PETER E. WALCOTT & ASSOC. LTD.

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FILE NO: 87-719-16451

7/88

A GEOPHYSICAL REPORT

ON

AN INDUCED POLARIZATION SURVEY

Atlin Area, British Columbia
59° 35' N, 133° 37' W
N.T.S. 104N/12E

Claims surveyed: S 1 & 2

Survey Dates: July 7 - 17th, 1987

FOR

Omner/Operator: EZEKIEL EXPLORATIONS LTD.

Vancouver, B.C.

BY

PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, B.C.

FEBRUARY 1988

Part 2
of 2

GEOPHYSICAL SERVICES

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INTRODUCTION.

Between July 7th and 17th, 1987, Peter E. Walcott & Associates Limited undertook an induced polarization survey over part of a property, located in the Atlin area of British Columbia, for Ezekiel Explorations Ltd.

The survey was conducted over handcut northwest-southeast lines that were turned off at right angles from a northeast-southwest baseline, and chained at 25 metre intervals.

Measurements (first to fourth separation) of apparent chargeability (the I.P. response parameter) and resistivity were made along the lines using the dipole-dipole method of surveying and a 25 metre dipole.

The data are presented in pseudo-section form in individual line profiles bound in this report.

PROPERTY, LOCATION & ACCESS.

The claims are located in the Atlin Mining Division of British Columbia and consist of the following claims:

CLAIM NAME	UNITS	RECORD NO.	ANNIVERSARY
S 1	20	1394	August 4th
S 2	18	1395	August 4th

They are situated straddling Spruce Creek some seven kilometres east southeast of the town of Atlin, British Columbia.

Access was obtained by means of one of the many gravel roads that connect the placer creeks in the area to Atlin.

PREVIOUS WORK.

Placer mining has taken place along Spruce Creek, the richest stream in the Atlin camp, since 1898. Previous work on the property consisted of this and geological mapping and prospecting, documented in reports held by Ezekiel Explorations Ltd.

GEOLOGY.

The reader is referred to the previously mentioned reports held by Ezekiel Explorations Ltd.

Basically the property is thought to be underlain by Cache Creek volcanics and sediments intruded in places by post-Pennsylvanian and Permian ultramafics.

Low grade gold values have been obtained in quartz stockworks hosted by or adjacent to carbonatized ultramafic bodies on other properties in the near vicinity.

PURPOSE.

The purpose of the survey was to see if the I.P. method could assist in determining the ultramafic-andesite contact on the basis of chargeability and resistivity measurements.

SURVEY SPECIFICATIONS.

The induced polarization (I.P.) survey was carried out using a pulse type system, the principal components of which are manufactured by Huntec Limited and Phoenix Geophysics Limited of Metropolitan Toronto, Ontario.

The system consists basically of three units, a receiver (Huntec), a transmitter and a motor generator (Phoenix). The transmitter, which provides a maximum of 2.0 kw d.c. to the ground, obtains its power from a 2.0 kw 400 c.p.s. three phase alternator driven by a gasoline engine. The cycling rate of the transmitter is 2 seconds "current-on" and 2 seconds "current-off" with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C_2, the primary voltage (V) appearing between the two potential electrodes, P_1 and P_2, during the "current-on" part of the cycle and the chargeability (M_a) presented as a direct readout using a 200 millisecond delay and a 1000 millisecond sample window by the receiver, a digital receiver controlled by a microprocessor.

The apparent resistivity (P_a) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and the resistivity are called apparent as they are values which that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks.

The survey was carried out using the "dipole-dipole" electrode array. This electrode configuration and the methods of presenting the results are illustrated in the appendix. Depth penetration with this array is increased or decreased by increasing or decreasing "a" and/or "n".

In practise, the equipment is set up at a particular station of the line to be surveyed; three transmitting dipoles are laid out to the rear, measurements are made for all possible combinations of transmitting and receiving dipoles, up to the fourth separation, i.e. n=4: the equipment is then moved 3 "a" feet along the line to the next set-up.

A 25 metre dipole was employed on this survey, and first to fourth separation measurements made every 25 metres along the survey lines.

DISCUSSION OF RESULTS.

It should be noted here that the writer has not as yet studied the data from the airborne electromagnetic and magnetic coverage of the property and surrounding area.

The I.P. survey showed the property to exhibit a low chargeability background - 3 to 7 milliseconds - above which several anomalous zones are clearly discernible.

The strongest of these are found in the western portion of the grid, are associated with stronger magnetic relief and are attributable to ultramafic intrusives.

The strong response at the north end of Line 2 SW is similar in character to the above and is thought to be also due to ultramafics although the ground magnetic survey did not yield appreciably higher readings there.

Higher resistivity readings were associated for the most with these strong chargeability responses.

A zone of lower resistivity can be observed from the profiles on the southeastern portion of the grid on Lines 0 to 8 SW respectively. This zone is larger in extent on the more easterly lines where it is presumably partially due to overburden cover, but undefined to the south on the more westerly lines due to lack of coverage.

This zone could represent a zone of altered sheared rocks.

No corresponding chargeability zone was observed over this resistivity zone but several individual zones of moderate response occur within it. These could be caused by the presence of sulphides in the underlying rocks.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

Between July 7th and 17th, 1987, Peter E. Walcott & Associates Limited undertook a small induced polarization survey over part of a property, located in the Atlin mining camp of British Columbia, for Ezekiel Explorations Ltd.

The I.P. survey located the presence of two zones of strong chargeability response, believed by the writer to be caused by underlying ultramafic rocks, and several zones of lower chargeability response which could reflect the presence of sulphide mineralization in the underlying volcanics and/or altered rocks.

A zone of lower resistivity that could be related to shearing and alteration was partially defined on the southeastern portion of the grid. Higher gold values were returned on the soil survey over this zone.

As a result the writer recommends that further study of the geophysical, geological and geochemical results be carried out before further work on the property is planned.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LTD.

Peter E. Walcott, P.Eng.
Geophysicist

Vancouver, B.C.

February 1988

APPENDIX

COSTS STATEMENT

EZEKIEL EXPLORATIONS LIMITED
'S' MINERAL CLAIMS
3 JUNE - 19 AUGUST 1987

FOOD & ACCOMMODATION:		
3 Pers., 20 man days @ $30.24		$ 604.80
SUPPLIES:		79.86
FUEL:		166.10
SHIPMENTS:		52.50
FIELD TELEPHONE SERVICE:		43.89
RENTALS:		
Norcan 4WD Suburban, 30 Jun-19 Aug, 15 days @ $50	$ 750.00	
Standard field equipment, 20 man days @ $6.00	120.00	
Norcan Ford 4WD PU, 13-16 June	54.85	$ 924.85
CONSULTANT FEES:		
ADDER EXPLORATION & DEVELOPMENT		750.00
REPORT PREPARATION:		1,745.00
TOTAL GENERAL COSTS:		$ 4,367.00

GEOPHYSICAL SURVEY COST

SALARIES & WAGES:	
3 Pers., 13 man days, 3 Jun-19 Aug, @ $106.41	$1,383.33
BENEFITS: @ 20%	276.67
RENTALS:	
Kangeld Proton Mag, 7 days @ $27.00	189.00
CONTRACTED IP SURVEY:	
P.E. Walcott, 1 Jun-16 Jul, 15 line km	20,985.60
GENERAL COSTS APPORTIONED:	
13/20 x $4,367.00	2,838.55
TOTAL GEOPHYSICAL SURVEY COST:	$25,673.15

Costs Statement continued...

PHYSICAL WORK

ROAD REPAIR:		
Thoma Services Loader, 3 Jul, 6 hrs @ $50	$ 300.00	
Culvert	68.90	368.90
LINE-CUTTING:		
Denis Jacob, 4-14 Jun, 16.9 line kilometers		5,150.00
TOTAL COST PHYSICAL WORK:		$ 5,518.90

GEOCHEMICAL SURVEY COST

SALARIES & WAGES: 3 Pers., 7 man days,2 Jun-19 Aug @ $100.00	$ 700.00
BENEFITS: @ 20%	140.00
ASSAYS & ANALYSES - Chemex Labs 59 soils for Au + 33 element ICP @ $16.00	944.00
GENERAL COSTS APPORTIONED: 7/20 x $4,367.00	1,528.45
TOTAL GEOCHEMICAL SURVEY COST:	$ 3,312.45

COST SUMMARY

GEOPHYSICAL SURVEYS	$25,673.15
PHYSICAL WORK	5,518.90
GEOCHEMICAL SURVEY	3,312.45
TOTAL COST	$34,504.50

PERSONNEL EMPLOYED ON SURVEY

NAME	OCCUPATION	ADDRESS	DATES
Peter E. Walcott	Geophysicist	Peter E. Walcott & Assoc. 605 Rutland Court, Coquitlam, B.C. V3J 3T8	Jan. 5th, Feb. 26th-28th, 1988
G. MacMillan	Geophysical Operator	"	Feb. 2nd - 7th, 1988
D. Sloan	"	"	Jul 7th-17th, 1988
D. Jensen	"	"	"
B. Newman	"	"	"
C. Dobie	"	"	"
J. Walcott	Typing	"	Feb. 26th,1988

CERTIFICATION

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

1. I am a graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.

2. I have been practising my profession for the last twenty five years.

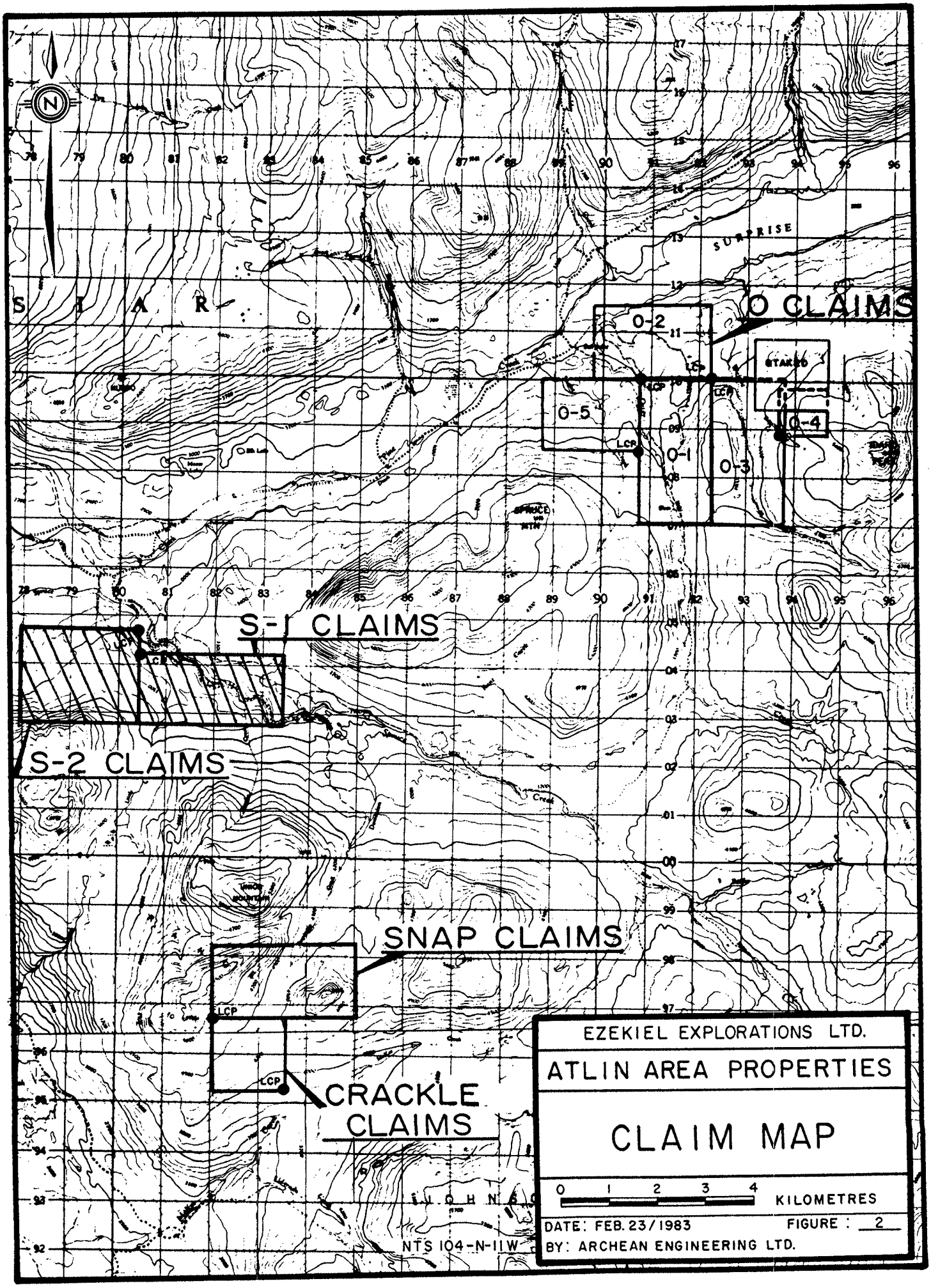
3. I am a member of the Association of Profession Engineers of British Columbia and Ontario.

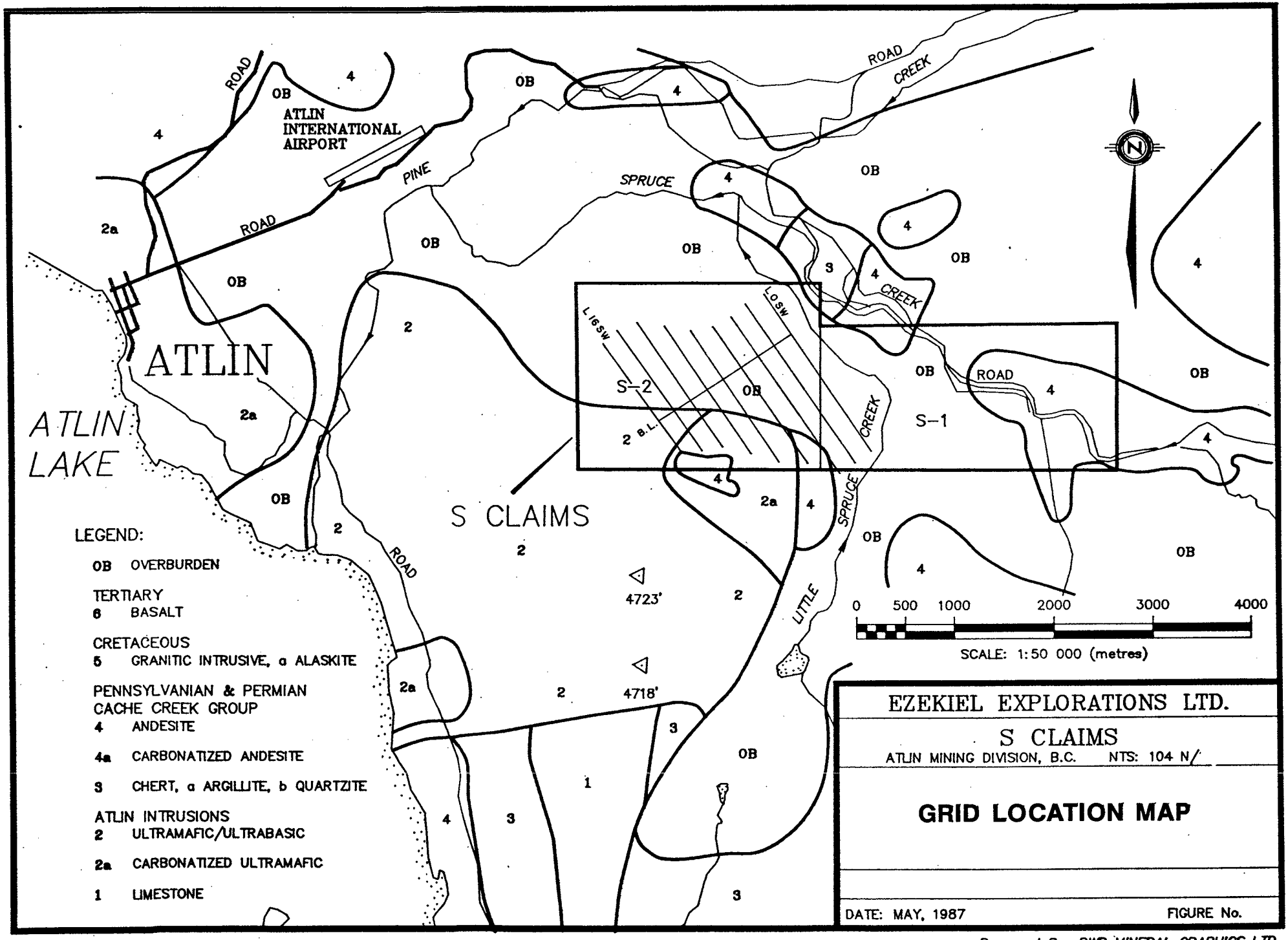
4. I hold no interest, direct or indirect, in the securities or properties of Ezekiel Explorations Ltd. nor do I expect to receive any.

Peter E. Walcott, P.Eng.

Vancouver, B.C.

February 1988


S I A R
O CLAIMS
O-2
O-5
O-1
O-3
O-4
STAKED
LCP
SURPRISE
S-1 CLAIMS
S-2 CLAIMS
SNAP CLAIMS
CRACKLE CLAIMS
EZEKIEL EXPLORATIONS LTD.
ATLIN AREA PROPERTIES
CLAIM MAP
0 1 2 3 4 KILOMETRES
DATE: FEB. 23/1983
FIGURE : 2
BY: ARCHEAN ENGINEERING LTD.
NTS 104-N-11W



EZEKIEL EXPLORATIONS LTD.

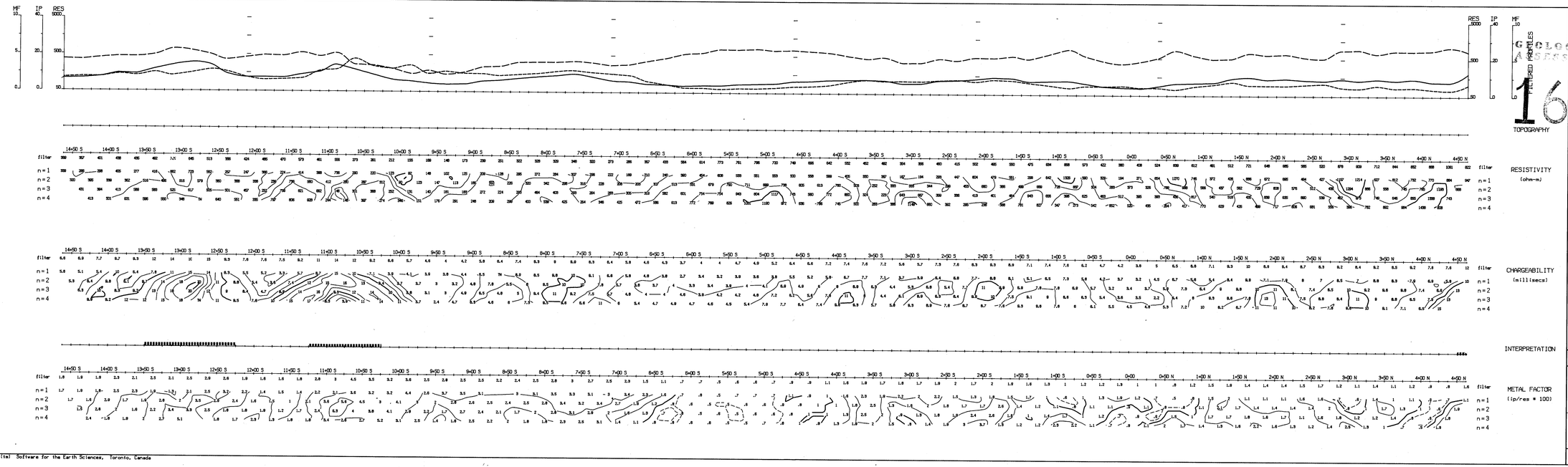
S CLAIMS

ATLIN MINING DIVISION, B.C. NTS: 104 N/

GRID LOCATION MAP

DATE: MAY, 1987 FIGURE No.

Prepared By: RWR MINERAL GRAPHICS LTD.



GEOSOFT (tm) Software for the Earth Sciences, Toronto, Canada

Part 2 of 2

L-4SW

Dipole-Dipole Array

16,451

a = 25 m
n = 1, 2, 3, 4
Plot Point

Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPTI, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

Well defined, strong increase in polarization with or without marked decrease in resistivity.

Fairly well defined moderate increase in polarization.

Poorly defined polarization increase.

Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY
S GRID
ATLIN, B.C.

Date: 08-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

PETER.E. WALCOTT & ASSOC. LTD

Part 2 of 2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,451

L-2SW

Dipole-Dipole Array

a = 25 m
n = 1, 2, 3, 4
plot point

Filtered Profiles

		filter
Resistivity	— — — —	*
Polarization	————	* *
Metal Factor	- - - - - - - -	* * / * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

Well defined, strong increase in polarization with or without marked decrease in resistivity.

Fairly well defined moderate increase in polarization.

Poorly defined polarization increase.

Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY
S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

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Part 2 of 2

L-OSW

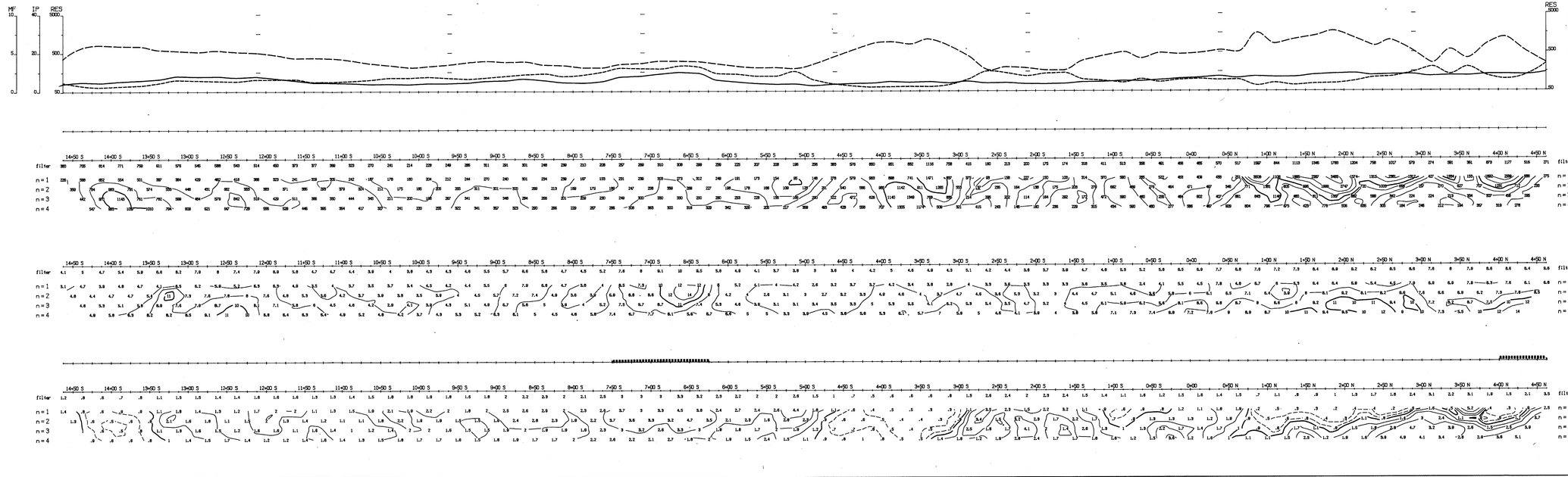
Pole-Dipole Array

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,451

a = 25 m
n = 1, 2, 3, 4

Filtered Profiles



filter
Resistivity
Polarization
Metal Factor

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10....

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

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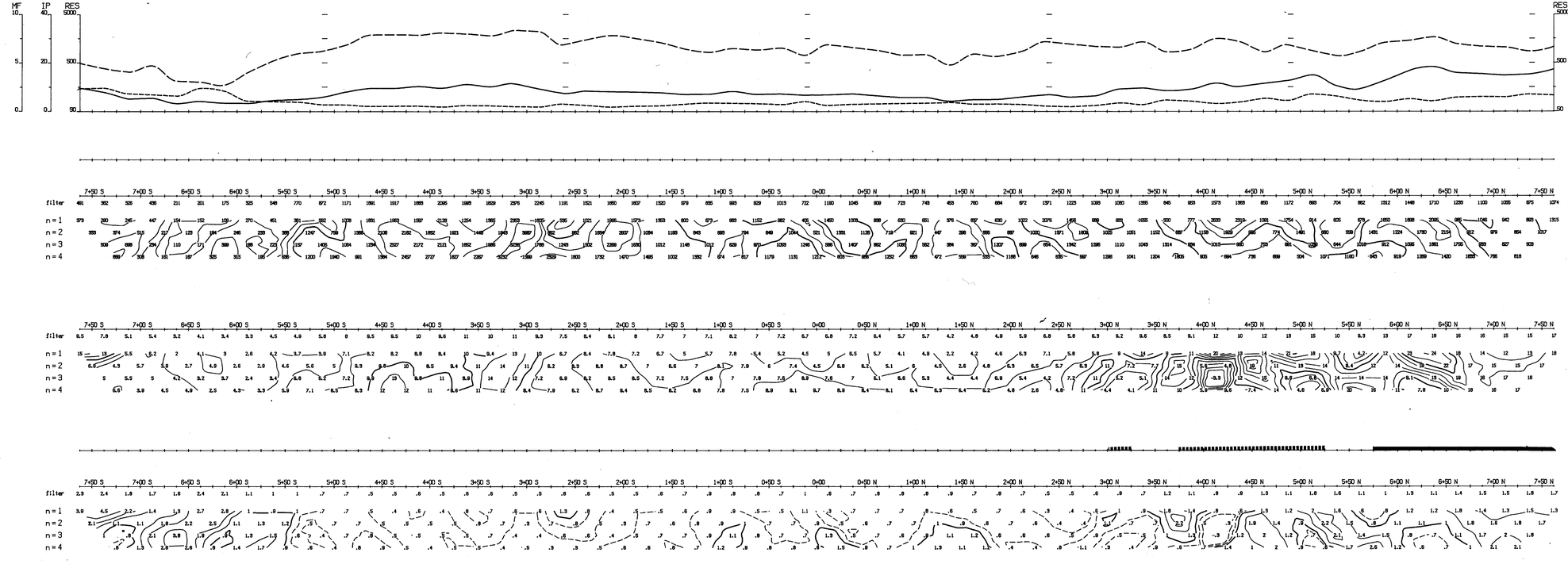
Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY
S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

PETER.E. WALCOTT & ASSOC. LTD



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L-10SW

Part 2 of 2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,451

Dipole-Dipole Array

a = 25 m
n = 1, 2, 3, 4

Filtered Profiles

filter
Resistivity
Polarization
Metal Factor

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,....

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

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Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY
S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

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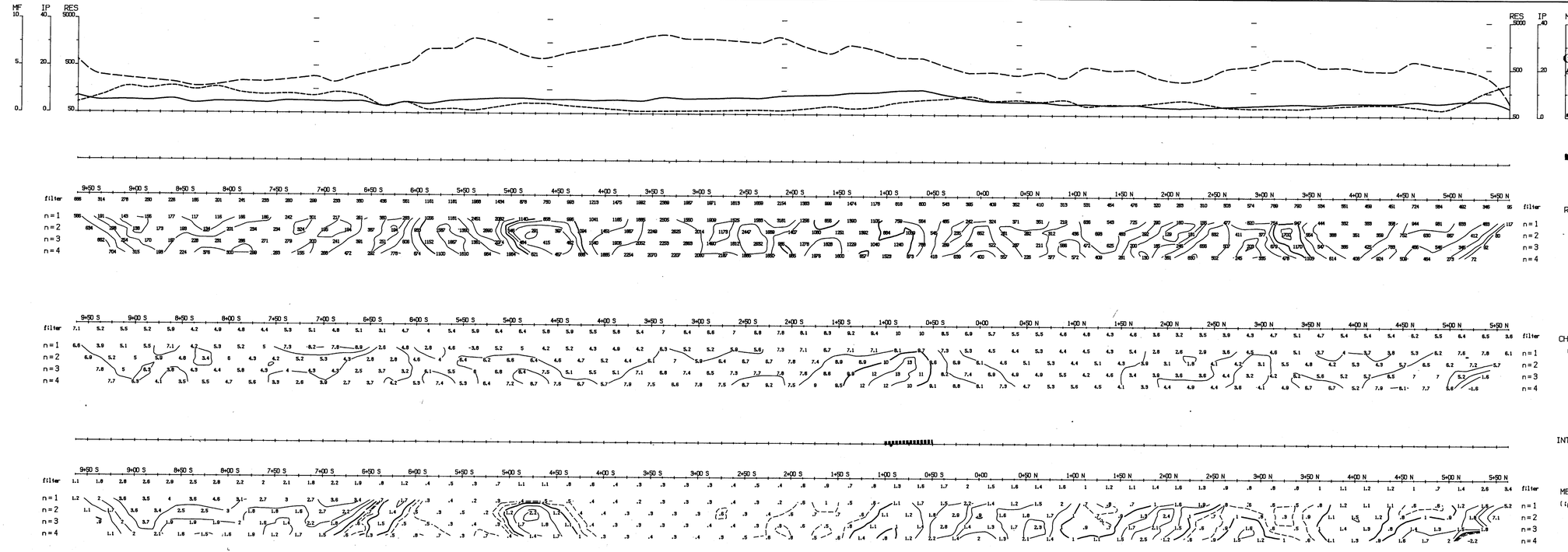
Part 2 of 2

L-8SW



Dipole-Dipole Array

Filtered Profiles

filter
Resistivity
Polarization
Metal Factor

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,....

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

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Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY

S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

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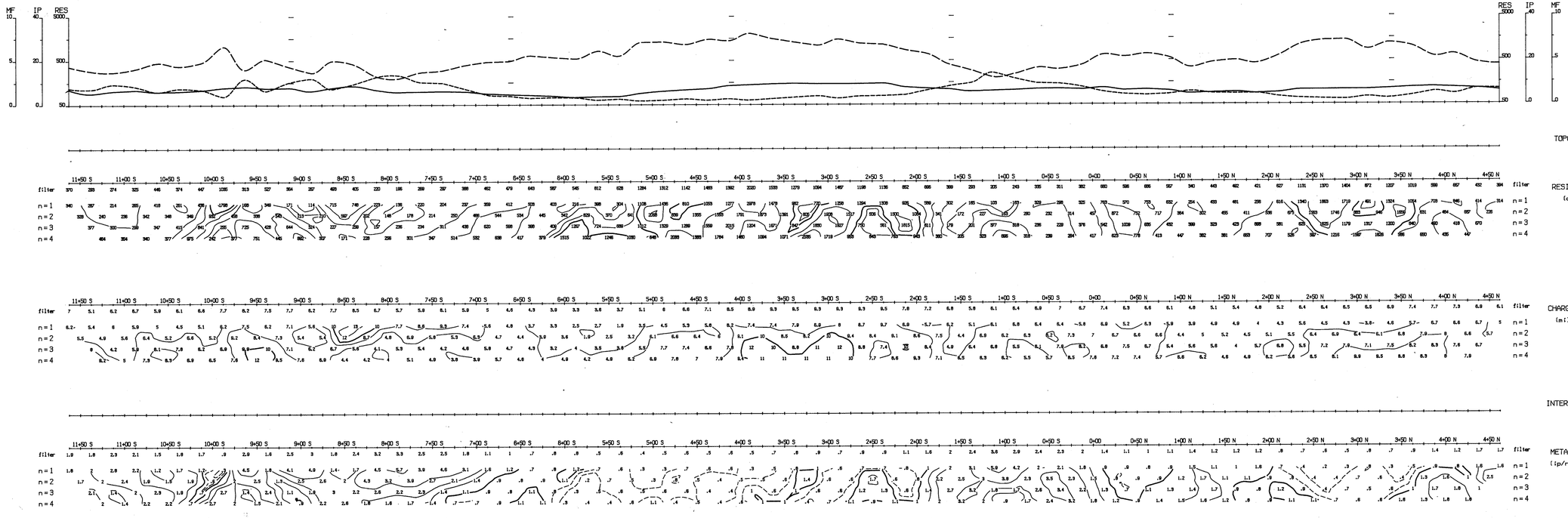
Part 2 of 2

L-6SW



Dipole-Dipole Array

Filtered Profiles

Resistivity
Polarization
Metal Factor

filter

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

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EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY

S GRID

ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
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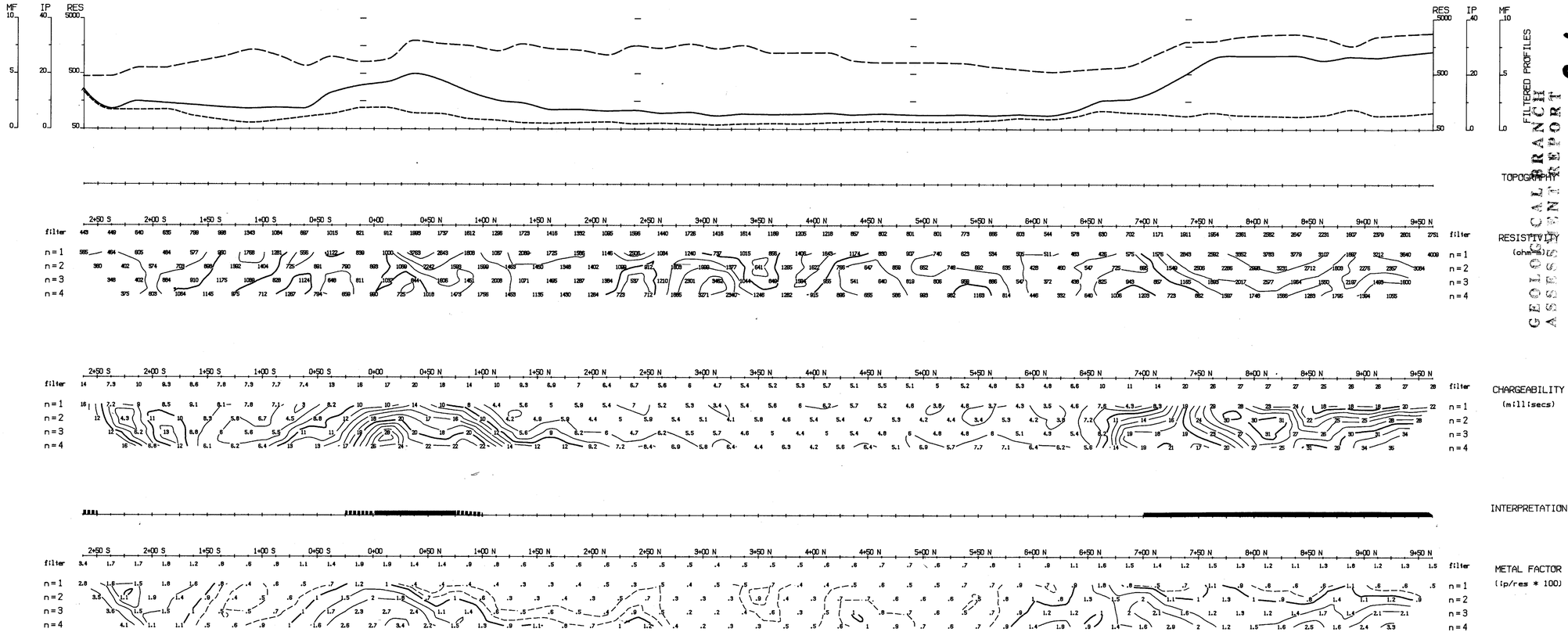


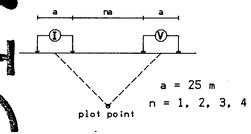
GEOLOGICAL BRANCH ASSESSMENT REPORT

FILTERED PROFILES

15151 part 2 of 2

L-16SW

Dipole-Dipole Array



Filtered Profiles

	filter
Resistivity	*
Polarization	* *
Metal Factor	* * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,....

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

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INDUCED POLARIZATION SURVEY

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ATLIN, B.C.

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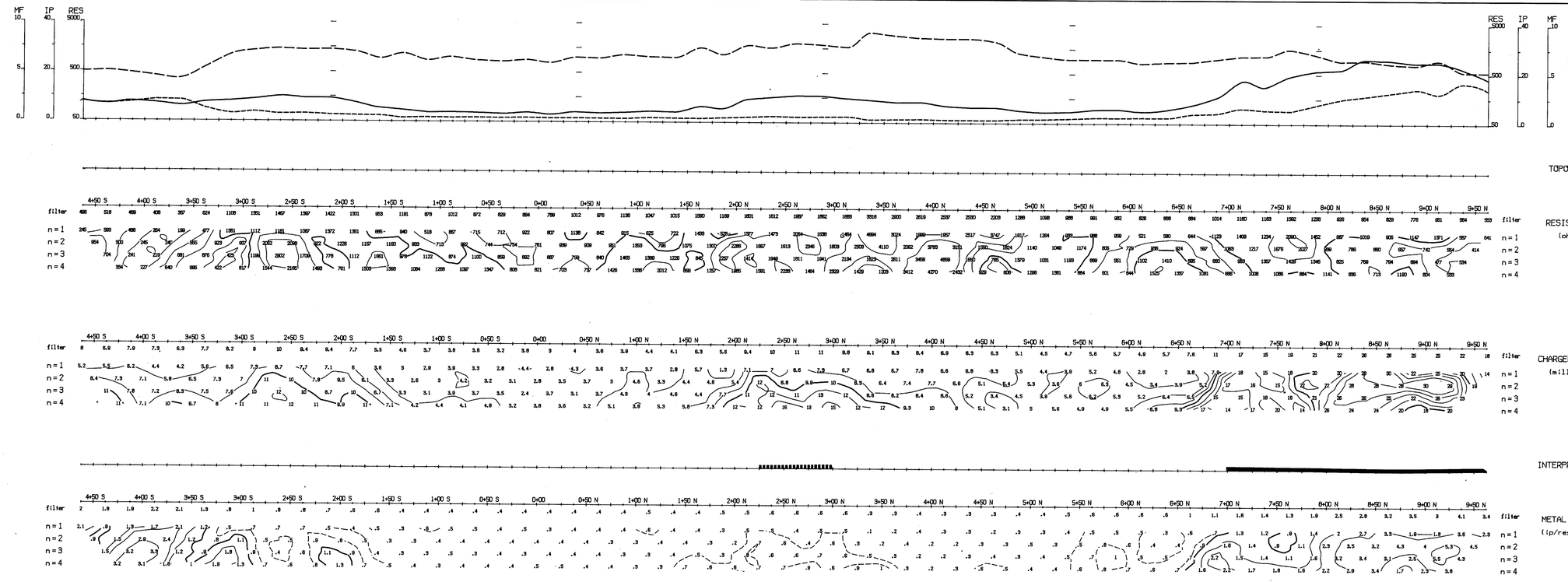

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GEOLOGICAL BRANCH
ASSESSMENT REPORT

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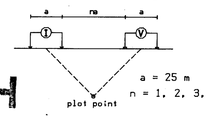
L-14SW

Dipole-Dipole Array



Filtered Profiles

Resistivity
Polarization
Metal Factor

filter
*
* *
* *
* *

Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

Well defined, strong increase in polarization with or without marked decrease in resistivity.

Fairly well defined moderate increase in polarization.

Poorly defined polarization increase.

Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY

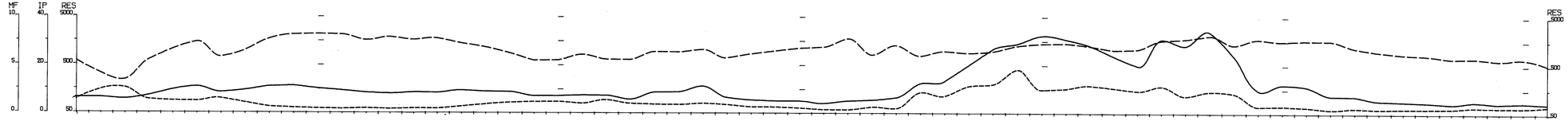
S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

PETER.E. WALCOTT & ASSOC. LTD

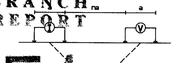
Part 2 of 2

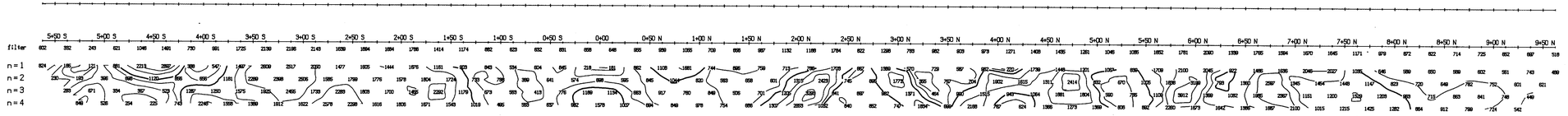
L-12SW



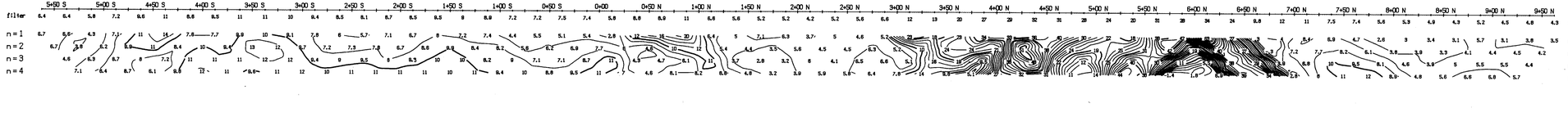
Filtered Profiles

Dipole-Dipole Array



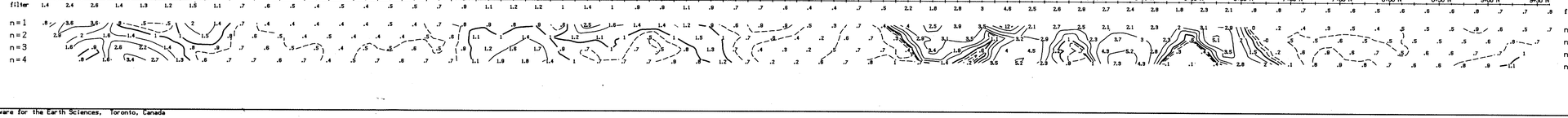


RESISTIVITY
(ohm-m)



CHARGEABILITY
(milliSecs)

INTERPRETATION



METAL FACTOR
(ip/res * 100)

filter

Resistivity
Polarization
Metal Factor

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,....

Instrument: IPT1, MKIV
Frequency: 0.125 Hz
Operators: R.S, D.S

INTERPRETATION

Well defined, strong increase in polarization with or without marked decrease in resistivity.

Fairly well defined moderate increase in polarization.

Poorly defined polarization increase.

Resistivity feature.

EZEKIEL EXPLORATION LTD.

INDUCED POLARIZATION SURVEY

S GRID
ATLIN, B.C.

Date: 06-07/87 N.T.S.: 104 N/12E
Interpretation by: P.E.W
Scale: 1 : 2500

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