81-#1008 ~#9777

GEOLOGICAL AND GEOPHYSICAL REPORT

ON AN

ELECTROMAGNETIC SURVEY

OF THE

REX I CLAIM

WEBSTER CREEK AREA, OMINECA M.D., B.C.

REX I	: 1 km E of Crater Lake and 27 km SSE of Smithers, B.C.
	: 54° 127° NE
	: N.T.S. 93L/11E
WRITTEN FOR	: James A. Rutherford, 1102-207 West Hastings Street Vancouver, B.C., V6B 1H7
BY	: Customer Mining Services Ltd. 1102-207 West Hastings Street Vancouver, B.C., V6B 1H7
CONSULTANT	: Toru Kikuchi, Ph.D., P.Eng. Consulting Geologist, 1374 Park Drive, Vancouver, B.C., Canada, V6P 2K6
DATE	: November 30th, 1981

LLL

CUSTOMER MINING SERVICES LTD.
VANCOUVER, B.C.

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SUMMARY

During the mid summer of 1981, an electromagnetic survey was carried out on the Rex Claim. The legal post of this claim is located 2000 m. south west of Crater Lake and about 27 km. south south east of Smithers. Access is most easily gained by helicopter. The terrain consists of barren steep slopes covered with trees and scrub bushes in the valleys, and talus. The purpose of the survey was to extend the known zones of copper and silver mineralization and to tie them into maps of the structure and rock-types.

Previous work on the property consists of prospecting, rock sampling and trenching programs.

The property is mainly underlain by Jurassic and Lower Cretaceous Hazelton Group volcanics. The rock types are green agglomerate, green andesite, red andesite, and basalts. Intruding into these rocks are acidic dykes and sills. Several prospects of copper and silver mineralization occur on the property.

CONCLUSIONS

1. Jones reached the conclusion as quoted below in his 1981 report for Mr. Rutherford and we see no reason to alter the same broad basic opinions as a result of the subsequent work done.

2. The 1981 survey outlined some "target areas" wherein tilt angle crossovers and vertical component highs corresponded

closely. As work continues pursuant to Mr. Jones' recommendations this data may become more significant.

> "Numerous mineral occurrences are known within Hunter Basin most of which are quartz-filled fissure veins. Many of these contain small discontinuous pods of massive chalcopyrite, bornite, pyrite, and specularite with associated values in silver and gold. While most of these high grade veins appear to be too small to be of interest, they are worthy of more exploration because of the present high prices for precious metals.
>
> The east rim of the cirque, now covered by Rex 1 claim, contains many east-striking fault zones containing veins similar to those described above. In this area they are poorly exposed due to talus and overburden.
>
> It is concluded that the Rex 1 claim warrants further exploration to examine the mineralized east-west fault zones for the possible presence of a large high grade vein, similar to or better than the King vein. As previously mentioned, the eastern extension of the King vein has not been found but it could also be present on this claim".

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INTRODUCTION AND GENERAL REMARKS

The Rex 1 mineral claim is located in Webster Creek-Hunter Basin area, 27 kilometers south of Smithers, B.C. Numerous quartz veins are known in Hunter Basin and adjoining area. These mineral exposures have been explored intermittently since their discovery in 1903. Most exploration to date in the Hunter Basin has concentrated on the King Vein, from which small tonnages of high grade ore have been mined.

Other mineralized veins, generally covered by talus and overburden, have been found on the Rex 1 claim. This report discusses the survey method, data compilation and interpretation of results from a V.L.F. EM-2 survey carried out on the property. All work carried out and discussed in this report was completed between August 15th and August 22nd 1981 by Customer Mining Services Ltd. of Vancouver, B.C. The work program was supervised by James A. Rutherford and executed by James Parker. They followed the recommendations outlined by Jones (1981). The V.L.F. EM-2 survey covered approximately

15 kms. of survey line over the south east corner of the property. The geological map was compiled by Mr. J.A. Rutherford from personal work done in the field and from any source available. Work done by Falconbridge and Kindle was particularly helpful. This work in conjunction with the geophysical survey was done in order that assessment advantage could be taken pursuant to section 11(1) of the Mineral Act Regulations.

PROPERTY AND OWNERSHIP

The property is owned 100% by James A. Rutherford of 1887 West 58th Avenue, Vancouver, B.C., V6P 1X1.

LOCATION AND ACCESS

The Rex claim is located in the Hunter Basin and Webster Creek area, bounded on the west by the headwaters of Cabinet Creek and to the east by the headwaters of Webster Creek. The property is approximately 27 km. south of Smithers, B.C. at latitude 54^{o} 30' N and longitude 127^{o} 08' W. The claims cover the ridge which forms the east wall of the Hunter Basin cirque and extends from 1,370 meters to 2,280 meters in elevation. The claim is accessible via 10 km. of road from Telkwa to Bulkley Valley Collieries on Goathorn Creek, then by 16 km. of 4-wheel drive road to the property. However, in recent years washouts and tree-falls on this 4-wheel drive road have made driving to the property difficult. Easier access is by helicopter from Smithers, which was employed in completing the work program described in this report.

TOPOGRAPHY

The Rex 1 claim is located in the Telkwa Mountain Range, part of the Bulkley Mountain range, bordered on the east by the Nechako Plateau and on the west by the Coast Mountain Range. The Rex claim covers a northerly trending mountain cirque that is bounded on the east by Webster Creek.

HISTORY OF PREVIOUS WORK

The first activity in Hunter Basin was in 1903 when William Hunter discovered copper mineralization. Hunter discovered numerous narrow veins and thin volcanic flows mineralized with borite, chalcopyrite and in some instances tetrahedrite. Conwest Exploration Co. Ltd. optioned the properties from 1939 to 1941 and mined a limited tonnage. To quote Jones (1981),

> "they (Conwest) shipped 249 tons of sorted ore to the Tacoma smelter which averaged 0.83 oz./ton gold, 23.6 oz./ton silver and 15.6% copper. In 1962, 28 tons of selected mine dump ore was shipped to the same smelter by Canadian American Mining Corporation, Inc. This shipment averaged 0.45 oz./gold, 13.58 oz./ton silver, and 6.65% copper."

Falconbridge Nickel Mines, from 1968-69 explored properties to the east of the Rex 1 claim. They carried out an extensive program that included geophysical and geochemical surveys. A limited diamond drill program was also completed at Loring Creek.

In 1977 Hunter Basin Mines Ltd. carried out 300 meters of stripping and 2.4 kms. of road construction on the properties. The following year they stripped another 250 meters.

GEOLOGY

Introduction:

D.H. Brown, in his report for the "Old Tom, Crater, Webster, Dominion, Lava, Marmot and Dome" claims, assessment report #1810, describes the geology of the area as follows:

> "The Telkwa Range is dominantly underlain by volcanic rocks of the Hazelton Group which consist of an apparently conformable succession of interbedded sedimentary and volcanic rocks ranging in age from Pre-Middle Jurassic to Lower Cretaceous. The Hazelton Group is overlain by sediments of the Bowser formation of Lower Cretaceous age which outcrop in low parts of the valleys and in folds in the Hazelton volcanics.
>
> Intruding the Hazelton rocks in the central part of the Telkwa Range is a relatively large granodiorite or quartz monzonitic stock. Lesser diorite stocks and sills and dykes of granodiorite, felsite and rhyolite quartz porphyry cut the Hazelton rocks in diverse directions.
>
> Structure is to a large extent controlled by intrusion of the granodiorite plug and bedding generally dips outward from the granodiorite. Block faults of variable displacement are common and in Loring Creek area most have their north side displaced downward. Vertical movement has been more important than horizontal movement and most of the faults are hinged. Occasional local flat-lying similar folds are perhaps a result of low angle faulting and bedding plane slippage. Alteration and mineralization associated with the central granodiorite stock are related to a hornfelsed zone at the periphery of the stock and with porphyritic phases within the stock. The alteration within the hornfelsed zone is chiefly due to pyrite and magnetite mineralization. Within the porphyritic phases of the granodiorite, alteration is related to fracture controlled quartz stockworks bearing moderate pyrite and minor chalcopyrite and molybdenite.

> Away from the central stock where small diorite stocks and sills intrude the volcanics, the mineralization is pyrite, chalcopyrite and minor bornite associated with epidote and minor chlorite. Within the volcanic series there are two types of mineral occurrences related to volcanic tuffs and pyroclastics. One is a pyrite-chalcopyrite-tetrahedrite assemblage associated with strong quartz and epidote alteration within bedded tuffs. The other is a bornite-minor chalcopyrite-specularite assemblage associated with skarnified pyroclastic beds and exhibiting strong epidote-garnet alteration".

In general, sulphide mineralization bearing copper, silver and molybdenum from the area has been observed in lenses, dykes, sills, gneissic volcaniclastic stratiform showings, stratiform andesitic and basaltic clasts, shear zones, holding veins and veinlets, fault zone fillings and as disseminated sulphides in volcaniclastic stock works.

Local Geology: Webster Creek-Hunter Basin

The following discussion of the local geology of the Rex 1 claim comes from Jones (1981).

> "Hazelton Group Volcanics
>
> All bedrock exposed in Hunter Basin consists of the Hazelton Group volcanics (Stephens, 1970). He mapped four separate units which were described as follows in decreasing age:
>
> 1. Lower Red Unit - thickness unknown - it varies in colour from brick-red to dark maroon, and consists almost entirely of fragmental volcanic rocks which vary from fine grained tuffs to very coarse volcanic agglomerates.
>
> 2. Epidote - Rich Unit - 260-300 meters thick - it is yellowish-green to dark greyish-green in

colour and composed predominantly of medium to coarse grained tuffs but also contains a few fine grained beds of either fine grained tuffs or aphanitic flows.

3. Upper Red Unit - 75 meters thick - it is composed predominantly of very fine grained, dark red tuffs and/or flows with sparse interbeds of coarse grained tuffs.

4. Diorite Flow Unit - thickness is unknown because where it occurs it now forms the land surface. It is similar to, but slightly coarser grained than a typical basalt.

Bulkley Intrusive

The Bulkley Intrusive, while not exposed in Hunter Basin, may be of importance in the mineralization of the Hazelton Group. The nearest exposure is approximately 600 meters south east of the A14 claim and consists of porphyritic granodiorite with approximately 2% fine disseminated pyrite. While not exposed on the claim, this intrusive might underlie it. It is generally believed that there is a genetic relation between the copper deposits in the Hazelton Group and the Bulkley Intrusives (Kindle, 1954)."

The following discussion of structure, alteration and mineralization also comes from Jones (1981).

"Structural features mapped by Stephens (1970) include minor folds, numerous joints and shears and a scattering of faults. He also observed many veins.

1. Folds - Folds occur in at least three locations within Hunter Basin and all have fold axes which trend N 10^{o} - 20^{o} W. The folds show no noticeable plunge and vary from approximately 3 to 45 meters wide.

2. Joints - They occur in three dominant sets, namely N 20^{o} E, N 45^{o} W and approximately east-west. Many show evidence of slight movement- 0.6 cm. to 1.2 cm. displacements and slickensided surfaces.

3. Shear Zones - Many shear zones are present and they parallel the above joint sets. They vary in width from 2.5 cm. to 15 cm.

4. Faults - Major faults are present but they are not always easy to recognize. They are generally steeply dipping and strike either east-west or randomly to the north west. On surface they appear as either long, narrow, linear depressions or as closely spaced parallel fracture zones adjacent to the main break.

5. Veins - Quartz commonly forms veins throughout the Hazelton Group volcanics in the Hunter Basin area. These veins fill many of the above mentioned joints, shears and faults. In joints quartz occurs as small veinlets 0.15 cm. wide while in shears veins up to 15 cm. wide are common. Veins in fault zones are much wider, as evidenced by the King vein which is up to 1.8 meters wide."

"Epidote and chlorite are the principal alteration products in this area. Epidote is widespread in the Epidote-Rich Unit where it appears to be stratigraphically controlled. Pervasive epidotization does not extend beyond this unit. Epidote occurs in veinlets with quartz and calcite in the Lower and Upper Red Units and as large blebs in the Lower Red Unit."

"Chlorite occurs as a thin film along joint surfaces in the Lower and Upper Red Units and along the margins of mineralized veins. In the latter case the chlorite alteration zone may attain a considerable width, as shown by the King vein where it is 6 to 9 meters wide on both sides of the vein."

"Pervasive chloritization occurs in some areas not related to veining."

"Numerous mineral occurrences are known in Hunter Basin, most of which are mineralized quartz veins. As mentioned earlier, quartz veining is common and is associated with all joint, shear and fault sets. However, studies by Stephens (1970) indicate that only those which strike approximately east-west are mineralized. All veins are steeply dipping."

"The mineralized veins are composed of white quartz containing massive pods of chalcopyrite and bornite with minor pyrite and specularite. Chlorite alteration is commonly associated with the veins and varies from a thin slickensided film

to pervasive alteration of the wall rocks. Veins are commonly narrow but several are known which vary from 1 m. to 3 m. wide (King vein, Colorado vein.)

"Kikuchi (1969) inferred that a large low grade disseminated ore body existed in a "hybrid zone" on the ridge to the east of Hunter Basin. Later work by Stephens (1970) in this area found that instead of a "hybrid zone", a zone of closely spaced shears and faults were present which were mineralized not only within the gougy sections but also to a minor degree in the wall rocks. Ore grade mineralization exists only in the shears and faults, not in the wall rocks."

"The western boundary of the Rex 1 claim (not yet surveyed) lies approximately 450 meters east of the King vein, the only producer in Hunter Basin. The eastern extension of this vein, if present, has not yet been found; but it could be on the Rex 1 claim. Numerous mineral occurrences are on this claim but as yet they have not been tested. These are poorly exposed and are covered to a large degree by talus and/or overburden."

"Hunter Basin Mines Ltd. tested two mineralized areas by diamond drilling. DDH 1 and 2 were drilled to explore for the down-dip extension of the King vein and DDH 3 and 4 were drilled to test Kikuchi's (1969) disseminated low grade copper zone."

"DDH 1 intersected 5 cm. of sphalerite (?) and specularite at an approximate down-dip length of 90 meters while DDH 2 did not locate the vein. This latter hole was drilled at approximately 20° to strike and consequently may not have gone far enough. DDH 3 and 4 encountered numerous clay-rich fault zones, a few fine quartz stringers containing minor pyrite, chalcopyrite and bornite, and weakly disseminated chalcopyrite over the last 15 meters of the hole."

Assays from all holes were very low."

In the general Webster Creek-Hunter Basin vicinity sulphide mineralization bearing copper, silver and molybdenum values of interest has been observed in lenses, dykes, sills, gneissic volcaniclastic stratiform showings, stratiform andesitic and basaltic clasts, shear zones holding veins and veinlets, fault zone fillings and as disseminated sulphides in volcaniclastic stock-works.

Very little data is available as to metamorphic petrology. Certainly any study should take into its scope such topics. Metamorphic reactions indicated, their respective temperatures, ages, mineralogical assemblages and the elemental chemistry of all zones are topics to be examined. Other data such as opaque mineralography of the ore minerals, their intergrowth and replacement textures, any special ore relationships such as between veins, lenses and stock-works and zoning of the metallic minerals in their respective host structures are of paramount importance as a prelude to establishing a genetic model for the area around Webster Creek et al. Paragenetic sequences, the cause and effect relationships of zonation patterns, the chemistry of precipitation of the metals of economic importance and the significance of mineral zoning juxtaposed to any change in the chemistry of solution are all important in trying to establish with any degree of certainty the ultimate origin of the ore deposit(s) no matter if it be magmatic, contact-metasomatic, hydrothermal (cavity-filling and/or replacement) or whatever.

Generally speaking, save for such classifications as sedimentary, surficial oxidation and supergene enrichment, it appears that all classes of copper deposits occur in the Webster Creek-Hunter Basin region.

Notwithstanding that extensive work needs still to be done and that any conclusions reached as to ore-genesis, it is suggested, that a hypothetical model(s) based on information available is most useful when planning future exploration programs. To this end the same is attempted below and is based upon all technical data available for study as at date.

A Hypothetical Model

The cupiferous mineralogical assemblages which are seen in the Webster Creek-Hunter Basin area lithic volcanic clasts having a permeability appropriate for the emplacement of the same were derived from fluids generated in the formation of a granodiorite plug(s) et al in early stage of development through an inter-connected "plumbing system" of faults, fissure faults, shear zones, tear faults along the axis of folds or anticlines wherein the fluids carrying copper and/or other metalliferous ions precipitated out save where impermeable interbeds or other rock formation was encountered and/or the necessary minerals for production of ions necessary for precipitation were absent. The whole region was laterly subjected to volcanic mechanisms which produced

barren dykes, sills, faults and ancillary faults of minor import. Surficial weathered expression of the volcaniclasts, particularly along graben-like planes of movement exhibits a harsh physiographic setting wherein access to outcrop is particularly hazardous if not impossible. Mineral zones and zonation profiles associated with the same in classic studies of ore bodies similar to the above, whether they occur in massive, vein or mantos form, all are present in the model area.

INSTRUMENTATION AND THEORY

The Electromagnetic survey was carried out using a Phoenix V.L.F. EM-2. The primary field source was from Seattle, Washington, transmitting station which has a frequency of 18.6 KHz. Vertical component and tilt angle measurements were taken at each station in the survey. Specifications of the Electromagnetic instrument used can be found in greater detail in Appendix 1.

Vertical component measurements are taken in percent, while tilt angle peasurements are taken in degrees positive or negative.

SURVEY PROCEDURE

A grid was established on the property with stations every 30 meters. This grid system was tied into the corner claim post at Webster Creek. Please refer to map R-81 included at

the end of the report for claim identification and identification of survey area.

Stations were marked with small rock cairns or flagging attached to trees when available. The electromagnetic shift was monitored in the field by a closed loop method using a series of base stations.

COMPILATION OF DATA

V.L.F. EM-2 data - tilt angles and vertical component measurements - were taken at each station. All data was then plotted on Maps Rex 1-81 and Rex 2-81. Vertical component graphs of each grid line was drawn in on map Rex 1-81 and the tilt angle graphs were drawn in on map Rex 2-81. Vertical component readings were plotted so that 1% - 1 cm., while tilt angle readings were plotted such that 1 degree $\pm$ = 1 cm. Areas of strong tilt angle peaks and vertical component highs were then marked in on the maps.

DISCUSSION OF RESULTS

The V.L.F. electromagnetic survey indicated various targets for further exploration work. Tilt angle peaks featured prominently at the following locations:

6 N - 16 W to 6 N - 11 W

15 N - 8 W to 18 N - 5 W

36 N - 12 W to 32 N - 6 W(extending south-westerly).

Vertical component highs featured prominently at the following locations:

12 N - 3 W to 12 N - 1 W

14 N - 9 W to 14 N - 6 W

29 N - 11 W to 30 N - 6 W

The most significant target appears to be from 38 N - 14 W to 38 N - 12 W. In this area tilt angle crossovers and vertical component highs correspond closely.

The above target areas, and the data in general may become more significant and illuminating as the geology of the property becomes mapped in greater detail. This geological mapping is part of a multi-phased program for the property outlined by Jones (1981).

CUSTOMER MINING SERVICES LTD.

James A. Rutherford - Pres.

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Jones, H.M., Geological Report on the Rex 1 Claim Hunter Basin, Smithers Area. (1981)

Kikuchi, T., Report and Recommendations on The Crater Lake Group, Cliffs Above Webster Creek, Omineca M.D., B.C., 1981.

CERTIFICATE

I, JAMES A. RUTHERFORD, of the City of Vancouver, British Columbia, the author of this report, hereby certify that:-

1. I am President and Manager of Customer Mining Services Limited, with offices at 1102-207 West Hastings Street, Vancouver, B.C., V6B 1H7.

2. I hold a B.Sc. degree (major geology) from the University of Alberta - 1955.

3. I hold an M.B.A. degree (major business administration) from the University of Western Ontario - 1957.

4. I am a Fellow of the Geological Association of Canada.

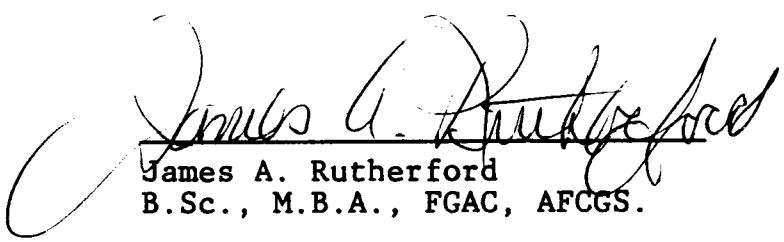
5. I am not a registered Engineer in the Province of British Columbia or of any province.

6. I have worked professionally and as a businessman in the mining and/or oil business for over 30 years.

7. As at date I have direct interest in the Rex 1 claim as to 100% ownership.

8. This report is based on personal field examination and examination of the data obtained as a result of the survey.

DATED at Vancouver, British Columbia, this 30th day of November, 1981.



James A. Rutherford
B.Sc., M.B.A., FGAC, AFCGS.

STATEMENT OF QUALIFICATIONS

I, Toru Kikuchi of the City of Vancouver, B.C., hereby certify that:-

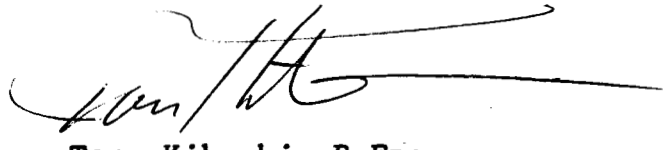
1. I am a graduate of the Hokkaido University, Japan (B.Sc., Geology and Minerology, 1946) and of the Tohoku University, Japan (Ph.D., Economic Geology, 1963).

2. I am a "GIJUTSUSHI" (a qualification for a consulting engineer authorized by the Japanese Government) and a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

3. I have been practising my profession continuously for the past thirty-five years, and am an independent Consulting Geologist with my office at 1374 Park Drive, Vancouver, B.C., V6P 2K6.

4. I have no direct or indirect interest in the property, nor do I anticipate receiving any such interest or in any future securities thereof.

5. I inspected a portion of the work while the program was being carried out. I have read this report and personally endorse the facts and concepts contained in the text.



Toru Kikuchi, P.Eng.

Vancouver, B.C.
November 30, 1981

STATEMENT OF QUALIFICATIONS

I, James D.A. Parker of the Municipality of Surrey, B.C., hereby certify that:

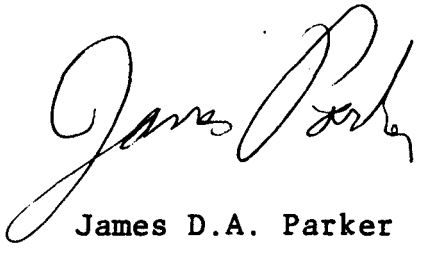
1. I am a University Student employed part time by Customer Mining Services Limited, with offices at 1102-207 West Hastings Street, Vancouver, B.C., V6B 1H7. I reside at 9469 - 127 A Street, Surrey, B.C., V3P 5X8.

2. I am working towards a B.A. degree (major: Psychology and English) at Simon Fraser University, and am in my last semester.

3. I have worked two field seasons on Smithers area properties under the direction of James A. Rutherford in the capacity of field manager.

4. As at date I have no direct or indirect interest in the Rex 1 claim.

DATED at Vancouver, British Columbia, this 30th day of November 1981.



James D.A. Parker

AFFIDAVIT OF EXPENSES

The electromagnetic survey carried out on the Rex No. 1 claim, Webster Creek-Hunter Basin Area, Omineca M.D., B. C. August 15 to August 22, 1981 was done to the value of the following set in below. Geological investigations were carried out sporadically from August, 1980 to August 1981 in conjunction with other work in the area.

FIELD:	
5-man crew, 7 days at $500/day	$ 3,500.00
Supervision	1,000.00
Instrument rental	80.00
Board and room	1,050.00
Survey supplies	50.00
Mobilization an d demobilization	1,000.00
	$ 6,680.00
REPORT:	
Drafting and printing (binding)	$ 500.00
Report typing and compilation	350.00
	$ 850.00
Grand Total	$ 7,530.00

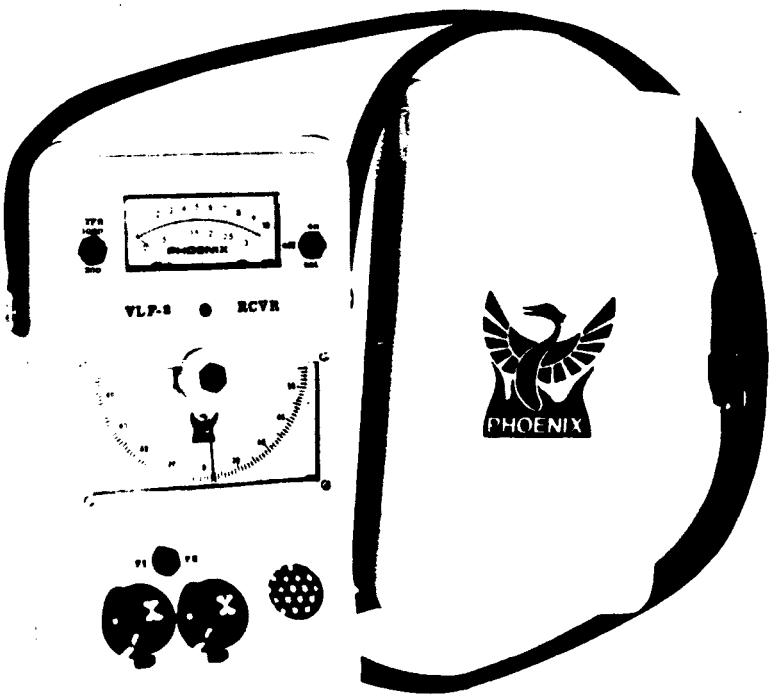
Respectfully submitted,
Customer Mining Services Ltd.,

James A. Rutherford
President

November 30, 1981

VLF-2

- Lightweight, low battery drain, rugged, simple to operate
- Two independent channels
- Each channel may select any station between 14.0 and 29.9 kHz
- Single crystal used for all frequencies
- Locking clinometer provides tilt-angle memory
- Superheterodyne detection and digital filtering provide extremely high selectivity and noise rejection



Military and time standard VLF transmitters are distributed over the world. These stations are used for geophysical EM surveying thus eliminating the need for a local transmitter and permitting one-man operation.

To ensure that a station excites the prospective conductor, two stations at approximately right angles are used during a survey (see data on back).

The choice of 160 frequencies in the range 14.0 to 29.9 kHz permits the use of a local EM transmitter when no suitable regular VLF station is available.

PHOENIX

PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

Head Office: 200 Yorkland Blvd. Willowdale, Ont., Canada M2J 1R5. Tel: (416) 493-6350
310 - 885 Dunsmuir St. Vancouver, B.C., Canada V6C 1N5. Tel (604) 684-2285
4690 Ironton St. Denver, Colorado, U.S.A. 80239. Tel: (303) 373-0332

Specifications

Parameters Measured	:	Orientation and magnitude of the major and minor axes of the ellipse of polarization.
Frequency Selection, Front Panel	:	Dual channel, front panel selectable (F1 or F2) each with independent precision 10-turn dial gain control.
Frequency Selection, Internal	:	F1 and F2 can be selected by internal switches within the range 14.0 to 29.9 kHz in 100 Hz increments.
Detection And Filtering	:	Superheterodyne detection and digital filtering provide a much narrower bandwidth and thus greater rejection of interfering stations and 60 cyc noise than conventional receivers.
Meter Display	:	2 ranges: 0 to 300 or 0 to 1000. Background is typically set at 100. Meter is also used as dip angle null indicator and battery test.
Audio	:	Crystal speaker. 2500 Hz used as null indicator.
Clinometer	:	±90°, +0.5° resolution. Normal locking, push button release.
Battery	:	One standard 9v transistor radio battery. Average life expectancy - 1 to 3 months (battery drain is 3 mA)
Temperature Range	:	-40° to + 60° C.
Dimensions	:	8 x 22 x 14 cm (3 x 9 x 6 inches).
Weight	:	850 grams (1.9 pounds).

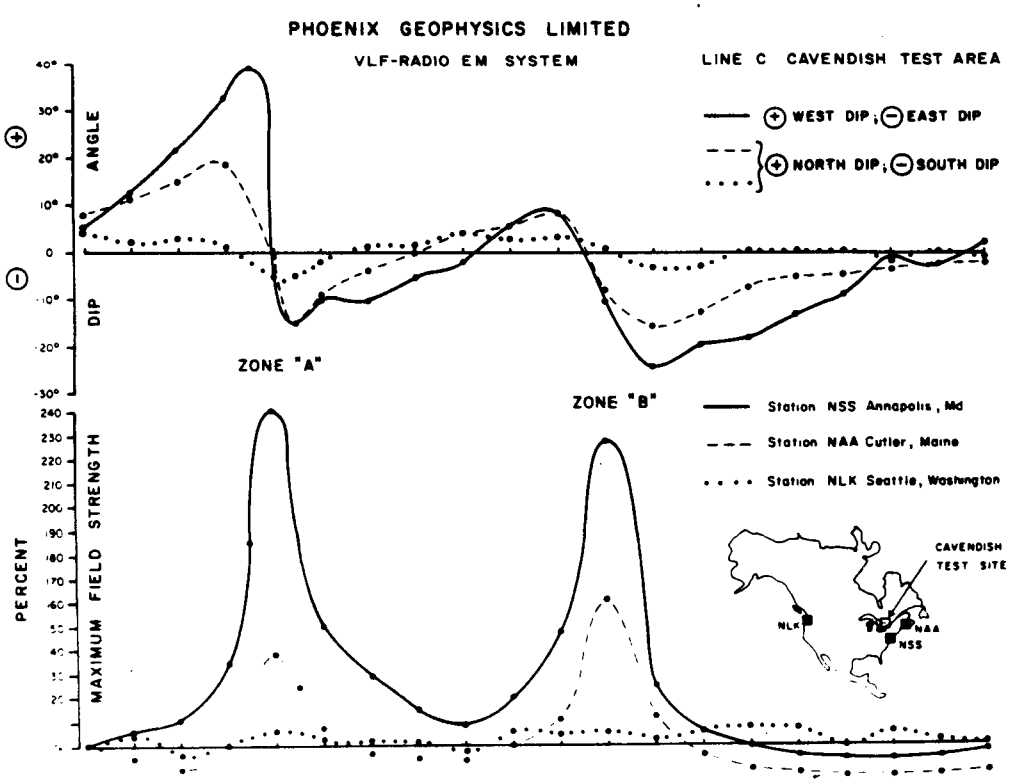
All of the established stations may be selected, or alternatively, a local VLF transmitter may be used which transmits at any frequency in the range 14.0 to 29.9 kHz.

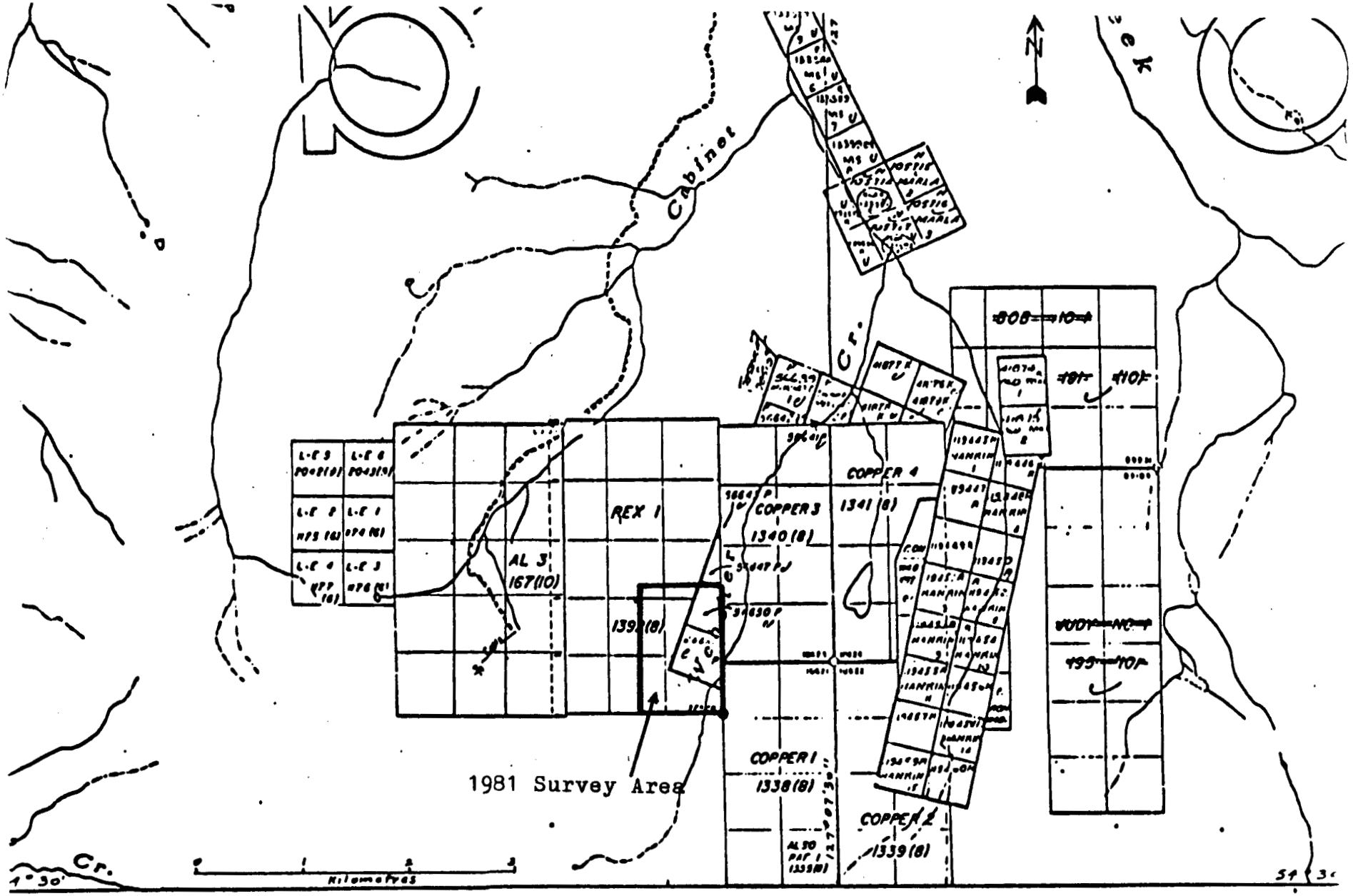
VLF Station	Frequency (kHz)
Bordeaux, France	15.1
Odessa (Black Sea)	15.6
Rugby, U.K.	16.0
Moscow, U.S.S.R.	17.1
Yosamai, Japan	17.4
Hegaland, Norway	17.6
Cutler, Maine	17.8
Seattle, Washington	18.6
Malabar, Java	19.0
Oxford, U.K.	19.6
Paris, France	20.7
Annapolis, Maryland	21.4
Northwest Cape, Australia	22.3
Laulualei, Hawaii	23.4
Buenos Aires, Argentina	23.6
Rome, Italy	27.2

Field Data

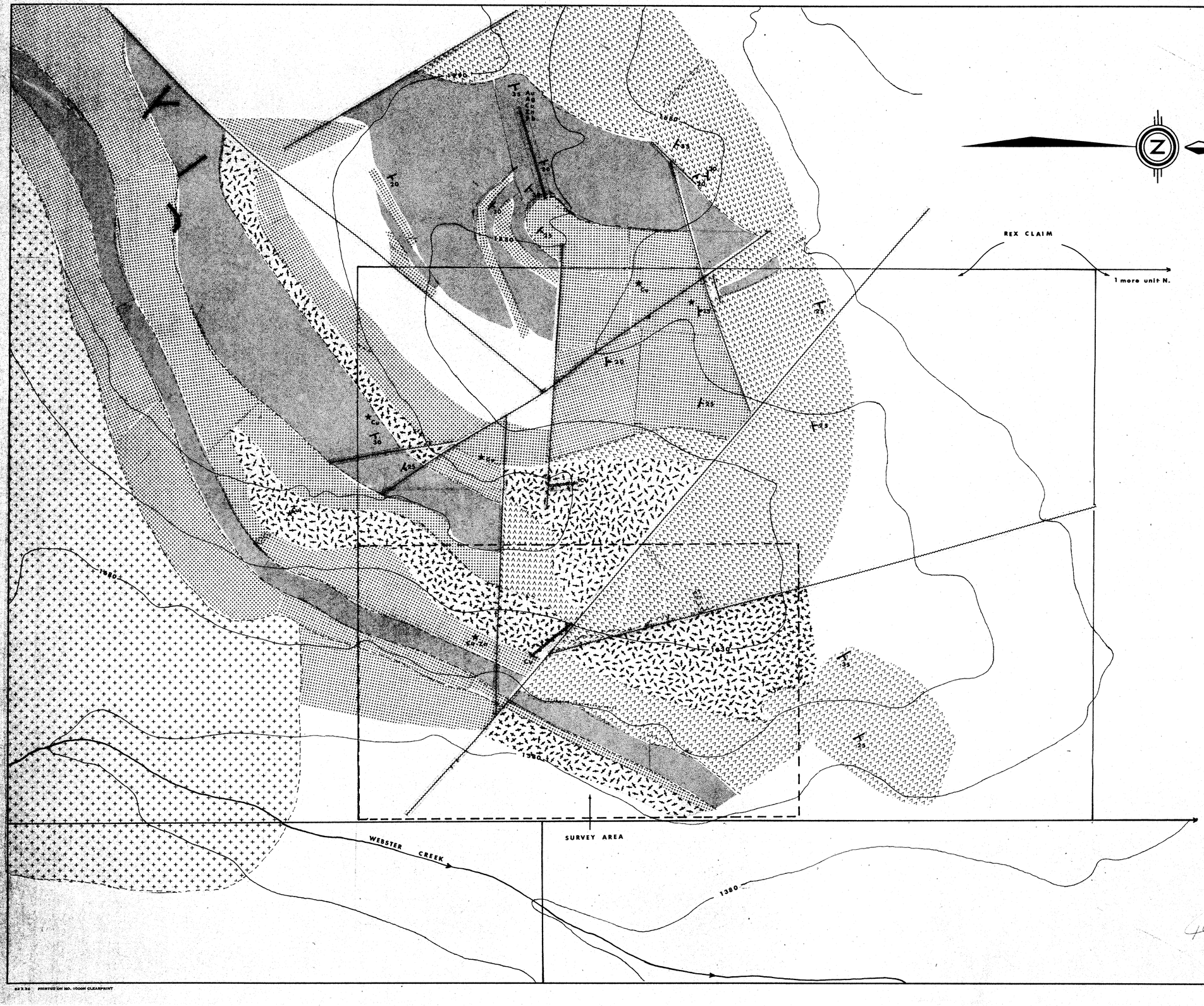
The results below illustrate the need for using two orthogonal stations when the strike of the prospective conductor is not well-known. The dip angle and amplitude data measured using station NLK in Seattle, Washington, show only a very weak anomaly associated with the two conductive sulphide zones at Cavendish, Ontario.

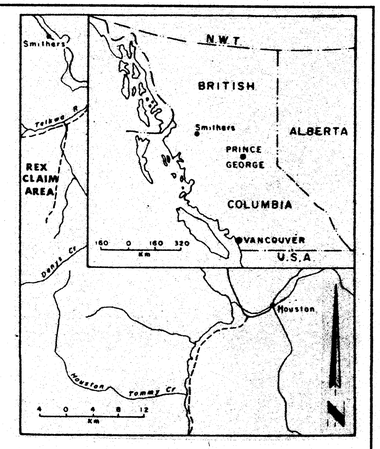
The results obtained using Cutler, Maine reveal a more prominent anomaly, but the best response was obtained using Annapolis, Maryland since the station lies almost due south and the transmitted electromagnetic field is thus maximum-coupled with the North-South trending conductors.





Map Rex 3-81
CLAIM MAP
REX 1 PROPERTY
Hunter Basin Area, B.C.
Scale: 1:50,000





LEGEND

INTRUSIVE ROCK

- GRANODIORITE (porphyritic Quartz Monzonite) (dykes and plugs) (also Quartz Monzonite dykes of Dominion Basin area)
- QUARTZ PORPHYRY FELSITE (dykes and sills)
- DIORITE (sills and irregular crosscutting intrusives some may be meta diorite)
- GREEN ANDESITE

HAZELTON GROUP
Layered rock (not in lithologic order)

- RED TUFFS RED and/or GREEN FRAGMENTALS (agglomerates) and RED ARGILLITE SOME PURPLE ANDESITE TUFFS MINOR CLASTIC SEDIMENTS
- GREEN ANDESITE MASSIVE FINE GRAINED FLOW ROCKS SOME VESICULAR and/or WITH HORNBLENDE PHENOCRYSTS
- RHYODACITE ACID VOLCANIC ROCK MAINLY TUFFACEOUS IN ORIGIN POSSIBLY MINOR FLOWS FINE GRAINED TO APHANITIC GROUNDMASS LIGHT GRAY OR PURPLE LESS COMMONLY BLACK OR RED IN COLOUR COMMONLY WITH QUARTZ EYES and/or WHITE OR PINK FELDSPAR PHENOCRYSTS ROCK IS USUALLY LESS COMMONLY THINLY BEDDED OR FRAGMENTAL

- 20 BEDDING
- FAULT (defined projected or assumed)
- MINERAL SHOWING
- VEIN

NOTE: ALL POSITIONS AND LOCATIONS ARE APPROXIMATE.

Geology after Falconbridge
Kindle
Mecca
Private - Rutherford

ASSESSMENT REPORT NO. 9777

REX No. 1 CLAIM

SCALE: 1cm=50m | APPROVED BY: | DRAWN BY: P. Buckland
DATE: Nov. 30/81 | REVISED

GEOLOGY

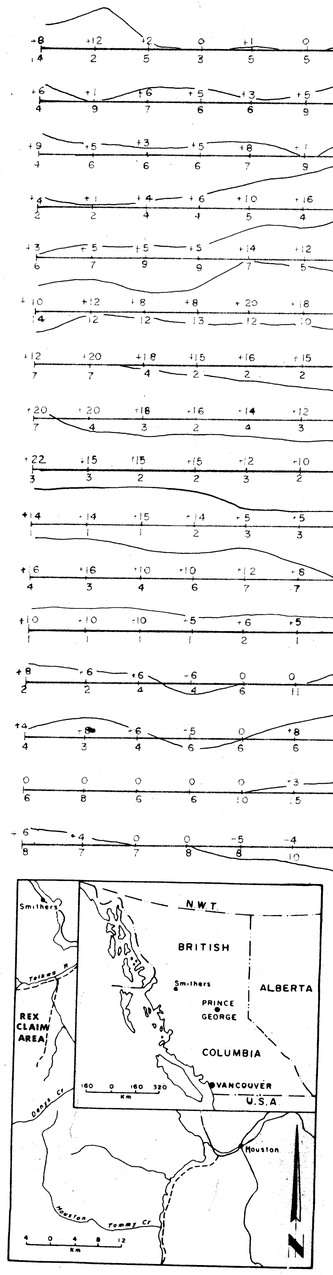
0 50 100 150 200 250 300 METERS

DRAWING NUMBER REX 4-81

22 X 34 PRINTED ON NO. 1000H CLEARPRINT

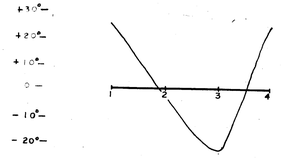
0N 2N 4N 6N 8N 10N 12N 14N 16N 18N 20N 22N 24N 26N 28N 30N 32N 34N 36N 38N 40N

16W
14W
12W
10W
8W
6W
4W
2W
0W



LEGEND

GRID STATION - $\frac{\text{TILT ANGLE (DEGREES)}}{\text{VERTICAL COMPONENT (\%)}} \frac{+10}{24}$



TILT ANGLE SCALE: 1 CM = 10°

TILT ANGLE PEAKS - - - - - - - -

0 15 30 45 60 75 90 105 120 Meters

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 9777

REX 1 CLAIM
OMINECA MINING DIVISION

V. L.F. ELECTROMAGNETIC SURVEY

MAP REX 2-81

SCALE: 1 CM = 15 METER

0N 2N 4N 6N 8N 10N 12N 14N 16N 18N 20N 22N 24N 26N 28N 30N 32N 34N 36N 38N 40N

16W

14W

12W

10W

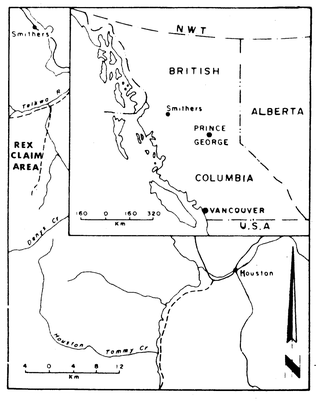
8W

6W

4W

2W

0W



LEGEND

GRID STATION – $\frac{\text{TILT ANGLE (DEGREES)}}{\text{VERTICAL COMPONENT (\%)}} = \frac{+10}{24}$

30% –
20% –
10% –
0 –

1 2 3

VERTICAL COMPONENT SCALE : 1 CM = 10 %

VERTICAL COMPONENT HIGHS – – – – – –

15 0 15 30 45 60 75 90 105
Metres

REX 1 CLAIM
OMINECA MINING DIVISION

V. L.F. ELECTROMAGNETIC SURVEY
MAP REX 1-81
SCALE: 1 CM = 15 METER