

LOG NO: SEP 13 1993 RD.
SECTION.
FILE NO:

COMINCO LTD.

EXPLORATION

WESTERN CANADA

NTS: 92J7

FILMED

ASSESSMENT REPORT

I.P./RESISTIVITY SURVEY

ON THE

OWL PROPERTY

SOUTHWESTERN BRITISH COLUMBIA

LILLOOET MINING DISTRICT, B.C.

CLAIMS COVERED : OWL 2,5,8

TIME PERIOD: MAY 21 -26, 1993

GEOLOGICAL BRANCH
ASSESSMENT REPORT

JUNE 1993

INGO JACKISCH

22,991



ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)] Induced Polarization Survey	TOTAL COST \$ 12,000.00
--	----------------------------

AUTHOR(S) Ingo Jackisch SIGNATURE(S) Ingo Jackisch

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) Nan 93-0700298-42 YEAR OF WORK 1993

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) 3036850 - June 15/93

PROPERTY NAME Owl (Pemberton)

CLAIM NAME(S) (on which work was done) Owl 2, 5, 8

COMMODITIES SOUGHT Cu, Mo

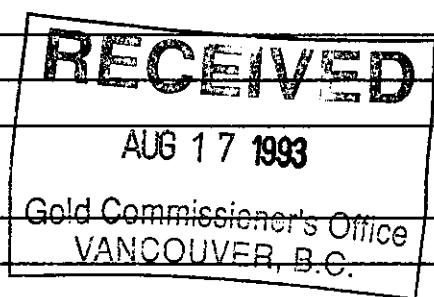
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN

MINING DIVISION Lillooet NTS 92 J / 7 W

LATITUDE 50° 26' LONGITUDE 122° 49' (at centre of work)

OWNER(S)
1) Cominco Ltd. 2)

MAILING ADDRESS
700-409 Granville St.
Vancouver
Vac ITZ



OPERATOR(S) [who paid for the work]
1) same 2)

MAILING ADDRESS

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
claims underlain by intermediate to felsic fragmental volcanics and augite plagioclase porphyry of Triassic Takla Group. Mineralization comprises disseminated Py/CPY in volcanic porphyry and disseminated and fracture controlled Py/CPY/Bc in tuffaceous rocks. Alteration consists of secondary K-spar and sericite in fragmentals.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS and sericite in fragmentals.

TABLE OF CONTENTS

	PAGE
I INTRODUCTION	1
Location and Access	1
II GEOPHYSICAL SURVEYS	1
Equipment and Procedures	1
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 AND CLAIM MAP	400-93-1
CLAIM AND I.P.\RES. GRID MAP	400-93-2
I.P. PSEUDOSECTION - LINE 3N	400-93-3
- LINE 4E	400-93-4
- LINE 5N	400-93-5

REPORT

ON

I.P./RESISTIVITY SURVEY

ON THE OWL PROPERTY

I INTRODUCTION

During the time period May 21 - 26, 1993, an Induced Polarization/Resistivity [I.P./Res.] survey was carried out by an in-house Cominco Ltd. geophysical crew on the Owl Property, located in southwestern B.C. Geophysicists I. Jackisch, D.C. Hall, and F. Dziuba were present for the field work. A total of 6.2 km of I.P./Res. was surveyed.

The purpose of these geophysical surveys was to test for indications of sulphides in a geological environment favourable to porphyry Cu/Au deposits, but where the ground surface is predominantly covered by overburden and outcrop is minimal. Survey lines 3N and 5N were chosen to test the significance of an airborne magnetic feature.

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

LOCATION AND ACCESS

The Owl Property is located 11 km north of Pemberton, B.C., at latitude 50°25'N, longitude 122°46'W, on N.T.S. 92J7. Access is from a very rough dirt road which follows Owl Creek approximately two thirds of the distance to Owl Lake from the paved road at the Birkenhead River. The turnoff onto this dirt road is 3 km north of Mount Currie on the road to Birken [Anderson Lake].

II GEOPHYSICAL SURVEYSEQUIPMENT AND PROCEDURES

Two Huntec Mark 4 time domain receivers and a Huntec 7.5 KW Mark 4 constant current transmitter were used for the I.P./Res. survey. A pole /dipole electrode array was used, and 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 notebook 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. This chargeability value is equivalent to the eighth slice [M7, measuring from 690 to 1050 msec. after transmitter shutoff] of the Scintrex IPR-11 receiver.

The I.P.\Res. survey was carried out on reconnaissance lines which are run through the bush at the time of the survey. The "a" spacing was 100 metres and the number of separations or "n" [in multiples of 100 metres distant from the current electrode] were 1,2,3, and 4. The deepest ground penetration would be for the n=4 reading, which would be probing to a maximum depth of 200 metres.

The resistivity values [R] are in units of ohmmetres [ohmm] 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] along the reconnaissance survey line and deposit a stainless steel rod at each 100 metre interval until the end of the line was reached. The person connecting the current rod would cut the wire and attach 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 stake 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. A new current is then turned on by the transmitter operator and the receiver operators take readings for this new station. This procedure is repeated in 100 metre increments until the entire line is read.

The location of the reconnaissance lines were chosen to lie in the flat valley bottoms, where walking would be easiest. At the time the survey was carried out, half a metre or more of snow covered the ground, making progress slow and strenuous. The melting snow was helpful, however, in keeping the ground moist so that electrode contact was good.

PRESENTATION OF RESULTS

The I.P./Resistivity data is presented in pseudosection form on Plates 400-93-3 to -6, 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 [15-20 msecs.], moderate [10-15 msecs.], and weak [7.5-10 msecs.]. These bars are plotted on the pseudo-sections to highlight the anomalous zones.

III INTERPRETATION

Line 3N shows a deep, local resistivity high from 1950E to 2100E. Resistivity values drop constantly to the east. A weak, deep chargeability response occurs from 2600E to 2700E.

Line 4E resistivity values resemble the moderately low numbers present on the east end of line 3N. The range in values is confined to a much smaller scale than on the other two lines. Localized, weak chargeability responses occur from 3100N to 3200N and from 3450N to 3600N.

Line 5N shows a greater range in resistivity values which resembles the west part of line 3N. A local high occurs from 2950E to 3100E. The chargeability values are all of background level.

IV CONCLUSIONS

6.2 kms of I.P./Resistivity were surveyed by Cominco Ltd. from May 21-26, 1993, on the Owl Property.

Two localized resistivity highs [in the 5000 ohm-metre range] were detected, perhaps indicating quartz dykes. Resistivities of approximately 1000 ohm-metres on the east half of Line 3N and the entire length of Line 4E are lower in value and volatility than the other survey areas, suggesting a change in rock type between these two resistivity types.

No significant chargeability anomalies indicating a large deposit of disseminated sulphides related to porphyry copper mineralization were discovered.

Report by : Ingo Jackisch
Ingo Jackisch
Geophysicist

Approved for
Release by : John Hamilton
J.M. Hamilton
Manager, Exploration
Western Canada

Distribution:

- [2] Mining Recorder
- [1] M.J.Casselmann - 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 OWL PROPERTY
 LOCATED 11 KMS NORTH OF PEMBERTON, B.C.
 IN THE LILLOOET MINING DIVISION OF THE
 PROVINCE OF BRITISH COLUMBIA,
 MORE PARTICULARLY
 N.T.S. 92J/7

S T A T E M E N T

I, Ingo Jackisch, of 424 Somerset Street, in the City of North 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 OWL Property;
3. That the said expenditures were incurred from May 21-26, 1993, for the purpose of mineral exploration on the above noted property.

Ingo Jackisch

 Ingo Jackisch
 Geophysicist
 Cominco Ltd.

Dated this 28 day of June, 1993
 at Vancouver, B.C.

APPENDIX II - EXHIBIT "A"
STATEMENT OF EXPENDITURES
OWL PROPERTY - OCT. 21-26, 1993

1. SALARIES [6 MAN CREW]	\$8500.50
2. REPORT WRITING, DRAFTING	2225.00
3. EQUIPMENT RENTAL	1950.00
4. EXPENSE ACCOUNTS [HOTEL, MEALS, GAS, ETC.]	2122.32
5. RENTAL OF 2 TRUCKS	2000.00

	\$16,797.82
minus 28.6% for work done off claims	-4797.82

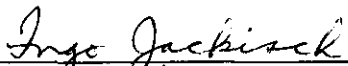
TOTAL	\$12,000.00

APPENDIX III

CERTIFICATION OF QUALIFICATIONS

I, INGO JACKISCH, of 424 Somerset Street, in the City of North Vancouver, in the Province of British Columbia, do hereby certify:

- i. THAT I graduated with a B.Sc. in Geophysics from the University of British Columbia in 1975.
- ii. THAT I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- iii. THAT I have been actively practising Geophysics from 1975 to 1993, and have been an employee of Cominco Ltd. from 1980 to 1993.



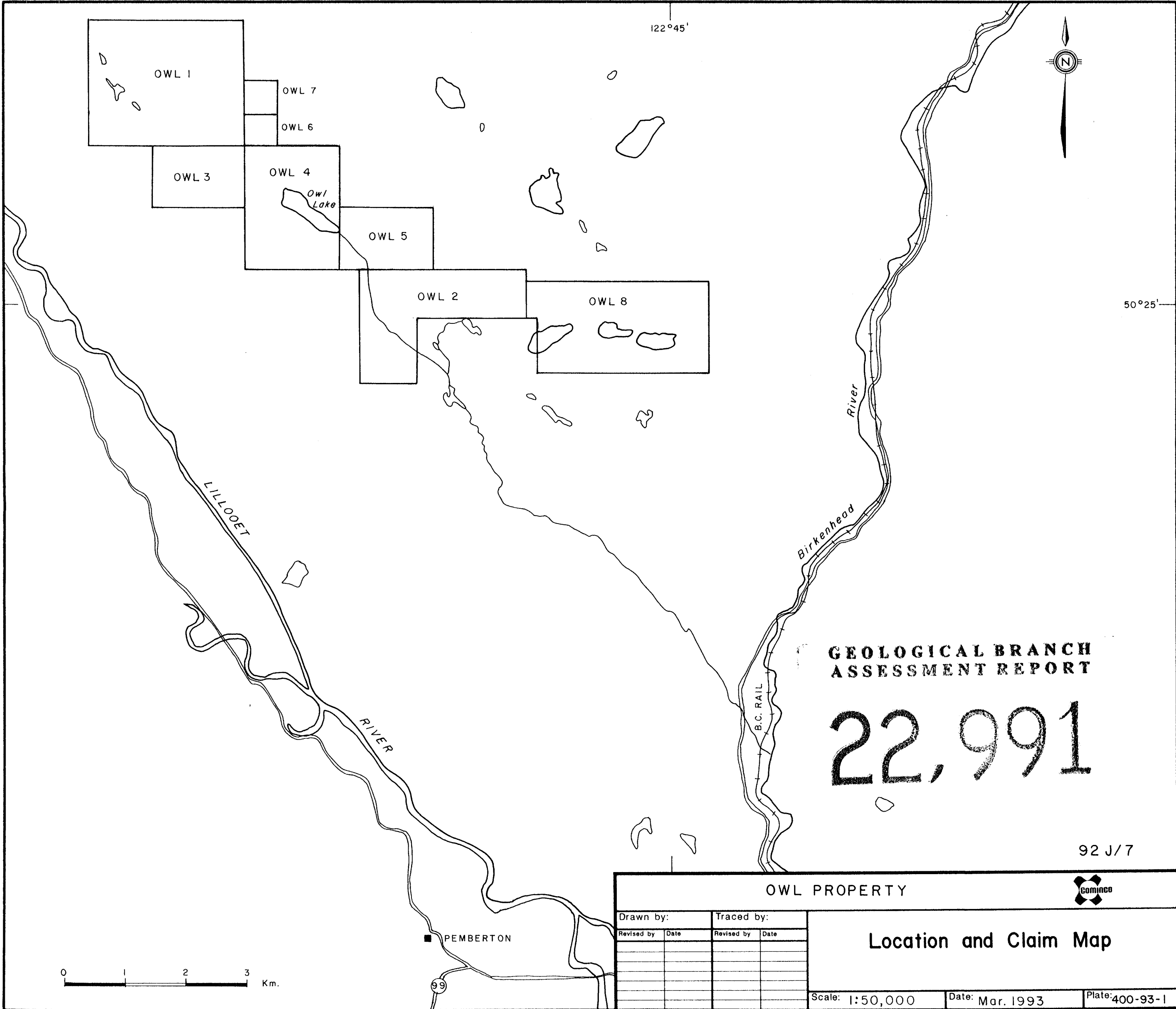
Ingo Jackisch, B.Sc. P. Geo.
Geophysicist

June, 1993

122°45'



50°25'



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,991

92 J/7

OWL PROPERTY



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

Location and Claim Map

Scale: 1:50,000

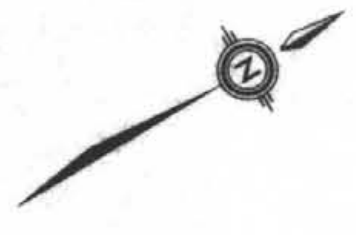
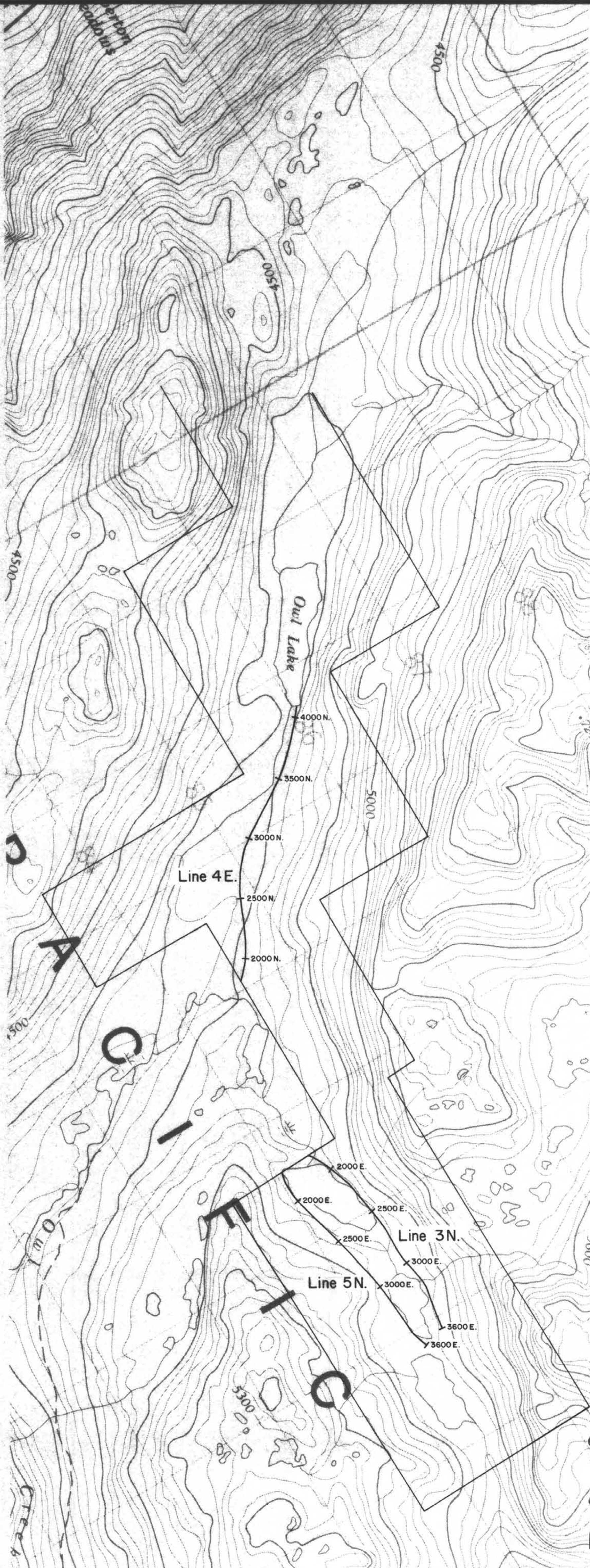
Date: Mar. 1993

Plate: 400-93-1

0 1 2 3 Km.

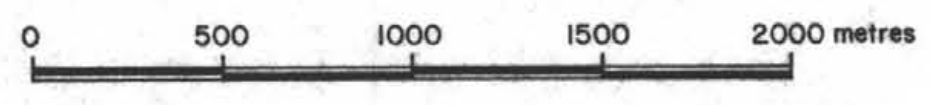
■ PEMBERTON

99



GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,991



OWL PROPERTY

92 J/7

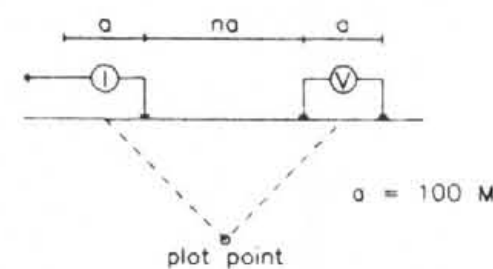
Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

Claim and I.P./Res. Grid Map

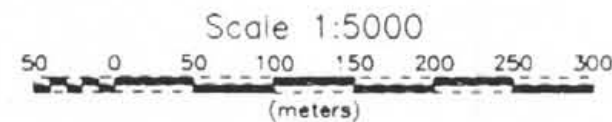
LILLOOET M.D., B.C.
Scale: 1 : 20,000 Date: June, 1993 Plate 400-93-2

Line 3 N

Pole-Dipole Array



- STRONG IP RESPONSE
- MODERATE IP RESPONSE
- WEAK IP RESPONSE



Contour Interval: Chargeability - 2.0 ms
Resistivity - 250 ohm-m

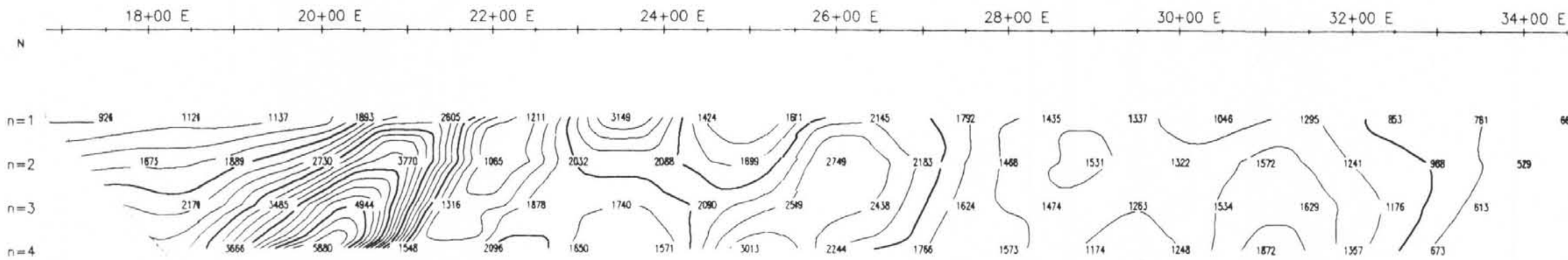
COMINCO EXPLORATION

INDUCED POLARIZATION SURVEY OWL LAKE POLE-DIPOLE

Date: 93/05/25
Interpretation: IJ

GEOPHYSICS

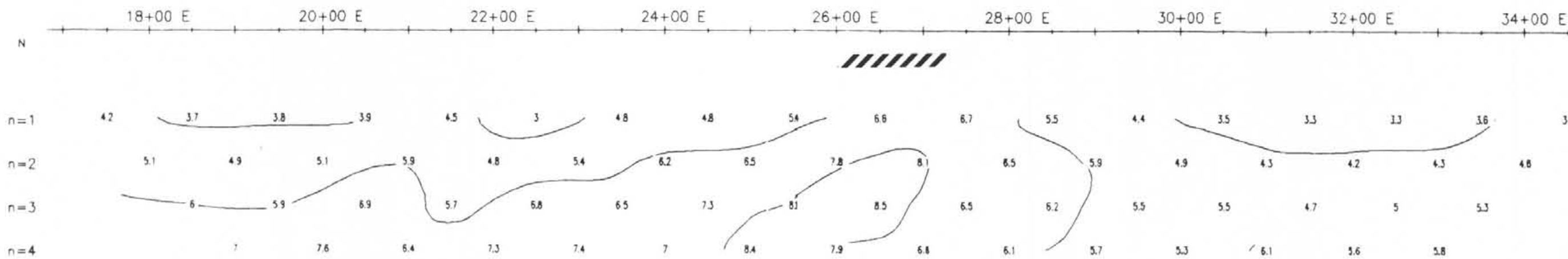
RESISTIVITY
OHM-METRES



RESISTIVITY
OHM-METRES

n=1
n=2
n=3
n=4

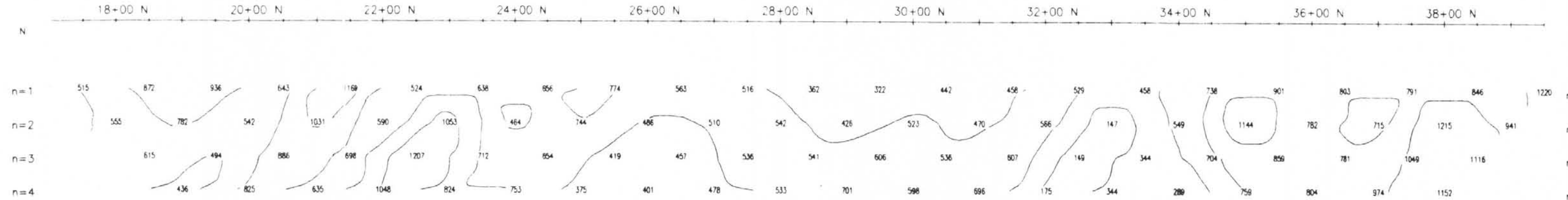
CHARGEABILITY
MILLISECONDS



CHARGEABILITY
MILLISECONDS

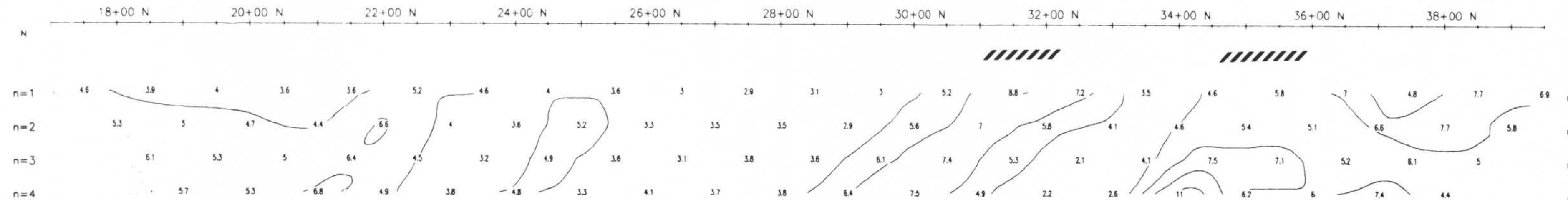
n=1
n=2
n=3
n=4

RESISTIVITY
OHM-METRES



RESISTIVITY
OHM-METRES

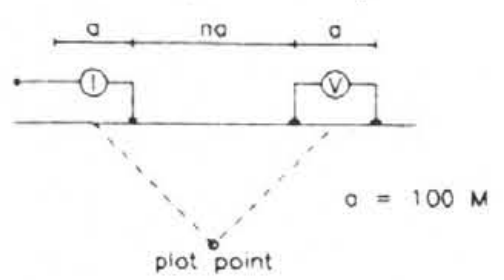
CHARGEABILITY
MILLISECONDS



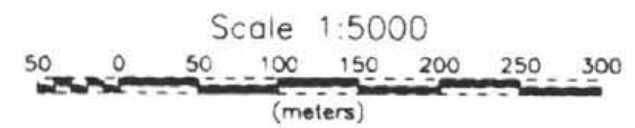
CHARGEABILITY
MILLISECONDS

Line 4 E

Pole-Dipole Array



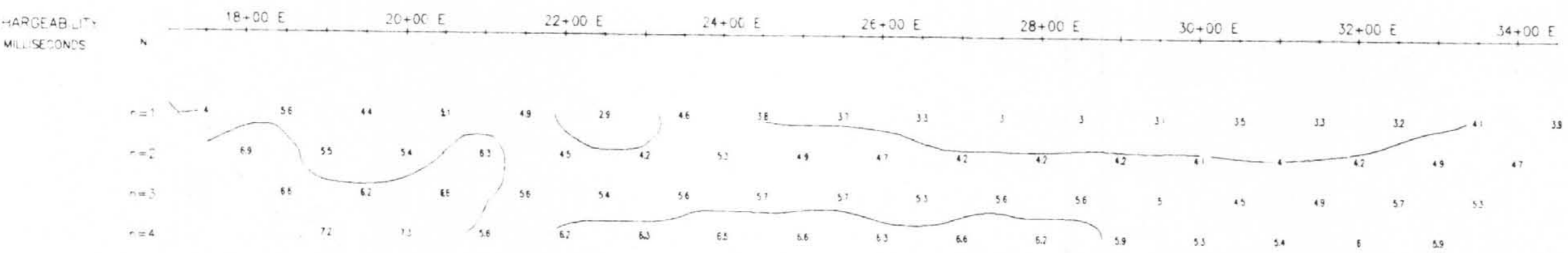
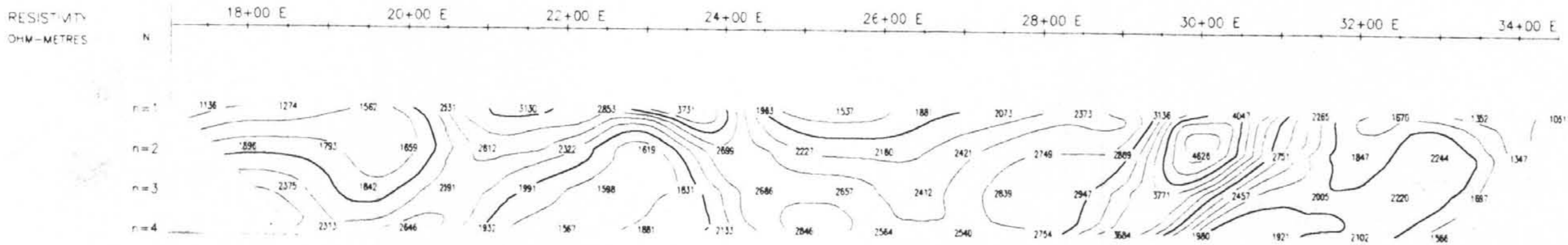
- STRONG IP RESPONSE
- MODERATE IP RESPONSE
- WEAK IP RESPONSE



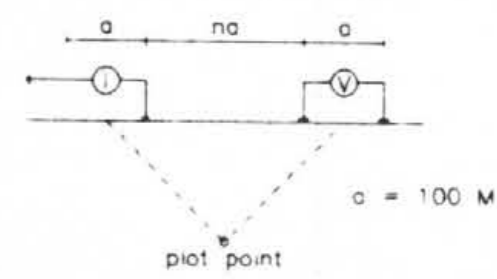
Contour Interval: Chargeability - 2.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.
INDUCED POLARIZATION SURVEY
OWL LAKE
POLE-DIPOLE
 Date: 93/05/23
 Interpretation: INGO JACKISCH
GEOPHYSICS

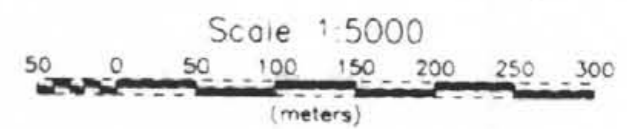
Line 5 N



Pole-Dipole Array



- STRONG IP RESPONSE
- MODERATE IP RESPONSE
- WEAK IP RESPONSE



Contour Interval: Chargeability - 2.0 ms
Resistivity - 250 ohm-m

COMINCO LTD.

**INDUCED POLARIZATION SURVEY
OWL LAKE
POLE-DIPOLE**

Date: 93/05/24
Interpretation: NGO JACKISCH

GEOPHYSICS