

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 94.11.22

ASSESSMENT REPORT 23144

MINING DIVISION: Nicola

PROPERTY: Nails

LOCATION: LAT 49 55 30 LONG 120 15 00  
UTM 10 5533698 697384  
NTS 092H16E 092H16W

CLAIM(S): Nails

OPERATOR(S): Cominco

AUTHOR(S): Hall, D

REPORT YEAR: 1993, 10 Pages

COMMODITIES

SEARCHED FOR: Gold, Copper

KEYWORDS: Triassic, Nicola Group, Volcanics, Jurassic, Pennask Batholith  
Overburden

WORK

DONE: Geophysical

IPOL 3.5 km

Map(s) - 1; Scale(s) - 1:5000

*Filtered*

**SUB-RECORDER  
RECEIVED**  
NOV 23 1993  
M.R. #.....\$.....  
VANCOUVER, B.C.

COMINCO LTD.

EXPLORATION

NTS: 92H/16 E/W

LOG NO:	DEC 23 1993	RD.
ACTION:	No M.L. No previous	
FILE NO:	assessment work	

WESTERN CANADA

**ASSESSMENT REPORT**

**I.P./RESISTIVITY SURVEY**

**ON THE**

**NAILS PROPERTY**

**LATITUDE: 49° 56' N**

**LONGITUDE: 120° 16' W**

**NICOLA MINING DISTRICT, B.C.**

**CLAIMS COVERED : NAILS**

**TIME PERIOD: OCT. 23-24, 1993**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

NOV. 1993

**23,144**

DAVID HALL

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**EXPLORATION**

**COMINCO LTD.**

**WESTERN CANADA**

**REPORT**

**ON**

**I.P./RESISTIVITY SURVEY**

**ON THE NAILS PROPERTY**

## **I INTRODUCTION**

During the time period Oct. 23-24, 1993, an Induced Polarization/Resistivity [I.P./Res.] survey was carried out on the Nails Property by Scott Geophysics Ltd. on behalf of Cominco Ltd. A total of 3.5 line kilometres of I.P./Res. survey was completed.

The purpose of this survey was to test an anomalous airborne magnetometer survey feature as a possible Cu/Mo porphyry mineralized system. The survey area is extensively masked by glacial cover which limits geological mapping.

This report discusses the geophysical equipment and procedures, then presents and interprets the results.

## **GEOLOGY**

The northern portion of the claim block exposes a quartz monzonite phase of the Jurassic-aged Pennask Batholith. This batholith is locally overlain on the west half of the claim block by a roof pendant of Triassic Nicola Group mafic and minor felsic volcanic lithologies. Local trace amounts of pyrite are present in the Nicola Group lithologies.

## **LOCATION AND ACCESS**

The Nails Property is located 40 km south east of Merritt, B.C., at latitude 49°56'N, longitude 120°16'W, on N.T.S. 92H/16. Access from Merritt is via highway 97C to the Elkhart Lake turnoff. From there a dirt road heads north, past Elkhart and Paradise Lakes and continues on another 2.5 km where it forks. The east fork leads to a point near the survey area.

## II GEOPHYSICAL SURVEYS

### EQUIPMENT AND PROCEDURES

A Scintrex IPR12 multi-channel time domain receiver and a Scintrex TSQ4 10 kw transmitter were used for the I.P./Res. survey. A pole/dipole electrode array was used, with the current electrode to the west of the potential electrodes. The standard 2 second ON/OFF alternating square wave was transmitted.

The IPR12 receiver determines I.P. response by measuring a number of chargeability windows of specific time widths. The chargeabilities plotted on the accompanying pseudosections are the values for the time interval 690 to 1050 milliseconds after transmitter shutoff.

The resistivity values [R] are in units of ohm-metres [ohm-m] and are calculated from the formula:

$$R = \frac{V K}{I} \quad \text{where } K = 2\pi a n [n+1] \quad a=100\text{m}, n=1,2,3,4,5,6,7,8$$

V = voltage at receiver [volts]  
I = transmitter current [amperes]

The survey procedure is described as follows. The transmitter is stationary and connected to the movable current electrode [pair of stainless steel rods] by well insulated wire on small, easily carried spools. The I.P. receiver moves along the line and for each current location is connected to the ground by a nonpolarizing electrode [porous pot containing CuSO<sub>4</sub>] at points 100, 200, 300, 400, 500, 600, 700, 800 and 900 metres from the current electrode. As the IPR12 is a multi-channel receiver readings of n=1-8 can be taken simultaneously. After a set of readings is taken at a particular current station the whole array moves 100 metres and the process is repeated. This continues until the line is finished. At this point the wire carrying the current has been laid out the full length of the line and must be wound in before the next line can be started.

### PRESENTATION OF RESULTS

The I.P./Resistivity data is presented in pseudosection form on Plate 397-93-5, with chargeability and apparent resistivity plotted at a scale of 1:5000. Apparent resistivity is in units of ohm-metres, chargeability values are in units of millivolts/volt [mV/V].

Chargeability anomaly bars are categorized as strong [ >20 mV/V], moderate [10-20 mV/V], and weak [7-10 mV/V]. These bars are plotted on the pseudosections to highlight anomalous chargeability zones.

### III INTERPRETATION

Line 4000S displays anomalous chargeabilities over 1200 metres. The strongest response is from 1500E to 1800E where chargeabilities reach values of approximately 15 mV/V.

Resistivities range from less than 200 ohm-metres to 900 ohm-metres.

### IV CONCLUSIONS

Scott Geophysics Ltd. surveyed 3.5 km of I.P./Resistivity on behalf of Cominco Ltd. on the Nails Property during the period October 23 to 24, 1993.

Although an anomalous zone was detected, the magnitude of the chargeability response was not sufficient to indicate significant concentrations of disseminated sulphides.

Report by : David C. Hall  
David C. Hall,  
Geophysicist

Approved for John Hamilton  
Release by : J.M. Hamilton, P.Eng/P.Geo  
Manager, Exploration  
Western Canada

#### Distribution:

- [2] Mining Recorder
- [1] D. Wagner- Geologist, Western District
- [1] Western District, Central Files
- [1] Geophysics File, Vancouver, B.C.

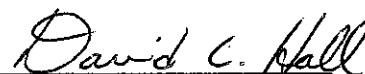
**APPENDIX I**

IN THE MATTER OF THE B.C. MINERAL ACT  
AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME  
CARRIED OUT ON THE NAILS PROPERTY  
LOCATED 40 KMS SOUTHEAST OF MERRITT, B.C.  
IN THE NICOLA MINING DISTRICT OF THE  
PROVINCE OF BRITISH COLUMBIA,  
MORE PARTICULARLY  
N.T.S. 92H/16

**S T A T E M E N T**

I, David C. Hall, of 3476 W. 22nd Avenue, in 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 "Exhibit A" to this statement is a true copy of expenditures incurred on a geophysical survey on the Nails Property;
3. That the said expenditures were incurred from Oct. 23-24, 1993, for the purpose of mineral exploration on the above noted property.



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David C. Hall  
Geophysicist  
Cominco Ltd.

Dated this 19 day of November, 1993  
at Vancouver, B.C.

## APPENDIX II - EXHIBIT "A"

STATEMENT OF EXPENDITURES  
NAILS PROPERTY - OCTOBER, 1993

1. INVOICE FROM SCOTT GEOPHYSICS LTD.	\$ 4091.39
2. REPORT WRITING, DRAFTING	\$ 1780.00
TOTAL	<u>\$ 5871.39</u>




## APPENDIX III

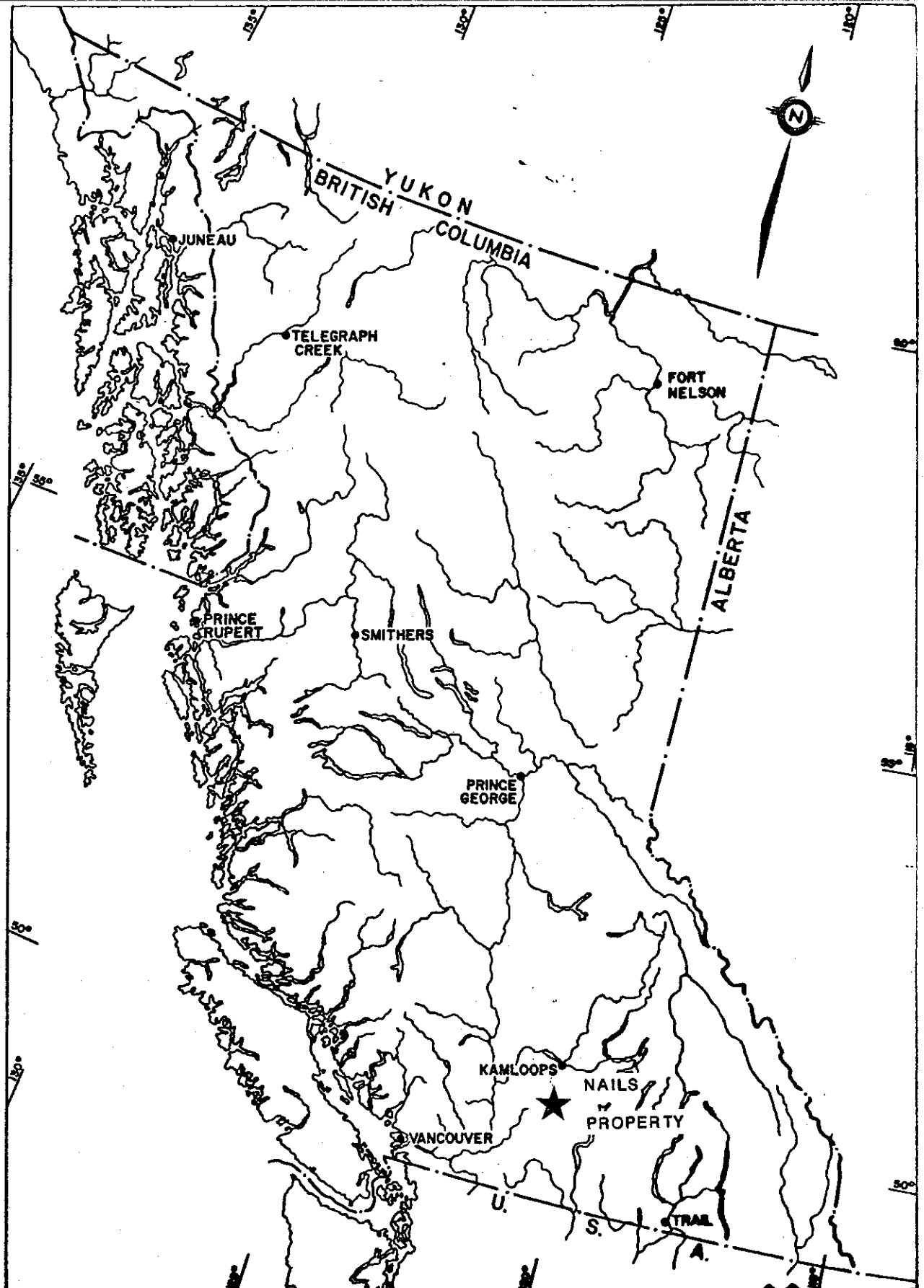
## CERTIFICATION OF QUALIFICATIONS

I, DAVID C. HALL, of 3476 W. 22nd Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:

- i. THAT I graduated with a B.Sc. in Geophysics from the University of Manitoba in 1976.
- ii. THAT I have been actively practising Geophysics from 1976 to 1993, and am presently an employee of Cominco Ltd.

  
\_\_\_\_\_  
David C. Hall, B.Sc.  
Geophysicist

November, 1993



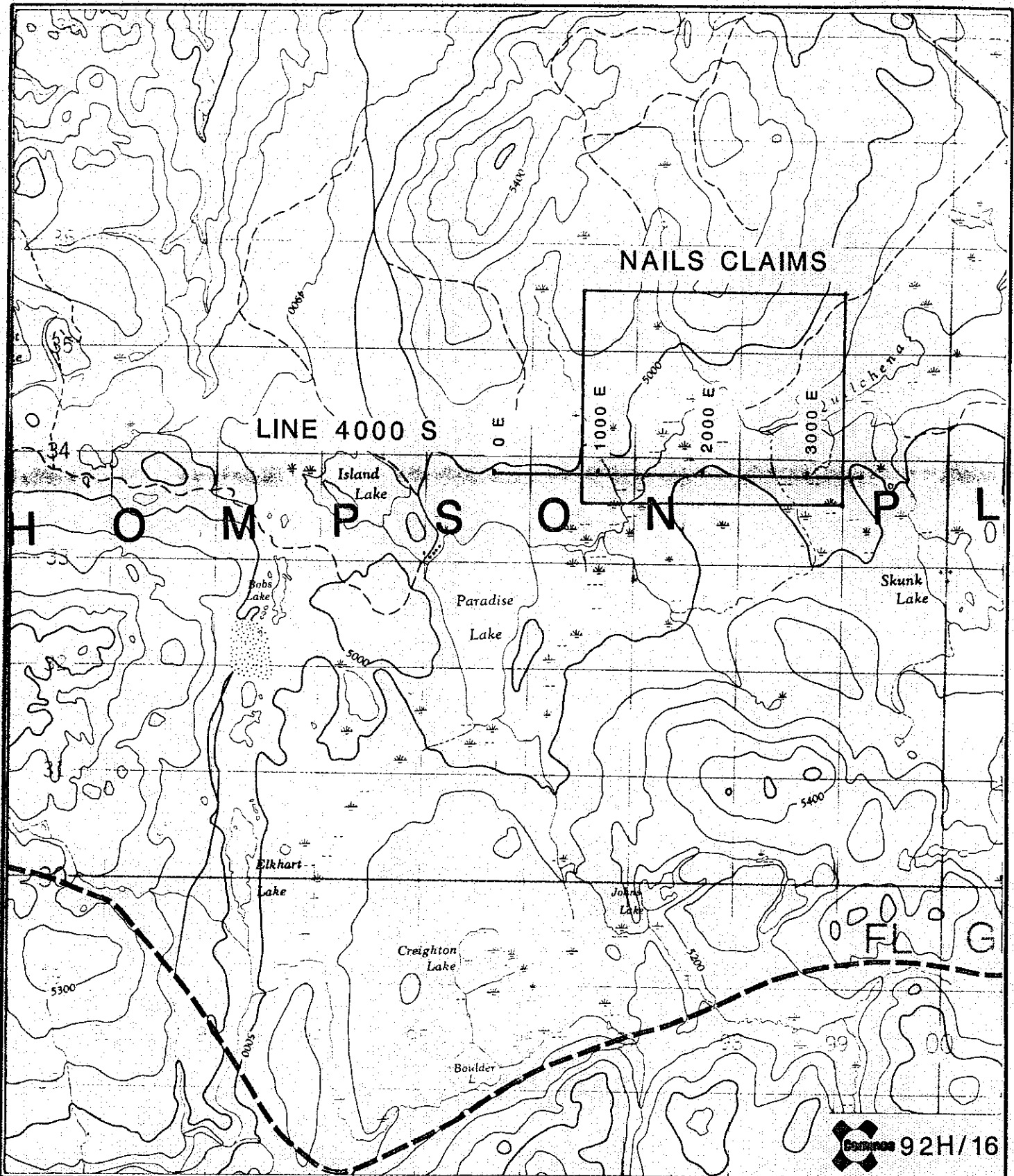
Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

## NAILS PROPERTY LOCATION

Scale: 1:6,370,000

Date: OCT. 1993

Plate: 397-93-3



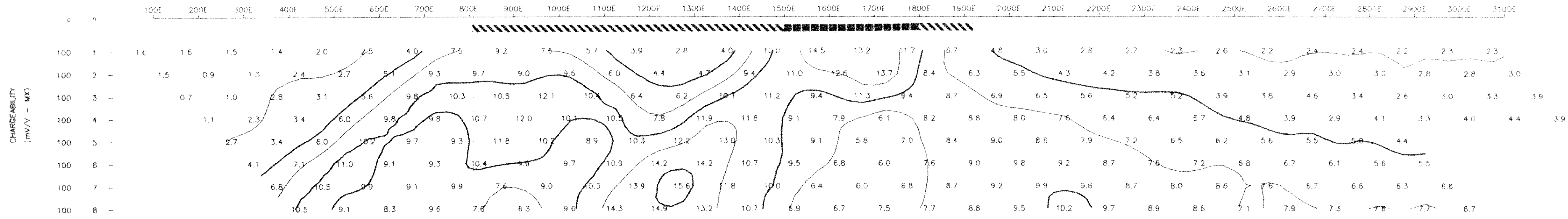
Compass 92H/16

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

**NAILS PROPERTY**

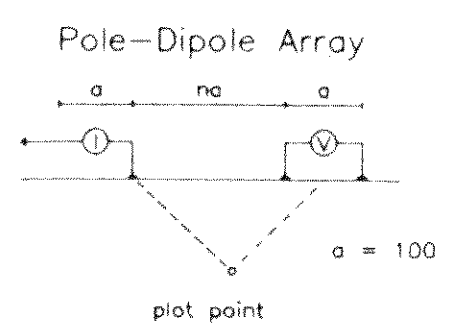
**SURVEY LOCATION AND CLAIM MAP**

Scale: 1:50,000      Date: OCT. 1993      Plate: 397-93-4

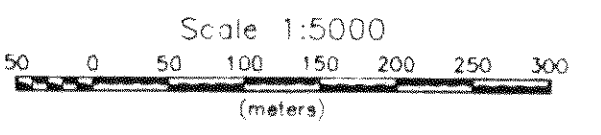


Contour levels

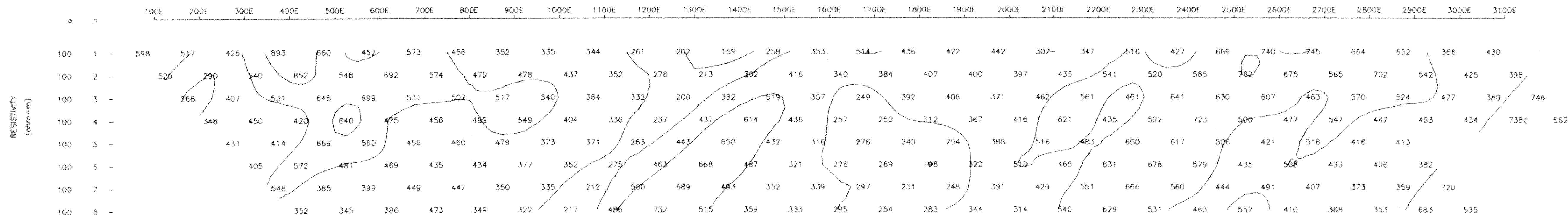
- 2.5
- 5
- 7.5
- 10
- 12.5
- 15



- STRONG IP RESPONSE >20 mV/V
- MODERATE IP RESPONSE 10-20 mV/V
- WEAK IP RESPONSE 7-10 mV/V



Contour Interval: Chargeability - 2.5 mV/V  
Resistivity - logarithmic



Contour levels

- 200
- 300
- 500
- 750

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

23,144

NAILS PROPERTY		Nicola M.D., B.C.	NTS 92-H/16
Line 400S		INDUCED POLARIZATION / CHARGEABILITY PSEUDOSECTIONS	
Scale 1:5000		November 1993	