GEOPHYSICAL INVESTIGATION OF THE WAD CLAIMS

(Electromagnetic, Magnetometer and Gravity Surveys)

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

Lat: 62° 44'N Long: 133° 59'W NTS: 105 K12

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

Claims: WAD 1-16

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 $ 9,000

Peterson

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

090825

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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 WAD 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).

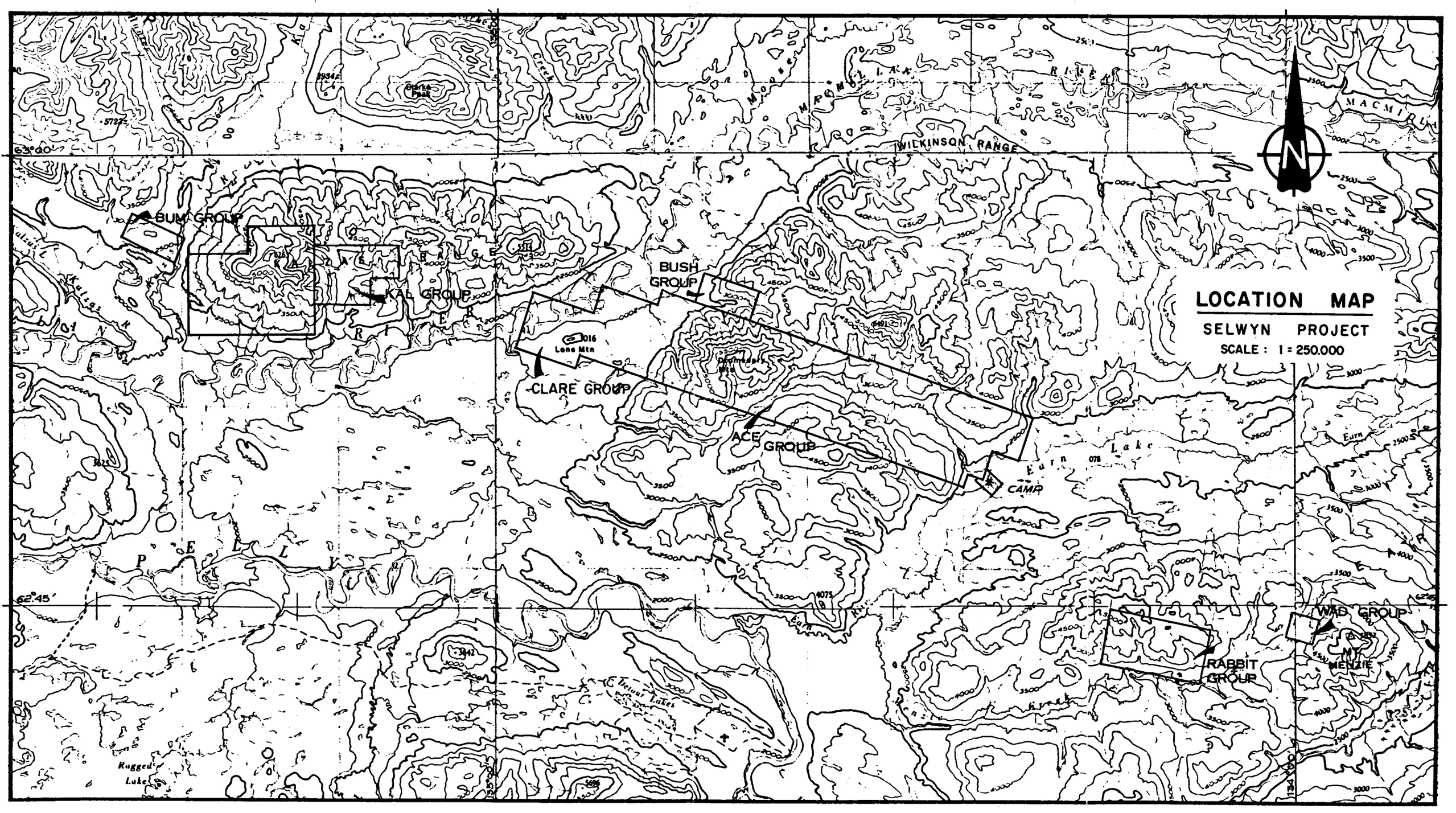
This report describes the methodology of the geophysical surveys conducted on the WAD claims, presents the data, and discusses the results.

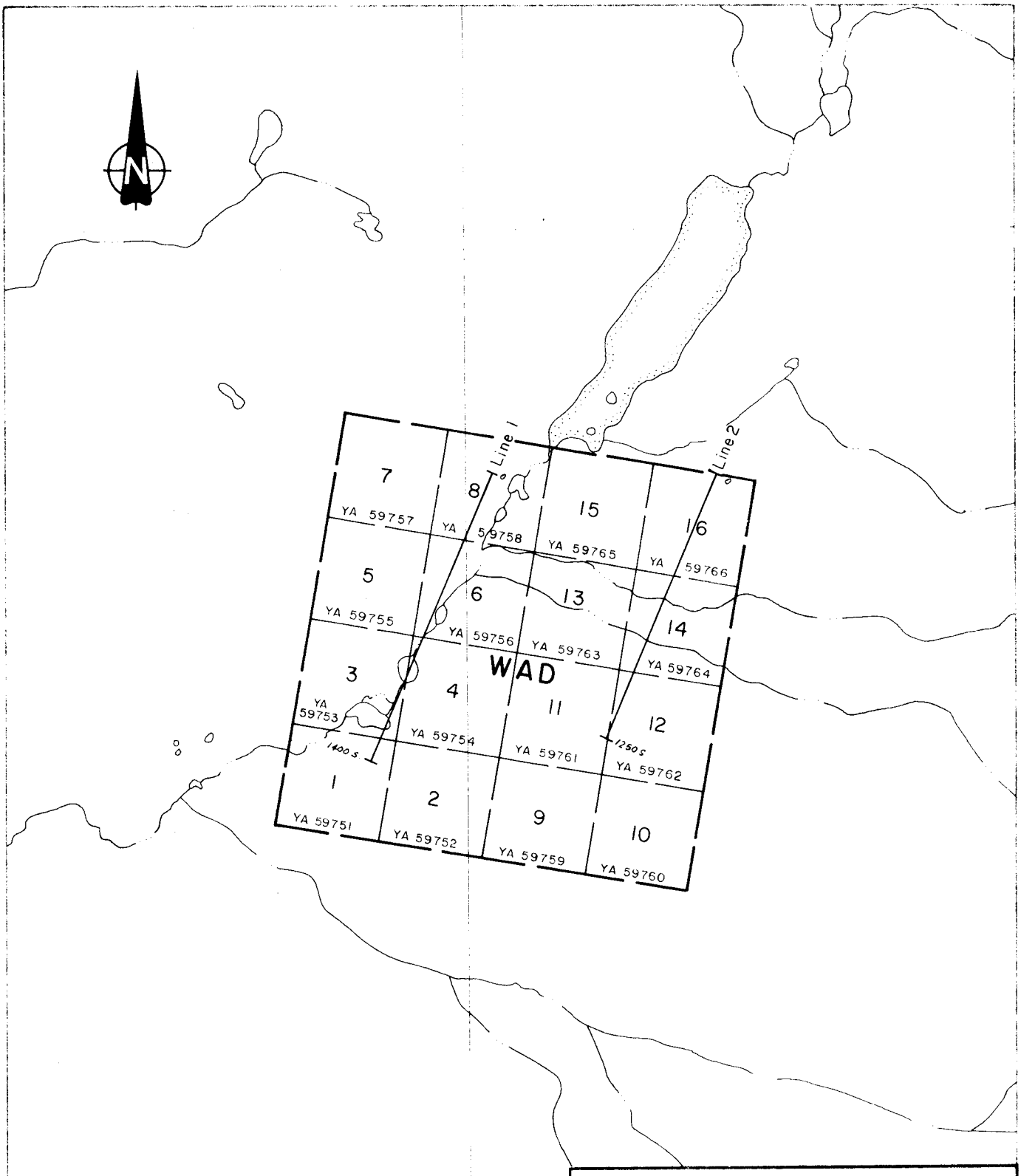
Location and Access

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
N
BUM GROUP
KAL GROUP
BUSH GROUP
CLARE GROUP
ACE GROUP
CAMP
RABBIT GROUP
WAD GROUP
MT. MENZIE
WILKINSON RANGE
MACMILLAN
PELLY
RIVER
Lone Mtn
Rugged Lake
Victoria Lakes
Earn Lake
63°00'
62°45'



ANACONDA Canada Exploration Ltd

SELWYN PROJECT

WAD CLAIMS

MAYO MINING DISTRICT

geology by	drawn by H.H.	date APR. 1982
scale 1:25,000	N.T.S. 105 K-12	drawing no. 2 of 4

Claims

The WAD claims are located 3.2 kms west of Mt. Menzie. The NTS sheet for the area is 105 K12. Grant numbers and claim names are listed below:

YA 59751-YA 59766 WAD 1-16

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 WAD 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 WAD survey.

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.

Gravity Survey

A SODIN CG-2 gravity meter was used for the gravity survey. This is a non thermisted meter and base station/sub base station loops at approximately hourly intervals were necessary to ensure adequate control on temperature caused meter drift. Corrections for instrument height and bouguer reduction were effected using standard published formulas (Telford, 1976).

Station elevations were established with a TOPCON EDM/WILD T-16 theodolite. Closures, where possible, indicated an elevation accuracy of $\pm$ 2 cm over 500 meters for this unit.

Overall accuracy of the bouquer gravity values, based on station repeats, is better than $\pm$ .05 milligals.

Discussion of Results

Two independent traverses (lines WAD 1 and WAD 2) were cut, chained, and surveyed on the WAD claims. Both lines were surveyed with HLEM, magnetics, and VLF. Line 1 was also gravity surveyed. The results are plotted as profiles on Drawings 3 and 4.

The location of HLEM conductors and apparent widths have been picked from the 444 Hz in phase data, and are noted on the profile as well as the topographic profile. Any quantitative interpretation of these conductors (such as dip, depth, and conductivity thickness product) should be treated with some caution due to the obvious interference between neighbouring conductors.

The conductors at 640S; line 1 and at 1055S; line 2 are coincident with magnetic highs (The magnetic highs were picked at the half amplitude width and do not imply a width estimate for the source.)

VLF conductors correspond quite closely to the noted HLEM conductor, except for the VLF response at 1300 S on line 1. However, a weak HLEM response is observed at the higher frequency (1777 Hz) coincident with that VLF conductor. VLF did not respond to all HLEM conductive sources, such as at 640 S on line 2.

Interpretation of the gravity profile on line 1 is primarily a matter of where one chooses to select the regional trend. Weak positive highs may be present in the vicinity of stations 600 S, 825 S and 1175 S. None of these residual highs are coincident with conductors.

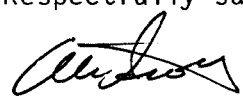
Conclusions

The geophysical work on the WAD claims confirmed the location of several EM conductors detected by the 1981 airborne survey. The two lines surveyed are too far apart to correlate between lines with any confidence.

Conductors located at 640 S; line 1 and at 1055 S; line 2 are coincident with magnetic highs. Weak residual gravity highs (line 1) are not coincident with HLEM conductors.

No further work could be recommended on these claims at this time, unless positive geological, prospecting, and/or geochemical evidence is forthcoming. In that event, detailed magnetics, gravity and HLEM should be undertaken.

Respectfully submitted



Alan Scott
Geophysicist

Distribution:

(2) Mining Recorder ✓
(1) IME - Vancouver
(1) J. Corbett, Chief Geophysicist
(1) R. Hall, Project Geologist

Appendix I

STATEMENT OF EXPENDITURES
(linecutting, chaining, HLEM, VLF-EM, magnetics, gravity surveys)
WAD CLAIMS

1.	Salaries		
	Eastern Associates, contract linecutting, Mar. 12, 13		
	2 men, 2 days @ 240/man =	960	
	A. Scott, geophysicist, Mar. 18 1 day @ 190 =	190	
	C. Hrabek, helper, Mar. 18 1 day @ 80 =	80	
	M. Archembault, geologist, Mar. 20, 27		
	2 days @ 125 =	250	
	F. Thrane, technician, Mar. 20 1 day @ 100 =	100	
	D. Washburn, helper, Mar. 27, 28, 29		
	3 days @ 80 =	240	
	B. Marini, technician, Mar. 27 1 day @ 100 =	100	
			1,920
2.	Expenses		
	Meals, accommodations, travel expenses =	1,025	
	Camp charges 13 man days @ 45/man day =	585	
			1,610
3.	Charter Aircraft		
	Fixed Wing (ALCAN) supply & personnel flights =	2,316	
	Helicopter (TNTA) 13.2 hours @ 450 =	5,940	
			8,256
4.	Equipment rentals		
	Max Min II + backup: 2 x 1 day @ 50/day =	100	
	UNIMAG I + UNIMAG II: 2 x 1 day @ 15/day =	30	
	Phoenix VLF + backup: 2 x 1 day @ 15/day =	30	
	EDM + T16 Theodolite (per Norman Wade rental) =	303	
	Gravity meter (per Sodin rental) =	300	
			763
5.	Charges per survey day (towards drafting, report supervision) 3 days geophysical survey @ 200/day =	600	
			600
	TOTAL EXPENDITURES		13,149

Appendix II

Certification

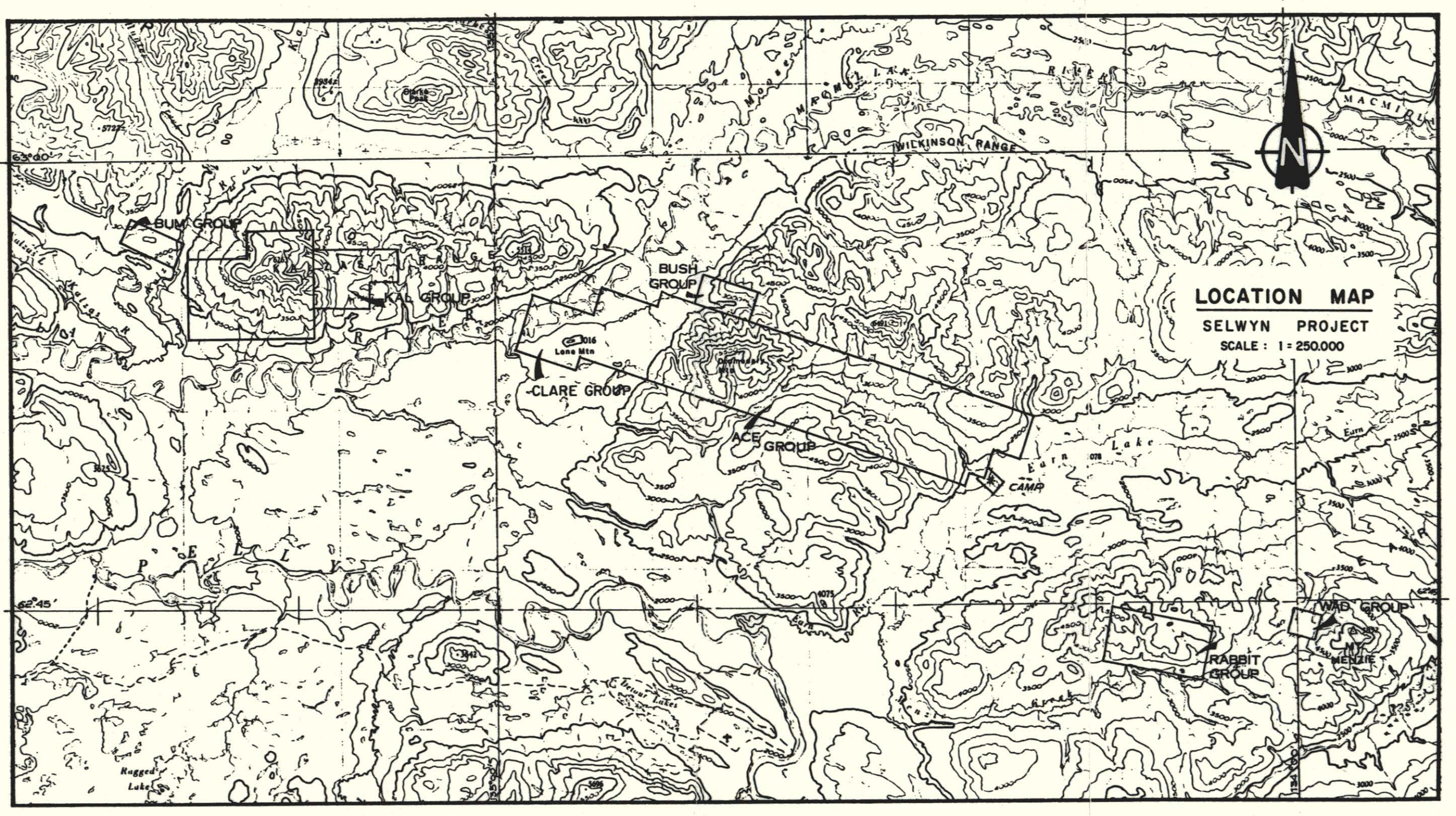
I, Alan R. Scott, of 4013 W. 14th Avenue, Vancouver, B.C., am employed as a professional geophysicist by Anaconda Canada Exploration Ltd. and have knowledge of the work performed and costs incurred per this report. I further attest that:

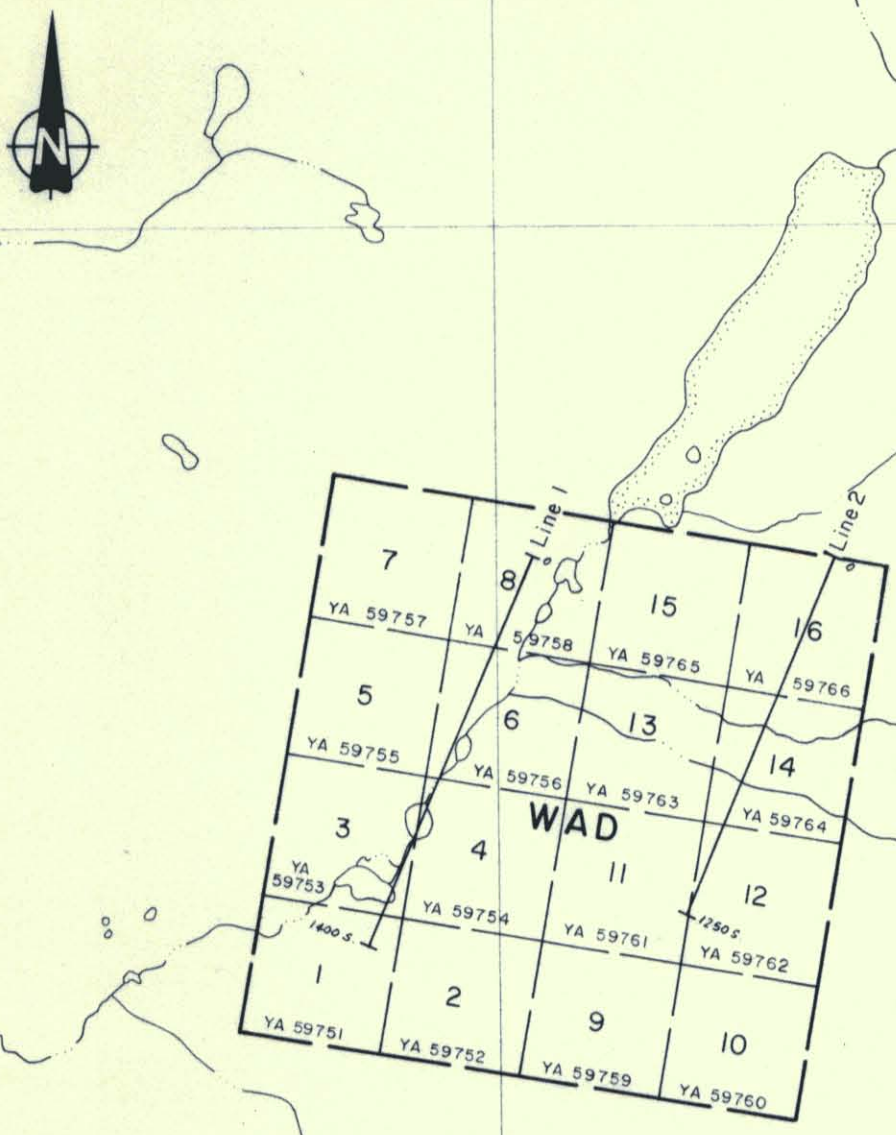
1. I graduated with a B.Sc. (geophysics) from the University of B.C. in 1970.

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


BUM GROUP
KAL GROUP
BUSH GROUP
CLARE GROUP
ACE GROUP
CAMP
RABBIT GROUP
WAD GROUP
MT MENZIE
WILKINSON RANGE
Lone Mtn
Clarke Peak
Rugged Lake
Earn Lake
LOCATION MAP
SELWYN PROJECT
SCALE : 1 = 250.000
N



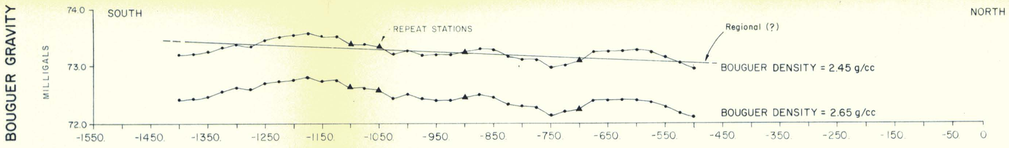
ANACONDA Canada Exploration Ltd.

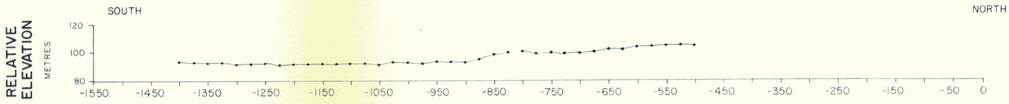
SELWYN PROJECT

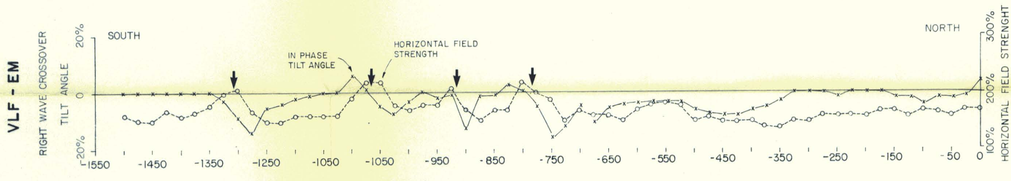
WAD CLAIMS

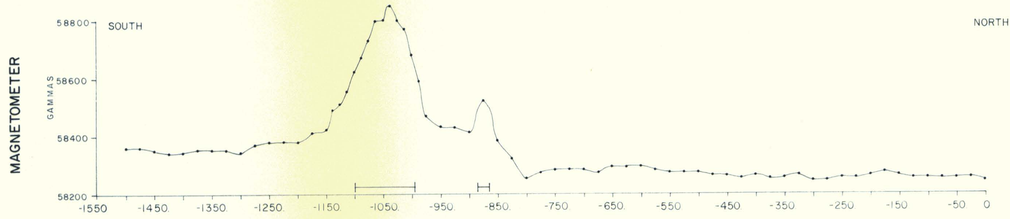
MAYO MINING DISTRICT

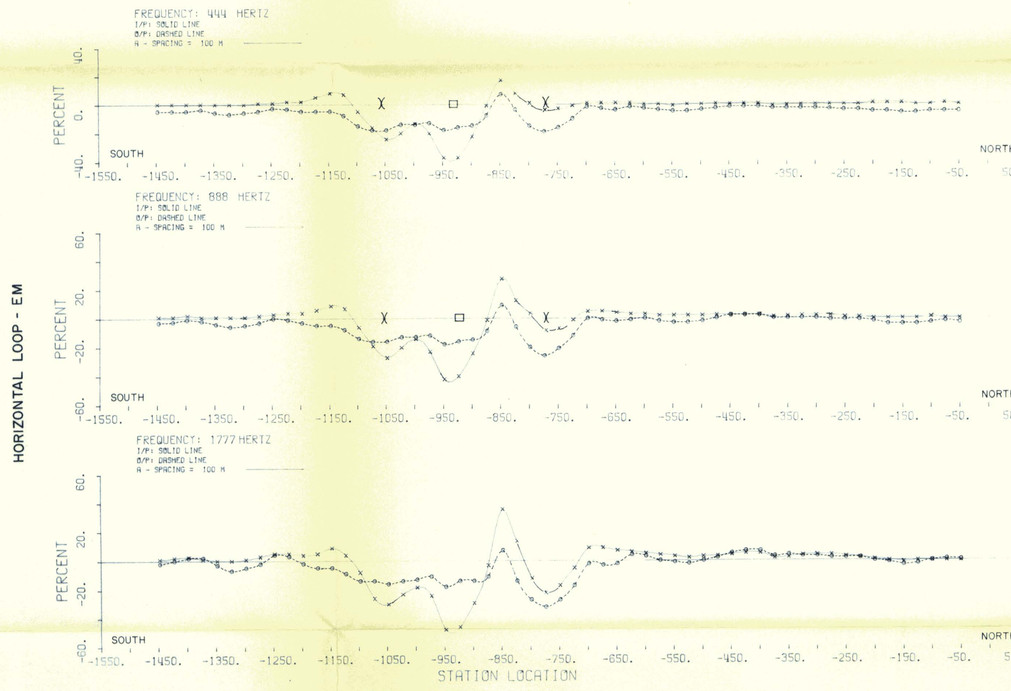
geology by:	drawn by: H.H.	date: APR. 1982
scale: 1:25,000	n.t.s. 105 K-12	drawing no. 2 of 4

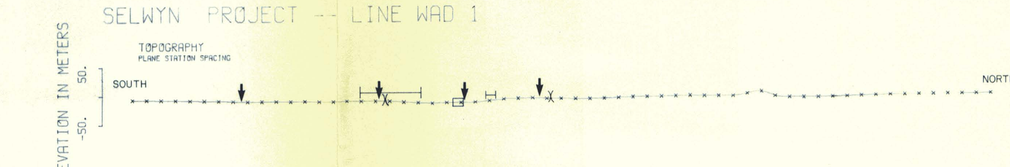












LEGEND

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

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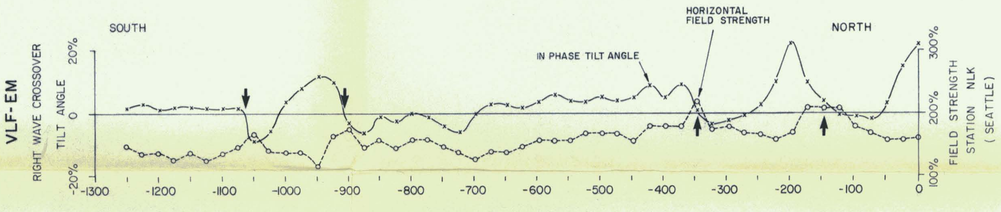
SELWYN PROJECT

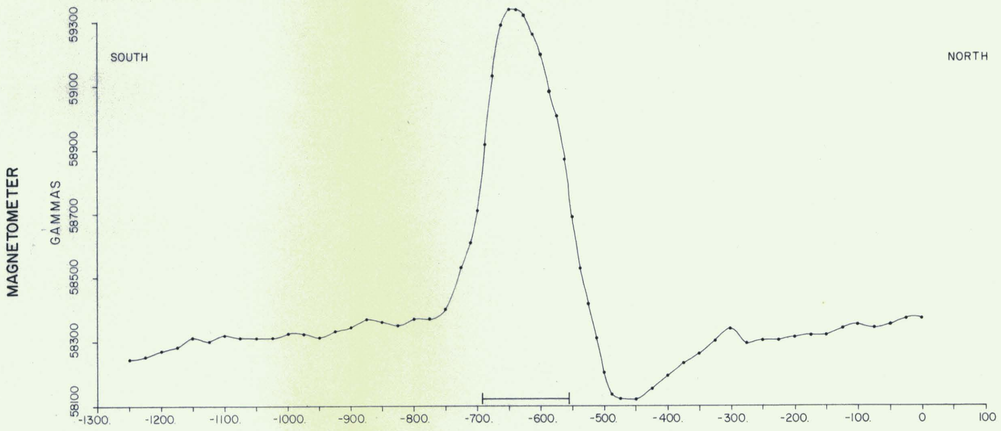
GEOPHYSICAL SURVEY PROFILES

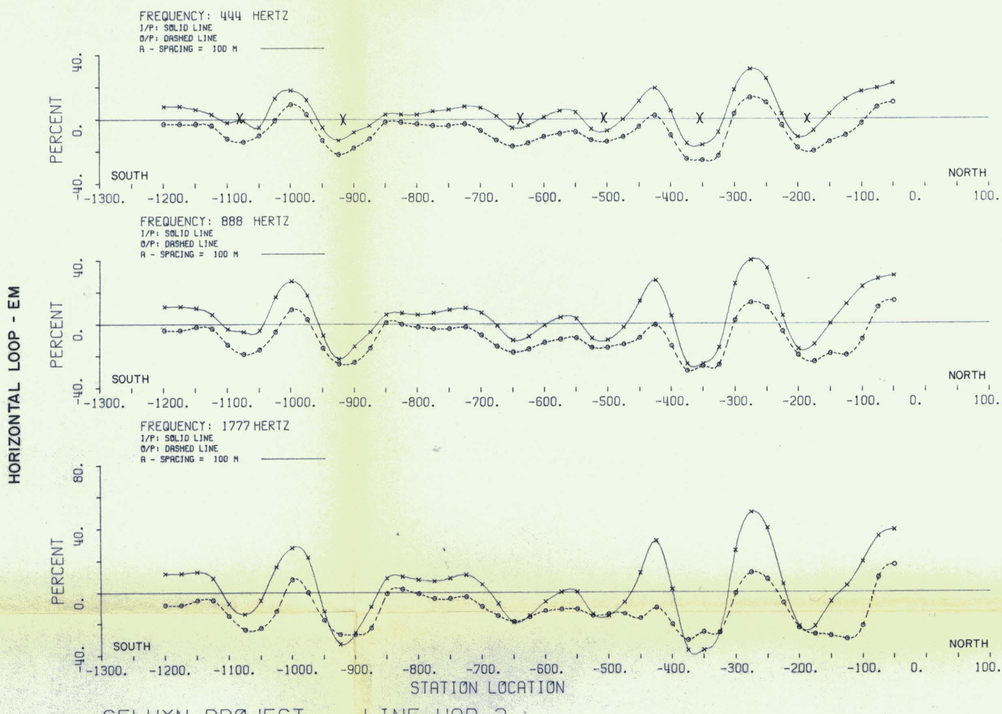
WAD CLAIMS

LINE WAD-1 091052

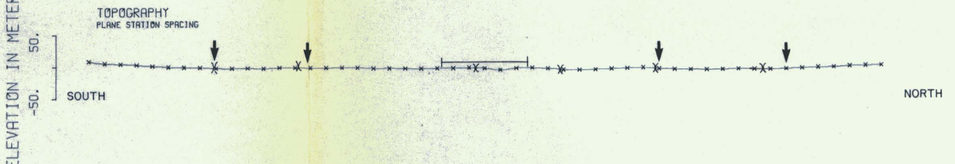
geology by:	drawn by: H.H.	date: APR. 1982
scale: 1 : 5000	n.t.s. 105 L - 9	drawing no. 3 of 4







SELWYN PROJECT -- LINE WAD 2



LEGEND

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

ANACONDA Canada Exploration Ltd.

SELWYN PROJECT

GEOPHYSICAL SURVEY PROFILES

WAD CLAIMS

LINE WAD-2 091052

geology by:	drawn by: H. H.	date: APR. 1982
scale: 1 : 5000	n.t.s. 105 K-12	drawing no. 4 of 4