GEOPHYSICAL INVESTIGATION OF THE RABBIT CLAIMS

(Electromagnetic and Magnetometer Surveys)

SELWYN PROJECT, EARN LAKE AREA, WHITEHORSE MINING DIVISION, Y.T.

Lat: 62° 43'N Long: 134° 12'W NTS: 105 L9

Field Work performed within the period March 1 - April 4, 1982

Claims: RABBIT 1-128

May 12, 1982

Alan R. Scott

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 16,000.

P. Watson

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

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APPENDICES

Introduction

During the period March 1 to April 4, 1982, a linecutting and geophysical survey program was completed over portions of Anaconda's Selwyn Project claims. This report is concerned with the portion of that work done on the RABBIT claims.

The purpose of the Geophysical work was to define the location, and further investigate electromagnetic conductors detected on an airborne survey completed in the spring of 1981 (flown by Geoterrex and previously submitted by Carlson, 1981).

This report describes the methodology of the geophysical surveys conducted on the RABBIT claims, presents the data, and discusses the results.

Location and Access

Anaconda's Selwyn Project is located about midway between the towns of Mayo and Faro, Yukon Territory (Drawing 1). This winter's work was conducted out of a central base camp located on the north shore of Earn Lake, utilizing helicopter support for local access. Access to the base camp was by fixed wing aircraft from Whitehorse.

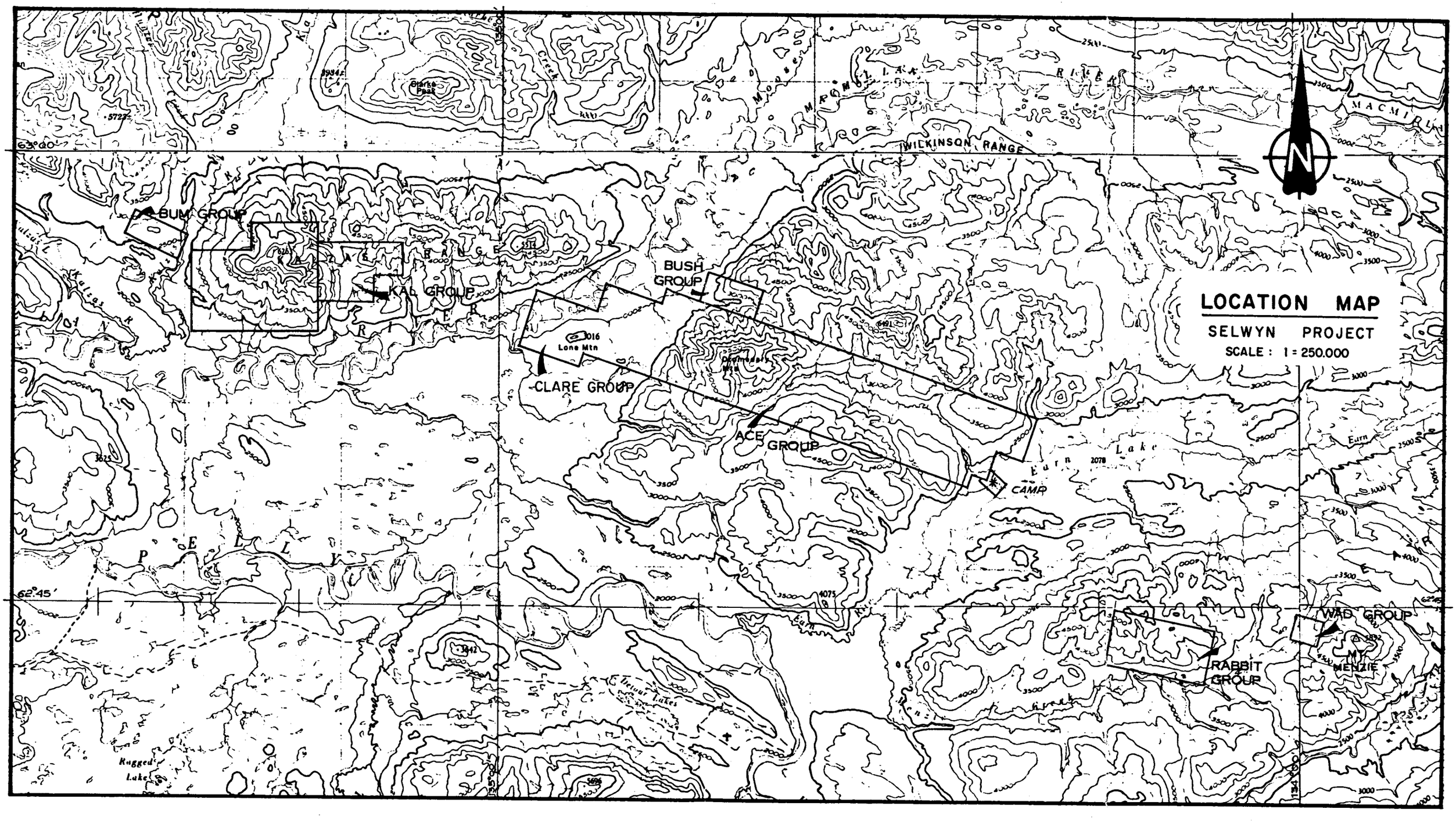
Ground Control

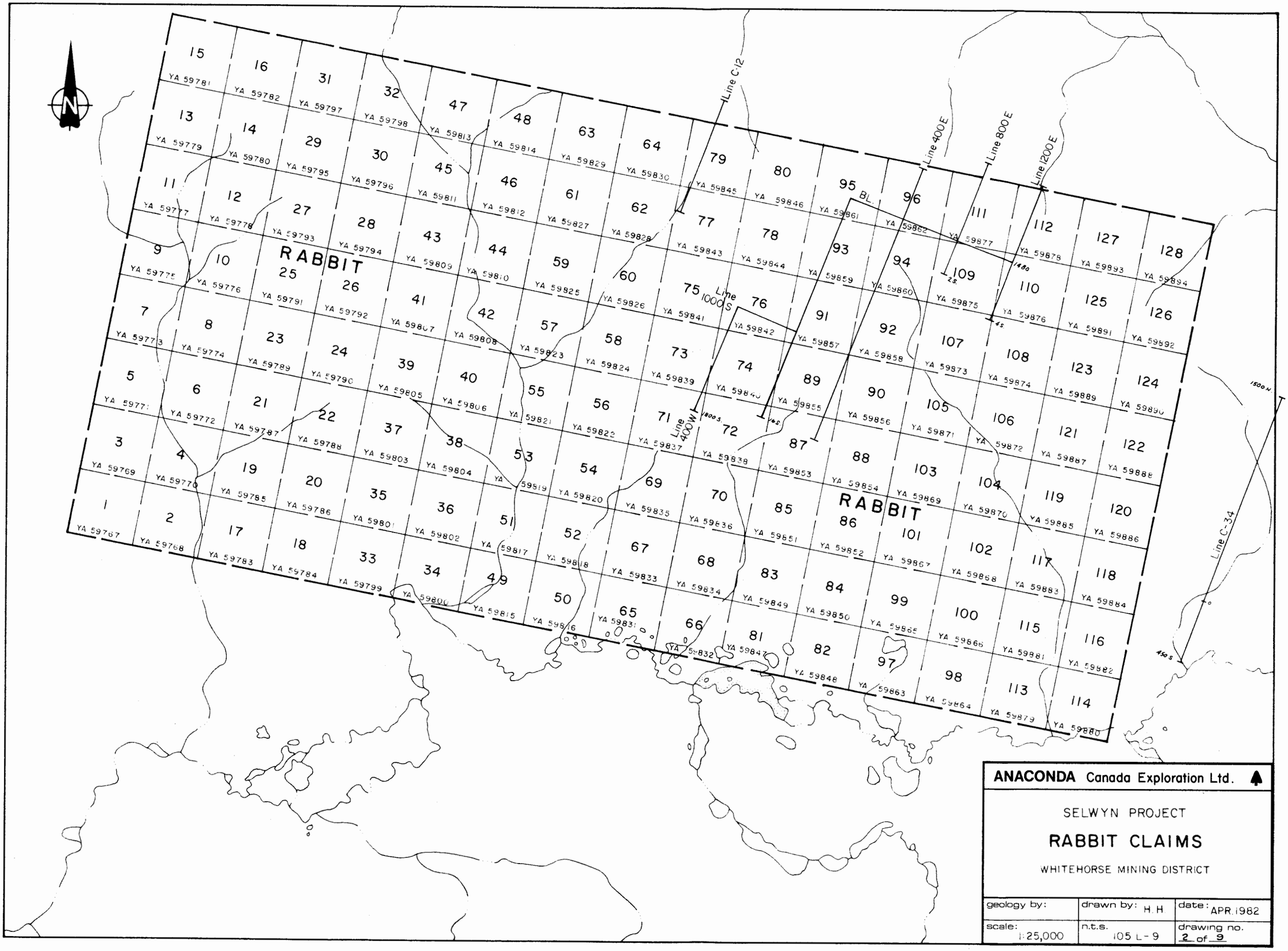
The location of the grids/traverses was chosen by reference to the helicopter EM survey flight path recovery and topographic maps. All base lines or traverses were turned off by compass, and cross lines by a nail board. Linecutting was accomplished by back sighting along pickets, and the quality of the lines is very good. Chaining of stations was by taut chain along the slope, with pickets placed at 25 meter intervals. The angle of slope was measured by inclinometer. The lines were tied in to topographic features wherever possible, for transfer to the location map (Drawing 2).

LOCATION MAP

SELWYN PROJECT

SCALE : 1 = 250.000





ANACONDA Canada Exploration Ltd.

SELWYN PROJECT

RABBIT CLAIMS

WHITEHORSE MINING DISTRICT

geology by:	drawn by: H.H	date: APR.1982
scale: 1:25,000	n.t.s. 105 L-9	drawing no. 2 of 9

Claims

The RABBIT claims are located 33 kms southeast of Dromedary Mountain. The NTS sheet for the area is 105 L9. Grant numbers and claim names are listed below:

YA 59767-YA 59894	RABBIT 1-128

Geology

The Selwyn project area lies within the Paleozoic aged Selwyn Basin of the Yukon Territory. Units consist of chert, shale and coarser grained clastic sedimentary rocks. Minor Tertiary high level intrusives and cretaceous biotite quartz monzonites occur. The property geology has been described in more detail by Carlson (1982).

Geophysical Surveys

Electromagnetic Surveys - HLEM

An Apex Parametrics Max Min II electromagnetometer was used for the horizontal loop (HLEM) survey. A back up unit was also available in the event of malfunction. All survey lines were previously slope chained and inclinometer surveyed to maintain close tolerances on the coil spacing and coplanarity of the HLEM survey. Corrections were applied to the HLEM data for the normally small changes from the selected coil spacing of 100 meters for the RABBIT claims.

Electromagnetic Surveys - VLF-EM

A Phoenix unit was used for the VLF survey. Station NLK (Seattle) was used as the transmitter station for the RABBIT grid.

The Phoenix unit measures both the in phase tilt angle and the field strength of the horizontal component. Corrections were applied to the measured field strength by reference to base readings at the Earn Lake camp at approximately hourly intervals.

Magnetometer Survey

A Geometrics Unimag I was used for the magnetometer survey, and a Unimag II as a base station for correction of diurnal variation. Base station readings were obtained at least hourly at the Earn Lake camp, and maximum observed drift from base reading to reading during the time of the survey, was normally less than 20 gammas.

Discussion of Results

The results of the geophysical surveys are plotted as profiles on Drawings 3-9. Lines 400W to 1200E form a reconnaissance scale grid (400 m line spacing) in the north east portion of the claim block. Lines C-12 and C-34 are isolated traverses to define the ground location of airborne EM conductors.

Conductor locations and apparent widths have been picked from the 444 Hz in phase data, and are noted on that profile as well as the topographic profile. Any subsequent quantitative interpretation (dip, depth, conductivity thickness product) should be done with some caution owing to the obvious interference between addjacent conductors (for example, line C-12). It should also be noted that somewhat different conductor locations are obtained if the out of phase or higher frequencies are used, for example the 1777 Hz data shows a conductor at 50N which is not apparent on the I/P data at 444 Hz. These ambiguities are representative of a complex geological environment (multiple conductors of varying conductivity).

Magnetic anomalies have been picked on the basis of their half amplitude width and do not imply a width estimate of the source.

VLF conductors have been picked at the inflection point of real crossovers, with horizontal field strength maxima as supporting evidence. In some instances, such as at 350 S on line 1200 E, a broad VLF conductor is indicated.

A detailed verbal description of anomalies will not be given here as the anomaly picks on the profiles are self explanatory. Correlation of these results to geological and/or geochemical work and further interpretation and fill in geophysics (including gravity) based on any positive results from that correlation are required.

Conclusions

The geophysical work on the RABBIT claims confirmed the presence and defined the ground location of several EM conductors and magnetic anomalies detected on the 1981 airborne survey.

Prospecting, geological and geochemical work are required as preliminary follow-up to these geophysical anomalies. If positive results are obtained from that work, fill in geophysical work - including gravity surveying - should be initiated.

Respectfully submitted

Alan Scott
Geophysicist

Distribution: (2) Mining Recorder
(1) I.M.E. Vancouver
(1) J. Corbett - Chief Geophysicist
(1) R. Hall, Project Geologist

Appendix I

STATEMENT OF EXPENDITURES - RABBIT CLAIMS

(linecutting, magnetometer and electromagnetic surveys)

1.	Salaries		
	Eastern Assoc. contract linecutting Mar. 7-11, 2 men 5 days @ 240/man =	2400	
	A. Scott, Geophysicist, Mar. 10-13, 17 5 days @ 190 =	950	
	C. Hrabek, helper, Mar. 10-13, 17, 5 days @ 80 =	400	
	F. Thrane, tech., Mar. 11-13, 18, 4 days @ 100 =	400	
	M. Archambault, geol., Mar. 12,13, 2 days @ 125 =	250	
			4,400
2.	Expenses		
	Meals, accommodation, travel expenses =	1025	
	Camp charges 26 man days @ 45/man day =	1170	
			2,195
3.	Charter aircraft		
	Fixed Wing (ALCAN) supply & personnel flights =	2316	
	Helicopter (TNTA) 12.9 hrs. @ 450/hr. =	5805	
			8,121
4.	Equipment rentals		
	MaxMin II + backup: 2 x 5 days @ 50 =	500	
	Phoenix VLF + backup: 2 x 5 days @ 10 =	100	
	Unimag I + Unimag II: 2 x 5 days @ 15 =	150	
			750
5.	Charges per survey day (towards drafting, report, supervision)		
	5 days geophysical survey @ 200/day =		1,000
	TOTAL EXPENDITURES		16,466

Certification

I, Alan R. Scott, of 4013 W. 14th Avenue, Vancouver, B.C., am employed as a professional geophysicist by Anaconda Canada Exploration Ltd. and have knowledge of the work performed and costs incurred per this report. I further attest that:

1. I graduated with a B.Sc. (geophysics) from the University of B.C. in 1970.

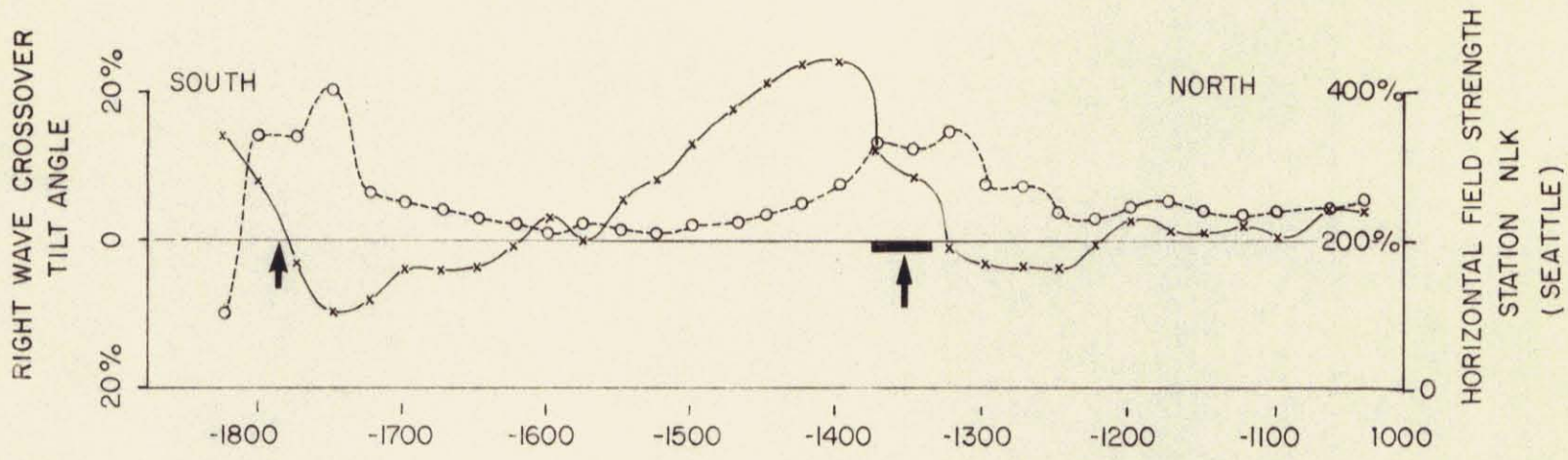
2. That I am a member of the Society of Exploration Geophysicists, and of the Association of Professional Engineers, Geologists, and Geophysicists of the Province of Saskatchewan.

3. That I have been practicing my profession for the past twelve years.

Alan R. Scott
P. Geophysicist

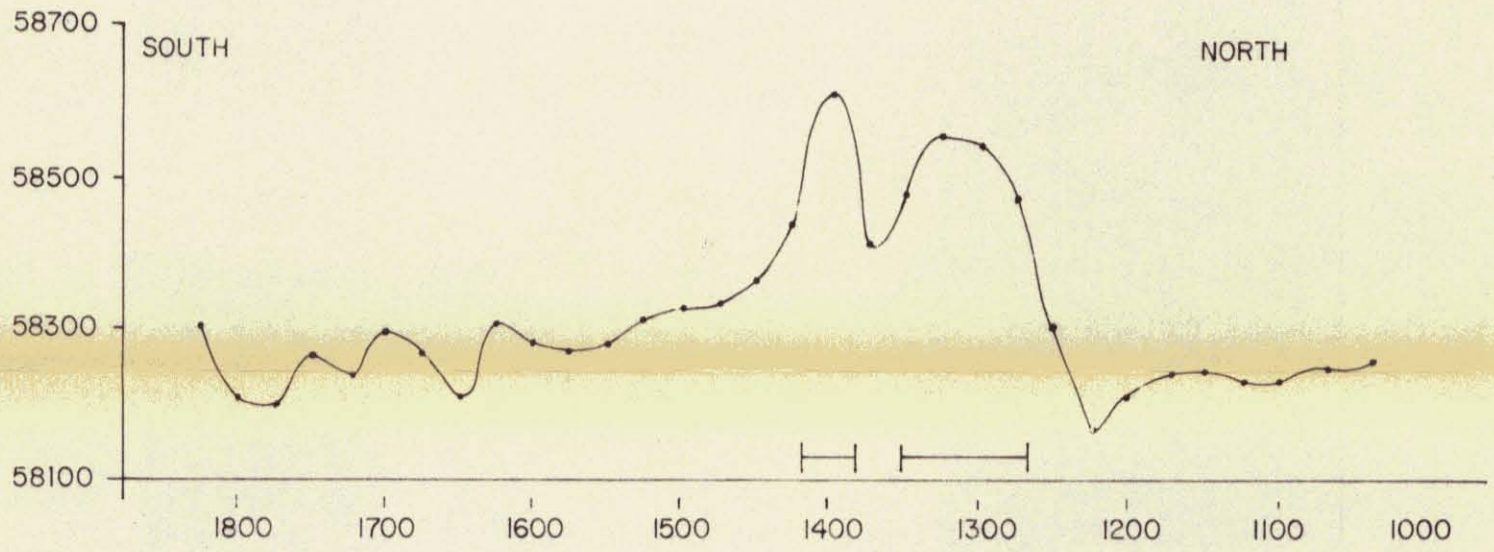
VLF-EM

RIGHT WAVE CROSSOVER TILT ANGLE



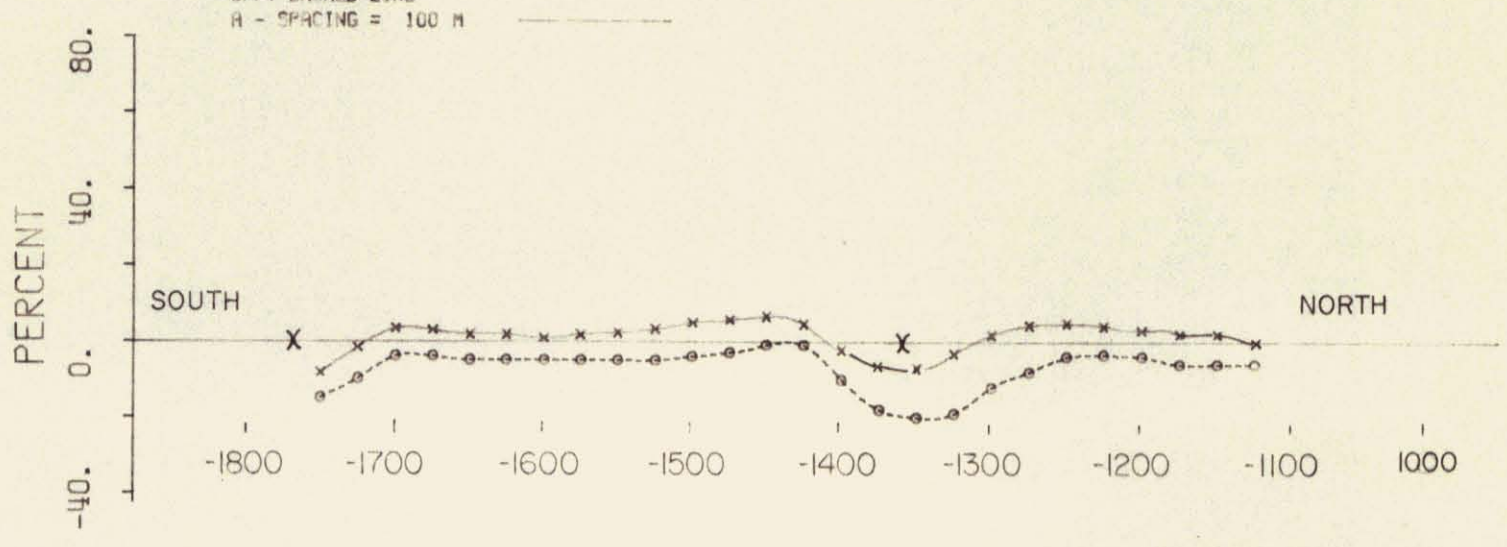
MAGNETOMETER

GAMMAS



HORIZONTAL LOOP - EM

FREQUENCY: 444 HERTZ
I/P: SOLID LINE
O/P: DASHED LINE
A - SPACING = 100 M



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O/P: DASHED LINE
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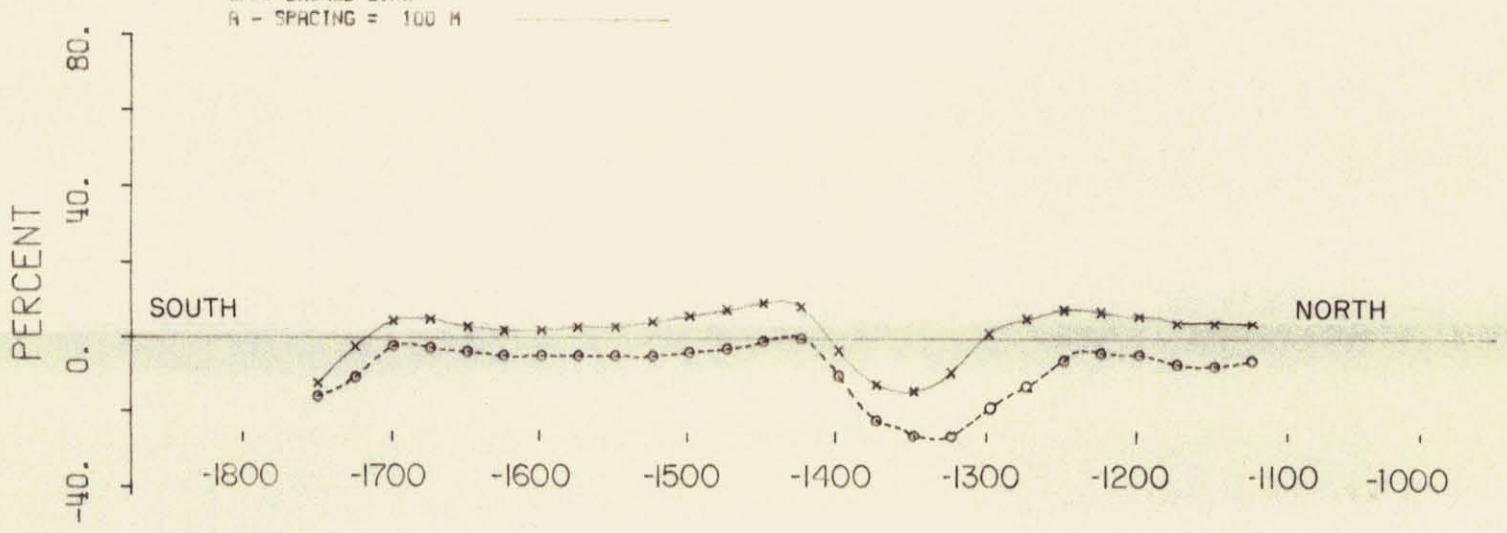

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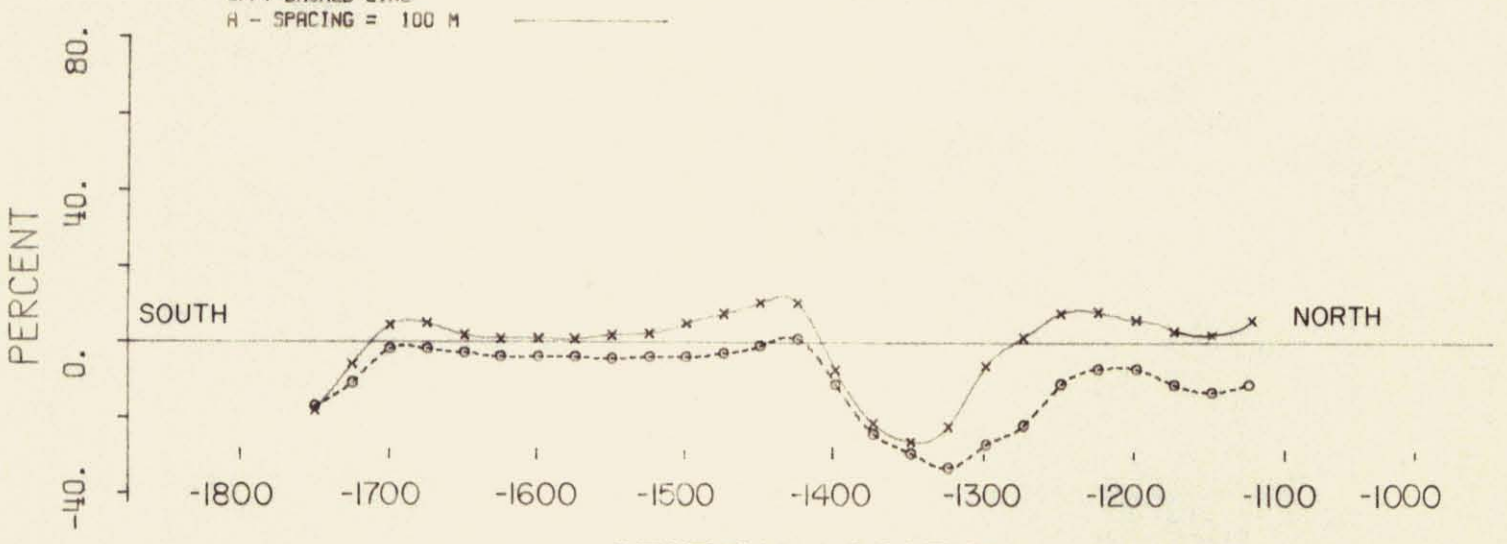
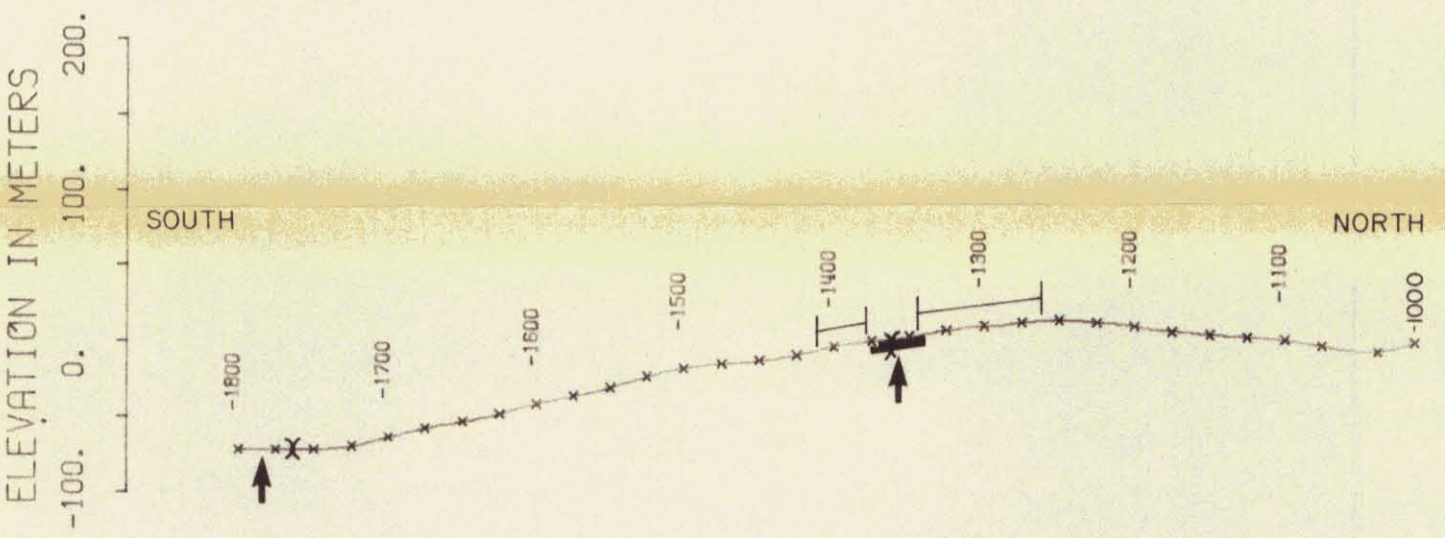
I/P: SOLID LINE
O/P: DASHED LINE
A - SPACING = 100 M



STATION LOCATION

SELWYN PROJECT -- RABBIT LINE 400 WEST

TOPOGRAPHY



LEGEND

Magnetic Anomaly

HLEM Conductor

VLF Conductor

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SELWYN PROJECT

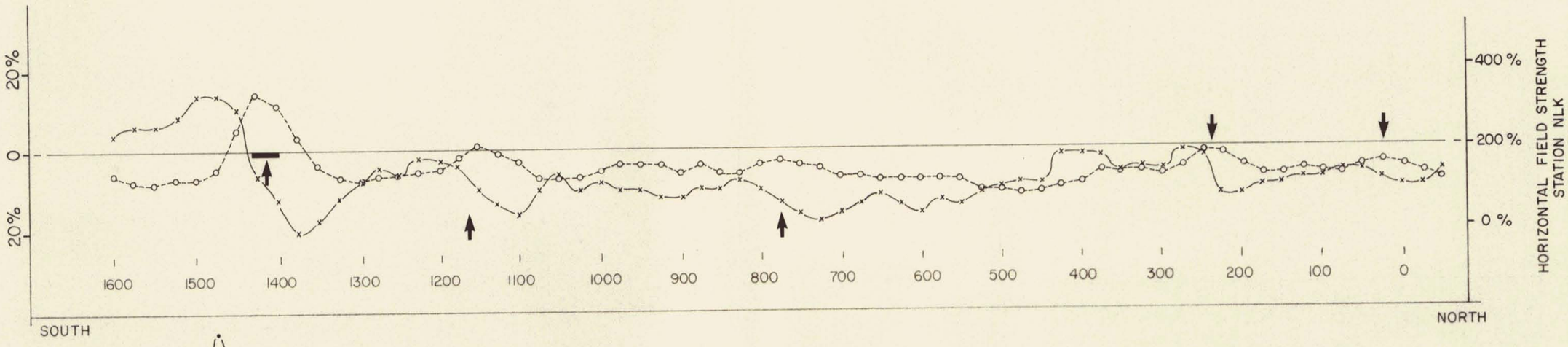
GEOPHYSICAL SURVEY PROFILES

RABBIT CLAIMS

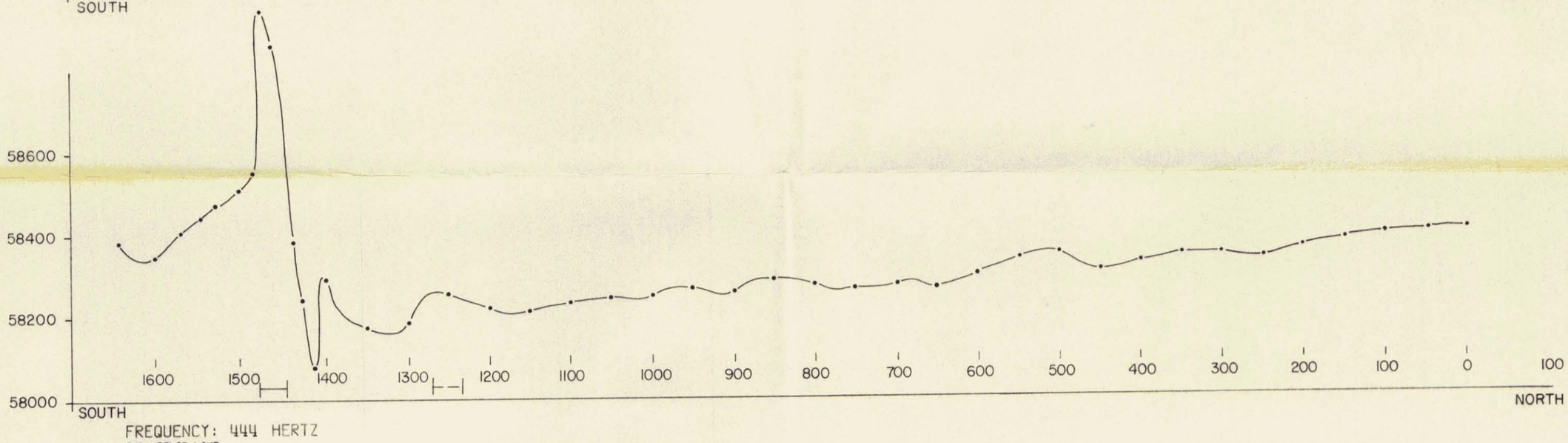
LINE RABBIT-400-W

Compilation by :	Drawn by : C.D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L-16	Drawing No. 3 of 9

VLF - EM
RIGHT WAVE CROSSOVER
TILT ANGLE

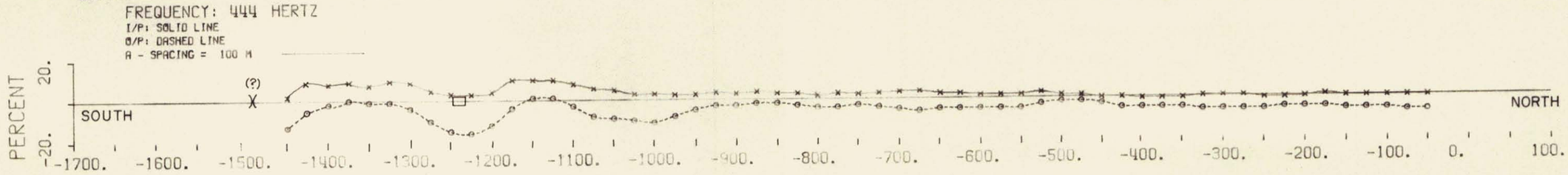


MAGNETOMETER
GAMMAS



HORIZONTAL LOOP - EM

FREQUENCY: 444 HERTZ
I/P: SOLID LINE
O/P: DASHED LINE
A - SPACING = 100 M



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O/P: DASHED LINE
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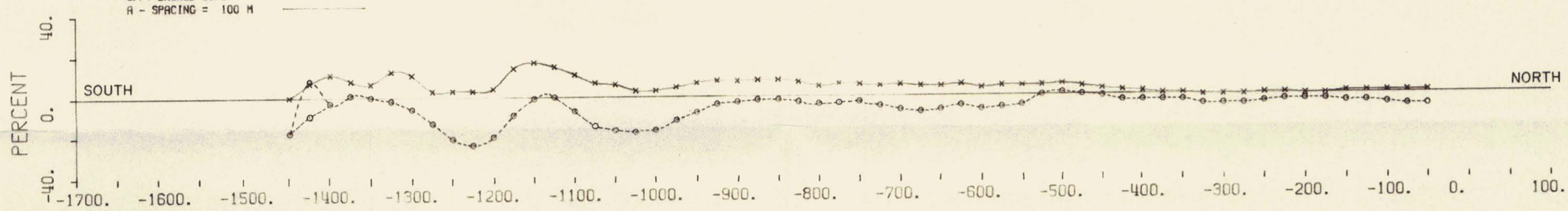

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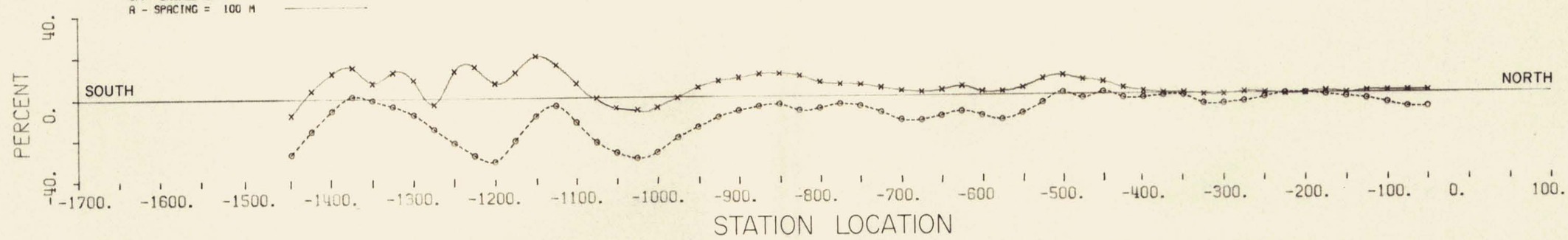
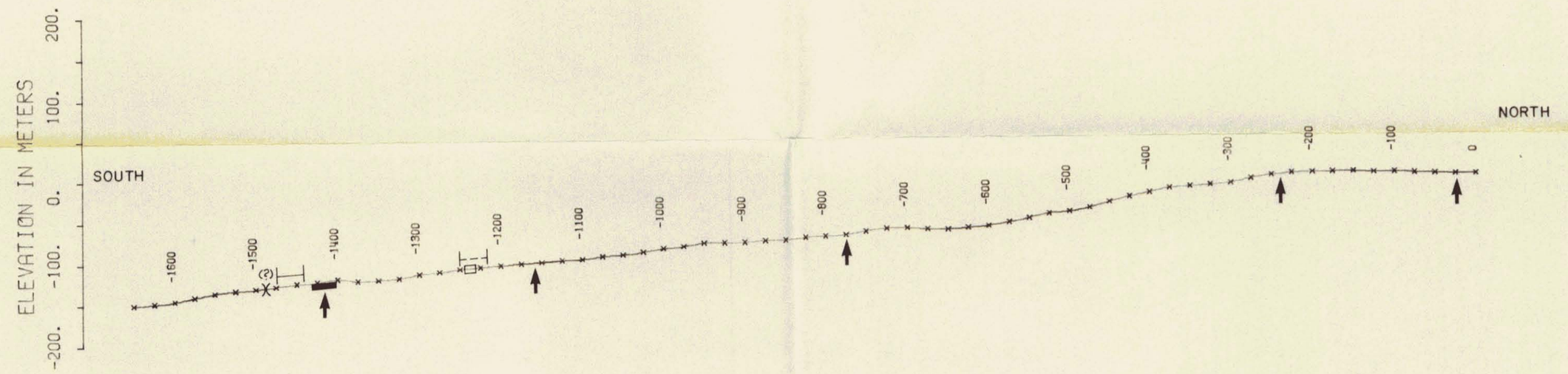
O/P: DASHED LINE
A - SPACING = 100 M



STATION LOCATION

SELWYN PROJECT -- RABBIT LINE 0

TOPOGRAPHY



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LEGEND

- Magnetic Anomaly
- HLEM Conductor (I/P - 444 Hz)
- VLF Conductor

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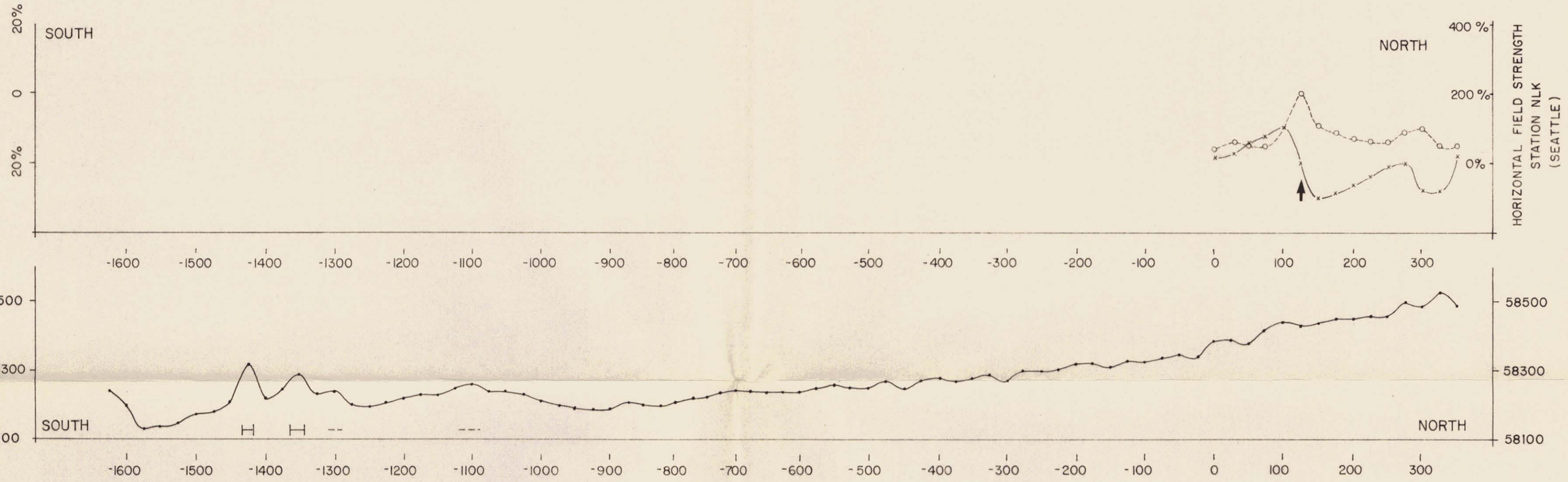
SELWYN PROJECT
GEOPHYSICAL SURVEY PROFILES
RABBIT CLAIMS
LINE RABBIT - 0+00

Compilation by :	Drawn by : C.D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L-16	Drawing No. 4 of 9

VLF - EM

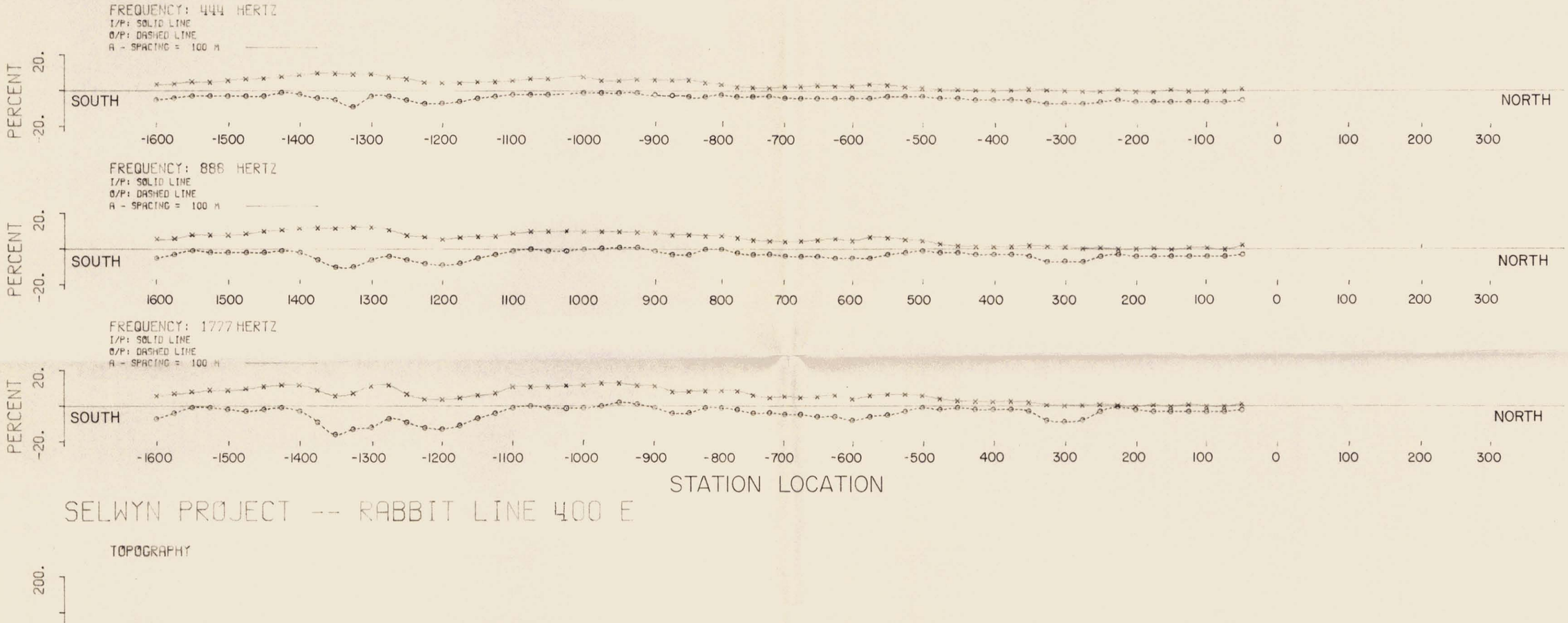
RIGHT WAVE CROSSOVER



MAGNETOMER

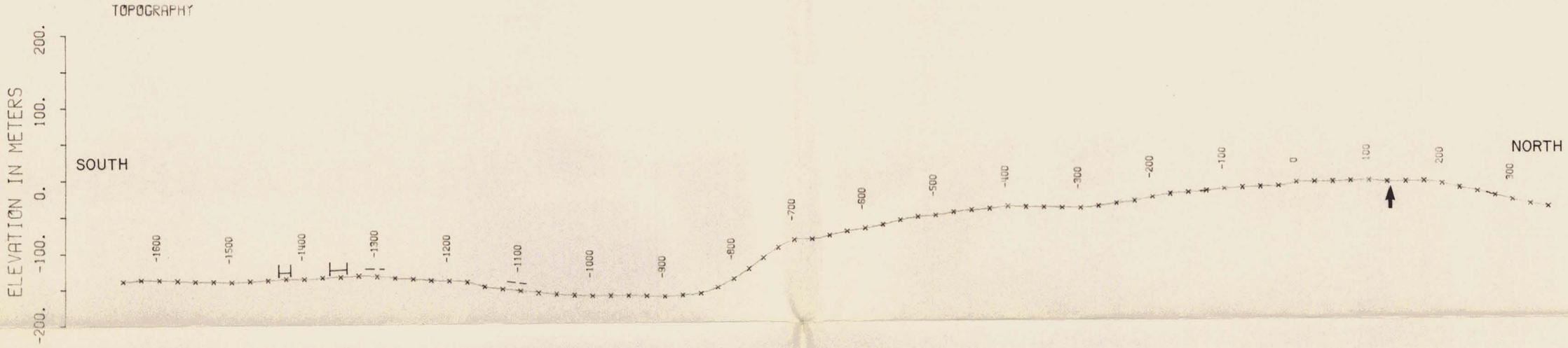
GAMMAS

HORIZONTAL LOOP - EM



SELWYN PROJECT -- RABBIT LINE 400 E

TOPOGRAPHY



LEGEND

- Magnetic Anomaly
- HLEM Conductor (I/P - 444 Hz)
- Anomalous Zone (-- A --)
- VLF Conductor

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ANACONDA Canada Exploration Ltd.

SELWYN PROJECT

GEOPHYSICAL SURVEY PROFILES

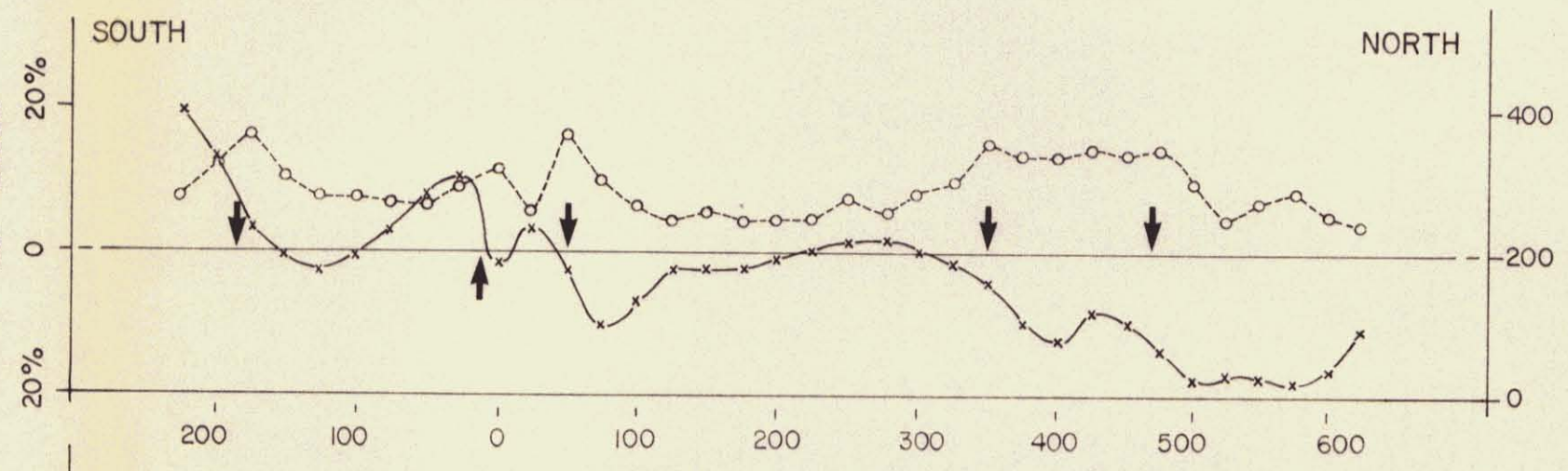
RABBIT CLAIMS

LINE RABBIT - 400 E

Compilation by :	Drawn by : C.D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L-16	Drawing No. 5 of 9

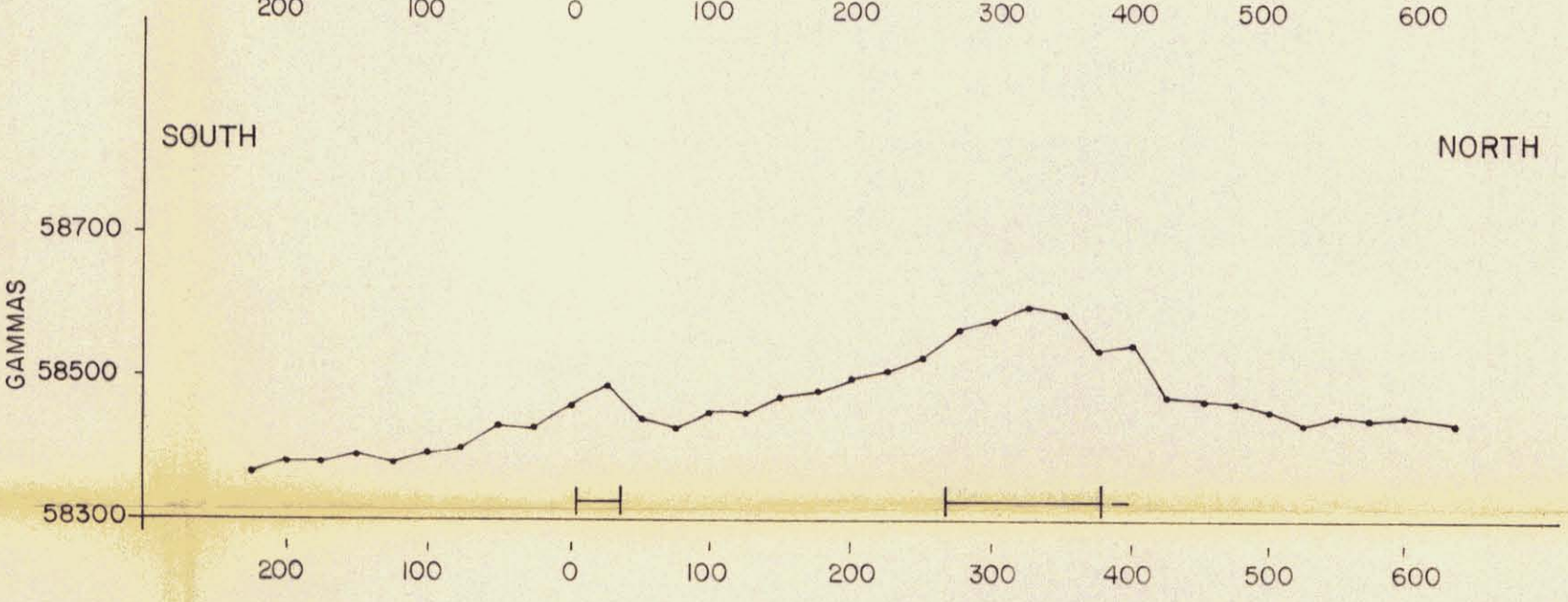
VLF - EM

RIGHT WAVE CROSSOVER TILT ANGLE



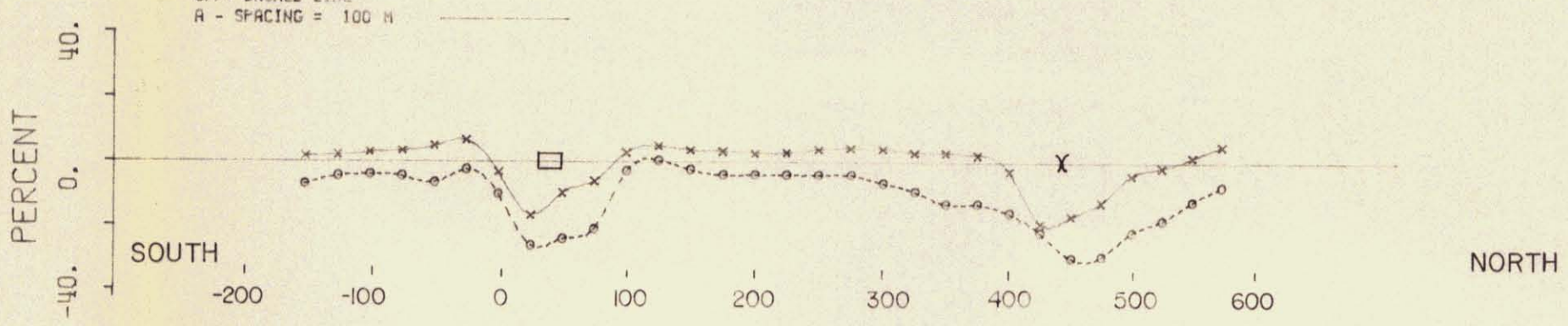
MAGNETOMETER

GAMMAS



HORIZONTAL LOOP - EM

FREQUENCY: 444 HERTZ
I/P: SOLID LINE
O/P: DASHED LINE
A - SPACING = 100 M



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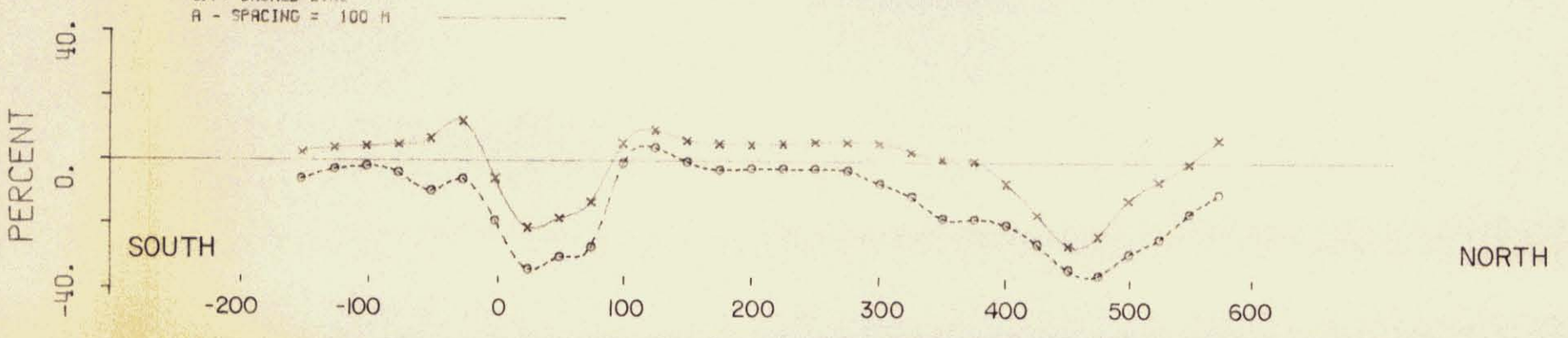

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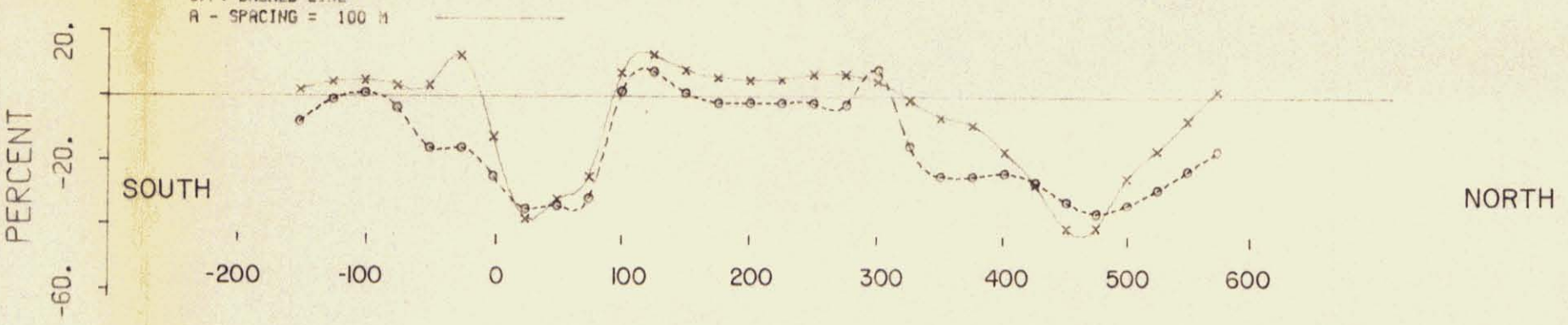
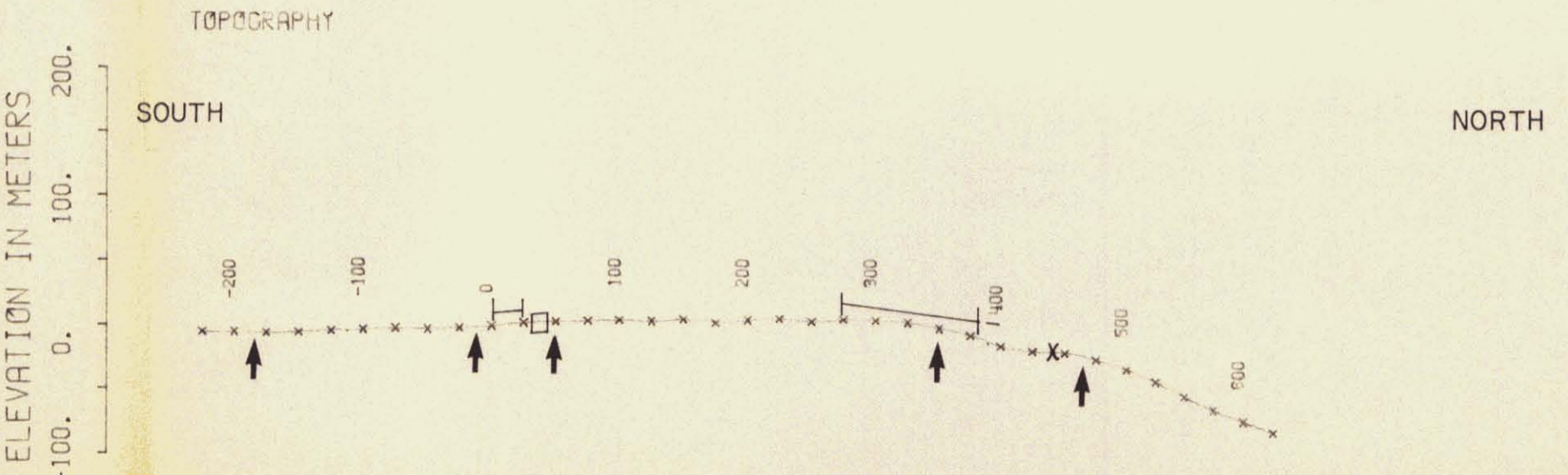


SELWYN PROJECT -- RABBIT LINE 800 E

TOPOGRAPHY



LEGEND

- Magnetic Anomaly
- HLEM Conductor (I/P
- VLF Conductor

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ANACONDA Canada Exploration Ltd.

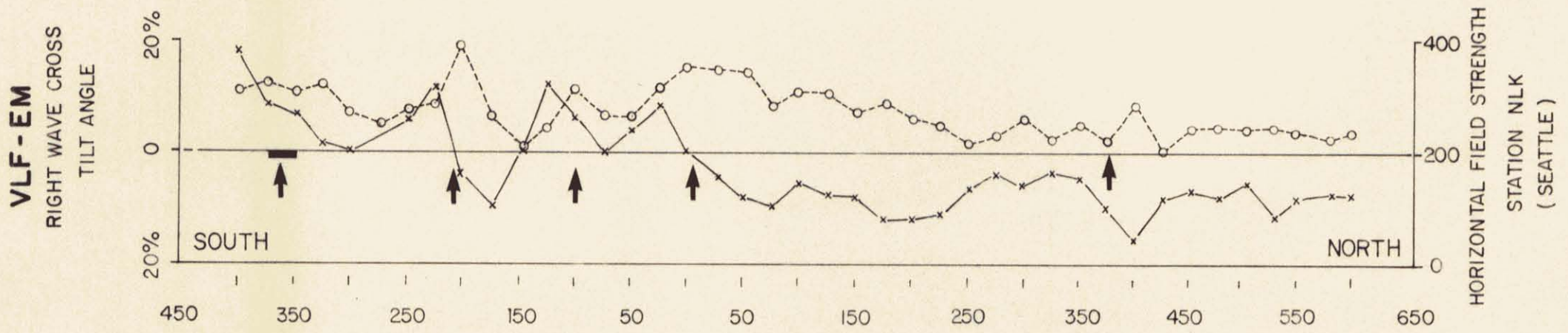
SELWYN PROJECT

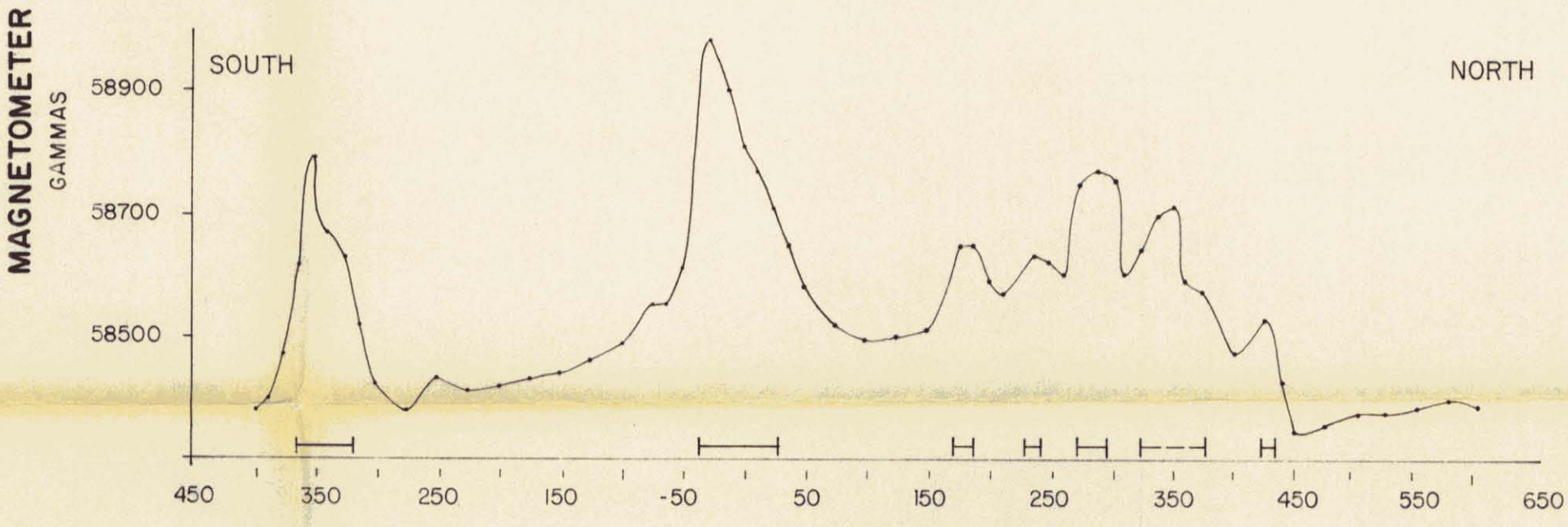
GEOPHYSICAL SURVEY PROFILES

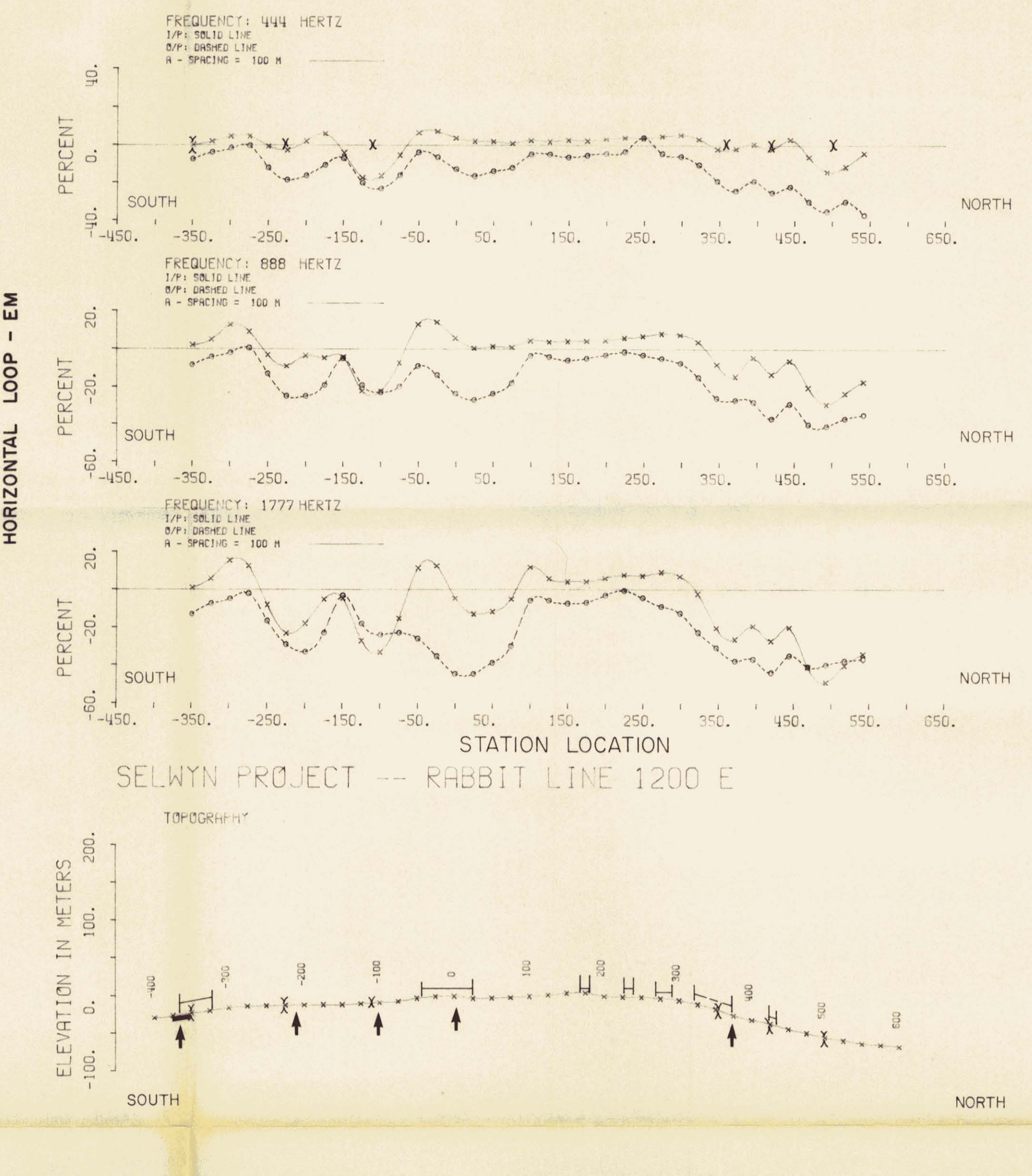
RABBIT CLAIMS

LINE RABBIT-800E

Compilation by :	Drawn by : C.D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L-15	Drawing No. 6 of 9







SELWYN PROJECT -- RABBIT LINE 1200 E

LEGEND

- Magnetic Anomaly
- HLEM Conductor (I/P - 444 Hz)
- VLF Conductor

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ANACONDA Canada Exploration Ltd.

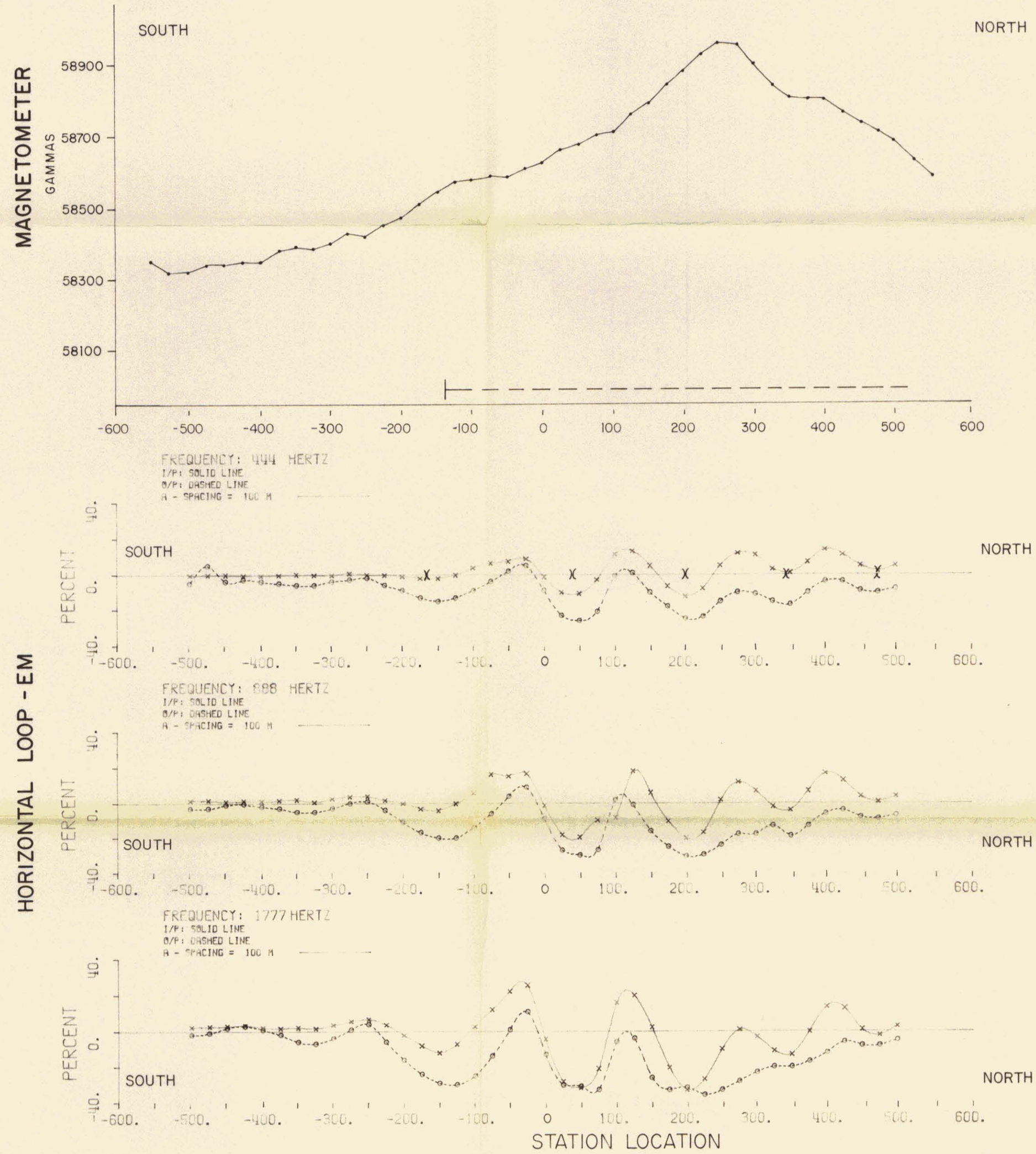
SELWYN PROJECT

GEOPHYSICAL SURVEY PROFILES

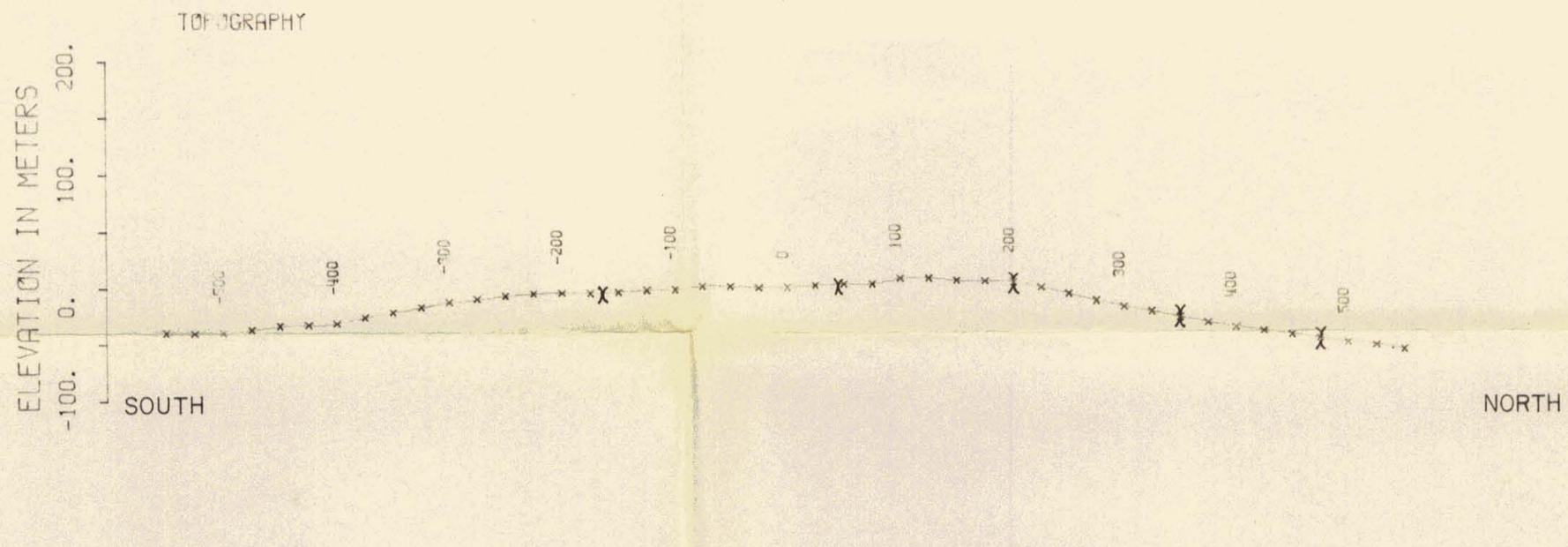
RABBIT CLAIMS

LINE RABBIT - 1200·E

Compilation by :	Drawn by : C. D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L - 16	Drawing No. 7 of 9



SELWYN PROJECT -- RABBIT LINE C12



LEGEND

Magnetic Anomaly

HLEM Conductor (I/P - 444 Hz)

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ANACONDA Canada Exploration Ltd.

SELWYN PROJECT

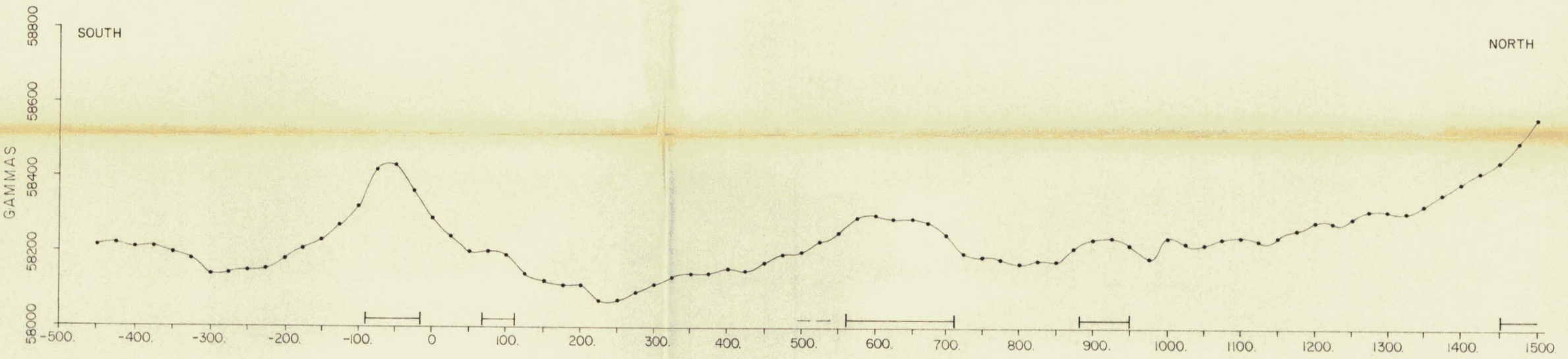
GEOPHYSICAL SURVEY PROFILES

RABBIT CLAIMS

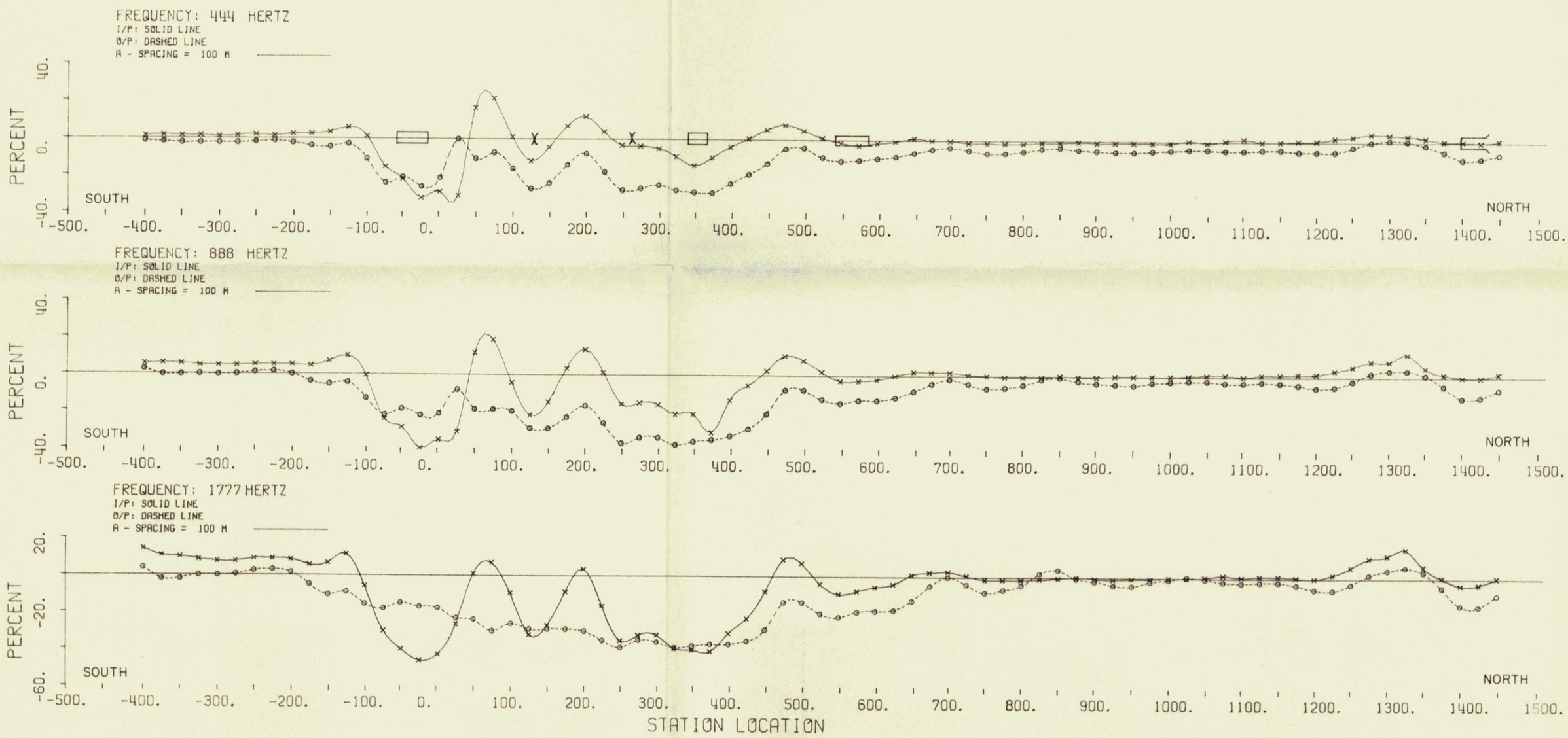
LINE RABBIT - C·12

Compilation by :	Drawn by : C.D.	Date : APRIL 1982
Scale : 1 : 5000	N.T.S. 105 L-16	Drawing No. 8 of 9

MAGNETOMETER



HORIZONTAL LOOP - EM



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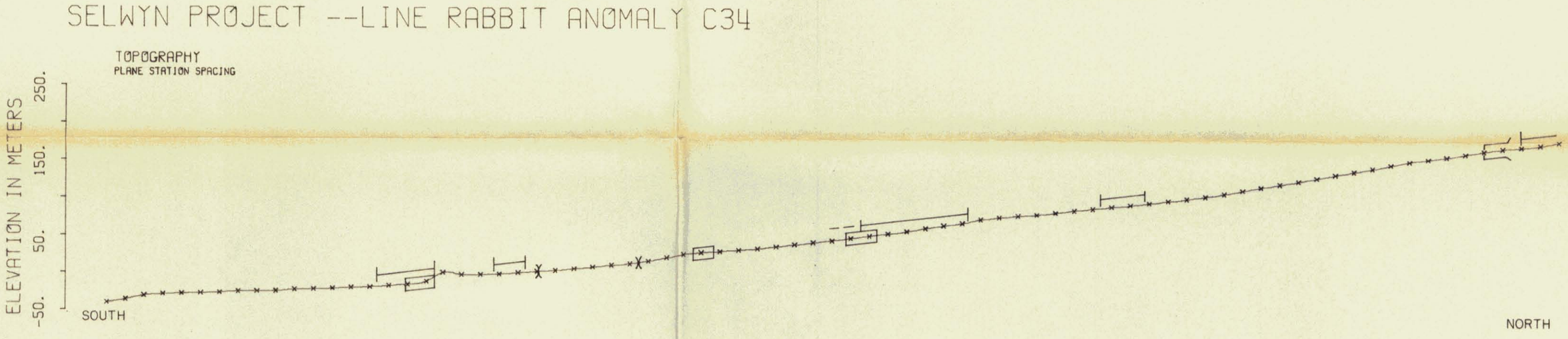

LEGEND

Magnetic Anomaly

HLEM Conductor (I/P - 444 Hz)

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ANACONDA Canada Exploration Ltd.

SELWYN PROJECT

GEOPHYSICAL SURVEY PROFILES

RABBIT CLAIMS

LINE RABBIT·C34

geology by:	drawn by: H. H.	date: APR. 1982
scale: 1:5000	n.t.s. 105 L - 9	drawing no. 9 of 9