss cpy.	2.09	17,730		95	1303	2.2	8	15.04	47.1	3267
91 BR-19B	L24+00E 17+95S at adit	50 cm chip sample taken immediately to south of 91 BR-19A sample consists of a rusty amphibolite 50% marble bands.		676		33	410	0.2	13	1.78	2.2	9943
91 BR-19C	L24+00E 17+95S at adit	65 cm wide chip sample taken immediately to the south of 91 BR-19B. Mostly marble with a 5 cm wide quartz vein that contains 2-3% pyrite, minor bands of sphalerite and pyrite (0.5 - 2.0 cm wide) which are parallel to the F_1 foliation, trace cpy.		5,200		288	213	1.0	11	2.80	14.8	2066
91 BR-20	L23+95E 17+85S	Chip sample across a 30 cm wide rusty zone consisting of bleached mafic volcanic rocks with 1-7% pyrite in coarse-grained veins, host rock is a dark green amphibolite which is cross-cut by a series of pyrite-garnet veins (up to 2.0 cm wide) which are somewhat irregular, old sample 88-RS-49.	2.73	22,167		19	1191	2.1	6	14.55	64.5	25822

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 BR-57A	L19+05E 15+25S	Grab sample from a dark green skarn (epidote and diopside) which contains minor garnets, also present is 5-10% pyrite in veins, sample comes from an old trench 87-5252.	1.24	10074		3	289	0.1	3	8.03	27.8	49711
91 BR-57B	L19+05E 15+25S	Grab sample from a recrystallized marble which contains 5% coarse-grained pyrite and 1-2% sphalerite.		176		199	375	0.5	4	3.92	10	2162
91 BR-70	L20+10E 16+05S	Grab sample taken from a huge rusty boulder of local derivation, trace pyrite and sphalerite.		170		7	56	0.1	1	3.41	0.7	1406
91 BR-86	L15+00E 13+00S	Grab sample taken from a medium to dark green amphibolite (F_1 150/90) which contains minor pyritic bands ups to 1.0 cm wide which are parallel to the F_1 foliation. Note the pyrite is generally pale green (calc-silicate) bands.		383		2	64	0.1	2	4.53	1.6	2119
91 BR-88	L15+00E 12+50S	Grab sample from an old hand dug trench, found in float amphibolite and calc-silicate rocks which contain 5-10% pyrite and 1-2% old pink flag 88 RS-003 and 88 RS-004.		326		167	527	0.8	17	5.35	1.4	2810
91 BR-89A	L14+90E 12+65S	Grab sample from an old hand dug trench, host rock is a marble which contains 3-4% sphalerite in bands and irregular veins.	1.99	16,266	1.18	8908	91	13.8	30	1.38	51.5	11988

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 BR-89B	L14+90E 12+65S	Grab sample from an old hand dug trench host rock is a calc-silicate which contains 2-5% pyrite and trace sphalerite in irregular veins.	1.06	8826	0.28	2438	799	9.2	39	2.06	23.8	9611
91 BR-91	L15+40E 12+40S	Grab sapmle from a dark green skarn (possibly an amphibolite) which contains 10% coarse-grained pyrite, old blue flag Neck RS-24.	2.64	20403		38	1162	1.3	7	11.06	81.5	26169
91 BR-104	L23+55E 18+20S	Chip sample from a large quartz vein that is 10 cm wide.		425		93	28	0.2	1	0.89	1.1	410
91 BR-107	L23+55E 17+50S	Grab sample taken from a silicified marble (likely a calc-silicate) 1-2% diss. pyrite, F_1 at 140/90.		204		80	150	0.3	4	0.99	0.3	815
91 BR-118A	L23+00E 16+90S	20 cm chip sample of a silicified marble (calc-silicate) 15-25% pyrite, and 1-5% sphalerite.		382		8	94	0.7	5	3.86	1.9	472
91 BR-118B	L23+00E 16+90S	20 cm wide chip sample immediately to the north of 91 BR-118A of a silicified marble (calc-silicate) 20% pyrite, 1-3% sphalerite.		168		11	42	0.5	3	3.56	0.7	778
91 BR-118C	L23+00E 16+90S	30 cm wide chip sample immediately to the north of 91 BR-118B of a silicified marble, 10% pyrite, 5 mm wide talcose bands.		68		5	20	0.1	4	3.32	0.3	187

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 BR-119	L23+00E 16+95S	Chip sample over 1.5 m wide, recrystallized limestone, finely banded, F_1 banding is contorted, 1-3% pyrite generally in fine bands. Blue Flag 88 Neek RS-40, 88 Neek 39.		35		8	28	0.1	2	1.66	0.2	93
91 BR-120	L23+00E 17+05S	Grab sample of a silicified marble (calc-silicate) 1-5% pyrite, 1-2% sphalerite, cross-cut by a mafic dyke, Old Blue Flag 88 RS-41, pyrite generally arranged in bands.		53		10	10	0.1	3	1.79	0.2	207
RE 91 BR-120				58		9	13	0.1	7	1.66	0.3	220
91 BR-171	L8+00E 7+45S	Grab sample of float, amphibolite containing 20% quartz veins parallel to the F_1 foliation, also present is 10% coarse-grained pyrite which appears to be related to the quartz veining.		343		86	268	0.7	8	7.10	1.0	1899
91 BR-173	L7+80E 7+30S	Grab sample from float of coarse-grained dark green diopside-garnet rock which contains 5-10% coarse-grained pyrite.		576		32	325	0.7	3	9.68	3.0	14613
91 BR-190	L22+30E 16+65S	Float, grab sample white calc-silicate 2-4% banded pyrite, 1-2% banded sphalerite, 5% phlogopite.		80		8	82	0.1	5	3.10	0.4	601

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 CR/MR-23	L17+00E 13+70S	Grab sample of a banded folded white calc-silicate, which contains minor amounts of pyrite and chalcopyrite.	1.38	10147		17	1142	1.3	1	6.09	29.9	38033
91 CR-30	L18+00E 13+50S	Grab sample of a massive light green calc-silicate, with fine-grained pyrite in fine bands, possible shear zone.		73		7	22	0.1	1	1.14	0.2	261
91 CR-31	L17+20E 13+75S	1.2 m chip sample across a green/pink banded calc-silicate, which contains sphalerite, chalcopyrite and pyrite.		10451		32	1097	1.9	4	7.61	236	53753
91 CR-33	L16+95E 13+70S	Grab sample of high grade massive sphalerite which contains minor fine-grained chalcopyrite and pyrite, host rock is a calc-silicate.	8.95	72378		48	4385	4.3	16	8.83	217.7	33009
91 CR-33A	L17+10E 13+70S	Grab sample of high grade massive sphalerite which contains minor fine-grained chalcopyrite and pyrite, host rock is a calc-silicate.	9.36	72323		56	6309	6.4	15	8.63	2219	28342
91 CR-33B	L17+10E 13+70S	Grab sample of high grade massive sphalerite which contains minor grains of fine-grained chalcopyrite and pyrite, host rock is a calc-silicate.	10.72	80979		110	6280	6.1	17	8.66	258.9	17204

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 CR-34	L17+20E 13+70S	Chip sample across 134 cm of a calc-silicate which contains light green and pink bands, minor sphalerite, lesser chalcopyrite, minor pyrite.		9423		22	404	0.9	4	5.58	22.2	56345
91 CR-41	L14+00E 12+20S	Grab sample of a calc-silicate which contains numerous small quartz veins.		733		12	101	0.3	1	2.48	1.8	1527
91 CR-43	L14+05E 12+40S	Grab sample of a foliated diorite, gneissic which contains some bands of mafic volcanic, rusty minor fine-grained pyrite.		961		18	99	0.2	1	3.64	2.4	2339
91 CR-69	L9+90E 8+00S	Grab sample of 2% pyrite, fine-grained in bands, host rock rusty metasediments.		171		13	29	0.4	1	3.68	0.8	6027
91 CR-77	L5+95E 7+25S	Grab sample of a mafic dyke rusty with minor pyrite.		1379		17	569	0.2	2	9.99	4.0	5671
91 MR-2	L23+35E 17+35S	Grab sample of local float, light gray-buff calc-silicate banded with pyrite, chalcopyrite and sphalerite.		709		644	382	1.3	19	3.71	1.5	608
91 MR-3	L22+40E 16+50S	Grab sample of a buff coloured calc-silicate, minor fine-grained pyrite, lesser sphalerite and chalcopyrite.		126		22	23	0.1	3	2.77	0.2	449
91 MR-4	L22+90E 17+00S	Grab sample of a large outcrop calc-silicate with light green fine-grained volcanic rock, pyrite, chalcopyrite and sphalerite present.	5.33	46022		13	579	0.1	7	12.38	13.00	42158

Sample	Location	Description	Zn wt%	Zn ppm	Pb wt%	Pb ppm	Cu ppm	Ag ppm	Au ppb	Fe wt%	Cd ppm	Mn ppm
91 MR-9	L23+50E 17+34S	Grab sample of local float rusty calc-silicate with fine disseminated pyrite.		393		10	16	0.1	3	2.06	1.4	285
91 MR-11	L23+50E 18+16S	Grab sample of a large band of greenstone which contains quartz, sphalerite, pyrite and pyrrhotite.		210		21	207	0.3	2	8.23	1.8	4529
91 MR-19	L17+00E 15+00S			108		11	72	0.2	1	1.18	1.8	333
91 MR-22	L17+60E 14+10S	Grab sample of a calc-silicate containing minor pyrite.	1.19	9395		36	1175	1.2	6	10.60	28.1	28718
91 MR-23	L17+75E 14+05S	Grab sample of a calc-silicate containing minor veined pyrite.	0.93	7482		43	821	1.3	5	9.42	22.5	34284
RE 91 MR-23				7936		41	876	1.4	4	9.60	22.9	37499
91 MR-24	L18+00E 14+10S	Grab sample of a banded marble containing pyrite and some sphalerite.		776		88	47	2.1	1.77	4.1	167	
91 MR-25	L18+00E 14+10S	Grab sample of a large boulder of quartz float, minor sulphides.		576		59	40	2.0	10	2.36	2.0	162
91 MR-26	L17+78E 14+15S	Grab sample of float chalcopyrite and pyrite present, some sphalerite also.	0.28	2525		81	1193	0.6	6	9.46	7.8	25620

APPENDIX C

ROCK SAMPLE ASSAYS AND ANALYSES

GEOCHEMICAL ANALYSIS CERTIFICATE

Cascade Pacific Exploration PROJECT CASCADIA-1 **File # 91-3805** **Page 1**

3872 Garden Grove, Burnaby BC V5G 4A7

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 %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm	Au** ppb
91BR 16	1	763	3	1026	.4	30	37	3086	9.71	3	5	ND	1	401	4.4	2	11	238	5.60	.078	13	69	3.18	91	.61	7.77	1.72	.27	2	20	1	31	1	1.7	36.7	14
91BR 19A	15	1303	95	17730	2.2	15	34	3267	15.04	15	12	ND	3	462	47.1	2	.2	90	5.67	.074	14	56	2.60	190	.29	6.05	1.66	.29	2	9	2	16	3	.2	9.7	8
91BR 19B	1	410	33	676	.2	13	9	9943	1.78	3	6	ND	1	59	2.2	2	2	7	12.07	.013	2	6	10.41	1884	.03	.64	.07	.17	2	6	2	4	3	.2	1.4	13
91BR 19C	20	213	288	5200	1.0	9	3	2066	2.80	6	5	ND	3	161	14.8	2	2	11	2.11	.029	16	17	2.87	899	.12	5.11	.79	2.37	2	13	1	12	7	.2	6.8	11
91BR 20	1	1191	19	22167	2.1	7	33	25822	14.55	11	6	ND	4	13	64.5	2	2	2	8.88	.012	2	39	2.77	22	.03	1.40	.08	.05	2	4	4	12	4	.2	1.3	6
91BR 57A	33	289	3	10074	.1	5	16	49711	8.83	8	5	ND	4	20	27.8	2	2	3	13.67	.005	3	28	2.33	13	.04	1.89	.08	.01	2	12	2	19	6	4.9	2.7	3
91BR 57B	13	375	199	176	.5	6	11	2162	3.92	2	7	ND	5	179	1.0	2	2	15	1.41	.108	8	13	.81	429	.10	6.33	2.09	2.21	2	8	1	17	7	1.9	9.4	4
91BR 70	2	56	7	170	.1	6	1	1406	3.41	2	5	ND	2	346	.7	2	2	15	2.28	.016	23	9	.54	167	.21	7.08	3.54	.10	2	46	3	39	14	1.6	13.9	1
91BR 86	2	54	2	383	.1	9	9	2119	4.53	4	5	ND	2	320	1.6	2	2	53	4.21	.046	20	16	1.12	146	.34	7.02	2.71	.26	2	21	1	47	10	1.1	19.5	2
91BR 88	1	527	167	326	.8	13	26	2810	5.35	2	5	ND	1	765	1.4	2	2	131	5.03	.072	9	24	3.71	301	.32	8.63	1.81	1.25	2	2	1	11	1	4.8	14.8	17
91BR 89A	27	91	8908	16266	13.8	6	3	11988	1.38	4	6	ND	1	460	51.5	18	2	8	6.73	.033	2	31	1.84	1970	.02	1.13	.07	.10	2	2	9	5	5	.2	1.3	30
91BR 89B	8	799	2438	8826	9.2	11	1	9611	2.06	4	5	ND	1	221	23.8	2	2	11	4.27	.022	4	25	4.62	277	.07	2.48	.09	.27	2	12	2	9	8	.2	4.4	39
91BR 91	7	1162	38	20403	1.3	14	25	26169	11.06	11	5	ND	3	37	81.5	2	2	11	12.69	.013	5	30	3.05	82	.04	2.03	.11	.04	2	28	2	16	5	.2	2.6	7
91BR 104	4	28	93	425	.2	12	1	410	.89	2	5	ND	2	63	1.1	2	2	7	.45	.003	9	16	.15	182	.04	2.83	1.75	.11	2	4	5	4	10	.2	2.4	1
91BR 107	11	150	80	204	.3	10	3	815	.99	2	5	ND	1	24	.3	2	2	3	.20	.032	5	11	.98	716	.04	2.45	.26	.60	2	10	2	3	12	3.0	.7	4
91BR 118A	22	94	8	382	.7	6	1	472	3.86	2	5	ND	2	87	1.9	2	2	6	.35	.016	9	6	.52	253	.14	7.63	1.51	2.23	2	5	4	2	7	1.0	4.9	6
RE 91BR 120	4	13	9	58	.1	10	1	220	1.79	2	5	ND	2	214	.3	2	2	7	.56	.027	16	14	.47	238	.09	7.81	4.73	.38	2	4	1	5	5	.3	9.1	7
91BR 118B	11	42	11	168	.5	21	6	778	3.56	2	5	ND	2	247	.7	2	2	36	1.35	.026	14	48	1.37	899	.13	6.48	2.02	1.10	2	16	1	7	4	.9	18.0	3
91BR 118C	9	20	5	68	.1	3	3	187	3.32	2	5	ND	3	66	.3	2	2	17	.20	.026	16	4	.66	613	.14	9.47	.94	3.28	2	11	1	3	2	.2	7.9	4
91BR 119	4	28	8	35	.1	4	1	93	1.66	2	5	ND	1	145	.2	2	2	2	.31	.015	17	7	.13	214	.05	6.51	3.87	.57	2	35	1	6	6	.2	8.0	2
91BR 120	4	10	10	53	.1	9	1	207	1.66	3	5	ND	2	197	.2	2	2	6	.51	.023	12	13	.44	223	.08	7.22	4.51	.37	2	5	1	4	6	.4	8.0	3
91BR 171	9	268	86	343	.7	15	14	1899	7.10	6	5	ND	1	149	1.0	2	6	103	2.90	.074	6	21	1.80	49	.29	2.98	.65	.19	2	3	1	14	6	.7	13.0	8
91BR 173	8	325	32	576	.7	4	20	14613	9.68	16	5	ND	3	482	3.0	2	2	35	12.33	.058	14	7	1.95	26	.20	6.09	.13	.04	2	22	4	31	8	2.3	8.9	3
91BR 190	6	82	8	80	.1	7	1	601	3.10	2	5	ND	3	181	.4	2	3	3	.67	.027	37	7	.82	768	.16	7.71	3.22	1.59	2	41	1	11	6	1.3	8.3	5
91BR 191	3	23	6	24	.1	7	1	195	.90	2	5	ND	2	79	.2	2	2	13	.65	.014	10	10	.16	281	.05	3.61	1.71	.88	2	10	2	14	10	.6	4.4	4
91BR 192A	1	194	27	958	2.1	1	6	29034	14.20	8	5	ND	3	12	3.3	2	2	4	8.41	.016	3	6	2.42	84	.04	1.83	.09	.03	2	4	1	15	6	1.1	2.0	10
91BR 192B	2	114	6	60	.2	4	5	1182	2.37	3	5	ND	2	177	.5	2	2	14	2.22	.010	22	9	.42	82	.12	6.40	3.09	.07	2	36	1	51	10	.2	12.4	5
91MR 2	10	382	544	709	1.3	9	8	608	3.71	2	5	ND	1	89	1.5	2	2	12	.41	.049	12	9	.15	150	.05	5.28	.63	4.70	2	7	1	6	7	.2	7.4	19
91MR 3	22	23	22	126	.1	5	2	449	2.77	7	6	ND	2	217	.2	2	2	3	.85	.028	27	4	.68	854	.12	8.30	3.45	1.83	5	16	7	5	7	.2	5.3	3
91MR 4	850	579	13	46022	.1	5	56	42158	12.38	8	6	ND	2	101	130.0	2	2	12	6.41	.057	5	42	4.87	16	.11	4.04	.19	.06	2	7	14	26	8	.2	5.4	7
RE 91MR 23	5	876	41	7936	1.4	5	24	37499	9.60	3	5	ND	3	142	22.9	2	2	9	9.77	.022	18	15	3.14	78	.12	4.54	.63	.12	2	8	17	40	11	.5	9.1	4
91MR 9	18	16	10	393	.1	4	1	285	2.06	5	5	ND	2	129	1.4	2	2	2	.35	.023	14	3	.18	104	.06	6.32	4.16	.31	2	33	1	4	6	.2	6.6	3
91MR 11	5	207	21	210	.3	22	41	4529	8.23	3	5	ND	1	144	1.8	2	2	271	9.42	.074	10	12	2.64	156	.77	6.95	1.24	.22	3	26	8	32	1	.2	36.4	2
91MR 19	2	72	11	108	.2	6	3	333	1.18	3	5	ND	3	92	1.8	2	2	7	.56	.014	22	3	.13	121	.12	7.00	4.39	.57	2	17	1	7	11	.2	6.3	1
91MR 22	1	1175	36	9395	1.2	7	13	28718	10.60	6	6	ND	2	432	28.1	2	2	47	9.23	.037	6	16	3.46	266	.16	4.95	.97	.27	2	9	14	22	5	.2	11.4	6
91MR 23	3	821	43	7482	1.3	6	28	34284	9.42	2	5	ND	3	142	22.5	2	2	8	9.48	.021	18	14	3.02	79	.13	4.30	.56	.13	2	7	12	37	10	.6	8.8	8
91MR 24	91	47	88	776	2.1	20	5	167	1.77	2	5	ND	3	109	4.1	2	2	5	.82	.023	11	9	.12	1056	.05	7.80	1.85	4.05	2	18	1	9	6	.2	6.2	21
91MR 25	56	40	59	576	2.0	25	5	162	2.36	2	5	ND	1	112	2.0	2	2	5	1.19	.029	14	12	.16	335	.07	6.61	1.48	3.04	2	16	1	17	8	.2	8.2	10
91MR 26	3	1193	81	2525	.6	8	32	25620	9.46	2	11	ND	3	578	7.8	2	2	105	9.72	.109	13	8	1.95	254	.41	7.78	.89	.43	2	15	15	20	8	1.0	13.4	6

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 10ML HCLO3-HNO3-HF AT 200 DEG. C TO FUMING AND IS DILUTED TO 10 ML WITH DILUTED AQUA REGIA. THIS LEACH IS PARTIAL FOR MAGNETITE, CHROMITE, BARITE, OXIDES OF AL, ZR & MN AND MASSIVE SULFIDE SAMPLES. AU DETECTION LIMIT BY ICP IS 3 PPM.
AS, CR, SB SUBJECT TO THE LOST OF VOLATILIZATION DURING HCLO4 FUMING.
- SAMPLE TYPE: P1 TO P5 ROCK P6 TALUS FINES AU** BY FIRE ASSAY & ANALYSIS BY ICP/GRAPHITE FURNACE.
AU** PT** PD** RH** BY FIRE ASSAY & ANALYSIS BY ICP/GRAPHITE FURNACE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 23 1991 **DATE REPORT MAILED:** Aug 30/91. **SIGNED BY** ......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
91CR 1	2	73	8	107	.3	4	4	544	2.19	4	5	ND	3	208	.2	4	2	8
91CR 1A	9	31	11	84	.2	56	20	1111	4.77	8	5	ND	3	448	.5	2	2	98
91CR 2	3	490	19	9042	.9	24	26	5121	5.28	6	5	ND	2	384	36.6	2	2	66
91CR 17	1	54	10	160	.4	16	15	1443	4.12	4	5	ND	1	846	.6	2	2	99
91CR 18	1	5	1149	1582	.3	3	1	99999	2.95	2	120	ND	7	44	2.6	8	8	3
91CR 21	1	179	480	4806	3.3	5	1	12203	.89	2	9	ND	1	50	17.6	2	4	6
91CR 23	1	285	10	335	.1	4	22	3232	7.81	2	6	ND	2	327	1.2	2	2	209
91CR/MR 23	1	1142	17	10147	1.3	5	28	38033	8.09	4	27	ND	4	24	29.9	2	2	13
91CR 30	1	22	7	73	.1	1	2	261	1.14	6	5	ND	3	110	.2	2	2	3
91CR 31	10	1097	32	10451	1.9	5	11	53753	7.61	7	8	ND	4	31	23.6	2	2	6
91CR 33	80	4385	48	72378	4.3	9	67	33009	8.83	7	5	ND	4	343	217.7	2	2	44
91CR 33A	96	6309	56	72323	6.4	9	93	28542	8.63	7	12	ND	5	333	221.9	2	2	34
91CR 33B	143	6280	110	80979	6.1	8	89	17204	8.66	9	12	ND	5	677	258.9	2	4	49
91CR 34	1	404	22	9423	.9	7	10	58345	5.58	8	17	ND	5	126	22.2	2	2	11
91CR 41	3	101	12	733	.3	6	9	1527	2.48	2	5	ND	5	178	1.8	2	2	26
91CR 43	3	99	18	961	.2	13	14	2339	3.64	5	5	ND	2	255	2.4	2	2	80
91CR 69	7	29	13	171	.4	13	13	6027	3.68	4	5	ND	4	189	.8	2	2	28
91CR 77	3	569	17	1379	.2	31	32	5671	9.99	2	5	ND	2	297	4.0	2	2	307

SAMPLE#	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	Al %	Na %	K %	W ppm	Zr ppm	Sn ppm	Y ppm	Nb ppm	Be ppm	Sc ppm	Au** ppb
91CR 1	.02	.019	18	2	.66	213	.18	6.53	3.76	.73	2	5	4	5	10	.2	9.2	8
91CR 1A	3.38	.105	23	63	1.77	698	.47	8.31	2.61	1.60	3	73	7	21	4	1.7	15.1	4
91CR 2	6.07	.111	20	28	2.32	722	.30	6.36	2.60	.76	2	18	10	35	9	1.2	13.5	4
91CR 17	4.07	.088	17	25	1.78	302	.41	7.57	3.28	.43	2	10	6	35	6	1.8	16.8	1
91CR 18	10.02	.019	3	4	1.62	108	.06	1.81	.03	.02	2	3	12	11	7	.2	2.3	2
91CR 21	13.66	.002	2	14	9.48	1041	.03	.85	.10	.27	2	9	15	9	3	.2	2.0	17
91CR 23	5.80	.576	12	1	2.89	92	1.30	6.55	1.43	.25	2	2	25	40	1	5.1	33.5	3
91CR/MR 23	7.87	.009	10	20	3.54	15	.09	2.86	.23	.08	2	4	18	29	8	3.5	5.6	1
91CR 30	.56	.018	18	1	.35	155	.05	6.36	4.29	.32	2	6	1	2	6	.2	6.8	1
91CR 31	12.46	.017	3	20	2.82	19	.05	1.86	.14	.01	2	7	19	10	6	2.7	1.9	4
91CR 33	9.03	.027	31	35	2.58	56	.17	4.23	.17	.07	2	12	15	42	7	.2	9.2	16
91CR 33A	8.77	.028	25	28	3.14	50	.19	3.84	.23	.10	2	10	16	47	10	.3	10.0	15
91CR 33B	8.85	.050	31	27	2.36	80	.25	4.84	.30	.12	28	15	15	58	11	.2	12.9	17
91CR 34	15.36	.007	9	18	2.63	13	.09	2.73	.06	.01	2	8	19	19	7	.2	4.2	4
91CR 41	1.57	.024	18	4	.53	273	.18	5.67	2.86	.38	2	3	9	8	11	.2	6.4	1
91CR 43	2.80	.073	12	20	1.44	352	.29	6.87	2.81	.46	2	7	5	26	6	.2	17.3	1
91CR 69	7.71	.062	17	9	.93	1048	.17	6.23	1.40	1.52	2	43	8	36	10	.2	9.6	1
91CR 77	5.22	.116	16	7	2.93	370	.86	7.52	1.77	.66	2	8	10	45	1	.2	33.5	2

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

ASSAY CERTIFICATE

Cascade Pacific Exploration PROJECT CASCADIA-1 FILE # 91-3805R2

SAMPLE#	Cu %	Pb %	Zn %	Ag** oz/t	Au** oz/t
91BR 19A	-	-	2.09	-	-
91BR 20	-	-	2.73	-	-
BR 57A	-	-	1.24	-	-
91BR 89A	-	1.18	1.99	-	-
91BR 89B	-	.28	1.06	-	-
91BR 91	-	-	2.64	-	-
91CR 2	-	-	1.16	-	-
91CR 21	-	-	.63	-	-
91CR/MR 23	-	-	1.38	-	-
91CR 33	-	-	8.95	-	-
91CR 33A	-	-	9.36	-	-
91CR 33B	-	-	10.72	-	-
91MR 4	-	-	5.33	-	-
91MR 22	-	-	1.19	-	-
91MR 23	-	-	.93	-	-
91MR 26	-	-	.28	-	-
STANDARD R-1/AG-1/AU-1	.85	1.36	2.39	.98	.099

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.
- SAMPLE TYPE: ROCK PULP

AG** & AU** BY FIRE ASSAY FROM 1 A.T. SAMPLE.

DATE RECEIVED: OCT 29 1991 **DATE REPORT MAILED:** Oct 31/91.

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

APPENDIX D

SOIL AND SILT SAMPLE ANALYSES

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Cascade Pacific Exploration PROJECT CASCADIA-1 FILE # 91-3808 Page 1

3872 Garden Grove, Burnaby BC V5G 4A7 Attn: BRIAN V. HALL

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L4E 5+00S	23	23	151	.4	2.96
L4E 5+25S	65	113	176	1.0	3.25
L4E 5+50S	22	7	32	.5	2.96
L4E 5+75S	21	2	86	.3	4.09
L4E 6+00S	27	3	64	.1	2.63
L4E 6+25S	10	11	22	.2	6.98
L4E 6+50S	41	24	234	.2	5.01
L4E 6+75S	5	5	40	.2	1.00
L4E 7+00S	2	3	10	.2	.33
L4E 7+25S	9	7	17	.1	1.59
L4E 7+50S	2	4	8	.1	.15
L4E 7+75S	1	3	13	.1	.21
L4E 8+00S	1	4	15	.1	.45
L4E 8+25S	1	4	19	.1	.45
L4E 8+50S	2	5	19	.1	.24
L5E 4+00S	12	9	106	.1	2.56
L5E 4+25S	13	13	71	.2	2.04
L5E 4+50S	12	12	87	.1	2.03
L5E 4+75S	18	10	80	.2	2.18
L5E 5+00S	2	4	18	.2	.77
L5E 5+25S	5	6	47	.2	3.66
RE L5E 4+25S	13	11	66	.2	2.03
L5E 5+50S	12	7	71	.2	2.20
L5E 5+75S	12	22	37	1.4	2.47
L5E 6+00S	18	9	107	.3	2.88
L5E 6+25S	105	96	403	1.0	2.74
L5E 6+50S	26	10	74	.2	2.09
L5E 6+75S	6	7	35	.1	1.66
L5E 7+00S	2	7	25	.1	1.36
L5E 7+25S	1	2	36	.1	1.34
L5E 7+50S	2	6	14	.1	.29
L5E 7+75S	1	2	19	.1	.25
L5E 8+00S	2	6	21	.1	.69
L6E 5+25S	6	33	49	.3	2.43
L6E 5+50S	5	22	88	.2	3.72
L6E 5+75S	13	10	43	.2	2.71
L6E 6+00S	11	6	49	.2	1.89
STANDARD C	59	38	134	6.9	4.01

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-P14 SOIL P15-P16 SILT Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: AUG 23 1991 DATE REPORT MAILED: Aug 29/91.

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

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L6E 6+25S	15	31	92	.2	2.90
L6E 6+50S	3	5	23	.2	3.96
L6E 6+75S	3	45	18	.2	2.45
L6E 7+00S	17	11	70	.2	2.16
L6E 7+25S	11	2	44	.1	1.84
L6E 7+50S	11	4	56	.1	1.61
L6E 7+75S	47	7	63	.1	2.99
L6E 8+00S	15	2	51	.1	1.98
L7E 4+50S	2	6	17	.1	1.63
L7E 4+75S	1	18	14	.1	.25
L7E 5+00S	1	10	13	.1	1.51
L7E 5+25S	7	4	63	.1	4.74
L7E 5+50S	2	2	14	.1	.81
L7E 5+75S	1	2	18	.1	1.54
L7E 6+00S	2	9	15	.2	7.32
L7E 6+25S	5	43	93	.1	3.83
L7E 6+50S	6	10	16	.1	6.21
L7E 6+75S	3	15	19	.2	3.66
L7E 7+00S	4	8	12	.1	3.05
L7E 7+25S	3	17	24	.2	5.11
L7E 7+50S	32	28	87	.1	3.60
RE L7E 6+75S	4	13	18	.2	3.38
L7E 8+00S	34	2	71	.2	4.80
L8E 5+00S	19	3	48	.1	2.12
L8E 5+25S	4	4	19	.1	2.31
L8E 5+50S	1	4	8	.1	.14
L8E 5+75S	1	2	12	.1	.48
L8E 6+00S	1	2	8	.1	.20
L8E 6+25S	11	11	13	.2	.24
L8E 6+50S	10	7	17	.1	.22
L8E 6+75S	1	9	11	.1	.79
L8E 7+00S	1	9	7	.1	.06
L8E 7+25S	6	16	44	.2	2.23
L8E 7+50S	15	11	73	.2	4.77
L8E 7+75S	6	9	19	.2	2.17
L8E 8+00S	6	10	38	.1	4.55
L8E 8+25S	1	5	10	.1	.30
STANDARD C	59	38	134	6.9	4.00

Samples beginning 'RE' are duplicate samples.

Cascade Pacific Exploration PROJECT CASCADIA-1 FILE # 91-3808 Page 3

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L8E 8+50S	1	12	13	.1	.13
L8E 8+75S	1	12	16	.1	.12
L8E 9+00S	2	4	11	.1	.23
L8E 9+25S	2	6	20	.1	.31
L8E 9+50S	1	5	17	.1	.31
L8E 9+75S	1	5	22	.1	.35
L8E 10+00S	3	4	22	.1	.45
L9E 5+50S	5	10	48	.1	4.75
L9E 5+75S	8	8	24	.1	6.27
L9E 6+00S	7	8	22	.2	2.72
L9E 6+25S	1	4	10	.2	.24
L9E 6+50S	1	7	19	.1	.56
L9E 6+75S	4	24	27	.1	6.23
L9E 7+00S	1	8	11	.1	2.08
L9E 7+25S	4	7	29	.1	7.93
L9E 7+50S	2	10	20	.1	1.15
L9E 7+75S	7	14	186	.1	2.19
L9E 8+00S	17	24	140	.2	3.95
L9E 8+25S	12	14	80	.1	3.85
L9E 8+50S	8	13	42	.1	6.97
L9E 8+75S	2	3	16	.1	.55
L9E 9+00S	5	4	28	.1	2.72
RE L9E 8+25S	13	17	77	.1	3.88
L9E 9+25S	1	7	12	.1	.40
L9E 9+50S	4	11	18	.1	.16
L9E 9+75S	6	7	24	.1	1.89
L9E 10+00S	7	4	29	.1	1.62
L9E 10+25S	8	5	27	.1	1.79
L9E 10+50S	3	4	16	.1	1.71
L10E 6+00S	5	13	29	.1	1.17
L10E 6+25S	2	13	20	.1	2.54
L10E 6+50S	1	8	15	.1	.15
L10E 6+75S	1	10	19	.1	.06
L10E 7+00S	2	12	14	.1	.07
L10E 7+25S	4	7	13	.1	.45
L10E 7+50S	2	6	10	.1	.58
L10E 7+75S	2	5	35	.1	1.73
STANDARD C	59	39	133	7.3	3.96

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L10E 8+00S	19	24	131	.1	5.08
L10E 8+25S	6	25	24	.1	.45
L10E 8+50S	28	32	445	.5	2.05
L10E 8+75S	8	10	38	.2	3.17
L10E 9+00S	56	49	279	.4	3.98
L10E 9+25S	901	70	487	.9	17.40
L10E 9+50S	266	65	693	.8	5.82
L10E 9+75S	14	8	33	.1	.81
L10E 10+00S	13	5	18	.1	.60
L10E 10+25S	4	3	16	.1	.50
L10E 10+50S	3	4	16	.1	.36
L10E 10+75S	19	2	55	.1	4.41
L10E 11+00S	23	2	63	.2	4.67
L10E 11+25S	21	2	56	.2	4.55
L10E 11+50S	14	2	38	.1	4.64
L11E 7+00S	4	28	38	.1	2.76
L11E 7+25S	6	22	84	.1	4.57
L11E 7+50S	2	5	17	.1	.23
RE L10E 11+50S	13	3	39	.1	4.70
L11E 7+75S	8	4	33	.1	4.20
L11E 8+00S	13	2	41	.1	1.71
L11E 8+25S	7	7	30	.1	4.43
L11E 8+50S	9	3	48	.1	1.73
L11E 8+75S	2	5	23	.1	.92
L11E 9+00S	4	15	34	.1	1.47
L11E 9+25S	17	18	124	.3	3.41
L11E 9+50S	7	6	23	.1	5.00
L11E 9+75S	11	12	110	.4	5.13
L11E 10+00S	22	2	56	.2	5.15
L11E 10+25S	47	2	86	.2	6.67
L11E 10+50S	4	25	17	.1	.51
L11E 10+75S	2	4	33	.1	3.13
L11E 11+00S	8	6	30	.4	1.04
L11E 11+25S	3	4	34	.1	3.34
L11E 11+50S	2	30	12	.1	.27
L11E 11+75S	4	6	25	.1	1.16
L11E 12+00S	1	30	12	.1	.22
STANDARD C	57	38	130	7.4	4.00

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L12E 8+00S	4	7	29	.1	3.36
L12E 8+25S	3	5	30	.1	4.57
L12E 8+50S	1	6	5	.2	.15
L12E 8+75S	3	10	30	.2	2.61
L12E 9+00S	42	53	634	.5	4.58
L12E 9+25S	39	56	651	.4	4.07
L12E 9+50S	3	3	76	.1	2.37
L12E 9+75S	13	14	90	.3	3.10
L12E 10+00S	18	21	70	.3	3.10
L12E 10+25S	7	44	40	.4	4.02
L12E 10+50S	7	18	31	.4	6.65
L12E 10+75S	9	8	30	.3	4.02
L12E 11+00S	17	3	39	.2	3.35
L12E 11+25S	7	6	52	.2	3.77
L12E 11+50S	9	4	60	.2	3.50
L12E 11+75S	2	4	9	.1	.17
RE L12E 10+75S	9	9	30	.2	4.00
L12E 12+00S	5	3	17	.1	2.48
L12E 12+25S	3	4	36	.2	.99
L12E 12+50S	4	4	45	.1	2.73
L12E 12+75S	2	4	32	.2	2.19
L12E 13+00S	2	4	14	.1	.99
L13E 8+00S	2	8	11	.1	.11
L13E 8+25S	6	13	30	.1	9.40
L13E 8+50S	2	9	12	.2	.21
L13E 8+75S	8	7	31	.1	6.70
L13E 9+00S	7	8	30	.2	5.32
L13E 9+25S	2	12	15	.1	.93
L13E 9+75S	28	123	248	.8	3.38
L13E 10+00S	43	100	332	.1	4.60
L13E 10+25S	15	33	166	.2	3.19
L13E 10+50S	15	6	42	.1	5.22
L13E 10+75S	13	9	88	.2	3.14
L13E 11+00S	7	19	54	.1	6.64
L13E 11+25S	17	64	204	.8	3.82
L13E 11+50S	25	7	71	.3	3.97
L13E 11+75S	16	4	43	.3	4.05
STANDARD C	61	38	134	6.9	4.01

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L13E 12+00S	9	2	27	.2	.23
L13E 12+25S	26	2	82	.3	3.72
L13E 12+50S	7	23	51	.3	5.54
L13E 12+75S	22	5	92	.3	4.59
L13E 13+00S	23	6	66	.3	3.54
L13E 13+25S	6	15	55	.3	4.46
L13E 13+50S	30	6	116	.2	4.79
L13E 13+75S	18	2	48	.2	4.10
L13E 14+00S	26	3	65	.4	4.17
L14E 9+00S	6	5	11	.3	3.73
L14E 9+25S	5	11	33	.2	3.10
L14E 9+50S	5	8	35	.2	3.16
L14E 9+75S	3	9	9	.1	.25
L14E 10+00S	7	4	86	.2	.30
L14E 10+25S	3	4	11	.2	.40
L14E 10+50S	4	2	10	.1	.73
RE L14E 11+75S	15	88	91	1.0	2.36
L14E 10+75S	3	4	6	.2	.23
L14E 11+00S	11	23	57	.3	2.70
L14E 11+25S	4	10	20	.3	2.32
L14E 11+50S	6	21	27	.5	3.15
L14E 11+75S	15	81	91	.9	2.32
L14E 12+00S	12	7	17	.2	3.75
L14E 12+25S	25	8	46	.2	3.05
L14E 12+50S	13	5	62	.1	3.24
L14E 12+75S	12	2	53	.1	3.42
L14E 13+00S	2	10	7	.2	.14
L14E 13+25S	2	11	8	.1	1.66
L14E 13+50S	5	9	23	.2	2.16
L14E 13+75S	5	11	68	.1	.53
L14E 14+00S	5	13	47	.2	.58
L15E 9+00S	1	7	8	.1	.19
L15E 9+25S	7	8	15	.2	5.51
L15E 9+50S	3	7	16	.2	1.43
L15E 9+75S	4	6	14	.1	.72
L15E 10+00S	3	4	14	.1	.77
L15E 10+25S	3	17	51	.1	3.26
STANDARD C	63	45	141	7.1	4.05

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L15E 10+50S	2	5	6	.1	.22
L15E 10+75S	2	4	10	.1	.18
L15E 11+00S	2	4	14	.1	.52
RE L15E 12+25S	60	245	197	1.3	3.05
L15E 11+25S	2	5	17	.2	.27
L15E 11+50S	8	9	98	.1	.20
L15E 11+75S	3	3	33	.2	3.35
L15E 12+00S	5	15	35	.1	2.22
L15E 12+25S	56	221	182	1.2	2.91
L15E 12+50S	61	319	331	1.0	3.06
L15E 12+75S	5	9	24	.1	2.36
L15E 13+00S	3	4	9	.1	.55
L15E 13+25S	6	9	18	.1	3.88
L15E 13+50S	5	12	14	.1	.14
L15E 13+75S	3	6	18	.1	2.22
L15E 14+00S	4	2	28	.2	1.77
L16E 9+00S	2	6	11	.1	.29
L16E 9+25S	2	7	7	.2	1.06
L16E 9+50S	2	6	12	.2	.56
L16E 9+75S	4	13	144	.4	12.37
L16E 10+00S	9	7	28	.2	5.45
L16E 10+25S	11	5	30	.3	8.11
L16E 10+50S	5	5	28	.1	1.00
L16E 10+75S	7	4	112	.1	.40
L16E 11+00S	6	7	70	.1	.63
L16E 11+25S	2	3	17	.1	.52
L16E 11+50S	4	4	17	.1	1.52
L16E 11+75S	1	3	5	.1	.38
L16E 12+00S	3	4	13	.1	1.22
L16E 12+25S	9	47	65	.3	3.56
L16E 12+50S	6	22	61	.2	3.07
L16E 12+75S	11	132	34	.2	1.98
L16E 13+00S	11	10	25	.4	5.98
L16E 13+25S	4	10	15	.1	3.12
L16E 13+50S	3	2	27	.1	1.67
L16E 13+75S	4	5	16	.2	3.05
L16E 14+00S	3	4	19	.1	1.92
STANDARD C	60	43	134	6.9	4.01

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L17E 12+00S	3	13	15	.2	.67
L17E 12+25S	3	12	12	.2	.81
L17E 12+50S	2	12	7	.1	.31
L17E 12+75S	4	3	101	.1	.16
L17E 13+00S	6	14	99	.2	6.17
L17E 13+25S	5	30	72	.7	2.34
L17E 13+50S	175	505	2576	1.6	2.83
L17E 13+75S	15	3	55	.1	2.63
L17E 14+00S	3	2	12	.1	.93
L17E 14+25S	3	4	15	.1	.84
L17E 14+50S	7	4	36	.1	2.64
L17E 14+75S	2	6	18	.1	.34
L17E 15+00S	6	2	36	.1	1.64
L17E 15+25S	15	2	32	.2	3.56
L17E 15+50S	13	2	51	.2	3.46
L17E 15+75S	10	3	38	.1	3.07
L17E 16+00S	3	6	17	.1	3.56
L17E 16+25S	3	6	11	.2	.45
L17E 16+50S	3	5	14	.1	.57
L17E 16+50SA	3	6	40	.1	.71
L18E 12+00S	2	3	7	.1	.29
L18E 12+25S	12	58	87	.2	5.11
RE L17E 16+50S	2	6	14	.1	.55
L18E 12+50S	21	2	196	.3	3.96
L18E 12+75S	2	3	7	.1	.32
L18E 13+00S	13	64	97	.2	4.68
L18E 13+25S	14	64	94	.2	4.60
L18E 13+50S	11	8	84	.2	3.25
L18E 13+75S	15	22	85	.2	3.56
L18E 14+00S	9	24	63	.7	6.22
L18E 14+25S	131	488	814	2.4	3.27
L18E 14+50S	13	16	57	1.0	5.89
L18E 14+75S	5	4	22	.2	2.05
L18E 15+00S	5	13	18	.1	2.31
L18E 15+25S	3	5	22	.1	2.90
L18E 15+50S	3	4	28	.1	2.89
L18E 15+75S	3	7	28	.2	3.65
STANDARD C	56	37	134	6.9	3.98

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L18E 16+00S	4	7	15	.3	3.41
L18E 16+25S	2	7	5	.1	.22
L18E 16+50S	2	5	11	.1	.15
L18E 16+75S	2	4	17	.1	.28
L18E 17+00S	2	8	8	.1	.37
L19E 12+00S	2	6	5	.1	.10
L19E 12+25S	1	5	4	.1	.07
L19E 12+50S	1	5	4	.2	.04
L19E 12+75S	4	5	12	.1	5.01
L19E 13+00S	2	4	7	.1	.42
L19E 13+25S	1	2	3	.1	.05
L19E 13+50S	2	11	6	.1	.07
L19E 13+75S	9	12	78	.2	1.97
L19E 14+00S	8	13	84	.2	2.14
L19E 14+25S	10	5	54	.2	2.36
L19E 14+50S	14	9	112	.2	3.62
L19E 14+75S	18	18	257	.9	4.15
L19E 15+00S	15	18	239	1.2	5.05
L19E 15+25S	142	250	987	1.0	4.24
L19E 15+50S	6	29	30	.3	2.60
L19E 15+75S	4	9	33	.2	3.97
L19E 16+00S	5	10	31	.3	4.28
L19E 16+25S	10	3	50	.1	3.91
L19E 16+50S	9	2	9	.1	8.30
L19E 16+75S	2	3	14	.1	.26
L19E 17+00S	2	3	14	.1	.21
L19E 17+25S	4	4	12	.2	1.14
L19E 17+50S	4	6	14	.2	1.77
L19E 17+75S	6	8	13	.2	1.37
RE L19E 16+75S	1	3	11	.1	.27
L19E 18+00S	4	4	15	.1	1.48
L20E 12+25S	3	8	16	.1	5.74
L20E 12+50S	3	6	16	.1	6.01
L20E 12+75S	2	8	13	.1	6.45
L20E 13+00S	1	8	5	.1	.28
L20E 13+25S	2	4	7	.1	.23
L20E 13+50S	3	6	16	.1	6.51
STANDARD C	56	38	133	6.6	3.92

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L20E 13+75S	5	9	11	.4	1.46
L20E 14+00S	4	5	3	.1	.74
L20E 14+25S	7	51	40	.2	1.63
L20E 14+50S	2	59	47	.1	2.00
L20E 14+75S	3	2	26	.1	1.94
L20E 15+00S	9	2	128	.3	2.38
L20E 15+25S	70	56	275	1.5	3.44
L20E 15+50S	4	29	23	.1	3.37
L20E 15+75S	3	2	3	.1	.51
L20E 16+00S	3	2	8	.1	.71
L20E 16+25S	10	6	11	.3	4.77
RE L20E 17+50S	2	3	6	.1	1.37
L20E 16+50S	2	13	7	.1	2.00
L20E 16+75S	3	11	17	.1	.72
L20E 17+25S	1	5	7	.1	.25
L20E 17+50S	4	4	7	.1	1.28
L20E 17+75S	11	2	22	.1	1.83
L20E 18+00S	8	2	21	.1	1.75
L21E 12+00S	8	14	27	.5	7.18
L21E 12+25S	1	2	1	.1	.40
L21E 12+50S	2	5	7	.1	1.86
L21E 12+75S	9	11	26	.4	6.03
L21E 13+00S	8	8	26	.2	7.98
L21E 13+25S	4	2	26	.1	1.58
L21E 13+50S	1	6	14	.1	.96
L21E 13+75S	2	4	18	.1	1.29
L21E 14+00S	5	5	13	.2	3.64
L21E 14+25S	15	3	19	.2	11.71
L21E 14+50S	6	8	25	.4	6.35
L21E 14+75S	4	11	10	.1	.78
L21E 15+00S	14	13	55	.4	5.05
L21E 15+25S	22	5	76	.6	4.20
L21E 15+50S	15	17	123	.7	4.03
L21E 15+75S	28	5	303	.5	3.23
L21E 16+00S	35	77	414	.7	3.15
L21E 16+25S	9	5	36	.4	4.96
L21E 16+50S	3	5	13	.1	.29
STANDARD C	59	36	132	7.0	3.96

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L21E 16+75S	7	2	33	.1	5.83
L21E 17+00S	17	2	39	.1	2.55
L21E 17+25S	1	2	7	.1	.24
L21E 17+50S	5	5	29	.1	2.07
L21E 17+75S	7	2	34	.1	4.42
L21E 18+00S	1	4	9	.1	.26
L22E 11+75S	1	3	28	.1	.86
L22E 12+00S	1	5	11	.1	.31
L22E 12+00SA	1	5	9	.1	.26
RE L22E 13+25S	7	6	17	.1	1.21
L22E 12+25S	1	13	10	.1	.26
L22E 12+50S	2	2	18	.1	2.91
L22E 12+75S	2	11	22	.1	3.56
L22E 13+00S	1	13	17	.1	3.02
L22E 13+25S	5	6	20	.1	1.41
L22E 13+50S	6	2	24	.1	2.98
L22E 13+75S	5	5	23	.1	3.50
L22E 14+00S	3	2	10	.1	3.22
L22E 14+25S	1	2	10	.1	2.04
L22E 14+50S	2	5	11	.2	2.09
L22E 14+75S	2	2	25	.1	3.90
L22E 15+00S	13	2	25	.1	4.73
L22E 15+25S	12	2	30	.1	3.96
L22E 15+50S	16	26	145	.1	3.12
L22E 15+75S	13	16	135	.1	4.00
L22E 16+00S	10	7	21	.3	4.37
L22E 16+25S	8	6	19	.3	4.51
L22E 16+50S	7	10	90	.2	2.02
L22E 16+75S	26	60	107	1.3	5.35
L22E 17+00S	4	9	17	.2	1.17
L22E 17+00SA	2	2	16	.1	.69
L22E 17+25S	6	6	25	.1	3.89
L22E 17+50S	1	6	10	.1	.21
L22E 17+75S	1	6	11	.1	.17
L22E 18+00S	1	5	8	.1	.24
L22E 18+25S	1	9	6	.1	.23
L22E 18+50S	1	3	19	.1	.27
STANDARD C	58	36	131	7.3	4.02

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L22E 18+75S	9	2	22	.4	1.83
L22E 19+00S	4	2	13	.1	.36
L22E 19+25S	2	2	17	.1	.51
L22E 19+50S	3	2	9	.1	.43
L22E 19+75S	2	3	7	.1	.58
L22E 20+00S	12	13	8	.1	3.79
L23E 12+00S	3	2	18	.1	2.47
L23E 12+25S	7	2	29	.2	3.25
L23E 12+50S	3	2	19	.1	2.39
L23E 12+75S	3	2	18	.1	2.57
L23E 13+00S	4	2	28	.1	3.14
L23E 13+25S	3	2	23	.1	2.72
RE L23E 14+50S	3	2	65	.2	2.46
L23E 13+50S	3	2	26	.1	2.96
L23E 13+75S	3	3	23	.1	2.74
L23E 14+00S	2	3	21	.1	4.33
L23E 14+25S	2	3	10	.1	1.00
L23E 14+50S	4	2	63	.1	2.35
L23E 14+75S	7	6	18	.1	3.08
L23E 15+00S	6	3	18	.1	2.88
L23E 15+25S	12	2	45	.1	2.75
L23E 15+50S	7	6	18	.2	6.61
L23E 15+75S	10	17	88	.1	4.85
L23E 16+00S	8	173	50	.2	2.03
L23E 16+25S	28	19	162	.2	4.41
L23E 16+50S	10	17	89	.1	2.09
L23E 16+75S	5	2	74	.1	4.82
L23E 17+00S	28	4	111	.1	3.02
L23E 17+25S	3	2	35	.1	3.19
L23E 17+50S	8	2	37	.1	3.28
L23E 17+75S	5	5	15	.1	4.57
L23E 18+00S	11	3	75	.1	1.14
L23E 18+25S	8	2	16	.1	3.11
L23E 18+50S	2	4	12	.1	1.27
L23E 18+75S	2	5	20	.1	.28
L23E 19+00S	8	2	29	.1	.86
L23E 19+25S	7	4	17	.1	.48
STANDARD C	58	39	133	6.9	4.01

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L23E 19+50S	5	11	31	.1	.76
L23E 19+75S	7	4	33	.1	3.00
L23E 20+00S	3	5	34	.1	2.21
L23+50E 15+00S	4	4	20	.3	4.16
L23+50E 15+25S	1	4	12	.1	1.17
L23+50E 15+50S	1	2	34	.1	1.57
L23+50E 15+75S	7	3	19	.2	3.44
L23+50E 16+00S	23	19	57	.4	6.08
L23+50E 16+25S	32	7	37	.1	2.82
L23+50E 16+50S	15	3	37	.2	3.82
L23+50E 16+75S	2	2	77	.1	2.65
L23+50E 17+00S	6	3	41	.1	3.70
L23+50E 17+25S	4	4	58	.2	2.42
L23+50E 17+50S	3	5	43	.2	2.76
L23+50E 17+75S	7	11	111	.1	1.64
L23+50E 18+00S	16	5	225	.1	.95
L23+50E 18+25S	10	4	28	.1	2.54
L23+50E 18+50S	9	3	21	.1	1.98
L23+50E 18+75S	1	3	9	.1	.23
RE L23+50E 17+75S	6	10	108	.2	1.54
L23+50E 19+00S	1	2	11	.1	.29
L23+50E 19+25S	1	4	9	.1	.33
L23+50E 19+50S	6	4	22	.1	.69
L23+50E 19+75S	6	3	25	.1	1.70
L23+50E 20+00S	8	3	27	.1	1.96
L24E 15+00S	3	5	27	.2	4.36
L24E 15+25S	5	4	28	.3	4.49
L24E 15+50S	11	2	47	.2	4.22
L24E 15+75S	14	2	44	.1	4.39
L24E 16+00S	18	56	40	.2	4.86
L24E 16+25S	24	57	48	.3	5.09
L24E 16+50S	28	60	75	.2	3.54
L24E 16+75S	6	17	19	.1	2.37
L24E 17+00S	13	10	103	.1	3.16
L24E 17+25S	23	2	118	.1	3.83
L24E 17+50S	13	4	148	.1	3.17
L24E 17+75S	69	11	417	.4	3.66
STANDARD C	60	36	131	6.9	3.95

Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
L24E 18+00S	36	30	398	.5	5.14
L24E 18+25S	11	12	57	.7	3.06
L24E 18+50S	17	12	152	.1	2.60
L24E 18+75S	16	8	159	.1	2.53
L24E 19+00S	26	14	153	.1	2.75

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
91BS 1	31	4	89	.1	22.73
91BS 3	6	4	69	.1	1.86
91BS 6	28	113	260	.1	3.59
91BS 10	6	7	135	.1	3.84
91BS 12	5	2	48	.1	1.36
91BS 13	19	5	130	.1	3.30
91BS 15	21	4	268	.1	3.15
91BS 23	57	162	1103	.5	2.62
91BS 30	4	11	110	.1	2.19
91BS 34	11	5	104	.1	3.15
91BS 35	9	28	187	.1	2.37
91BS 38	1	5	62	.1	1.11
91BS 51	11	4	72	.1	2.03
91BS 55	20	8	649	.1	2.56
91BS 58	12	2	142	.1	2.65
91BS 62	5	2	70	.1	1.48
91BS 62A	18	2	104	.1	3.13
91BS 65	9	2	51	.1	1.91
91BS 66	16	3	86	.1	2.55
91BS 67	15	3	324	.1	3.34
91BS 74	20	2	88	.1	3.18
91BS 77	2	5	47	.1	.68
91BS 79	9	2	96	.1	3.20
91BS 80	22	2	67	.1	3.12
91BS 83	23	2	78	.1	3.31
91BS 84	5	2	84	.1	2.94
91BS 85	8	4	66	.1	2.61
91BS 99	8	7	109	.1	3.07
91BS 102	18	3	278	.1	3.12
91BS 116	15	33	399	.4	3.07
RE 91BS 85	7	6	75	.1	2.47
91BS 130	7	2	64	.1	2.16
91BS 141	8	3	75	.1	2.49
91BS 154	13	11	168	.1	3.84
91BS 160	25	30	819	.1	3.07
91BS 163	13	3	104	.1	2.77
91BS 164	10	4	81	.1	2.66
STANDARD C	63	40	132	7.5	3.97

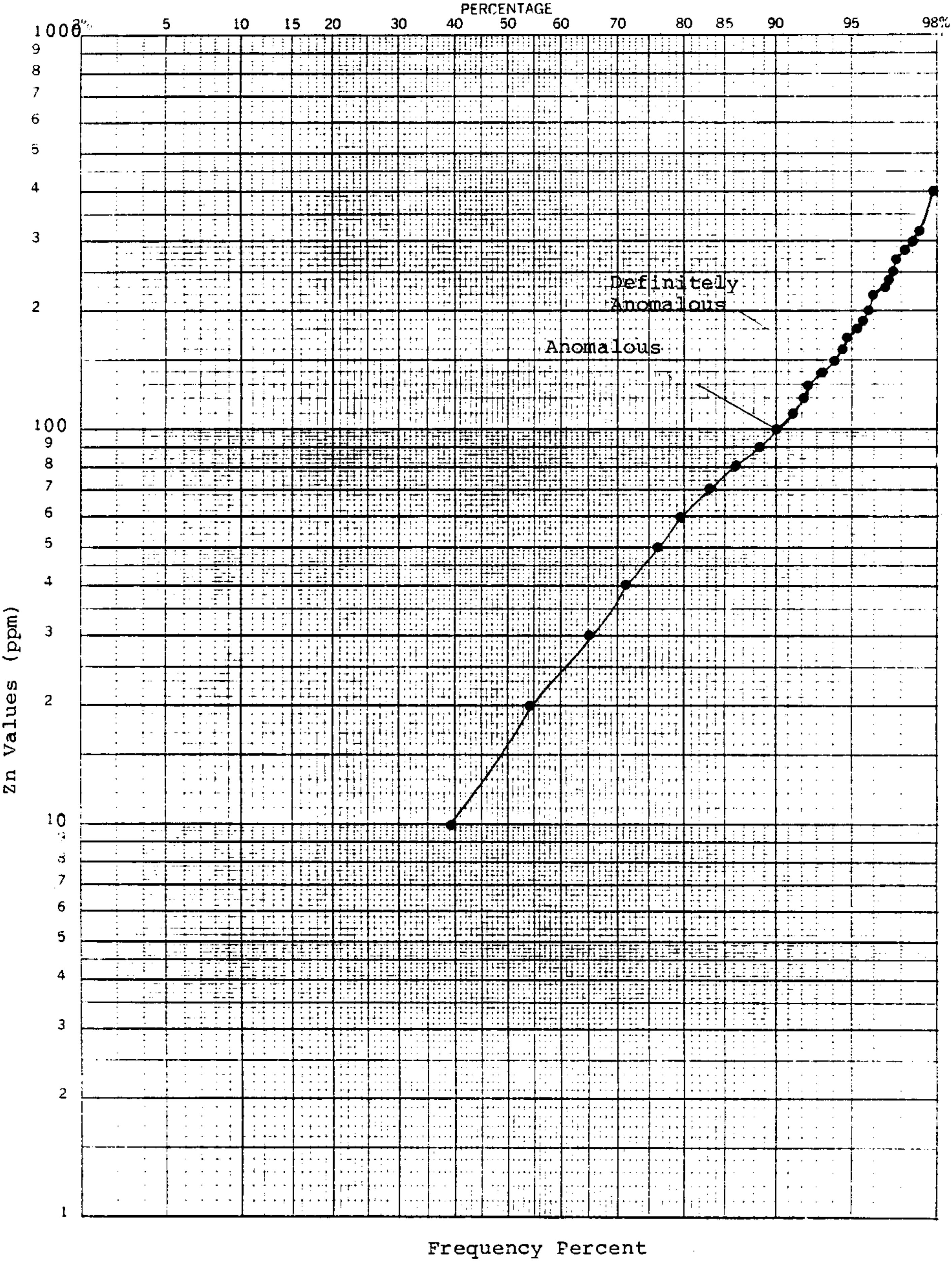
Samples beginning 'RE' are duplicate samples.

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
91BS 175	21	14	543	.2	2.73
91BS 179	25	18	291	.1	2.94
91BS 183	12	8	131	.1	2.32
91BS 186	12	6	91	.1	3.21
91BS 193	11	2	113	.1	3.56
91CS 1	21	3	71	.1	2.79
91CS 2	4	3	54	.1	1.25
91CS 3	12	2	67	.1	1.81
91CS 4	25	2	63	.1	3.13
91CS 5	5	6	57	.1	1.09
91CS 6	30	5	88	.2	3.09
91CS 7	23	2	67	.2	2.89
91CS 8	14	2	62	.2	2.83
91CS 10	16	7	170	.2	3.64
91CS 11	9	6	105	.1	2.80
91MS 1	19	56	621	.5	2.04
91MS 5	10	27	244	.3	2.14
91MS 6	1	9	32	.1	.41
91MS 7	6	27	457	.1	3.62
91MS 8	55	220	1137	1.0	2.63
91MS 10	16	19	201	.1	2.75
91MS 12	4	6	66	.1	1.66
91MS 13	6	9	78	.1	2.18
91MS 14	6	3	45	.1	1.94
91MS 16	11	4	51	.1	2.22
91MS 17	9	5	53	.5	1.74
91MS 18	10	11	75	.2	3.07
91MS 19	4	3	52	.1	2.05
91MS 20	1	3	32	.1	.87
91MS 21	1	7	44	.1	.73
91MS 27	9	4	160	.1	2.76
RE 91MS 19	6	3	60	.1	2.31
91MS 28	2	17	89	.2	2.44
91MS 29	12	15	136	.1	3.93
91MS 30	7	8	131	.1	2.22
91MS 31	5	3	62	.1	2.53
91MS 32	8	26	153	.2	1.15
STANDARD C	61	40	139	7.5	4.04

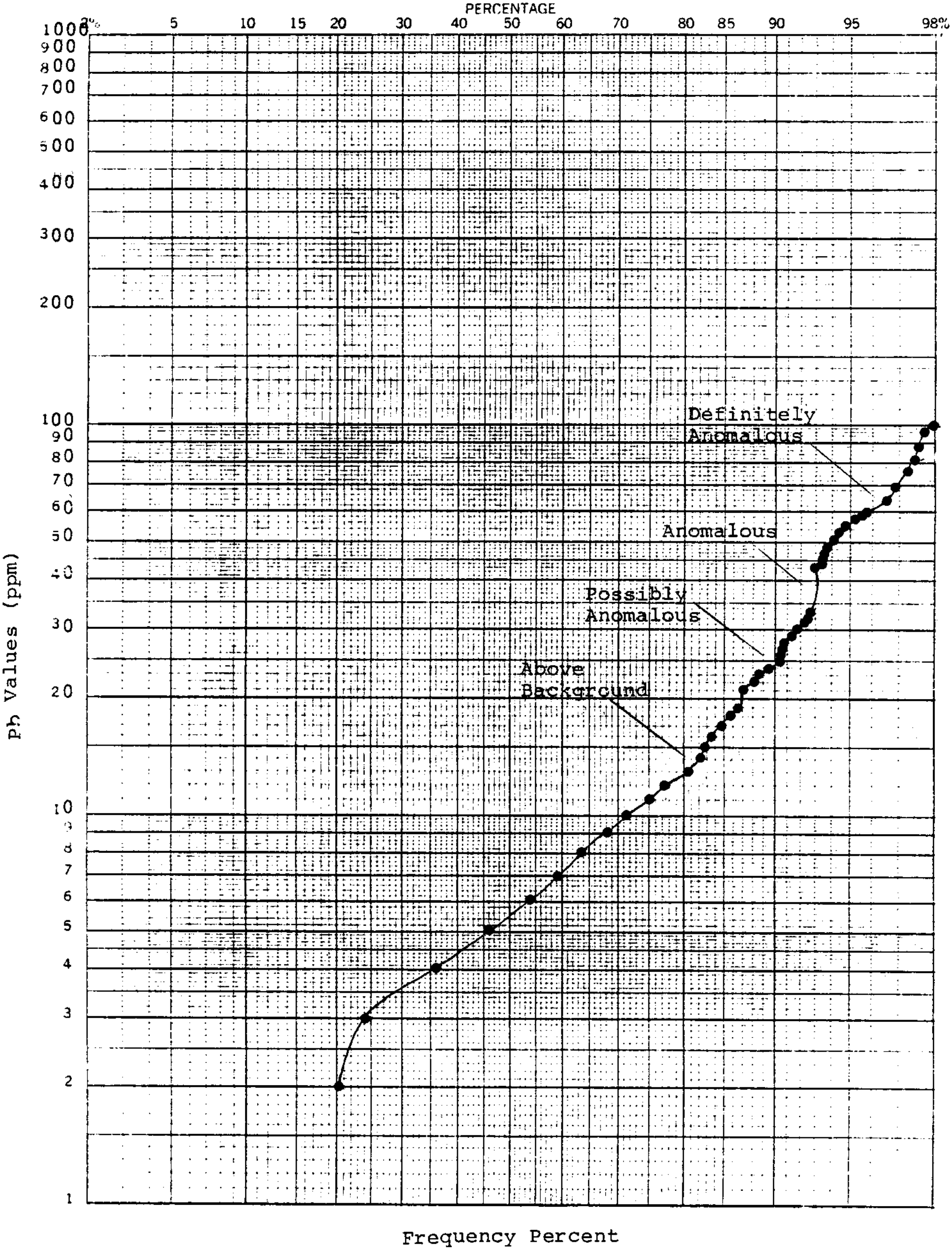
Samples beginning 'RE' are duplicate samples.

APPENDIX E

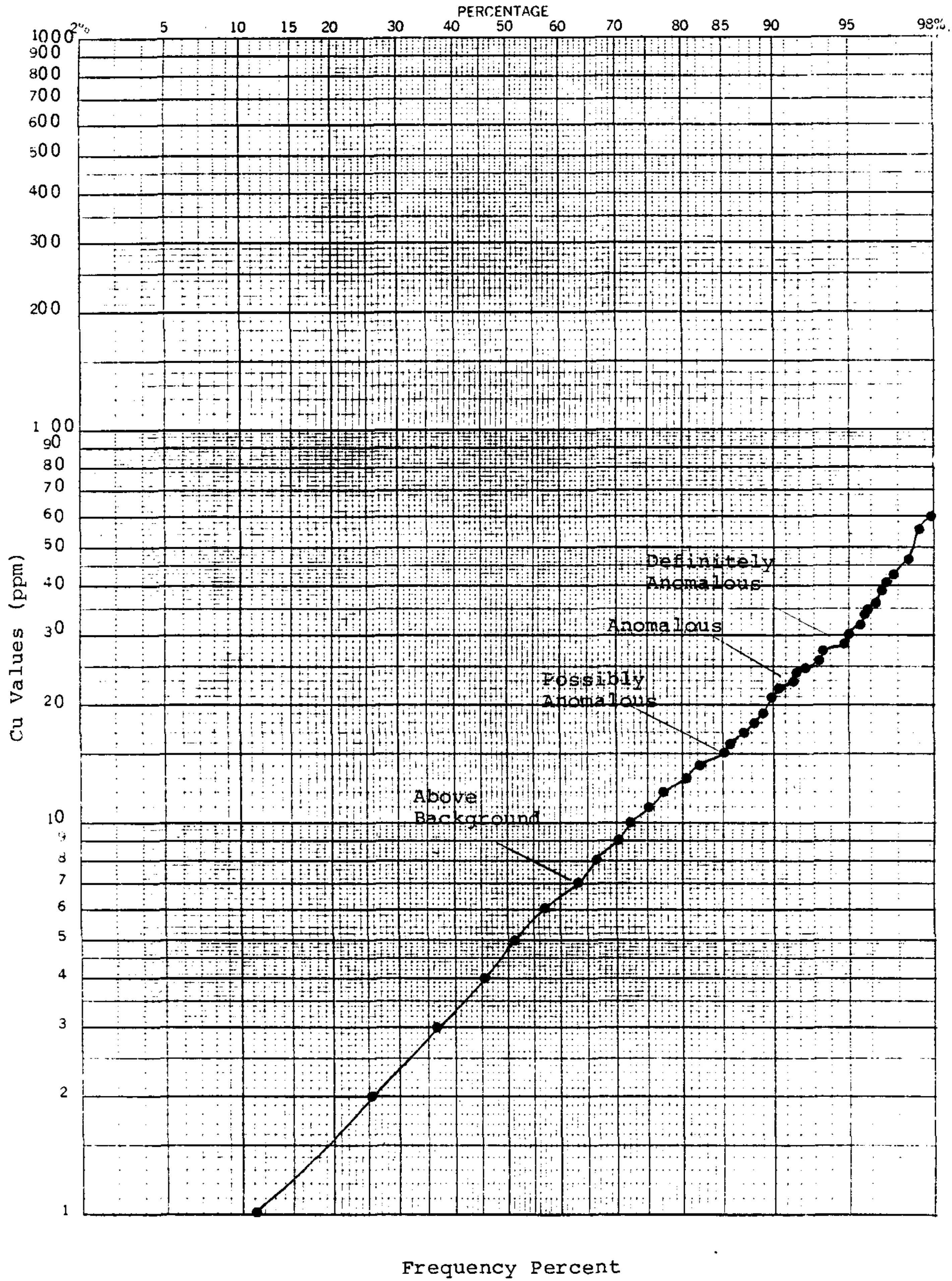
CUMULATIVE FREQUENCY-PROBABILITY PLOTS



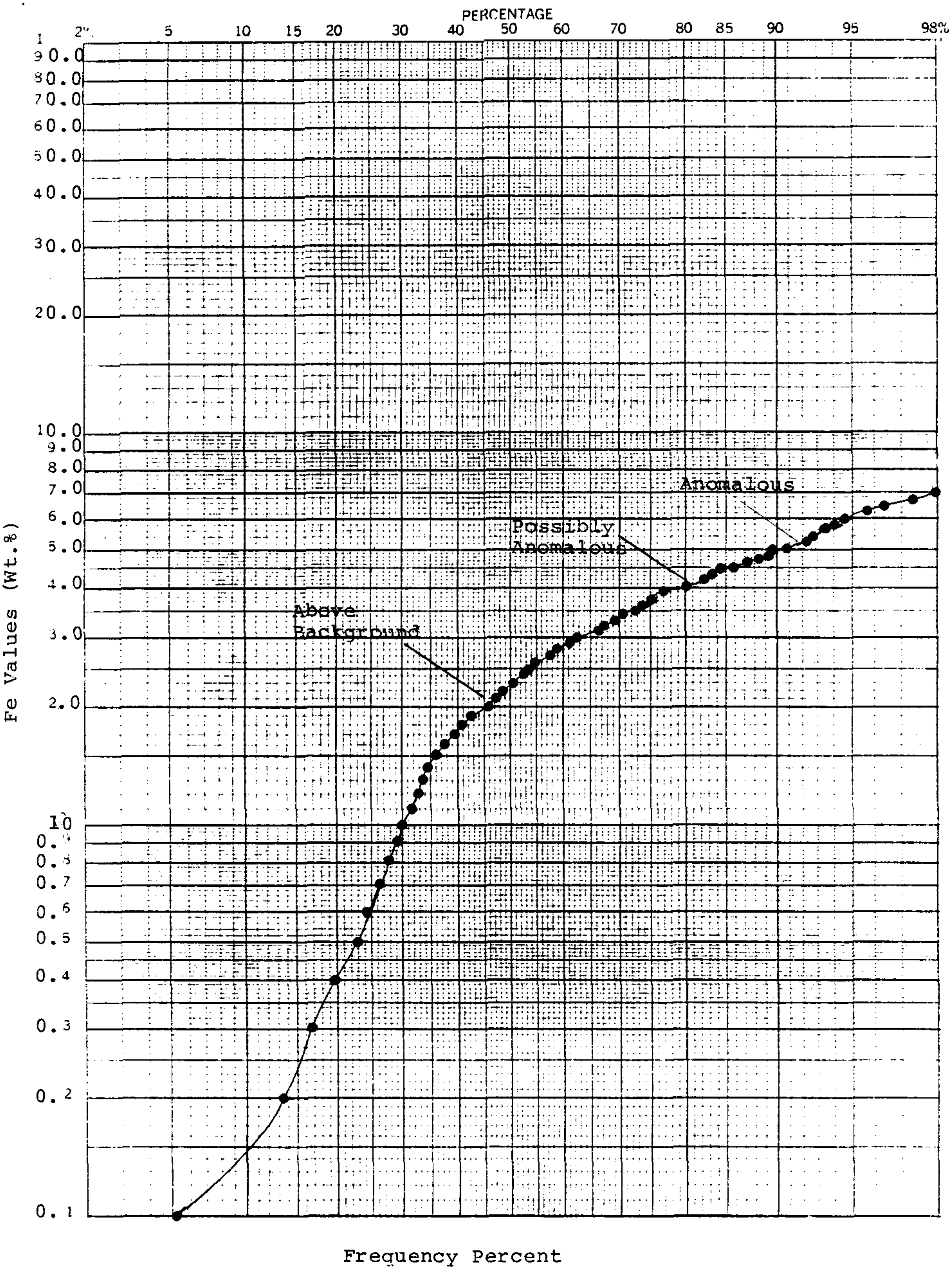
PERCENTAGE
2% 5 10 15 20 30 40 50 60 70 80 85 90 95 98%
1000
100
10
1
Definitely Anomalous
Anomalous
Zn Values (ppm)
Frequency Percent

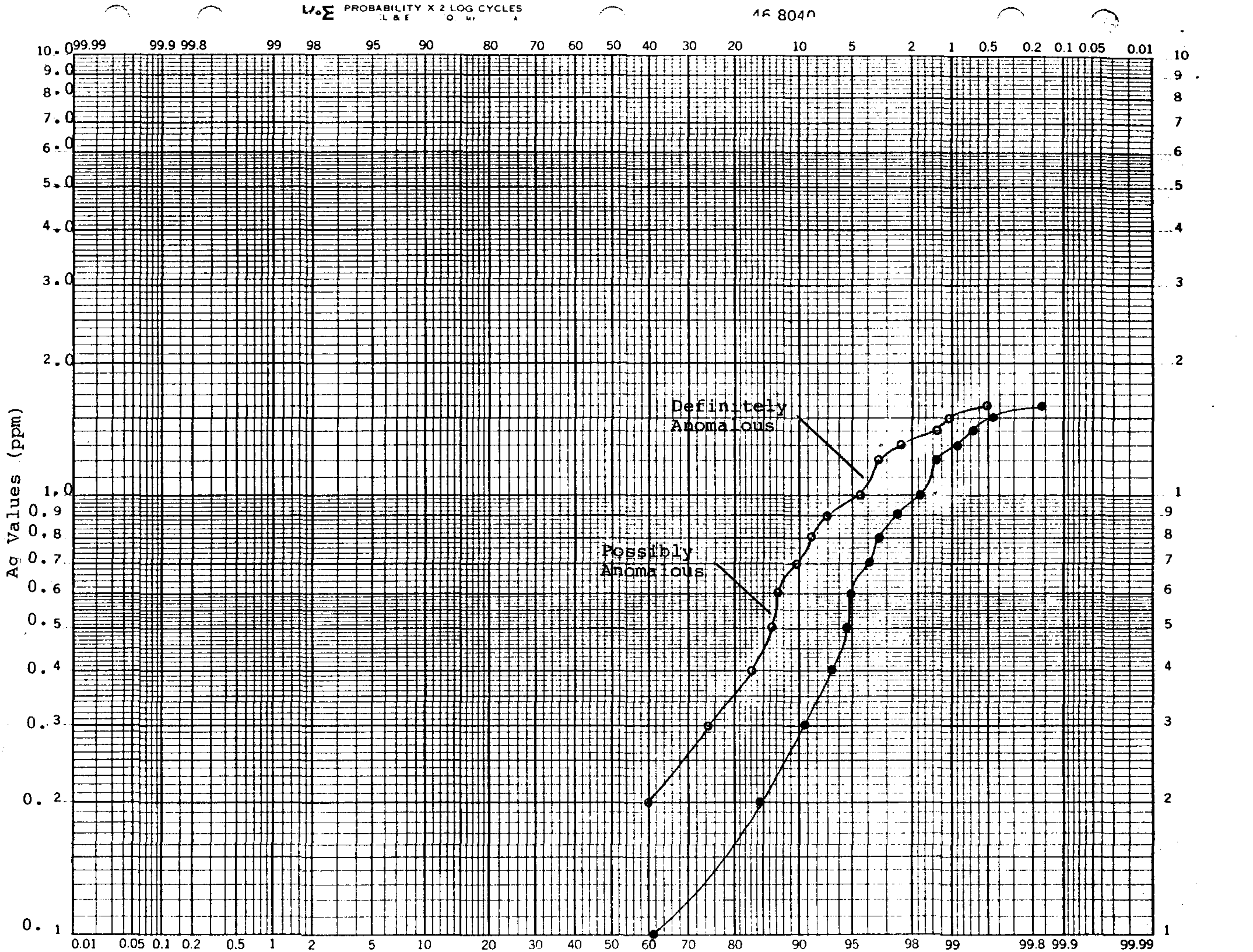


PERCENTAGE
2%
5
10
15
20
30
40
50
60
70
80
85
90
95
98%
1000
900
800
700
600
500
400
300
200
100
90
80
70
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1
Pb Values (ppm)
Definitely Anomalous
Anomalous
Possibly Anomalous
Above Background
Frequency Percent



PERCENTAGE
2%
5
10
15
20
30
40
50
60
70
80
85
90
95
98%
1000
900
800
700
600
500
400
300
200
100
90
80
70
60
50
40
30
20
10
9
8
7
6
5
4
3
2
1
Cu Values (ppm)
Definitely Anomalous
Anomalous
Possibly Anomalous
Above Background
Frequency Percent


PERCENTAGE
2% 5 10 15 20 30 40 50 60 70 80 85 90 95 98%
90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 9.0 8.0 7.0 6.0 5.0 4.0 3.0 2.0 1.0 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1
Fe Values (Wt.%)
Anomalous
Possibly Anomalous
Above Background
Frequency Percent



PROBABILITY X 2 LOG CYCLES
46 8040
Ag Values (ppm)
Definitely Anomalous
Possibly Anomalous

APPENDIX F

COST STATEMENT

COST STATEMENT

Wages

Brian V. Hall (Geologist) July 11 (½), 15, 17-31, 1991 August 1-6, 1991 September 10 (½), 1991 November 2 (½), 3, 4, 5 (½), 20, 24, 25 (½), 28, 29, 1991 December 2, 3, 4 (½), 6, 9, 10 (½), 27 (½), 30, 1991 38 days at $35.00 per day	$13,300.00
Chris McAtee (Geologist) July 18-31, 1991 August 1-6, 1991 20 days at $225.00 per day	4,500.00
Mike Gray (Prospector) July 17-31, 1991 August 1-6, 1991 21 days at $175.00 per day	3,675.00
	21,475.00

Assays and Analyses

473 soil samples analyzed for Cu, Pb, Zn, Ag and Fe at $5.35 per sample	2,530.55
72 silt samples analyzed for Cu, Pb, Zn, Ag and Fe at $4.50 per sample	324.00
55 rock samples analyzed for 31 major and minor elements at $16.25 per sample	893.75
14 Zn assays at $7.50 per sample	105.00
2 Pb and Zn assays at $10.50 per sample	21.00
	3,874.30

Fixed Wing

Wilderness Air	2,725.29
Food and accommodation	2,133.60
Truck rental	1,000.00
Camp rental	1,000.00
Fuel	201.48
Office supplies	121.41
Telephone	22.52
Field supplies	211.70
Typing and drafting (estimated)	1,000.00
Grand Total	$33,765.30
G.S.T.	2,363.57
FINAL TOTAL	$36,128.87

APPENDIX G

COST OF PROPOSED WORK

COST OF PROPOSED WORK

Phase 1 - Trenching

Mobilization/Demobilization	$ 5,000.00
Trenching and Road Construction 15 days at $700 per day	10,500.00
Supervision 18 days at $350 per day	6,300.00
Fixed Wing	1,000.00
Food	500.00
Assays and Analyses	2,000.00
Camp Rental	750.00
Field Supplies	200.00
Reporting	5,000.00
	$31,250.00
10% Contingency	3,125.00
TOTAL	$34,400.00

Phase 2 - Trenching

Trenching and Road Construction 10 days at $700 per day	$ 7,000.00
Supervision 10 days at $350 per day	3,500.00
Fixed Wing	1,000.00
Food	500.00
Assays and Analyses	2,000.00
Camp Rental	500.00
Field Supplies	100.00
Reporting	1,500.00
	$16,100.00
10% Contingency	1,610.00
TOTAL	$17,710.00

APPENDIX H

STATEMENT OF QUALIFICATIONS

Phase 2 - Additional Field Work

Linecutting 5 km at $250 per km	$ 1,250.00
Soil Sampling 155 samples at $7.00 per sample	1,085.00
Geological Mapping 5 days at $350 per day	1,750.00
Prospecting 3 days at $350 per day	1,050.00
Fixed Wing	1,000.00
Food	500.00
Assays and Analyses	2,500.00
Camp Rental	400.00
Field Supplies	200.00
Reporting	3,500.00
	$13,235.00
10% Contingency	1,323.50
TOTAL	$14,558.50

Phase 1 - Trenching	$34,400.00
Phase 2 - Trenching	17,710.00
Phase 2 - Field Work	14,558.50
Total	32,268.50
Phase 1 and 2 Total	**$66,668.50**

STATEMENT OF QUALIFICATIONS

I, Brian V. Hall, of R.R. #1, Bowen Island, British Columbia, V0N 1G0, do certify that:

1) I am a graduate of the University of British Columbia (B.Sc., 1975) and the University of Waterloo (M.Sc., 1978) in geology.

2) I have practised my profession for the past 16 years since my graduation from the University of British Columbia.

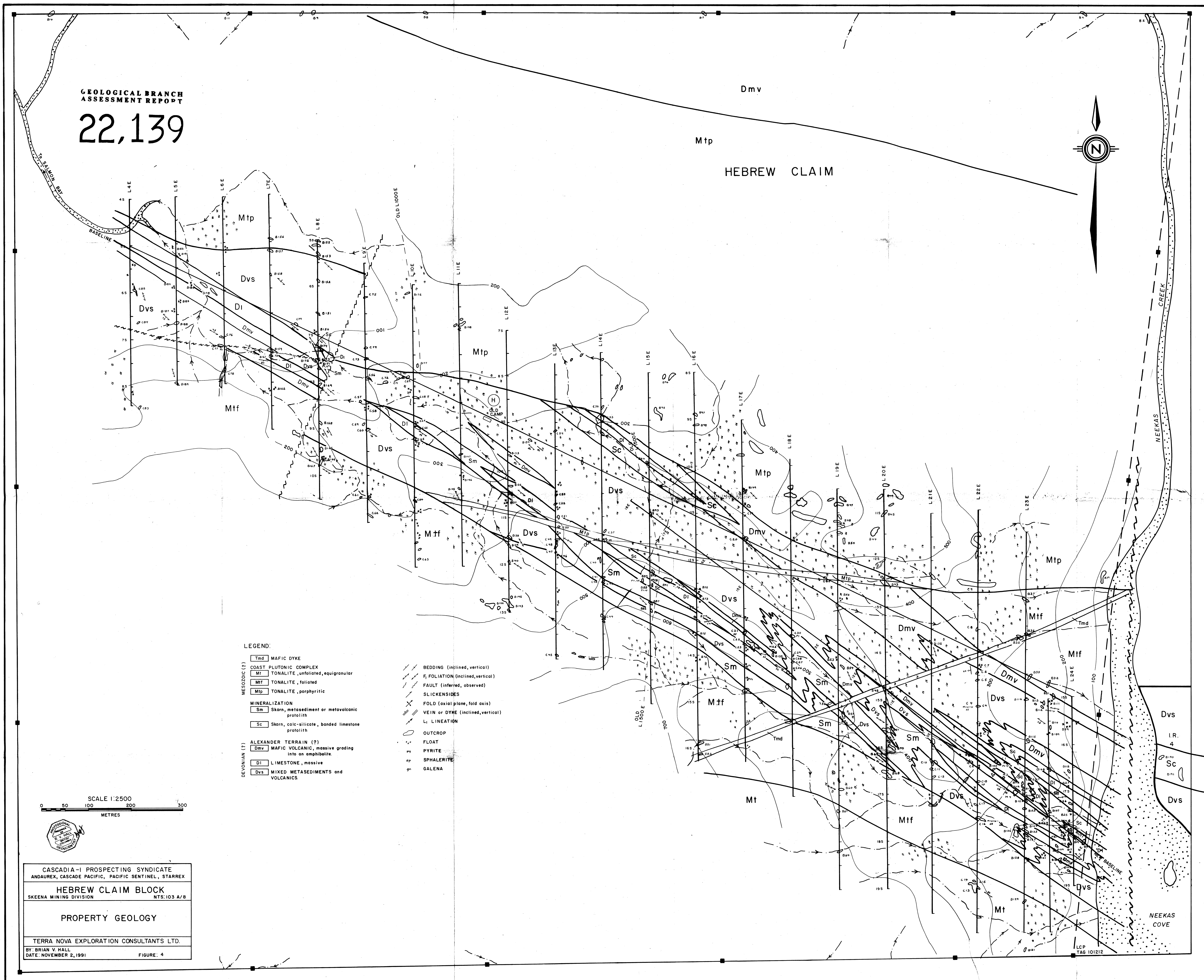
3) I am a member of the Society of Ecnomic Geologists, Fellow of the Geological Association of Canada and a member of the British Columbia Association of Professional Engineers and Geoscientists (P.Geo.).

4) I am currently the President of Cascade Pacific Explorations Ltd. and hold a sizable stock interest in Cascade Pacific Explorations Ltd.

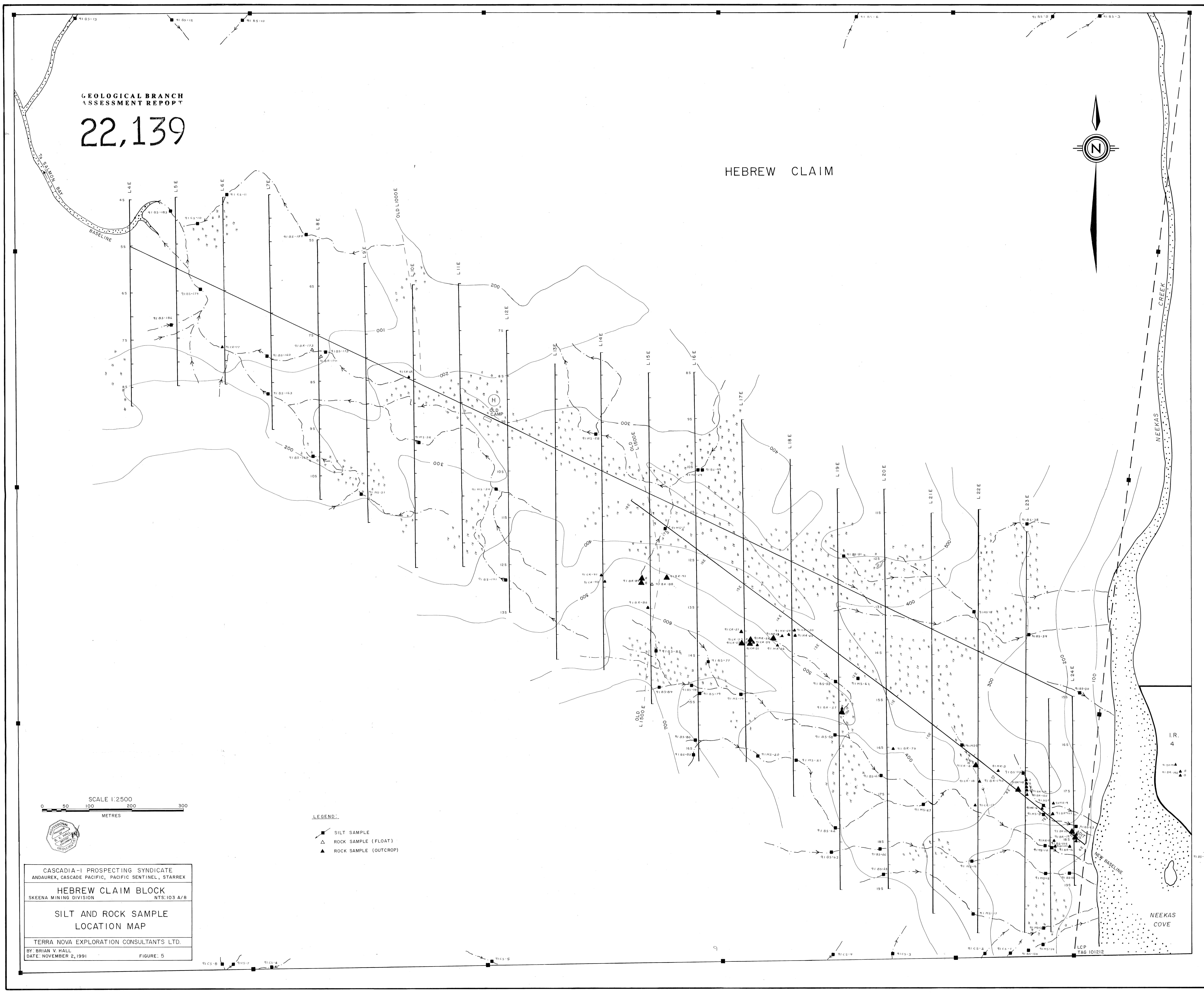
5) The work described in this report is the result of field work carried out by myself and field personnel under my supervision, plus relevant published reports.

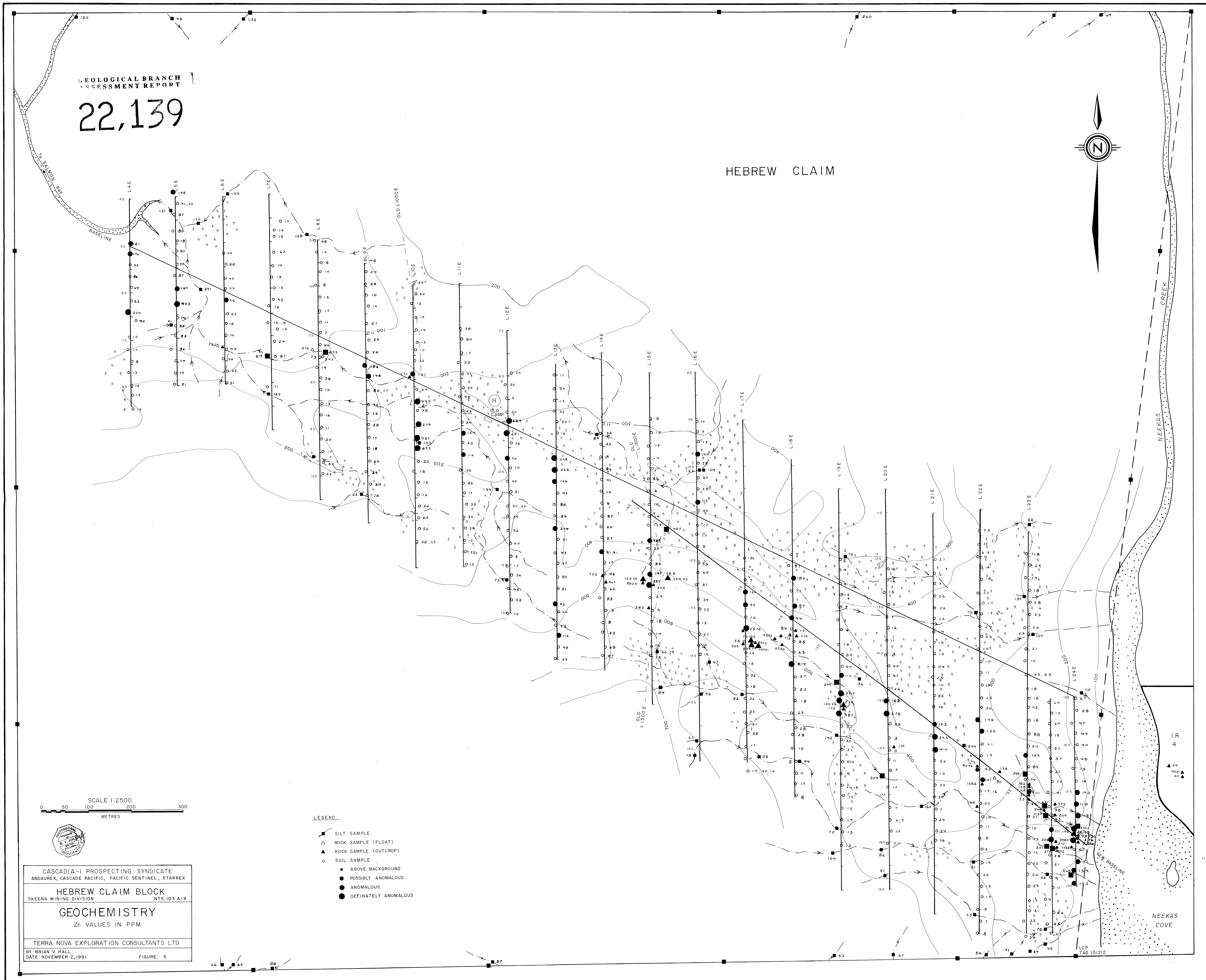
Brian V. Hall, M.Sc.
November 30, 1991

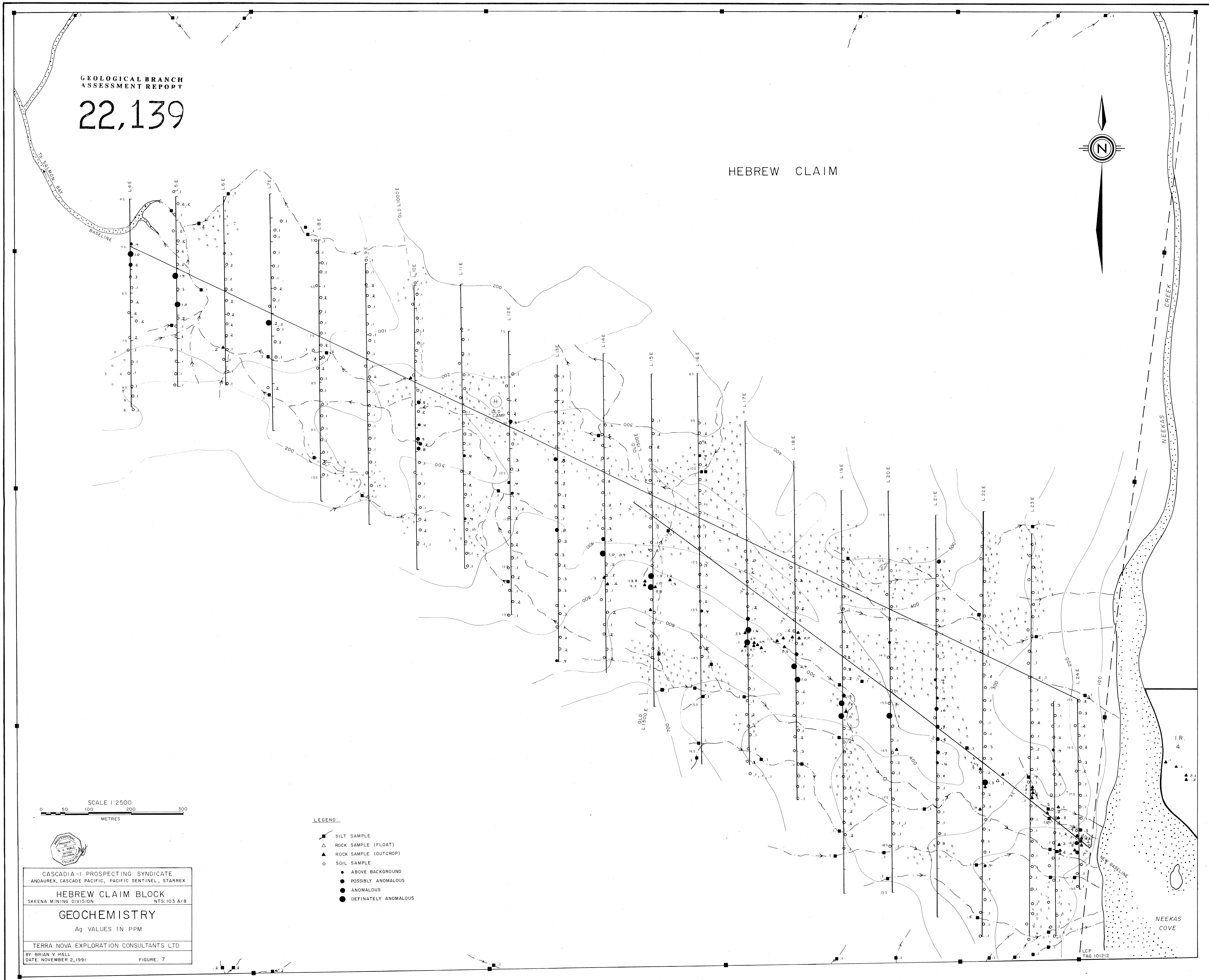
PROFESSIONAL PROVINCE OF B. V. HALL BRITISH COLUMBIA GEOSCIENTIST

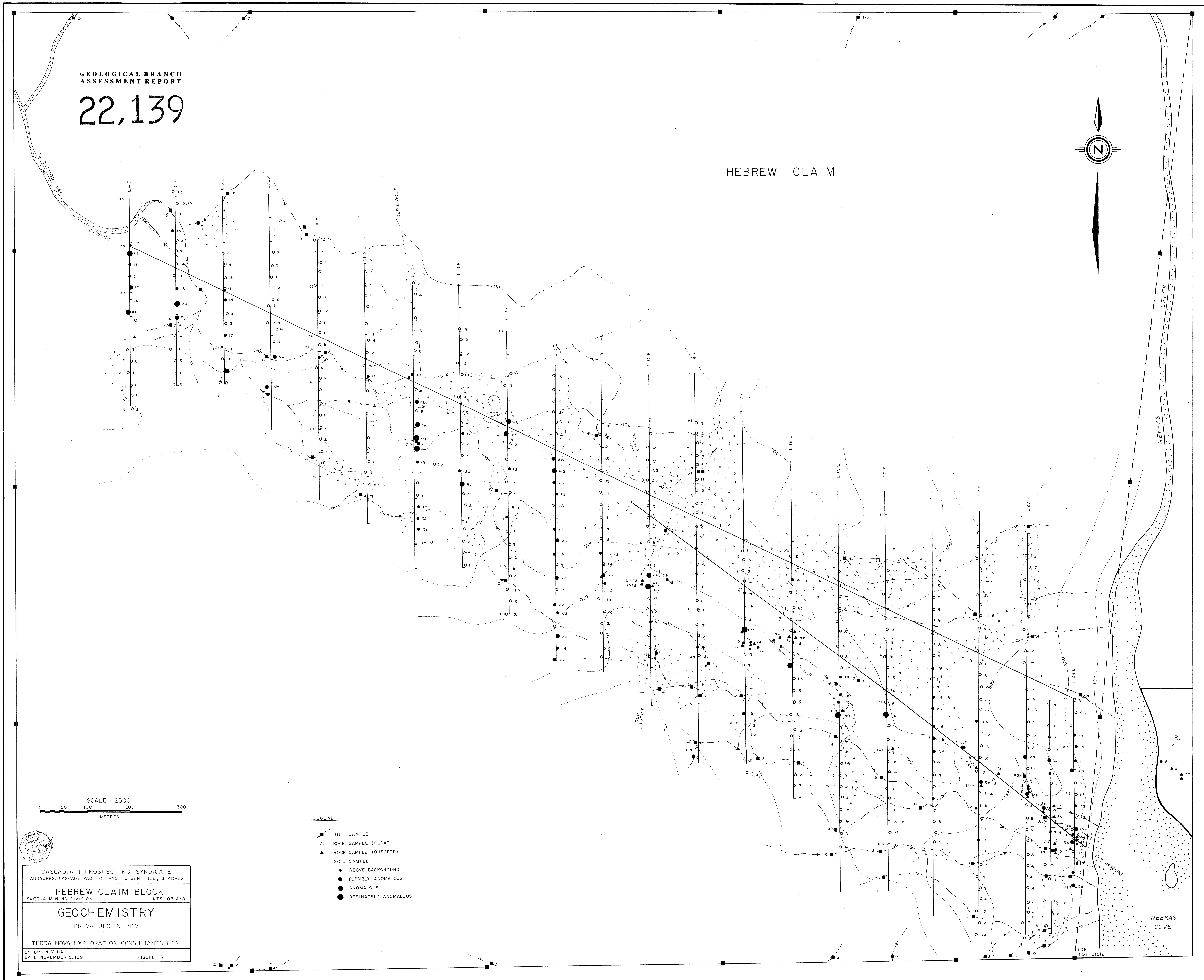


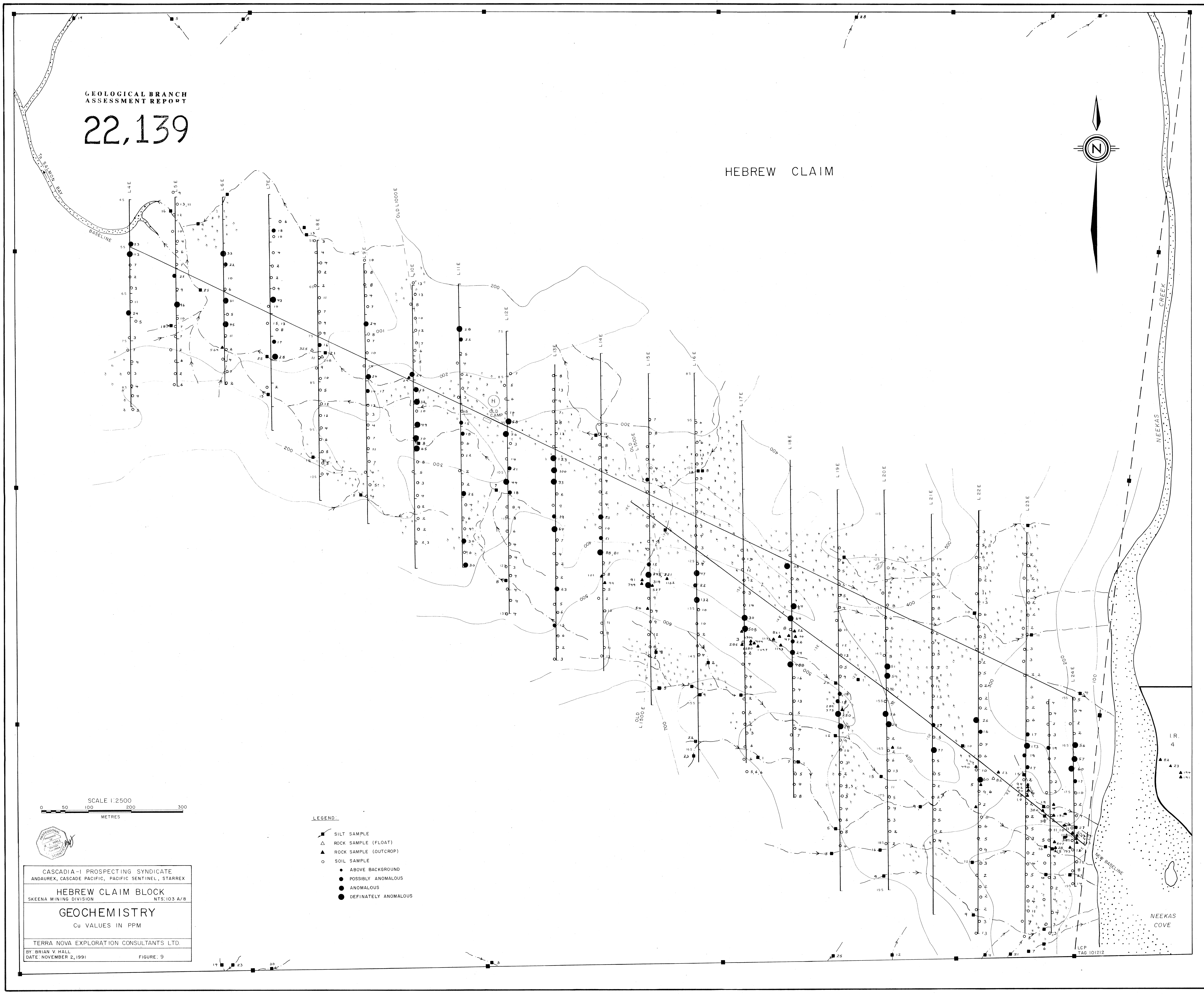
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
Dmv
Mtp
Mtf
Dvs
Dl
Sc
Sm
Mt
Tmd
N
OLD CAMP
BASELINE
To SALMON BAY
NEEKAS CREEK
NEEKAS COVE
I.R. 4
LCP
TAG 101212
LEGEND:
Tmd MAFIC DYKE
MESOZOIC (?)
COAST PLUTONIC COMPLEX
Mt TONALITE, unfoliated, equigranular
Mtf TONALITE, foliated
Mtp TONALITE, porphyritic
MINERALIZATION
Sm Skarn, metasediment or metavolcanic protolith
Sc Skarn, calc-silicate, banded limestone protolith
DEVONIAN (?)
ALEXANDER TERRAIN (?)
Dmv MAFIC VOLCANIC, massive grading into an amphibolite.
Dl LIMESTONE, massive
Dvs MIXED METASEDIMENTS and VOLCANICS.
BEDDING (inclined, vertical)
F1 FOLIATION (inclined, vertical)
FAULT (inferred, observed)
SLICKENSIDES
FOLD (axial plane, fold axis)
VEIN or DYKE (inclined, vertical)
L1 LINEATION
OUTCROP
FLOAT
py PYRITE
sp SPHALERITE
gn GALENA
SCALE 1:2500
0 50 100 200 300
METRES
PROFESSIONAL
PROVINCE OF
B. V. HALL
BRITISH COLUMBIA
GEOSCIENTIST
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
PROPERTY GEOLOGY
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 4


GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
To SALMON BAY
BASELINE
OLD CAMP
NEEKAS CREEK
NEW BASELINE
NEEKAS COVE
I.R. 4
LCP
TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
LEGEND:
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
PROFESSIONAL
PROVINCE OF
B. V. HALL
BRITISH COLUMBIA
GEOSCIENTIST
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
SILT AND ROCK SAMPLE
LOCATION MAP
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 5

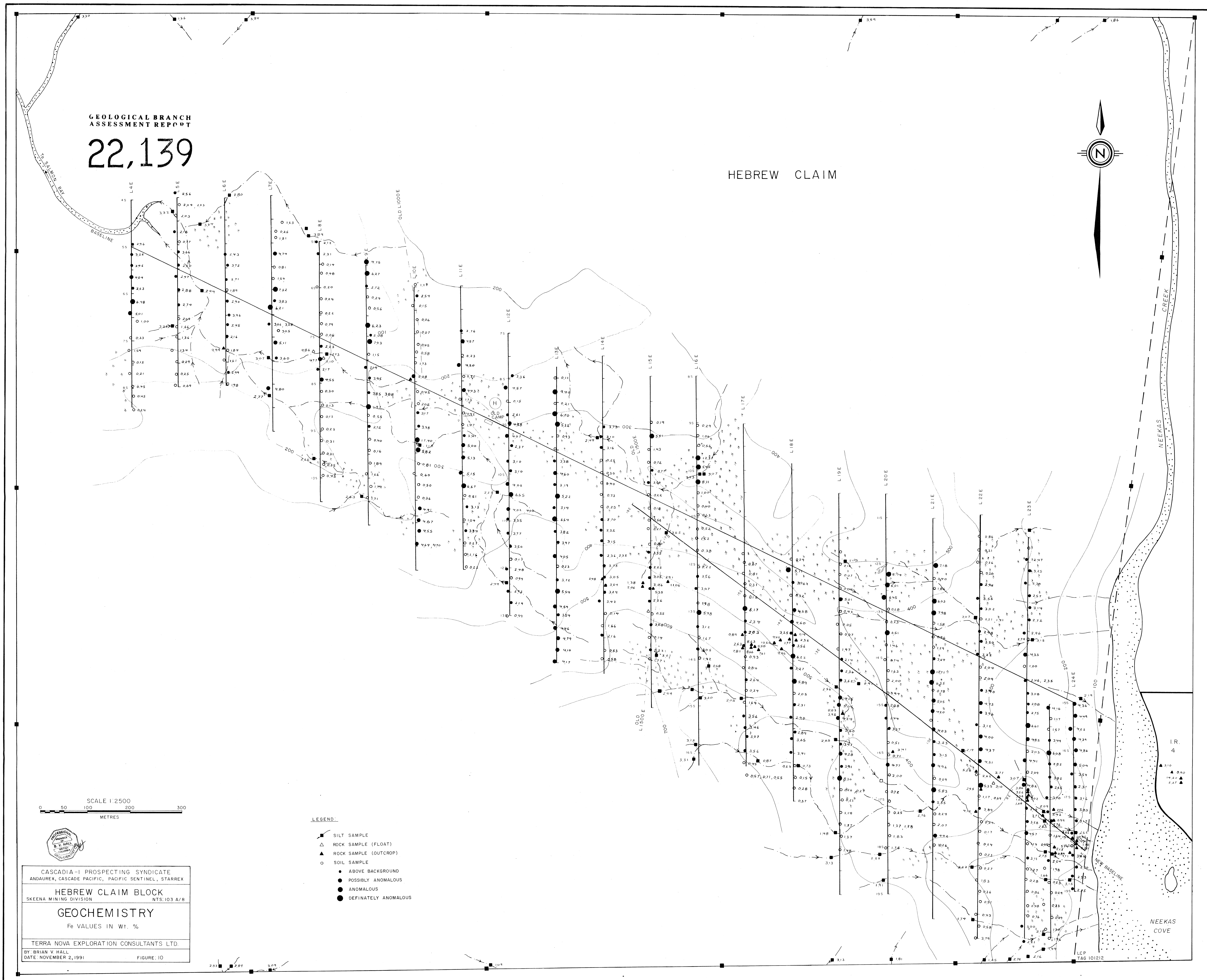

GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
NEEKAS CREEK
NEEKAS COVE
I.R. 4
TO SALMON BAY
BASELINE
NEW BASELINE
OLD CAMP
LCP TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
LEGEND:
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
SOIL SAMPLE
ABOVE BACKGROUND
POSSIBLY ANOMALOUS
ANOMALOUS
DEFINATELY ANOMALOUS
PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA B. V. HALL
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
GEOCHEMISTRY
Zn VALUES IN PPM
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 6


GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
TO SALMON BAY
BASELINE
OLD CAMP
NEEKAS CREEK
I.R. 4
NEEKAS COVE
NEW BASELINE
LCP
TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
LEGEND
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
SOIL SAMPLE
ABOVE BACKGROUND
POSSIBLY ANOMALOUS
ANOMALOUS
DEFINATELY ANOMALOUS
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
GEOCHEMISTRY
Ag VALUES IN PPM
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 7


GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
N
To SALMON BAY
BASELINE
NEW BASELINE
NEEKAS CREEK
NEEKAS COVE
I.R. 4
OLD CAMP
LCP
TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
LEGEND:
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
SOIL SAMPLE
ABOVE BACKGROUND
POSSIBLY ANOMALOUS
ANOMALOUS
DEFINATELY ANOMALOUS
PROFESSIONAL
PROVINCE OF
B. V. HALL
BRITISH COLUMBIA
GEOSCIENTIST
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
GEOCHEMISTRY
Pb VALUES IN PPM
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 8



GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
NEEKAS CREEK
NEEKAS COVE
I.R. 4
To SALMON BAY
BASELINE
NEW BASELINE
OLD CAMP
LCP
TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
LEGEND
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
SOIL SAMPLE
ABOVE BACKGROUND
POSSIBLY ANOMALOUS
ANOMALOUS
DEFINATELY ANOMALOUS
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS:103 A/8
GEOCHEMISTRY
Cu VALUES IN PPM
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 9


GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,139
HEBREW CLAIM
TO SALMON BAY
BASELINE
NEW BASELINE
NEEKAS CREEK
NEEKAS COVE
I.R. 4
OLD CAMP
LCP
TAG 101212
SCALE 1:2500
0 50 100 200 300
METRES
PROFESSIONAL
PROVINCE OF
B. V. HALL
BRITISH COLUMBIA
GEOSCIENTIST
CASCADIA-I PROSPECTING SYNDICATE
ANDAUREX, CASCADE PACIFIC, PACIFIC SENTINEL, STARREX
HEBREW CLAIM BLOCK
SKEENA MINING DIVISION
NTS: 103 A/8
GEOCHEMISTRY
Fe VALUES IN Wt. %
TERRA NOVA EXPLORATION CONSULTANTS LTD.
BY: BRIAN V. HALL
DATE: NOVEMBER 2, 1991
FIGURE: 10
LEGEND:
SILT SAMPLE
ROCK SAMPLE (FLOAT)
ROCK SAMPLE (OUTCROP)
SOIL SAMPLE
ABOVE BACKGROUND
POSSIBLY ANOMALOUS
ANOMALOUS
DEFINATELY ANOMALOUS