

COMINCO LTD.

EXPLORATION
N.T.S. 82F/6W

WESTERN DISTRICT

GEOPHYSICAL SURVEYS

on the

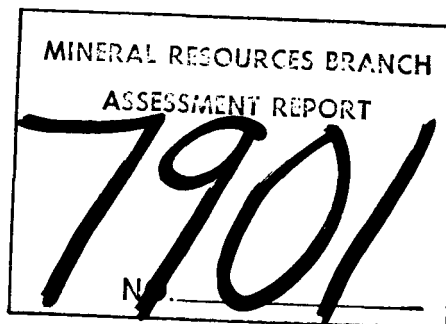
CONNOR PROPERTY

South Slocan Area, Nelson M.D., B.C.

Latitude: $49^{\circ}25'N$; Longitude: $117^{\circ}30'W$

Work Performed: October 12-19, 1979

Claims Covered: Connor & Hungryman C.G.



November 1979

ALAN R. SCOTT

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
LOCATION AND ACCESS	1
GEOPHYSICAL SURVEYS	1
Horizontal Loop Electromagnetics (HLEM)	1
Magnetics Survey	2
VLF-EM Survey	2
DESCRIPTION OF RESULTS	2
CONCLUSIONS	3

ATTACHMENTS

Plate 159-79-1	Location Map
159-79-2	Claims and Grip Map
159-79-3	HLEM and magnetometer profiles
159-79-4	HLEM, VLF, and magnetometer profiles: Line 0
159-79-5	Magnetic field contour plan
159-79-6	Topographic profiles
Appendix I	Statement
Appendix II	Statement of Expenditures
Appendix III	Certification

GEOPHYSICAL SURVEYS

on the

CONNOR PROPERTY

INTRODUCTION

During the period October 12-19, 1979, a Cominco geophysical crew under the direction of Cominco geophysicist B. Lum completed 3.5 line kilometers of linecutting, horizontal loop electromagnetics (HLEM) survey, total field magnetometer survey, and 1.2 line kilometers of VLF electromagnetic survey over a portion of the CONNOR Property.

The purpose of the survey was to determine the geophysical response of a Au-bearing pyrrhotite showing, and to determine its possible strike length.

This report describes the procedures used on the survey, presents the data, and discusses the geophysical results.

LOCATION AND ACCESS

The Connor mineral claim straddles Connor Creek some 10 kilometers south of South Slokan, B.C. This claim is about 35 kilometers west southwest of the city of Nelson, and surrounds the Hungryman Crown Grant. Plate 159-79-1 shows the general location of the claim and Plate 159-79-2 the location of the grid relative to the claim. Logging roads provide 4x4 vehicle access.

GEOPHYSICAL SURVEYS

Horizontal Loop Electromagnetics (HLEM): An Apex Max Min II electromagnetometer was used for the HLEM survey. Readings

were taken

were taken with a coil separation of 100 meters and a station interval of 25 meters. The survey over the pyrrhotite showing (line O) was conducted at four frequencies, namely 444, 888, 1777, and 3555 Hz. The remainder of the grid was surveyed at 444, 1777, and 3555 Hz only.

All the grid lines were cut and chained, and surveyed with an inclinometer prior to the HLEM survey. The required offset for the receiver coil from the picket and the angle both the transmitter and receiver should be tilted in order to ensure a constant coil separation and coplanar coil alignment was then precalculated. Readings were made in the field using these computed offsets and tilt angles.

The HLEM data is plotted in profile form on Plates 159-79-3 and 4.

Magnetics Survey: A scintrex MP-2 total field proton precession magnetometer was used for the magnetics survey. Readings were taken at 25 meter intervals and have been corrected for diurnal drift via the usual base station looping method. The values are plotted on Plate 159-79-3.

VLF Electromagnetics Survey: A Crone RADEM was used for the VLF survey, with the Laulualei, Hawaii station serving as the transmitter station (23.4 KHz). Lines O and 100N only were surveyed, with the results plotted on Plate 159-79-4. It is plotted so as to give a right wave in-phase tilt angle crossover and a field strength peak over a conductive body.

DESCRIPTION OF RESULTS

The three frequencies of HLEM data (444, 1777, and 3555 Hz) and the magnetic field strength values are plotted in

profile form

profile form on Plate 159-79-3. The HLEM data on line O and VLF profiles on lines O and 100N are plotted on Plate 4. Also included is a contour plan of the magnetic field values (Plate 5) and topographic profiles of the survey lines (Plate 6).

Line O runs across the showing, and an HLEM conductor was detected coincident to the showing. There is also a coincident magnetic field high of some 300 gammas above background, but no VLF conductor. A VLF conductor was obtained on line 100N.

The HLEM conductor can be traced on all the survey lines, that is, from line 400N to 100S. The response on line 100S is offset some 150 meters to the east, suggesting either faulting or a parallel zone. In all cases the response is well defined on the high frequency (3555 Hz) but weak on the lower frequency (444 Hz)-- indicating a relatively poor conductivity for the source. There is also a coincident or near coincident weak magnetic high associated with the conductor on all lines. The conductor locations and associated mag highs have been indicated on Plate 159-79-3. The HLEM responses do not "fit" any of the standard type curve responses so that a quantitative assessment other than conductor location is not possible. The unusual nature of these responses is believed to be due to geometrical complications owing to its location in the bottom of a steep valley (see Plate 159-79-6).

CONCLUSIONS

Portions of the CONNOR CLAIM and HUNGRYMAN C. G. were surveyed with multi-frequency horizontal loop electromagnetics, VLF electromagnetics, and total field magnetics in the fall of 1979.

The purpose of the survey was to investigate the geophysical response of a Au-bearing pyrrhotite showing and establish its possible strike length.


An HLEM high

An HLEM high frequency conductor and magnetic field high are spatially coincident with the showing and these features were traced for 400 meters to the north and 100 meters to the south. The southward extension is offset some 150 meters to the east.

oOo

Respectfully submitted:

ALAN R. SCOTT
Geophysicist



Endorsed for release:



G. HARDEN
Manager, Western District

ARS/tlp

Distribution:

Mining Recorder - 2 v
Western District- 1
Geophysics File - 1

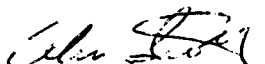
APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT
AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME
CARRIED OUT ON PORTIONS OF THE CONNOR CLAIMS
AND HUNGRYMAN C.G. ON THE CONNOR PROPERTY
LOCATED 35 KM WEST SOUTHWEST OF NELSON IN THE NELSON MINING DIVISION
OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY
N.T.S. 82F/6W

S T A T E M E N T

I, ALAN R. SCOTT of the City of Vancouver, in the Province of British Columbia, make oath and say:

1. That I am employed as a Geophysicist by COMINCO LTD. and, as such, have a personal knowledge of the facts to which I hereinafter depose;
2. That annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the Connor Claim;
3. That the said expenditures were incurred for the purpose of mineral exploration of the above noted claim between the 12th and 19th of October, 1979.



ALAN R. SCOTT
Geophysicist

ARS/tlp
13/11/79

APPENDIX II

STATEMENT OF EXPENDITURES

(Linecutting, Horizontal Loop EM, Magnetics, VLF Surveys)

SALARIES (includes travel days, Oct. 12 & 19 for
for MLS and MRS):

B Lum	Oct. 13-18	6 days @ \$120	\$ 720.00	
MLSerack	Oct. 12-19	8 " " 81	648.00	
MRSchaumberger	" 12-19	8 " " 81	<u>648.00</u>	\$2,016.00

EQUIPMENT RENTALS:

Max Min II	4 days @ \$35/day	\$ 140.00	
Proton Magnetometer,	1 day @ \$10/day	10.00	
VLF (RADEM)	1 day @ \$12.50/day	12.50	
Truck rental	8 days @ \$28.75/day	<u>230.00</u>	392.50

OPERATING CHARGES:

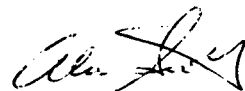
(towards report, drafting, supervision)

5 days geophysical survey @ \$175/survey day 875.00

MISCELLANEOUS:

Food, lodging, gas, consumables 1,163.87

TOTAL EXPENDITURES. . . . \$4,447.37



APPENDIX III

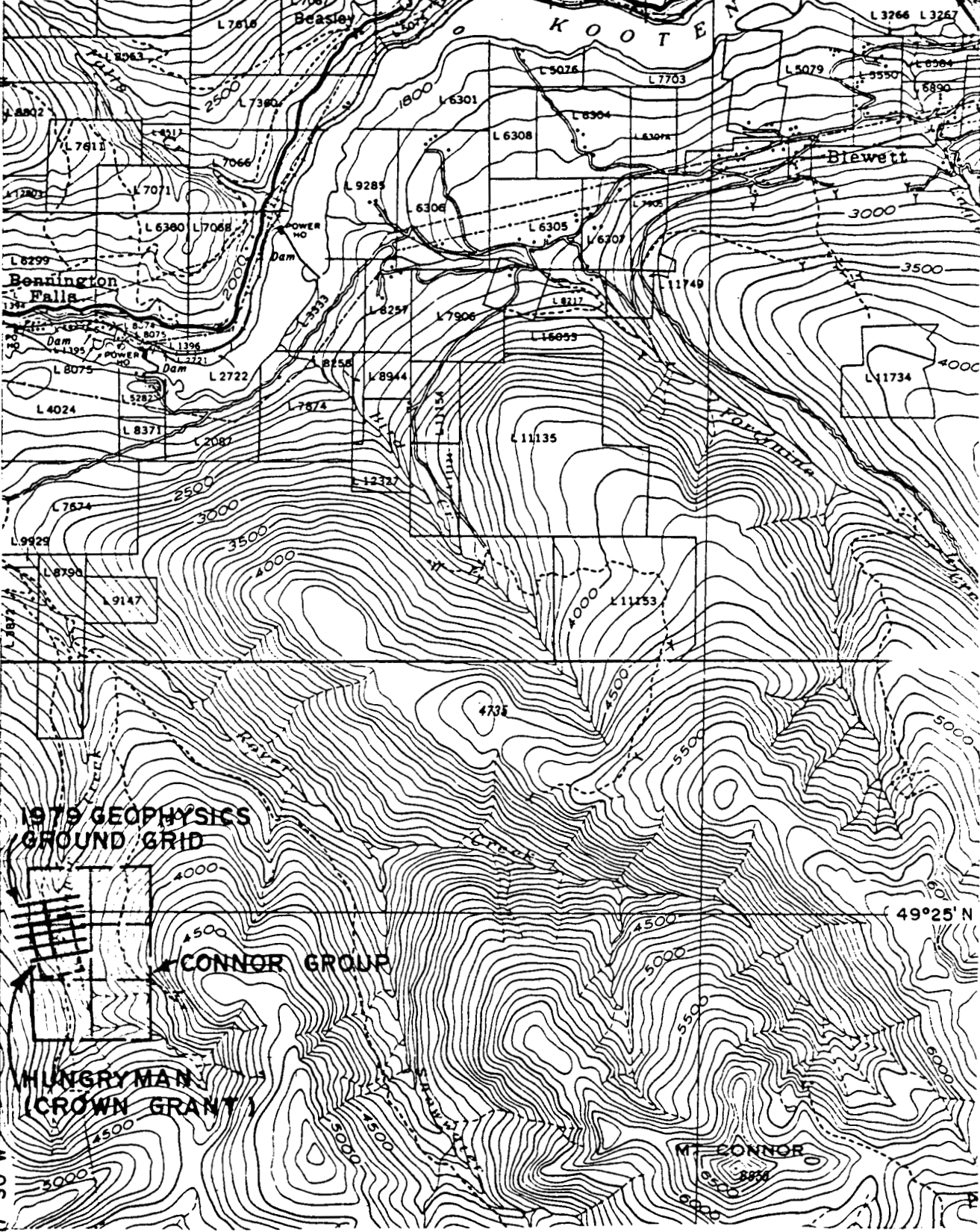
C E R T I F I C A T I O N

I, ALAN R. SCOTT, of 4013 West 14th Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify that:

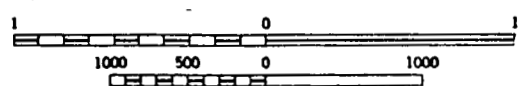
1. I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics;
2. I am a member of the Association of Professional Engineers of the Province of Saskatchewan, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society;
3. I have been practising my profession for the past nine years.


ALAN R. SCOTT

ARS/tlp
13/11/79



SCALE 1:50,000
1.25 inches to 1 mile approximately



CONNOR GROUP
HUNGRYMAN (CROWN GRANT)  N T S
82 F 6 W

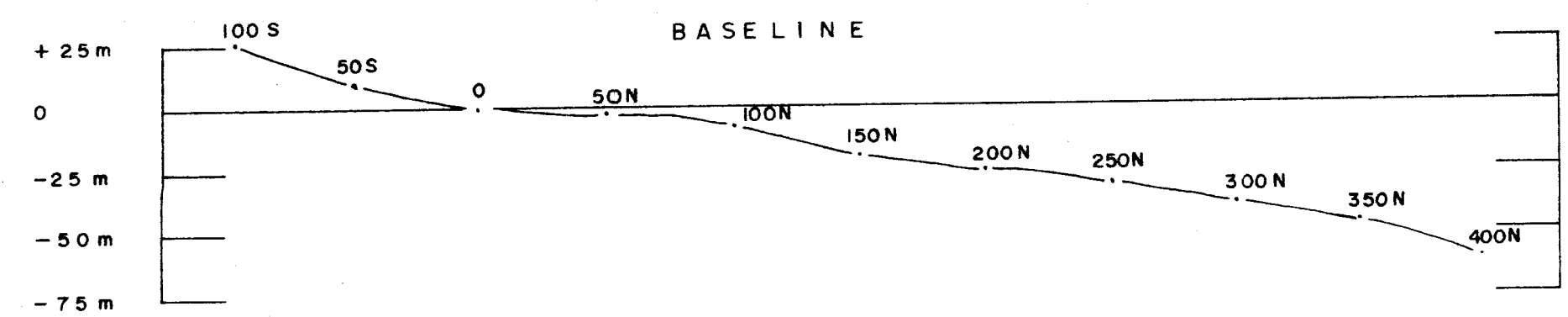
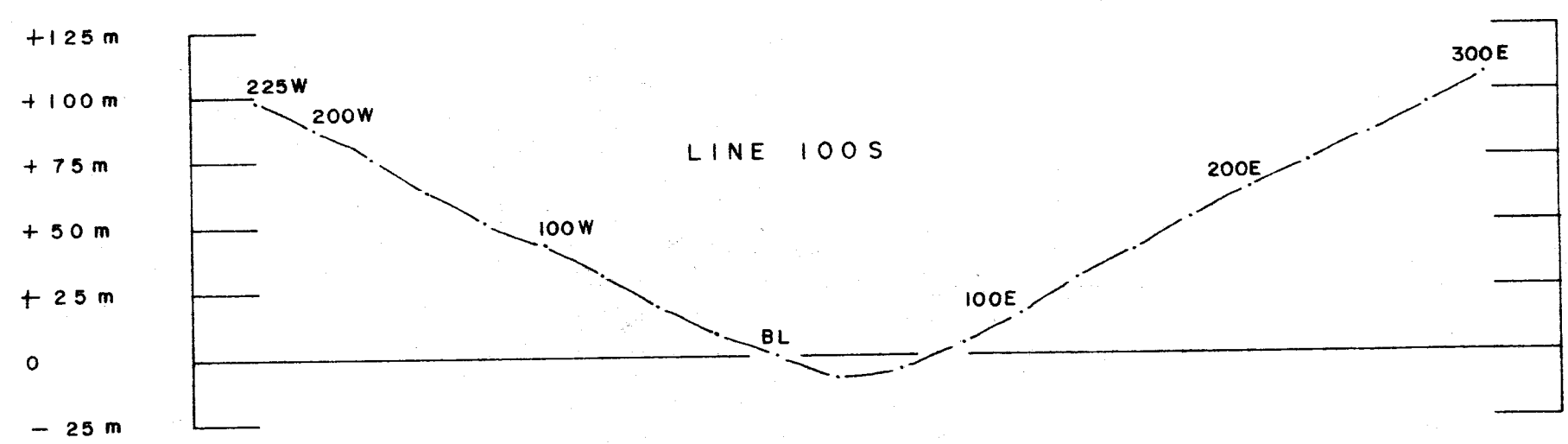
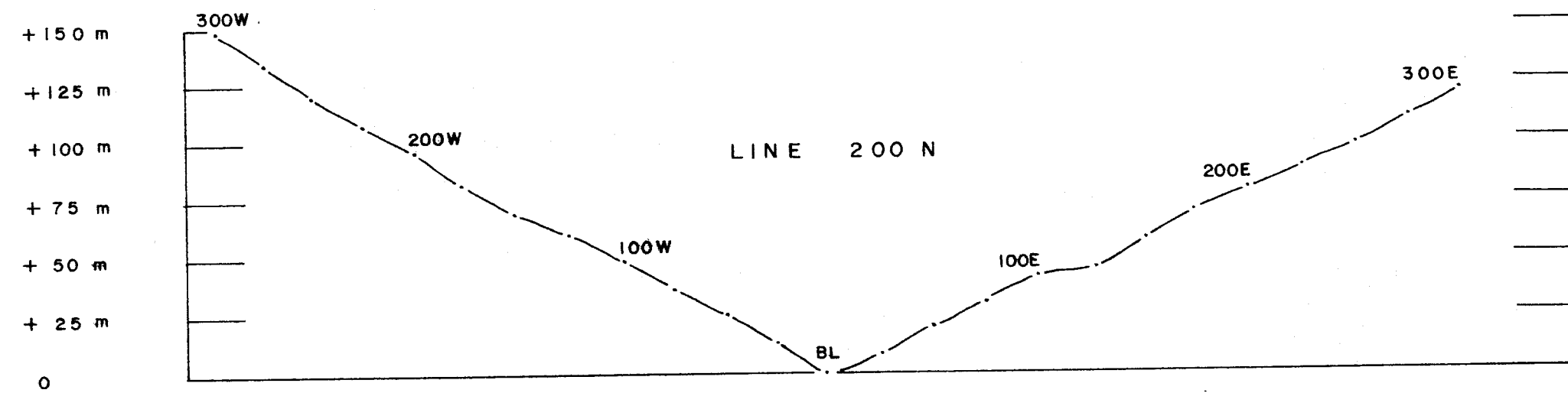
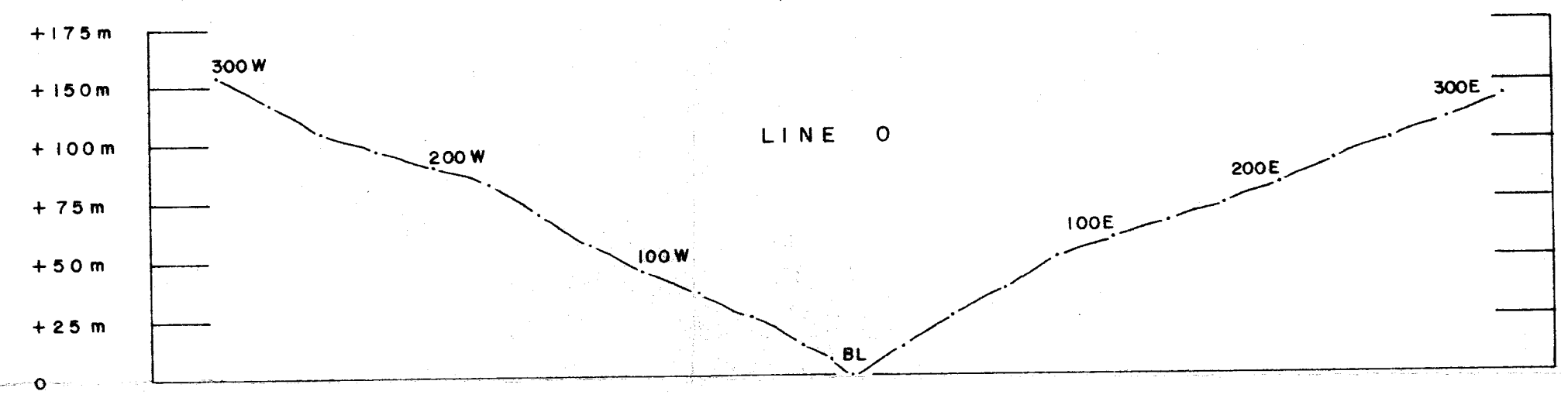
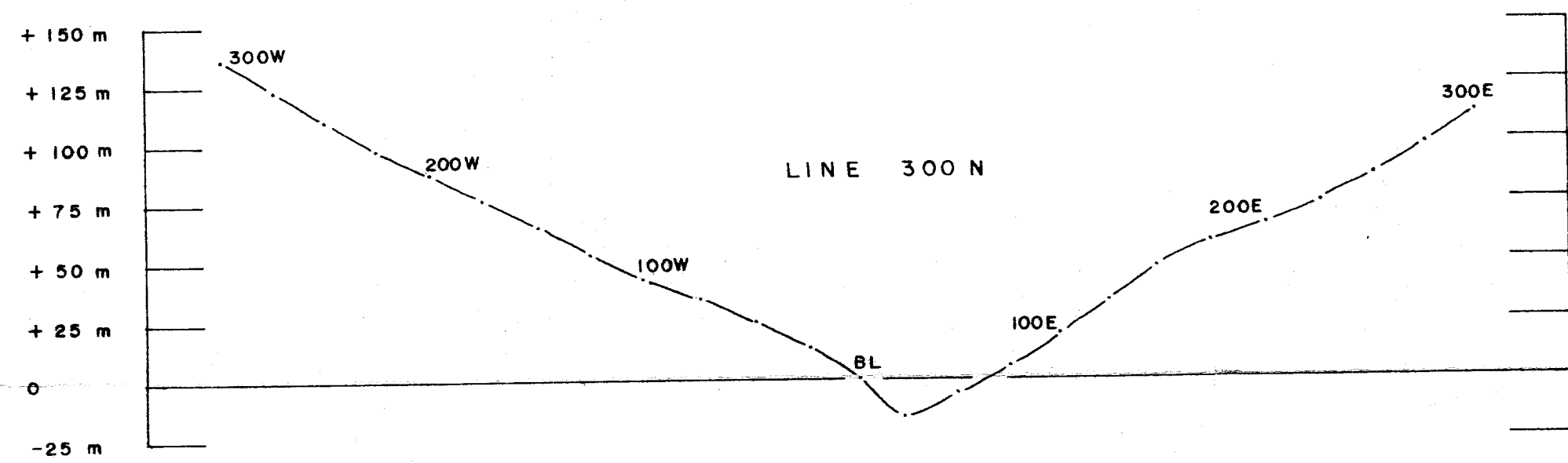
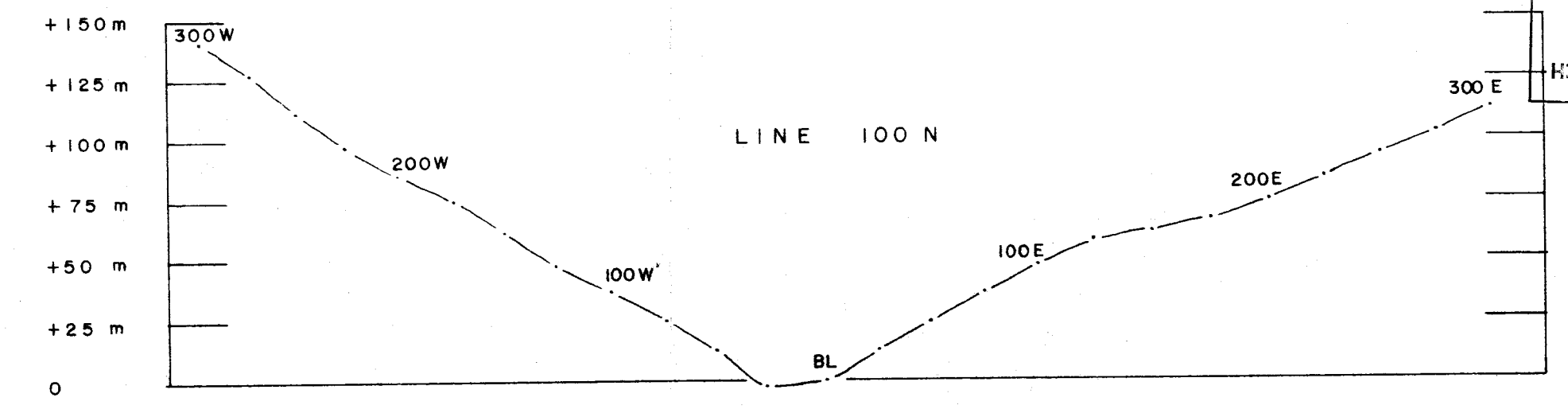
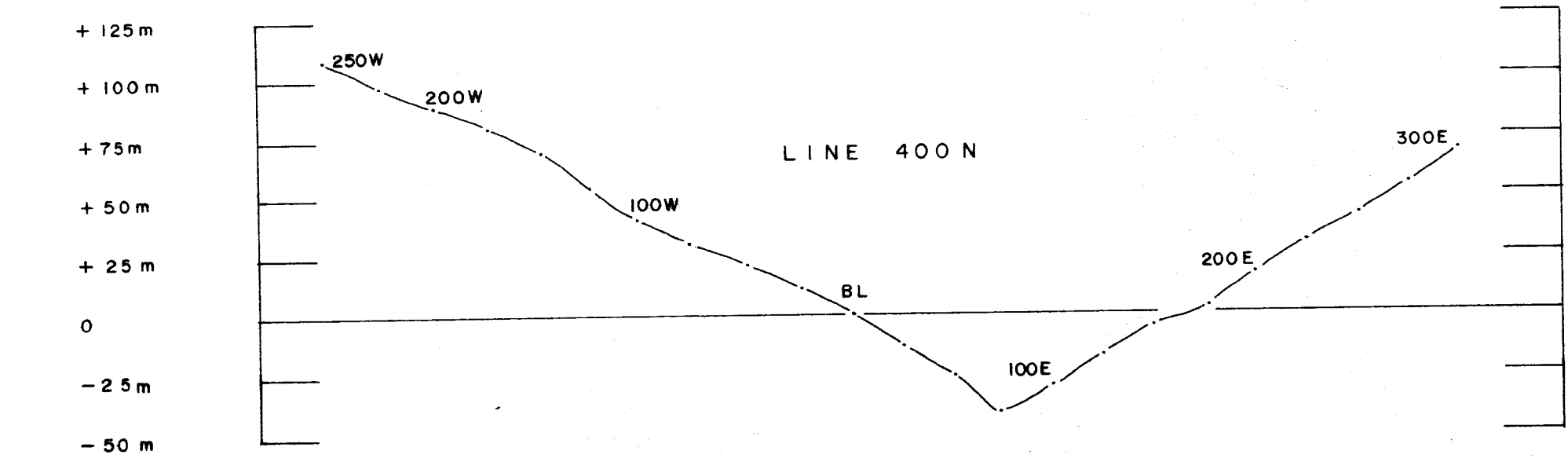
Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP


NELSON M.D., B.C.

Scale: 1:50,000 Date: NOV 1979 Plate: 159-79-1

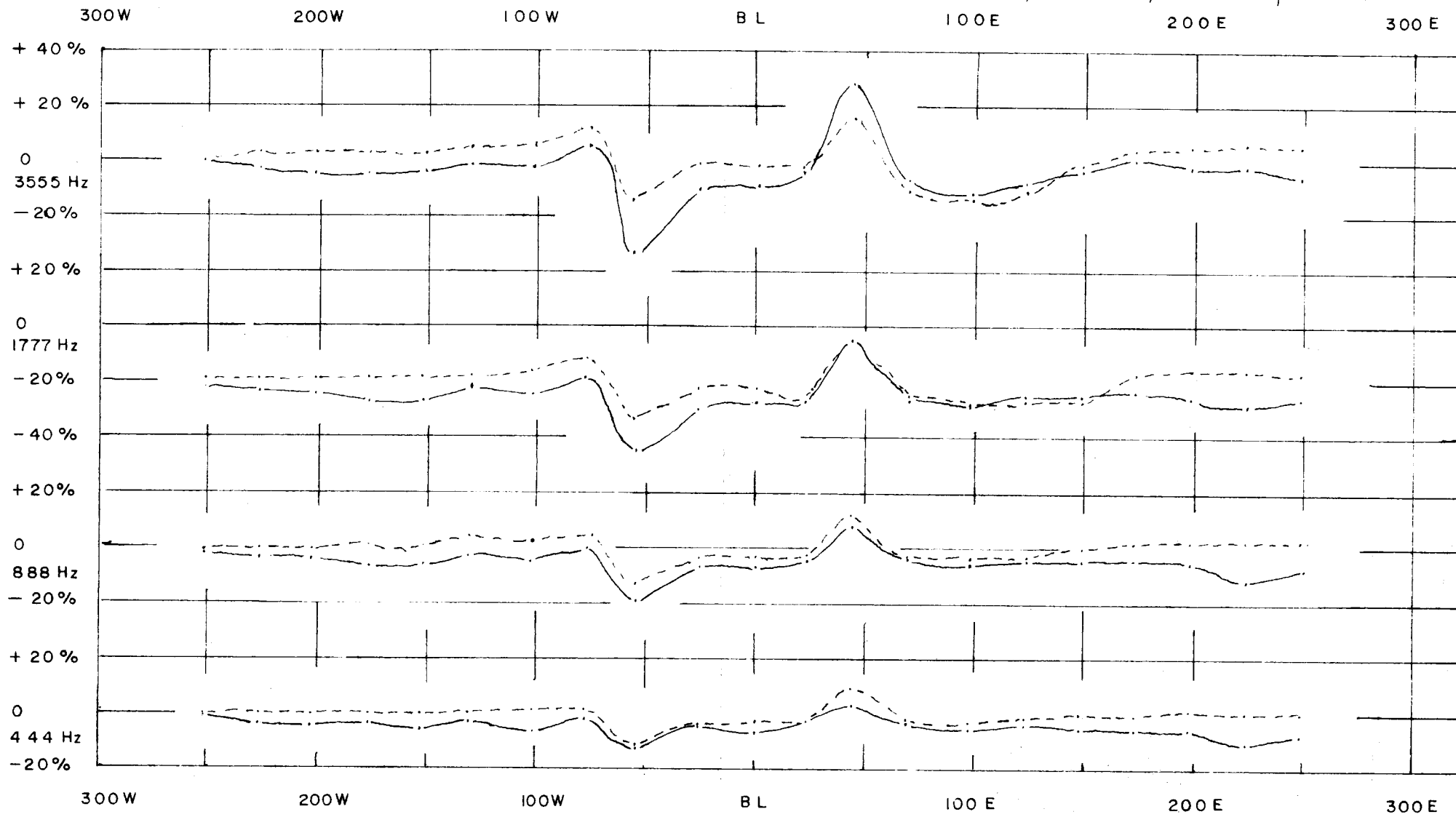
106L
 HUNGRYMAN (CROWN GRANT)
 TOPOGRAPHICAL PROFILES
 NELSON M.D., B.C.



INSTRUMENT :

CONNOR GROUP				 NTS 82 F6W	
Drawn by:	Traced by:		HUNGRYMAN (CROWN GRANT)		
Revised by	Date	Revised by	Date	TOPOGRAPHICAL PROFILES	
				NELSON M.D., B.C.	
				Scale: A S SHOWN	Date: NOV., 1979
				Plate: 159-79-6	

LINE O ELECTROMAGNETIC HORIZONTAL LOOP SURVEY TEST LINE 3555 Hz, 1777 Hz, 888 Hz, 444 Hz.

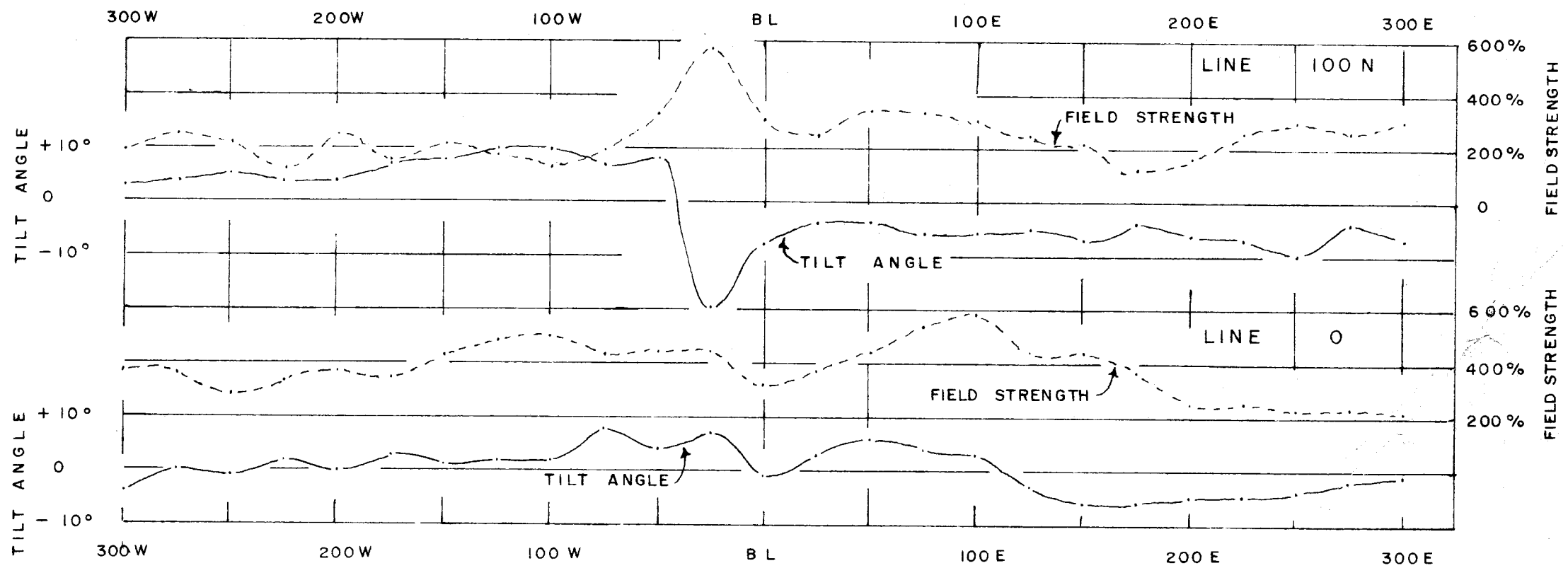


INSTRUMENT: MAX MIN II
100 m COIL SEPARATION

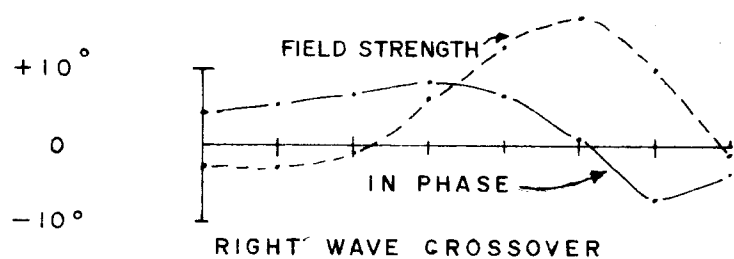
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

7901
NO.

V. L. F. RADEM SURVEY



HAWA II
TRANSMITTER
23.4 KHz



CONNOR GROUP

Ala...



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

HUNGRYMAN (CROWN GRANT)
TEST LINE O - HLEM - 4 FREQUENCIES - 100m C.S.
V L F RADEM PROFILES - LINE 100N & LINE O
NELSON M.D., B.C.

Scale: A S SHOWN Date: NOV 1979 Plate: 159-79-4



300 W

200 W

100 W

BASELINE

100 E

200 E

300 E

LINE 400 N

LINE 300 N

LINE 200 N

LINE 100 N

LINE 0

LINE 100 S

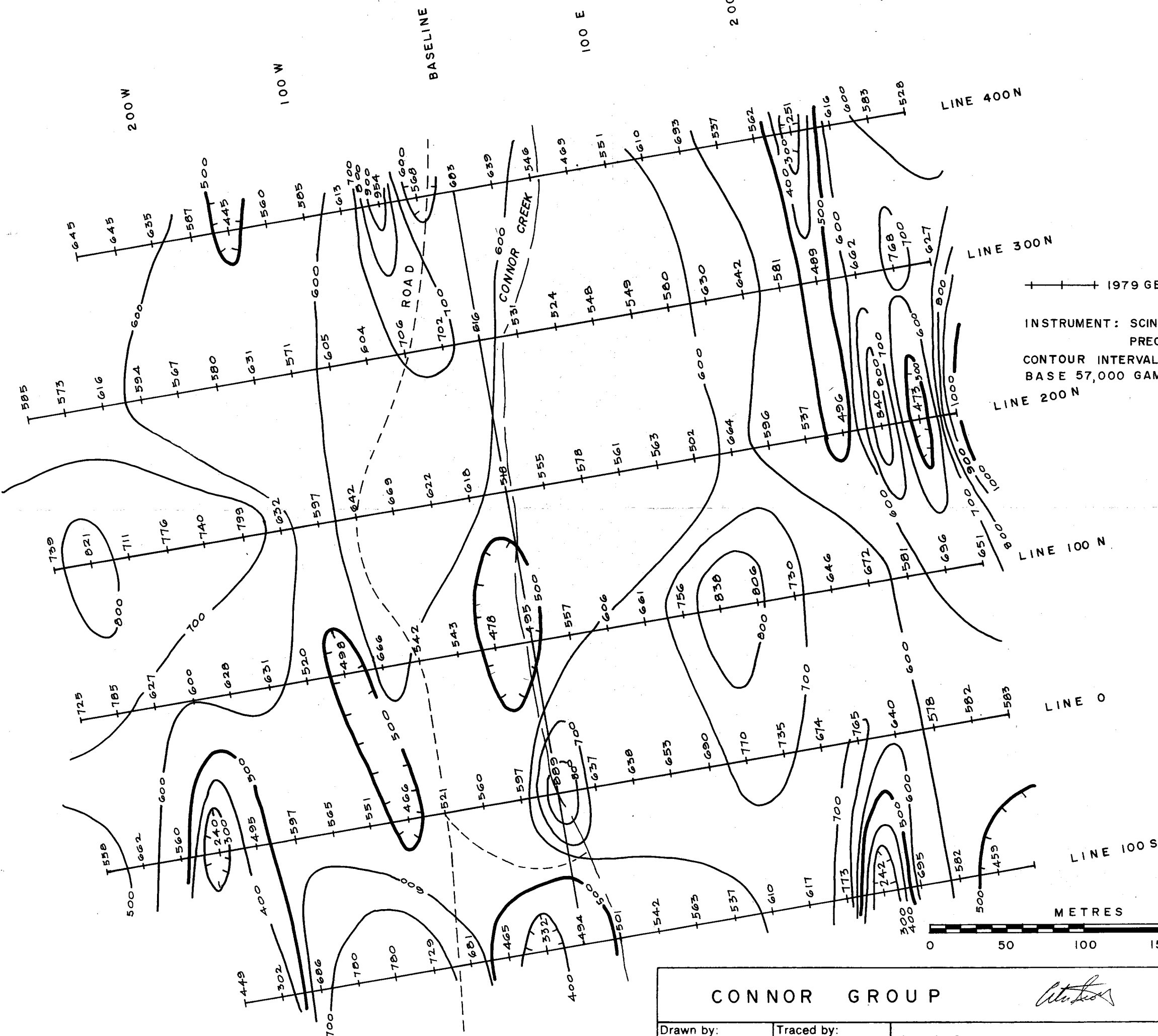
1979 GEOPHYSICS GROUND GRID

INSTRUMENT: SCINTREX MP II PROTON PRECESSION MAGNETOMETER

CONTOUR INTERVAL 100 GAMMAS
BASE 57,000 GAMMAS



106L
HONGKONG PHOTOGRAPHIC CO. LTD.
HONGKONG



CONNOR GROUP



NTS
82 F6W

Drawn by:	Traced by:
Revised by	Date

HUNGRY MAN (CROWN GRANT)
MAGNETOMETER SURVEY
NELSON M.D., B.C.

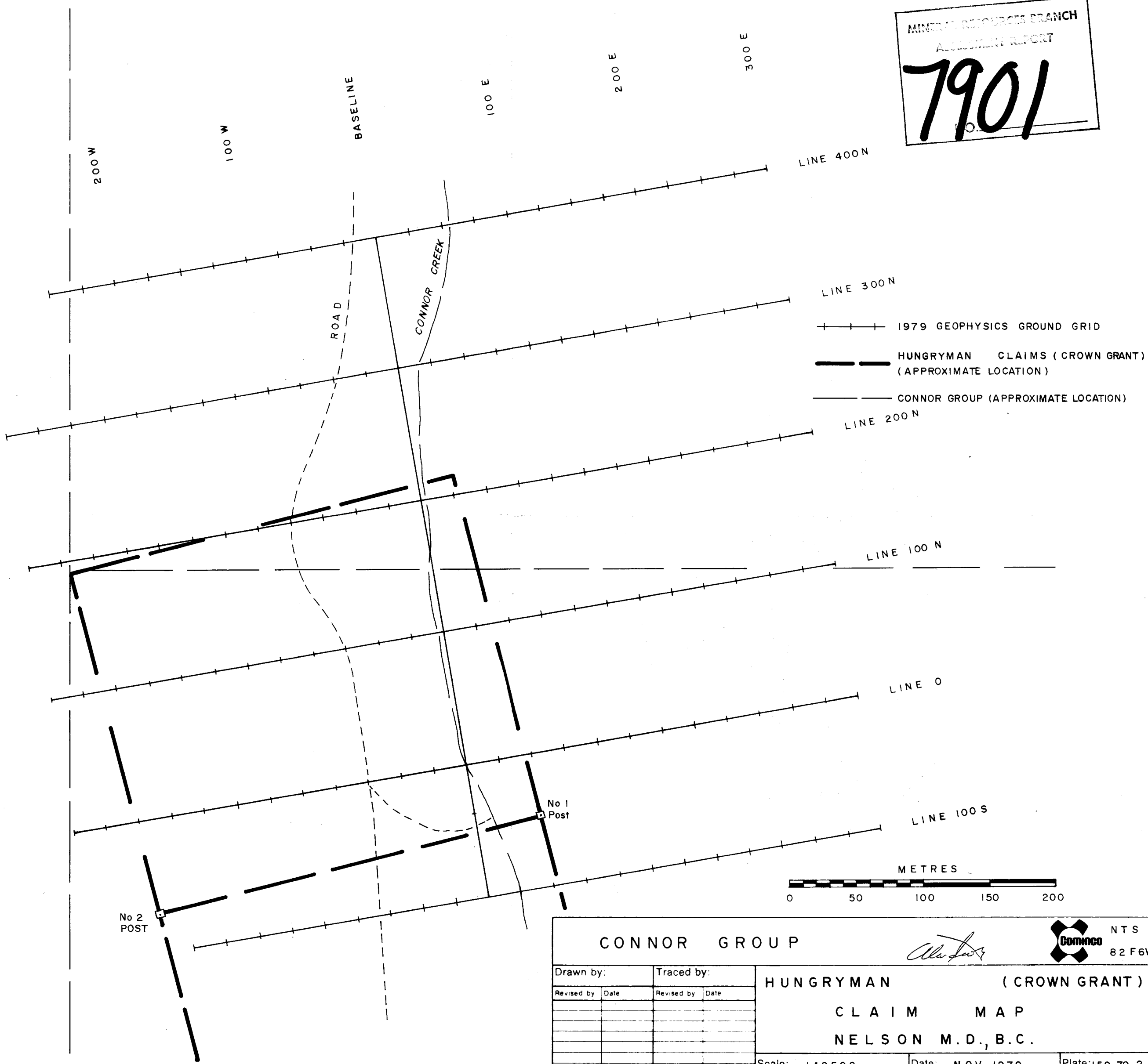
Scale: 1:2500

Date: NOV 1979

Plate: 159-79-5




MINERAL RESOURCES BRANCH
 ALLOCATION REPORT
7901

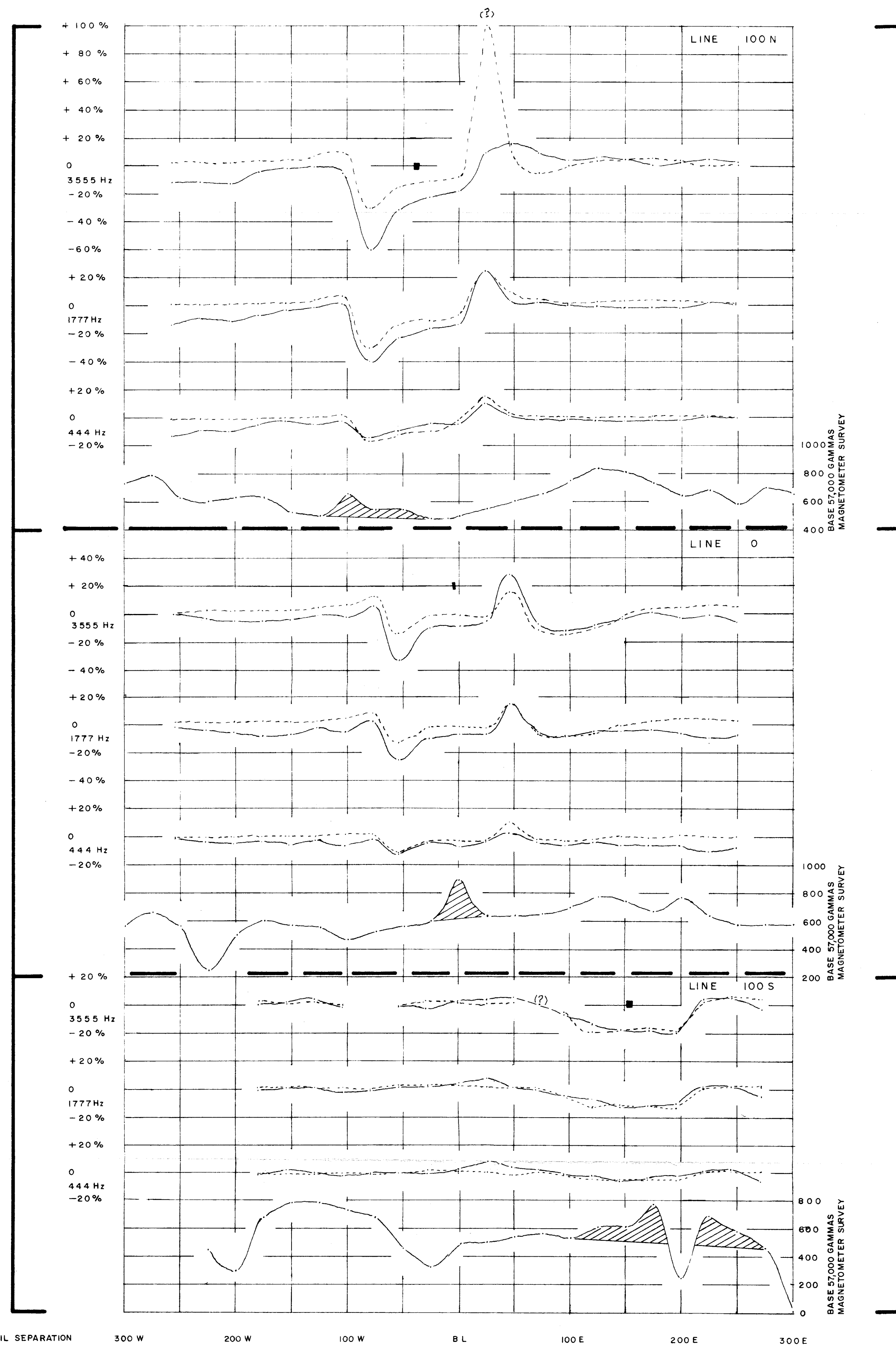
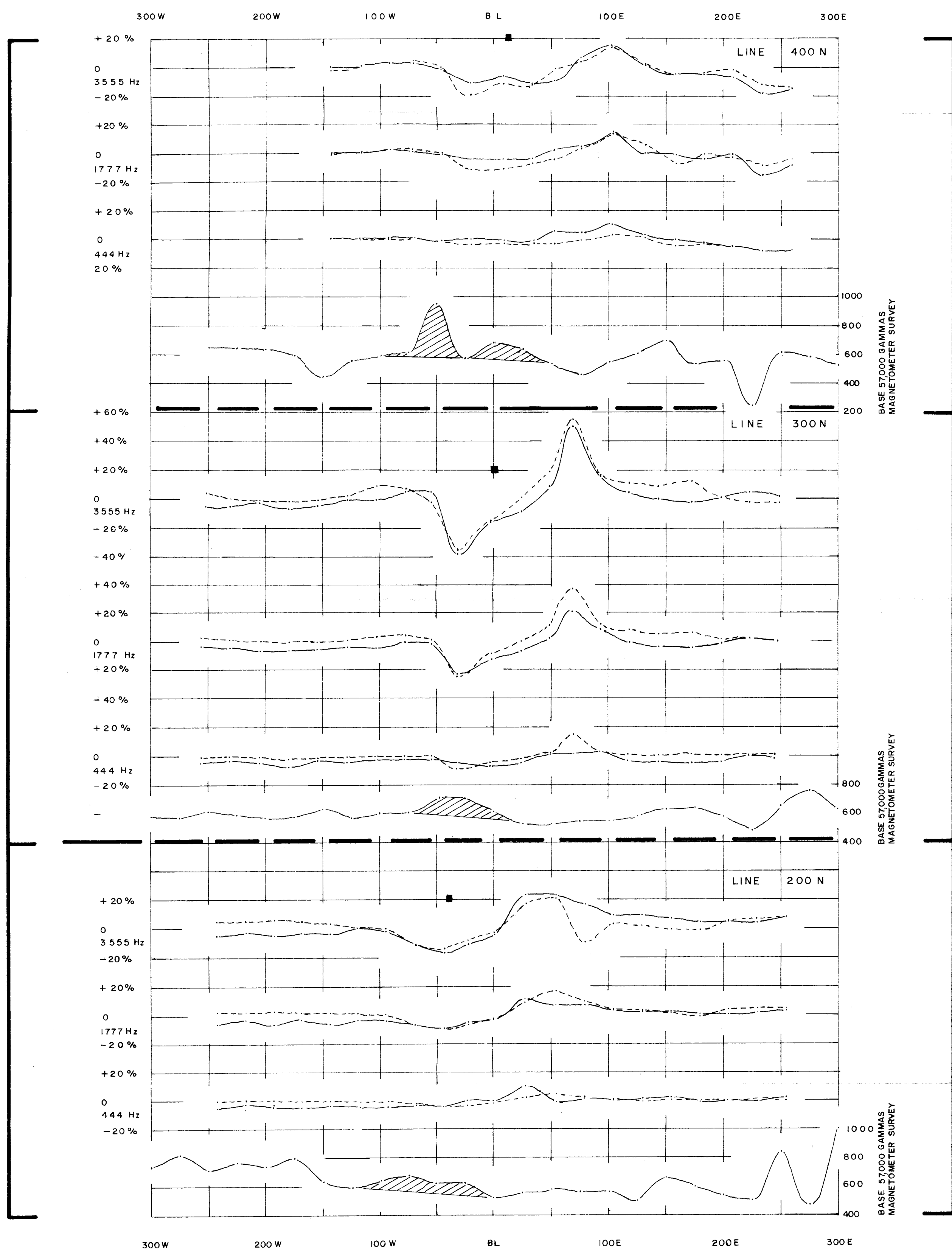


LINE 400 N
 LINE 300 N
 LINE 200 N
 LINE 100 N
 LINE 0
 LINE 100 S

1979 GEOPHYSICS GROUND GRID
 HUNGRYMAN CLAIMS (CROWN GRANT)
 (APPROXIMATE LOCATION)
 CONNOR GROUP (APPROXIMATE LOCATION)



CONNOR GROUP				<i>Alta</i>	 NTS 82 F6W
Drawn by:		Traced by:			
Revised by	Date	Revised by	Date	CLAIM MAP	
				NELSON M.D., B.C.	
				Scale: 1:2500	Date: NOV 1979
					Plate: 159-79-2



100 m COIL SEPARATION

— IN PHASE
 - - - OUT OF PHASE
 ■ CONDUCTOR LOCATION

—x— MAGNETOMETER SURVEY

INSTRUMENT: EM - MAX MIN II
 MAGNETOMETER - SCINTREX MP II PROTON PRESSION MAGNETOMETER

▨ MAGNETIC FIELD HIGH

MINERAL REVENUE BRANCH
 7901

Drawn by:		Traced by:	
Revised by:	Date:	Revised by:	Date:
CONNOR GROUP HUNGRYMAN (CROWN GRANT) HORIZONTAL LOOP ELECTROMAGNETIC SURVEY 444 Hz, 1777 Hz, 3555 Hz - MAGNETOMETER PROFILES NELSON M. D., B. C.			
Scale:	A S SHOWN	Date:	NOV 1979
Plate:	159-79-3		