

LOG NO: 'SEP 26 1994 RD.

ACTION.

FILE NO:

COMINCO LTD.

EXPLORATION

WESTERN CANADA

NTS: 92H16

ASSESSMENT REPORT

I.P./RESISTIVITY SURVEY

ON THE

PINNACLE PROPERTY,

NICOLA MINING DISTRICT, B.C.

LATITUDE: 49° 56' N

LONGITUDE: 120° 04' W

CLAIMS COVERED: PINNACLE

SUB-RECORDER
RECEIVED
SEP 13 1994
M.R.# \$
VANCOUVER, B.C.

TIME PERIOD: APR. 8-14, 1994

FILMED

GEOLOGICAL BRANCH
ASSESSMENT REPORT

SEPT. 1994

DAVID HALL

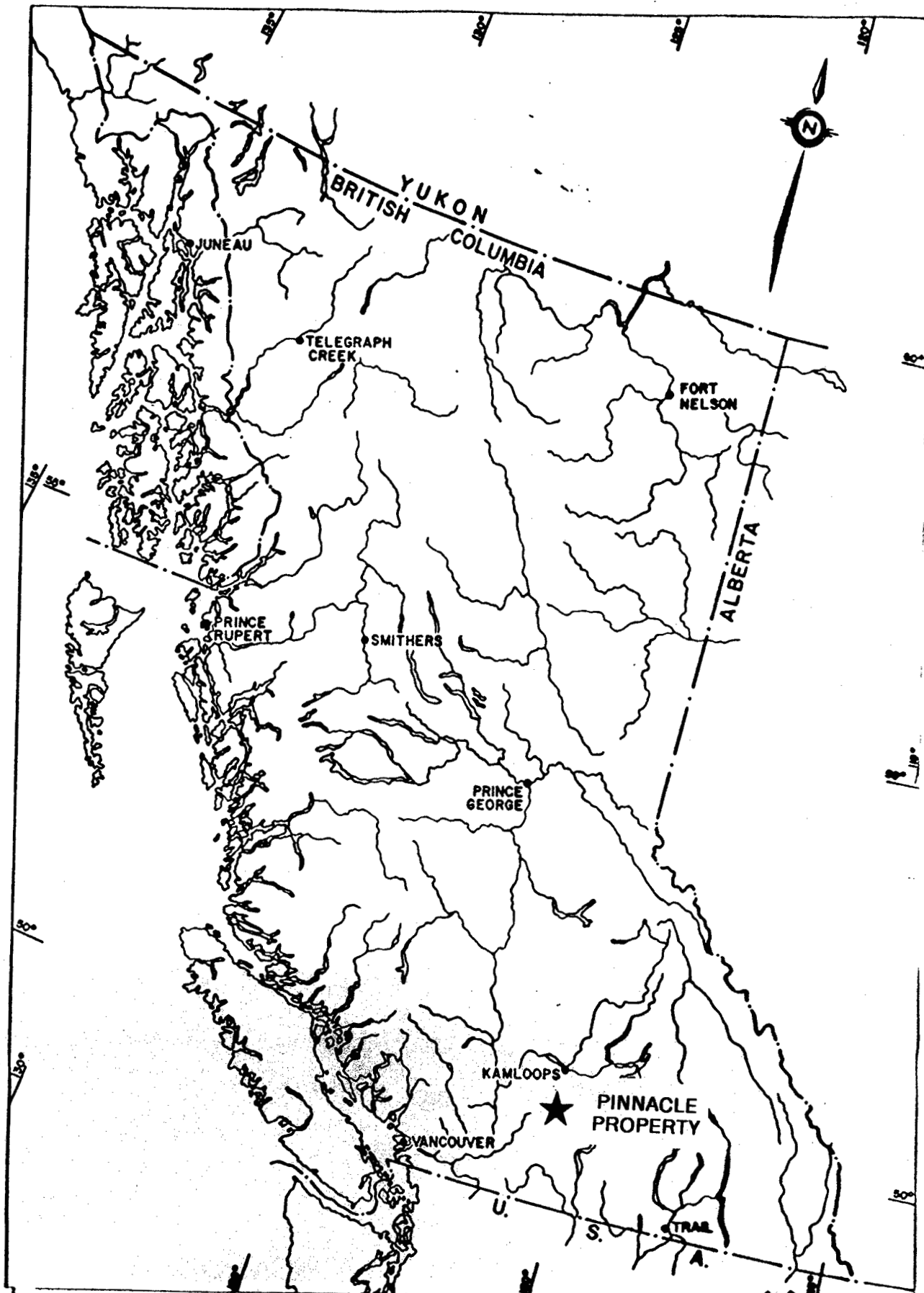
23,510

TABLE OF CONTENTS

	PAGE
I INTRODUCTION	1
Geology	1
Location and Access	1
II GEOPHYSICAL SURVEYS	2
Equipment and Procedures	2
Presentation of Results	3
III INTERPRETATION	3
IV CONCLUSIONS	4
APPENDIX I STATEMENT	5
APPENDIX II STATEMENT OF EXPENDITURES	6
APPENDIX III CERTIFICATION OF QUALIFICATIONS	7

LIST OF PLATES

	PLATE NO.
Location Map	397-94-1
I.P. Survey Grid Location and Claim Map	397-94-2
Chargeability/Resistivity Pseudosections	397-94-3



92H/16

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

PINNACLE PROPERTY LOCATION

REPORT

ON

I.P./RESISTIVITY SURVEY
ON THE PINNACLE PROPERTYI INTRODUCTION

During the time period April 8-14, 1994 an Induced Polarization/Resistivity [I.P./Res.] survey was carried out on the Pinnacle Property by an in-house Cominco geophysical crew. Geophysicists I. Jackisch and D. C. Hall were present for the survey. A total of 10.4 kms of I.P./Res. was completed on a grid established by an in-house Cominco crew from April 4-6, 1994.

The purpose of this geophysical survey was to test an anomalous airborne magnetic survey feature as a zone with potential for porphyry style mineralization. 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 survey site is the largely overburden covered Pennask Creek Valley. The area is underlain by the Jurrassic-aged Pennask Batholith near the contact between the Reservoir [granodiorite] and Paradise Lake [quartz monzonite] phases of the batholith. To the southeast of the survey area are located pyritic black shales and subordinate mafic volcanics of the Upper Triassic Nicola Group which form a roof pendant atop the batholith. Eocene volcanic and volcanoclastic lithologies occupy heights of land north and to the southwest of the survey area.

LOCATION AND ACCESS

The Pinnacle Property is located 50 km southeast of Merritt, B.C., at latitude 49°56'N, longitude 120°04'W, on N.T.S. 92H16. Access from Merritt is via highway 97C to the Sunset Lake turnoff. From there a gravel road travels east for approximately 9 km to the Bear Main Forest Service Road which leads to the survey area 2 km to the north. The Bear Main FSR cuts through the center of the grid.

II GEOPHYSICAL SURVEYS

EQUIPMENT AND PROCEDURES

Two Hunttec Mark 4 time domain receivers and a Hunttec 7.5 KW Mark 4 constant current transmitter were used for the I.P.\Res. survey. A pole/dipole electrode array was used. The standard 2 second ON/OFF alternating square wave was transmitted.

The Mark 4 receivers were set to a delay time of 120 msec. and an integration time of 900 msec. Data was recorded both in notepad form and on a Solid State Memory [SSM] unit, manufactured by Lloyd Geophysics Ltd., which is installed inside the receivers. The SSM dumps directly onto a personal computer running on Geosoft software.

The Hunttec receiver measures the chargeability in 10 windows, each 90 msec. in duration, for a total of 900 msec. The instrument displays and records each of the 10 windows as well as the total chargeability, which is the value plotted on the pseudo-sections.

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

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

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

The survey procedure was to reel out the wire [leading from the transmitter] to the end of the survey line, leaving a stainless steel rod at each 100 metre interval. The survey line is then read back to the beginning of the line by the following procedure. The current electrode man cuts the wire at each 100 metre picket and attaches the end leading to the transmitter to the steel electrode. The wire and rods discarded by the current man are used as potential electrodes by the receiver operators [one receiver taking n=2,1 readings, the other taking n=4,3 readings]. The current electrode man moves up in 100 metre intervals and hammers the rod into the ground while the readings are in progress. When both receiver operators are finished with their readings, the current is shut off, and the current man cuts the wire for the new current station and connects the wire to the rod, then asks for the power to be turned on at the new station. This procedure is repeated in 100 metre increments until the entire line is read.

PRESENTATION OF RESULTS

The I.P./Resistivity data is presented in pseudosection form on Plate 397-94-3, with chargeability and apparent resistivity plotted at a scale of 1:5000 for each survey line. Apparent resistivity is in units of ohm-metres, chargeability values are in units of milliseconds [msecs.].

Chargeability anomaly bars are categorized as strong [>30 msecs.], moderate [20-30 msecs.], and weak [12-20 msecs.]. These bars are plotted on the pseudosections to highlight anomalous chargeability zones.

III Interpretation

In April 1994 four east-west lines were completed on the Pinnacle Property [Plate 397-94-3]. Line 1700N, the northmost line does not display any anomalous chargeabilities. Resistivities vary from 100 to 600 ohm-metres.

Line 1200N is anomalous for 1200 metres with chargeabilities reaching values of 35-40 msecs on the deeper separations from 900E to 1200E. First separation response is greatly attenuated suggesting that it is not penetrating through the overburden. Resistivities associated with the chargeability high are approximately 100 ohm-metres.

Chargeability response increases on Line 300N in both magnitude and width. The zone of strong I.P. response [>30 msecs] extends from 100W to 700E with values of over 45 msecs. from 300E to 650E. The anomaly is open to the west. Overburden depth appears fairly shallow at 650E and increases to the west.

Line 700S displays two separate anomalies. The western zone could be a continuation of the southwest trending anomaly detected on Lines 1200N and 300N however the magnitude of the response is diminished from Line 300N. The eastern anomaly shows chargeability response increasing to the east associated with a marked increase in resistivity. Outcrop of Nicola Volcanics is evident on the east end of this line containing enough pyrite to produce a moderate chargeability response.

IV Conclusions

During the time period April 8-14, 1994 an in-house Cominco geophysical crew completed 10.4 kms. of I.P./Res. on the Pinnacle Property. The purpose of the survey was to test an anomalous aeromagnetic feature as a possible porphyry target in an area almost totally masked by glacial cover.

The I.P./Res. survey detected a southwest trending chargeability anomaly of sufficient size and magnitude to justify additional work on the property.

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] Douglas Lake Cattle Company
- [1] D. Wagner - Geologist, Western District
- [1] Western District, Central Files
- [1] Geophysics File, Vancouver, B.C.

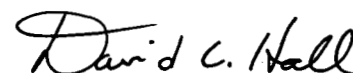
APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT
AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME
CARRIED OUT ON THE PINNACLE PROPERTY
LOCATED 50 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 herein-after 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 Pinnacle Property;
3. That the said expenditures were incurred in April, 1994 for the purpose of mineral exploration on the above noted property.



David C. Hall
Geophysicist
Cominco Ltd.

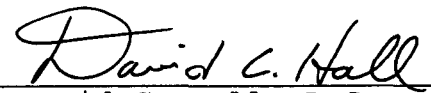
Dated this 8th day of September, 1994
at Vancouver, B.C.

APPENDIX III

CERTIFICATION OF QUALIFICATIONS

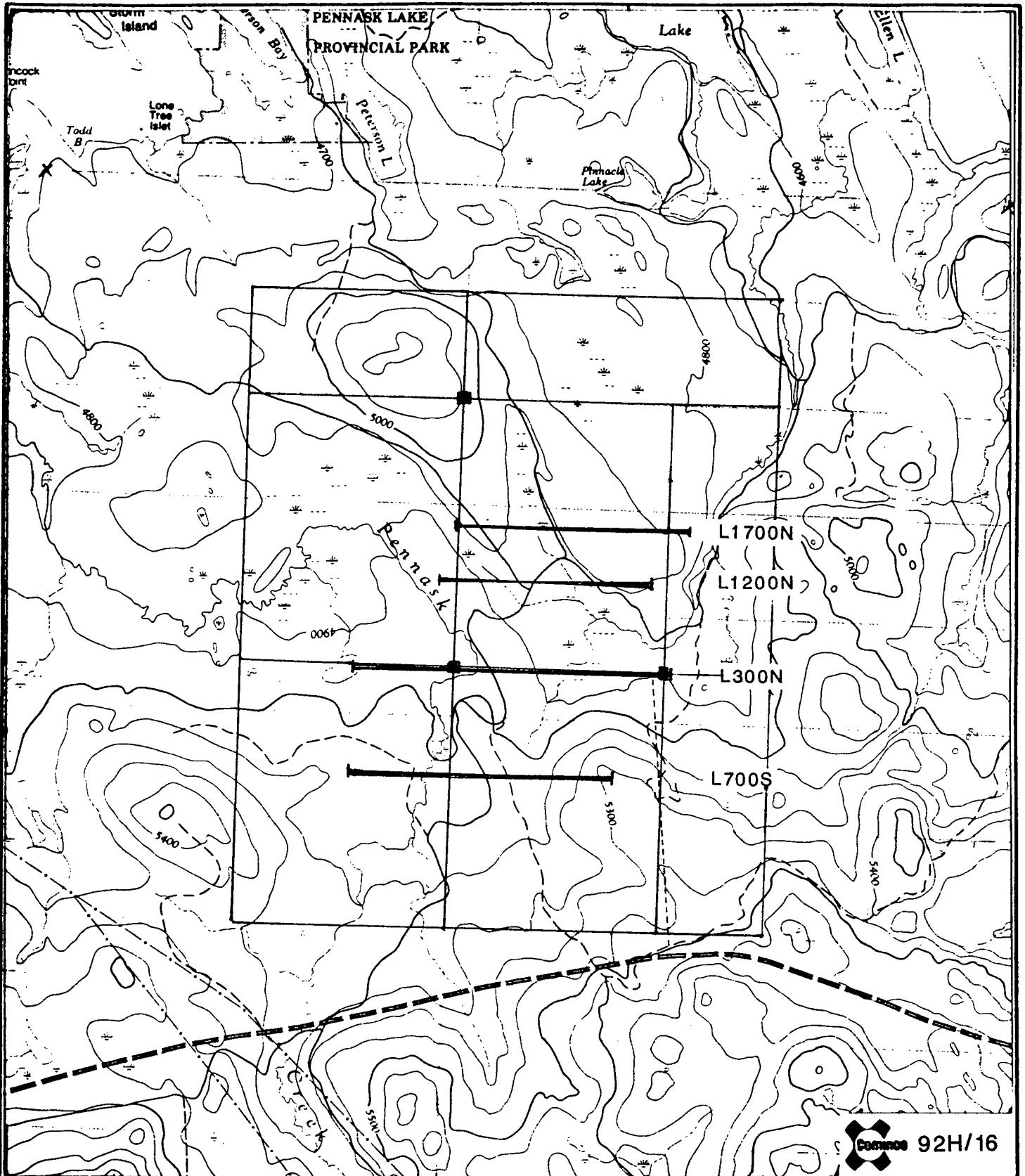
I, DAVID C. HALL, of 3476 W. 22nd Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:

- 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 1994, and am presently an employee of Cominco Ltd.



David C. Hall, B.Sc.
Geophysicist

September 1994



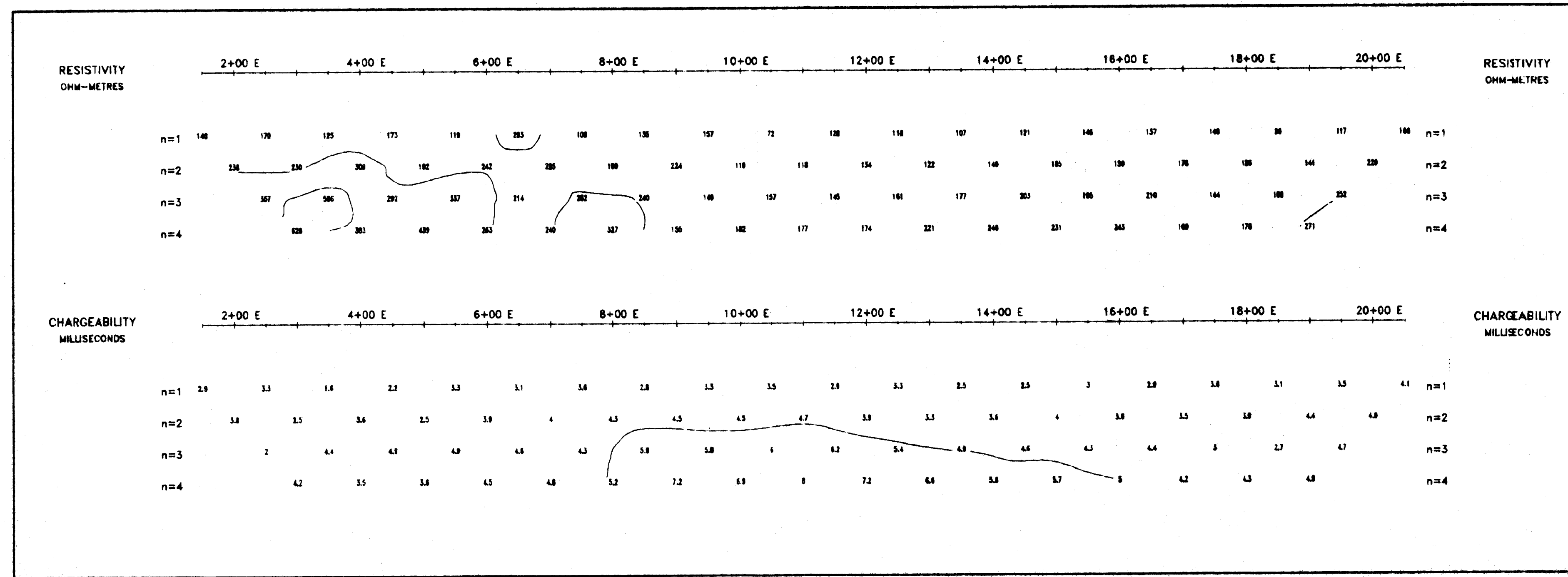
Corona 92H/16

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

PINNACLE PROPERTY

1994 I.P. SURVEY GRID LOCATION

Scale: 1:50,000	Date: APRIL 1994	Plate: 397-94-2
-----------------	------------------	-----------------



Line 1700 N

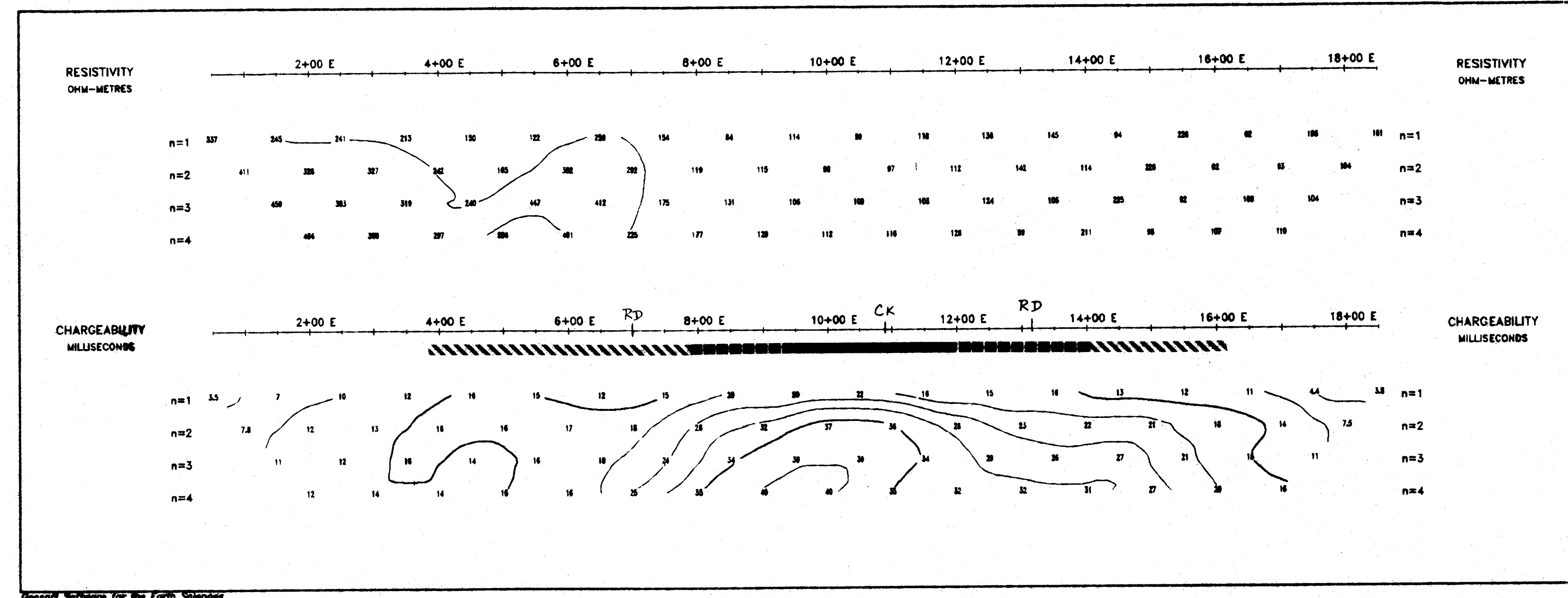
Pole-Dipole Array
a = 100 M
plot point

STRONG IP RESPONSE > 30 milliseconds
MODERATE IP RESPONSE 20-30 milliseconds
WEAK IP RESPONSE > 12 milliseconds

Scale 1:5000
50 0 50 100 150 200 250 300 (metres)

Contour Interval: Chargeability - 5.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.
INDUCED POLARIZATION SURVEY
DOUGLAS LAKE
PINNACLE
Date: 94/04/09
Interpretation: Td=120ms Tp=900ms
HUNTEC MK 4 RX



Line 1200 N

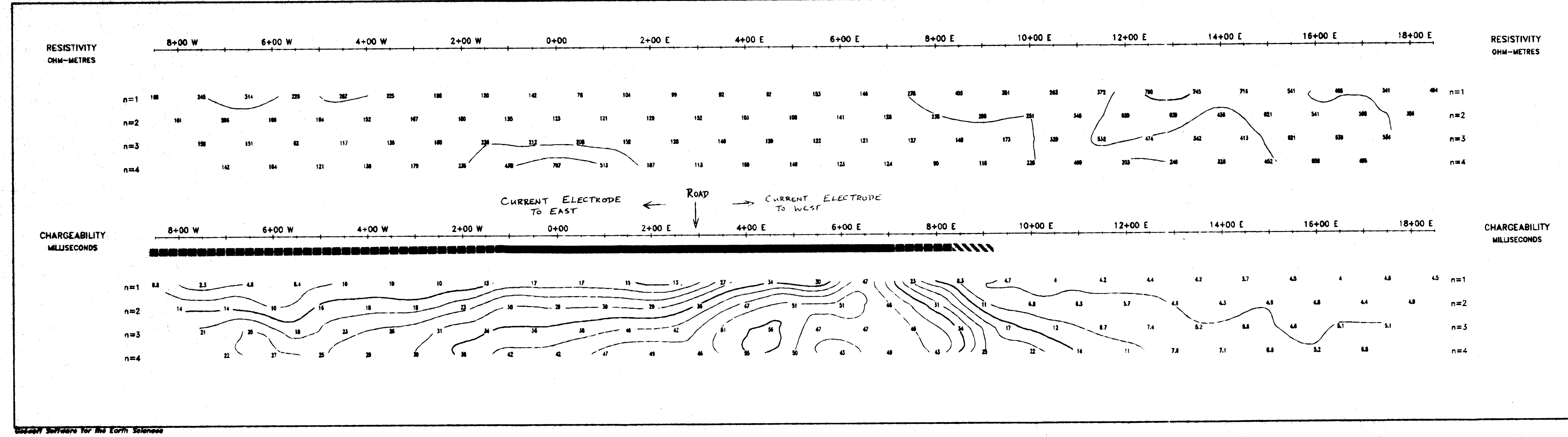
Pole-Dipole Array
a = 100 M
plot point

STRONG IP RESPONSE > 30 milliseconds
MODERATE IP RESPONSE 20-30 milliseconds
WEAK IP RESPONSE > 12 milliseconds

Scale 1:5000
50 0 50 100 150 200 250 300 (metres)

Contour Interval: Chargeability - 5.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.
INDUCED POLARIZATION SURVEY
DOUGLAS LAKE
PINNACLE
Date: 94/04/09
Interpretation: Td=120ms Tp=900ms
HUNTEC MK 4 RX



Line 300 N

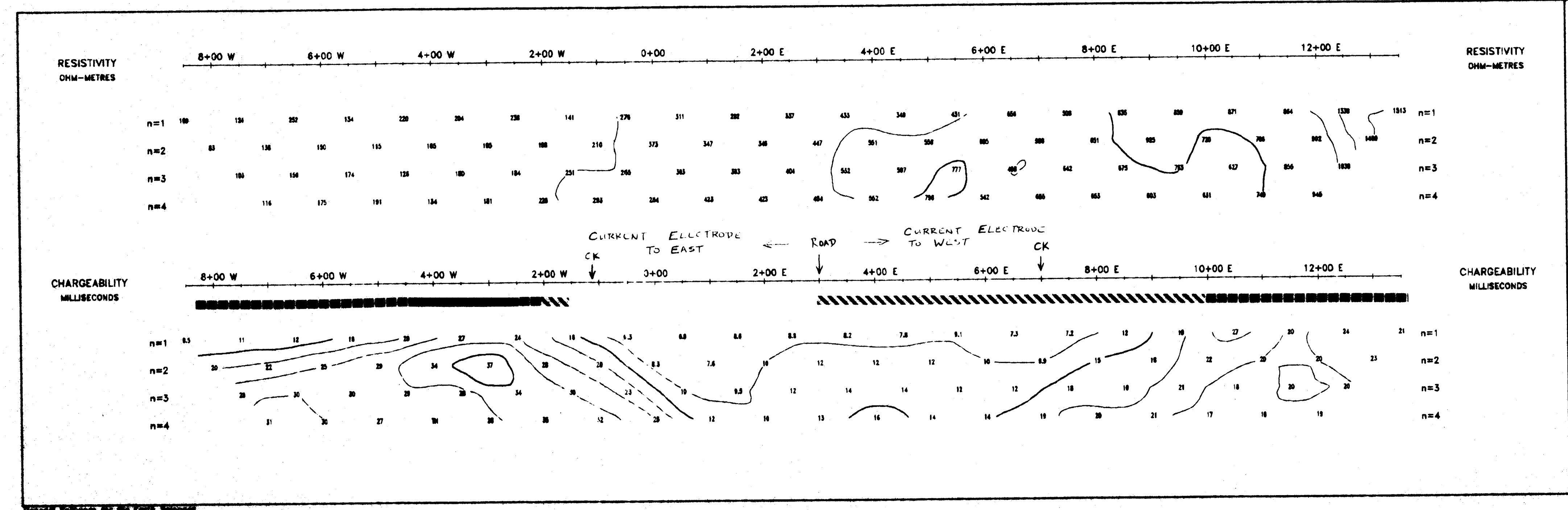
Pole-Dipole Array
a = 100 M
plot point

STRONG IP RESPONSE > 30 milliseconds
MODERATE IP RESPONSE 20-30 milliseconds
WEAK IP RESPONSE > 12 milliseconds

Scale 1:5000
50 0 50 100 150 200 250 300 (metres)

Contour Interval: Chargeability - 5.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.
INDUCED POLARIZATION SURVEY
DOUGLAS LAKE
PINNACLE
Date: 94/04/11
Interpretation: Td=120ms Tp=900ms
HUNTEC MK 4 RX



Line 700 S

Pole-Dipole Array
a = 100 M
plot point

STRONG IP RESPONSE > 30 milliseconds
MODERATE IP RESPONSE 20-30 milliseconds
WEAK IP RESPONSE > 12 milliseconds

Scale 1:5000
50 0 50 100 150 200 250 300 (metres)

Contour Interval: Chargeability - 5.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.
INDUCED POLARIZATION SURVEY
DOUGLAS LAKE
PINNACLE
Date: 94/04/13
Interpretation: Td=120ms Tp=900ms
HUNTEC MK 4 RX

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,510

PINNACLE PROPERTY

Drawn by:	Traced by:
Revised by:	Revised by:
Scale: 1:5,000	Date: Apr., 94
Page: 397-94-3	Form 210 (94)

CHARGEABILITY/RESISTIVITY PSEUDOSECTIONS