COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

N.T.S. 92H/15E

GEOPHYSICAL REPORT
ON AN
INDUCED POLARIZATION SURVEY
THALIA PROPERTY

Aspen Grove Area, B.C.; Nicola Mining Division

Latitude: 49°50'N; Longitude: 120°35'W

Work Performed: May 26-28, 1979

On Claims: Thalia 1

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7724

JANUARY 1980

Alan Scott

PART 2
OF 2

TABLE OF CONTENTS

* * * * * * * * * * *

ATTACHMENTS

* * * * * * * * * * *

INTRODUCTION

The THALIA property is located some 12 kilometers south of Aspen Grove, B.C., as indicated on accompanying Plate 161-79-1. The lines surveyed, in relation to the claims, are shown on Plate 161-79-2.

During the period May 26-28, 1979, a Cominco geophysical crew completed some 3.5 line kilometers of multi separation induced polarization survey over portions of the THALIA claims.

This report describes this induced polarization work, presents the data, and discusses the results.

LOCATION AND ACCESS

The THALIA claims are approximately centered at geographic coordinates 49°50'N latitude by 120°35'W longitude, and are situated immediately southwest of Bluey Lake.

Road access to the property is gained by turning east onto a good gravel road from highway number 5, some 12 kilometers south of Aspen Grove.

GEOLOGY

The THALIA property is an alkaline porphyry copper prospect located in the Aspen Grove complex. It is underlain by a sequence of basaltic pyroclastic rocks intruded by small dioritic and monzonitic dykes and stocks. The geology has been described in more detail in a report by D. Mehner (1979).

INDUCED POLARIZATION SURVEY

G.J. Niemeyer, geophysical technician, was the party chief/ receiver operator on the Thalia IP survey.

A Scintrex IPR-8 receiver, in combination with a Huntec 7.5 kw motor generator/transmitter was used on the survey. This equipment operates in the time domain, employing a 2 second current on/2 second current off alternating square wave. The chargeability (IP) values plotted are the M_{232} values, and the units are millivolts/volt. For a more detailed discussion of this instrument, the reader is referred to the Scintrex manual for the IPR-8.

The pole dipole electrode array was used on the survey with an "a" spacing of 50 m and "n" separations of 1, 2, 3, and 4. The current electrode was kept to the west of the potential dipole.

The apparent resistivity data is given in units of ohm meters. The values were calculated from the relation:

$$\text{apparent resistivity} = (V/I) \cdot K$$

where V is the voltage across the potential measuring dipole due to a transmitted current I, and K is a geometric factor dependent upon the "a" spacing and "n" separation.

DESCRIPTION OF RESULTS

The induced polarization (chargeability) and apparent resistivity data is presented in standard pseudo section format as Plates I61-79-3 to 6 inclusive.

No well defined chargeability anomalies were detected on the Thalia IP survey. Broad weakly high values of from 7-9 millivolts per volt were obtained at the further separations on all survey lines. The highest value was 10.5 mv/v obtained at the third separation at 475W on line 2N.

An area of very low apparent resistivity (less than 100 ohm meters) lies to the west of approximately station 400W on lines 0, 2S, and 4S. The lowest resistivity value read was 23 ohm meters (n=3) which plots at 725W on line 4S. These low resistivities imply the area is underlain by very porous and saturated material.

CONCLUSIONS

Portions of the THALIA mineral claims were surveyed with multi-separation time domain IP in the summer of 1979.

No well defined chargeability (IP) anomalies were detected on the survey. Broad weakly high responses of from 7-9 millivolts per volt were obtained on all lines at the further separations. No further work can be recommended on the basis of the IP survey alone.

Respectfully submitted,

Alan Scott
Geophysicist

Endorsed for release by:

G. Harden
Manager, Exploration
Western District

Distribution:

Mining Recorder (2)
Western District (1)
Geophysics file (1)

ARS/skg

N.T.S. 92-H-15E

DWG. NO. 161-79-3

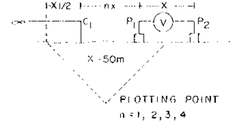
COMINCO LTD.

THALIA PROPERTY

NICOLA M.D., B.C

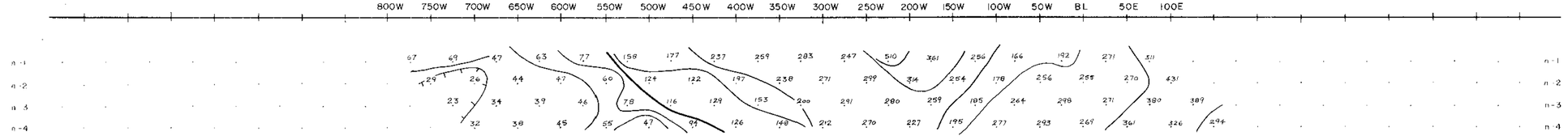
LINE NO. 4+00S

POLE - DIPOLE
ELECTRODE CONFIGURATION
I-X1/2 I---nx---I---X---I

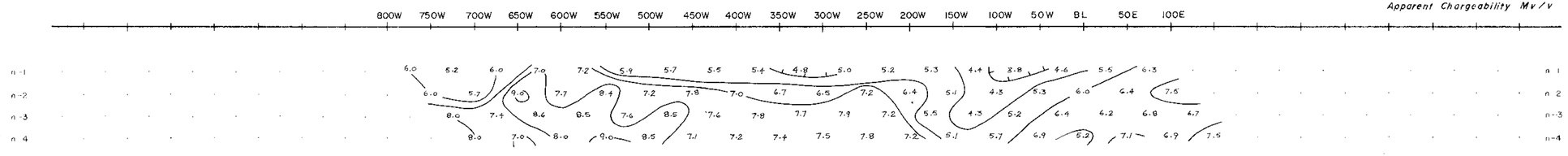


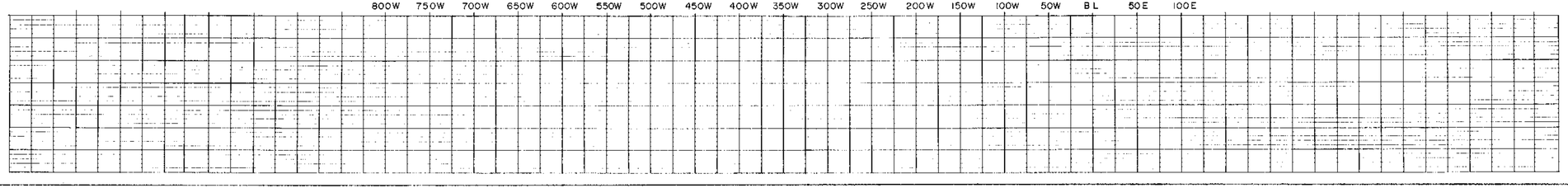
CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

Apparent Resistivity ohm metres



Apparent Chargeability Mv/v





CONTOUR INTERVALS :
APP RES — 1,15,2,3,5,7.5,10
APP CHARG — 1mv/v

TRANSMITTER — HUNTEC 7.5 Kw
RECEIVER — SCINTREX IPR-8

DATE SURVEYED MAY 27, 1979

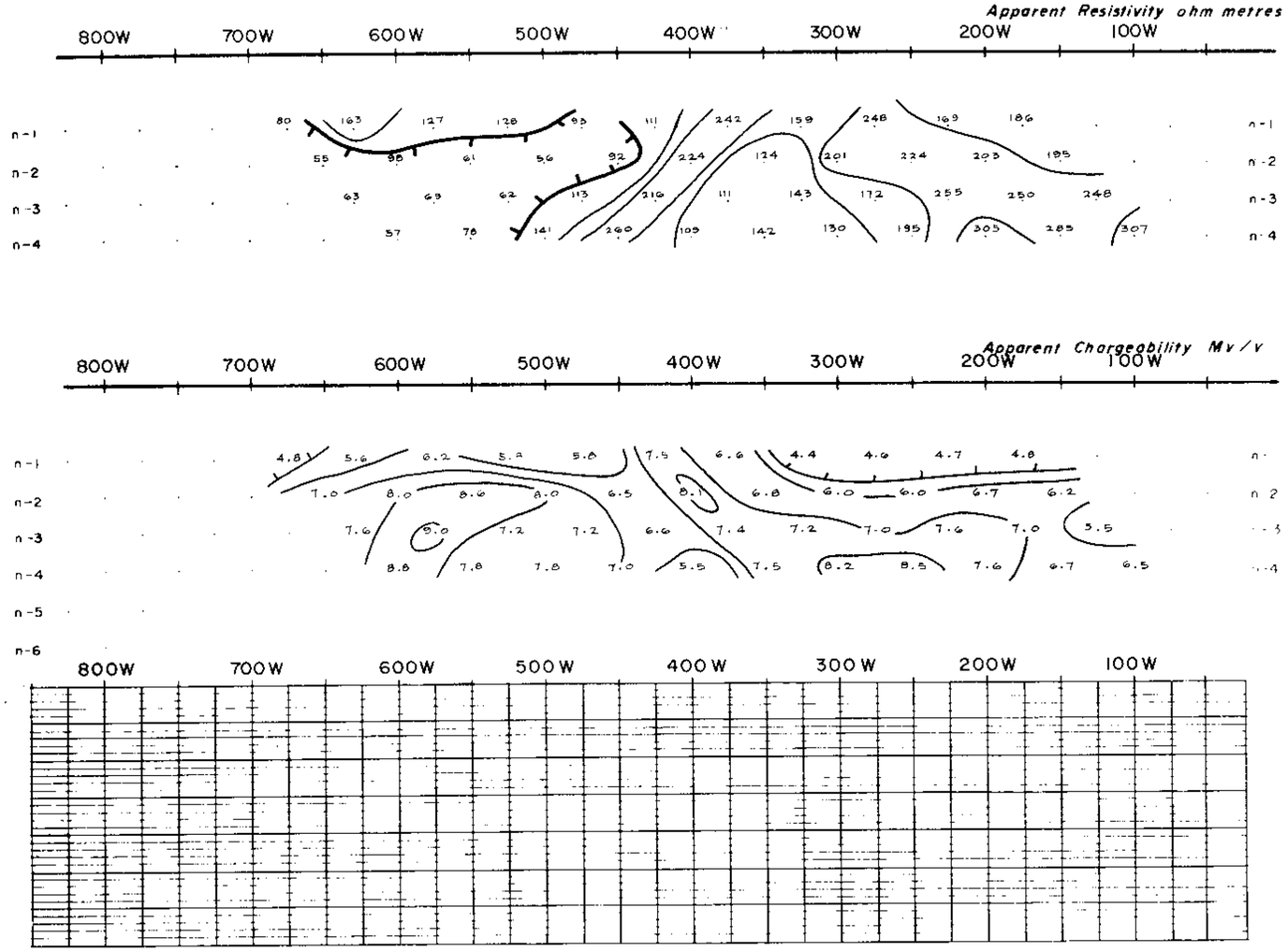
APPROVED

DATE

MINERAL RESOURCES DIVISION
ASSESSMENT REPORT
NO. 7724 PART 2 of 2

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 4+00S



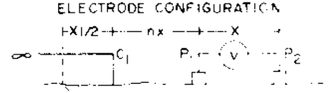
N.T.S. 92-H-15E

DWG NO. 161-79-4

COMINCO LTD.
THALIA PROPERTY
NICOLA M.D., B.C.

LINE NO. 0+00

POLE-DIPOLE
ELECTRODE CONFIGURATION



PLOTTING POINT
n = 1, 2, 3, 4

CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

CONTOUR INTERVALS :
APP RES — 1,1.5,2,3,5,7.5,10
APP CHARG — 1mv/V

DATE SURVEYED MAY 28, 1979

APPROVED

DATE

TRANSMITTER — HUNTEC 7.5 Kw
RECEIVER — SCINTREX IPR-8

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7724

PART 2 OF 2

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

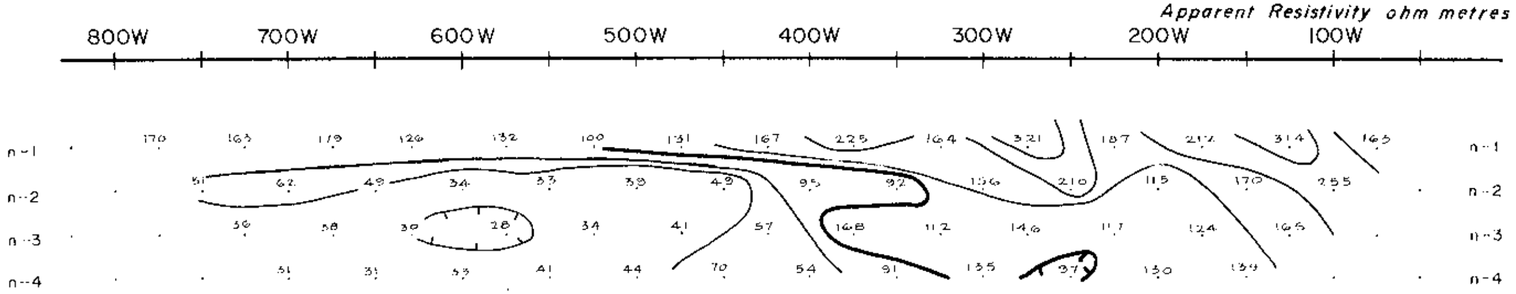
LINE 0+00

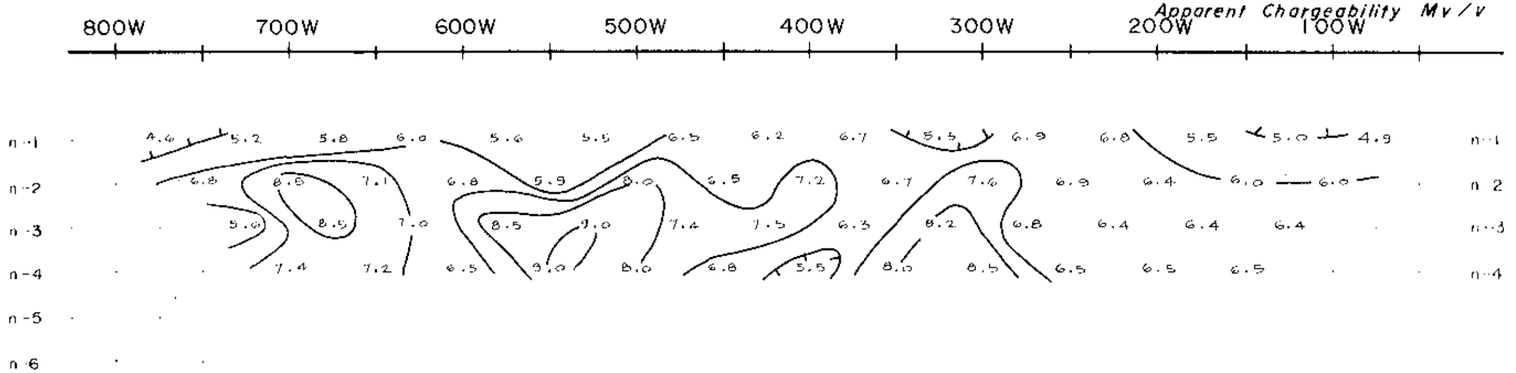
N.T.S. 92-H-15E

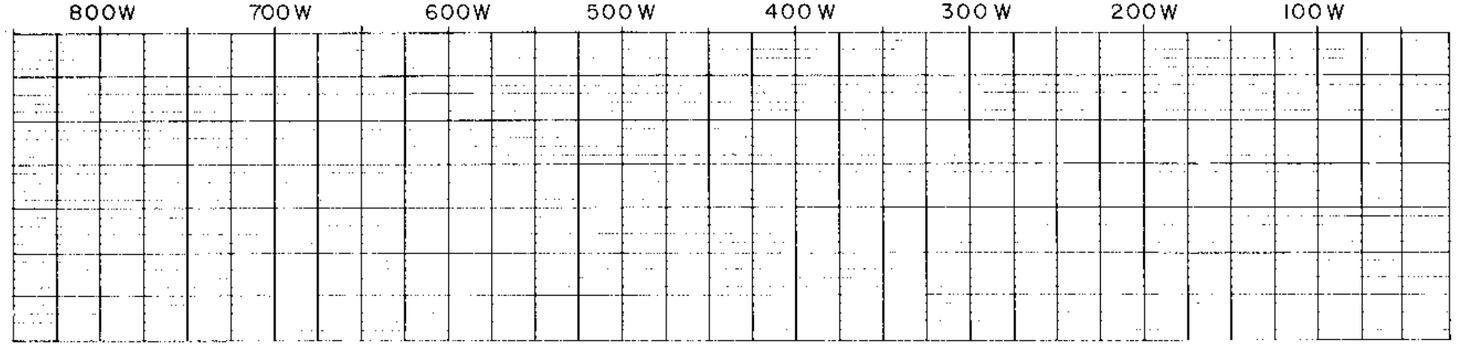
DWG. NO. 161-79-5

COMINCO LTD.
THALIA PROPERTY
NICOLA M.D., B.C.

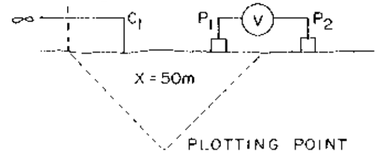
LINE NO. 2+00S







POLE-DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

DATE SURVEYED MAY 27, 1979

CONTOUR INTERVALS:
APP. RES. — 1,1.5,2,3,5,7.5,10
APP. CHARG. — 1mv/V

APPROVED

DATE

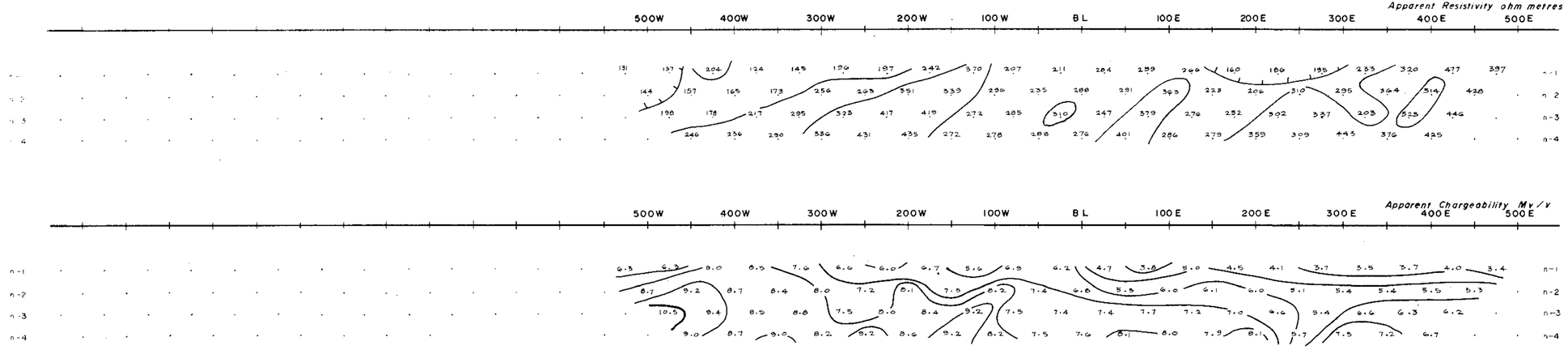
TRANSMITTER — HUNTEC 7.5Kw
RECEIVER — SCINTREX IPR-8

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7724

PART 2 OF 2

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

LINE 2+00S



N.T.S. 92 H 15E

DWG. NO. 161-79-6

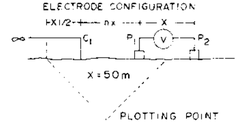
COMINCO LTD.

THALIA PROPERTY

NICOLA M. D., B.C.

LINE NO. 2+00 N

POLE-DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE WEST OF POTENTIAL DIPOLE

LINE 2+00 N

DATE SURVEYED MAY 28, 1979

CONTOUR INTERVALS:
APP RES — 1, 1.5, 2, 3, 5, 7.5, 10
APP CHARG — 1 Mv/V

APPROVED

DATE

TRANSMITTER — HUNTEC 7.5 Kw
RECEIVER — SCINTREX IPR8

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7724 PART 2 of 2

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION

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 THALIA MINERAL CLAIMS

ON THE THALIA PROPERTY

LOCATED 12 KM SOUTH OF ASPEN GROVE IN THE NICOLA MINING DIVISION

OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 92H/15E

S T A T E M E N T

I, ALAN 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 THALIA MINERAL CLAIMS:

3. THAT THE SAID EXPENDITURES WERE INCURRED FOR THE PURPOSE OF MINERAL EXPLORATION OF THE ABOVE NOTED CLAIMS BETWEEN THE 25TH OF MAY AND 28TH OF MAY, 1979.

Alan Scott
Geophysicist

ARS/skg
9 January 1980

APPENDIX II

STATEMENT OF EXPENDITURES

(IP SURVEY)

THALIA PROPERTY

SALARIES (Field work performed May 26-28, 1979)

G.J.	Niemeyer	3 days @ 105	=	315
I.	Cummings	3 days @ 81	=	243
S.	Kirstiuk	3 days @ 81	=	243
D.	Saunders	3 days @ 81	=	243
J.	Bell	3 days @ 81	=	243
R.	Prefontaine	3 days @ 81	=	243
				1530.00

MISCELLANEOUS

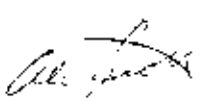
Food, lodging, gas, consumables	756.61

CHARGES PER OPERATING DAY

(towards report, drafting, supervision) 2 days IP survey @ 175/survey day	350.00

EQUIPMENT RENTALS AND CHARGES

3 days 7.5 kw IP survey system @ 251		753.00
	TOTAL:	$3389.61



APPENDIX III

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

I, Alan Scott, of 4013 West 14th Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify that:

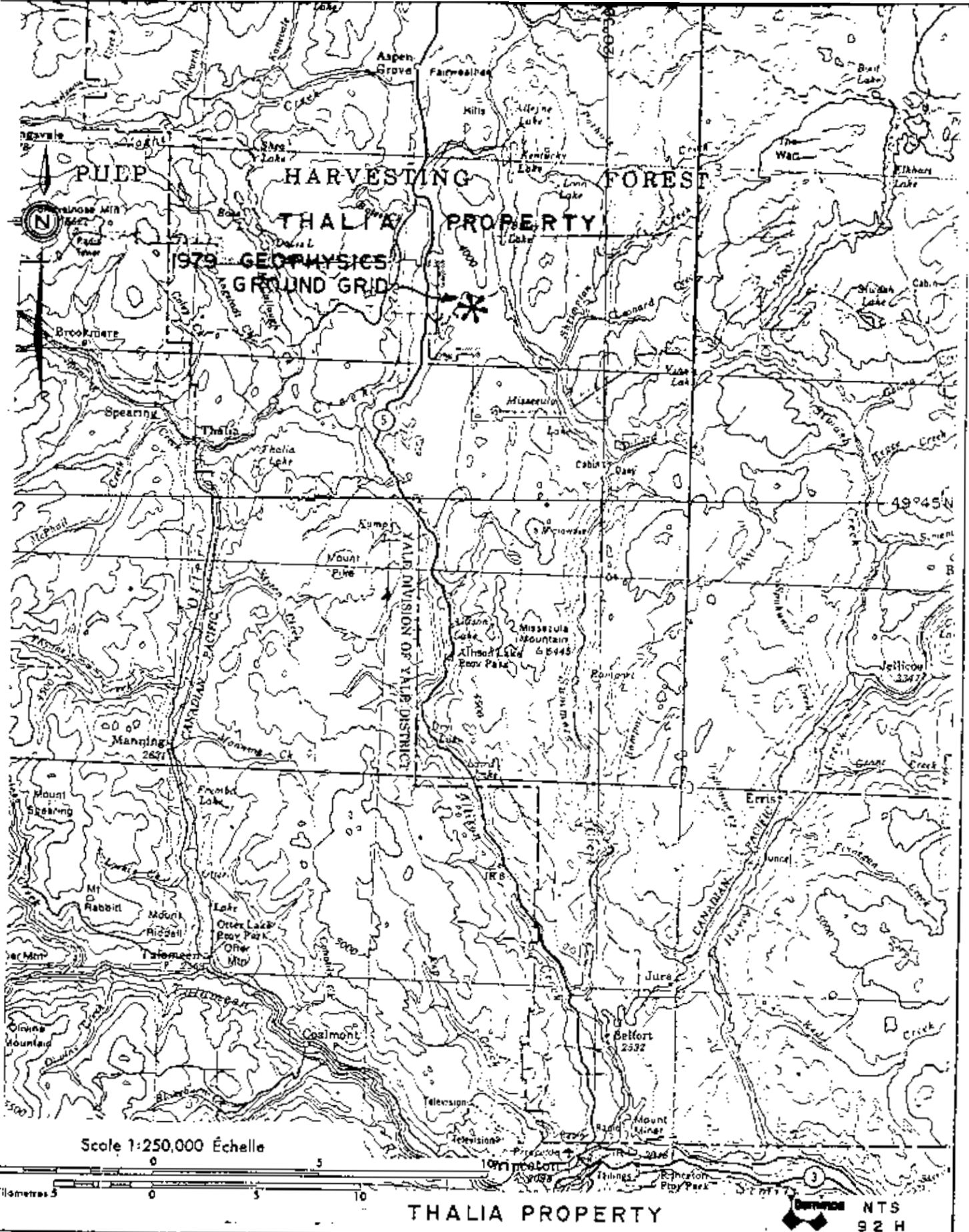
1. I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics.

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 ten years.

Alan Scott
Geophysicist

ARS/skg
9 January 1980



Drawn by:		Traced by:		LOCATION MAP
Revised by	Date	Revised by	Date	
				NICOLA M. D. B.C.

Scale: 1:250,000 Date: FEB 1979 Plate: 161-79-1

120°37'30"
49°52'30"

120° ' "
49° ' "

22°36' MAGNETIC

BLUEY LAKE

EAST GRID
1978 GEOPHYSICS
GROUND GRID

THALIA 5
THALIA 6
THALIA 7
THALIA 4
THALIA 1
THALIA 2
THALIA 3

BL

LINE 10 N
LINE 8 N
LINE 6 N
LINE 2N
LINE 0
LINE 2S

WEST GRID
8W 6W 4W 2W BL 2E 4E 5E

LINE 2+00N
LINE 0
LINE 2+00N
LINE 4+00S

1979
GEOPHYSICS
GROUND
GRID

1978 GEOPHYSICS
GROUND GRID

1979 GEOPHYSICS GROUND GRID
1978 GEOPHYSICS GROUND GRID
APPROX. LOCATION OF
CLAIM BOUNDARY AND POST

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7724 PART 2 of 2.

49°48'45"
120°37'30"

49° ' "
120° ' "

SCALE MILES
0 1/2 1

METRES
0 200 400 600 800 1000

THALIA PROPERTY — EAST & WEST GRID

NTS 92 H

Drawn by:		Traced by:	
Revised by	Date	Revised by	Date
J.P.S.	JAN/80		

CLAIM MAP

NICOLA M.D., B.C.

Scale: 1:15,840 | Date: FEB 1979 | Plate: 161-79-2