

**RECEIVED**  
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Gold Commissioner's Office  
VANCOUVER, B.C.

**GEOPHYSICAL SURVEY  
ASSESSMENT REPORT**

**RECEIVED**  
JUN 20 1997  
Gold Commissioner's Office  
VANCOUVER, B.C.

ON THE

**RINGER 1 & 2 CLAIMS**

**KNIPPLE LAKE AREA**

**SKEENA MINING DIVISION, B.C.**

**N.T.S. 104 A/5**

**Lat. 56 ° 27.3 ' N, Long. 129 ° 57.5 ' W**

Owned By

**Lawrence Hewitt Company and Associates Inc.**

Prepared for the Operator:

**Alpine Exploration Corporation**

By

**Edwin R. Rockel, B. Sc., P. Geo.**

**S.J.V. Consultants Ltd.**

**April 22, 1997**

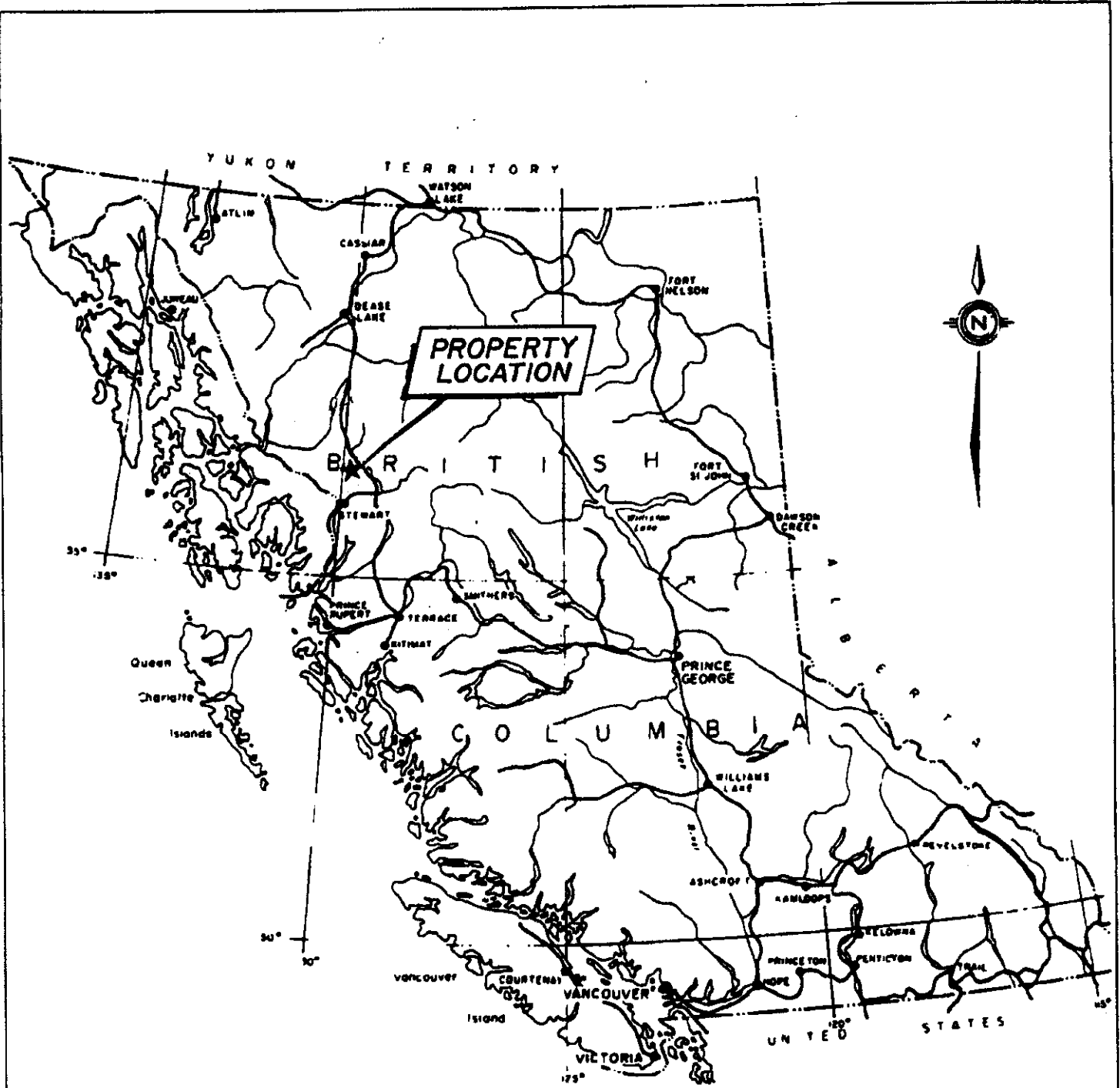
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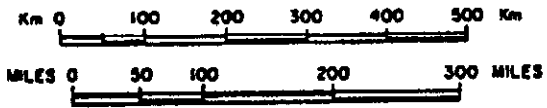
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Alpine Exploration Corporation  
 Ringer 1 and Ringer 2 Claims  
**LOCATION MAP**  
 British Columbia  
 SKEENA MINING DIVISION  
 NTS 104 A/5

April, 1997      Figure 1



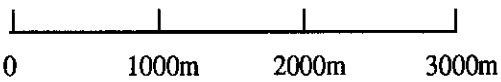
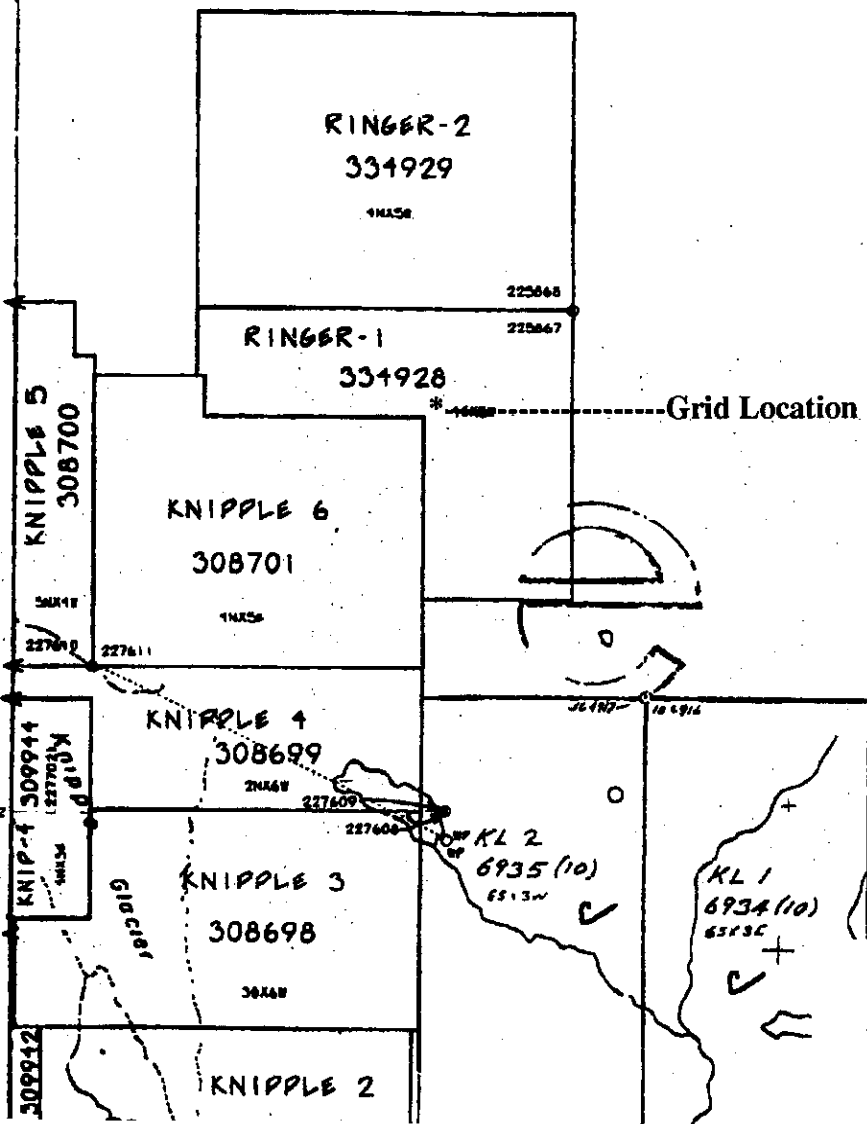
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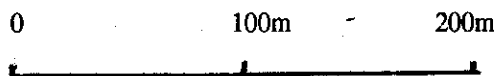
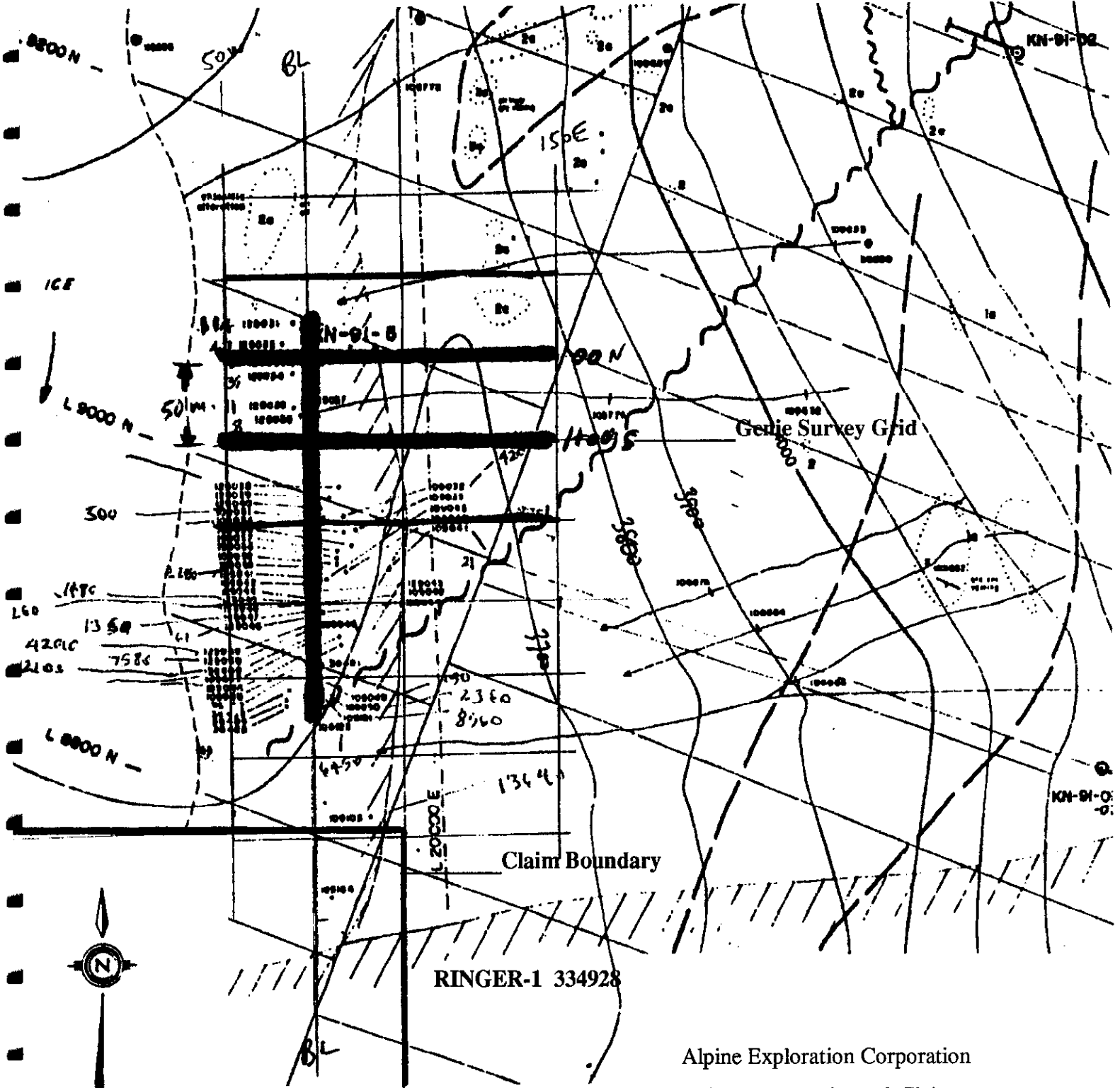
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Alpine Exploration Corporation  
 Ringer 1 and Ringer 2 Claims  
**CLAIM MAP**  
 British Columbia  
 SKEENA MINING DIVISION  
 NTS 104 A/5

April, 1997 Figure 2



Alpine Exploration Corporation  
 Ringer 1 and Ringer 2 Claims  
**GRID PLAN MAP**  
 British Columbia  
 SKEENA MINING DIVISION  
 NTS 104 A/5

April, 1997 Figure 3

## **1. Introduction**

This report pertains to a Genie (SE-88) horizontal loop electromagnetic survey carried out on the Ringer 1 and Ringer 2 claims during the period September 29 to October 1, 1996.

### **1.1 Location and Access**

The small survey grid is located at the east edge of an ice field about 2.5 km. directly east of the peak of Mount Knipple, approximately 60 km. north of Stewart, B.C. The survey lines were established between the ice and the steep part of a mountain slope (part of the "Boundary Ranges" of the Coast Mountains). Vegetation was typical post glacial barren till, moraine and rock with small grasses and shrubs in wet drainage areas. Access to the claims and survey grid was by helicopter from Stewart, B.C. each day. Accommodations were at the King Edward Hotel in Stewart.

### **1.2 Claim History and Survey Objectives**

The Ringer 1 and Ringer 2 claims, of the Knipple Lake property, are in the Skeena Mining district. This property was previously claimed as the KL3 and Treaty 12 claims as described in "Geological Branch Assessment Report 20,556" submitted by Noranda Exploration (ref. #1). The current owner of the claims is Lawrence Hewitt Company and Associates Inc. The Ringer 1 and Ringer 2 claims are currently held under option by the operator, Alpine Exploration Corporation, of Vancouver, B.C.

A boulder train containing high grade Ag, Pb, Zn, Cu and Au mineralization was discovered within the claimed area. A VLF EM conductor was reported (ref. #2) to have been outlined by Noranda at or near the foot of the boulder train. This conductor was drilled (DDH KN-91-5) to a depth of 90 feet without intersecting conductive material (ref. #4). The target is believed to be a massive sulphide conductor conformable with local bedding with a bearing of 110° to 115° (ref. #2). The objective of the present survey was to search in the vicinity of the VLF conductive feature and establish a more definitive target for drilling in order to test the possible source of the boulder train.

### 1.3 Claim Status

<u>Claim Name</u>	<u>Record #</u>	<u>Units</u>	<u>Record Date</u>	<u>Expiry Date</u>
Ringer 1	334928	20	April 23, 1995	April 23, 1997
Ringer 2	334929	20	April 23, 1995	April 23, 1997

### 1.4 Survey Parameters

A total of 750 meters of survey was performed on three short lines within the Ringer 1 claimed area. The survey grid was centered (grid origin 0+00E, 0+00N) on diamond drill hole KN-91-5 with a north-south base line and two east-west survey lines. The base line and lines were chained and flagged before survey. The genie HLEM survey was carried out on east-west lines, spaced at 50 meter intervals, labeled 0+00N and 1+00S, as well as on part of the base line 0+00E. A 50 meter coil separation was used with station spacings of 10 meters on line 0+00N and 20 meters on lines 1+00S and base line 0+00E.

Frequency pairs used were;

Line	Pair 1	Pair 2	Pair 3	Pair 4	Pair 5
0+00E	337/112 Hz.	1012/112 Hz.	3037/112 Hz.	1012/337 Hz.	3037/337 Hz.
0+00N	"	"	"	"	"
1+00S	1012/112 Hz.		3037/112 Hz.		3037/337 Hz.

## 2. Interpretation

### 2.1 Discussion of Results

Profile plots (included) show the Genie EM "ratio" values for the survey. Ratios from all Genie frequency pairs ranged between +2 and -2 % and showed a consistent positive offset. Line 0+00N showed a response to conductivity on all frequency pairs at station 0+65 E and a less definitive response on two frequency pairs at about station 0+00. Lines 1+00S and base line 0+00E showed only positive values and did not provide a specific conductor location. On base line 00+00E the 3037/112 Hz. frequency pair profile

displays what may be construed as the on-set of a broad anomaly located north of the present coverage, although there is no support from other frequency pairs.

## 2.2 Conclusions

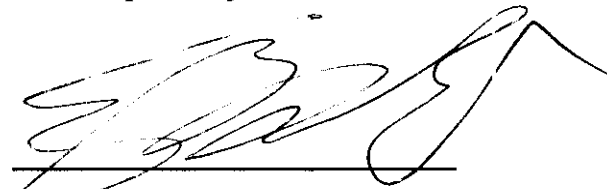
The positive offset of ratio values for all frequency pairs on all lines suggests the presence of conductive overburden within the grid area. Although the survey was centered over a diamond drill hole (KN-91-5) it is believed that the target should be expected to the east of the drill hole location since the hole was drilled towards the east (ref. #1) in search of conductive material. This is consistent with the position of the Genie conductive response at 0+65E on line 0+00N. If this conductive feature represents the target mineralization, which is believed to be bed conformable and striking at Az. 110° to 115° (ref. #2), then the drill hole appears to have stopped short of the target. With an orientation of 110° to 115° the conductor, crossing line 0+00N at 0+65E, would probably have been missed by the present Genie EM coverage on line 1+00S as well as base line 0+00E simply because line 1+00S coverage did not go far enough east and the base line coverage did not go quite far enough north. The possible on-set of a conductive response on the base line, in the 3037/112 Hz. pair (the most sensitive), may indicate the presence of the conductive feature crossing the base line to the north of present coverage. Dip and conductivity parameters are difficult to predict on the basis of one set of profiles on one line especially when a shallow angle of incidence (20° to 25°) is suspected between the conductor strike and survey line orientation. However, since an appreciable response was observed on the 337/112Hz. frequency pair, the feature is believed to be quite conductive consistent with sulphide mineralization. The less definitive ratio response, seen at about 0+00 on line 0+00N, is weak, indicates lower conductivity and probably represents a response from a local increase in conductive overburden.



### 2.3 Recommendations

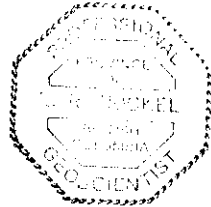
The presence of high grade mineralized boulders (ref. #2), apparently terminating in the vicinity of the present grid, plus the possibility of a buried massive sulphide conductive source for the boulders, suggest continued interest in this region of the property. Although the present Genie EM coverage has produced some evidence of high conductivity in the region of interest, it did not satisfactorily define a conductive trend that could be drilled with confidence. To this end additional geophysical surveys should be planned to more accurately define the suspected target and confirm the results of the present survey. As mentioned in a previous "Mini-Report: SE-88/GENIE Horizontal Loop Survey" (ref. #3) by J.W.F. Mitchell, old VLF EM and induced polarization data pertaining to the property should, if possible, be procured first and analyzed. Then a combined magnetic/VLF EM survey over a larger grid is recommended to help predict structural features and near surface geology. This should be followed by a horizontal loop EM survey to obtain data for a more comprehensive interpretation for use in establishing drill locations.

**Respectfully Submitted**



**Edwin R. Rockel, B. Sc., P. Geo.**

**S.J.V. Consultants Ltd.**



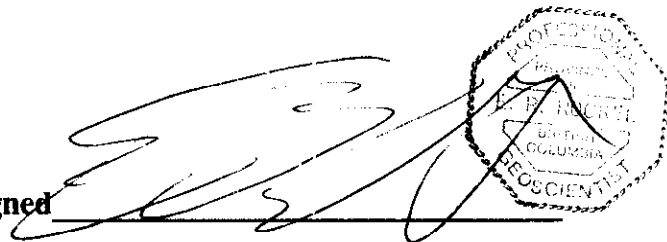
## Statement of Qualifications

I, Edwin Ross Rockel, Geophysicist of Surrey, British Columbia, Canada, hereby certify that:

1. I received a B.Sc. degree in Geophysics from the University of British Columbia in 1966.
2. I currently reside at 13000 54A Avenue, in the City of Surrey, in the Province of British Columbia.
3. I have been practicing my profession since graduation.
4. I am a Professional Geoscientist registered in the Province of British Columbia.
5. I am a Professional Geoscientist registered in the Province of Newfoundland.
6. I am a Professional Geophysicist registered in the Northwest Territories.
7. I hold no direct or indirect interest in, nor expect to receive any benefits from, the mineral property or properties described in this report.
8. This report may be used for the development of the property, provided that no portion will be used out of context in such a manner as to convey meanings different from that set out in the whole.
9. Consent is hereby given to the company for which this report was prepared to reproduce the report or any part of it for the purposes of development of the property, or facts relating to the raising of funds by way of a prospectus and/or statement of material facts.

Dated April 22, 1997

Signed



**Edwin Ross Rockel**

**B. Sc., P. Geo.**

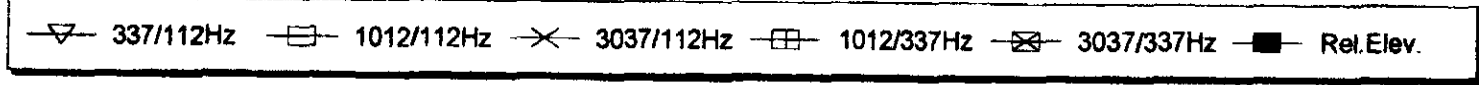
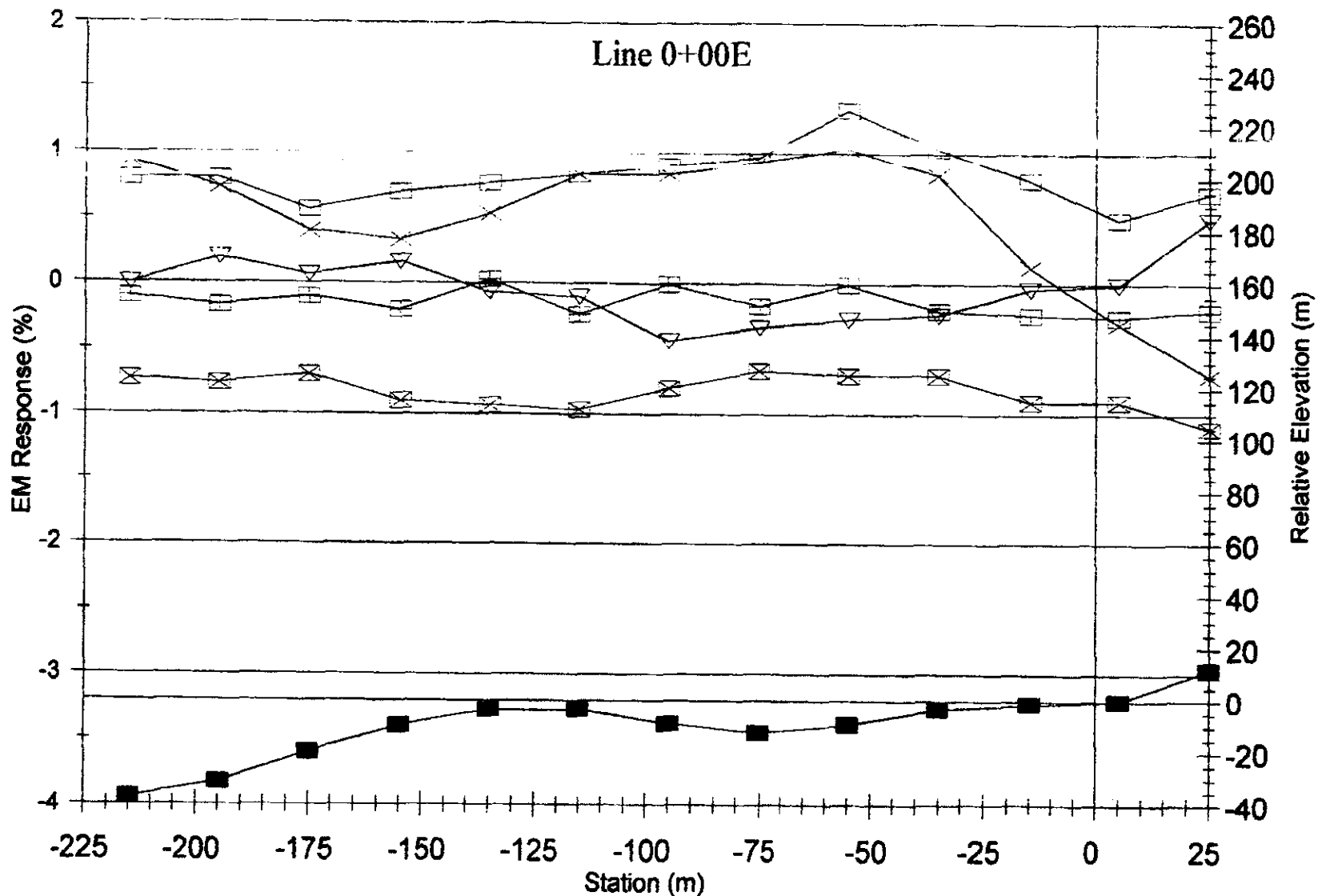
## References

1. Noranda Exploration Co. Ltd., (author unknown), November, 1990, Geological, Geochemical Report on the Knipple Lake Property (KL 1 to 3, Treaty 12 Claims) Geological Branch Assessment Report 20,556 maps only, Knipple Lake DWG No. 4 Geology & Sample Location Map and FIG 5, Soil Geochemical Survey PPB Au, dated July 23, 1990, submitted as part of an assessment report by Noranda Exploration.
2. MacQuarrie, D.R., Sept. 20, 1996 written correspondence to J. Mitchell regarding the present Genie EM survey on the Ringer 1 and 2 claims.
3. Mitchell, J.W.F., Oct. 18, 1996, Mini-Report: SE-88/GENIE Horizontal Loop Survey, Knipple Glacier Property, Stewart, B.C., September, 1996, SJ Geophysics Ltd. summary report submitted to Alpine Exploration Corporation.
4. Savell, M., Stewart, F., October, 1991, Diamond Drilling Report on the Knipple Lake Property, KL 1 to 4, Treaty 12 Claims, Skeena Mining Division, NTS 104 A/05 W, Geological Branch Assessment Report 22,074, submitted by Noranda Exploration Co. Ltd.

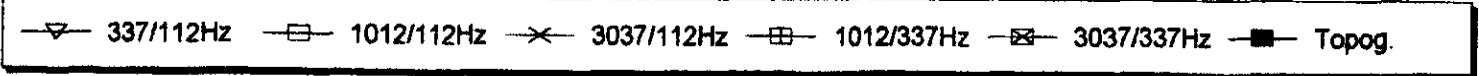
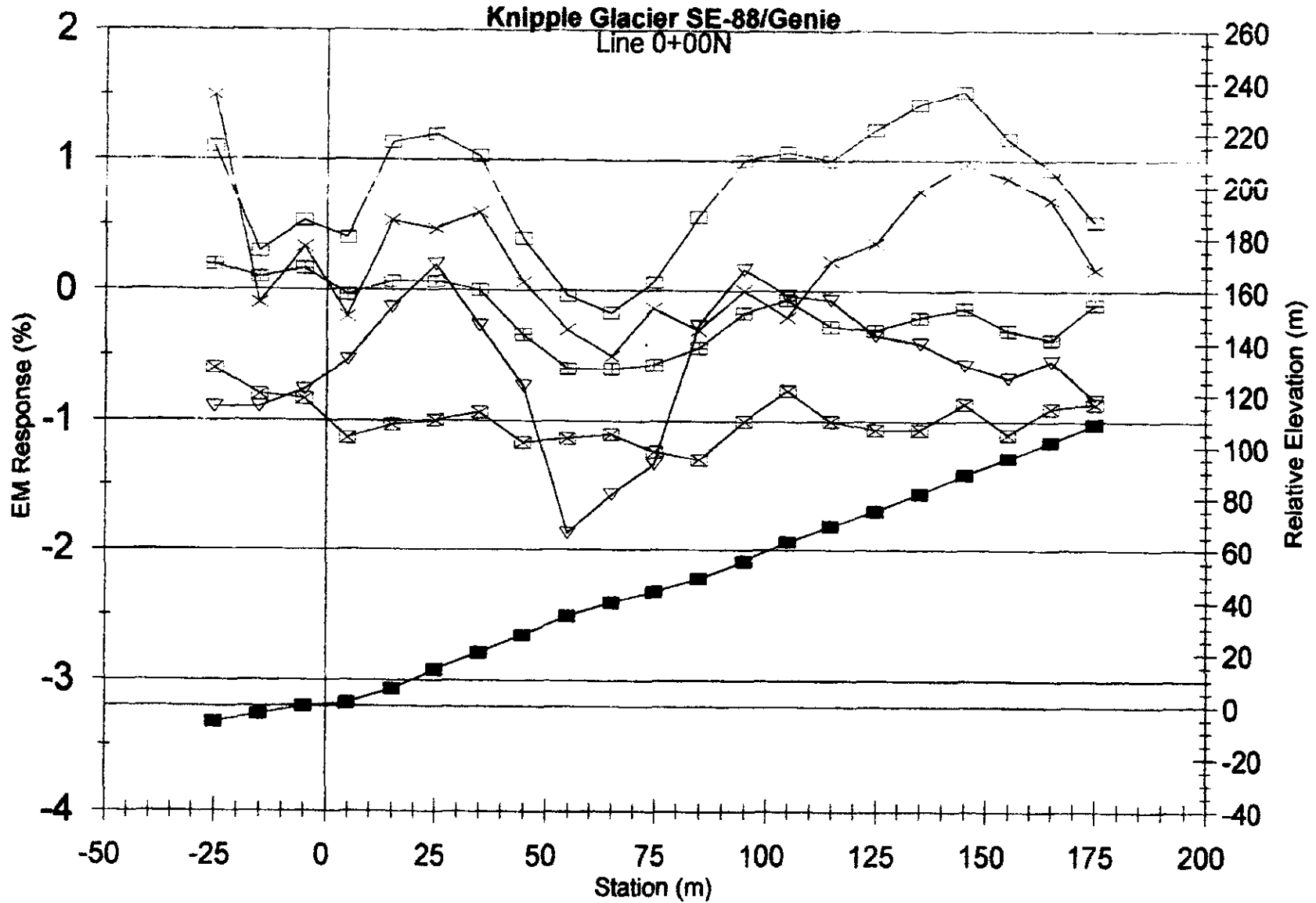
**Statement of Expenditures**

Contract geophysical survey cost -	\$ 3,035.00
Genie equipment rental cost -	\$ 500.00
Vancouver Island Helicopter cost -	\$ 3,402.47
Consulting fee (report) -	\$ 642.00
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TOTAL	\$ 7,579.47

# Knipple Glacier SE-88/Genie

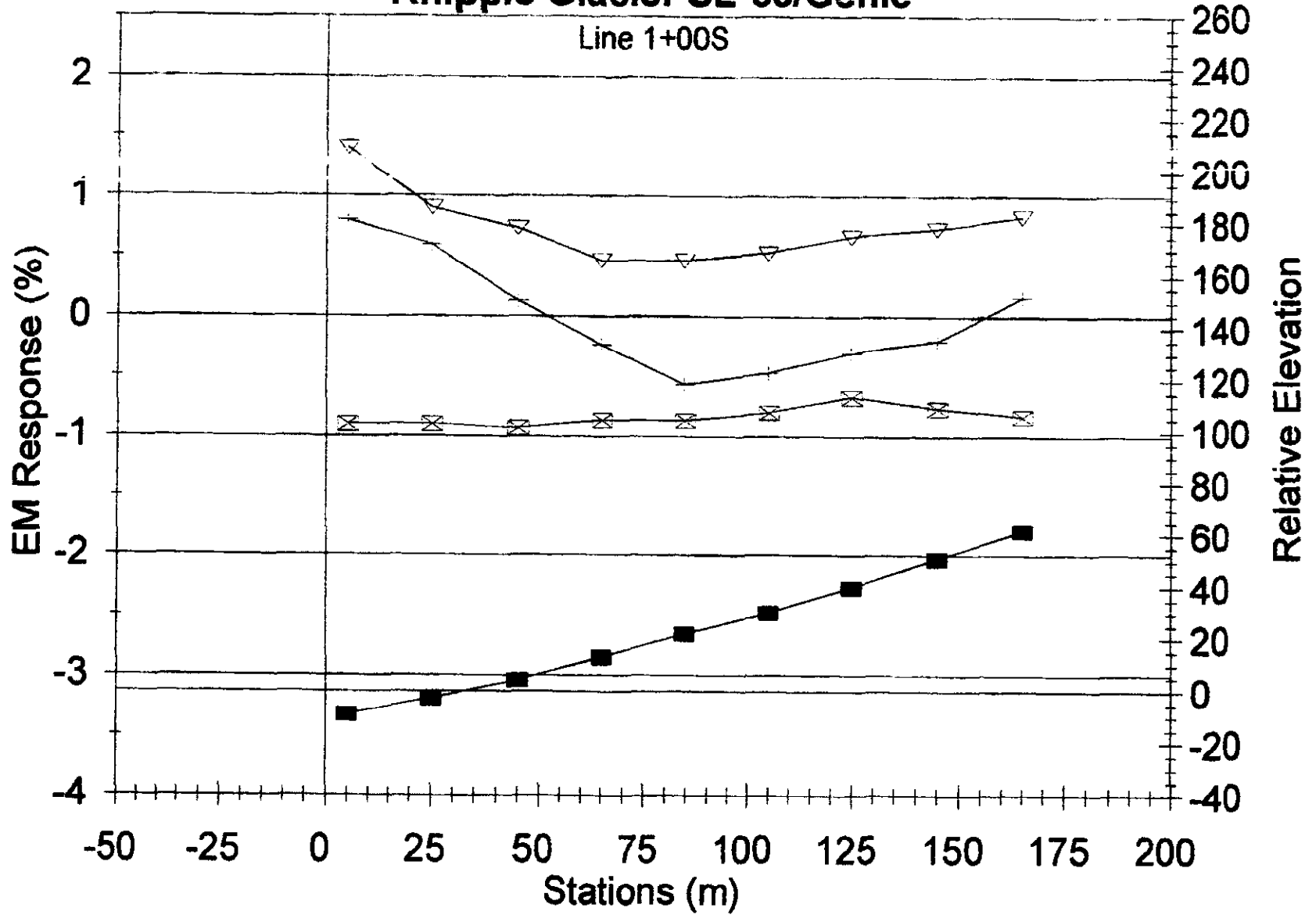


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# Knippie Glacier SE-88/Genie

Line 1+00S



1012/112Hz
  3037/112Hz
  3037/337Hz
  Rel.Elev.

11762 - 94<sup>th</sup> Ave., Delta, B.C. Canada tel: (604) 582-1100 fax: (604) 589-7466

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