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REPORT  
ON  
SILT SAMPLE AND  
LITHOGEOCHEMICAL SURVEY,  
4 - 7 AUGUST 1999

## **BESSHI PROPERTY**

AIKEN LAKE AREA  
OMINECA MINING DIVISION  
BRITISH COLUMBIA

Latitude 56 degrees 28 minutes North  
Longitude 125 degrees 45 minutes West  
NTS 94C/5

by  
R. H. McMillan Ph.D., P.Geo.  
10 May 2000

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

26,308

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## **SUMMARY and RECOMMENDATIONS**

The Besshi property consists of 5 mineral claims covering 700 hectares, located in the Omineca Mining District, 5 kilometres northeast of Aiken Lake on the Omineca Development Road 250 kilometres north of Fort St. James, B.C.

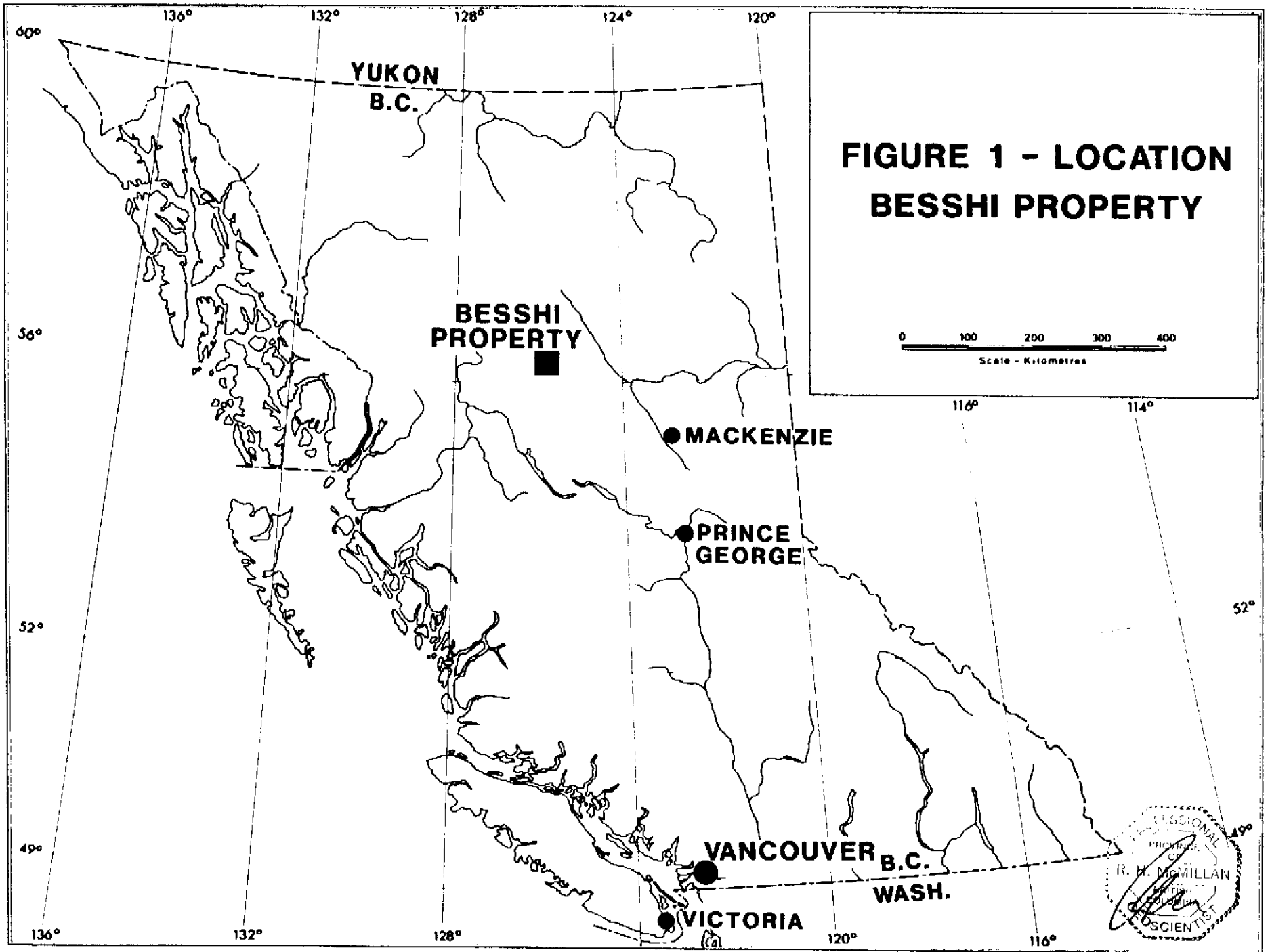
The property covers a belt of volcanic and sedimentary rocks with showings of copper, gold and pyrrhotite-rich massive sulphides centred on Polaris Creek. The area was prospected by the Consolidated Mining and Smelting Company (CM&S) in the 1930's, and significant showings of gold, copper and silver-lead-zinc were discovered on Polaris and adjacent Jupiter Creeks.

In the Polaris Creek Area on and adjacent to the Besshi #2, #3, #4 and #10 claims, a silicified and carbonatized contact zone between mafic volcanic and clastic sedimentary rocks has been traced by airborne and ground geophysical surveys (magnetic, VLF-EM and electromagnetic) for approximately 3 kilometres. Showings of massive sulphide (pyrrhotite-pyrite) nine metres in thickness are exposed in Polaris Creek Canyon in the favourable contact area. Also in Polaris Creek, approximately 850 metres above the massive sulphide zone, CM&S found the "Discovery Zone" (BCEMPR Property Files), an area of quartz-carbonate veining in argillite measuring 35 by 6 metres, carrying pyrite, arsenopyrite, pyrrhotite, galena, sphalerite, chalcopyrite and minute particles of free gold. Samples from the veins yielded assays of up to 1015 g t Au. One hundred metres above the "Discovery Zone", CM&S trenched a base metal occurrence called the "Nanny Zone", where a 20 to 100 centimetre thick zone containing chalcopyrite, pyrite and pyrrhotite yielded assays of 3.56% Cu, 2.1 g/t Au and 20.0 g/t Ag across 0.6 metres. No drilling has been undertaken to date by CM&S or any of the other previous operators despite the highly encouraging results.

The Besshi Property was staked by R.H. McMillan and R. Keefe in 1992 and subsequently optioned by Dentonia Resources Ltd. In February 1993, an airborne electromagnetic, magnetic and VLF-EM survey commissioned by Dentonia was flown over the property. In August of 1993, the author (RHM) and Mr. Keefe completed silt geochemical, lithochemical and lithochemical surveys and limited ground magnetic and VLF-EM surveys.

Between 4 and 7 August 2000, the claim owners (RHM and Mr. Ralph Keefe) completed silt geochemical (21 samples), lithochemical (2 samples) and soil (38 samples) surveys on the property. Prospecting was undertaken where areas of bedrock and float have been exposed by the active logging operations. Samples of cherty manganese and ferruginous float returned low values in base and precious metals. However highly anomalous results (up to 476 ppm copper and 1221 ppb silver) were encountered in silt geochemical samples from the upper end of a creek which drains a co-incident electromagnetic-magnetic anomaly along strike from the massive pyrrhotite-pyrite horizon which outcrops in Polaris Creek canyon. The electromagnetic-magnetic anomaly is located on a low till-covered ridge between two small creeks. The current logging operations provide excellent access to the area.

A modest drill program (approximately 400 metres in 3 holes) is recommended to test for VMS-style mineralization associated with the geochemical and geophysical anomalies along strike from the massive sulphide mineralization exposed in Polaris Creek.



## **1 - INTRODUCTION**

The Besshi Property was staked by Messrs. Ralph Keefe and the author (RHM) in 1992 to cover geophysical anomalies related to a Besshi-type VMS environment centred on Polaris Creek and a greenstone-gold environment on Jupiter Creek. Since that time, various tenures have been abandoned and re-staked, with the current Besshi claims covering most of the key soil geochemical and electromagnetic-magnetic anomalies associated with the VMS environment. Mr. William Haleran and partners own the Pol 1 to 3 claims which cover the Polaris and Jupiter gold showings. The Halleran claims were part of an earlier joint venture agreement and can likely be re-optioned on reasonable terms if required.

Much of the information presented in this report is derived from the sources referenced in Section 13 of this report. In addition portions of this report, in particular the sections on the location, geology, physical setting and history of the property are derived partially or verbatim from a report by Carter (1993).

## **2 - LOCATION AND ACCESS**

The Besshi property is located 340 kilometres northwest of Prince George (Figure 1). The mineral claims are immediately north of Lay Creek, and between 3 and 6 kilometres north of Aiken Lake (Figure 2) in NTS 94C:5 at latitude 58 degrees 26 minutes North and 125 degrees 45 minutes West.

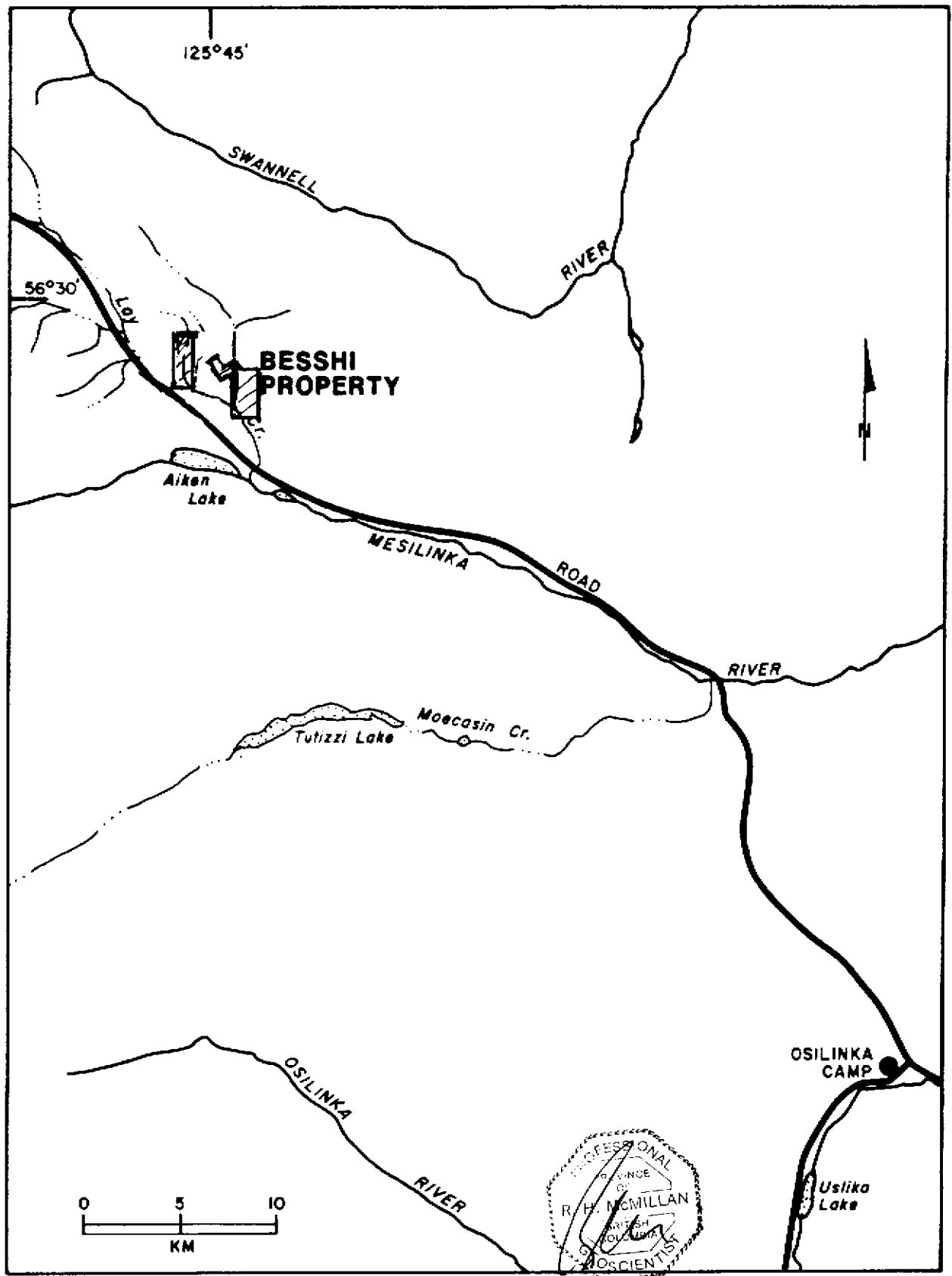
The property is readily accessible by way of the Omineca Mining Access Road (OMAR) which passes within a few hundred metres of the southern part of the claims (Figure 2). Two principal routes are available, one by way of active logging roads some 250 km. in length down the west side of Williston Lake to a point 160 km. north of Prince George on highway 97. The second is via the traditional OMAR road south to Germansen Landing and Fort St. James, a distance of approximately 335 km.

Finlay Forest Products is actively logging the area covered by the claims and excellent road access is available to most areas.

Accommodation and some supplies are available by prior arrangement at a road stop-restaurant 3 km. east of Aiken Lake and at Osilinka Camp, operated by Finlay Forest Products and situated some 50 km. southeast of the property (Figure 2).

## **3 - MINERAL PROPERTY**

The Besshi Property consists of two 4-post mineral claims of 15 and 10 units each and three 2-post mineral claims located in the Omineca Mining Division of British Columbia. Messrs. R. Keefe and R. H. McMillan are tenure holders to three 4-post claims (Besshi #8A, and 10) and three 2-post claims (Besshi #s 2, 3 and 4). The claims cover an area totalling 700 hectares. The POL 1, 2 and 3 claims are



**FIGURE 2 - LOCATION - BESSHI PROPERTY**

owned by Mr. W.H. Halleran and partners and were part of an earlier joint venture agreement with Messrs. Keefe and the author (RHM).

All the mineral claims were located in accordance with the procedures specified by the Mineral Tenure Act Regulations of the Province of British Columbia. The Besshi #2, #3 #4, #8A and 10 were staked by Mr. Keefe and the author and the claim posts and lines of the POL 1, 2 and 3 were located by the author (RHM) or Mr. Keefe during the course of the work on the Besshi claims.

The disposition of mineral claims comprising the property are shown on Figure 3 and details are as follows:

<u>Claim Name</u>	<u>Record Number</u>	<u>Units</u>	<u>Work Recorded To</u>
BESSHI #2	370840	1	2000:08/05
BESSHI #3	370841	1	2000:08/05
BESSHI #4	370842	1	2000:08/05
BESSHI #8A	320683	10	2001.08/19
BESSHI #10	320684	15	2000 08/22

The Besshi #2, #3, #4 and #10 claims are contiguous with overlapping boundaries, and as such constitute a "Group". The Besshi #8A is separate and located approximately 800 metres west of the western boundary of the Besshi #3 claim.

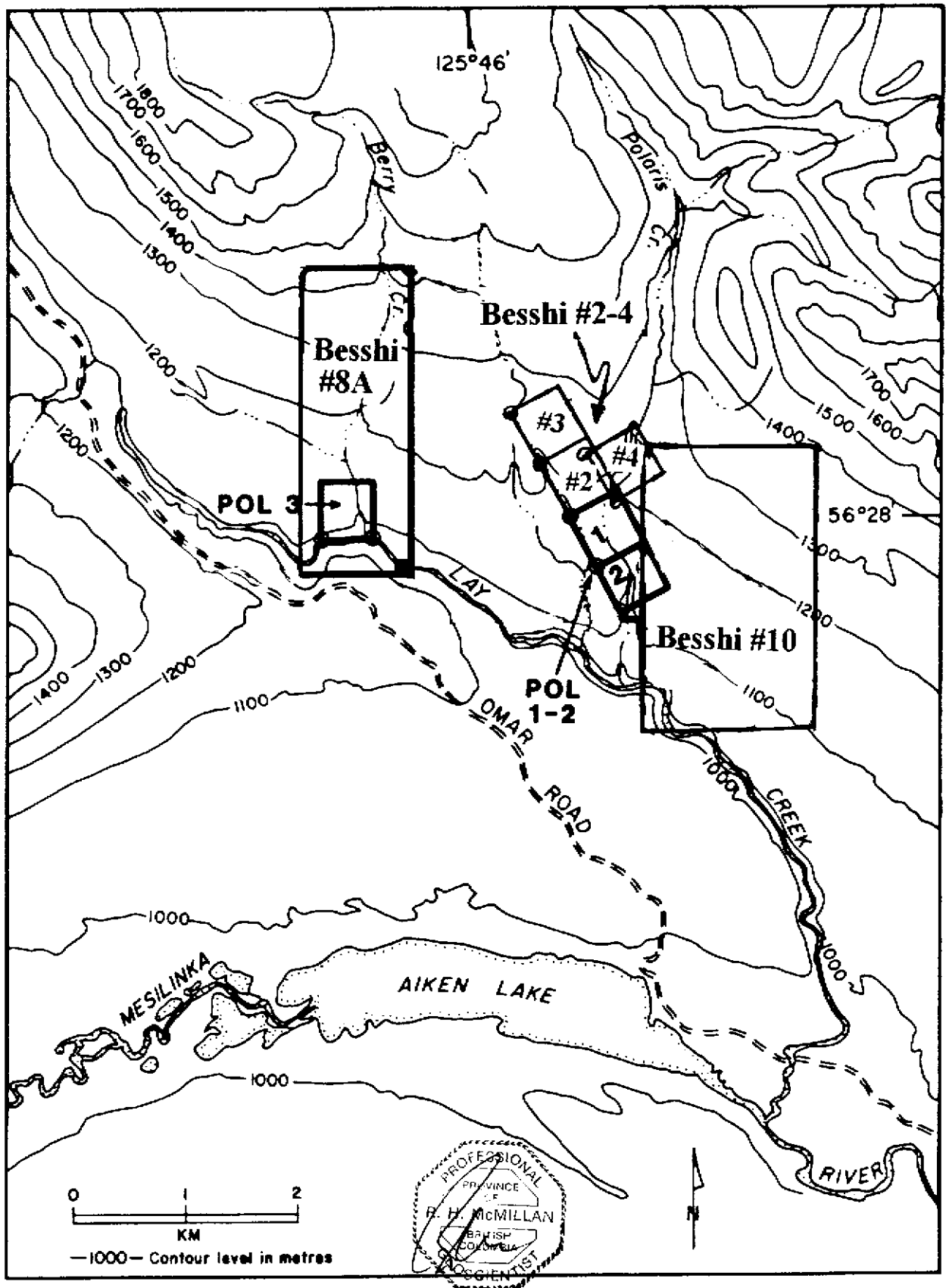
#### **4 - PHYSICAL SETTING**

The Besshi property is situated on a relatively gentle south-facing slope in the lower reaches of the Lay Range, immediately north of Lay Creek, an east-flowing tributary of Mesilinka River (Figures 2, 3). The broad Lay Creek valley is broken by deeply incised (+100 metres deep) canyons along both Lay and Polaris Creeks (Figure 3). Elevations range from slightly more than 1000 metres in the south-eastern property area to about 1450 metres along the northern boundary.

Prior to logging, an open forest cover of spruce, pine, fir and poplar extends over most of the property. Bedrock is best exposed in the canyons along Lay Creek and the two principal tributaries - Polaris and Berry Creeks. Overburden, consisting of gravel and till, ranges in thickness from a few centimetres to more than 30 metres and obscures more than 95% of the property area. Excellent bedrock exposures are present in the canyon walls of Lay and Polaris Creeks.

#### **5 - HISTORY**

The earliest recorded mining activity in the general area of Aiken Lake took place in 1899 and was directed towards placer gold on Jim May Creek, a tributary of Osilinka River. Prospecting for lode deposits, initiated throughout north-central British Columbia by the Consolidated Mining and Smelting Company (CM&S) in 1927, was successful in the discovery of a number of mineral showings including



**FIGURE 3 - MINERAL CLAIMS - BESSHI PROPERTY**



the Jupiter and Polaris gold-silver prospects. Several of the Polaris showings are included within claims of the present Besshi property.

Work by CM&S on these two prospects continued through the 1930's and included surface stripping, hand trenching and more than 500 metres of underground development on the Jupiter prospect and hand trenching and 45 metres of underground crosscutting on the Polaris prospect 4 km to the east.

Both prospects lay dormant until 1975, when a large block of claims located by Susie Gold Mines Ltd. included most of the present Besshi property (BCEMPR Assessment Report 6037 and 6607). Work by this company in 1976 and 1977 was directed towards assessing the potential for porphyry copper-molybdenum mineralization and included geological mapping, magnetometer and VLF-EM surveys and soil sampling over a large area north of Lay Creek between Berry and Polaris Creeks.

Claims were re-located over the same general area by Golden Rule Resources in 1980. The precious metals potential of the Jupiter and Polaris prospects was the main focus of attention and work through 1983 included soil geochemistry and geophysical surveys centred on the two principal mineral showings, construction of a 1 km. tote road linking the Jupiter workings with the Omineca road and some re-sampling of the main Jupiter adit (BCEMPR Assessment Report 11251).

Skylark resources Ltd. re-located essentially the same ground in 1987 and completed soil and stream sediment geochemistry north and south of Lay Creek (BCEMPR Assessment Report 17457).

Prospecting and limited rock sampling was carried out by Mister W. H. Halleran in the area of the Jupiter and Polaris showings following the location of claims in 1990.

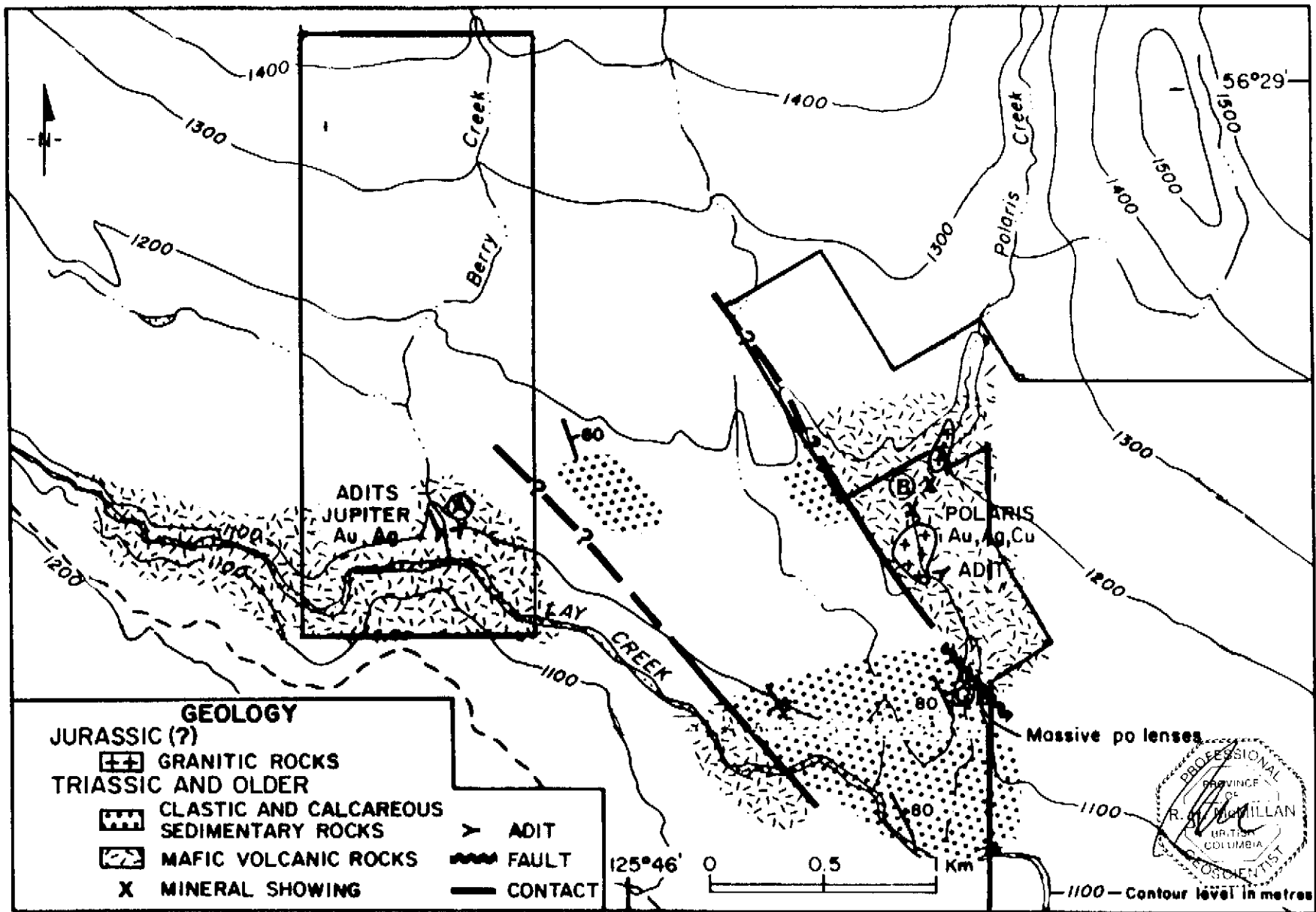
In February 1993, Dentonia Resources Ltd. commissioned Geonex Aerodat Inc. to complete a helicopter mounted magnetic-electromagnetic-VLF-EM survey over the property (Wollham, 1993; McMillan, 1993a). In the survey, a total of 125 line kilometres was flown, and a satellite-based global positioning device (GPS) was utilised for accurate location of the anomalies. In August 1993, Dentonia engaged the author (RHM) and Mr. Ralph Keefe to undertake ground geochemical and geophysical surveys which included silt geochemistry (60 samples), litho-geochemistry (18 samples) and 2 km of magnetic and VLF-EM surveying (McMillan, 1993b). The results of the survey have been filed as assessment work with the Ministry.

The earliest government geological work in the area was published in 1940 by Douglas Lay of the B. C. Department of Mines (Lay, 1940). The area was mapped at a scale of 1:253,400 by the Geological Survey of Canada who published Memoir 274 (Roots, 1954) in 1954. More recently, the area was mapped by the B. C. Geological Survey at a scale of 1:50,000 (Ferri, 1992).

## **6 - REGIONAL GEOLOGICAL SETTING**

The Aiken Lake area, which straddles the boundary between the Intermontane and Omineca Crystalline tectonic belts, features a number of diverse geological terranes.

The area southwest of Mesilinka river and Aiken Lake, including the present Besshi property (Figure 2), is underlain by late Triassic to early Jurassic Takla Group volcanic and lesser sedimentary rocks which lie along the eastern margin of the mainly coeval Hogem granitic intrusive complex.



**FIGURE 4 - GEOLOGY - BESSHI PROPERTY**

These intrusive and layered rocks, part of Quesnel terrane, are in apparent fault contact with a late Paleozoic, island arc-related clastic and volcanoclastic sequence northeast of Meslinka River and Lay Creek. This older sequence, part of Harper Ranch terrane, underlies the central part of the Lay Range between Lay Creek and Swannell River and is cored by the northwest-trending 14 x 4 km Alaskan-type Polaris Ultramafic complex of late Triassic age (Nixon et al, 1990).

The eastern margin of Harper Ranch terrane is along Swannell River (Figure 2) north of which older, late Proterozoic Inginika Group clastic and carbonate sedimentary rocks of Cassiar terrane are in thrust fault contact with younger rocks.

Harper Ranch terrane was previously included with Quesnel terrane sequences of the Intermontane tectonic belt but is now thought to represent the western margin of the Omineca Crystalline belt (Nixon et al, 1990; Ferri et al, 1991).

A regional northwest-trending structural grain is imparted by major dextral and thrust faults separating the various geological terranes, and by faulting, shearing and stratigraphic trends within the various terranes and the northwest trends of the Polaris ultramafic and Hogem granitic intrusive complexes.

The Aiken Lake area is well known for the number and variety of its mineral deposits and occurrences. The most prevalent are copper (gold) showings developed in fracture zones and marginal to satellitic intrusions in Takla Group volcanic rocks peripheral to the eastern margin of the Hogem intrusive complex.

Quartz veins containing pyrite, chalcopyrite, magnetite and molybdenite and locally gold values are numerous in Takla volcanic rocks west of Aiken Lake. Several magnetite lodes in volcanic rocks in the same general area are known to contain locally significant concentrations of copper and gold.

Quartz-carbonate veins occupying shear zones and containing gold-silver values are developed in Takla Group volcanic-sedimentary sequences in the southern Lay Range north of Aiken Lake. The best examples are the Jupiter and Polaris prospects adjacent to the Besshi claims.

Massive and semi-massive layers of pyrite and pyrrhotite-pyrite containing some copper and gold values are known in Takla Group volcanic strata west of Lay Creek several kilometres west of Aiken Lake and in the lower part of Polaris Creek adjacent to the Besshi property.

The Polaris ultramafic complex contains some localised anomalous platinum group metal values in chromite-bearing dunites and pyroxenites (Nixon et al, 1990).

## **7 - PROPERTY GEOLOGY**

The principal geological elements are shown on Figure 4. The following description is based on reports by Potter (1976), Roots (1954), and Lay (1940) and on mapping by the author (RHM) in August of 1993 and 1999.

The oldest rocks, exposed in Polaris Creek, are a mafic-dominated section of basaltic tuffs and minor flows with intercalated impure limestones, cherty argillaceous siltstones and greywackes. The sequence is intruded by a few dykes and two sill-like bodies of quartz monzonite and biotite porphyry. Bedding generally strikes north to north-northwest, with moderate dips generally to the east, although local open folds were noted.

A prominent northwest-trending fault zone is well-exposed at the base of the triple waterfall in Polaris Canyon. The fault zone separates the volcanic-volcaniclastic sequence to the northeast from a thick succession of black, pyritic and graphitic argillites. The contact area between the mafic volcanic rocks and the black argillites is marked by intense carbonatization, silicification, pyritization and bleaching. The steeply-dipping, northwest-trending epiclastic sequence has an apparent thickness of more than 1000 metres.

The sedimentary sequence is bounded on the southwest by intermediate to mafic volcanic flows and tuffs which are variably sheared and feature locally intense chloritic and carbonate alteration, the latter being particularly well developed adjacent to the No. 2 "shear-zone" structure as well as on the tote road on the south side of the Jupiter adit. Small porphyritic dioritic bodies which parallel the No. 2 "shear-zone" structure are possibly intrusive in origin (Roots, 1954).

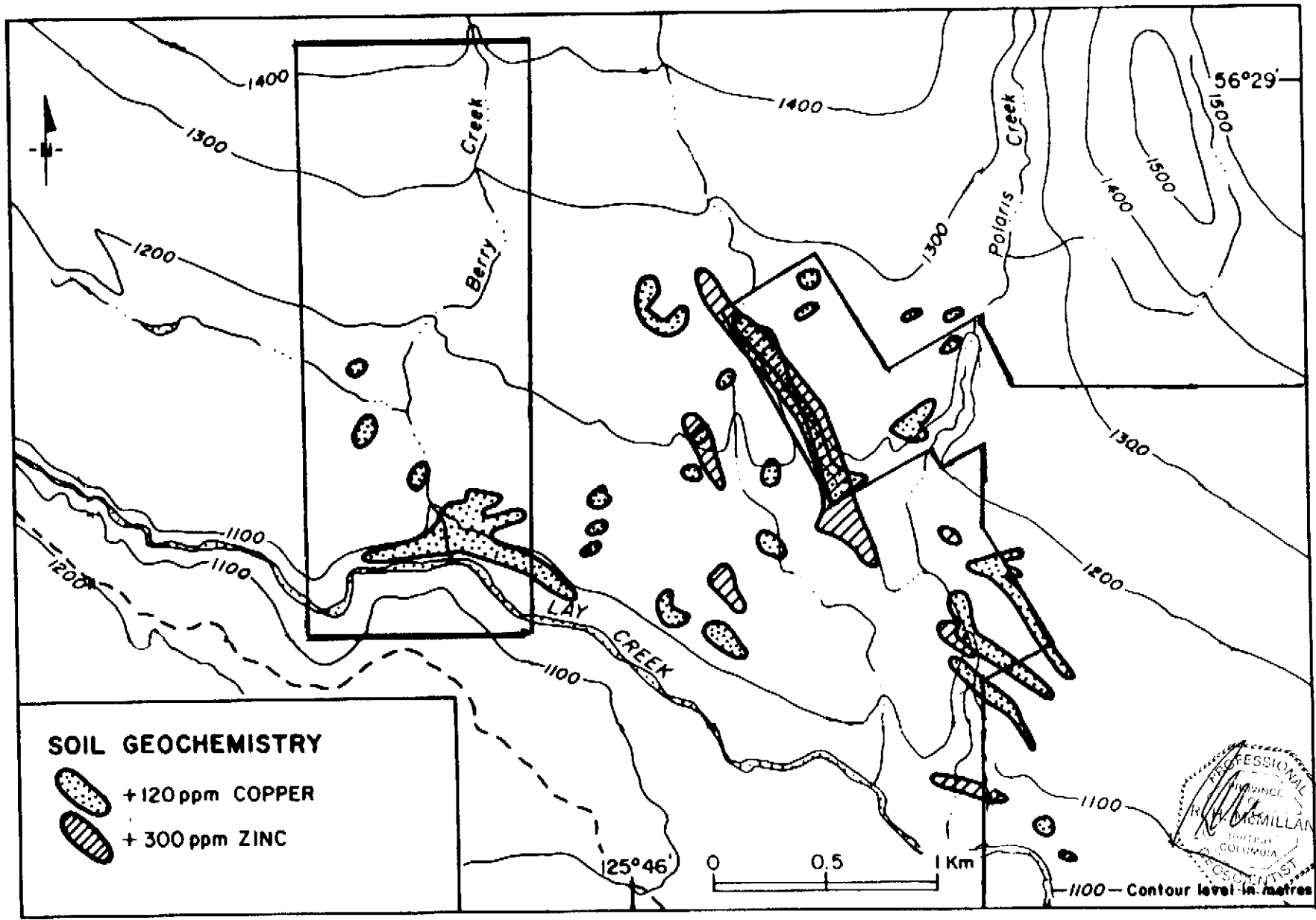
The volcanic and sedimentary rocks underlying the Lay Range and extending south to Lay Creek were regarded by Roots (1954) as being of late Paleozoic age. Roots' map shows these rocks to be separated from the late Triassic to early Jurassic Takla strata to the west by a fault. Mapping by Potter (1976) shows no fault or displacement of lithologies along Lay Creek. More recently work by Ferri (personal communication) indicates that both the volcanic assemblages and the intervening sedimentary unit form the basal part of the Upper Triassic Takla Group. The nature of the sedimentary rocks which include calcareous units and black pyritic fine clastic sedimentary strata suggests deposition in a back-arc environment.

## **8 - MINERALIZATION**

Several distinctive styles of mineralization are present in and adjacent to the Besshi claims. These include a precious metal-rich "shear-zone" and fissure veins at the Jupiter showings near Berry Creek. To the east, in Polaris Creek canyon, several types of mineralization outcrop. Two areas of Fracture-controlled gold-silver mineralization is present, weakly developed porphyry copper-molybdenum mineralization and stratiform massive and semi-massive pyrrhotite-pyrite. In the upper section of Polaris Creek, the Nannie showing is associated with cherty interflow sediments and shows similarities to VMS-style mineralization.

### **8a) Jupiter Area**

At the Jupiter workings, the adit on the west side of Berry Creek (Figure 4) follows the main, No. 2 "vein" structure over a strike length of more than 200 metres. The No. 2 "vein" (Lay, 1940; Roots, 1954) is a steeply west-dipping north-striking zone of siliceous and carbonate alteration of mafic volcanic and graphitic-pyritic sedimentary strata. Green mica (mariposite?) alteration is reported (Roots, 1954) to be present in the adit and can also be seen in similar altered rocks on the tote road on the south side of Lay Creek. Possibly intrusive andesitic or dioritic porphyritic rock is exposed near the adit portal and was reported to be present in the adit workings (Roots, 1954). Widths on the No. 2 "vein" generally averaged 0.6 metres or less, however detailed sampling by CM&S personnel in the 1930's indicated better gold grades over a 30 metre strike length between 50 and 80 metres from the adit portal (Lay, 1940; BCEMPR property files). The plan (BCEMPR property files) shows individual samples within this zone ranging up to more than 100 g/t Au over widths of several centimetres.



**FIGURE 5 - SOIL GEOCHEMISTRY - BESSHI PROPERTY**

Calculations by Carter (1993) on 42 samples within one high-grade zone exposed where the drift traverses the No. 2 structure, indicated an average grade of 5.34 g/t Au and 42.46 g/t Ag across an average width of 1.3 metres along a strike length of 24.4 metres. Some 30 metres north of this high-grade section, a 12 metre crosscut driven east has exposed similar mineralised material from which 4 samples yielded a weighted average grade of 15.98 g/t Au and 79.2 g/t Ag over a width of 1.26 metres. North of this crosscut, where the main drift again traverses the No. 2 structure, samples across 0.3 to 1.2 metre widths yielded values in the 0.7 to 2.4 g/t Au range.

The second type of mineralization in the Jupiter area consists of silver-rich fissure-veins such as the Numbers 1 and 3 veins, which are northeast-striking, southeast-dipping quartz carbonate veins containing sphalerite, galena, tetrahedrite and chalcopyrite. Carter (1993) calculated the weighted average for 17 samples for the No. 1 vein over a width of 1.33 metres and a strike length of 20 metres to be 0.34 g/t Au and 834.2 g/t Ag. For the No. 3 vein, Carter (1993) calculated an average grade of 2283.8 g/t Ag and 0.31 g/t Au over an average width of 0.57 metres and a strike length of 10 metres.

A 45 metre adit driven northeast on a continuation of the No. 3 vein structure on the east side of Berry Creek (Figure 4) yielded only low values (Lay, 1940).

#### **8b) Polaris Creek Area**

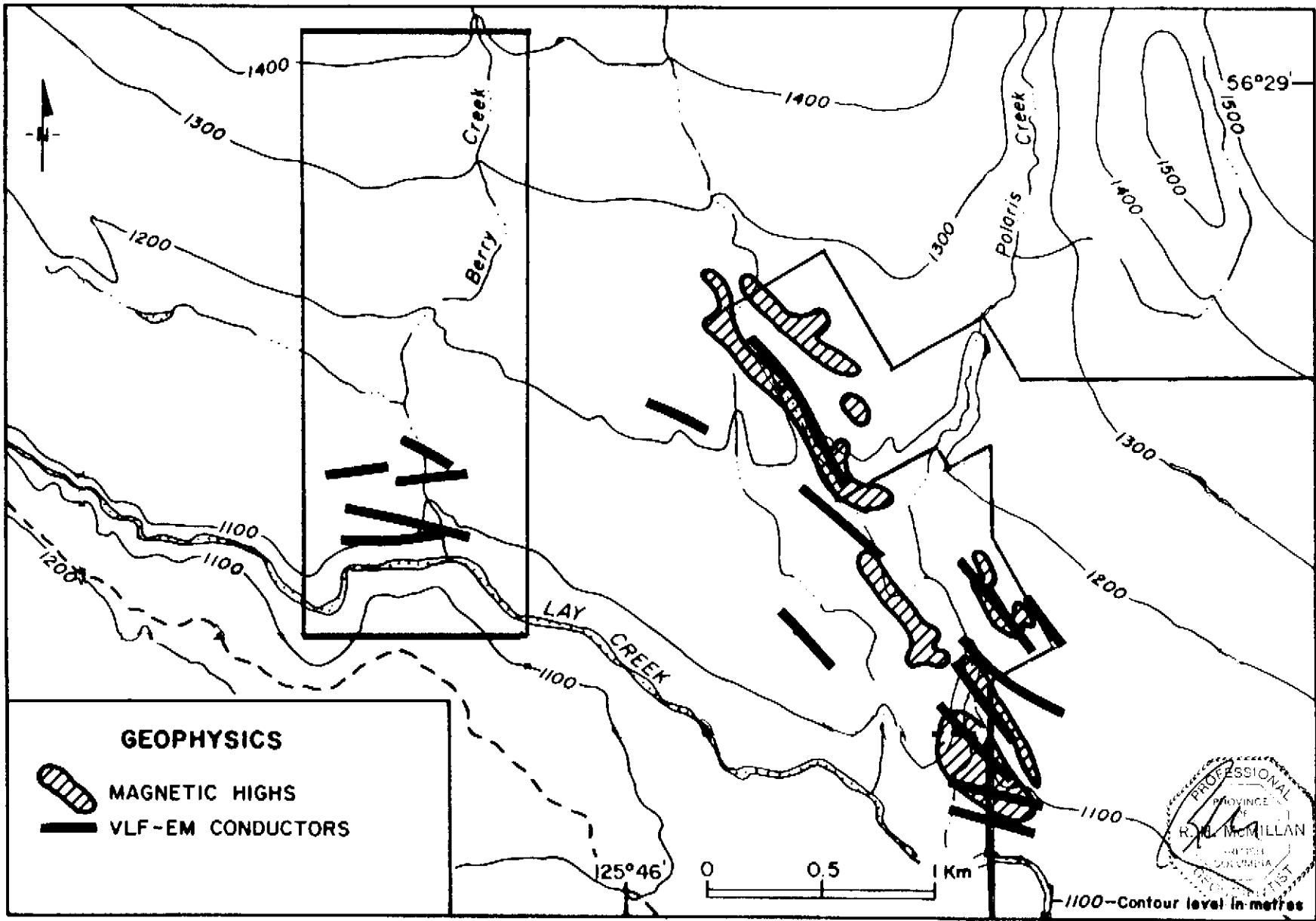
As stated above, there are several showings and different styles of mineralization exposed in Polaris Creek. Beginning at the uppermost end at the northern end of Polaris Creek canyon, approximately 200 metres north of the upper waterfall, porphyry-type copper-molybdenum mineralization is present in the northernmost granitic intrusive body. A grab sample collected by Potter (1976) returned 0.23% Cu, 0.004 % Mo, 5.8 g/t Ag and 0.1 g/t Au.

South of this, 150 metres above the waterfall, CM&S trenched a 20 cm. to 1 metre thick showing called the Nanny Zone which yielded an assay of 2.1 g/t Au, 20 g/t Ag and 3.56% Cu in a 60 cm. sample which contained pyrite, chalcopyrite and pyrrhotite. In 1993 (McMillan, 1993) several concordant horizons of semi-massive pyrrhotite-pyrite associated with magnetite, minor chalcopyrite and cherty sedimentary layers a few centimetres to a metre in thickness were identified, however the Nanny showing was not identified - probably because the old trenches have sloughed-in.

Downstream, immediately above the upper waterfall, a zone of quartz-carbonate veining called the "Discovery" zone was trenched by CM&S in 1932. This work exposed a network of 2 to 20 cm. wide quartz-carbonate veins with fine pyrite, pyrrhotite, chalcopyrite, galena, sphalerite and minor free gold cutting dark, calcareous argillite. Samples taken by CM&S assayed as much as 1014.8 g/t Au and 148 g/t Ag over narrow widths, however most samples assayed considerably less than 1 oz/ton Au - the entire zone which was estimated to cover an area approximately 6 by 35 metres was estimated to average approximately 3 g/t Au.

Approximately 475 metres below the "Discovery" area CM&S drove the 50 metre long Polaris adit into the east bank of Polaris Creek canyon in an attempt to intersect an inaccessible vein 15 to 40 cm. in thickness which shed talus fragments assaying between 6.85 g/t and 415 g/t Au.

Immediately above the 3-level waterfall, 550 metres below the Polaris adit, a 6 to 10 metre thick layer of massive pyrite-pyrrhotite is exposed on the west bank of the canyon. The massive sulphides form a north-striking, 45 degree east-dipping slab which outcrops along a 40 metre strike-length and for 30 metres down-dip. Minor magnetite and trace chalcopyrite are associated with the iron



**FIGURE 6 - GEOPHYSICS - BESSHI PROPERTY**

sulphides. In 1991, a grab sample taken by W. Halleran returned anomalous copper and molybdenum values of 834 and 12 ppm respectively.

Quartz-carbonate stringers containing pyrite and pyrrhotite and hosted in the sedimentary sequence in the lower reaches of Polaris Creek and along Lay Creek were found by CM&S and McMillan (1993b) to contain only low gold and silver values.

## 9 - GEOCHEMISTRY

Soil sample results from previous large-scale programs (Potter, 1976 - 876 samples; Fox, 1981 - 400 samples and Fox, 1983 - 65 samples) were compiled by McMillan (1993b - Map 2). Featured prominently is a northwest-trending, 1.5 km long linear zone with anomalous copper (+ 120 ppm), zinc (+ 300 ppm) and molybdenum (+ 20 ppm) on the west side of Polaris Creek semi-concordant to the trend of the massive pyrrhotite-pyrite body exposed in Polaris Creek Canyon. These results are summarised on Figure 5 of this report. This anomaly is largely covered by the Besshi #2 and #3 claims.

On the east side of Polaris Creek, on ground covered by the Besshi #10 claim, the work by Fox (1981 and 1983) has defined two subparallel northwest-trending Cu-Ag zones 700 metres in length (Figure 5). The southeast anomaly extends southeast from the massive pyrite-pyrrhotite body in Polaris Creek canyon. The stronger and better-defined northwest anomaly is along the strike projection of the Nanny and Discovery showings. Copper values are as high as 600 ppm and silver 2.0 ppm. Anomalous gold-in-soil anomalies are associated with the southeast anomaly with values as high as 165 ppb Au (Fox, 1983).

The northwest anomaly was the target of the work described in this report.

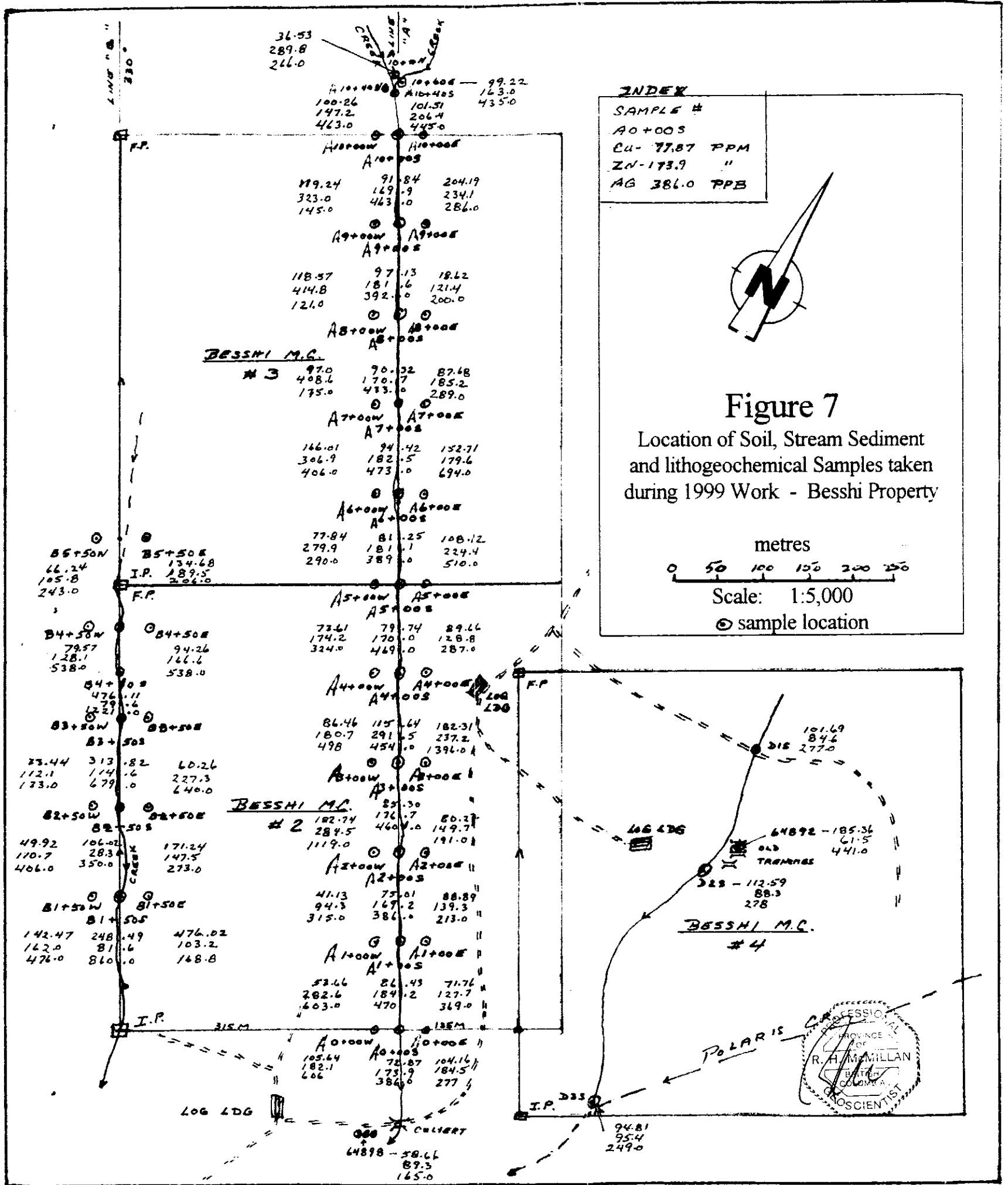
## 10 - GEOPHYSICS

In previous programs (Stelling, 1977; Fox, 1981) ground VLF-EM and magnetometer surveys were completed over the grids, and linear northwest-trending magnetic highs (+ 200 nanoTeslas) with coincident VLF-EM anomalies (Fraser filtered values of more than +18) were identified on the west side of Polaris Creek. The geophysical anomalies coincide with the strong 1.5 kilometre long Cu-Zn-Mo soil geochemical anomaly discussed above.

In February (1993) Dentonia Mines Ltd. commissioned Geonex Aerodat Limited of Mississauga Ontario to undertake a helicopter-borne magnetic-electromagnetic-VLF-EM survey over the property (Woolham, 1993 and McMillan, 1993a). The survey utilised a GPS navigational system to locate the anomalies precisely. The survey detected co-incident electromagnetic-magnetic and VLF-EM anomalies along strike from the massive sulphides exposed in Polaris creek canyon. The electromagnetic results also confirmed that the VLF-EM anomalies detected in the ground surveys are bedrock-related.







## 11 - CURRENT PROGRAM

The object of the August 2000 work on the property was to take advantage of the new exposures and access provided by the logging operations on the property - in particular in the area of the long co-incident electromagnetic-magnetic and Cu-Zn soil anomalies along strike from the massive sulphide mineralization which outcrop in Polaris Creek canyon.

Between 4 and 7 August 2000, a total of 21 silt geochemical, 2 lithochemical and 38 soil samples were collected from the Besshi #2, #3 and #4 claims. The sample locations are shown in Figure 7. Brief descriptions of the samples and methodology follow:

### a) Lithochemical Samples:

#64892 - rock chip sample of available material in a sloughed-in trench on Besshi #4 claim - mafic volcanic rock with 5-10% fracture-controlled pyrite.

#64898 - float sample of till-derived, but probably locally-derived sample of manganiferous and limonitic cherty sediment. No visible sulphide minerals.

### b) Stream Sediment Samples:

Twenty one stream silt samples were taken from three separate creeks and are suffixed with the letter S on Figure 7 and in Appendix 2. Samples were taken at 100 metre intervals on Creeks A and B, which straddles the large electromagnetic-magnetic anomaly. All samples were from active stream channels. Most contained some black organic material.

### c) Soil Samples:

Thirty eight soil samples were collected at 100 metre intervals from the stream banks approximately 5 to 10 metres above and immediately adjacent to the stream sediment samples on Creeks A and B. All samples were light brown in colour and derived from till.

The samples were dried and submitted to Acme analytical Laboratories Ltd. of Vancouver and tested by 48 element analysis utilising the Inductively Coupled Plasma (ICP) technology with analyses by Emission Spectroscopy (ES) or Mass Spectroscopy (MS).

## 12 - DISCUSSION

The prospecting-geochemical sampling program described in this report was undertaken to investigate areas of bedrock and float exposed by the active logging operations. Although the road cuts did not penetrate to bedrock in many places, some float samples of cherty manganiferous and ferruginous chemical sediment were exposed and appear to be locally derived. Analytical results of a specimen submitted for assay (Lithochemical sample #64898) returned only low values in base and precious metals, however it is of interest as it could represent a distal exhalite and thus provides support for the presence of a VMS environment in the area.

Stream sediment samples returned some strongly anomalous results (up to 476 ppm copper and 1221 ppb silver) from the upper end of Creek B which drains the area of the co-incident electromagnetic-magnetic anomaly along strike from the massive pyrrhotite-pyrite mineralization which

outcrops in Polaris Creek canyon. The electromagnetic-magnetic anomaly is located on a low till-covered ridge north of the anomalous stream sediment samples.

The current program has confirmed the upper Polaris Creek area as having potential for Besshi-type VMS mineralization and confirmed the conclusions and recommendations by McMillan (1993b) for a 1000 metre (five hole) diamond drill program to test five geochemical and electromagnetic-magnetic anomalies which extend over an length of 3 km. on the two sides of Polaris Creek. However, given the current economic conditions, a more modest drill program (approximately 400 metres in 3 holes) is recommended as an initial test.

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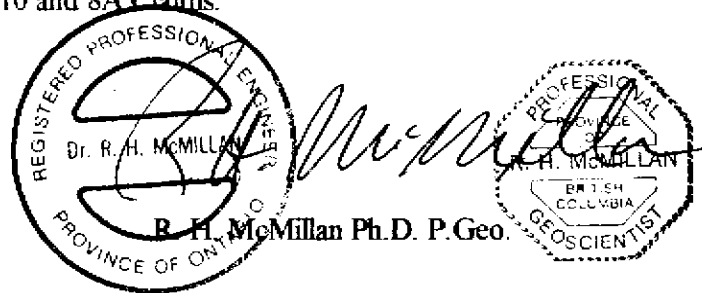
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**13 - CERTIFICATE**

I, RONALD HUGH McMILLAN, of 6606 Mark Lane, Victoria, British Columbia (V9E 2A1), do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1992, and with the Association of Professional Engineers of Ontario since 1981.
2. I am a graduate of the University of British Columbia with B.Sc. (Hon. Geology, 1962), and the University of Western Ontario with M.Sc. and Ph.D. (1969 and 1972) in Mineral Deposits Geology.
3. I have practised my profession throughout Canada, as well as in other areas of the world continuously since 1962.
4. The foregoing report on the BESSHI property is based on the field work carried out in the current program between August 4 and 7, as well as a review of published and unpublished information regarding the geological setting, styles of mineralization and results of previous exploration programs within and adjacent to the subject property.
5. I am one of the owners of the BESSHI #2, #3, #4, #10 and 8A Claims.



Victoria, B. C.  
10 May 2000

Appendix I - Analytical Results - Lithochemical Samples



GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd. PROJECT BESSHI File # 9902876 (a)

405 - 470 Grenville St., Vancouver BC V6C 1V5 Submitted by: R. Keefe

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	In	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hf	Hg	Se	Te	Ga	
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm		
64892	19.43	185.36	6.39	61.5	441	13.0	12.1	670	6.09	17.9	1.0	5.0	1.3	314.0	29.6	50	21	181	55	075	5.9	41.6	1.48	247.8	.159	4.2	85	.218	16.2	1	24	141	3.4	22	11.8	
64893	2.92	68.98	3.43	62.0	191	26.1	19.8	740	4.59	2.0	3	3	4	55.8	17	25	11	54	99	061	2.3	35.6	1.16	85.9	347	1.1	65	.042	10.4	0	05	11	1.4	07	3.8	
64894	2.20	61.06	2.75	75.0	365	13.2	9.0	692	4.60	2.1	3	2	4	20.8	02	1.59	.12	119	76	048	1.6	65	1.1	66	51.5	358	1.2	04	051	16	.9	07	15	5.3	11	7.6
64898	20.81	58.66	3.31	89.3	165	21.4	15.0	705	4.19	11.1	3.5	2	1.5	104.5	79	89	21	57	2.84	063	6.0	21.8	60	171.6	.412	1.1	25	.025	12.4	3	.08	49	4.2	18	5.7	
RE 64898	19.23	59.30	3.32	90.1	173	21.9	14.9	708	4.18	10.9	3.6	2	1.4	106.5	84	88	21	58	2.84	063	6.0	21.9	59	169.7	.410	1.1	24	.025	11.4	3	.08	47	4.2	21	5.7	
STANDARD DS2	34.40	135.08	31.49	171.5	254.38	7.13	3.847	3.31	65.5	22.0	206.8	3.1	32.2	11.48	9.98	11.63	84	57	086	14.3	181.7	.64	151.6	.120	2.1	89	.040	17.7	1.1	98	259.2	6.1	95	6.3		

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL.  
- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 13 1999

DATE REPORT MAILED: Aug 30/99

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



GEOCHEMICAL ANALYSIS CERTIFICATE



Hudson Bay Expl. & Dev. Co. Ltd, PROJECT BESSHI File # 9902876 (b)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: R. Keefe

SAMPLE#	Cu ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
64892	1.14	.1	.10	5.2	14.3	.6	.97	3.9	9.08	14.1	.08	11	48.7
64893	.16	<.1	.24	3.3	4.0	.4	1.31	9.5	4.67	5.6	<.02	3	12.6
64894	.26	.1	.09	4.5	5.1	.5	.60	7.2	3.39	3.7	.02	6	13.1
64898	.14	.1	.40	3.4	5.6	1.0	1.12	13.5	8.65	13.8	.06	38	15.2
RE 64898	.14	.1	.46	3.3	5.7	1.0	1.10	13.6	8.89	14.0	.06	30	15.2
STANDARD DS2	2.81	<.1	2.01	14.3	3.2	23.6	.02	4.2	5.71	31.9	5.97	<1	13.9

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER FOLLOWED BY ANALYSIS BY ICP/ES & MS. THIS LEACH IS PARTIAL FOR ALL ELEMENTS.

- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 13 1999

DATE REPORT MAILED:

*Aug 30/99*

SIGNED BY:

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

Appendix 2 - Analytical Results - Stream Sediment Samples

GEOCHEMICAL ANALYSIS CERTIFICATE

Hudson Bay Expl. & Dev. Co. Ltd. PROJECT BESSHI File # 9903053 (a)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Ralph Keefe



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Hg	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Pt	Hg	Se	Te	Ga
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	%	ppm	ppb	ppm	ppm	ppm
A 0+00S	4.78	77.87	10.33	173.9	386.47	6.21	2.10	1023.4	68.36	9.4	8.5	1.3	36.2	.90	18.25	.13	99	77	064	7.2	39.5	1.10	180.9	.053	10.1	.98	042	.07	<2	10	188	2.7	10	6.3	
A 1+00S	5.46	86.43	11.68	184.2	470.50	2.73	3.12	1211.4	91.41	9.4	9.6	1.3	42.0	1.11	22.06	.14	103	92	069	8.0	41.8	1.17	218.9	.058	12.2	.13	048	.08	<2	11	228	2.9	12	6.7	
A 2+00S	5.08	75.01	10.77	169.2	386.45	6.20	9.10	1036.4	58.35	3.4	7.3	1.3	35.6	.99	17.83	.12	95	76	064	6.9	35.1	1.06	191.6	.056	11.1	.92	043	.07	<2	10	205	2.3	11	6.2	
A 3+00S	5.28	85.30	10.97	176.7	460.47	4.70	7.10	1066.4	60.38	6.4	7.3	1.2	41.0	1.06	19.98	.12	98	92	066	7.6	42.4	1.06	198.6	.053	11.1	.99	046	.07	<2	11	241	3.1	13	6.3	
A 5+00S	5.16	79.74	13.86	170.0	469.43	6.20	0.10	1011.4	48.42	2.4	8.5	1.5	42.4	1.09	24.15	.12	92	94	071	8.1	37.1	.99	193.0	.046	15.1	.85	044	.08	<2	11	280	2.9	12	6.0	
A 6+00S	6.54	81.25	10.27	181.1	389.47	8.21	1.10	1053.4	60.41	0.4	9.3	1.3	41.3	1.37	24.65	.12	102	89	065	7.3	39.5	1.11	183.5	.065	16.1	.99	050	.07	<2	11	194	2.9	11	6.4	
A 7+00S	6.62	94.42	11.16	182.5	473.50	7.22	6.11	1194.4	86.46	6.5	11.5	1.3	45.1	1.23	31.18	.13	106	1.02	068	8.2	39.4	1.14	208.1	.068	17.2	.07	057	.07	<2	12	210	3.2	14	7.0	
A 8+00S	6.06	90.32	9.72	170.7	433.47	4.21	3.11	1100.4	50.44	6.5	8.3	1.2	44.9	1.17	26.38	.15	100	1.01	066	7.4	42.6	1.14	191.4	.068	18.2	.05	060	.07	<2	12	185	3.3	12	6.8	
A 9+00S	9.51	97.13	9.84	181.6	392.52	6.24	2.12	1259.4	98.48	2.5	7.9	1.2	44.0	1.35	38.79	.15	109	99	061	7.6	41.3	1.21	205.3	.087	23.2	.17	077	.06	<2	12	144	3.1	13	7.2	
A 10+00S	3.24	91.84	8.76	169.9	463.44	7.21	9.11	1124.4	42.51	3.4	14.9	1.1	49.1	1.19	37.92	.13	107	1.15	066	7.8	45.4	1.23	205.6	.076	23.2	.14	067	.07	<2	10	202	3.2	12	7.3	
A 10+40S	6.06	101.51	7.84	206.4	445.44	4.20	9.12	1200.4	07.23	4.6	4.2	.3	63.8	2.55	2.82	.15	64	1.73	087	6.2	34.9	.95	203.1	.055	6.1	.87	015	.06	<2	13	164	6.3	10	4.6	
A 10+40SOUTH	11.95	100.26	7.28	147.2	463.24	9.15	1.78	1277.4	54.51	5.4	5.1	.3	24.3	1.41	2.49	.15	87	28	064	2.7	24.4	.75	112.3	.143	<1	2.01	.029	.07	<2	12	71	2.9	15	6.7	
A 10+60S	2.87	99.22	7.49	163.0	435.44	4.23	1.12	1277.4	54.51	5.4	10.5	1.0	52.2	1.20	48.26	.12	120	1.28	067	7.8	54.4	1.35	228.7	.098	45.2	.29	.102	.07	.3	11	235	3.9	15	7.3	
RE A 10+60S	2.95	99.79	7.70	158.7	442.44	1.22	9.13	1355.4	71.54	0.5	11.3	.9	54.6	1.25	47.31	.12	118	1.35	071	8.2	49.8	1.23	221.6	.103	51.2	.25	.098	.08	.3	12	241	4.3	14	7.3	
B 1+50S	1.22	248.49	3.46	81.6	860.27	5.10	6.67	125.4	1.91	7.6	1.3	12.3	.1	125.4	.89	2.99	.08	44	3.38	.107	3.7	40.5	.62	147.6	.037	12.1	.25	.011	.03	.3	.09	231	17.0	.04	3.6
B 2+50S	2.28	106.02	1.14	28.3	350.11	3.21	.85	.56	3.0	2.1	6.9	<1	135.1	.73	1.00	.03	12	4.19	.082	.6	15.4	.11	52.8	.007	15.2	.26	.007	.02	.2	.03	112	29.7	.02	.9	
B 3+50S	1.71	313.82	5.14	114.6	679.47	0.20	0.148	3.79	9.6	.5	4.3	4	71.4	.79	1.46	.10	79	1.97	.072	4.6	39.6	1.32	100.9	.037	8.2	.20	.011	.06	.3	12	180	7.1	.09	6.0	
B 4+10S	2.16	476.11	4.44	79.6	1221.39	4.15	0.115	2.82	10.5	1.0	4.8	2	94.9	.87	2.24	.09	56	2.72	.081	4.1	34.1	.67	88.4	.012	8.1	.50	.010	.05	.3	15	133	10.9	10	4.1	
D 15	2.45	101.69	3.76	84.6	277.26	6.12	3.98	2.89	30.8	4	74.9	4	55.6	1.09	15.42	.06	70	1.49	.073	5.9	48.6	.74	286.0	.039	7.1	.51	.016	.06	<2	07	217	4.6	.04	4.4	
D 25	2.46	112.59	3.92	88.3	278.29	8.14	8.90	3.09	29.2	.5	14.5	4	65.3	1.09	15.34	.08	75	1.74	.073	6.8	54.1	.84	303.9	.045	7.1	.63	.017	.06	<2	07	247	5.1	.06	4.6	
D 35	2.65	94.81	4.12	95.4	249.31	5.15	1.885	3.27	27.5	.4	9.3	5	53.2	1.03	14.70	.07	81	1.36	.067	6.0	50.8	.93	267.6	.059	8.1	.70	.018	.06	<2	.07	185	3.6	.06	5.0	
STANDARD DS2	13.91	128.15	31.49	161.5	247.36	9.13	4.820	3.10	64.5	20.6	217.5	3.8	31.6	11.56	10.03	11.32	80	.54	.080	14.3	163.6	.58	139.9	.116	2.1	.70	.038	.16	7.7	2.02	247	2.5	1.66	6.0	

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL.  
- SAMPLE TYPE: SILT Samples beginning 'RE' are Returns and 'RRE' are Reject Returns.

DATE RECEIVED: AUG 23 1999 DATE REPORT MAILED: *Aug 31/99* SIGNED BY: *[Signature]* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

GEOCHEMICAL ANALYSIS CERTIFICATE

Hudson Bay Expl. & Dev. Co. Ltd. PROJECT BESSHI File # 9903053 (b)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Ralph Keefe



SAMPLE#	Ca ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
A 0+00S	1.09	.1	.46	5.1	6.5	.6	.01	1.8	9.40	16.1	.06	5	21.3
A 1+00S	1.11	.1	.53	5.3	7.2	.5	.02	1.8	10.56	17.9	.06	5	21.9
A 2+00S	1.02	.1	.47	4.9	6.5	.4	.02	1.8	8.84	15.7	.05	6	20.3
A 3+00S	1.06	.1	.61	5.1	6.8	.5	.03	1.6	10.26	16.3	.06	5	20.7
A 5+00S	1.08	.1	.58	5.1	6.7	.5	.04	1.8	10.28	17.5	.06	8	19.7
A 6+00S	1.16	.1	.59	5.0	6.5	.5	.03	1.9	9.52	16.1	.06	6	21.7
A 7+00S	1.20	.1	.64	5.2	7.3	.6	.05	1.9	10.48	17.4	.06	7	23.0
A 8+00S	1.17	.1	.71	4.9	6.9	.4	.05	1.9	9.85	16.4	.05	6	23.3
A 9+00S	1.20	.1	.68	4.7	7.2	.5	.03	2.1	10.54	17.5	.06	7	24.1
A 10+00S	1.34	.1	.80	5.2	7.2	.4	.05	2.3	9.67	16.3	.05	8	25.0
A 10+40S	.64	.1	1.01	5.6	4.4	.2	.09	1.0	11.45	12.1	.04	29	14.8
A 10+40SOUTH	.50	<.1	2.44	4.5	3.3	.7	<.01	1.7	3.77	8.4	.04	<1	8.8
A 10+60S	1.53	.1	.91	4.9	7.6	.5	.08	3.1	9.57	15.8	.05	11	23.3
RE A 10+60S	1.86	.1	.93	5.8	7.8	.5	.09	2.6	10.09	16.7	.06	13	27.6
B 1+50S	1.65	.1	1.02	5.5	3.0	.4	.31	1.5	10.16	5.0	.02	44	10.9
B 2+50S	.66	.3	.32	1.9	.7	.6	.59	1.2	2.46	1.3	<.02	84	1.8
B 3+50S	2.86	.1	.87	6.3	6.2	.3	.09	1.2	9.31	10.2	.04	12	23.1
B 4+10S	2.60	.1	.66	6.8	6.7	.3	.12	1.2	11.66	7.8	.03	33	17.4
D 1S	1.53	.1	.93	5.6	4.6	.2	.07	.9	8.80	10.7	.03	10	19.0
D 2S	1.47	.1	1.10	5.9	5.2	.3	.08	1.3	10.45	11.9	.03	19	18.0
D 3S	1.47	<.1	.99	5.6	5.2	.4	.04	1.3	8.11	11.4	.03	13	20.3
STANDARD DS2	3.52	<.1	2.60	14.7	3.2	24.9	.02	4.0	5.39	31.2	5.73	<1	13.8

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL.  
- SAMPLE TYPE: SILT Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: AUG 23 1999 DATE REPORT MAILED: *Aug 31/99* SIGNED BY: *[Signature]* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Appendix 3 - Analytical Results - Soil Samples

GEOCHEMICAL ANALYSIS CERTIFICATE

Hudson Bay Expl. & Dev. Co. Ltd, PROJECT BESSHI File # 9903052 Page 1 (a)

405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Ralph Keefe



SAMPLE#	Mn	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Se	Te	Ga
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppb	ppm	ppm	ppm
A 0+00W	4.83	105.64	9.89	182.1	606	54.8	21.2	1138	5.09	37.7	5.14	7.12	34.2	1.21	15.65	15.107	70.070	8.0	44.6	1.13	191.5	.043	5.2	14.042	07	< 2	11	238	3.4	13	54	2.3	16	9.7	
A 1+00W	3.38	53.66	11.99	282.6	603	44.5	24.2	1182	6.08	20.2	2.25	9.39	3.185	2.82	26.118	67.115	7.7	48.5	.82	429.8	.024	3.3	20.012	12	4	13	63	1.7	12	6	8				
A 2+00W	5.66	41.13	8.99	94.3	315	21.8	9.5	522	4.31	15.0	3.9	3.1	21.1	1.14	1.93	20.117	24.064	2.7	29.7	.46	173.7	.063	5.1	55.011	06	3	06	63	1.7	12	6	8			
A 3+00W	4.53	182.74	15.67	284.5	1119	124.3	37.8	1942	6.45	22.1	5.20	2.16	23.2	.76	3.79	27.90	21.077	11.3	51.1	.97	430.8	.014	1.2	70.010	07	3	10	81	5.3	16	7.5				
A 4+00W	5.00	86.46	11.14	180.7	498	48.9	21.8	1111	4.85	41.2	4.14	5.14	46.3	1.16	24.25	15.103	96.070	7.7	43.7	1.14	215.4	.049	15.2	07	048	07	< 2	10	282	2.9	14	6.6			
A 5+00W	21.50	73.61	9.45	174.2	324	32.0	18.0	1202	7.11	15.6	6.12	0.3	48.3	2.40	2.98	23.112	32.106	3.4	27.3	.57	249.6	.136	< 1	1.99	.011	.05	< 2	12	72	1.8	20	7.8			
A 6+00W	15.54	77.84	6.48	279.9	290	68.4	22.5	908	5.57	24.9	4.3	9.5	25.1	2.74	4.72	12.172	41.053	2.6	70.7	1.51	96.4	.161	< 1	3.24	.015	.06	3	19	56	2.3	13	8.4			
A 7+00W	60.60	166.01	14.36	306.9	406	131.4	42.6	1181	8.94	51.7	1.6	6.6	18.46	3.57	6.31	16.177	49.070	18.4	35.4	1.43	133.8	.015	< 1	3.20	.020	.06	< 2	45	136	6.6	26	8.3			
A 8+00W	36.67	97.00	7.85	408.6	175	96.3	30.6	1231	6.33	26.2	1.0	8.5	8.36	3.534	4.78	11.187	84.053	8.5	32.3	1.34	137.0	.104	< 1	2.77	.013	.05	< 2	42	67	3.8	14	7.0			
A 9+00W	42.15	118.57	8.40	414.8	121	113.5	33.2	1449	6.53	24.9	.8	3.1	9.26	3.587	3.19	13.189	44.040	6.7	33.1	1.19	212.7	.136	< 1	2.56	.011	.04	2	34	36	3.6	16	7.3			
A 10+00W	61.78	119.24	10.93	323.0	145	101.3	30.2	1029	7.06	46.1	1.2	16.4	1.2	20.2	2.69	4.40	17.193	23.058	6.8	30.8	.97	87.6	.087	< 1	2.81	.016	.04	< 2	38	59	4.8	23	7.3		
A 0+00E	5.64	104.16	11.00	184.5	277	55.7	22.8	1197	5.21	37.1	5.10	5.16	31.1	1.21	16.11	19.110	66.057	8.3	46.5	1.23	216.3	.049	2.2	36.042	.07	< 2	14	255	3.4	12	7.2				
A 1+00E	5.46	71.76	9.81	127.7	369	40.4	22.5	1284	5.34	15.2	3.12	8.5	28.9	.95	1.76	17.121	30.076	2.5	46.8	.84	137.9	.041	3.2	10.013	.06	3	12	104	1.9	11	6.5				
A 2+00E	1.39	88.89	12.40	139.3	213	48.6	33.6	3069	6.25	8.4	2.10	8.8	23.1	1.00	.90	15.201	29.098	5.2	48.5	.44	149.2	.005	1.2	08.009	.04	6	10	96	1.1	09	7.7				
A 3+00E	1.87	80.22	8.32	149.7	191	59.4	26.5	1102	7.04	6.9	2.10	7.6	15.6	.55	.99	14.227	20.108	2.2	72.5	.32	186.9	.004	< 1	2.17	.009	.07	8	08	49	.9	12	7.5			
A 4+00E	3.95	182.31	20.19	237.2	1396	91.5	38.2	1810	6.16	67.9	3.45	8.2	20.3	.40	3.47	32.73	27.058	9.7	30.7	.83	137.4	.005	1.2	26.011	.11	< 2	.09	190	4.5	22	6.0				
A 5+00E	2.38	89.66	8.47	128.8	287	46.4	36.8	2614	5.86	7.7	3.11	.8	36.5	.57	5.32	13.158	84.060	12.1	36.7	1.48	155.6	.005	4.2	79.027	.08	2	.09	96	1.7	16	10.3				
RE A 9+00E	2.48	18.07	27.46	121.2	198	13.5	6.5	231	3.19	21.7	3.8	1.5	27.9	.79	.80	23.76	35.047	3.6	24.5	.29	136.1	.006	1.1	73.008	.09	< 2	.09	112	6	07	5.7				
A 6+00E	2.75	108.12	11.74	224.4	510	91.2	36.1	3061	7.85	10.3	1.9	6.1	26.8	.64	2.99	17.94	64.061	13.7	27.9	1.2	347.8	.001	2.99	.006	10	< 2	.25	615	4.1	30	7.5				
A 7+00E	4.15	152.71	11.13	179.6	694	66.4	36.8	1964	9.44	10.6	4.12	3.1	13.0	.42	2.96	15.169	12.054	14.1	41.7	.34	282.4	.004	1.1	69.009	.05	< 2	.34	297	4.7	17	4.3				
A 8+00E	4.38	87.68	9.79	185.2	289	52.5	22.1	1249	7.84	29.4	2.8	8.1	5.30	.68	2.69	18.128	30.107	2.1	28.0	.27	236.7	.003	1.2	33.009	.07	< 2	14	54	3.3	28	5.8				
A 9+00E	2.55	18.62	28.43	121.4	200	11.5	6.8	229	3.22	22.6	3.7	1.6	29.8	.83	.80	24.76	36.048	3.8	24.7	.32	149.3	.007	2.1	92.009	.10	< 2	10	174	6	08	6.0				
A 10+00E	14.73	204.19	9.98	234.1	286	65.0	53.9	1233	6.04	49.1	6.16	7.1	30.9	2.53	4.25	16.97	64.056	8.2	41.9	1.54	234.0	.060	< 1	3.31	.009	.09	< 2	14	55	4.1	16	8.6			
A 10+40NORTH	3.03	36.51	11.01	289.8	266	21.0	35.8	2555	4.49	11.9	4.3	3.0	7.34	7.59	1.18	27.86	44.070	6.1	29.1	.67	486.6	.148	< 1	2.58	.013	.08	4	12	70	1.3	12	8.5			
B 1+50W	2.06	142.47	9.10	162.0	476	47.7	38.9	1485	6.92	11.0	2.4	4.0	8.19	.45	1.12	26.182	21.085	5.1	55.3	1.50	133.7	.032	1.3	65.011	.08	3	.09	53	1.5	29	11.4				
B 2+50W	1.74	49.92	5.90	110.7	406	29.3	13.3	576	6.04	12.4	3.3	3.6	6.25	.60	1.13	16.160	40.079	2.5	63.9	1.15	71.5	.129	1.3	06.014	.06	4	.06	36	8	14	9.9				
B 3+50W	1.94	33.44	4.55	112.1	133	26.0	17.4	1275	5.11	5.7	3.1	1.7	7.37	.26	.27	19.192	51.082	2.0	49.2	1.69	85.1	.462	2.1	2.56	.011	.02	5	.02	45	4	26	8.5			
B 4+00W	7.49	115.64	14.99	291.5	454	79.6	25.8	1428	7.04	20.9	5.8	7.1	6.17	.97	3.22	26.100	18.070	7.3	40.4	1.25	232.4	.027	< 1	3.52	.009	.09	4	10	55	4.5	16	9.0			
B 4+50W	1.62	79.57	4.17	128.1	538	38.9	28.5	1052	6.13	9.5	2.1	1.0	4.47	.42	.49	11.209	56.082	2.2	79.3	1.87	93.3	.205	3.3	3.35	.011	.05	3	.05	26	6	11	10.5			
B 5+50W	1.48	66.24	5.88	105.8	243	18.0	18.5	1140	3.85	4.8	4.1	1.6	1.31	.57	.42	18.100	46.119	2.8	23.7	.78	132.3	.205	< 1	1.82	.010	.04	4	.05	65	7	13	5.5			
B 1+50E	1.78	476.02	8.88	103.2	1688	53.6	25.2	3550	8.68	10.6	5.8	2.3	2.33	.28	.78	20.108	42.054	15.4	25.4	.92	235.4	.004	< 1	4.22	.010	.12	< 2	10	70	1.8	22	7.8			
B 2+50E	1.55	171.24	8.37	147.5	273	46.2	33.5	986	6.17	9.7	3.3	2.1	4.33	.28	.70	23.182	39.042	5.2	71.4	2.26	571.1	.021	1.4	88.010	.06	< 2	.09	24	1.0	22	12.9				
B 3+50E	2.26	60.26	7.59	227.3	640	49.5	37.1	2060	6.22	11.4	3.2	2.7	6.38	.78	.63	20.135	49.074	4.0	35.0	1.57	289.2	.132	< 1	4.08	.011	.14	.4	11	37	1.3	22	10.4			
B 4+50E	1.66	94.26	4.99	166.6	538	27.7	41.8	3220	5.11	5.6	3.2	2.5	3.53	1.14	.46	20.119	63.141	3.2	40.4	1.34	229.3	.266	< 1	2.64	.012	.05	.4	10	51	.8	17	6.8			
B 5+50E	1.52	134.68	5.50	189.5	206	43.6	27.9	1123	5.53	11.4	3.2	2.2	6.46	.49	.55	25.160	49.120	2.3	63.4	1.86	50.1	.325	< 1	3.08	.017	.05	.4	.05	30	.8	34	8.4			
STANDARD DS2	14.51	134.13	30.97	169.4	272	38.4	13.3	855	3.25	67.4	20.5	213.8	3.6	32.2	11.52	10.44	11.62	84.57	.083	13.8	174.8	.63	148.4	.118	4.1	82.040	17	7.5	1.97	253	2.7	1.92	6.6		

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL.  
- SAMPLE TYPE: SOIL Samples beginning 'RE' are Returns and 'RR' are Reject Returns.

DATE RECEIVED: AUG 23 1999 DATE REPORT MAILED: Aug 31/99 SIGNED BY: [Signature] D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date: [Signature]



ACME ANALYTICAL



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SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppb	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppb	Se ppm	Te ppm	Ga ppm
D 1	3.67	139.43	5.98	118.9	97	55.2	30.3	1133	5.21	55.1	.4	14.0	1.4	44.9	.48	22.06	.13	147	.77	.050	9.3	82.2	1.79	209.4	.215	1	3.00	.043	.10	.3	.14	92	1.5	.12	8.6
D 2	2.33	69.78	4.96	77.9	166	50.8	26.9	489	3.85	17.3	.4	14.6	1.4	38.7	.34	2.25	.12	112	.59	.033	3.9	77.9	1.52	102.0	.211	1	3.15	.024	.03	.3	.06	41	1.0	.09	6.9
D 3	2.74	75.64	5.53	94.2	171	46.5	20.6	574	4.03	24.8	.3	13.8	1.0	42.5	.60	4.19	.12	123	.80	.032	4.5	74.0	1.52	160.2	.175	1	2.92	.029	.04	.3	.08	62	.7	.09	7.9
RE D 2	2.30	68.41	4.94	76.3	164	50.0	25.8	477	3.82	16.8	.3	15.4	1.3	34.6	.34	2.19	.12	108	.54	.034	3.6	76.4	1.51	100.9	.195	1	3.13	.022	.03	.3	.06	38	1.1	.07	6.8

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

GEOCHEMICAL ANALYSIS CERTIFICATE

Hudson Bay Expl. & Dev. Co. Ltd. PROJECT BESSHI File # 9903052 Page 1 (b)  
405 - 470 Granville St., Vancouver BC V6C 1V5 Submitted by: Ralph Keefe



SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
A 0+00W	1.00	.1	.67	4.7	7.7	.6	.05	2.0	11.38	17.6	.06	7	22.0
A 1+00W	1.85	<.1	2.62	22.0	4.4	1.0	.05	1.1	3.05	15.7	.09	<1	23.3
A 2+00W	.55	<.1	1.06	4.6	2.4	.9	.05	.1	1.99	7.8	.04	<1	6.4
A 3+00W	.69	.1	.54	6.1	8.4	.7	.03	1.4	11.10	31.5	.11	1	14.9
A 4+00W	1.06	<.1	.60	5.4	7.5	.6	.06	2.1	10.57	17.0	.06	5	21.2
A 5+00W	.73	.1	2.92	6.0	3.5	.8	.02	.7	3.40	8.4	.05	<1	11.5
A 6+00W	1.13	.1	1.42	5.8	4.9	.6	.02	1.6	3.36	7.1	.06	<1	18.2
A 7+00W	.61	.1	.46	4.5	12.1	1.0	.08	2.9	26.95	49.7	.14	4	20.1
A 8+00W	.78	<.1	1.75	5.2	7.4	.7	.03	1.6	14.80	26.2	.08	<1	19.5
A 9+00W	.63	<.1	1.66	5.5	6.5	.6	<.01	2.0	11.02	18.6	.09	1	17.6
A 10+00W	.66	.1	1.80	5.8	6.0	.9	<.01	2.4	11.20	17.9	.09	5	17.1
A 0+00E	.91	.1	.63	4.9	8.1	.4	.01	2.8	11.24	19.3	.05	4	19.3
A 1+00E	.90	.1	1.09	8.4	5.6	.6	.04	.5	2.91	8.4	.06	<1	12.2
A 2+00E	1.07	.1	.61	5.9	12.7	.7	<.01	1.5	6.74	17.8	.08	<1	8.5
A 3+00E	1.68	.1	.69	8.4	9.7	.8	<.01	1.2	2.14	6.6	.09	<1	9.6
A 4+00E	.70	.1	.20	5.8	9.8	.7	<.01	1.2	13.46	28.6	.12	<1	12.4
A 5+00E	1.41	<.1	.24	5.2	11.9	.6	<.01	1.1	15.09	32.8	.09	<1	23.4
RE A 9+00E	.67	<.1	.53	9.5	2.3	.6	<.01	.7	1.38	8.3	.04	<1	8.2
A 6+00E	.61	<.1	.09	5.9	11.4	.7	.02	.9	26.31	28.2	.09	<1	1.9
A 7+00E	.94	.1	.23	4.4	17.0	.8	<.01	1.6	25.90	29.1	.10	2	3.6
A 8+00E	1.29	.1	.58	11.3	6.0	.6	<.01	1.2	3.96	5.7	.09	<1	10.7
A 9+00E	.71	<.1	.57	10.1	2.4	.6	<.01	.7	1.47	8.8	.05	<1	7.9
A 10+00E	.63	<.1	.95	6.9	7.0	.6	<.01	2.5	14.47	24.1	.08	<1	20.2
A 10+40NORTH	.89	<.1	2.12	14.5	3.7	.9	<.01	1.3	5.72	14.1	.06	<1	13.2
B 1+50W	3.00	<.1	.80	15.1	5.2	.7	<.01	.5	1.91	12.3	.07	<1	34.6
B 2+50W	1.61	<.1	2.64	9.3	4.1	.8	<.01	1.1	1.83	6.7	.04	<1	18.0
B 3+50W	.83	.1	2.37	5.4	3.6	.4	<.01	3.0	1.65	5.2	.03	<1	17.3
B 4+00W	.84	<.1	1.29	10.3	5.1	.9	<.01	2.0	4.45	21.9	.12	<1	28.6
B 4+50W	1.04	.1	1.17	9.1	6.6	.4	<.01	1.4	2.21	6.0	.04	<1	17.1
B 5+50W	.58	<.1	1.70	7.2	2.3	.4	.02	1.2	2.10	7.1	<.02	<1	7.1
B 1+50E	3.06	.1	.14	14.1	22.8	.6	<.01	1.4	18.15	29.4	.10	2	19.2
B 2+50E	1.44	.1	.69	10.8	8.0	.6	<.01	2.1	3.09	14.0	.09	<1	21.7
B 3+50E	1.70	<.1	1.66	17.1	4.0	.6	<.01	.8	3.22	9.6	.05	<1	21.6
B 4+50E	1.13	.1	2.65	12.5	2.7	.5	<.01	1.8	2.53	9.0	.02	<1	13.3
B 5+50E	1.42	.1	2.06	7.2	3.1	.4	<.01	2.7	2.11	6.0	.03	<1	18.0
STANDARD DS2	3.34	<.1	2.69	14.4	3.4	24.8	.03	4.1	5.27	30.8	6.12	<1	14.5

30 GRAM SAMPLE IS DIGESTED WITH 180 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 600 ML WITH WATER, ANALYSIS BY ICP/ES & MS.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K GA AND AL.  
- SAMPLE TYPE: SOIL Samples beginning 'RE' are Returns and 'RRE' are Reject Returns.

DATE RECEIVED: AUG 23 1999 DATE REPORT MAILED: *Aug 31/99* SIGNED BY: *[Signature]* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date *d* FA





SAMPLE#	Cs ppm	Ge ppm	Nb ppm	Rb ppm	Sc ppm	Sn ppm	S %	Zr ppm	Y ppm	Ce ppm	In ppm	Re ppb	Li ppm
D 1	1.90	.1	.53	5.8	10.8	.5	<.01	4.5	8.19	20.2	.05	<1	17.8
D 2	1.09	<.1	1.12	5.3	6.1	.5	<.01	8.6	3.84	11.0	.04	<1	13.2
D 3	1.17	<.1	1.19	5.9	6.5	.5	<.01	3.8	4.98	11.7	.04	<1	16.5
RE D 2	1.01	.1	1.10	4.8	5.8	.4	<.01	8.7	3.51	10.5	.03	<1	13.0

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

Memorandum to: Mr. Wilcox fax:(250)952-0381  
from: Ron McMillan  
date: 2000/11/27  
subject: Statement of Expenditures - Besshi Project

**Besshi Project**  
**Statement of Expenditures**  
**1999 Work**

Gasoline	\$ 126.21
Airfare (RHM Victoria- Prince George, return)	273.00
Groceries	147.69
Meals	60.76
Assaying	1411.00
Labour (RHM and RJK) - 6 days (Aug.03 to 08) @\$750/day	4500.00
Report writing and drafting	<u>500.00</u>
Total	\$7018.66

  
R.H. McMillan