

GEOPHYSICAL REPORT

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VANCOUVER, B.C.

ON A

VLF-EM SURVEY

OVER THE

TUTSHI LAKE CLAIM GROUP

PADDY PASS, TUTSHI LAKE AREA

ATLIN MINING DIVISION, BRITISH COLUMBIA

PROPERTY LOCATION : At Paddy Pass between Bennett Lake and Tutshi Lake
59° 52' N Latitude
134° 52' W Longitude
N.T.S. - 104M/15W

WRITTEN FOR : **KEA-DO EXPLORATIONS LTD.**
11840 86 Avenue
Delta, B.C., V4C 2X8

WRITTEN BY : David G. Mark, P.Geo.,
GEOTRONICS SURVEYS LTD.
#405 - 535 Howe Street
Vancouver, British Columbia V6C 2Z4

DATED : May 27, 1997

**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

25,096



AFFIDAVIT OF EXPENSES

A VLF-EM survey was carried out within the Elyssa #1 claim, the Donnie #1 claim, the Mary #1 claim, and the Wit #1 claim belonging to Kea-Do Explorations Ltd., from April 4 to 6, 1997, located adjacent to Tutshi Lake within the Atlin Mining Division, British Columbia, to the value of the following:

Transportation and Accomodation:

Airfare, 20% of \$1,400	\$280.00	
Room and Board, 20% of \$1,000	200.00	
Truck Rental and fuel, 20% of \$2,000	400.00	\$880.00

Field

Grid preparation, 3 men @ \$750/day for 6 days	\$4,500.00	
VLF-EM Survey @ \$425/day for 5 days	2,125.00	
Snowmobile rental	600.00	
Instrument rental @ \$350/week for 1 week	350.00	7,575.00

Data Reduction & Report:

Senior geophysicist, 10 hr. @ \$60/hr.	\$600.00	
Computer-aided data reduction & drafting, 20 hr. @ \$35/hr.	700.00	
Printing, photocopying, compilation	200.00	<u>1,500.00</u>

GRAND TOTAL

\$9,955.00

Respectfully submitted,
Kea-Do Explorations Ltd.

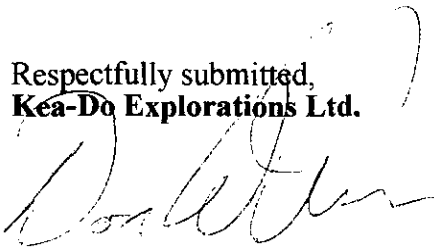


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SUMMARY

A ground VLF-EM survey was carried out during April, 1997 on part of the Tutshi Lake Claim Group located at Paddy Pass just west of Tutshi Lake, within the northwest corner of British Columbia. The terrain of the property, which covers 87 claim units, is near flat to steep and mountainous with a number of alpine lakes and mountainous streams occurring throughout. Access can be gained by vehicle along the Klondike Highway from Carcross and Whitehorse.

The property is mostly underlain by undivided volcanics and sedimentary rocks of Pennsylvanian to Triassic age. Along the western boundary of the property and within the Rachael claim occurs younger acidic intrusives of the Coast Intrusions of Lower Jurassic age. Structure, including faults, contacts, and folds, is predominantly northwesterly. Mineralization is unknown on the property but on the adjacent Westmin property consists of sulphides within quartz veins containing gold and silver values. Assay results have consisted of gold above 10 grams/ton, silver of 200 to 300 grams/ton, lead above 2%, and antimony in the 1% to 2% range.

The main purpose of the VLF-EM survey was to map geological structure that may be associated with mineralization especially similar to that found on the adjacent Westmin property.

The VLF-EM survey was carried out with a VLF-EM receiver by taking readings every 50 m on 100 m separated lines. The raw data were profiled onto a 1:5,000 base map, and also Fraser-filtered and contoured onto a second 1:5,000 base map.

A total of 7,100 meters were carried out.

CONCLUSIONS

1. The Tutshi Lake Claim Group is underlain by geology similar to that occurring on the adjacent Westmin property where mineralization of strong economic interest is being explored for. Old assessment reports indicate the mineralization occurs as base metal sulphides with gold and silver values within quartz veins.
2. The favourable direction of structure for economic mineralization in the area is northwesterly.
3. The VLF-EM survey revealed two conductors striking in a northwesterly direction each with a minimum strike length of up to 900 meters. The probable cause of the two conductors, which were labeled A and B, respectively, is structure, more specifically, faulting.
4. Sulphide mineralization may occur along each of the two conductors/faults or be associated with them, especially in areas of possible cross-faulting.
5. A northeasterly-trending fault appears to have faulted off both conductors A and B in the area of line 500 S. Because this would indicate cross-structure on both conductors, these areas would be of exploration interest for sulphide mineralization.

RECOMMENDATIONS

1. Geological mapping and prospecting should be carried out throughout the property, especially over areas of prime interest. The geological knowledge of the property is very limited and thus the mapping is needed to help focus further exploration and also help determine what tools should be used. Involved in this is learning as much as possible about the Westmin property.
2. The VLF-EM survey should be extended throughout the claim group if the terrain will permit it. Also, in order to help the geological mapping, magnetic surveying should be considered. VLF-EM surveying is particularly proficient at mapping geological structure and magnetic surveying, lithology. The line interval should be kept at 100 meters and the reading interval, 25 meters.
3. Stream silt sampling should be carried out on all the streams since they occur throughout the property.
4. Soil sampling should be tested in order to determine its effectiveness in the area for locating base metal sulphide mineralization. Such factors as poor soil development could inhibit the detectability of base metals and/or silver and gold. If it is found to work, than the soil sampling should be carried out throughout the property. However, because of its expense, it may be necessary to limit it to geological and/or geophysical target areas.
5. Further recommendations such as trenching and other geophysics would depend on the results of the above. However, it is recommended to try to learn what are the effective exploration tools on the adjacent Westmin property.



GEOPHYSICAL REPORT

ON A

VLF-EM SURVEY

OVER THE

TUTSHI LAKE CLAIM GROUP

PADDY PASS, TUTSHI LAKE AREA

ATLIN MINING DIVISION, BRITISH COLUMBIA

INTRODUCTION

This report discusses the survey procedure, compilation of data, interpretation methods, and the results of a very low frequency electromagnetic (VLF-EM) survey carried out over a portion of the Tutshi Lake Claim Group located just west of Tutshi Lake within the northwest corner of British Columbia.

The VLF-EM surveys were carried out by Tim Smith, geophysical technician, employed with Kea-Do Explorations Ltd., from April 4 to 6, 1997.

The total amount of VLF-EM surveying carried out was 7,100 meters.

The purpose of the survey was to map geological structure with which economic mineralization may be associated. The property was acquired because of its proximity to the Westmin property which borders the Kea-Do property to the north and because of it being apparently underlain by similar rock-types. It is reported that Westmin is discovering mineralization of strong economic interest but, because of secrecy, little is known of the type and mode of mineralization.

PROPERTY AND OWNERSHIP

The property consists of six claims totaling 87 units, as described below and as shown on Map #2. The Mary I claim was staked as a two-poster and the rest were staked under the modified grid system.

CLAIM NAME	TAG NUMBER	RECORD NUMBER	NUMBER OF UNITS	EXPIRY DATE
Mary I	662544	346181	1	May 14, 1998
Elyssa I	117682	346180	12	May 14, 1998
Donnie I	214289	346215	18	May 14, 1998
Wit I	117696	346216	16	May 14, 1998
P.P. I	117697	346217	20	May 14, 1998
Rachael	234325	346331	<u>20</u>	May 14, 1998
TOTAL			87	

The expiry dates shown assumes that the work under discussion within this report will be accepted for assessment credits.

The property is owned by Kea-Do Explorations Ltd. of Delta, British Columbia.

LOCATION AND ACCESS

The property is located at Paddy Pass to the immediate east of Tutshi Lake and to the west of Bennett Lake within the Atlin Mining Division within the northwest corner of British Columbia.

The geophysical coordinates are 59°52' N latitude and 134°52' W longitude.

Access from Whitehorse, the capital of the Yukon Territory, to the property is best gained by traveling 19 km southeast on the Alaska Highway (#1) to the Klondike Highway (#2) intersection which gives access to Carcross and Skagway, Alaska. One turns south and travels 40 km to Carcross and thence into the province of British Columbia. The property, specifically the southeast corner of the Rachael claim, is a further 53 km from Carcross. Total distance from Whitehorse is 112 km.

The northern part of the property can be gained by an access road along Paddy Pass.

PHYSIOGRAPHY

The property is located within the Tagish Highland which is a small physiographic subdivision of the Yukon Plateau which itself is a subdivision of the Interior Plateau System. The Tagish Highland is characterized by areas of relatively smooth, gently rolling upland surface lying, for the most part, between 1500 and 1800 meters. The valleys are incised areas of the Highland being U-shaped and at elevations of around 670 meters.

On the property itself, the terrain varies from near flat within Paddy Pass to very steep on the two mountains. The elevations vary from 710 meters at the southeast corner of the Rachael Claim on the shore of Tutshi Lake to 2110 meters at the southeastern border of the Donnie I Claim to give an overall relief of 1400 meters.

Most of the property is above timberline with forest cover occurring along Tutshi Lake and within Paddy Pass.

Numerous small alpine lakes occur throughout the property as well as a number of mountainous streams. The major drainage is the easterly-flowing creek within Paddy Pass which flows into Tutshi Lake.

PREVIOUS WORK

There is no known work on the property prior to the VLF-EM surveying.

GEOLOGY

According to the GSC map of the area by Christie, the main geological feature of the area and of the property is a northwesterly-trending contact between an older volcanic/sedimentary sequence to the northeast and younger Coast Intrusions to the southwest.

The northeastern rocks, which underlie most of the property, consists of a great, indivisible assemblage of volcanic and sedimentary rocks that may have a total thickness of 2400 meters or more. The sediments, which lie mostly along the contact with the Coast Intrusions, consist of undivided greywacke, arkose, and slate. The volcanics consist of undivided andesite, basalt, tuff, breccia, and volcanic conglomerate.

The Coast Intrusions of Post Lower Jurassic age in this area occur as a large intrusive body to the west and along the west side of the property on the P.P. I claim and on the Donnie I claim. A small Coast intrusive body occurs within the Rachael claim. In general, that is not necessarily on the property, the most abundant rock-types are medium- to coarse-grained biotite granodiorite, slightly foliated biotite-hornblende granodiorite, and quartz diorite. Other rock-types are granite, gabbroic types, and various hybrids of the afore-mentioned rocks.

The regional structural trend of the area is northwesterly which is the main trend of the contacts, faults, and folds.



For mineralization in the general area, Christie says "Very little sign of mineralization has been found within the granitic rocks but minor quartz vein and replacement deposits occur near and at the contacts of the Coast Intrusions. In the quartz veins two associations of metallic minerals are common: gold-pyrite, occasionally with some arsenopyrite and chalcopyrite; and gold-pyrite-chalcopyrite-galena-sphalerite, with some tetrahedrite occasionally present. Veins, particularly those with the second type of mineralization, tend to be in northwest trending fractures, and these structures are therefore regarded as most favourable for prospecting."

The property has been unexplored and thus there is no known mineralization on it. However, on the adjacent Westmin property, sampling records from 1983, when Texaco had the property, indicate that the mineralization consisted of pyrite, arsenopyrite, galena, and sphalerite, with gold and silver values, occurring within quartz veins. The lead was often above 2%, the gold above 10 grams/ton, and the silver 200 to 300 grams/ton. There was also antimony assay returns in the range of 1.37 to 1.92%. It must be remembered that it is unknown what Westmin is currently finding or exploring for. It could be similar to what Texaco was doing, or Westmin could be exploring for a different type of mineral deposit.

INSTRUMENTATION AND THEORY

The VLF-EM survey was carried out with a VLF-EM receiver, Model EM-16, manufactured by Geonics Ltd. of Toronto, Ontario. This instrument is designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for this survey is transmitted at 24.8 kHz from Jim Creek, Washington, which is east of Arlington.

In all electromagnetic prospecting, a transmitter induces an alternating magnetic field (called the primary field) by having a strong alternating current move through a coil of wire. This primary field travels through any medium and if a conductive mass such as a sulphide body is present, the primary field induces a secondary alternating current in the conductor, and this current in turn induces a secondary magnetic field. The receiver picks up the primary field and, if a conductor is present, the secondary field. The fields are expressed as a vector which has two components, the "in-phase" (or real) component and the "out-of-phase" (or quadrature) component. For the MaxMin instrument, the results are expressed as the percent deviation of each component from what the values would be if no secondary field (and therefore no conductor) was present. For the VLF-EM receiver, the tilt angle in degrees of the distorted electromagnetic field with a conductor is measured from that which it would have been if the field was not distorted with no conductor.

Since the fields lose strength proportionally with the distance they travel, a distant conductor has less of an effect than a close conductor. Also, the lower the frequency of the primary field, the further the field can travel and therefore the greater the depth penetration.

The VLF-EM uses a frequency range from 13 to 30 kHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is



more susceptible to clay beds, electrolyte-filled fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up. Consequently, the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. (In places it can be used instead of IP). However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

SURVEY PROCEDURE

The survey grid was put in with a baseline running in a 150°E direction and the survey lines running in orthogonal directions, 060°E and 240°E, as shown on the profile and contour maps. The survey lines were placed 100 m apart with stations marked every 50 m.

Tilt angle and quadrature readings of the electromagnetic field from the transmitter station, Seattle (Jim Creek) at 24.8 kHz, were also taken at the 50 m stations with the operator facing west.

A total of 7,100 line meters of VLF-EM survey were carried out.

COMPILATION OF DATA

The VLF-EM tilt angle and quadrature data were input into a computer. A profile map of both tilt angle and quadrature data was profiled onto a base map, GP-1, at a scale of 1:5,000. The tilt angle data were 4-point Fraser-filtered and then the filtered data plotted and contoured onto a second base map, GP-2, also at the a scale of 1:5,000.

DISCUSSION OF RESULTS

The VLF-EM survey has revealed two conductive zones within the survey area. These have been labeled by the upper case letters A and B.

Conductor A occurs on the northeastern part of the survey area. It strikes in a northwesterly direction which is the predominant direction of structure in this area. The minimum strike length is 500 meters with it being open to the southeast. In addition, the anomaly at L-100S, 125W could be a northerly continuation of conductor A which would extend the minimum strike length to 900 meters with it being open to the northwest and to the southeast.

Conductor B occurs within the western part of the survey area also striking in a northwesterly direction. Its minimum strike length is 900 meters with it being open both to the northwest and to the southeast.

The probable cause of both conductors is regional structure, since (1) this is the predominant direction of structure within this area and (2) the reading interval is 50 meters, which is more conducive to broader conductors such as regional structure. Also the quadrature response indicates that the conductor has poor conductivity which is more indicative of structure. An example of a good conductor would be a massive sulphide vein or a graphitic shear zone. The type of structure is probably faulting or shearing since these types are more likely to contain conductive material.


However, as Christie has stated, northwest-trending fractures are the most favourable for prospecting for economic mineralization. Though the causative source of the VLF-EM conductors may be faulting, sulphide mineralization may occur along the conductor/fault or be associated with it.

More favourable areas for mineralization would be areas of cross-structure. Within VLF-EM conductors, these areas are often indicated by anomalous highs within the conductors. Examples of this would be, (1) for conductor A, (L-600S, 125W), (L-700S, 125W), and (L-800S, 75W) and (2) for conductor B, (L-400S, 400W) and (L-600S, 475W).

Both conductors A and B appear to be truncated in the area of line 500 S. Quite possibly this may be due to a northeasterly-trending fault. If this is the case, it would appear that the northwestern part of each conductor has been faulted to the northeast relative to the southeastern part. This would then mean that this area would be of exploration interest since it is an area of cross-structure.

Yours sincerely,

GEOTRONICS SURVEYS LTD.


David G. Mark, P.Geo.,
Geophysicist



July 17, 1995

SELECTED BIBLIOGRAPHY

Christie, R. L., Bennett, Cassiar District, British Columbia, Sheet 104 M, (with geological descriptive notes), Map 19-1957, Geol. Surv. of Can., 1957

Assessment reports on adjacent Westmin property (previously held by Texaco)



GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify that:


I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

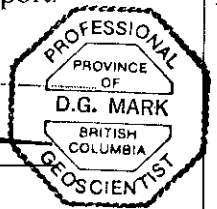
I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at #405 - 535 Howe Street, Vancouver, British Columbia.

I further certify that:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
2. I have been practicing my profession for the past 29 years, and have been active in the mining industry for the past 32 years.
3. This report is compiled from data obtained from a VLF-EM survey carried out over a portion of the Tutshi Claim Group from April 4 to 6, 1997, carried out by Tim Smith, geophysical technician, employed by Kea-Do Explorations Ltd.
4. I do not hold any interest in Kea-Do Explorations Ltd., nor in the properties discussed in this report, nor in any properties held by Kea-Do Explorations Ltd. nor do I expect to receive any interest as a result of writing this report.

May 27, 1997


David G. Mark, P. Geo.,
Geophysicist



ALASKA

YUKON
TERRITORY

NORTHWEST
TERRITORIES



WHITEHORSE

PROPERTY
LOCATION

SKAGWAY
HAINES

WATSON LAKE

Pacific
Ocean

FORT
NELSON

BRITISH
COLUMBIA

ALBERTA

DAWSON CREEK

MACKENZIE

PRINCE
RUPERT

PRINCE
GEORGE

QUESNEL

WELLS

BELLA
COOLA

WILLIAMS
LAKE

KAMLOOPS

VANCOUVER

USA

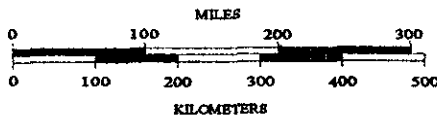
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KEA-DO EXPLORATION LTD.

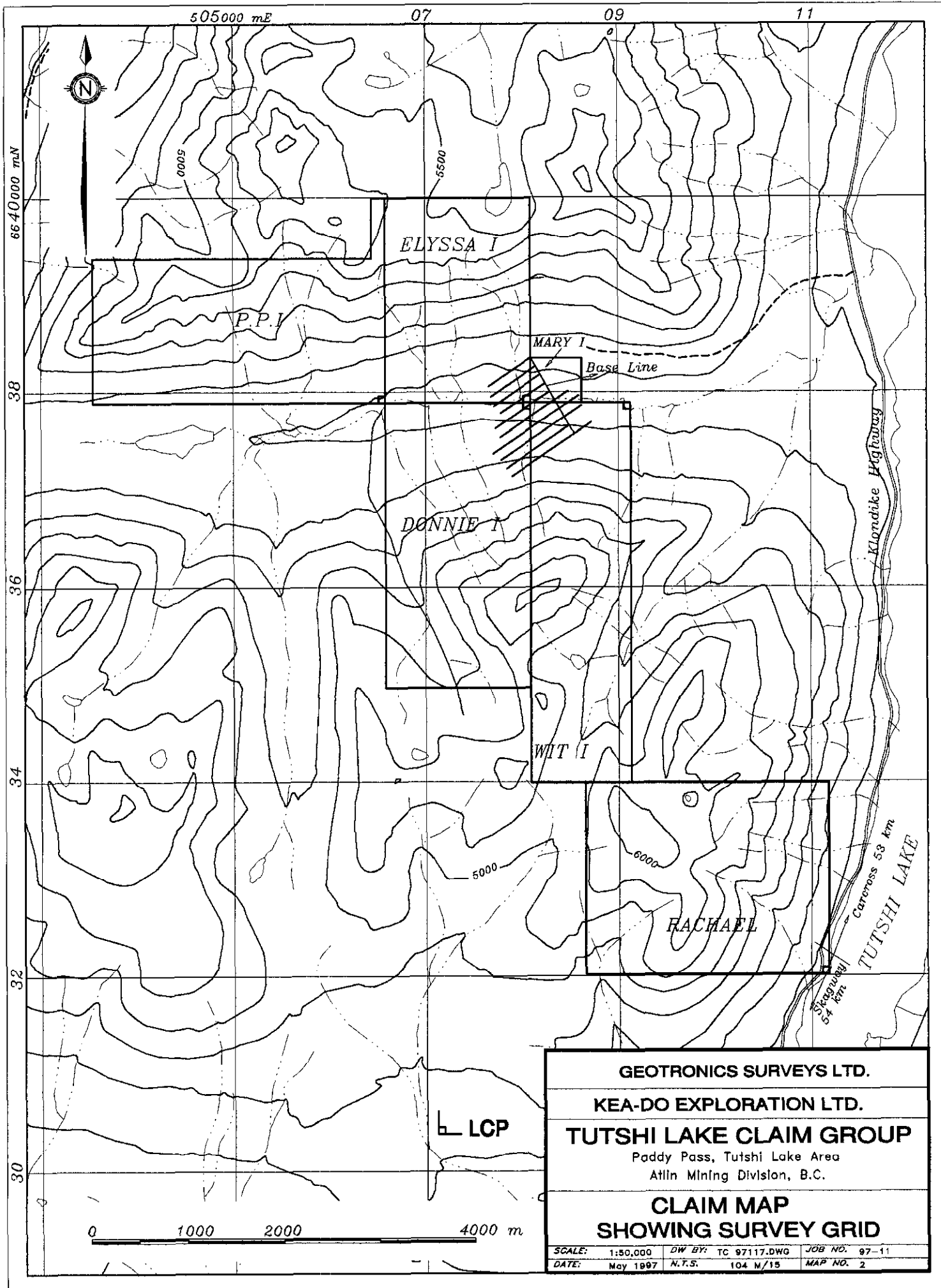
TUTSHI LAKE CLAIM GROUP

Paddy Pass, Tutshi Lake Area
Atlin Mining Division, BC

LOCATION MAP



SCALE:	DRAWN BY: TC96117-C	JOB No: 97-11
DATE: MAY, 1997		MAP No: 1

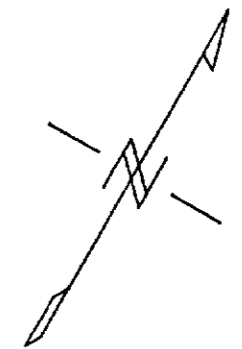


GEOTRONICS SURVEYS LTD.		
KEA-DO EXPLORATION LTD.		
TUTSHI LAKE CLAIM GROUP		
Paddy Pass, Tutshi Lake Area Atlin Mining Division, B.C.		
CLAIM MAP		
SHOWING SURVEY GRID		
SCALE: 1:50,000	DW BY: TC 97117.DWG	JOB NO. 97-11
DATE: May 1997	N.T.S. 104 N/15	MAP NO. 2

L LCP

21

25,096

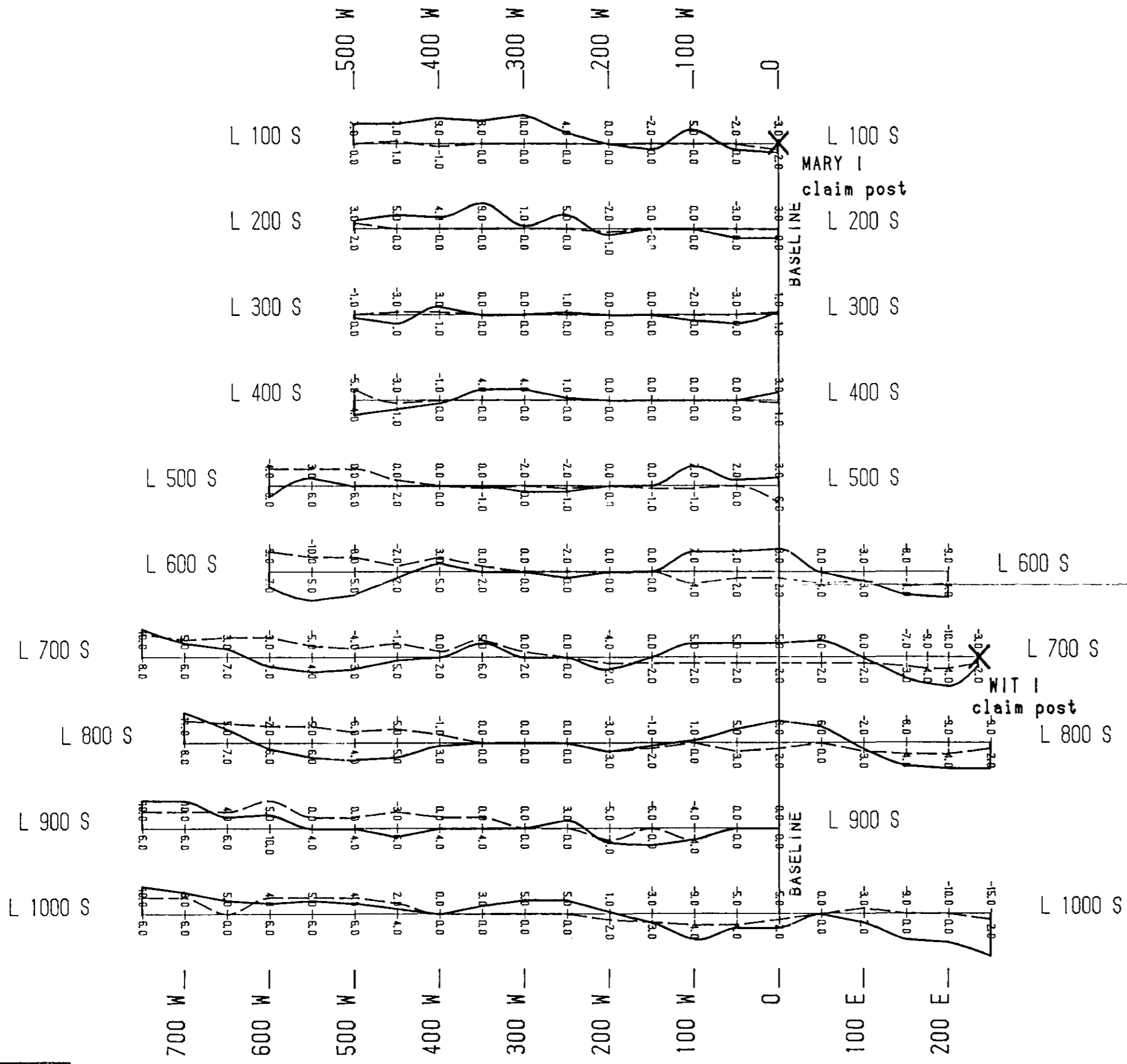
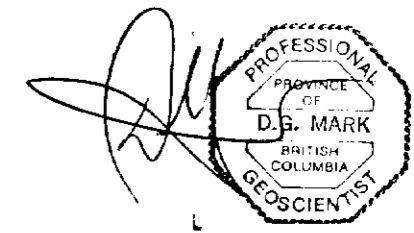


INSTRUMENTATION:

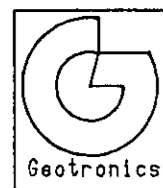
Geonics EM-16
VLF Transmitter: Jim Creek, 24.8 KHz
Transmitter direction: SE

VLF-EM Profiles:

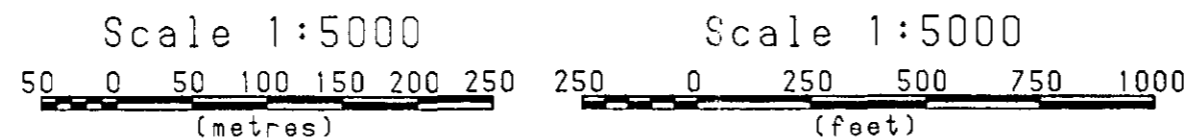
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- - - Quadrature (15 deg per cm)



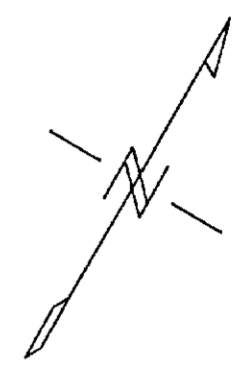
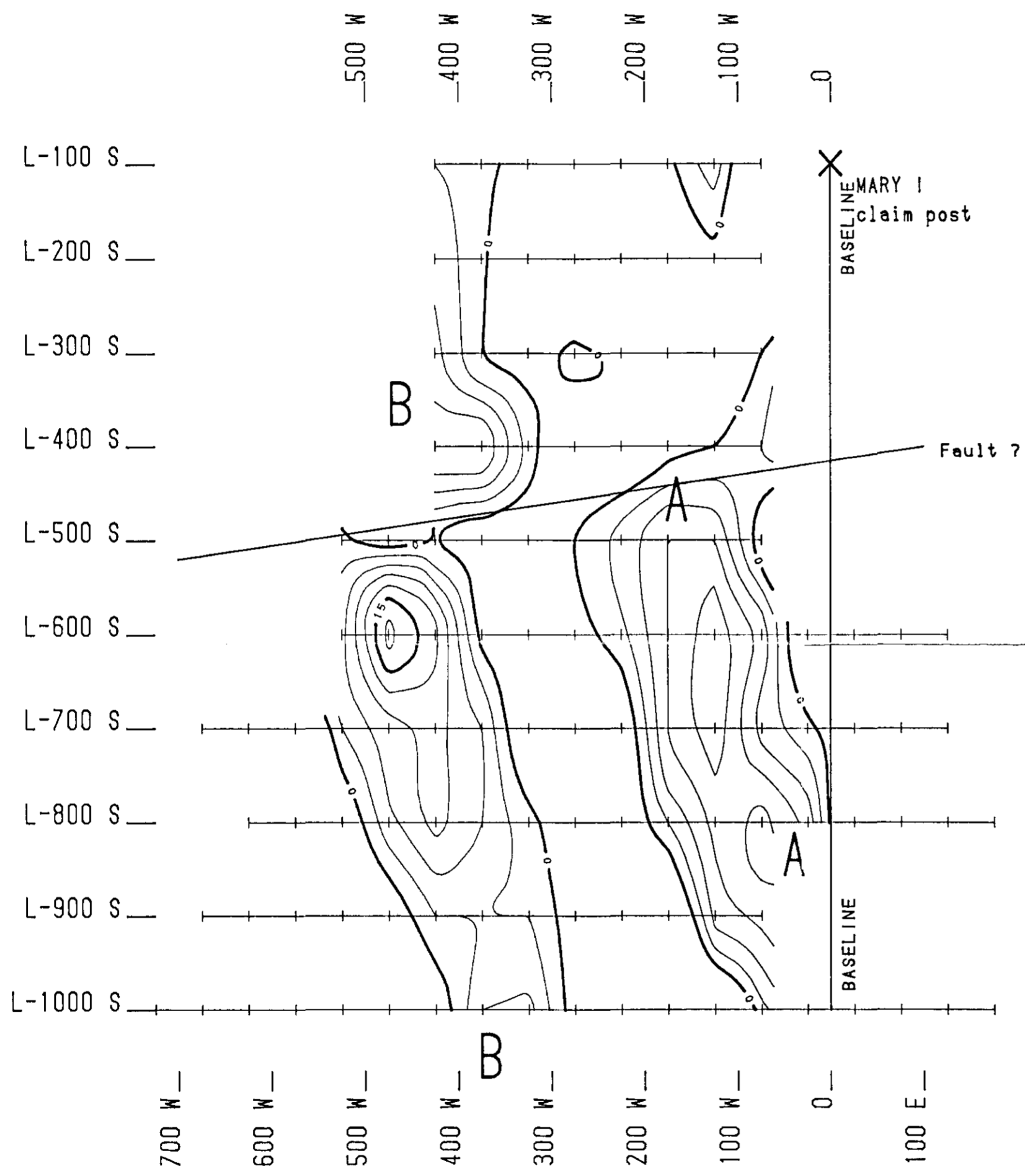
GEOTRONICS SURVEYS LTD.				
KEA-DO EXPLORATIONS LTD.				
TUTSHI LAKE CLAIM GROUP Paddy Pass, Tutshi Lake Area Atlin Mining Division, B.C.				
VLF-EM SURVEY STACKED PROFILE PLAN				
Drawn by: DVO	Job No. 97-11	NTS 93M/15	Date Apr. 97	Map No. Gp-1



Data Reduction by:
GEOTRONICS SURVEYS LTD.
VANCOUVER B.C.



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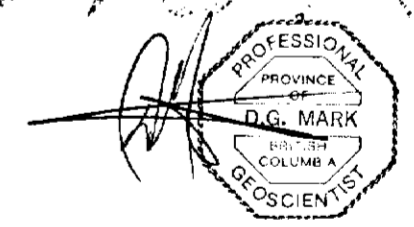
INSTRUMENTATION:
 Geonics EM-16
 VLF Transmitter: Jim Creek, 24.8 KHz
 Transmitter direction: SE

CONTOUR INTERVAL: 3 deg

A-A : VLF-EM anomaly

GEOLOGICAL SURVEY BRANCH
 ASSESSMENT REPORT

25,096



GEOTRONICS SURVEYS LTD.				
KEA-DO EXPLORATIONS LTD.				
TUTSHI LAKE CLAIM GROUP Paddy Pass, Tutshi Lake Area Atlin Mining Division, B.C.				
VLF-EM SURVEY CONTOUR PLAN (Fraser-filtered)				
Drawn by: DVO	Job No. 97-11	NTS 93M/15	Date Apr. 97	Map No. 6p-2



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