821270

1994 Exploration Program

on the

Fenton Creek Property

Claims:	Fen 1, Fen 2, Fen 4, Tsalit 4, Tsalit 5, Tsalit 6, Tsalit 7, Tsalit 8, Fen 1 Fr., Fen 2 Fr.
Mining Division:	Omineca Mining Division
NTS Map Sheet:	93 L 2 W
Latitude:	54° 10' N
Longitude:	126° 55' W
Owner of Claims:	Baril Developments Ltd.
Project Operator:	Electrum Resource Corporation
Consultant:	New Caledonian Geological Consulting
Report by:	Peter A. Ronning, P.Eng.
Date of Report:	January 1995

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I. Summary and Conclusions

The Fenton, or Fen property is located about 2 km south of the Morice River and about 33 kilometers southwest of Houston, B.C., on NTS map sheet 93 L 2W. The modern history of exploration on the property dates from 1965, when a silver-lead-zinc anomaly was located in stream sediments from Code Creek. In the period 1972 through 1981 various exploration programs included in excess of 5,000 meters of drilling. The most obvious target for exploration in this district would be a deposit similar to Equity Silver, which contained copper-silver-antimony sulphides and sulphosalts with associated gold in upper Jurassic to lower Cretaceous sediments and volcanics.

During 1994, exploration concentrated in a recent clear-cut where logging activities had created new rock exposures in an area determined by earlier work to be prospective. Thirty-eight rock ship samples and 22 soil samples were collected. 12.75 kilometers of VLF survey were done.

The project area is underlain largely by rocks correlated with the lower to middle mesozoic Hazelton Group. Most of the Hazelton rocks present are tuffs and lapilli tuffs.

Within the Hazelton Group there is a clear distinction between relatively unaltered tuffs and those which have been subjected to variably intense argillic and siliceous alteration. Visible sulphides are rare on the surface, but any found lie within the most intensely altered rocks.

Altered rocks lie north of a poorly constrained "alteration front" with a roughly arcuate shape. Within the alteration zone, outcrops are found only within 150 meters of the front. Beyond that, to the north, bedrock disappears beneath overburden and swampy ground. Relatively little exploration has been done north of the alteration front, due to the paucity of outcrop. Potential exists to find more alteration, and possibly mineralization, north of the altered outcrops.

Further work on this property should start with compilation and merging of the various available data sets. In particular, attention should be paid to any existing geophysical data that would shed light on the possible existence of overburden-covered mineralization north of the altered outcrops. If the existing geophysical information for that area is inadequate, further geophysical surveys may be warranted. The nature of such surveys can be determined only after the existing information is fully compiled.

Ultimately, if geophysical indications warrant it, drilling may be undertaken within the altered zone. Relatively little drilling has been done in that area.

II. Introduction

A. Location and Access

(see Figures 1 and 2)

The Fenton, or "Fen" property is located about 2 km south of the Morice River, straddling Fenton Creek, on NTS map sheet 93 L 2W. It is about 33 kilometers in a straight line southwest of Houston. Directions to the site by road are as follow:

- from the center of Houston, drive about 5 km east along Highway 16 to the Morice River Forest Service Road (FSR)
- follow the Morice River FSR about 25 kilometers south to the Morice West FSR
- follow the Morice West FSR about 3½ kilometers west to the Fenton Creek road
- follow the Fenton Creek road about 5 kilometers southeast to the property

B. Physiography

The area comprises sloping terrain of modest relief (Church, 1972). Creeks such as Fenton Creek are deeply incised into mainly glacial cover. In places, resistant bedrock forms steep-sided hills with 100 meters to 150 meters of relief. Parts of the property have been clear cut.

C. Property Definition

1. Claims

(see Figure 2)

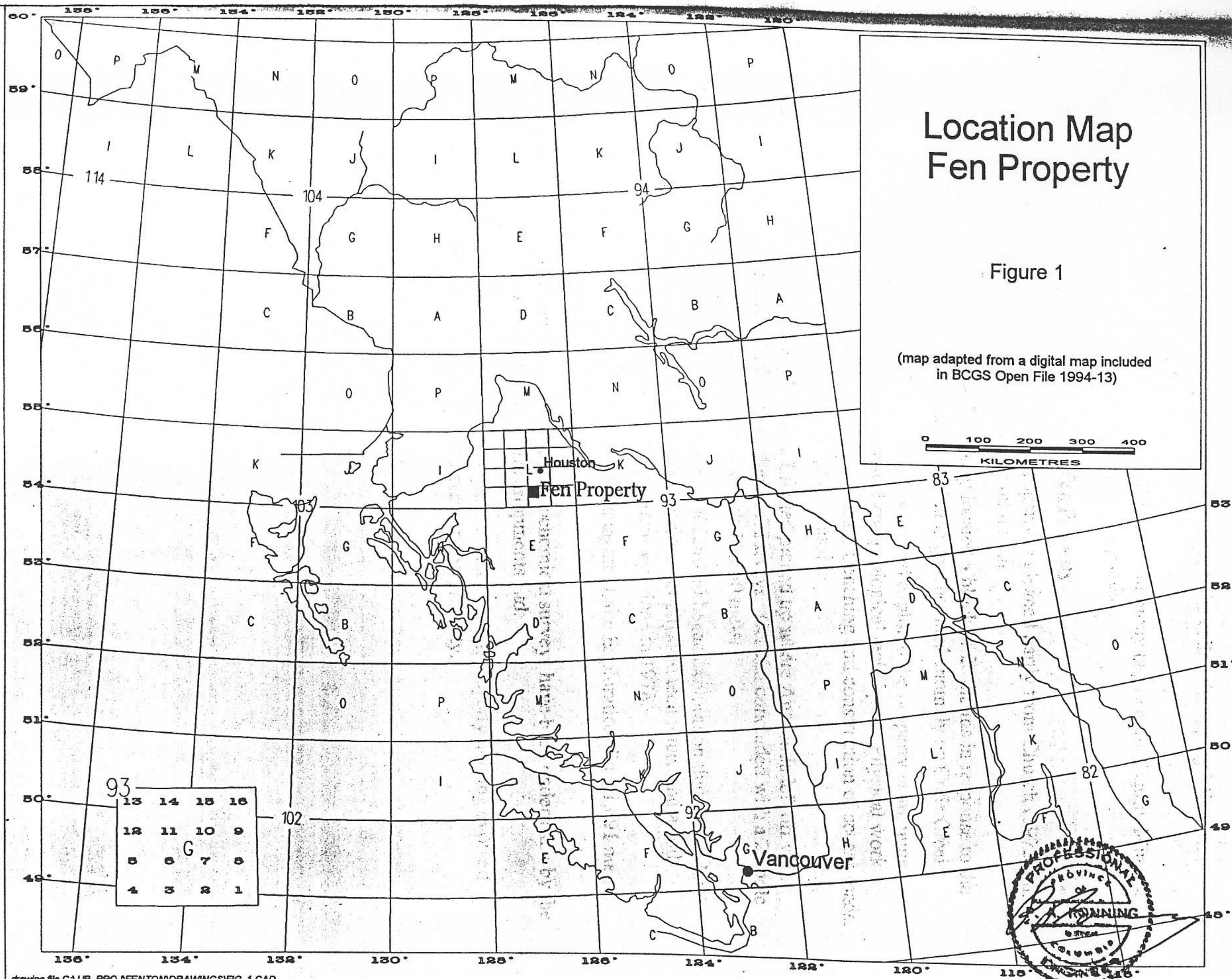
The claims that comprise the property are listed in Table 1 on page 4. All are owned by Baril Developments Ltd..

2. History

a) History of the District

Church and Barakso (1990) discuss the mining history of the Buck Creek map area, which is adjacent to the Fenton Creek area on the east:

prior to 1905	natives were reported to have recovered a small amount of placer gold from Bob Creek, about 11 kilometers south of Houston.
1915 to 1929	lode sulphides were explored on Grouse Mountain, 19 kilometers north of Houston.
1912 to 1923	lode sulphides were explored at Owen Lake, 35 kilometers south of Houston.
1972	the Silver Queen mine in the Owen Lake area commenced production, which ultimately amounted to 190,676 tonnes of ore yielding gold, silver, copper, lead, zinc and cadmium.



Location Map
Fen Property
Figure 1
(map adapted from a digital map included in BCGS Open File 1994-13)
0 100 200 300 400
KILOMETRES
Houston
Fen Property
Vancouver
114
104
94
103
93
83
102
92
82
drawing file C:\JJB_PROJ\FENTON\DRAWINGS\FIG_1.CAD

1967	The Sam Goosely prospect, later to be called the Equity Mine, was discovered.
1980	production of copper, silver and antimony began at the Equity Mine, with a plant capacity of 4,000 tonnes per day.

b) History of the Fen Property

This history of what is now the Fen property is gleaned partly from Church (1972) and partly from company reports referenced in the bibliography:

1965	Julian Mining Company located a block of 20 claims in response to the discovery of a silver-lead-zinc geochemical anomaly on Code Creek.
1966 - 1971	Anaconda American Brass limited explored the property using numerous geochemical, geophysical and geological techniques. Physical work included line cutting, bulldozer trenching and construction of access roads. The latter are now largely unusable.
1972	Helicon Explorations Limited picked up where Anaconda left off with geophysical and geochemical surveys. Helicon concluded with a 25 hole drilling program that exceeded 3,350 meters.
1977	Mattagami Lake Exploration Limited began exploration that was to last several years and included various geophysical techniques and a soil survey. A limited drill program was done in 1978.
1980 - 1981	Vital Mines Limited and Mattagami Lake Exploration did a 1,691 meter diamond drilling program.
1991 - present	Various geophysical and geochemical surveys have been undertaken by the present owner, Baril Developments Ltd.

During the exploration history described above, the original property holding evolved through several generations of claims into the present Fen property.

Table 1 - List of Claims

Claim Name	Record Number	Size in Units	*Expiry Date
Fen 1	242780	20	25-Sep-97
Fen 1 Fr	318278	1	19-Jun-97
Fen 2	241036	20	25-Jun-97
Fen 2 Fr	318279	1	19-Jun-97
Tsalit 4	243216	14	21-Mar-96
Tsalit 5	243217	16	21-Mar-96
Tsalit 6	243218	1	21-Mar-96
Tsalit 7	243219	1	21-Mar-96
Tsalit 8	243220	1	21-Mar-96
Fen 4	242901	16	24-Oct-95
* assumes acceptance of this report			

3. Economic Potential

The various surveys done over the years have indicated the presence of anomalous concentrations of base and precious metals on the Fen property. While metal values found to date have been sub-economic, potential to discover a significant deposit still exists. A possible analogy is the Equity Silver deposit, which contains copper-silver-antimony sulphides and sulphosalts with associated gold. Mineralization there is found in tabular zones roughly conformable to a host sequence of upper Jurassic to lower Cretaceous sediments and volcanics. Theories put forward as to the genesis of the Equity Silver deposit include a volcanogenic origin related to the host rocks and variations on an epigenetic replacement deposit driven by Tertiary intrusions (Church and Barakso, 1990).

III. Work Program

The 1994 exploration program was concentrated largely on parts of the Fen 1, 2, 4, Fen 1 Fr. and Fen 2 Fr. claims. Much of it consisted of describing and sampling new rock exposures created by logging activities. Thirty-eight rock chip samples were collected, as were 22 soil samples, including 13 samples from 4 soil profile pits. Roughly 12.75 kilometers of VLF survey were done.

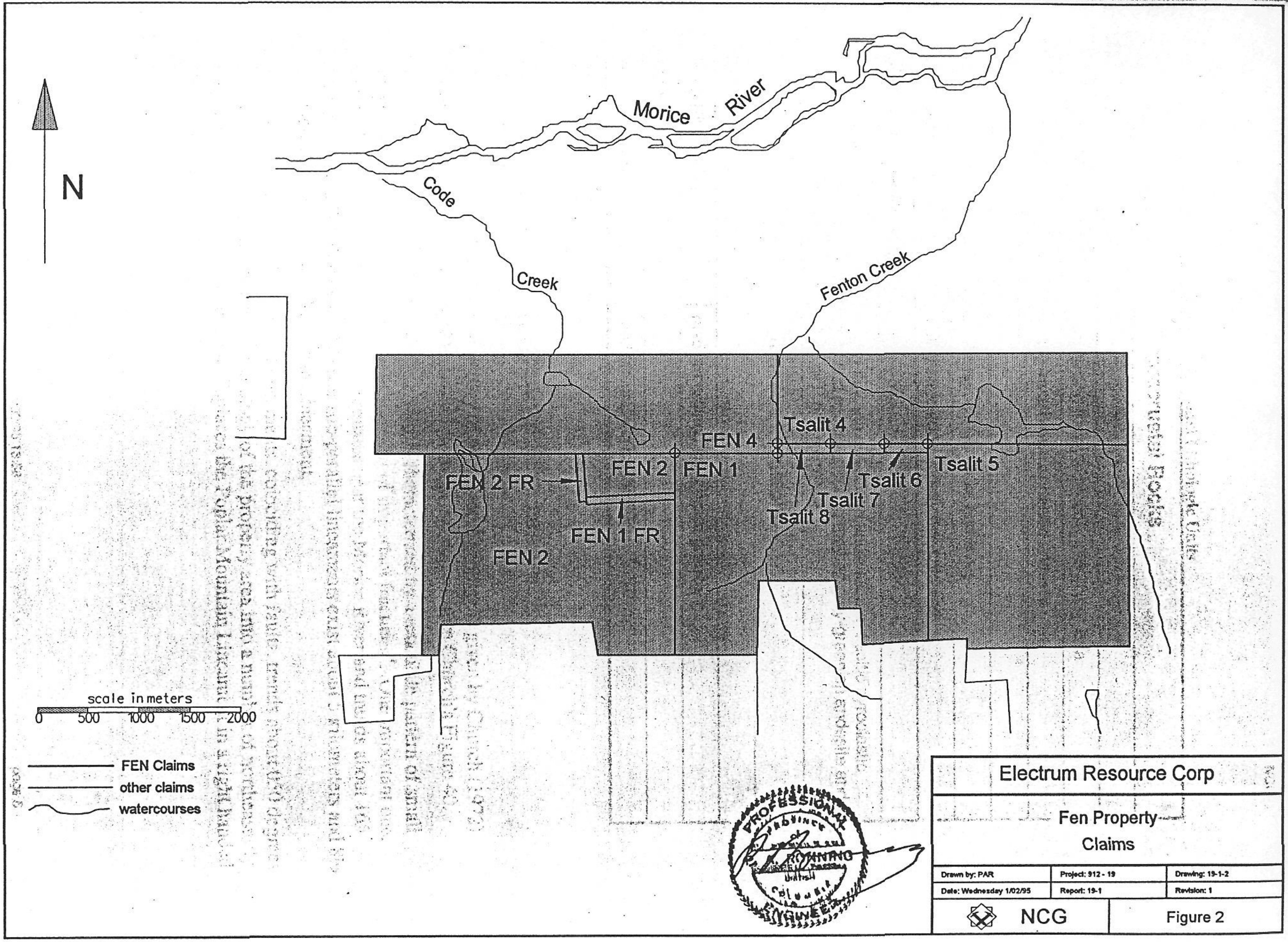

N
Morice River
Code Creek
Fenton Creek
Tsalit 4
FEN 4
FEN 2
FEN 1
Tsalit 5
Tsalit 6
Tsalit 7
Tsalit 8
FEN 2 FR
FEN 1 FR
FEN 2
scale in meters
0 500 1000 1500 2000
FEN Claims
other claims
watercourses
Electrum Resource Corp
Fen Property
Claims
Drawn by: PAR
Project: 912 - 19
Drawing: 19-1-2
Date: Wednesday 1/02/95
Report: 19-1
Revision: 1
NCG
Figure 2

Table 2 - Regional Lithologic Units

Supracrustal Rocks	
Tertiary	
Fenton Creek Volcanic Rocks	rhyolite and trachyte breccia and glassy lava
Buck Creek Volcanic Rocks	mainly fresh brown aphanitic andesite
Upper Mesozoic	
Tip Top Hill Volcanic Rocks	dacitic pyroclastic rocks and lavas
sedimentary rocks	mainly sandstone, locally rust-coloured
Lower or Middle Mesozoic	
Hazelton Group	mainly maroon and brown andesitic and dacitic pyroclastic rocks and epidote-bearing mottled grey-greenish andesite and basalt and minor rhyolite
Igneous Intrusions	
Tertiary	
Owen Hill Granite	medium grained leucocratic granite
Mesozoic	
small gabbro stock	medium grained gabbro

IV. Geology

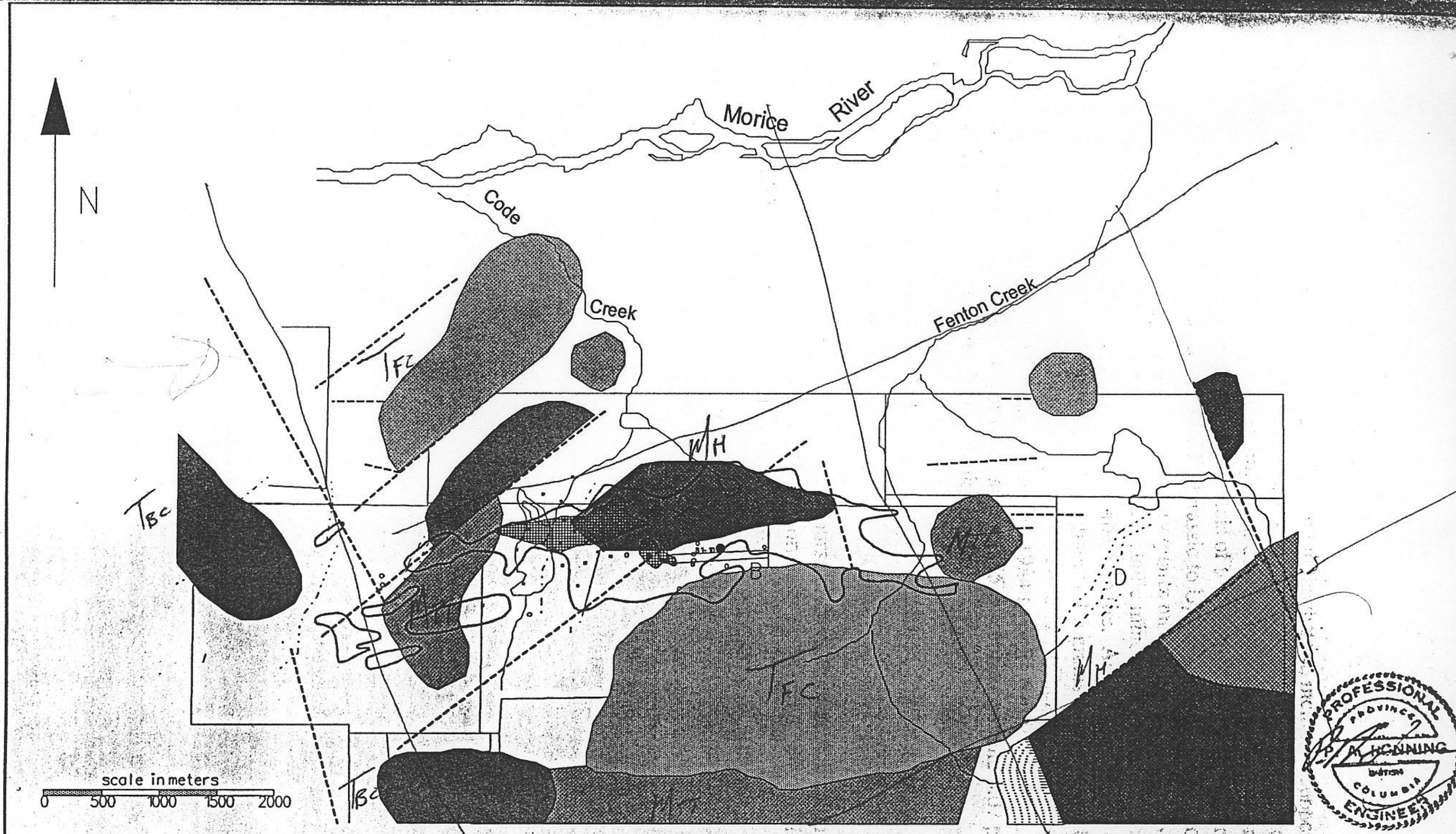
A. Regional Geological Setting

(See Figure 3)

The most comprehensive summary of the regional geology is given by Church (1972). The lithologic sequence described in Table 2 on page 5 is copied from Church's Figure 40.

According to Church (1972) "the area is characterized by a reticulate pattern of small valleys and draws which evidently mark a system of important fractures". One important one, Church's Poplar Mountain Lineament, originates near the Morice River and trends about 165 degrees for about 24 kilometers. Weaker sub-parallel lineaments exist about 5 kilometers and 8½ kilometers east of the Poplar Mountain Lineament.

A second series of prominent lineaments, coinciding with faults, trends about 050 degrees. Movement on these has chopped the geology of the property area into a number of northeasterly elongated panels. One of these faults displaces the Poplar Mountain Lineament in a right handed sense by about a kilometer.



(solid line)	Property Boundary
(thin line)	other claims
(wavy line)	watercourses
(dashed line)	topographic lineaments
(line)	airborne EM anomalies
(outline)	Zn in soil > 300 ppm
(shaded outline)	Pb in soil > 40 ppm & Ag > 1.5 ppm
○ ◉ ●	DDH; least, moderately, most mineralized
•	percussion drill hole

Tertiary	Fenton Creek Volcanic Rocks
	Buck Creek Volcanic Rocks?
	Owen Hill Granite
U Mesozoic	Tip Top Hill Volcanic Rocks
	sedimentary rocks, mainly sandstone
l or m Mesozoic	Hazelton Group

Electrum Resource Corp

Fen Property
Generalized Compilation

Drawn by: PAR	Project: 912 - 19	Drawing: 19-1-3
Date: Wednesday 1/02/95	Report: 19-1	Revision: 2

NCG

Figure 19-1-3

adapted from Church, 1992, and company reports

B. Mineral Deposits in the District

A variety of mineral deposit types is found in the district, including copper and molybdenum porphyry deposits, epithermal and mesothermal veins and replacement deposits (Church and Barakso, 1990). The most important deposit is Equity Silver. As previously noted, there has been some controversy as to the genesis of this deposit. In purely descriptive terms, it is a sulphide-rich orebody hosted by a Middle Jurassic to Upper Cretaceous volcano-sedimentary sequence. The sequence is intruded by a Tertiary quartz monzonite and a slightly younger Tertiary gabbro-monzonite. Many sulphide and metallic minerals are present, the most abundant including pyrite, chalcopyrite, tetrahedrite and arsenopyrite. An open pit on one orebody, the Southern Tail, yielded 6.8 million tonnes of ore grading 1.3 grams per tonne gold, 121 grams per tonne silver, 0.48 percent copper and 0.085 percent antimony (Church and Barakso, 1990). Open pit reserves on the main orebody were reported in 1984 to be 21.6 million tonnes grading 1.04 grams per tonne gold, 109 grams per tonne silver, 0.35 percent copper and 0.07 percent antimony (Cyr et. al., 1984, cited in Church and Barakso, 1990).

C. Local and Property Geology

1. Lithologic Units

The lithologic units encountered in the course of the present geological investigation are described on Figure 4. Table 3, which follows, correlates the mapped units on Figure 4, insofar as possible, with the regionally mapped units on Figure 3.

Table 3 - Correlation of Local and Regional Lithologic Units

Local Unit (Fig. 4)	Regional Unit (Fig. 3)	Comments
I	no obvious correlation	clearly younger than unit A, presumed to be Hazelton, no criteria are available to correlate this intermediate dike with other intrusives in the region.
H	Fenton Creek Volcanics	This probable tuff is correlated with the Fenton Creek Volcanics only because it is in an area mapped by Church (1972) as Fenton Creek.
A, B, C, D, E, F, G	Hazelton Group	Unit A is a feldspar crystal and lithic lapilli tuff, the dominant rock type in the area mapped. Unit B is altered andesite hornblende porphyry, represented only by one outcrop. Unit C is differentiated from Unit A based only on the high degree of alteration in Unit C. The silicification and argillization are related to the mineralizing event. Unit D is a carbonate, a rock type not normally associated with the Hazelton Group. Represented only by two small creek bank exposures, this rock is thought to be an alteration product. Unit E is a finely crystalline basalt seen in only one small creek bank exposure. Unit F is a dense, hard, black cryptocrystalline intermediate flow or intrusive, represented by only one outcrop on the flank of the resistant knob formed by Unit G. Unit G, which forms a resistant knob, has the shape of a sub-volcanic plug, different from but perhaps contemporaneous with the other Hazelton units.

2. Structural Geology

There is little penetrative deformation in the area mapped, but a foliation formed by closely spaced brittle fractures is characteristic of the rhyolite, Unit G. Small scale brittle fracturing is common in all the rock units.

One of Church's 50° lineaments trends across the area mapped, forming a topographic low.

3. Alteration

An "Alteration Front" is indicated on Figure 4. The scarcity of outcrop permitted it to be sketched in only roughly. Clearly, however, the intensely altered rocks assigned to Unit C are dominant north of the arcuate front while their unaltered equivalents assigned to Unit A are dominant south of the front.

All of the altered outcrops are found within a couple of hundred meters of the alteration front. North of the outcrops, the ground slopes down towards a swamp (Figure 4). It is possible that the alteration zone continues underneath the swampy area.

The alteration consists of intense argillization, with variable amounts of silicification. The latter starts along hairline veinlets and locally becomes pervasive.

V. Mineralization and Rock Geochemistry

The only mineralization seen during the course of the present work consisted of up to 5% sulphides locally in the altered rocks of Unit C. Furthermore, all of the higher metal values reported came from rocks either within or immediately adjacent to the altered zone.

Where sulphides are visible on the surface, pyrite is dominant. With the pyrite are fine grey disseminated sulphides that can't be identified with a hand lens. These are presumably the sources of the higher silver, zinc and lead values reported in some samples.

In drill holes, zinc values of up to 3.7% over 0.3 meters and silver values of up to 30.2 ppm over 0.6 meters have been reported (see sections for DDH's 81-10 and 81-15, included with this report).

VI. Soil Geochemistry

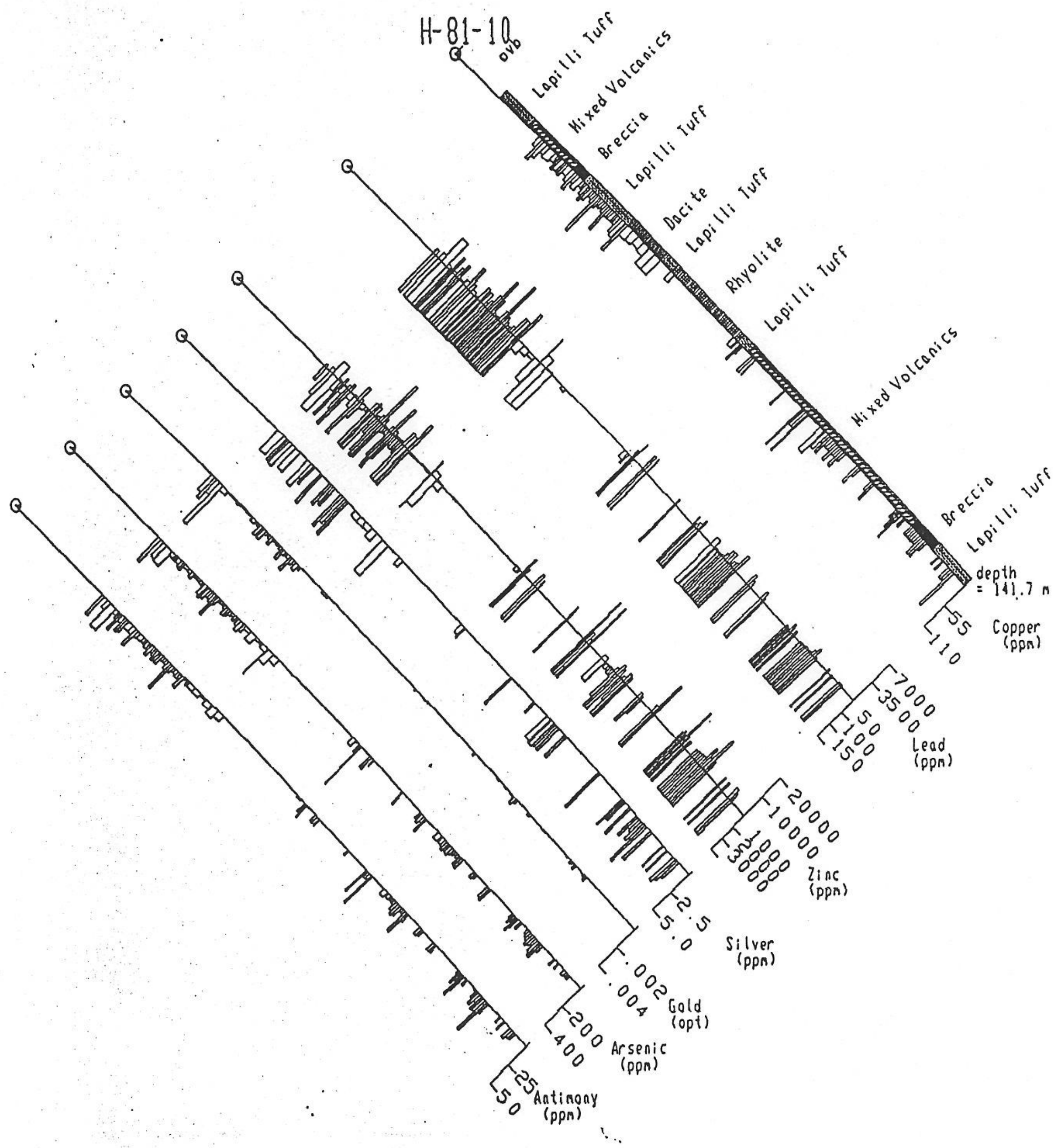
Twenty-two soil samples were collected in 1994, and analyzed for 31 elements using the ICP technique and for gold using a fire assay preparation and an AA finish. Fifteen of the samples were also analyzed for total barium and fluorine.

The results for copper, lead, zinc, silver and gold are plotted on Figures 11 through 15. These plots serve only to document the samples collected in 1994. In order to properly interpret these results, they should be merged with those from prior years. This has not been done for this report.

At four sites, in a low-lying, swampy area, pits were hand dug and samples collected from two to four different soil horizons. This was done as a check on certain results obtained in earlier soil sampling.

Soil samples 1550 A-D and 1600 A-C were collected at stations 1550 W and 1600 W on the base line. In a 1991 survey soil samples at these sites were found to contain 4.9 ppm and 18.0 ppm silver respectively (Zastavnikovich and Bzdel, 1991). Furthermore, between 1500 W and 1950 W, five of the 1991 samples contained zinc in excess of 1,000 ppm and only one contained less than 500 ppm zinc.

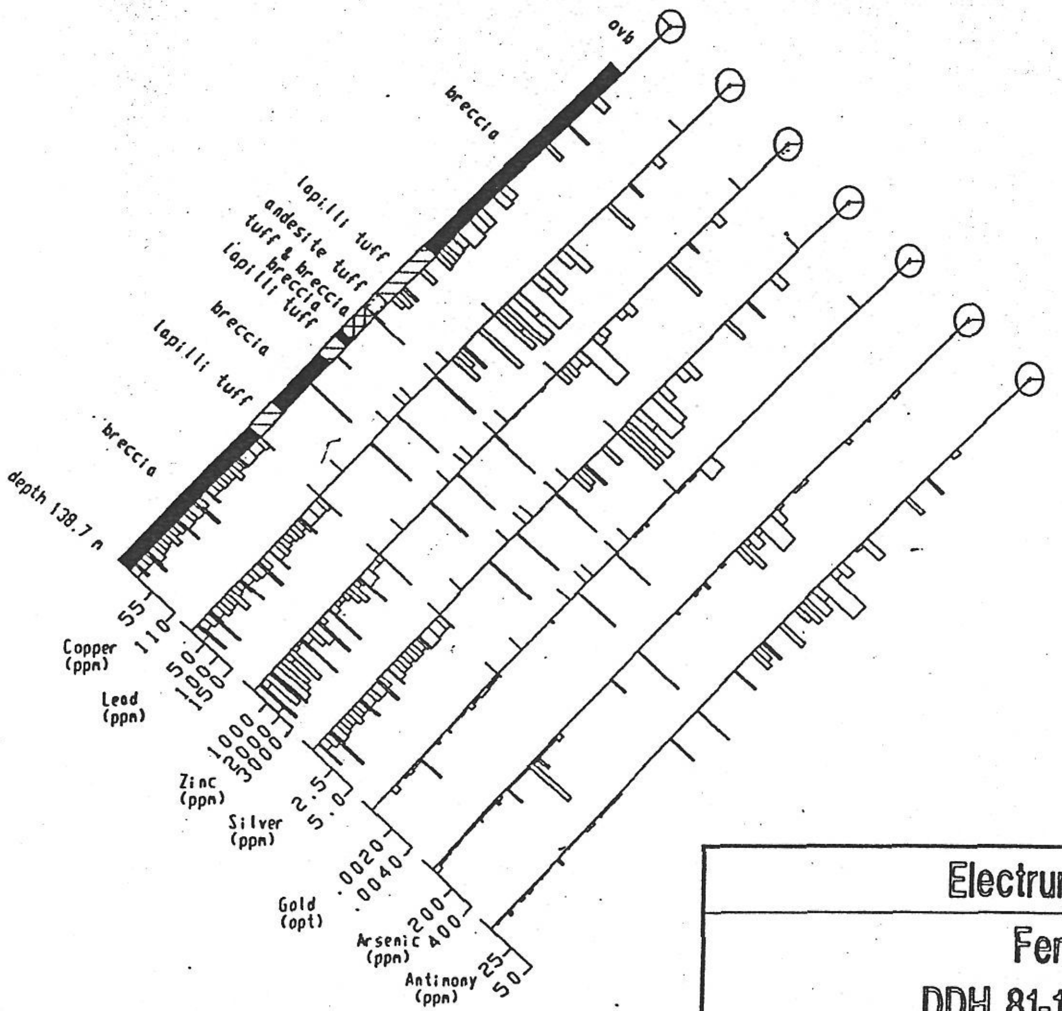
The 1994 check sampling at 1550 W and 1600 W indicates that silver is highly enriched in the organic debris that forms the upper 40 centimeters of the swamp accumulation. Black, purely organic material below the live roots but above any mineral soil contains 12.5 ppm silver at 1550 W and 17.3 ppm silver at 1600 W. Below the black organics, in a grey-brown, muddy mineral soil containing rock fragments, silver drops to 1.5 ppm and 1.9 ppm. Even deeper, in a mineral soil containing sub-rounded boulders up to 25 cm in diameter, silver drops to 0.1 ppm at 1550 W.



Electrum Resource Corp.

Fen Property
DDH 81-10 - Trace Elements

Compiled by: P. Ronning	Date: Dec. 1991	Drawing No.: 91 19-2	Revision No: 1



Electrum Resource Corp.

Fen Property

DDH 81-15 - Trace Elements

Compiled by: P. Ronning	Date: Dec. 1991	Drawing No.: 91 10-1	Revision No: 1

Zinc is also most concentrated in the organic layer, and there is a weak tendency for a similar concentration of copper.

This indicates that the organic-rich material, which is typically 60 centimeters thick in the swamp, scavenges and concentrates hydromorphically transported metals. Furthermore, the mineral soil, found underneath 60 cm or so of organic material, appears to be transported. Thus any metal anomalies found in the low-lying swampy parts of the survey area are probably a result of complex mechanical and hydromorphic dispersion. Their ultimate source is almost impossible to deduce.

VII. Geophysics

A report by Todd A. Ballantyne, discussing the VLF survey done in 1994, is included with this report as Appendix 1. In general it is difficult to correlate the VLF anomalies with any known geological features, a problem that is largely due to the paucity of outcrop. One tentative correlation can be suggested. Ballantyne points out that the most well defined VLF anomaly is located in the center of the grid, trending ESE as indicated on his Plate 1. A correlative anomaly is evident on Ballantyne's Plate 4.

The western part of this ESE feature is crudely correlative with the western part of the "alteration front" as drawn in Figure 4. It is possible, though far from certain, that the alteration front is partly bounded on the southwest by some through-going structure to which the VLF responds.

VIII. Discussion

There is no doubt that hydrothermal alteration and mineralization have affected rocks assigned to the Hazelton Group in the survey area. Based solely on surface occurrences, without reference to drill hole data, the altered zone has dimensions of at least 750 meters east-west and 350 meters north-south. North of the exposures of altered tuff, the surface descends into a low-lying, swampy area with no rock exposures. Therefore the altered zone is open to the north for some unknown distance. One can speculate that the topographic low may be partly a reflection of the presence of rocks which are recessive due to a high degree of alteration.

Exploration north of altered outcrops will be difficult. Soil geochemistry is hard to interpret in that area due to the combined effects of hydromorphic and mechanical dispersion. Short of drilling, the only effective exploration techniques will be geophysical.

IX. Recommendations

The following steps are necessary to further exploration of this area:

1. Merge the rock and soil geochemical information in this report with similar data from Zastavnikovich and Bzdel (1991) and Zastavnikovich and Visser (1993).
2. Compare the merged geochemical data with older data sets. This will require careful correlation of topographic references in order to compare data collected on different coordinate or grid systems.

3. Re-examine existing drill hole data from the vicinity of the alteration zone. Determine whether there is any correlation between drill hole data and surface data.

4. Examine pre-1990's geophysical data for indications of alteration or sulphides in the swampy area north of altered rock exposures. Determine whether further geophysical surveys are warranted. Until the old data is reviewed in detail, it is not possible to determine what further types of surveys may be needed.

5. Based on geophysical information, determine whether drilling is warranted.

X. Bibliography

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Zastavnikovich, S and Visser, S.J.

1993: Geochemical and Geophysical Assessment Report on the Fen 1-4 & Tsalit 4-8 Mineral Claims; company report for Baril Developments Ltd., filed for assessment credit.

XI. Statement of Qualifications

I, Peter Arthur Ronning, of 1450 Davidson Road, Langdale, B.C., hereby certify that:

1. I am a consulting geological engineer, doing business under the registered name New Caledonian Geological Consulting. My business address is 912 - 510 West Hastings Street, Vancouver, B.C., V6B 1L8.
2. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
3. I am a graduate of the University of British Columbia in geological engineering, with the degree of B.A.Sc. granted in 1973.
4. I hold the degree of M.Sc. (applied) in geology from Queen's University in Kingston, Ontario, granted in 1983.
5. I have worked as a geologist and latterly as a geological engineer in the field of mineral exploration since 1973.
6. I am the author of the report entitled "1994 Exploration Program on the Fenton Creek Property"
7. I participated in the work described in this report.
8. I hold no beneficial interest in the mineral claims which are the subject of this report, nor in any corporation or other entity whose value could reasonably be expected to be affected by the conclusions expressed herein.
9. I authorize Electrum Resource Corp. and Baril Developments Limited to use this report, but only in its entire and unabridged form, for any lawful purpose.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA P. A. RONNING

Peter A. Ronning, P.Eng.

GEOPHYSICAL REPORT

VLF-EM SURVEYS

on the

FEN PROPERTY

OMINECA, Mining Division N.T.S. 93 L/2W

Prepared for:

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S. Zastavnikovich

Report by:

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Delta, British Columbia
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January 1995

INTRODUCTION

A VLF-EM survey was completed by S. Zastavnikovich on the Fen Property. The Property is located between Fenton and Code creeks four kilometres south of Morice River, 30 km southeast of Houston, B.C. in the Omineca mining division (N.T.S. 93L/2W). The data was presented to S.J.V. Consultants Ltd. by Peter Ronning of New Caledonian Geological Consulting for plotting and interpretation.

The purpose of the survey was to search for concentrations of sulphides, to aid in the location of shear zones that may have associated mineralization and to aid in the mapping of local geology. This report is an addendum to the geological report written by New Caledonian Geological Consulting.

FIELD WORK AND INSTRUMENTATION

The field work was performed by S. Zastavnikovich, a Geochemist during the September 1994. A total of approximately 12.75 km, with stations every 25m along flagged lines, were surveyed by VLF-EM.

A Geonics EM-16 was used for the field instrument. The dip angle and quadrature measurements were recorded at each station. The east-west lines were surveyed with frequencies 24.8 kHz (NLK, Seattle) and 23.4 kHz (NPM, Hawaii). The north-south lines were surveyed with frequencies 24.0 kHz (NAA, Cutler) and 24.8 kHz (NLK). The azimuths to these transmitting stations from the property are Seattle - 160°, Hawaii - 220° and Cutler - 090°. The survey direction in which the VLF data was collected is shown on the data presentation figures.

DATA PRESENTATION

The VLF-EM data, filtered VLF-EM data (using a standard four point Fraser filter) and compilation of the VLF-EM data are presented on the following plates:

Plate G1	VLF-EM Survey Profiles Dip Angle & Quadrature - Seattle (N/S lines)	Appendix II
Plate G2	VLF-EM Survey Profiles Dip Angle & Quadrature - Hawaii (N/S lines)	Appendix II
Plate G3	VLF-EM Survey Profiles Dip Angle & Quadrature - Cutler (E/W lines)	Appendix II

INTERPRETATION

The interpretation is presented on each of the VLF-EM plates G1 through G4. It is noted that there is a discrepancy between the results of the 1993 VLF survey and the expanded 1994 survey. While the data between these two surveys repeats very well, the 1993 interpretation of anomaly locations is not correct based upon the 1994 field notes. According to the 1993 data the survey direction was facing west and so the according cross-overs were identified. The 1994 field notes state that the survey direction is in fact facing east (northeast). Therefore the location of the 1993 anomaly cross-overs are actually on the reverse cross-over in those data maps. The writer of this report was unable to talk with S. Zastavnikovich to confirm the survey direction used in the interpretation of the 1994 data.

The Seattle (24.8 kHz) transmitter was the best suited for this grid. The Hawaii data provided little insight, but it may yield more information if the very subtle anomalies correlate with structures of interest. VLF results from the Cutler transmitter were similar to the Seattle data. The most well defined anomaly is located in the centre of the grid trending ESE on plate G1. This anomaly is confirmed on the north/south lines with the Seattle transmitter and partially confirmed with the Cutler data. The remainder of the anomalies are presented on the data profile maps on plates G1 through G4.

Contour maps of the Fraser filtered dip angle data are provided for Seattle and Cutler. Care should be taken when using the contoured presentation for interpretation. The gridding algorithm is not capable of comparing the line to line similarities in the signatures of data profiles for both the dip angle and quadrature and hence the anomalies plotted on the profile maps will not always reflect the contoured data.

RECOMMENDATIONS & SUMMARY

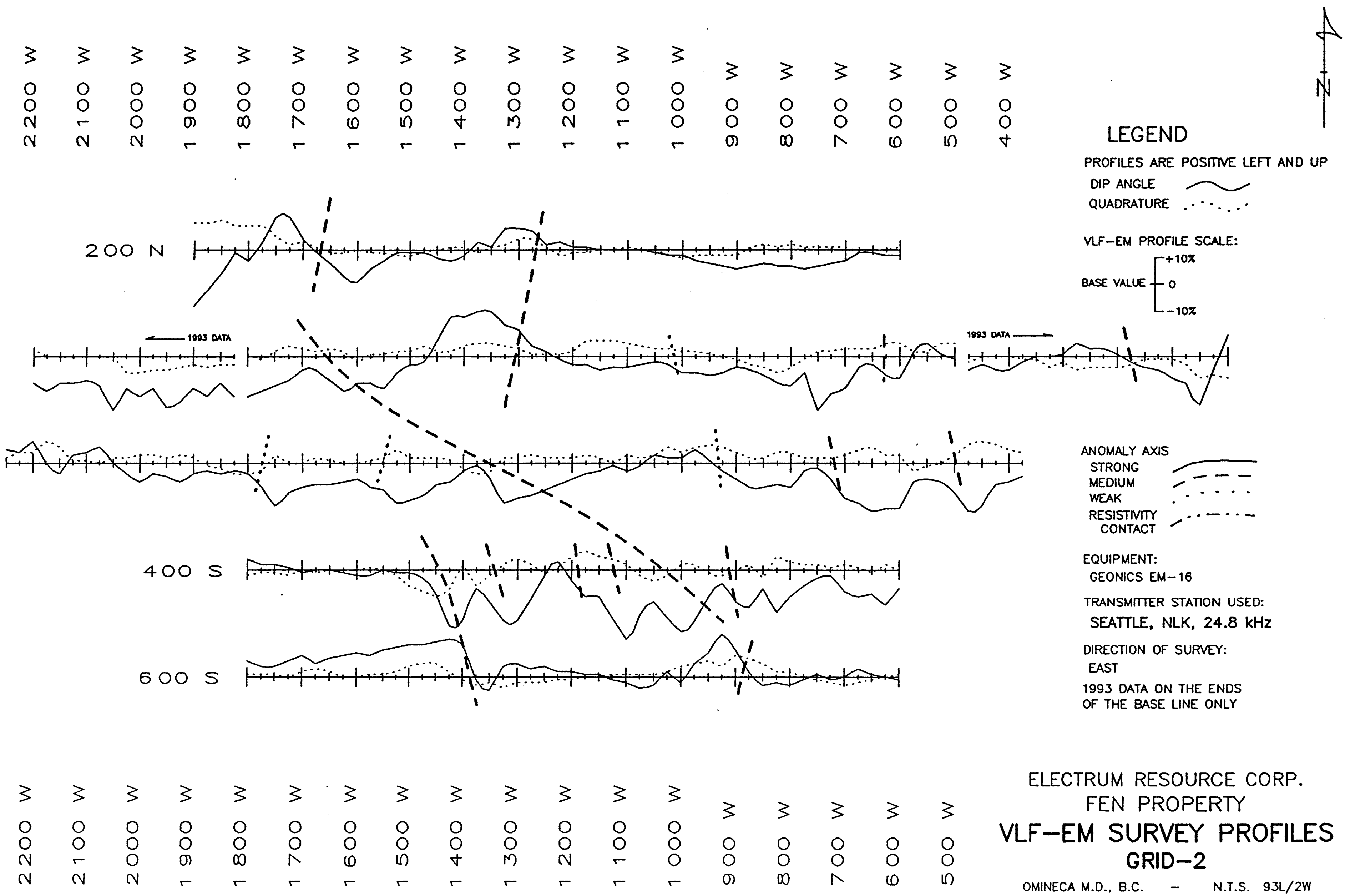
The geophysical data should be compiled with geological mapping, geochemical sampling and overburden thickness to enhance the existing geophysical interpretation and to determine if infill or other geophysical techniques are required to increase the geological and geophysical information. Infill surveying of 100 metre spaced lines would greatly improve the ability to connect VLF anomalies from line to line. There are numerous very weak anomalies that cannot be confidently identified without geological information or more dense VLF data. More information is likely to be obtained from these data sets when compared with the geology and geochemical sampling. The field notes have not been correlated with the VLF survey. More time should be spent correlating the VLF results with the geology and field notes.

The VLF-EM survey has delineated numerous VLF anomalies. The VLF frequencies for Seattle and Cutler provided the best information. Data from the Hawaii transmitter was sketchy, but may prove of use if the weak anomalies show favourable correlation with the geology. At this point it is not clear to what degree mineralization is responsible for the anomalies delineated.

PROFESSIONAL PROVINCE OF T. A. BALLANTYNE BRITISH COLUMBIA GEOSCIENTIST

17 January, 1995

Todd A. Ballantyne, P.Geo.
Geophysicist



LEGEND

PROFILES ARE POSITIVE LEFT AND UP

DIP ANGLE

QUADRATURE

VLF–EM PROFILE SCALE:

BASE VALUE: +10%, 0, −10%

ANOMALY AXIS

- STRONG
- MEDIUM
- WEAK
- RESISTIVITY CONTACT

EQUIPMENT:
GEONICS EM–16

TRANSMITTER STATION USED:
SEATTLE, NLK, 24.8 kHz

DIRECTION OF SURVEY:
EAST

1993 DATA ON THE ENDS OF THE BASE LINE ONLY

ELECTRUM RESOURCE CORP.
FEN PROPERTY

VLF–EM SURVEY PROFILES

GRID–2

OMINECA M.D., B.C. – N.T.S. 93L/2W

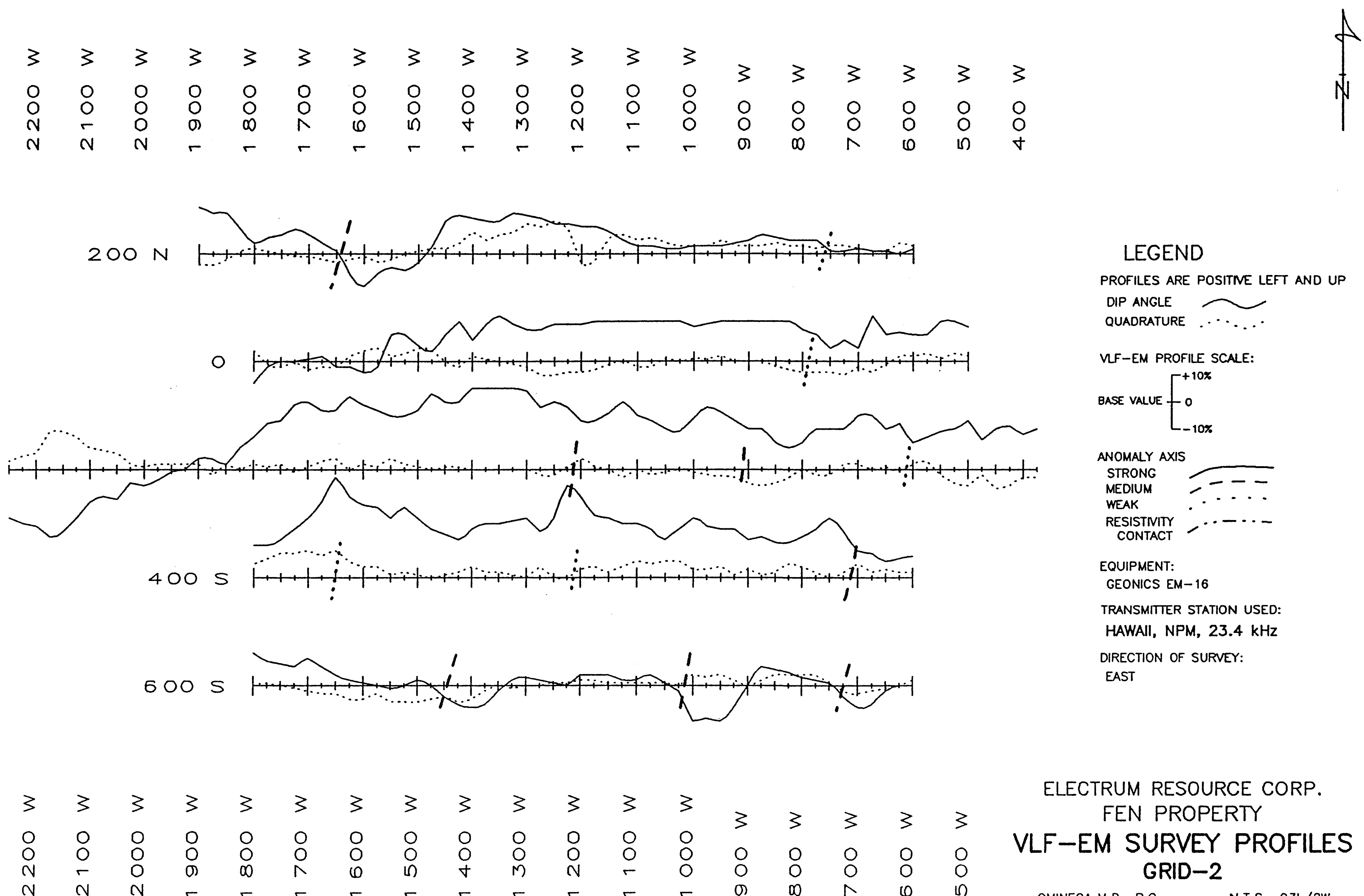
SCALE IN METRES

100 0 100 200 300

SEPTEMBER 1994

PLATE G1

S.J.V. CONSULTANTS LTD.



ELECTRUM RESOURCE CORP.
FEN PROPERTY

VLF-EM SURVEY PROFILES
GRID-2

OMINECA M.D., B.C. – N.T.S. 93L/2W

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100 0 100 200 300

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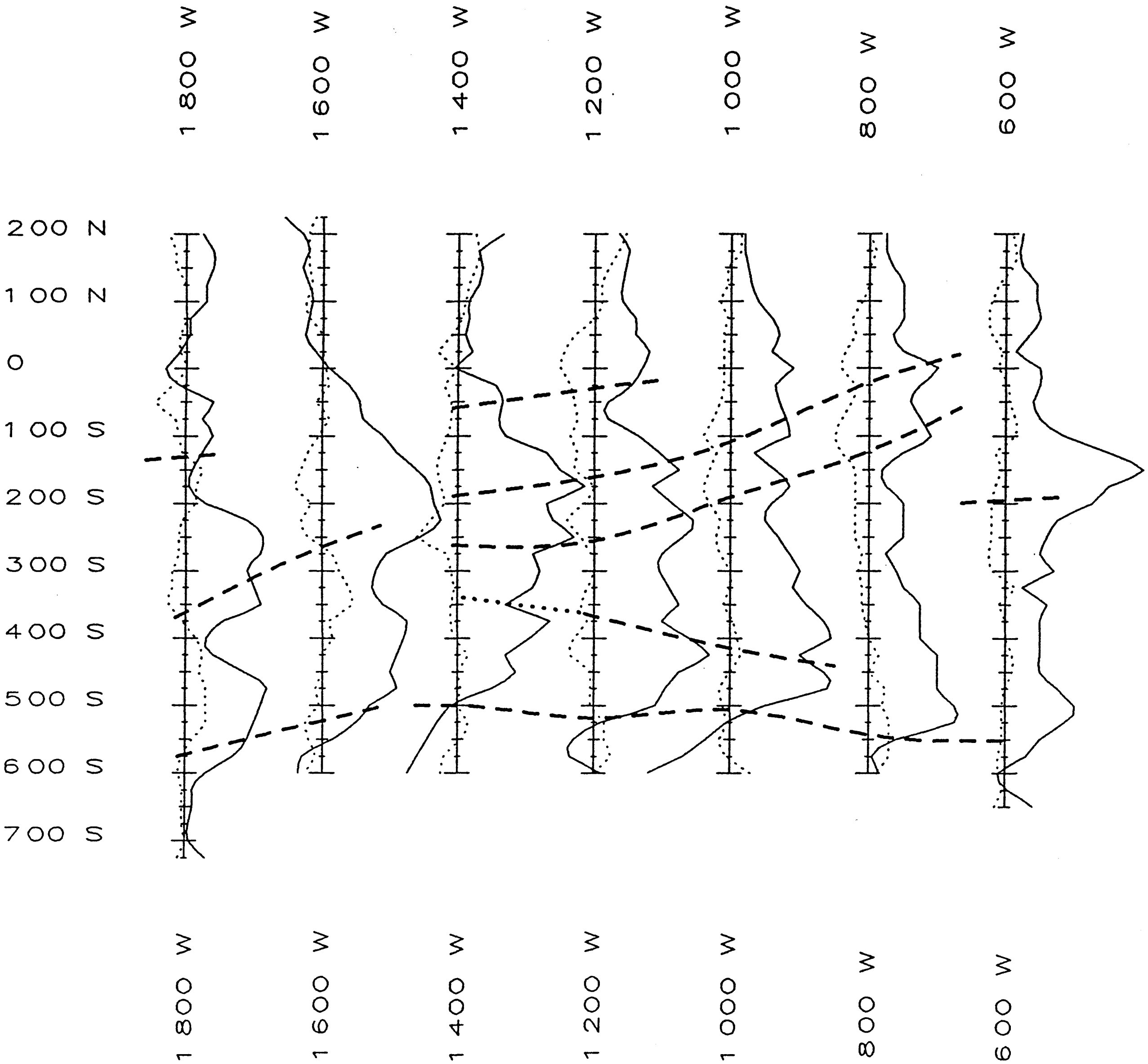
PLATE G2

S.J.V. CONSULTANTS LTD.



N

LEGEND

PROFILES ARE POSITIVE LEFT AND UP

DIP ANGLE

QUADRATURE

VLF-EM PROFILE SCALE:

+10%

BASE VALUE — 0

-10%

ANOMALY AXIS

STRONG

MEDIUM

WEAK

RESISTIVITY CONTACT

EQUIPMENT:
GEONICS EM-16

TRANSMITTER STATION USED:
CUTLER, NAA, 24.0 kHz

DIRECTION OF SURVEY:
NORTH

ELECTRUM RESOURCE CORP.

FEN PROPERTY

VLF-EM SURVEY PROFILES

GRID-2

OMINECA M.D., B.C. – N.T.S. 93L/2W

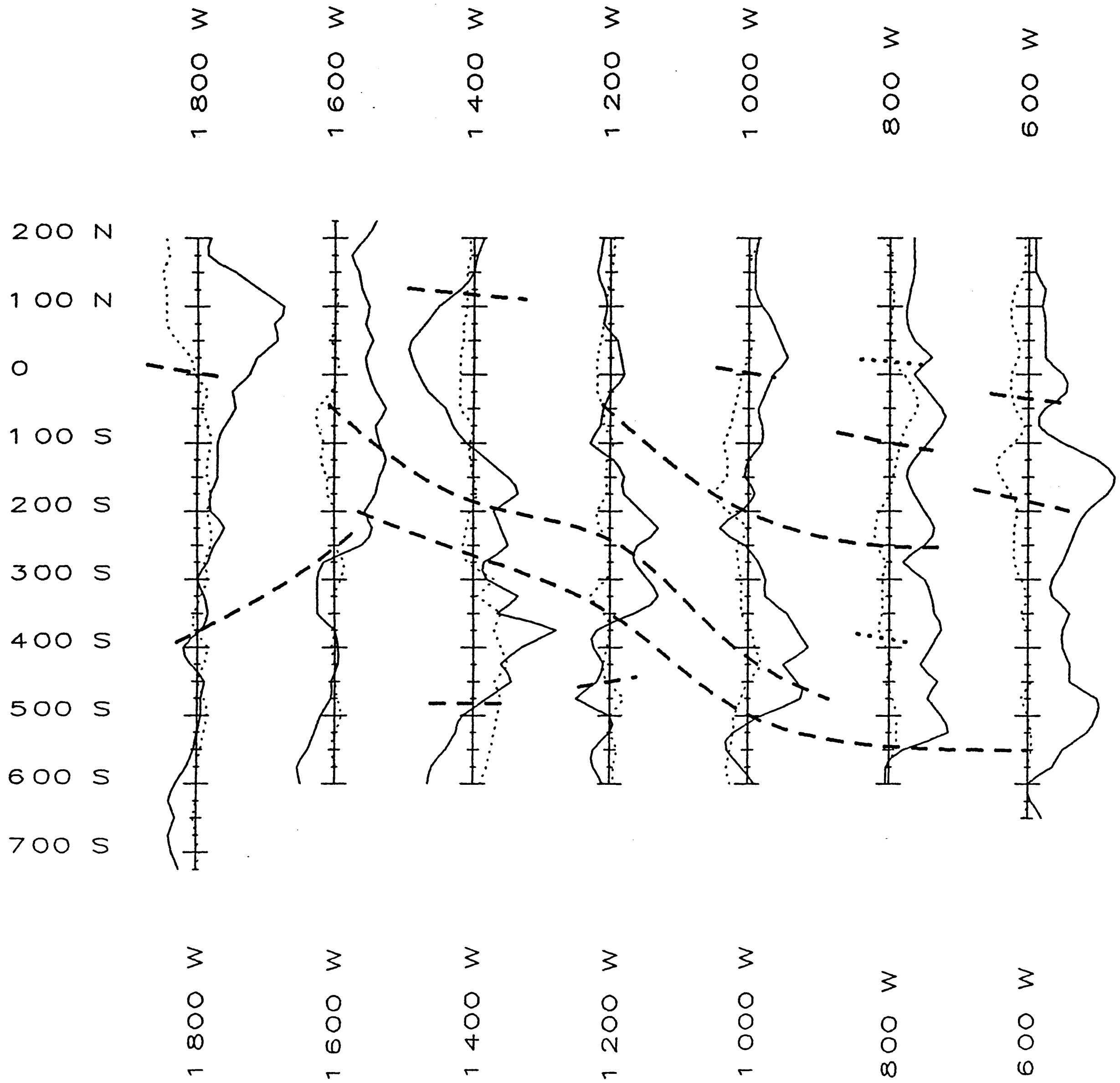
SCALE IN METRES

100 0 100 200 300

S.J.V. CONSULTANTS LTD.

SEPTEMBER 1994

PLATE G3



LEGEND

PROFILES ARE POSITIVE LEFT AND UP

DIP ANGLE

QUADRATURE

VLF-EM PROFILE SCALE:

BASE VALUE — +10% / 0 / -10%

ANOMALY AXIS
- STRONG
- MEDIUM
- WEAK
- RESISTIVITY CONTACT

EQUIPMENT:
GEONICS EM-16

TRANSMITTER STATION USED:
SEATTLE, NLK, 24.8 kHz

DIRECTION OF SURVEY:
NORTH

ELECTRUM RESOURCE CORP.

FEN PROPERTY

VLF-EM SURVEY PROFILES

GRID-2

OMINECA M.D., B.C. — N.T.S. 93L/2W

SCALE IN METRES

100 0 100 200 300

SEPTEMBER 1994

PLATE G4

S.J.V. CONSULTANTS LTD.

Appendix 3 — Descriptions of Rock Samples

Table 4 - Descriptions of Rock Chip Samples Collected in 1994

Sample Number	Location	Description
PRF-01	exposure in ditch beside logging road	Highly altered, original lithology obscured but probably a tuff. Mafic destroyed. Feldspars altered to a soft white clay assemblage. Original millimetric quartz grains, although partly obscured by silicification, probably formed 15% of rock. Silicification in the form of partial flooding and a variably intense network of quartz veinlets now forms 15% of rock. ±5% sulphides or sulphosalts; mainly pyrite but also some dark grey minerals that tarnish to black. Thick coating of black oxides on outer exposed surfaces. Orange-brown Fe oxides line interior fractures.
PRF-02	in ditch beside logging road, ±15m south of PRF-01	Completely altered; grey, crypto-crystalline, moderately hard, 10% pore space as sub-millimetric, sharply angular vugs. Sulphides ±5%, pyrite and unknown black sulphides. Also, 10% white specks of unknown alteration mineral.
PRF-03	10 m west of road in skid trail	Feldspar Crystal Lapilli Tuff. Mainly feldspar crystal tuff with 15% white, sub-millimetric feldspar crystals in grey, crypto-crystalline groundmass. 10% to 20% of rock is lithic lapilli, generally consisting of felsic volcanic material like the groundmass. Occasional relics of black minerals that may have been sulphides or sulpho-salts. Weathers to orange-brown. Sample is a grab from a 5m radius.
PRF-04		Feldspar crystal / lithic lapilli tuff. Texturally similar to PRF-03. Two % ovoid, sub-rounded black spots; soft, waxy black streak. Zeolite? Feldspars altered to opaque chalky masses. A few traces of pyrite and a few specks of Fe oxides. Sample is random grab of chips over length of outcrop.
PRF-05	exposure in old cat trail on south side of Mineral Hill	Intermediate flow or sub-volcanic intrusive. Dense, hard, dark maroon with patches of green-grey. Generally crypto-crystalline, with a few identifiable phenocrysts of plagioclase and quartz. Non-magnetic. Fractures rusty; exposed surfaces buff grey.
PRF-06	top of Mineral Hill	Siliceous volcanic flow rock. Dense and hard, texturally similar to PRF-05. All of groundmass is very hard and has the sheen of finely crystalline quartz. A few irregular millimetric quartz stringers. Local dustings of fine black specks. Most of rock is rusty red. Sample is random selection of chips over about 20 meters of exposure.
PRF-07	top of Mineral Hill, 10 m west of cliffs	Outcrop displays intense fracture cleavage. Cleavage is brittle, spaced at 0.5 cm to 1.0 cm. Orientation 250/45. Cleavage so prominent that OC has aspect of tilted pile of stacked plates. Rock is finely crystalline, pink. May be mainly orthoclase feldspar. 1% ±1 mm specks of epidote. A few hairline veinlets of quartz, usually oblique to cleavage.

Sample Number	Location	Description
		Possible traces of oxidized sulphides.
PRF-08	Near central summit of Mineral Hill.	Rock rubble in roots of recently fallen tree. White, finely crystalline, porcellanous rhyolite. Mainly very finely crystalline feldspar. Quartz recognized in a few sub-millimetric grains and as a lacing of hairline veinlets. Rusty on fracture surfaces; traces of fine metallics. Sample is a grab from the rubble under the tree.
PRF-09	old trench now forms ditch on south side of road.	Lithologically as PRF-04. Sample is random grab.
PRF-10	north end of old bulldozer trench that forms ditch on east side of road	Lithologically as PRF-04. Sample is random grab.
PRF-11	outcrop exposed by logging activity in clear cut on top of a knoll.	Andesite or dacite; probably sub-volcanic intrusion. 10% biotite phenocrysts, acicular, up to 3 mm long; may be pseudomorphs after hornblende, although they form good books. 10% plagioclase phenocrysts, idiomorphic to anhedral; typically 1 mm x 1-3 mm. Groundmass is medium greyish green, very finely crystalline mixture of felsic and mafic minerals. Feldspars are altered to soft, white powdery mass, probably clays. Exposed surface weathers to a pale greyish white. Fracture surfaces display hematitic oxidation. No sulphides. Non-magnetic. Exposed surface is pitted where the feldspar is weathered out. Outcrop exhibits fracture cleavage; 84/87 (100/m). Sample is a random chip from the few angular edges that permit specimens to be broken off.
PRF-12		Lithologically as PRF-11, with the exception that biotite phenocrysts are about ½ the size. Outcrop pattern of rocks like PRF-11 and PRF-12 suggests a north trending dike. Sample is random grab of chips over the extent of the outcrop.
PRF-13	at edge of cut block, rubble in perimeter cat trail	rubble in trail and debris pulled up in roots of fallen trees, indicate the presence of outcrop under a thin veneer of soil. The rock is a quartz-feldspar lithic lapilli tuff, texturally very similar to PRF-03 and PRF-04. Feldspars are altered to a white porcellanous clay mixture. 5% orange-red specks of oxides are present. No sulphides or silicification. The sample is a random grab of chips from tree roots and from the trail.
PRF-14	bluff north of the road	Rock type as PRF-11. Part of a group of exposures trending 308° that may be a deflected continuation of the dike south of the road where PRF-11 was collected.
PRF-15	last exposure on 308° trend at edge of clearcut.	Rock type as PRF-11 and PRF-14. Sample is a grab around a 5 meter radius.

Sample Number	Location	Description
PRF-16		an area 4 m by 6 m contains abundant rubble of highly altered feldspar porphyry. It may be a flow or a sub-volcanic intrusive, but it is different from PRF-11. Lacks any suggestion of biotite which is characteristic of PRF-11. Rock is entirely chalky white. 10% feldspar phenocrysts, now altered to clays. A few quartz crystals, sub-rounded, ±1 mm. Groundmass is greenish white, hard, slightly porous, porcellanous. Exposed surfaces weather orange-red. This rock not actually seen in situ but the ruble is presumed to be almost in place. The sample is a random grab of chips from the area.
PRF-17		Felsenmeer or possibly frost heaved rubble. Area 1m x 1m is covered with 1-5 cm fragments of tuff as at PRF-04. Mafics were destroyed, probably by leaching in the surficial environment. Sample collected by scooping up handsful out of a shallow pit. Not certain, but probable, that this represents bedrock.
PRF-18	in skidder trail	Small area covered with fragments, as at PRF-17. Minor digging uncovers bedrock. Highly oxidized, orange Fe oxides and black Mn oxides. Probably a similar rock type to PRF-04.
PRF-19	in skidder trail	True outcrop, lithologically as PRF-18.
PRF-20	rocky knoll partly cut by perimeter skidder trail.	Outcrop of rock as PRF-04.
PRF-21	at lip of topographic bench	sub-outcrop of rubble or felsenmeer. Lithologically as PRF-04. Sample dug out of shallow pit with rock hammer at a randomly selected location.
PRF-22	in perimeter cat trail	Rubble, probably but not certainly outcrop. Altered version of unit described at PRF-04. Feldspars altered white clays. Groundmass also altered, to pale grey porcellanous very finely crystalline mass. 3% pore space; some is cavities where minerals were weathered out but some is due to volumetric changes with alteration. The soft black spots noted at PRF-04 are largely altered or removed. On newly broken surfaces, 5% orange-red specks of oxide are present, usually with a central cavity less than 1 mm. Older fracture surfaces, and exposed surfaces, are completely coated with Fe oxides. One grain of pyrite noted and deliberately included in the sample.
PRF-23		A zone of gossanous rubble, ±1m x 10m, trending 170°, contains fragments up to 20 centimeters stained black (Mn), dark brown, dark red. Original minerals and textures lost. Could be an "iron cap" over oxidized sulphide mineralization. The sample is a random grab of loose pieces.
PRF-24	in cat trail, as it goes over the lip of an E-W trending bluff.	Highly altered volcanic; lithologic and textural details of protolith destroyed. Pale grey, very finely crystalline, flecked with 15% white sub-mm feldspars as clay pseudomorphs. 10% Fe oxides as speckles and fracture coatings. Speckles

Sample Number	Location	Description
		usually cored by a pit where something, possibly pyrite, has been weathered out.
PRF-25	skid trail exposure	Altered volcanic. Protolith masked. White, finely crystalline mixture of quartz and clays. Speckled with dark brown to black oxides, 10%. Trace of grey metallic specks, possibly hematite.
PRF-26		Moss-covered rubble on steep slope. Talus derived no more than 10 m above this point. Typical white altered volcanic as at PRF-25. At this point, however, more quartz, ±15%, as interstitial patches and hairline veinlets. Sample is a grab from the rubble.
PRF-27		Altered hornblende porphyry. Finely sucrosic white groundmass consists of 25% quartz with clay altered feldspars. dense and hard. hornblende phenos mainly degraded to Fe oxide pseudomorphs, elongate, ½ to 4 mm. Surface pitted where hornblende pseudomorphs leached out. Originally, hornblende phenocrysts formed 10% of the rock, anhedral to idiomorphic, randomly oriented. The quartz-rich groundmass is probably an alteration. The original rock could have been andesite.
PRF-28	skid trail	Intense quartz-clay alteration. Protolith obscured although probably tuff. 20% quartz as sub-millimetric grains and minor hairline stringers. The remainder is a soft white material probably consisting of clays. Speckled with 10% Fe oxides that may be pseudomorphous after hornblende. 2-3% pore space. Traces of fine grey minerals that may be sulphides. All fracture surfaces are coated with Fe oxides. Sample selected for hints of sulphides.
PRF-29		Rock as PRF-04 exhibiting degrees of alteration ranging from partial clay alteration of feldspar to almost complete quartz-clay as at PRF-28. Sample is grab of several chips representing a spectrum of alteration.
PRF-30	in skid trail	3m x 5 m of rubble as at PRF-29. Sample is grab selected for relatively high degree of alteration.
PRF-31	lh bank of Fenton Creek, 3 meters above channel	3m x 2m exposure of finely crystalline basalt. Weathers reddish, most fracture surfaces are dark brown. Rare unoxidized surfaces exhibit 25% euhedral 1 mm - 2 mm plagioclase phenocrysts in a very finely crystalline black groundmass. Non-magnetic.
PRF-32	lh bank of Fenton Creek	4m x 4m exposure of carbonate rock. Unclear whether it is a primary carbonate or a product of alteration. Latter interp. favoured. Finely crystalline; reacts with 10% HCl only if powdered. Weathers orange-brown. On one fracture surface, orange-red Fe oxides plus soft black unknown metallic mineral with black streak. This mineral included in sample. In fresher pieces, rock is grey with irregular black hairline seams of an unknown mineral.

Sample Number	Location	Description
PRF-33	beside Fenton Creek	small moss-covered exposure of rock as PRF-32. Abundant manganese oxide staining. Some pyrite coating fractures.
PRF-34	in old mining access road	Road cut outcrop of rock completely altered to a chalky white assemblage; soft, easily gouged with a steel point. Very slight reaction in 10% HCl. Probably mainly clay minerals. On some weathering surfaces, a relict porphyry texture is evident, consisting of 10% white, 2-4 mm sub-idiomorphic feldspar phenocrysts in a grey finely crystalline groundmass. Very locally within the outcrop is a stockwork. White rock is shattered to form fragments 2 mm to 2 cm, healed by dark grey hairline stringers of an unknown mineral.
PRF-35	site of old trench	Lithic lapilli feldspar crystal tuff and tuff breccia. 1-3 mm feldspar crystals, euhedral to subhedral, form 30% of the rock in a grey, finely crystalline felsic groundmass. A few breccia-sized fragments with a similar lithology are present. Feldspars are generally soft, at least partly altered to clay. No evidence of pervasive hydrothermal alteration. Fracture surfaces are rusty red-brown. Sample is a grab of several chips over 2 meters. A similar lithology is present over the entire 200 meters of the trench.
PRF-36	cliff, lh bank of Code Creek	moss covered OC, 1m x 1m, created with pick. Feldspar crystal lithic lapilli tuff, similar to PRF-04. Feldspars altered to clays; otherwise little alteration.
PRF-37	on Mineral Hill.	White, finely crystalline, felsic rock. 5% - 10% ±1 mm quartz grains. A few millimetric quartz stringers or stretched quartz grains exhibiting sub-parallel orientation. A few traces of epidote. Speckled with 10% Fe oxides after some unknown mineral. No sulphides. Probably the same rock as PRF-07 and PRF-08. Fracture cleavage 103/68, 100 per m., very rough, possibly an exfoliation. Other fracture sets at 270/60, 4 per m. and 350/87, 1 per m.

Appendix 4 — Descriptions of Soil Samples

Table 5 - Descriptions of Soil Samples Collected in 1994

Sample Number	Location	Descriptions
1550A	BL00, 15+50 W	0-15 cm. deep. Black organic layer containing live plant roots
1550B	BL00, 15+50 W	15-40 cm deep. Black organic layer with trace mineral soil. Slight brownish tint.
1550C	BL00, 15+50 W	40-45 cm deep. Grey-brown muddy mineral soil containing sub-centimetric rock fragments. Erratic patches of red-brown soil.
1550D	BL00, 15+50 W	45 - >60 cm deep. Grey-brown muddy mineral soil with sub-centimetric rock fragments and boulders to at least 25 cm.
1600A	BL00, 16+00 W	0-20 cm. deep. Black organic layer containing live plant roots.
1600B	BL00, 16+00 W	20-40 cm deep. Dark grey to black organic layer with minor mineral soil component.
1600C	BL00, 16+00 W	40-60 cm. deep. Grey-brown muddy mineral soil with sub-centimetric rock fragments. Lacks the patches of red-brown soil noted in 1550C