

3256

REPORT ON  
INDUCED POLARIZATION SURVEYS  
T AND CAP CLAIM GROUPS  
CAPOOSE LAKE AREA, BRITISH COLUMBIA

by *934/1004W*  
Richard O. Crosby, B.Sc., P.Eng.

August 12, 1971

Surveys executed by  
Rio Tinto Canadian Exploration Limited

Interpretation and report by  
Seigel Associates Limited

CLAIMS:  
(See Attached Sheet)

LOCATION:  
On the north and south sides of Capoose Lake - NTS 93-F-6  
Omineca Mining Division  
125° 53° SE

DATES:  
April 5 to July 14, 1971

CAPOOSE CLAIMS

Cap Group 1

<u>Claim Name:</u>	<u>Record No.</u>
CAP 4 - 32 (inclusive)	77680 - 77708
CAP 38, 47, 48	78546, 78555, 78556
CAP 93 - 100 (inclusive)	78585 - 78592

Cap Group 2

CAP 1 - 3 (inclusive)	77677 - 77679
CAP 33 - 36 (inclusive)	78541 - 78544
CAP 49 - 53 (inclusive)	78557 - 78561
CAP 59 - 62 (inclusive)	78904 - 78907
CAP 69 - 72 (inclusive)	78914 - 78917
CAP 78 - 82 (inclusive)	78570 - 78574
CAP 108 - 118 (inclusive)	78927 - 78937
CAP 139 - 142 (inclusive)	78948 - 78951

Cap Group 3

CAP 83 - 86, 88	78575 - 78578, 78580
-----------------	----------------------

Cap Group 4

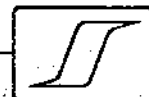
CAP 37	78545
CAP 39 - 46 (inclusive)	78547 - 78554
CAP 87	78579
CAP 89 - 92 (inclusive)	78581 - 78584
CAP 119 - 128 (inclusive)	78938 - 78947
CAP 129 - 138 (inclusive)	80150 - 80159
CAP 143 - 148 (inclusive)	80160 - 80165

T Group 1

T 1 - 10 (inclusive)	82263 - 82272
T 51 - 58 (inclusive)	82313 - 82320
T 115 - 122 (inclusive)	82471 - 82478
✓T 143 - 146 (inclusive)	82499 - 82502
✓T 761 - 764 (inclusive)	83117 - 83120
T 1056 - 1059 (inclusive)	83412 - 83415
T 1126 Fr, 1160 Fr.	83482, 83516

T Group 2

T 11 - 20 (inclusive)	82273 - 82282
T 123 - 126 (inclusive)	82479 - 82482
T 128	82484
✓T 147 - 154 (inclusive)	82503 - 82510
T 293	82649
T 362	82718
✓T 765, 166	83121, 83122
✓T 768	83124
✓T 770	83126
✓T 1034 - 1038 (inclusive)	83390 - 83394
✓T 1156 - 1159 (inclusive)	83512 - 83515
T 1060 - 1061	83416 - 83417



## TABLE OF CONTENTS

	<u>Page No.</u>
SUMMARY	
INTRODUCTION	1
GEOLOGY	2
PRESENTATION OF RESULTS	3
DISCUSSION OF RESULTS	3
CONCLUSIONS AND RECOMMENDATIONS	5
PLATES:	
1 Plate 1 - Claim Location Map	1 inch = 2640 feet
2 Plate 1 A - Chargeability Profile Plan	1 inch = 400 feet
3 Plate 1 B - Chargeability Profile Plan	1 inch = 400 feet
4 Plate 2 A - Resistivity Profile Plan	1 inch = 400 feet
5 Plate 2 B - Resistivity Profile Plan	1 inch = 400 feet
6 Plate 3 A - Chargeability Contour Plan 400 foot Electrode Spacing	1 inch = 400 feet
7 Plate 3 B - Chargeability Contour Plan 400 foot Electrode Spacing	1 inch = 400 feet
8 Plate 4 A - Resistivity Contour Plan 400 foot Electrode Spacing	1 inch = 400 feet
9 Plate 4 B - Resistivity Contour Plan 400 foot Electrode Spacing	1 inch = 400 feet



SUMMARY

The present induced polarization survey has revealed five extensive zones which reveal anomalous chargeability responses.

Geological and geochemical opinion are necessary to indicate which zones within the increased chargeability areas have highest priority for further investigation.





REPORT ON  
INDUCED POLARIZATION SURVEYS  
T AND CAP CLAIM GROUPS  
CAPOOSE LAKE AREA, BRITISH COLUMBIA

INTRODUCTION

During the period from April 5, 1971 to July 14, 1971 a geophysical field party under the direction of Mr. D. N. Sexsmith executed an induced polarization survey on some T and CAP claims in the Capoose Lake area, British Columbia. All personnel were on the staff of Rio Tinto Canadian Exploration Limited. Data plotting was carried out in the Rio Tinto Vancouver offices and the resulting maps were submitted to Seigel Associates Limited for interpretation and reporting.

The property lies just north and east of Capoose Lake in the Interior Plateau area of British Columbia. Access is by float aircraft from Burns Lake, approximately 70 air miles to the south of the property. The claims covered in whole or part by the present surveys are listed on the title page of this report and are shown on the accompanying drawings. These claims are held by Rio Tinto Canadian Exploration Limited.

Scintrex Mk VI time-domain (pulse-type) induced polarization equipment has been employed on this property. The transmitting unit had a rating of 2.5 kilowatts and equal on and off times of 2.0 seconds. The receiving unit was a remote, ground-pulse type triggered by the rising and falling primary voltages set up in the ground by the transmitter. The integration of the transient polarization voltages takes place for 0.65 seconds after a 0.45 second delay time following the termination of the current-on pulse.

The purpose of an induced polarization survey is to map the subsurface distribution of metallicly conducting mineralization near the



lines covered. In the present area such mineralization could include chalcopyrite, bornite, pyrite and other sulphide minerals. As well, metallic conductors such as magnetite and graphite can give chargeability responses not always distinguishable from sulphide mineralization. These latter anomalous sources are not expected to occur on this property.

For the present survey nineteen grid lines were laid out oriented north-south with interline spacings of about 1400 feet. One line was completed along the long axis of Capoose Lake and one line oriented east-west was surveyed south of the Lake. A total of approximately 43 line miles of grid was completed in the Capoose Lake area. During 1970, 13.0 line miles were surveyed and reported on and an additional 30.0 line miles were completed during the 1971 programme.

The three electrode array with electrode spacings of 400 feet and 800 feet was employed for reconnaissance purposes. Some 200 foot electrode spacings were used in several areas. Station intervals were 200 feet.

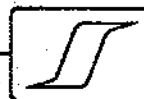
The 200 foot electrode spacing on lines 84 E, 28 E and the line across the lake were surveyed using the gradient array.

#### GEOLOGY

The geology of the area was discussed by Mr. J. Baird in the report covering the 1970 work over the area and is as follows:

"The geology of the area including and surrounding the present property is discussed in G. S. C. Memoir 324, "Nechako River Map-Area" by H. W. Tipper, 1963. The geology of the property has been studied by geologists on the staff of Rio Tinto Canadian Exploration Limited who have supplied the writer with a geological map.

Most of the survey area is underlain by intrusive granodioritic



rock of the Jurassic or Cretaceous age. North of the granodioritic rock lies an extensive area underlain by Triassic and Jurassic sediments and volcanics of the Takla Group. The contact between these two formations is shown on the accompanying DWG G-8094 as taken from the geological map supplied by Rio Tinto.

The property was located by a geochemical soil sampling programme, the results of which are given in a report by M. B. Mehrtens, Ph.D., dated May, 1970. Significant copper and molybdenum soil anomalies have been located north of Capoose Lake".

PRESENTATION OF RESULTS

The results of the survey are shown on eight plates, all on the scale of 1 inch = 400 feet.

Plates 1 A and 1 B show the chargeability results in profile form.

Plates 2 A and 2 B show the resistivity results in profile form. The vertical scales for these profiles are 1 inch = 10.0 milliseconds for chargeabilities and 1 inch = 1000 ohm-meters for resistivity.

Plates 3 A and 3 B show the chargeability results in contour form for the 400 foot electrode array. The observed chargeabilities are contoured with a 1.0 millisecond interval.

Plates 4 A and 4 B are resistivity contour plans for the 400 foot electrode spacings. The apparent resistivities are shown in ohm-meters and have been contoured with a 100 ohm-meter contour interval.

DISCUSSION OF RESULTS

A description of the results obtained over the north side and the east side of Capoose Lake is discussed in great detail in the Report on Induced Polarization and Magnetometer Surveys, Cap Claim Group, Capoose Lake



2577

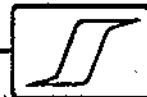
Area, British Columbia, by Jon G. Baird, dated September 1, 1970. This will not be included in this report, although some of the present work was completed over intermediate lines within these areas. Data on these intermediate lines indicated chargeabilities higher than those previously recorded. Examples of these areas would be the 13.2 millisecond response recorded on L 7 W and the 16.5 and 11.1 millisecond responses recorded on L 21 E. These peak chargeabilities were recorded with a 400 foot electrode spacing over the extensive east-west anomalous zone discussed by Baird. These new data suggest that this zone may contain up to 2 percent or more by volume of metallicly conducting mineralization rather than the 1 percent as previously indicated by last year's work.

A chargeability anomaly trending generally northeast-southwest was recorded about 2500 feet south of the south shore of Capoose Lake. The zone is well defined and reaches a peak chargeability of 14.4 milliseconds at 42 S on L 7 W with a 400 foot electrode spacing. The chargeabilities increased slightly with the 800 foot electrode spacing indicating an increase in chargeable material with an increase in depth.

Four additional anomalous areas were recorded south and southeast of Capoose Lake.

Three distinct areas of increased chargeabilities were recorded along the eastern edge of the survey grid. The centres of these zones are located at 14 N on L 70 E, 22 S on L 84 E and 62 S on L 70 E. Peak chargeabilities recorded with the 400 foot electrode spacings were 18.0, 11.0 and 19.0 milliseconds respectively. The resistivities recorded over these areas are less than 1000 ohm-meters except for the area on L 70 E.

A fifth area of increased chargeability was centred at 94 S on L 14 E. Maximum chargeability was 9.0 milliseconds a corresponding increase



in apparent resistivity was recorded

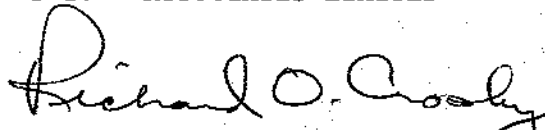
CONCLUSIONS AND RECOMMENDATIONS

The present induced polarization surveying has located five extensive zones of increased chargeabilities in addition to more clearly defining anomalous areas recorded on last year's survey.

A thorough geological and geochemical evaluation should be carried out for each of the present high chargeability zones. Diamond drill locations should be determined upon correlation of all available geophysical, geochemical and geological data.

Respectfully submitted,

SEIGEL ASSOCIATES LIMITED



Richard O. Crosby, B.Sc., P.Eng.  
Geophysicist

Vancouver, B. C.  
August 12, 1971





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3256 MAP #1

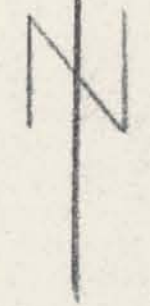
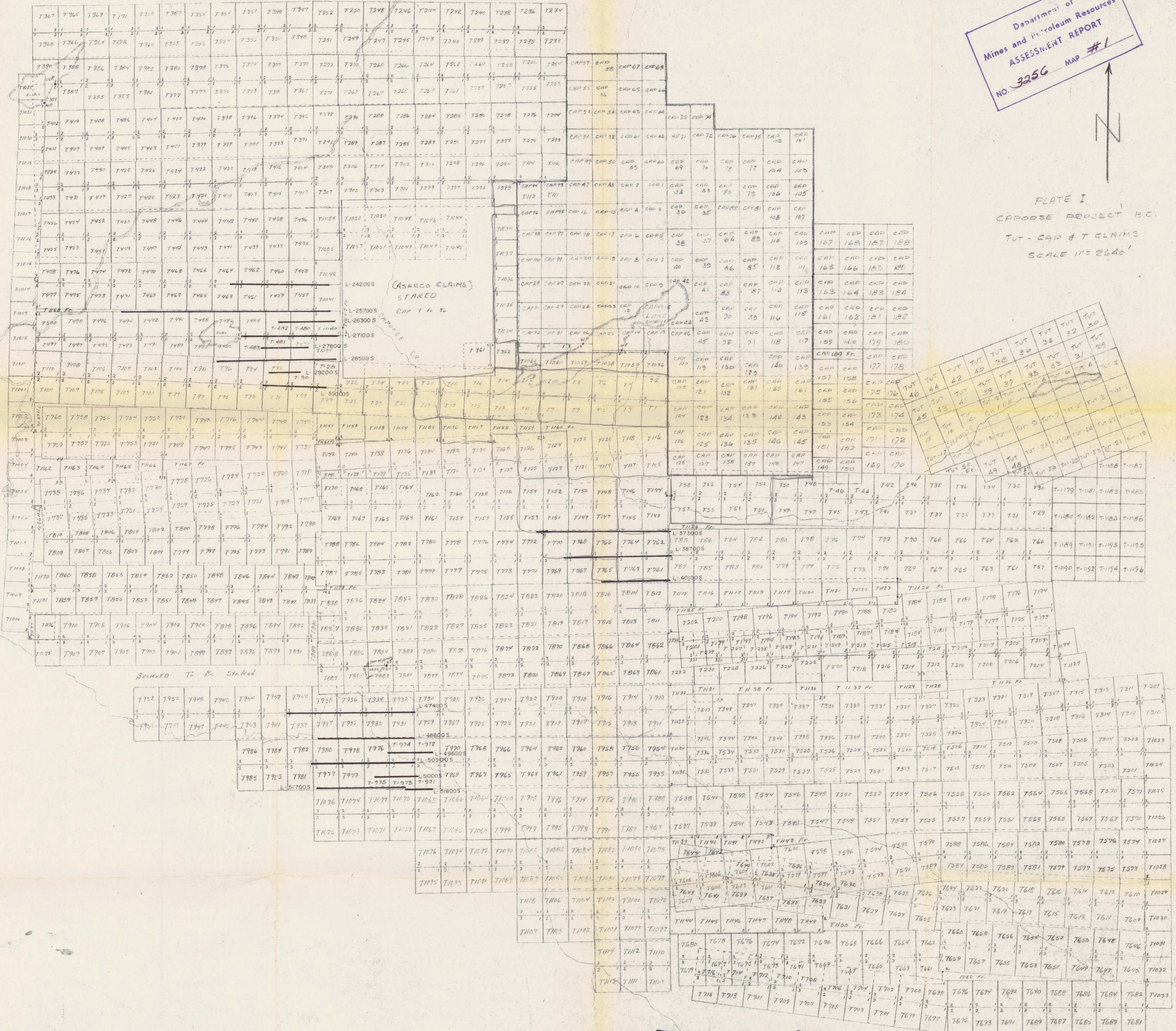
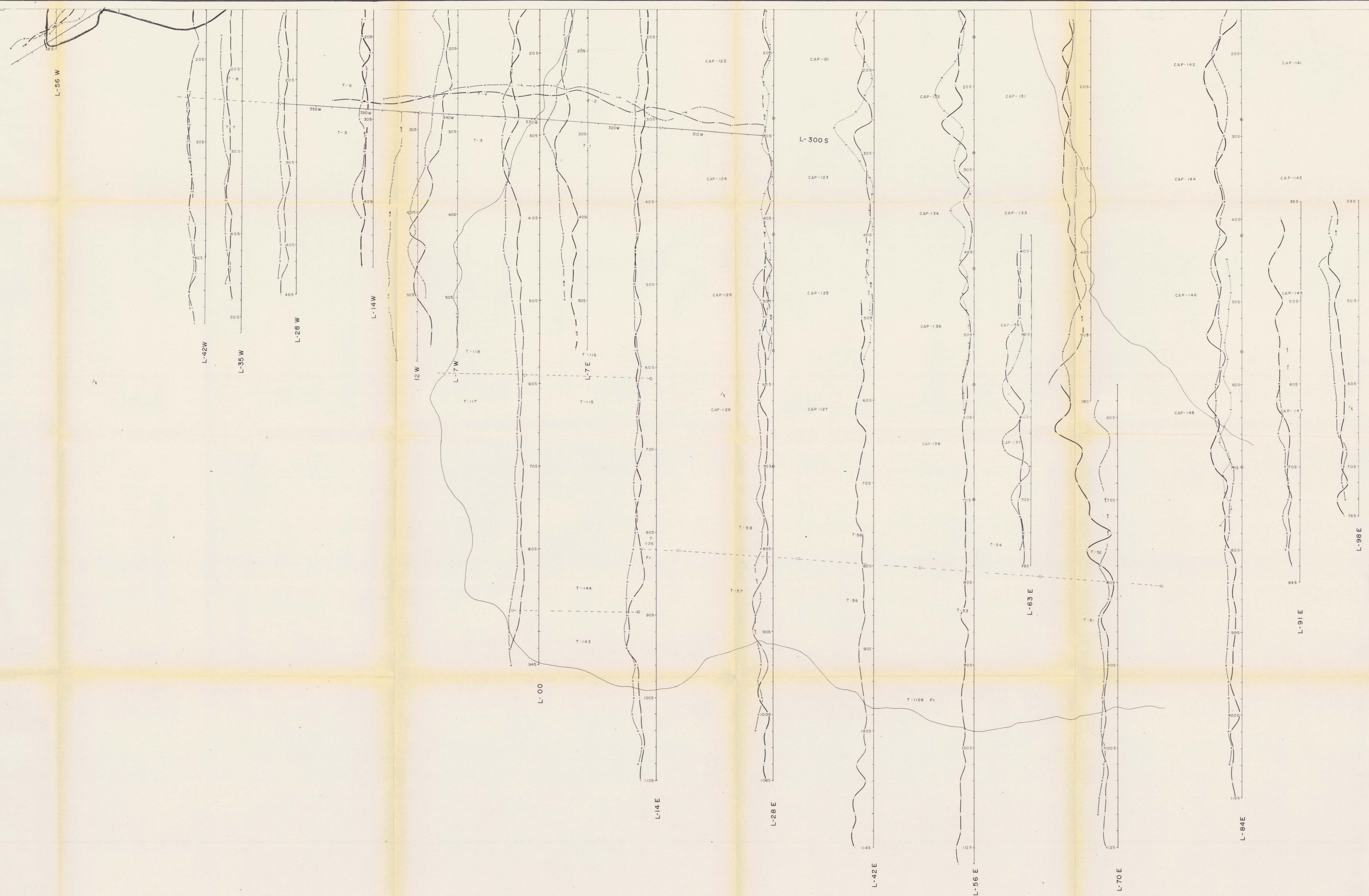


PLATE I  
CAROOSE PROJECT B.C.  
TUT - CAP & T CLAIMS  
SCALE 1" = 2640'



3256 M-1  
Richard D. Crosby



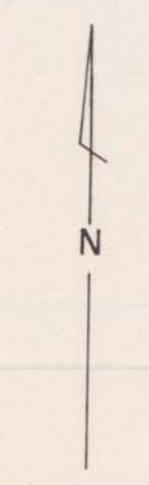


Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 5256 MAP # 2

PLATE 1A  
RIO TINTO CANADIAN EXPLORATION LIMITED  
CAPOOSE PROJECT BC, 93-F-6  
CHARGEABILITY PROFILE PLAN  
SCALE 1" = 400'  
DNS, rwr - JULY, 71

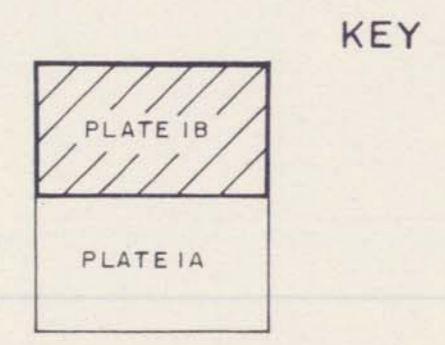
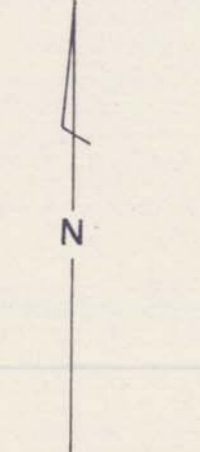
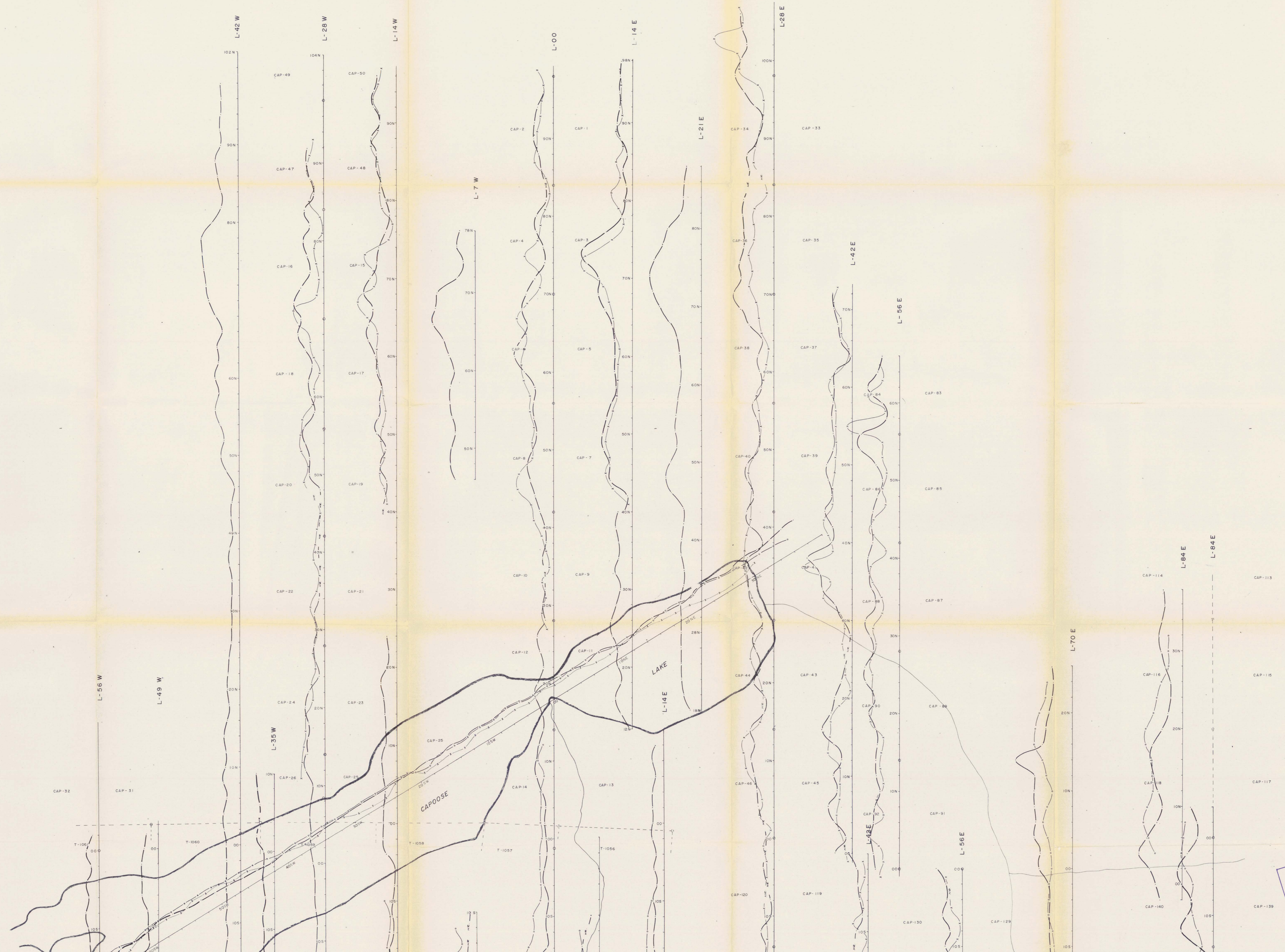
**Legend**  
Chargeability profile scale 1" = 10 Milliseconds  
Electrode spacing a = 200' ————  
a = 400' ————  
a = 800' ————  
NOTE: Three electrode array except for 200' electrode spacing on  
lines 84E, 28E and L-00 which are gradient array

**KEY**  
PLATE IB  
PLATE IA



*Richard Olney*





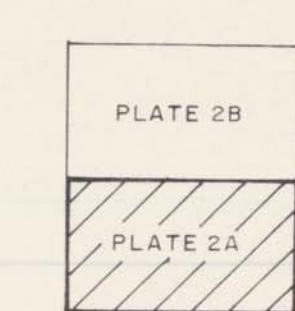
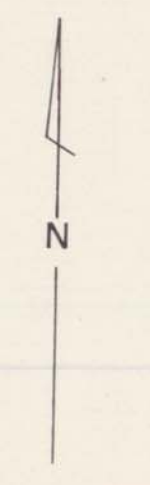
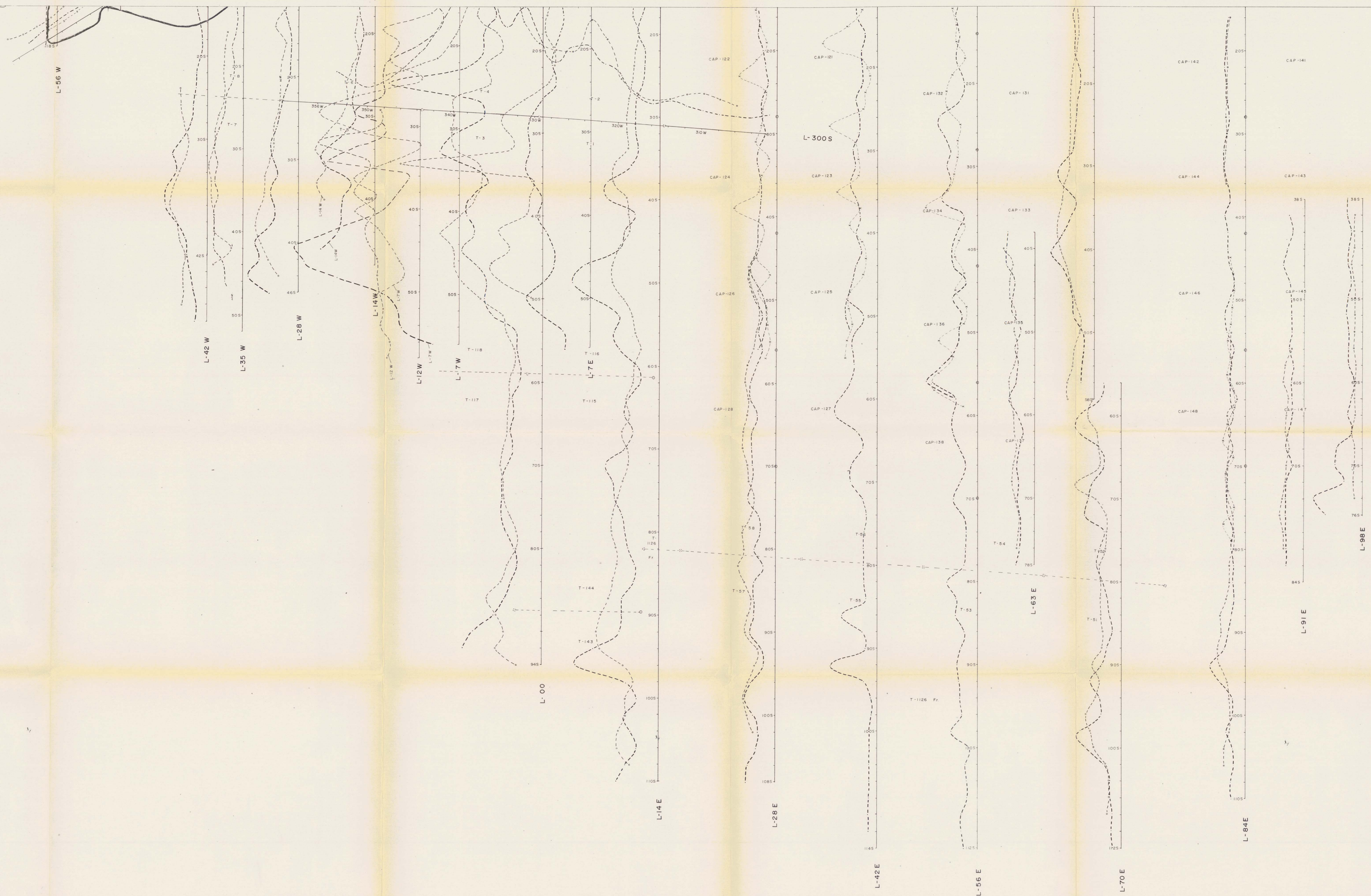
For legend see plate 1A

PLATE 1B  
 RIO TINTO CANADIAN EXPLORATION LIMITED  
 CAPOOSE PROJECT BC, 93-F-6  
 CHARGEABILITY PROFILE PLAN  
 SCALE 1" = 400'  
 DNS, rwr - JULY, 71

Department of  
 Mines and Petroleum Resources  
 Assessment Report  
 No. 2056  
 Map # 9

*Richard O'Leary*





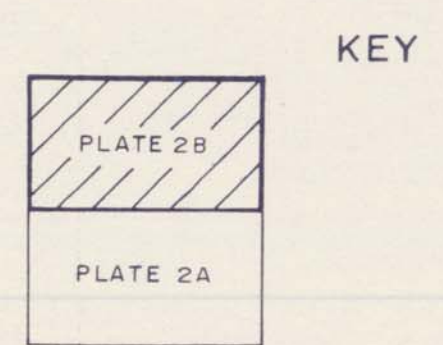
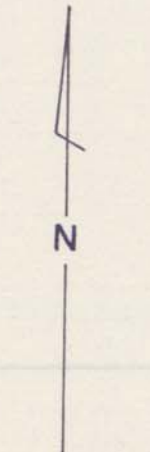
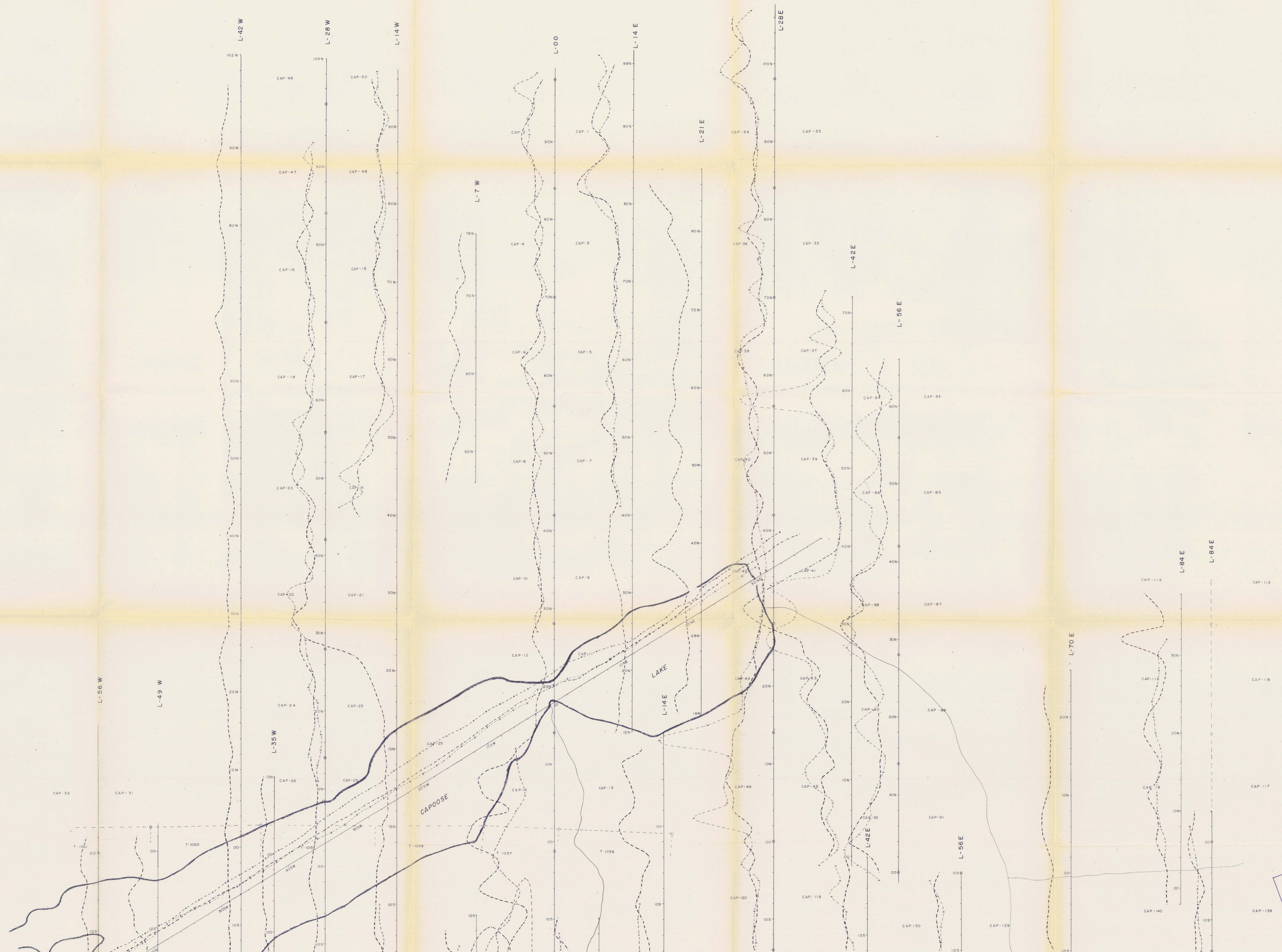
**Legend**  
 Resistivity profile scale 1"=1000 Ohm-meters  
 Electrode spacing a = 200' - - - - -  
 a = 400' - - - - -  
 a = 800' - - - - -  
 Note: Three electrode array except for 200' electrode spacing on lines 84 E, 28 E south of base line which are gradient array.

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 5056 MAP # 4

PLATE 2A  
 RIO TINTO CANADIAN EXPLORATION LIMITED  
 CAPOOSE PROJECT BC, 93-F-6  
 RESISTIVITY PROFILE PLAN  
 SCALE 1" = 400'  
 DNS, rwr - JULY, 71

*Rinal Olchay*





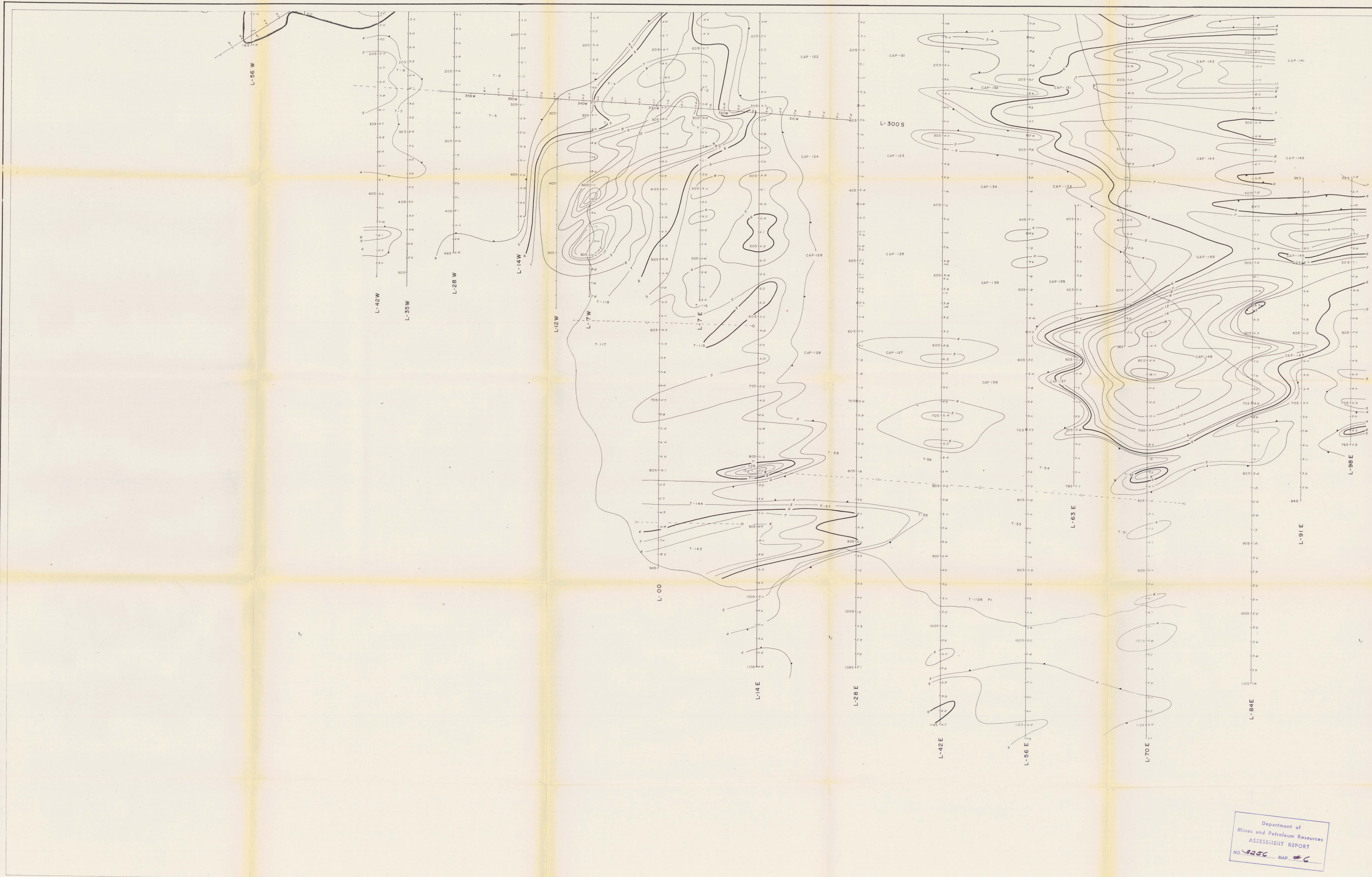
For legend see plate 2A

PLATE 2B  
 RIO TINTO CANADIAN EXPLORATION LIMITED  
 CAPOOSE PROJECT BC, 93-F-6  
 RESISTIVITY PROFILE PLAN  
 SCALE 1" = 400'  
 DNS, rwr JULY, 71

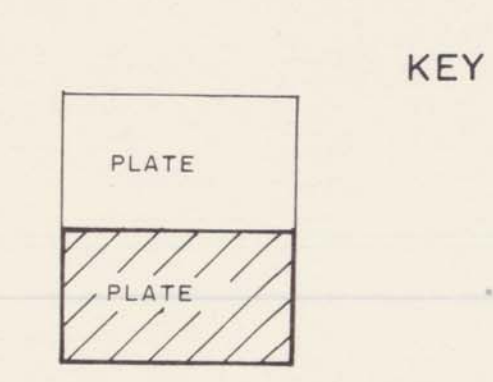
Department of  
 Mineral and Petroleum Resources  
 MINERAL ASSESSMENT REPORT  
 No. 8256  
 Map # 5

*Richard O. Crosby*





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 9256 MAP # 6



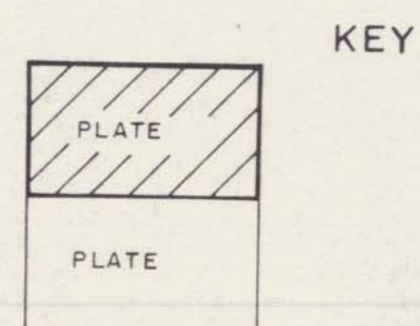
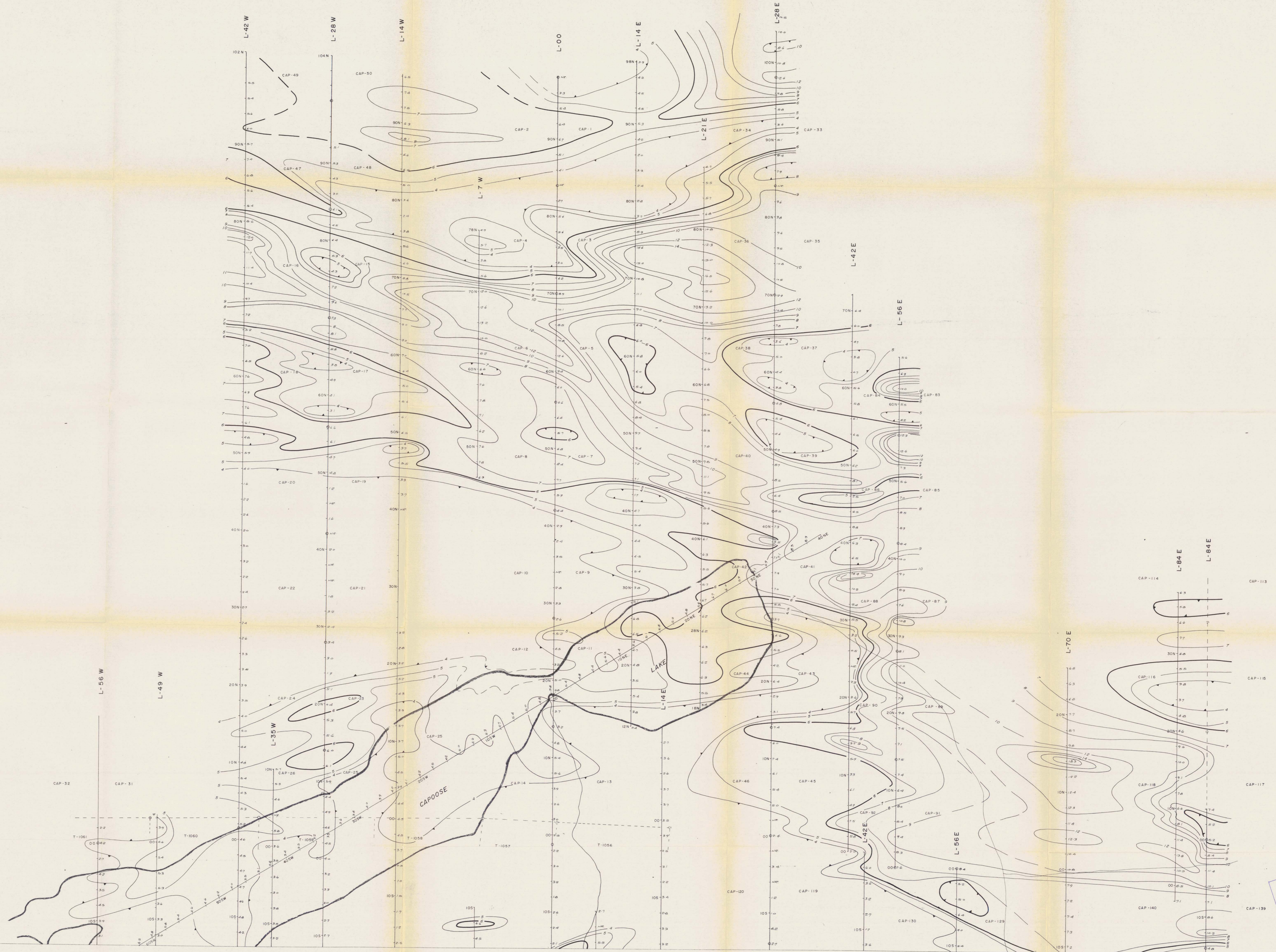
Legend

- Value in milliseconds
- | Contour interval | 1 & 2 millisecond            |
|------------------|------------------------------|
| 4                | Millisecond contour interval |
| 5                | "                            |
| 6                | "                            |
| 7                | "                            |
| 8                | "                            |
| 9                | "                            |
| 10               | "                            |
| 12               | "                            |
- Chargeability low
- NOTE: Three electrode array  
Electrode spacing 4x400'

PLATE 3A  
RIO TINTO CANADIAN EXPLORATION LIMITED  
CAPOOSE PROJECT BC, 93-F-6  
CHARGEABILITY CONTOUR PLAN  
SCALE 1" = 400'  
rwr - JULY, 71

*Richard D. [Signature]*





For legend see plate 3A

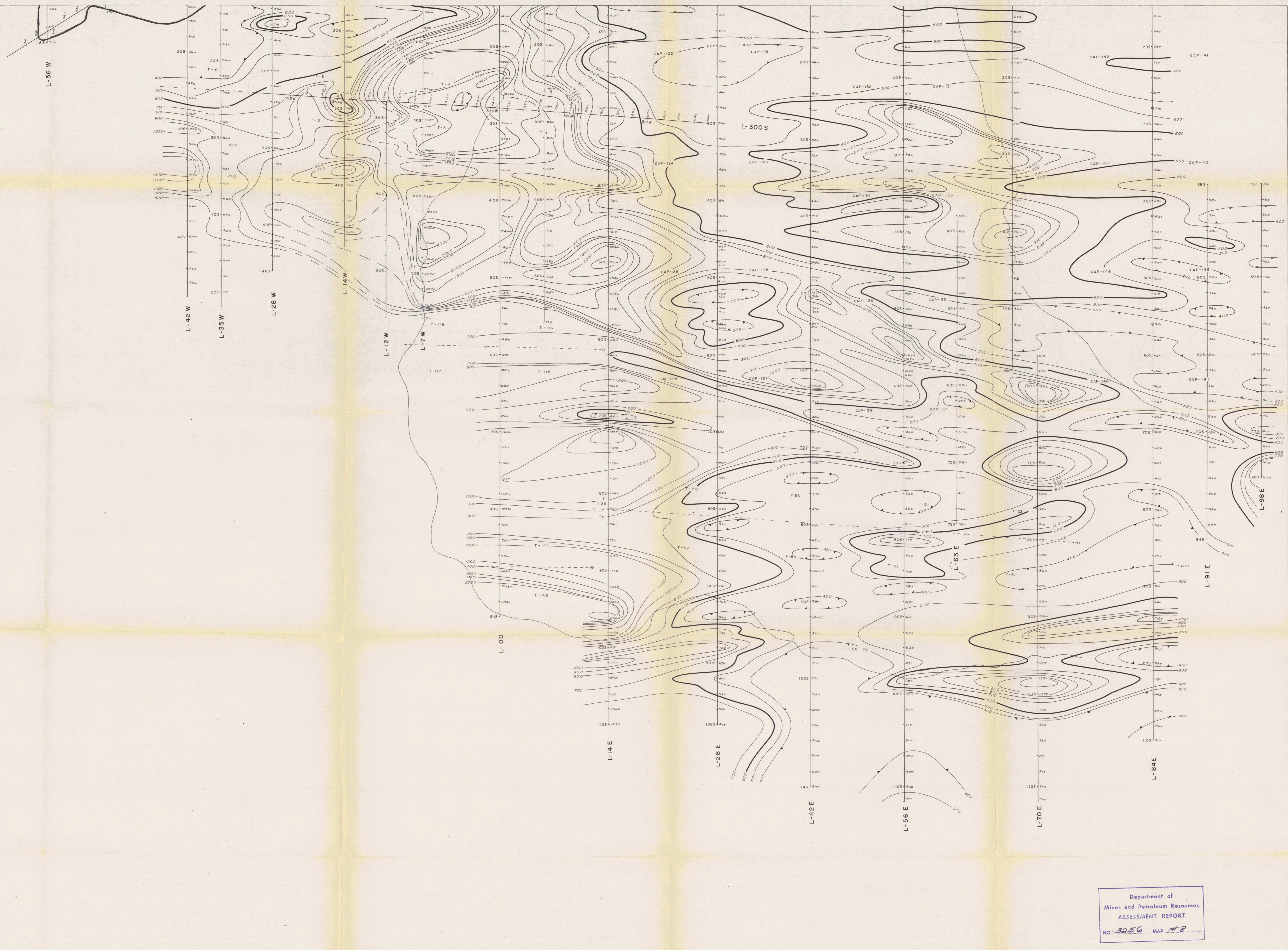
PLATE 3B  
 RIO TINTO CANADIAN EXPLORATION LIMITED  
 CAPOOSE PROJECT BC, 93-F-6  
 CHARGEABILITY CONTOUR PLAN  
 SCALE 1" = 400'

, rwr - JULY, 71

Department of Resources  
 Mines and Petroleum  
 ASSESSMENT REPORT  
 9356  
 No. 93-71

*Richard O. Cook*





Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3056 MAP # 8

PLATE 4A  
RIO TINTO CANADIAN EXPLORATION LIMITED  
CAPOOSE PROJECT BC, 93-F-6

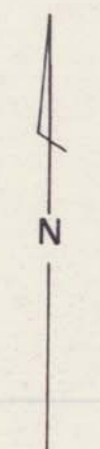
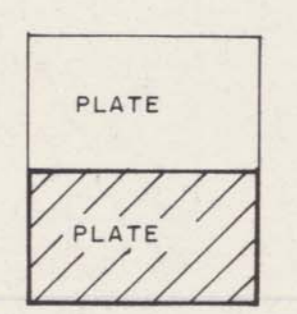
RESISTIVITY CONTOUR PLAN  
SCALE 1" = 400'

rwr - AUG, 71

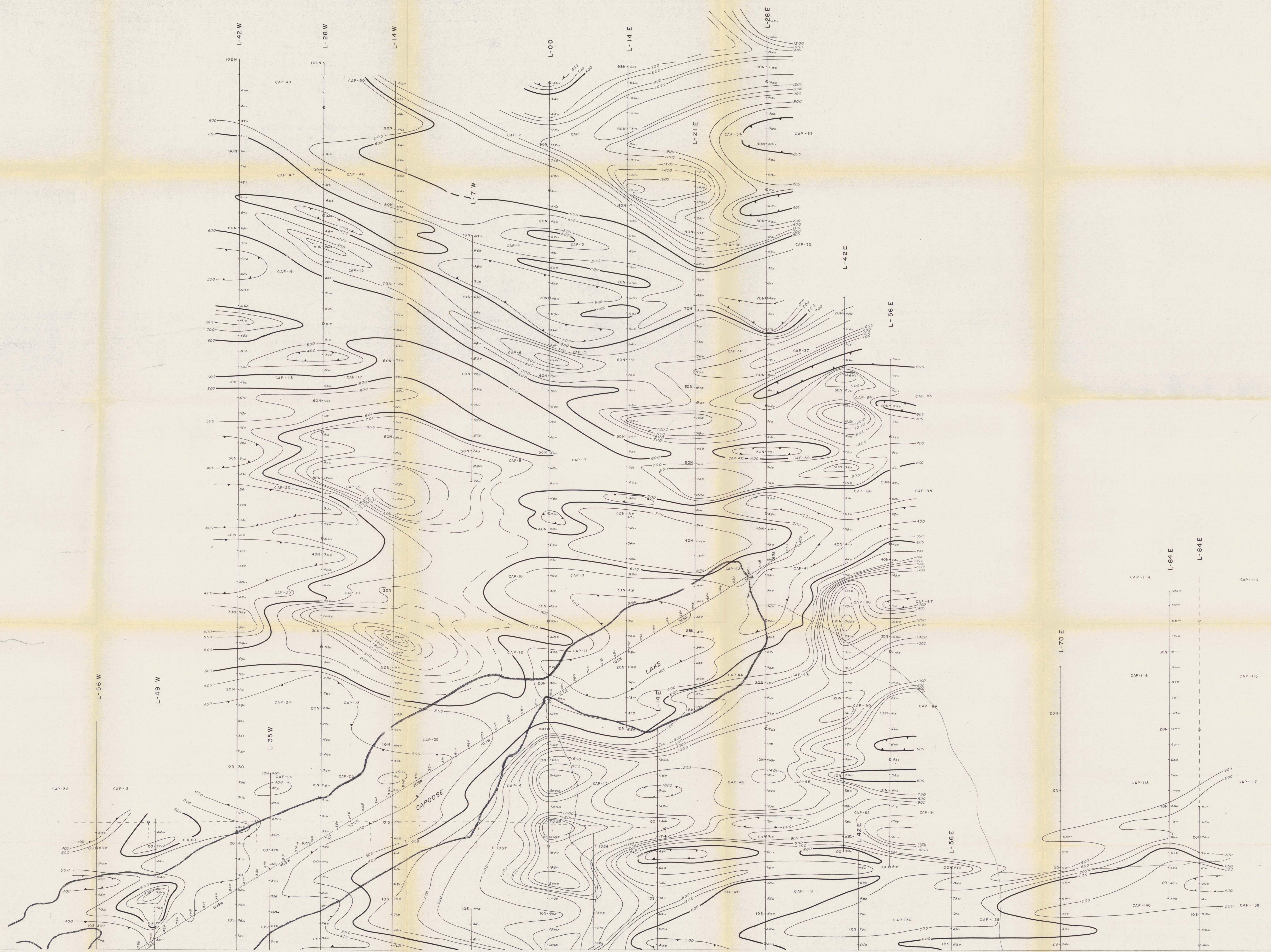
*Richard O'Leary*

**Legend**  
 Res Value in Ohm-meters  
 Contour interval 100, 200 @ 500 ohm-meters  
 400 Ohm-meter contour interval  
 500 " " " " " "  
 600 " " " " " "  
 700 " " " " " "  
 800 " " " " " "  
 900 " " " " " "  
 1000 " " " " " "  
 1200 " " " " " "  
 1400 " " " " " "

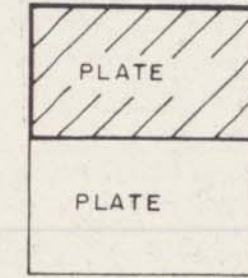
Resistivity low  
 NOTE: Three electrode array  
 400' electrode array







KEY



For legend see plate 4 A

PLATE 4B  
RIO TINTO CANADIAN EXPLORATION LIMITED

CAPOOSE PROJECT BC, 93-F-6

RESISTIVITY CONTOUR PLAN

SCALE 1" = 400'

rwr - AUG, 71

Department of Resources  
Mines and Petroleum  
ASSESSMENT REPORT  
3256  
MAY 79

*Richard D. Cross*