British Columbia

Energy, Mines and Petroleum Resources
GEOLOGICAL SURVEY BRANCH

FILMED

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]
Geophysical-Induced Polarization/Resistivity

TOTAL COST
$119,770

AUTHOR(S) Lorne A. Bond SIGNATURE(S) Lorne Bond

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) KAM94-1500444-173 YEAR OF WORK 1994

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S)

Nos. 3063242 and 3063244 filed Dec. 9, 1994

PROPERTY NAME Highland Valley Copper - Highmont Tailings Pond Area

CLAIM NAME(S) (on which work was done) Lynn 4-5, Lynn FR, Jericho 2, 3, 5, 14, 15, Cu Nos 17-20, Gaza 1, 2, Sheba No 23-24, #25-26, Ind 1-3, 5-9, Ind 4 FR, Ind 10 FR, DO #6, DO 4FR, DO 6FR, Ann # 17FR, Colin Fraction, Stevie Fraction, Mikey Fraction

COMMODITIES SOUGHT Cu, Mo

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN

MINING DIVISION Kamloops/Nicola NTS 92I/7W, 92I/10W

LATITUDE 50 ° 28 ' " LONGITUDE 120 ° 41 ' " (at centre of work)

OWNER(S)

1) Highland Valley Copper Corp. 2)

MAILING ADDRESS

Box 1500
Logan Lake, B.C.
V0K 1W0

OPERATOR(S) [who paid for the work]

1) Highland Valley Copper Corp. 2)

MAILING ADDRESS

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Induced Polarization/Resistivity surveys over portions of the calc-alkaline Guichon Batholith of Triassic age. Exploration target is porphyry type copper molybdenum sulfide mineralization.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 3639, 2181, 2052, 922

(OVER)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization	87.1 km	Lynn, Jericho	$65,868
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)	105.44 km	Lynn, Jericho	$53,902
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST	$119,770

INDUCED POLARIZATION AND RESISTIVITY REPORT

on the

Lynn 4-5, Lynn FR, Jericho 2, 3, 5 ,14, 15,
Cu Nos 17-20, Gaza 1, 2, Sheba No 23-24, #25-26,
Ind 1-3, 5-9, Ind 4 FR, Ind 10 FR, DO #6, DO 4 FR,
DO 6 FR, Ann # 17 FR, Colin Fraction, Stevie Fraction,
Mikey Fraction

Mineral Claims

Highmont Tailings Pond Area

KAMLOOPS MINING DIVISION
NICOLA MINING DIVISION
NTS 92 I/7W, 92 I/10W

Latitude 50° 28' Longitude 120° 41' W

for

Highland Valley Copper Corp.
Box 1500
Logan Lake, BC
V0K 1W0

Report By

Lorne A. Bond

Logan Lake, BC January 20, 1995

TABLE OF CONTENTS

1. Introduction

During the period April 12 to July 15, 1994, a program of induced polarization and resistivity surveys was conducted over a portion of the property holdings of the Highland Valley Copper partnership. The grid was centered around the tailings impoundment area of the former Highmont operation.

The Highmont Tailings Pond Area grid is located in the Highland Valley Area of British Columbia some 10 kilometers west of the town of Logan Lake, and immediately adjacent to the active mining operations of Highland Valley Copper. Figure 1 shows the general location of the survey grid and Figure 2 illustrates the position of the grid relative to the mineral claim holdings at Highland Valley Copper. Earlier geophysical work in this area has been reported in assessment reports 3639, 2181, 2052, and 922.

The objective of the survey was to test for large tonnage, porphyry type sulfide mineralization in the grid area. This report describes procedures used for this survey, presents the data, and discusses the results.

Expenditures on this program have been applied to property mineral claims on Statement of Work 3063242 (Group HVC 94-1) and 3063244 (Group HVC 94-2) filed on December 9, 1994.

2. Survey Parameters and Equipment

Daryl Calder of Cranbrook was contacted to carry out the grid preparation program. Line cutting commenced on the Highmont Tailings Area grid on April 12. Maps of the completed grids with actual gridline locations were prepared by the contractor. A total of 105.44 kilometers of gridlines, baselines, and tielines were cut and chained on the Highmont area grid.

The contract for the IP/Resistivity survey was awarded to Scott Geophysics Ltd. of Vancouver. Field work on the Highmont Tailings area grid began on May 31 and was completed on July 12. Surveying was continuous with the exception of a one week period from June 23-30, when the transmitter was out for repair and the field crew returned to Vancouver. A total of 87.1 line kilometers of data were collected on the Highmont grid on 17 east-west gridlines .

The exploration target was a large tonnage, low grade, porphyry copper system. For this reconnaissance type program, the gridlines were 300 meters apart. A pole-dipole array was used for the IP/Resistivity surveys, with an electrode spacing of a = 100 meters and separations of n = 1-6. The on-line current electrode was to the west of the potential electrode on the Highmont Tailings Area grid.

A Scintrex TSQ4-10 kw transmitter and a Scintrex IPR-12 receiver were utilized in a 2 second ON/OFF mode with the receiver measuring between 120 and 1,020 msecs after current interruption.

3. Data Presentation

The chargeability and resistivity results are presented in standard pseudosection format and as contour plans for the triangular filtered values. The results for each survey line are displayed in standard pseudosection form for chargeability expressed in mV/V (Ma for 120 - 1,020 msecs) and apparent resistivities in ohm-m. Horizontal scale is 1:10,000 and contours are at 2.5 mV/V and 250 ohm-m increments for chargeability and apparent resistivity respectively. The results are also presented in contour plan for the averaged values of chargeability and resistivity. The average values were obtained using a moving triangular filter comprising one n=1 to six n=6 values. The weighting factor for each data point is one. The average value is therefore emphasizing the effects of deeper n-separations, thereby minimizing the effects of overburden and/or near surface weathering effects.

4. Descriptions of Results and Conclusions

On the Highmont Tailings Area grid, background chargeabilities are in the 5+/-1.5 mV/V range, which can be considered as non-anomalous. A set of anomalies were obtained trending from Line 2100 N - Station 1800E across the grid in a NNE direction, the strongest response being at Line 3600 - Station 4300E. This narrow zone is a reflection of man-made infrastructure, including a 20 in. metal water pipe and pumping station.

One weak chargeability high was recorded in the northwest corner of the grid on Lines 3600N and 3900N. This weak anomaly ties into the Sheba mineralized zone covered in a 1984 Cominco IP survey. The strongest response was 8.5 mV/V for n=2 on line 3900N - Station 1900E. Sufficient drilling has been done in this area to reveal the source as sporadic vein type mineralization. Limited drilling and surface work has previously been carried out at scattered locations on this grid. However, the current survey does not suggest any anomalous Cu-Mo sulphide concentrations indicative of a large tonnage porphyry system.

Resistivities range from 300 to 1,200 ohm-m with most values near the lower end. Locally, higher values are recorded with most of these along the eastern edge of the grid; some are weakly associated with topography. The lowest values are recorded over the tailings pond and along Line 4800N; this is along the southern edge of the valley. The resistivity data indicates a structure running ENE through Line 3000N - Station 4000E.

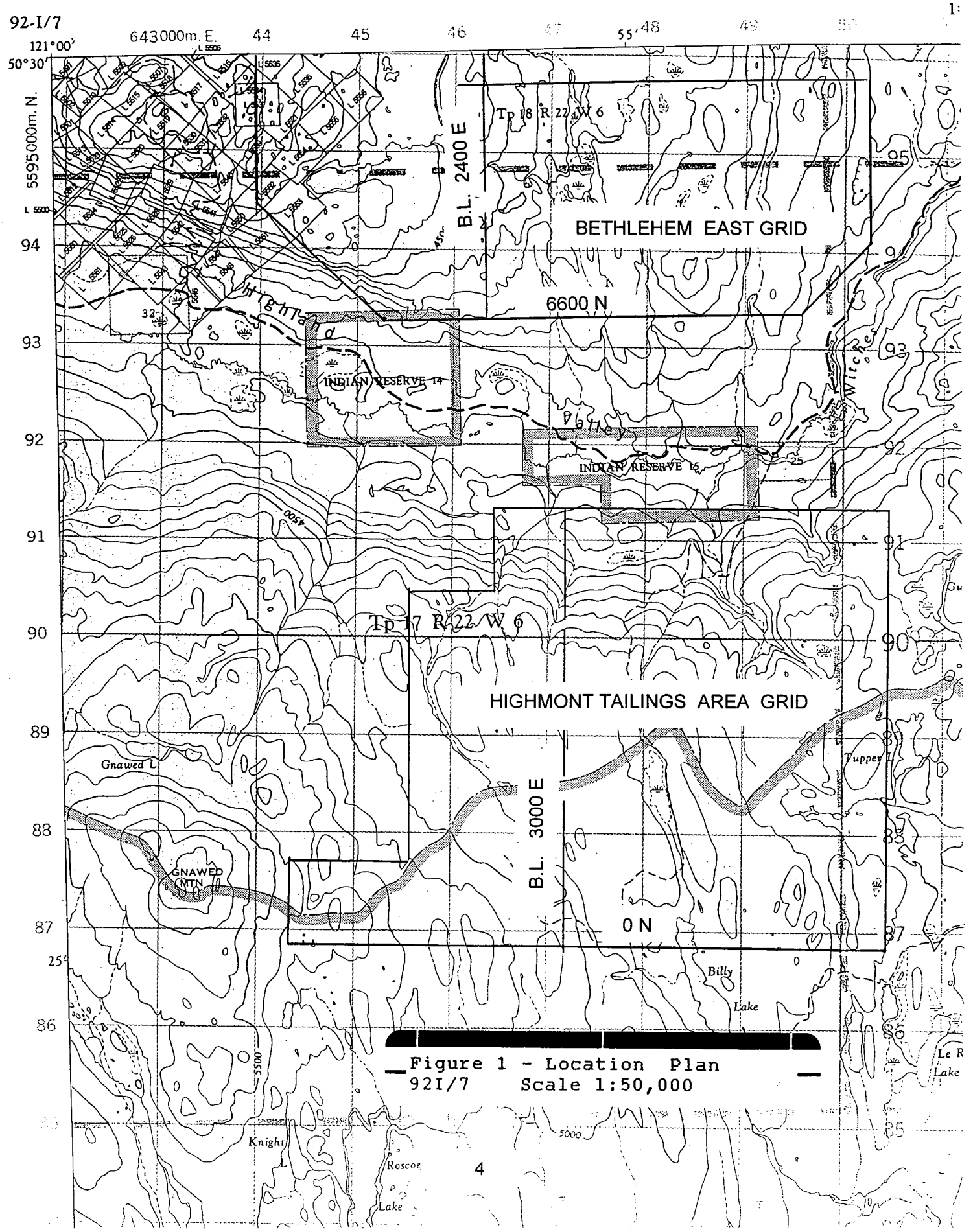
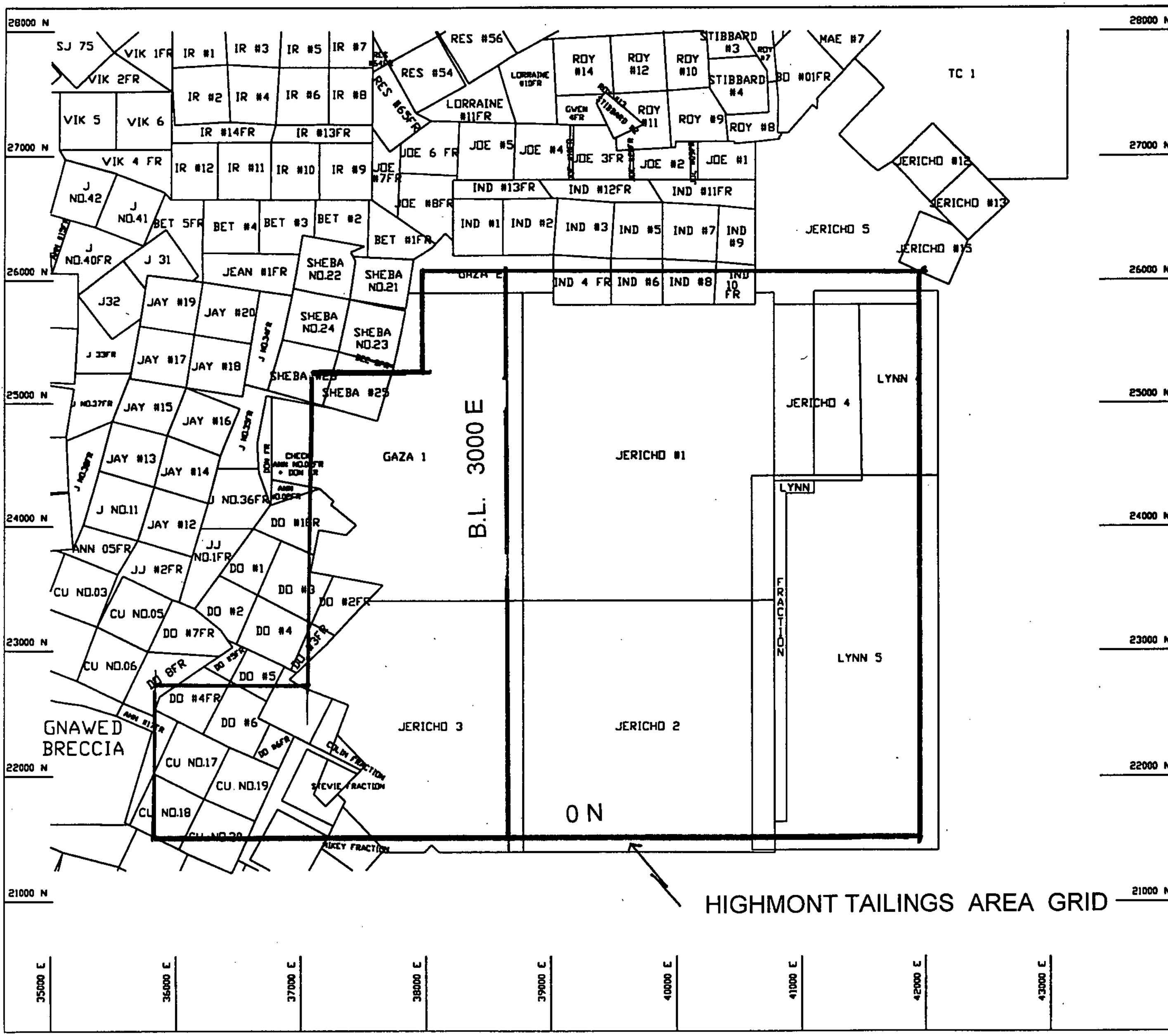


Figure 1 - Location Plan
92I/7 Scale 1:50,000



Highland Valley Copper

HIGHMONT TAILINGS AREA

CLAIM AND GRID LOCATION

DRAWN	K.L.B.	CHECKED	
DATE	11 JAN. 1995	SCALE	1/50000

FIG. 2

5. Statement of Costs
Highmont Tailings Area Grid

Linecutting - grid preparation - 105.44 kilometers	
Daryl Calder and associates	$ 53,902
Geophysics	
IP/Res survey - 87.1 kilometers	
conducted by Scott Geophysics Ltd.	63,368
Project management planning,	
supervision, report preparation	
Lorne Bond, HVC, 10 days @ $250/day	2,500
	$ 119,770

Statement of Qualifications

I, **Lorne Allan Bond**, of the city of Kamloops, British Columbia do hereby certify that:

1. I am a qualified, Practicing Geologist.

2. I am a graduate of Loyola College (Concordia University), with a B.Sc. (1967) in Geotechnical Sciences.

3. I have practiced my profession since 1967 while employed with Sherritt-Gordon Mines Ltd., Cominco, Afton Operating Corporation, and Highland Valley Copper.

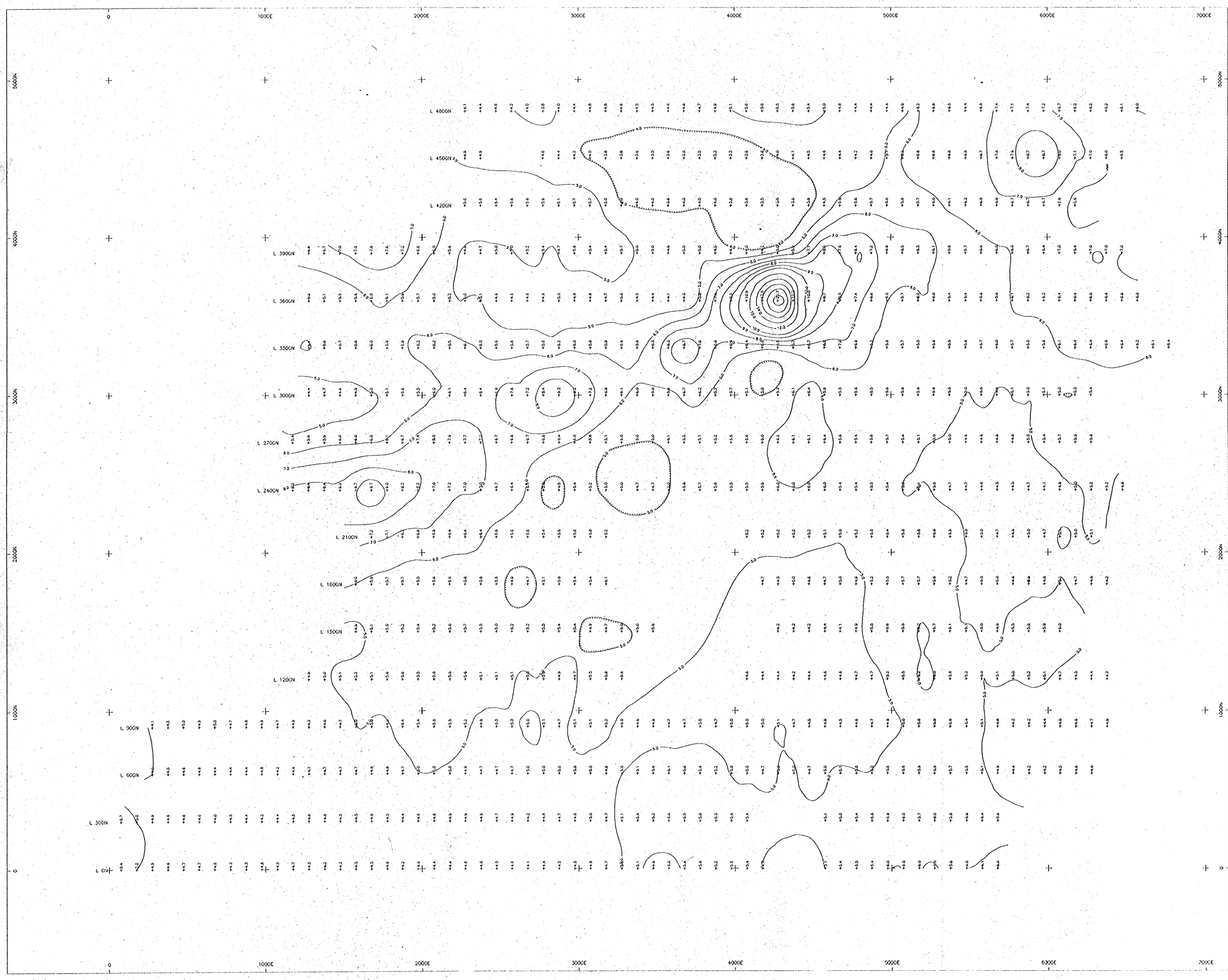
4. This report describes geophysical exploration performed under my direction during the period April 12 - July 12, 1994.

Lorne A. Bond

Senior Mine Geologist

Highland Valley Copper

January 20, 1995



SURVEY SPECIFICATIONS

receiver	Scintrex IPR12
transmitter	TSQ4 (10 kw)
pulse time	2 seconds
Mx receive window	120-1020 msecs
array	pole dipole
a spacing	100 metres
n separations	1, 2, 3, 4, 5, 6

current electrode located west of receiving electrodes (heading E)

Contoured value	Filtered Mx
Filtered values	n=1, 2, 3, 4, 5, 6

Contour intervals:

0.0 to 10.0	1.0 msecs
10.0 to 20.0	2.0 msecs

NOTE:
The plotting point for the filtered value is at the n=1 plotting point. The pseudosections must be referred to when assessing a given feature.

Filter description:
The filtered value gives equal weight to each of the n-separations, and is calculated at each n=1 data point.

The filter has the effect of passing a triangle over the data set, such that one value is selected for n=1, two for n=2, three for n=3, etc.

The average of the averages for each of the n-separations is the filtered value for the given n=1 location.

Where there is only a partial set of data, such as at the ends of lines, the average for each n-separation is the average of the existing values.

23743

N

0 200 400 600 800
METERS

Figure 3

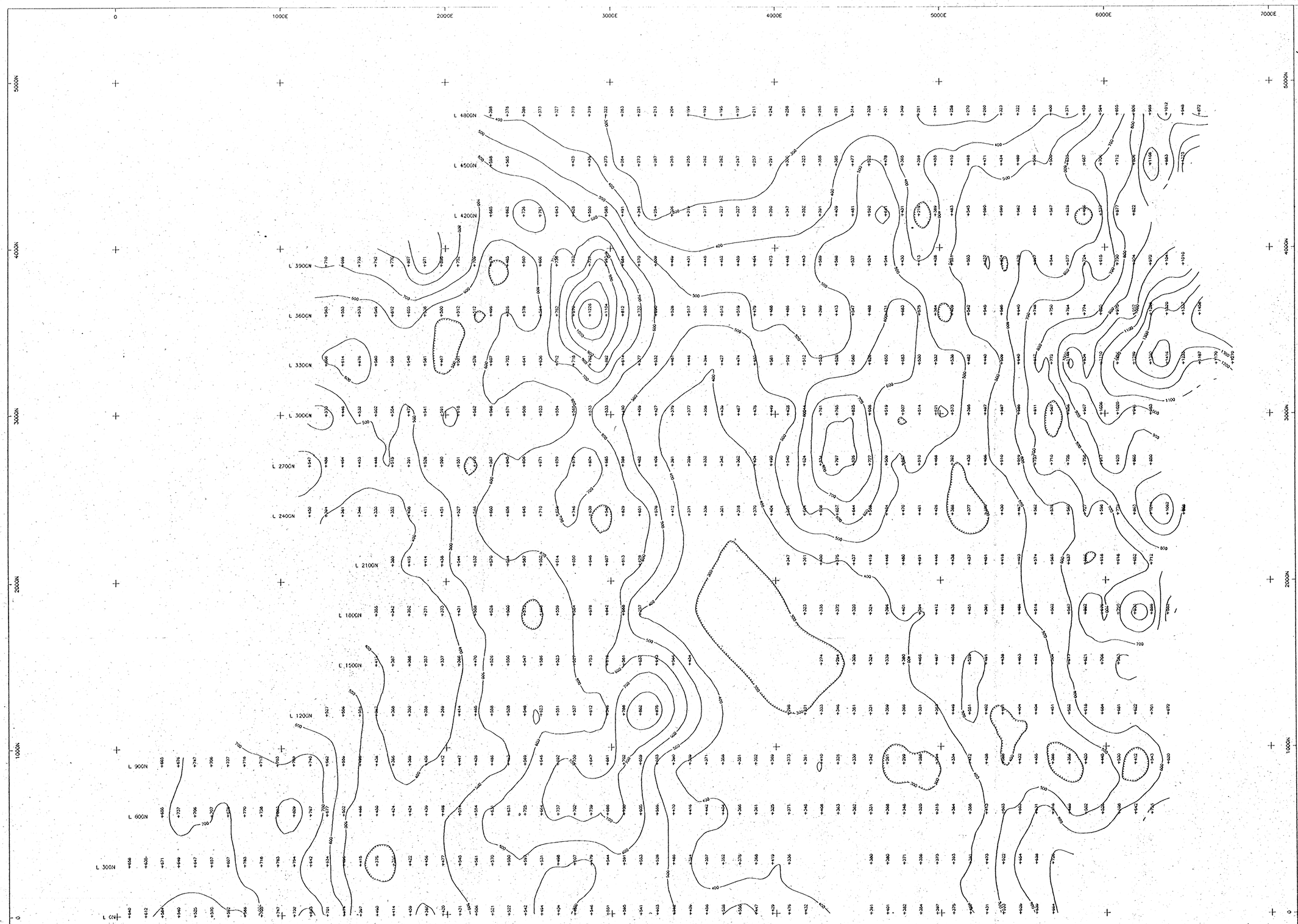
HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

CHARGEABILITY CONTOUR PLAN
triangular filtered values
electrode spacing = 100 metres
first to sixth separation (n=1-6)

DRAWN BY: crs	DATE: July/94

SCOTT GEOPHYSICS LTD



SURVEY SPECIFICATIONS

receiver	Scintrex IPR12
transmitter	TSQ4 (10 kw)
pulse time	2 seconds
Mx receive window	120-1020 msecs
array	pole dipole
a spacing	100 metres
n separations	1, 2, 3, 4, 5, 6
current electrode located west of receiving electrodes (heading E)	
contoured value	Filtered Res.
Filtered values	n=1, 2, 3, 4, 5, 6
Contour interval	100 ohm-metres

NOTE:
The plotting point for the filtered value is at the n=1 plotting point. The pseudosections must be referred to when assessing a given feature.

Filter description:
The filtered value gives equal weight to each of the n-separations, and is calculated at each n=1 data point.

The filter has the effect of passing a triangle over the data set, such that one value is selected for n=1, two for n=2, three for n=3, etc.

The average of the averages for each of the n-separations is the filtered value for the given n=1 location.

Where there is only a partial set of data, such as at the ends of lines, the average for each n-separation is the average of the existing values.

23743

N

0 200 400 600 800
METERS

Figure 4

HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA
RESISTIVITY CONTOUR PLAN
triangular filtered values
electrode spacing = 100 metres
first to sixth separation (n=1-6)

DRAWN BY: drs	DATE: July/94
SCOTT GEOPHYSICS LTD	

23743

Figure 5

HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 0N

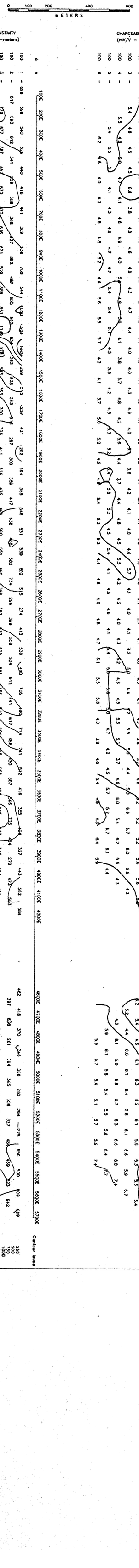
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)

SCOTT GEOPHYSICS LTD. Scintrex IPR12

July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)

Mx chargeability is for interval 120-1020 msecs after shutoff



LINE: 0N

HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 300N

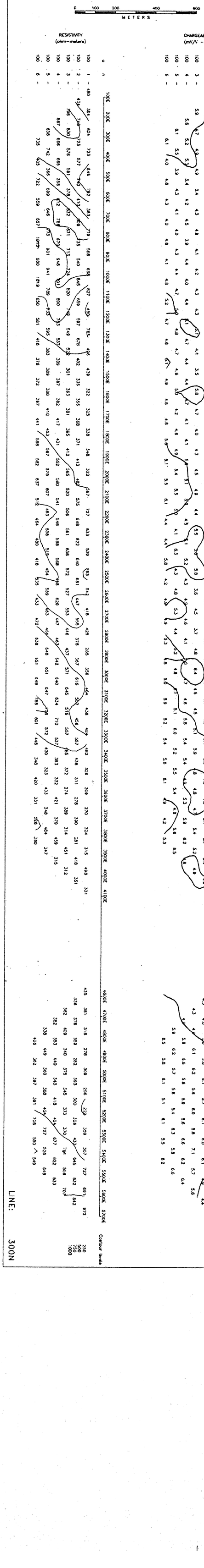
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)

SCOTT GEOPHYSICS LTD. Scintrex IPR12

July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)

Mx chargeability is for interval 120-1020 msecs after shutoff



LINE: 300N

HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 600N

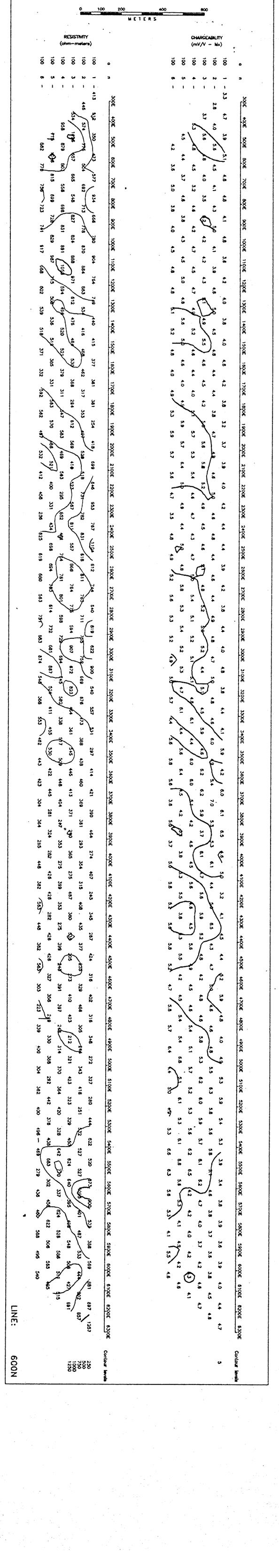
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)

SCOTT GEOPHYSICS LTD. Scintrex IPR12

June/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)

Mx chargeability is for interval 120-1020 msecs after shutoff



LINE: 600N

HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 900N

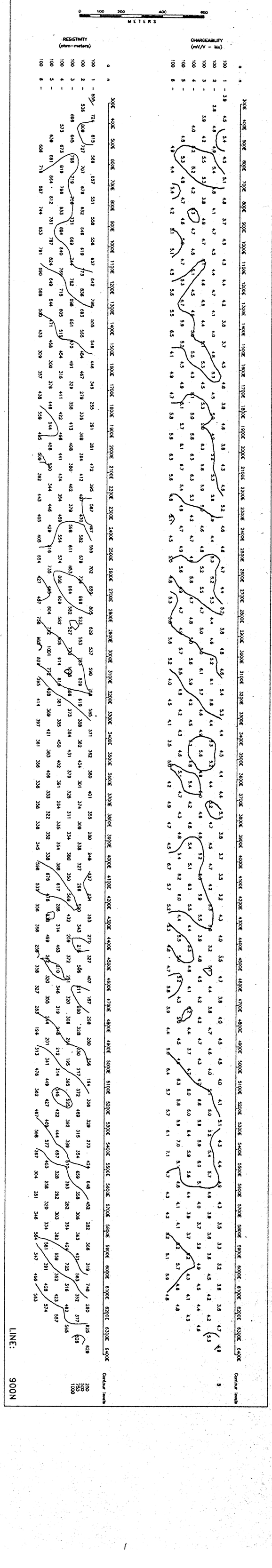
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)

SCOTT GEOPHYSICS LTD. Scintrex IPR12

June/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)

Mx chargeability is for interval 120-1020 msecs after shutoff



LINE: 900N

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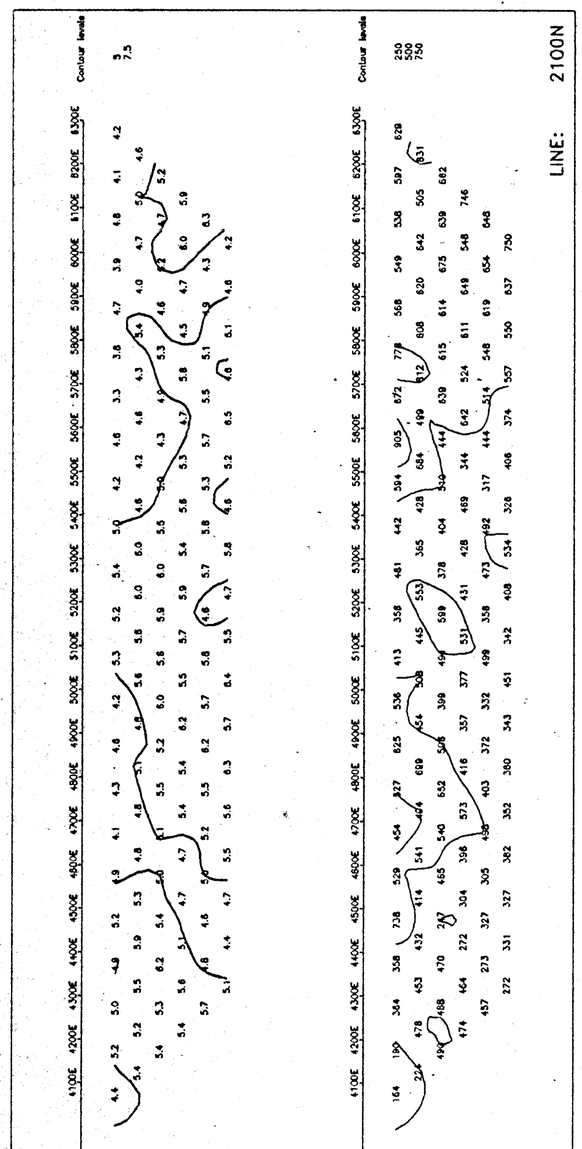

Figure 6

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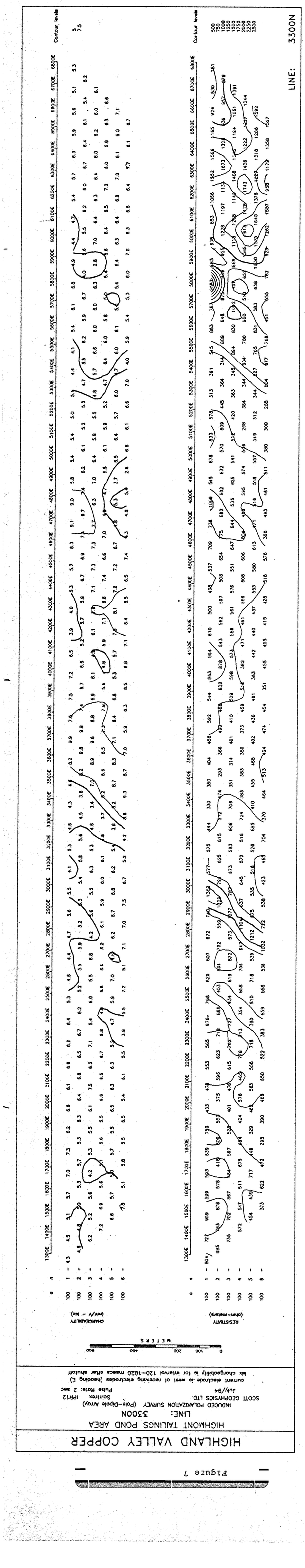
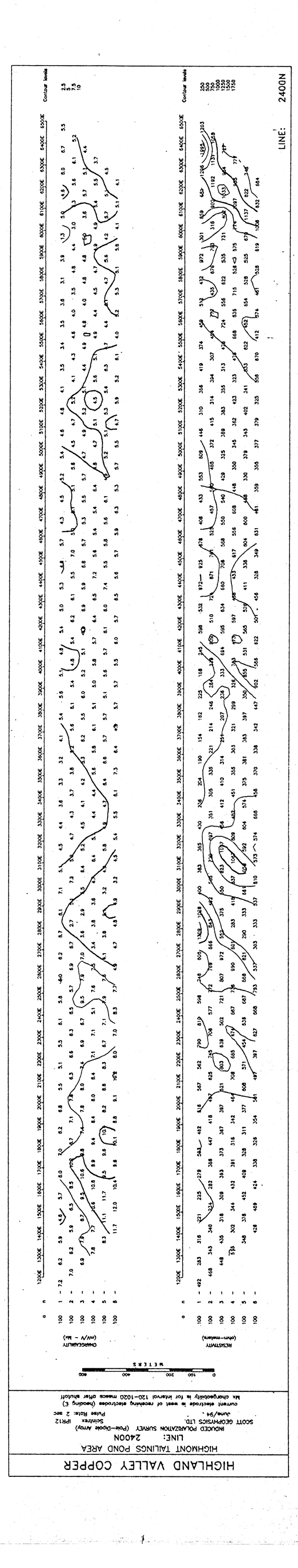

HIGHLAND VALLEY COPPER
HIGHMONT TAILINGS POND AREA
LINE: 3300N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec
current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff
RESISTIVITY (ohm-meters)
CHARGEABILITY (mV/V - Mx)
METERS
Contour levels
Figure 7

HIGHLAND VALLEY COPPER
HIGHMONT TAILINGS POND AREA
LINE: 3000N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
June/94 Pulse Rate: 2 sec
current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff
RESISTIVITY (ohm-meters)
CHARGEABILITY (mV/V - Mx)
METERS
Contour levels

HIGHLAND VALLEY COPPER
HIGHMONT TAILINGS POND AREA
LINE: 2700N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
June/94 Pulse Rate: 2 sec
current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff
RESISTIVITY (ohm-meters)
CHARGEABILITY (mV/V - Mx)
METERS
Contour levels


HIGHLAND VALLEY COPPER
HIGHMONT TAILINGS POND AREA
LINE: 2400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
June/94 Pulse Rate: 2 sec
current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff
RESISTIVITY (ohm-meters)
CHARGEABILITY (mV/V - Mx)
METERS
Contour levels

23743

Figure 8

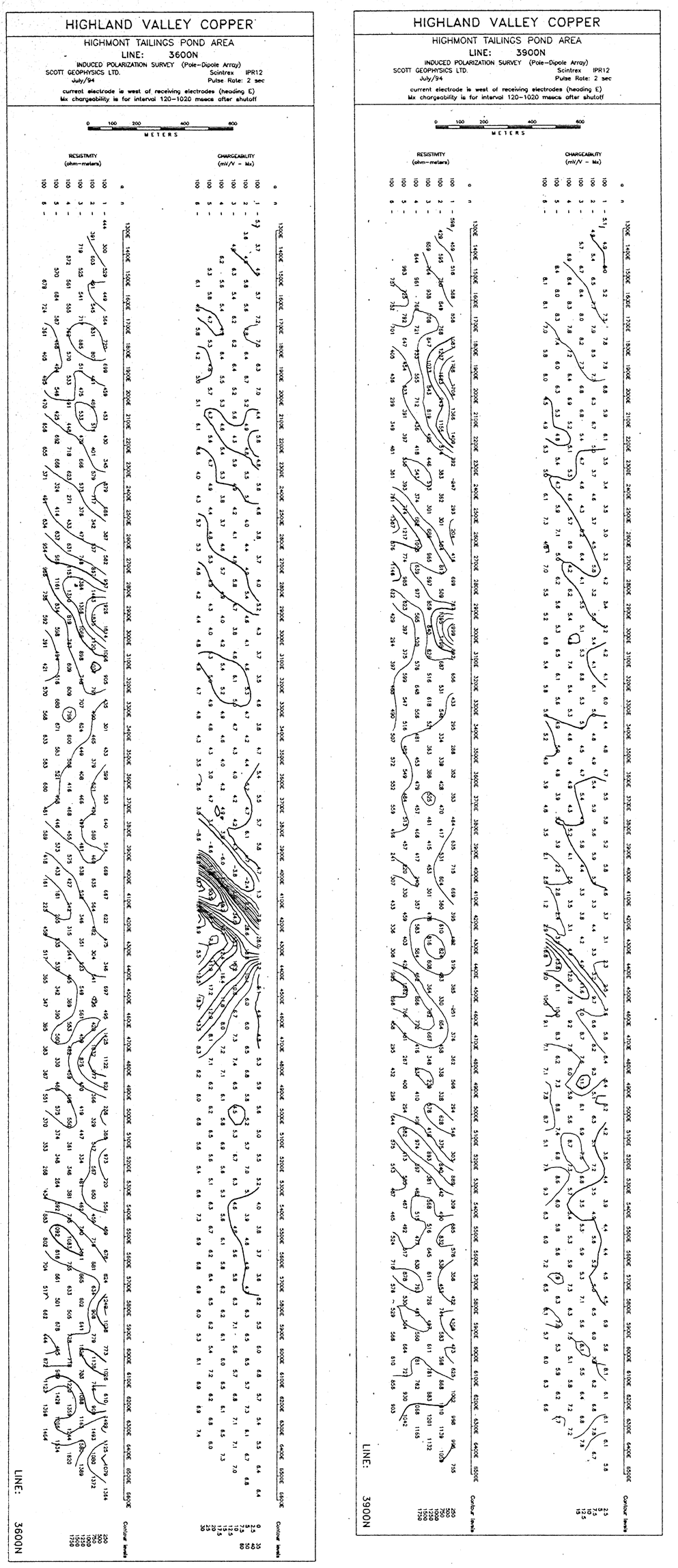
HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 3600N

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff



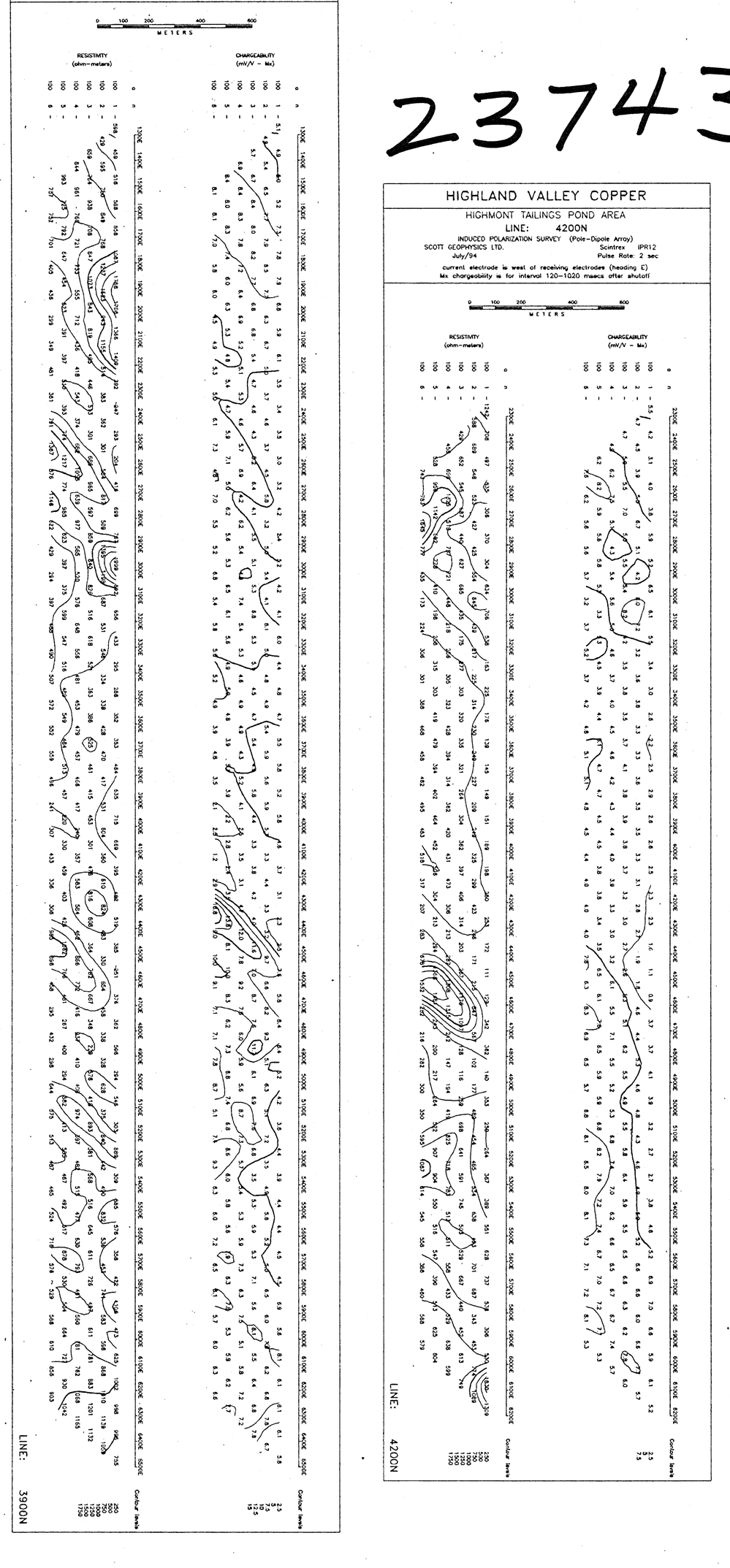
HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 3900N

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff



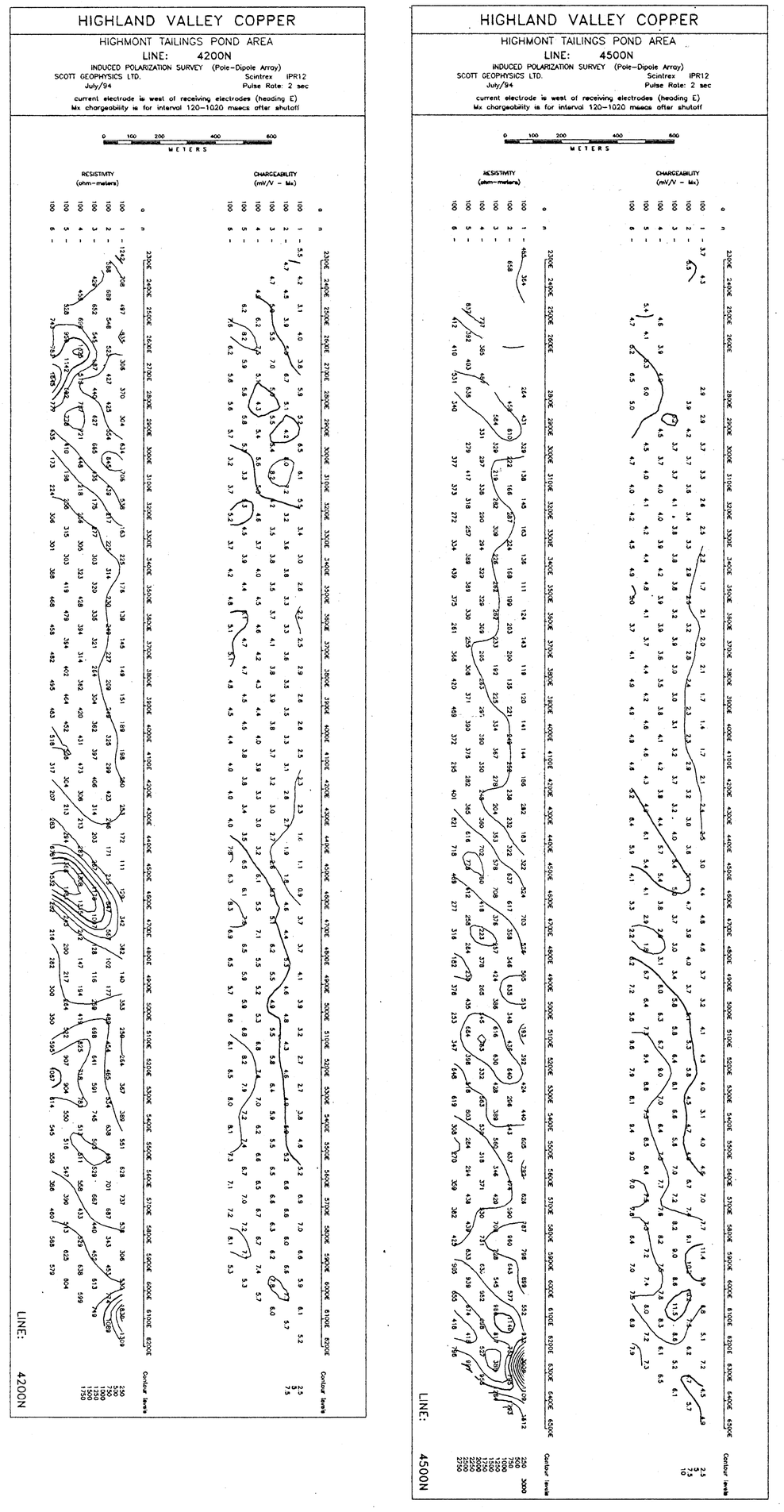
HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 4200N

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff



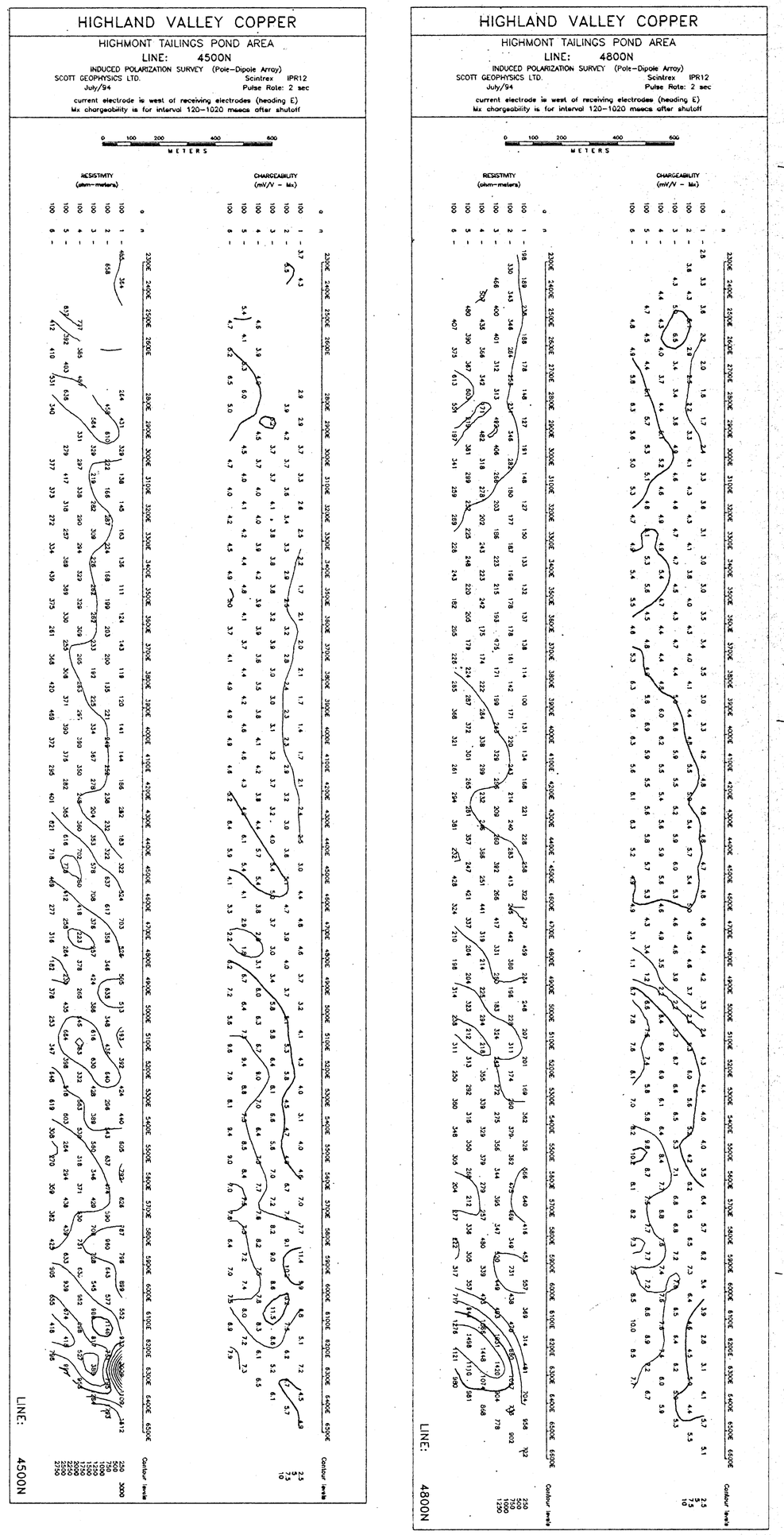
HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 4500N

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff



HIGHLAND VALLEY COPPER

HIGHMONT TAILINGS POND AREA

LINE: 4800N

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR12
July/94 Pulse Rate: 2 sec

current electrode is west of receiving electrodes (heading E)
Mx chargeability is for interval 120-1020 msecs after shutoff