

701

REPORT ON
AN INDUCED POLARIZATION AND MAGNETOMETER SURVEY
QC CLAIM GROUP
KINASKAN LAKE, BRITISH COLUMBIA
(57°, 130°, N.E.)

FOR

CONWEST EXPLORATION COMPANY LIMITED

BY

HUNTEC LIMITED
TORONTO, ONTARIO
SEPTEMBER, 1965


Qualifications of Andrew R. Dodds, Hunttec Limited.

Academic

B. Sc. degree in geology and geophysics, granted by Queens University, Kingston, Ontario in 1963.

Practical

Field geophysicist with Hunting Survey Corporation Limited and Hunttec Limited from July 1963 to date. This includes field supervision, interpretation and report writing of magnetic, electro-magnetic and induced polarization surveys, primarily the last named from January 1964 to date.



Andrew R. Dodds, B. Sc.

Geophysicist

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APPENDIX II

MAP POCKET

- #1 Profiles of Apparent Chargeability, Apparent Resistivity and Vertical Magnetic Intensity. Lines QC-1 and QC-2. ²⁰⁰ Scale: 1 inch to ~~400~~ feet.
- #2 Location Map - QC Group
I.P. Lines relative to Claim Boundaries.
1 inch to 1500'
- #3 *Survey Line Location Map.*

INTRODUCTION

On July 17th and 18th, 1965, a combined magnetometer and Induced Polarization (I.P.) survey was carried out by Hunttec Limited for Conwest Exploration Company Limited. The survey area was covered by a group of 17 mineral claims (QC 5 to 8 inclusive, 21 to 26 inclusive, and 36 to 42 inclusive) located approximately 12 miles north-west of Kinaskan Lake, in the Stikine area of British Columbia (57°, 130°, N.E.)

The geophysical crew was managed by Mr. A.R. Dodds, assisted by Mr. B.T. Howes, both of Hunttec Limited. Conwest were represented by Mr. P.O. Hasley, and they provided two field helpers. Drafting and typing were done at the Toronto office of Hunttec Limited.

The I.P. survey consisted of 1.36 miles of readings taken at 200-foot intervals on two lines, using the electrode configuration known as the "three-electrode array". Electrode separations of 400 feet and 800 feet were used, with 400 feet between the potential electrodes.

The magnetometer survey consisted of 1.14 miles of readings at 100-foot intervals, on one line only.

The data are presented in the form of profiles, using a distance scale of 1 inch to 400 feet. Vertical scales are 1 inch to 4 milliseconds, 1 inch to 40 gammas, and 2 inches per logarithmic cycle for chargeability, magnetic intensity and resistivity respectively.

SURVEY SPECIFICATIONS

The Hunttec pulse-type I. P. instrument is similar in design and operation to that described by R. W. Baldwin in "A Decade of Development in Overvoltage Surveying", A. I. M. E. Transactions, Vol. 214, 1959. Power is obtained from a gasoline motor coupled to a 2.5 kw, 400 cycle three phase generator, providing a maximum of 2.5 kw d. c. to the ground. The cycling rate is 1.5 seconds "current on" and 0.5 seconds "current off", the pulses reversing continuously in polarity.

The data recorded in the field consist of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C_2 , the primary voltage (V_p) appearing between P_1 and P_2 during the "current on" part of the cycle, and the secondary voltage (V_s) appearing between P_1 and P_2 during the "current off" part of the cycle. The apparent chargeability (M_a), in milliseconds, is calculated by dividing the secondary voltage by the primary voltage and multiplying by 400, which is the sampling time in milliseconds of the receiver unit. The apparent resistivity, in ohm-meters, is proportional to the ratio of the primary voltage to the measured

current, the proportionality constant depending on the geometry of the array used. The resistivity and chargeability obtained are called "apparent" as they are values which that part of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous, the calculated apparent resistivity and apparent chargeability are functions of the actual resistivity and chargeability and of the geometry of the rocks.

The electrode configuration used for this survey was the "three-electrode array". For this array one current electrode, C_1 , and the two potential electrodes, P_1 and P_2 , are moved in unison along the survey lines. The spacing of these electrodes determines the depth penetrated. The second current electrode, C_2 , is placed an infinite distance away which, in practice, is about ten times the distance between C_1 and P_1 . The I.P. measurement is plotted halfway between C_1 and P_1 .

The magnetometer readings were taken with a Jalander magnetometer at a station interval of 100 feet.

INTERPRETATION

The apparent chargeability measurements are high throughout this area, dropping to lower values only at either end of Line QC-1 and for a short section in the middle of this line. Significant mineralization percentages could be present throughout.

A detailed interpretation is not possible without extra electrode separations. However, a basic interpretation is given under the profiles (Appendix II), indicating areas of major or lesser interest. These really do little more than reflect the amplitude of the chargeability readings. Although it appears likely that the cause of the high readings is located directly under the line, it is possible that it could be located to one side, possibly by as much as 200 feet. If mineralization is the cause, as appears likely, this must be extensive both horizontally and vertically and is expected to approach within 100 feet of surfaces. Average sulphide contents could range between 1.5 and 5.0 per cent.

Line QC-2 angles to the south of Line QC-1, intersecting it at about 42+00W, and was surveyed to check the response of extensive outcropping mineralized rock. This response is similar to the maximum obtained on Line QC-1.

The resistivity and magnetic readings are very flat, and such fluctuations as do occur cannot be interpreted without a more extensive survey.


SUMMARY AND RECOMMENDATIONS

The I.P. survey indicated an extensive high response area, probably caused by sulphide mineralization. From a geophysical point of view, the region warrants further investigation; since terrain problems prevent a more extensive geophysical survey, it is recommended that geological mapping, possibly followed by diamond drilling, be the next stage of the program.

HUNTEC LIMITED



Andrew R. Dodds, B.Sc.
Geophysicist


for Roger K. Watson, B.A.Sc., P.Eng.
Geophysicist

APPENDIX I

Claims surveyed:

The survey area was covered by 17 mineral claims, as follows:

QC 5 to 8 inclusive
 21 to 26 inclusive
 36 to 42 inclusive

Miles surveyed:I.P.

Two electrode separations were used, total miles covered and stations read being:

<u>Electrode Separation</u>	<u>Station Interval</u>	<u>Miles</u>	<u>Readings</u>
400'	400')	1.36	36
)		
800'	400')		

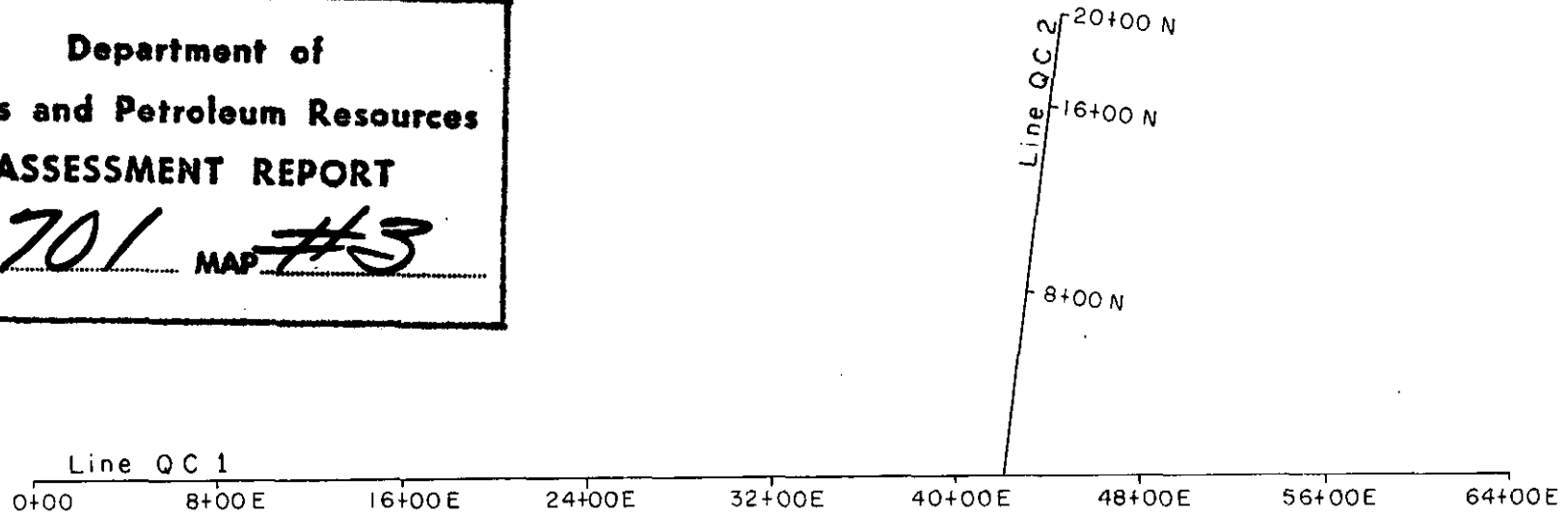
Magnetometer

The magnetometer survey consisted of 1.14 miles of readings at 100-foot intervals, for a total of 61 readings.

Personnel employed on survey:

<u>Name</u>	<u>Occupation</u>	<u>Address</u>	<u>Dates</u>
A.R. Dodds	Geophysicist	1450 O'Connor Drive Toronto, 16. Ontario	July 17 & 18, 1965 Sept. 7 - 9, 1965
B. T. Howes	Geophysical Operator	-do-	July 17 & 18, 1965
P.O. Hasley	"	Conwest Explora- tion Co. Ltd.	-do-
A. Groat	Helper	-do-	-do-
J. Dennis	Helper	-do-	-do-
Miss J. Wilson	Drafting	1450 O'Connor Drive, Toronto 16, Ontario	Sept. 29, 30, 1965
Miss E. Reid	Typing	-do-	Oct. 1, 1965

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 701 MAP #3



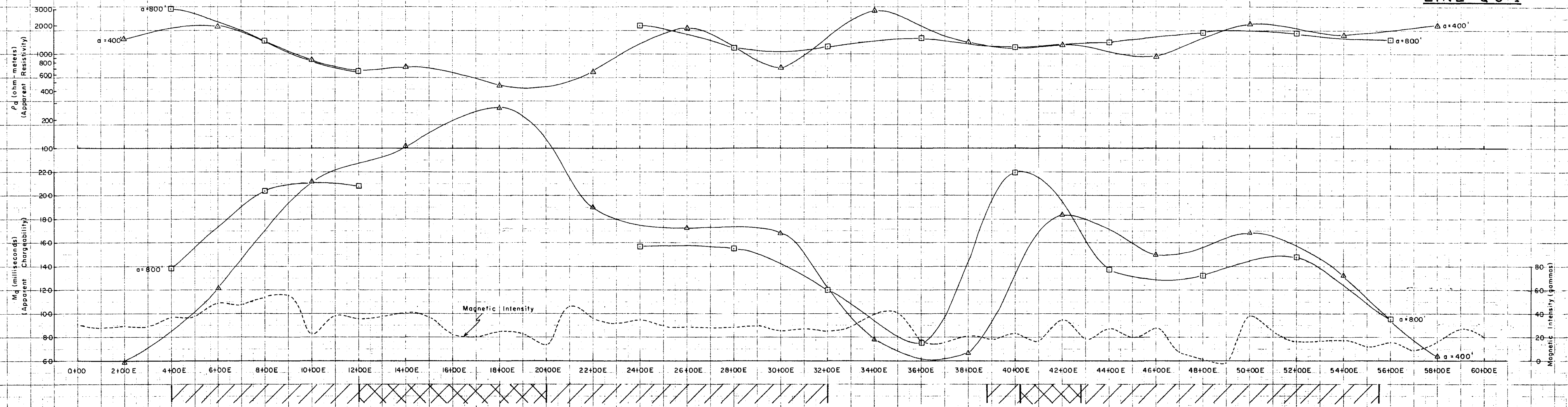
CONWEST EXPLORATION COMPANY LIMITED

SURVEY LINE LOCATION MAP

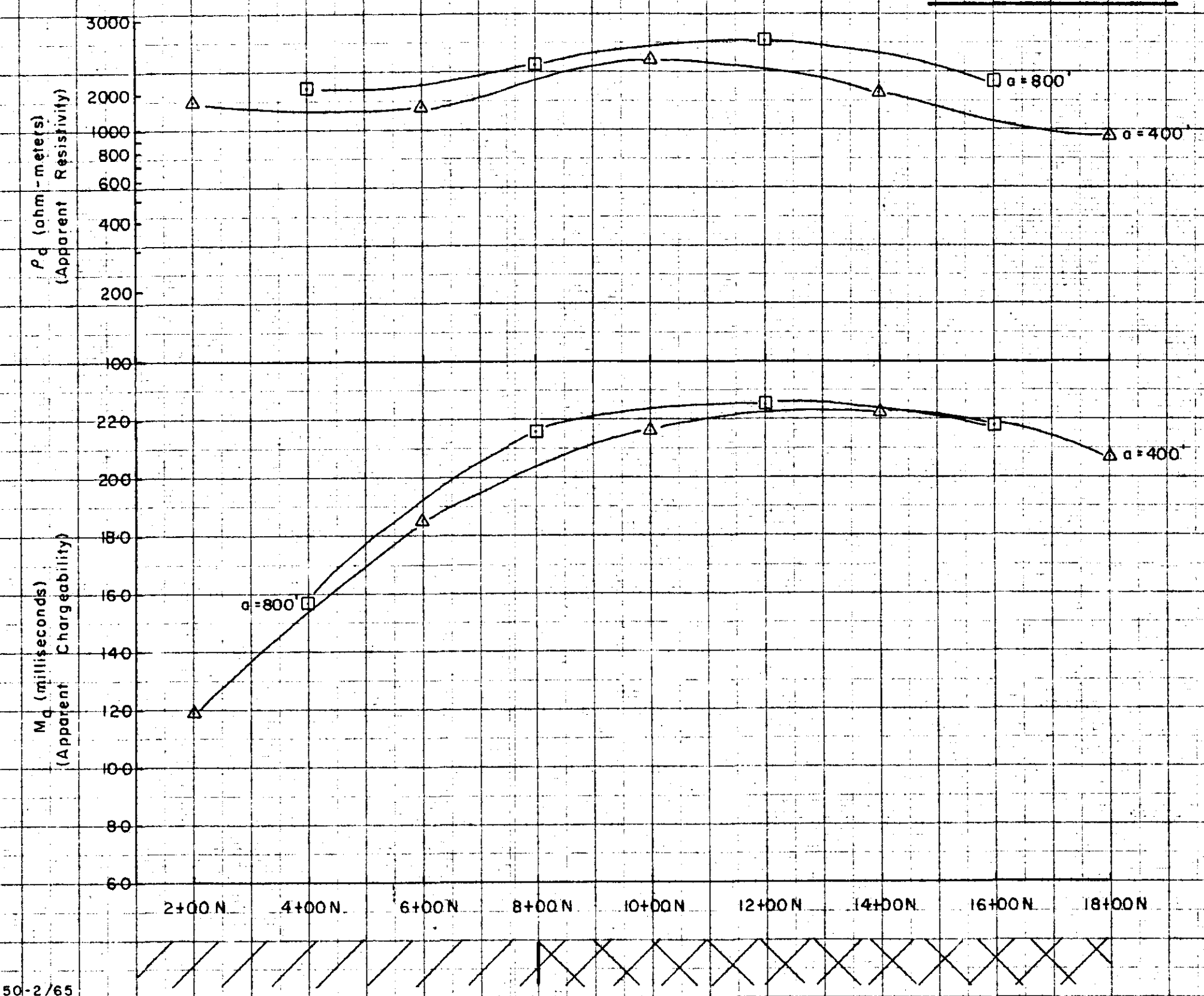
QC CLAIMS, KINASKIN LAKE, B.C.

1 inch = 800 feet

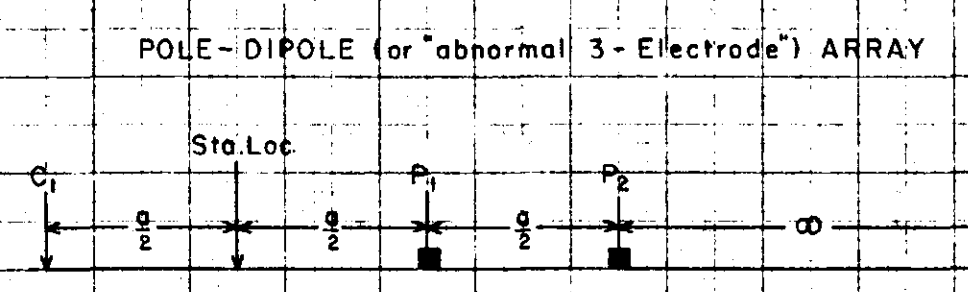
LINE QC 1



LINE QC 2



INTERPRETATION LEGEND
 XXXX Zone of major interest
 // Zone of interest



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 701 MAP #1

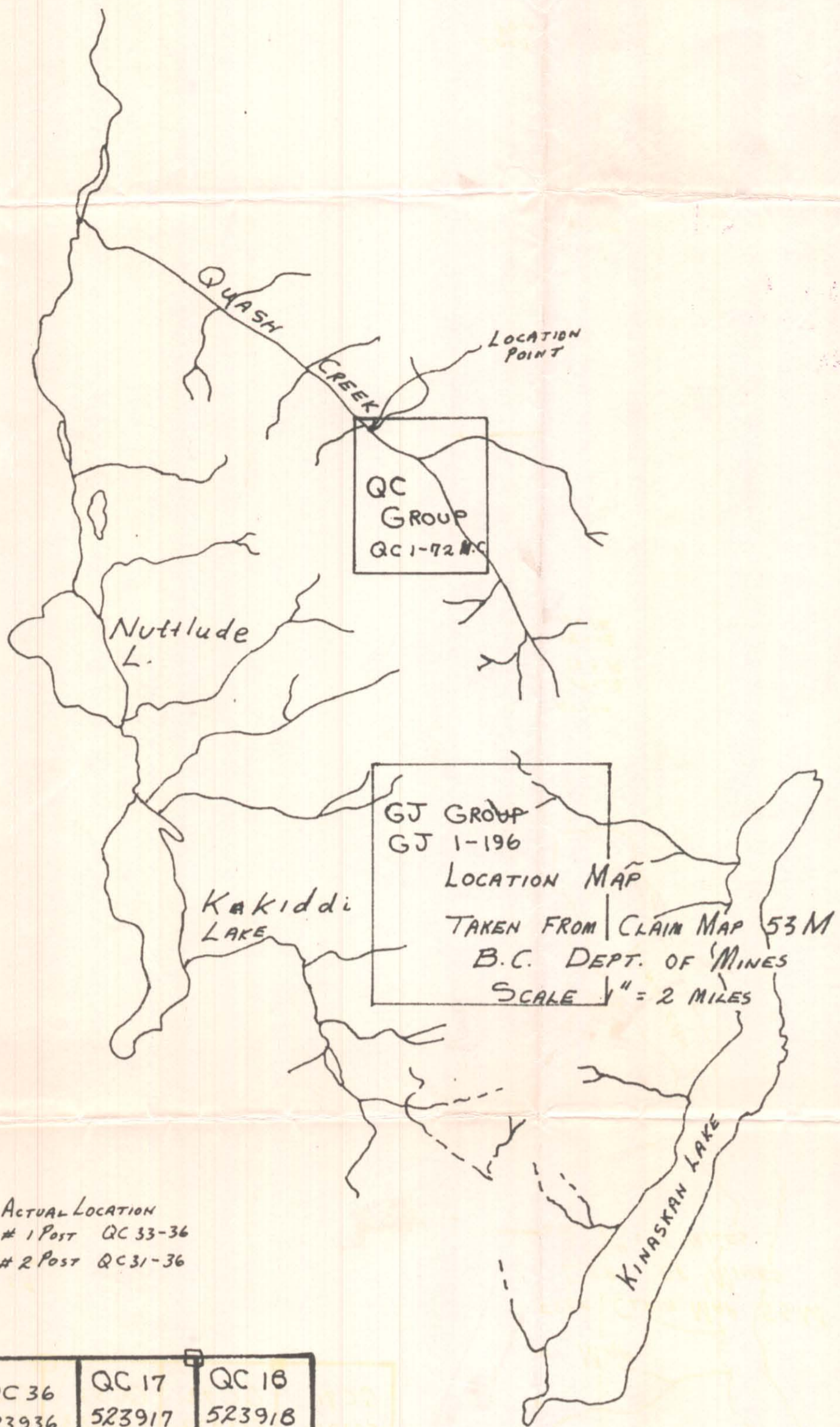
CONWEST EXPLORATION COMPANY LIMITED
 INDUCED POLARIZATION AND GROUND MAGNETIC SURVEY
 KINASKIN LAKE, B.C.
 QC CLAIMS
 PROFILES OF
 APPARENT CHARGEABILITY, APPARENT RESISTIVITY,
 & VERTICAL MAGNETIC INTENSITY
 WITH INTERPRETATION

701

HORIZONTAL SCALE: 1 inch = 200 feet

HUNTEC LIMITED, Toronto, Canada - September, 1965

Andrew R. Dods
 Andrew R. Dods, B.Sc., Geophysicist



QC 71 523971	QC 72 523972	QC 53 523953	QC 54 523954	QC 35 523935	QC 36 523936	QC 17 523917	QC 18 523918
QC 69 69	QC 70 70	QC 51 51	QC 52 52	QC 33 33	QC 34 34	QC 15 15	QC 16 16
QC 67 67	QC 68 68	QC 49 49	QC 50 50	QC 31 31	QC 32 32	QC 13 13	QC 14 14
QC 65 65	QC 66 66	QC 47 47	QC 48 48	QC 29 29	QC 30 30	QC 11 11	QC 12 12
QC 63 63	QC 64 64	QC 45 45	QC 46 46	QC 27 27	QC 28 28	QC 9 09	QC 10 10
QC 61 61	QC 62 62	QC 43 43	QC 44 44	QC 25 25	QC 26 26	QC 7 07	QC 8 08
QC 59 59	QC 60 60	QC 41 41	QC 42 42	QC 23 23	QC 24 24	QC 5 05	QC 6 06
QC 57 57	QC 58 58	QC 39 39	QC 40 40	QC 21 21	QC 22 22	QC 3 03	QC 4 04
QC 55 523955	QC 56 523956	QC 37 523937	QC 38 523938	QC 19 523919	QC 20 523920	QC 1 523901	QC 2 523902

LOCATION THIS POINT SEE LOCATION SKETCH

ASSESSMENT WORK TO BE APPLIED TO BLOCK OUTLINED

INTERSECTION I.P. LINES QC 1 & QC 2

ACTUAL LOCATION #1 POST QC 55-58 #2 POST QC 55-56

ACTUAL LOCATION #1 POST QC 53-54 #2 POST QC 51-54

ACTUAL LOCATION #1 POST QC 33-36 #2 POST QC 31-36

ACTUAL LOCATION #1 POSTS QC 17-18 13-14 #2 POSTS QC 15-18 11-12

ACTUAL LOCATION #1 POST QC 9-12 #2 POST QC 7-10

ACTUAL LOCATION #1 POST QC 37-42 #2 POST 37-40

ACTUAL LOCATION #1 POST QC 19-22 #2 POST QC 19-20

Department of Mines and Petroleum Resources
 A STATEMENT REPORT
 NO. 701 #2

■ CLAIM POSTS IN PLACE
 □ WITNESS POST

LOCATION MAP - QC GROUP.
 I.P. Lines relative to Claim Boundaries.
 To accompany
 A Geophysical Report on
 An Induced Polarization and Magnetometer Survey
 Kinaskan Lake, British Columbia.
 (57°, 130° N.E.)
 For
 Conwest Exploration Company, Limited.
 By: A. R. Dodds, B.Sc., Geophysicist.

QC GROUP
 QUASH CREEK
 KINASKAN LAKE AREA, B.C.
 SCALE 1" : 1500'

CONWEST EXPLORATION
 AUG. 6, 1964

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