COMINCO LTD.

EXPLORATION

N.T.S.: 92-O/5E

WESTERN DISTRICT

July 8, 1982

REPORT ON

INDUCED POLARIZATION AND MAGNETIC SURVEYS

ON THE FISH LAKE PROPERTY

TASEKO LAKES AREA

CLINTON M.D. B.C.

Latitude : 51°29'N

Longitude : 123°37'W

Claims Covered : K53, K66, K68, FL4,
TK9, 21, 22, 23, 24, 25, 26
KAREN, BARB

Rec. Nos. : 29417, 29430,
29432, 404, 30889, 30901-30906,
1149, 1150

Owners : Taseko Mines NPL
Bethlehem Copper Corporation
Cominco Ltd.

Operator : Cominco Ltd.

Survey Dates : May 20 - June 3, 1982

JULY 1982

Report by : J. Klein

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TASEKO LAKES AREA, CLINTON M.D. B.C.

INTRODUCTION

During the period May 20 - June 3, 1982, a COMINCO Ltd. geophysical crew under the direction of Ingo Jackisch completed an induced polarization/ resistivity and magnetic survey over parts of the Fish Lake property. A total of 12 km of I.P. and 6 km of magnetic data was collected.

The objective of the geophysical surveys was to map the existence of any polarizable materials (sulphides, magnetite, graphite, etc) that may be present in the grid area.

This report describes the procedures used for the survey, presents the data and briefly discusses the results.

LOCATION AND ACCESS

The Fish Lake property is located 250 kilometers north of Vancouver and 128 kilometers southwest of Williams Lake, B.C. (see Plate 1). The grid area is centered some 3 km N.W. of Fish Lake. The area is part of the Chilcotin Plateau, and topography is subdued; elevations range from 1450 to 1600 meters above sea level.

Access is by paved highway (#20) from Williams Lake, west to Hanceville and from there, southwest along a well maintained gravel road to the Davidson bridge over the Taseko River. From the bridge a rough road covers the last 16 kilometers to Fish Lake. Total road distance from Williams Lake is 192 kilometers and the travelling time by road is about five hours.

PROPERTY AND OWNERSHIP

A total of 365 units are presently held under agreement between Taseko Mines and Bethlehem Copper Corporation.

In 1981, 137 units were added west and south of the existing claims. Claim posts in the central part of the property were surveyed in late 1980 and the six internal fractions found were staked in early 1981. Claim locations for the west part of the property are illustrated on Plate 2.

Management of exploration on the Fish Lake property was assumed by COMINCO as of 1st May 1981.

GEOPHYSICAL SURVEY

Induced Polarization/Resistivity

Two Huntec MK IV I.P. receivers in combination with a Huntec 7.5 kw motor generator/transmitter were used on the FISH LAKE survey. Readings were taken in the time domain using a 2 second current ON/2 second current OFF alternating square wave signal. A delay time of 120 milliseconds and total integration time of from 120 msecs. to 1020 msecs. was used to measure the I.P. effect. Chargeability values are given in units of milliseconds.

The survey was of a semi detail nature with survey lines 200 meters apart. A pole-dipole electrode array was used with an "a" spacing of 50 meters and "n" separations of 1, 2, 3 and 4. The current electrode was kept to the east of the potential dipole.

The apparent resistivity values are given in units of ohm meters and were calculated from the relation:

$$\text{apparent resistivity} = (V/I) \cdot K,$$

where V is the voltage across the measuring dipole during the current on period (I), and K is a geometrical factor dependent on the "a" spacing and "n" separation.

Magnetics

Scintrex MP-2 total field proton precession magnetometers were used for the magnetic survey. Corrections for drift were made by checking back at arbitrarily chosen base stations at regular intervals. Drifts were assumed linear with time. Station interval was 25 m.

DISCUSSION OF RESULTS

The induced polarization survey results are plotted in pseudosection format on accompanying Plates 226-82-8 to 11. The chargeability response has been categorized on the sections in the following manner:-


strong I.P. high (> 45 msecs. at near separation)


moderate I.P. high (> 35-45 msecs. at near separation)


weak I.P. high (> 25-35 msecs. at near separation)

> 30 msecs. at further separations

The magnetic results (Lines 96N - 102N only) are shown on Plate 226-82-3 on a scale of 1:5,000 and a contour interval of 250 gammas. Base level is 57,000 gammas.

The chargeability results show typical background values for most parts of the survey lines. These values range from 5-7 msec. for the near separations to 7-10 msecs. for the deeper ones. A relatively strong chargeability anomaly is visible near the east end of Lines 98N - 106N. This feature appears to plunge westward. The highest values are just below 50 msecs. This could represent several percent of disseminated sulphides.

The resistivity values range from less than 100 ohm meters to over 1000 ohm meters. The values, in general, increase eastward with higher resistivites correlating with the chargeability anomaly.

The magnetic results show a sharp sineous-shaped gradient near the west end of the lines, possibly reflecting the edge of the basalts present in this area. The local magnetic high along Lines 96N and 98N near Station 86E might also be caused by a basalt remnant.

CONCLUSIONS

During the period May 20 - June 3, 1982, eight lines of multiseparation time domain induced polarization and four lines of magnetics were surveyed on portions of the FISH LAKE property.

The data revealed that near the east ends of most of the lines chargeable material is present.

Subject to a geological and geochemical assessment, further work to determine the causative source appears to be warranted.

Report by: _____
J. Klein
Chief Geophysicist

Approved for Release: _____
for G. Harden
Manager, Exploration
Western District

JK/jel

Distribution:

Mining Recorder	(2)
Western District	(1)
Geophysics Files	(2)
Administration	(1)
Fish Lake Project File	(1)

APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT

AND IN THE MATTER OF A GEOPHYSICAL PROGRAM

CARRIED OUT ON PORTIONS OF THE K53, K66, K68, FL4, TK9, 21 - 26 INCL., KAREN and BARB CLAIMS

ON THE FISH LAKE PROPERTY

LOCATED IN THE TASEKO LAKES AREA, CLINTON MINING DIVISION, B.C.

OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 92-O/5E

S T A T E M E N T

I, JAN KLEIN, OF THE CORPORATION OF RICHMOND, 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 hereinafter depose;

2) THAT the annexed hereto and marked as "Appendix II" to this statement is a true copy of expenditures incurred on geophysical survey on the FISH LAKE Property;

3) THAT the said expenditures were incurred for the purpose of mineral exploration of the above-noted claims between the 20th day of May and the 3rd day of June, 1982.

Signed: Jan Klein

J. Klein
Chief Geophysicist

July 8, 1982

APPENDIX II

STATEMENT OF EXPENDITURES

FISH LAKE

INDUCED POLARIZATION AND MAGNETIC SURVEYS

I.P. Survey	12 km @ $ 980.32	$ 11,763.84
Magnetic Survey	6 km @ $ 100.00	600.00
Linecutting	12 km @ $ 205.00	2,460.00
TOTAL EXPENDITURES		$ 14,823.84

APPENDIX III

C E R T I F I C A T I O N

I, JAN KLEIN, of 4371 Coventry Drive, in the Corporation of Richmond, in the Province of British Columbia, do hereby certify:-

1) THAT I graduated from the Technological University of Delft Netherlands in 1965 with a M.Sc. in Geophysics;

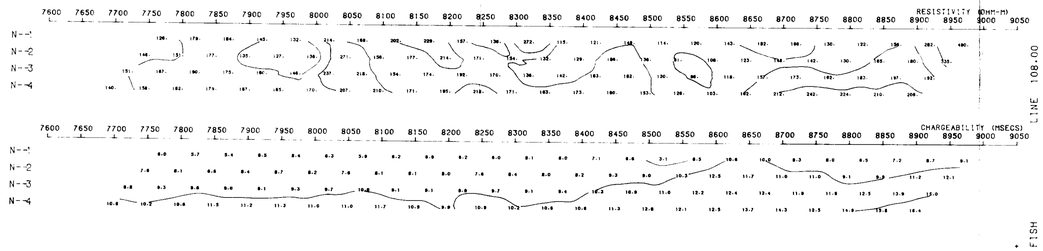
2) THAT I am a member of the Association of Professional Engineers of the Province of British Columbia, the Society of Exploration Geophysicists of America, and British Columbia Geophysical Society;

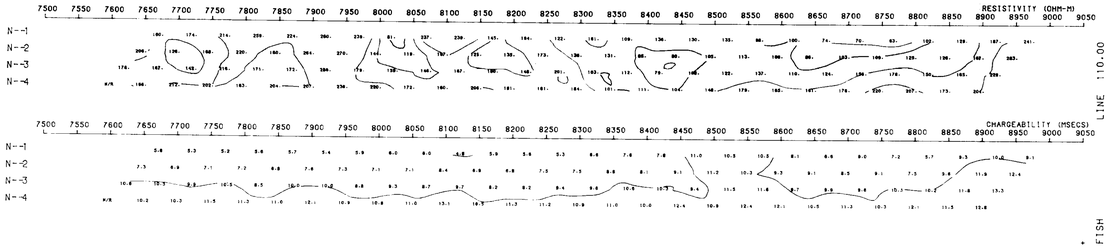
3) THAT I have been practising my profession for the past seventeen years.

Signed: Jan Klein

J. Klein, M.Sc., P.Eng.
Chief Geophysicist

July 8, 1982



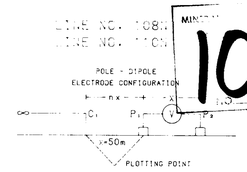


NTS 92-O-5E DWG NO 226-82-11

COMINCO LTD.
FISH LAKE PROPERTY
CLINTON M.D., B.C.

LINE NO. 108N
LINE NO. 110N

POLE - DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

SCALE 1:4000

CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED LINE 108N MAY 26,82
LINE 110N MAY 26,82

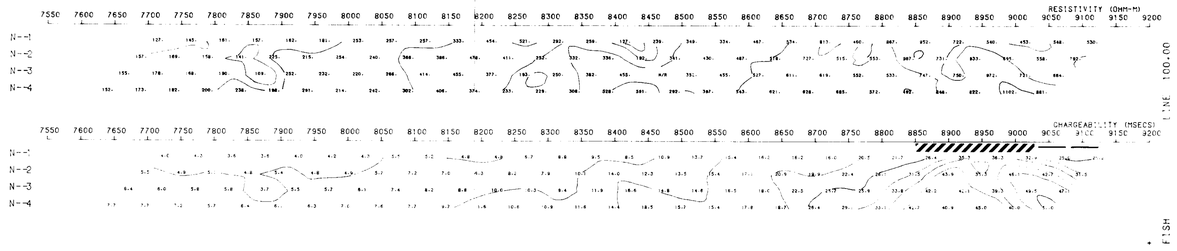
CONTOUR INTERVALS :
APP RES = 1:1.5:2:3:5:7.5:10
APP CHARG = 10 MSEC.

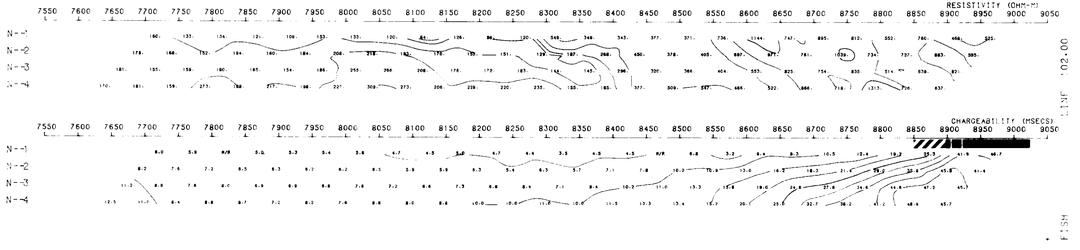
APPROVED

DATE JULY 16, 82

I.P. (DOED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD. EXPLORATION DIVISION

LINE 110N
LINE 108N





NTS 92-O-5E DWG NO 226-82-9

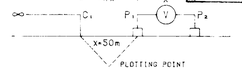
COMINCO LTD.

FISH LAKE PROPERTY

CLINTON M.D., B.C.

LINE NO. 100N
LINE NO. 102N

POLE - DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

SCALE 1:4000

CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED: LINE 100N MAY 29,82
LINE 102N MAY 28,82

CONTOUR INTERVALS :
APP RES - 1,1.5,2,3,5,7.5,10
APP CHARG - 10 MSEC.

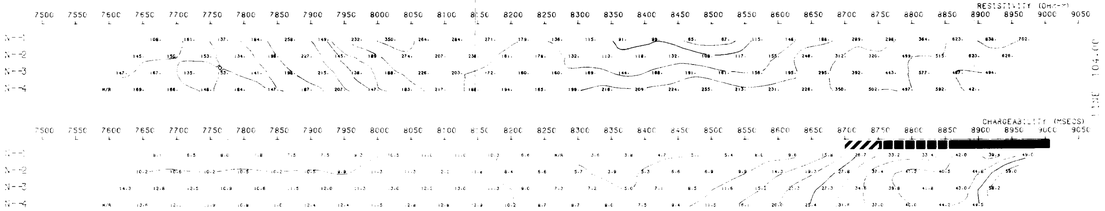
APPROVED _____

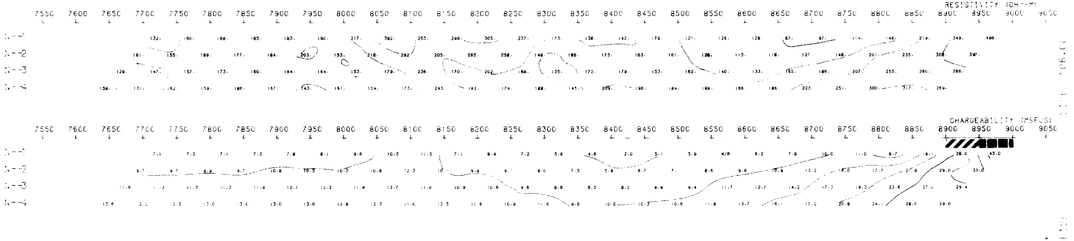
DATE JULY 16/82

TRANSMITTER - HUNTEC 7.5 KW
RECEIVER - HUNTEC MK4

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD. EXPLORATION DIVISION

LINE 102 N
LINE 100 N





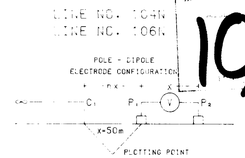
NTS 92-O-5E DWG NO 226-82-10

COMINCO LTD.
FISH LAKE PROPERTY
CLINTON M.D., B.C.

LINE NO. 104N
LINE NO. 106N

1965

POLE - DIPOLE
ELECTRODE CONFIGURATION



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

SCALE 1:4000

CHARGEABILITY (IP) INTERPRETATION

- STRONG CHARGEABILITY HIGH
- MODERATE CHARGEABILITY HIGH
- WEAK CHARGEABILITY HIGH
- IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED LINE 104N MAY 28/82
LINE 106N MAY 27/82

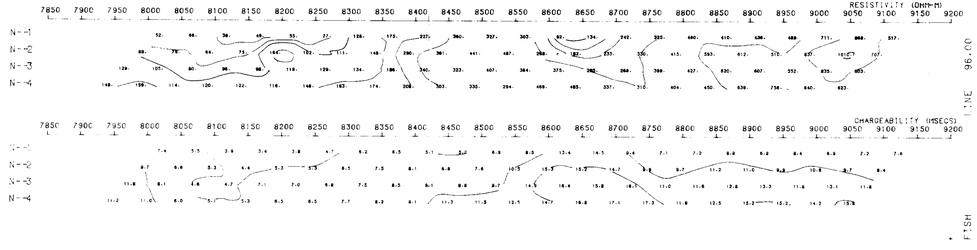
CONTOUR INTERVALS :
APP RES - (1),1.5,2,3,5,7.5,10
APP CHARG - 10 MSEC.

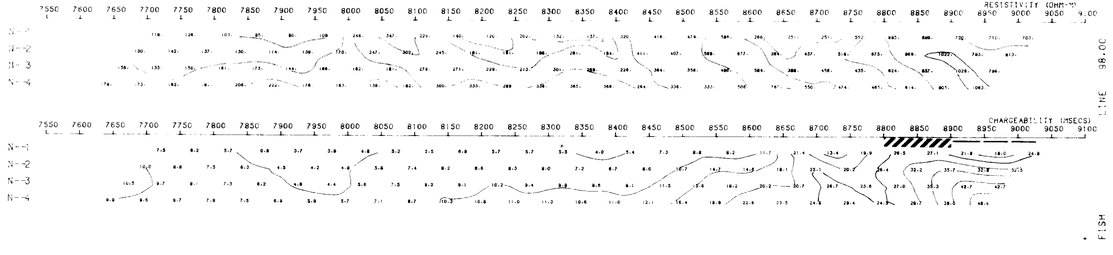
APPROVED

DATE JULY 16/82

TRANSMITTER - HUNTEC 7.5 KW
RECEIVER - HUNTEC MK4

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD. EXPLORATION DIVISION

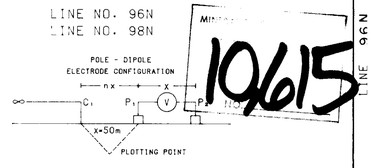




NTS 92-O-5E DWG NO 226-82-8

COMINCO LTD.
FISH LAKE PROPERTY
CLINTON M.D.,B.C.

LINE NO. 96N
LINE NO. 98N



CURRENT ELECTRODE EAST OF POTENTIAL DIPOLE

SCALE 1:4000

CHARGEABILITY (IP) INTERPRETATION

STRONG CHARGEABILITY HIGH
MODERATE CHARGEABILITY HIGH
WEAK CHARGEABILITY HIGH
IP HIGH AT FURTHER SEPARATIONS

DATE SURVEYED LINE 96N MAY 30/82
LINE 98N MAY 29/82

CONTOUR INTERVALS :
APP RES - 1.1.5.2.3.5.7.5.10
APP CHARG - 10 MSEC.

APPROVED _____

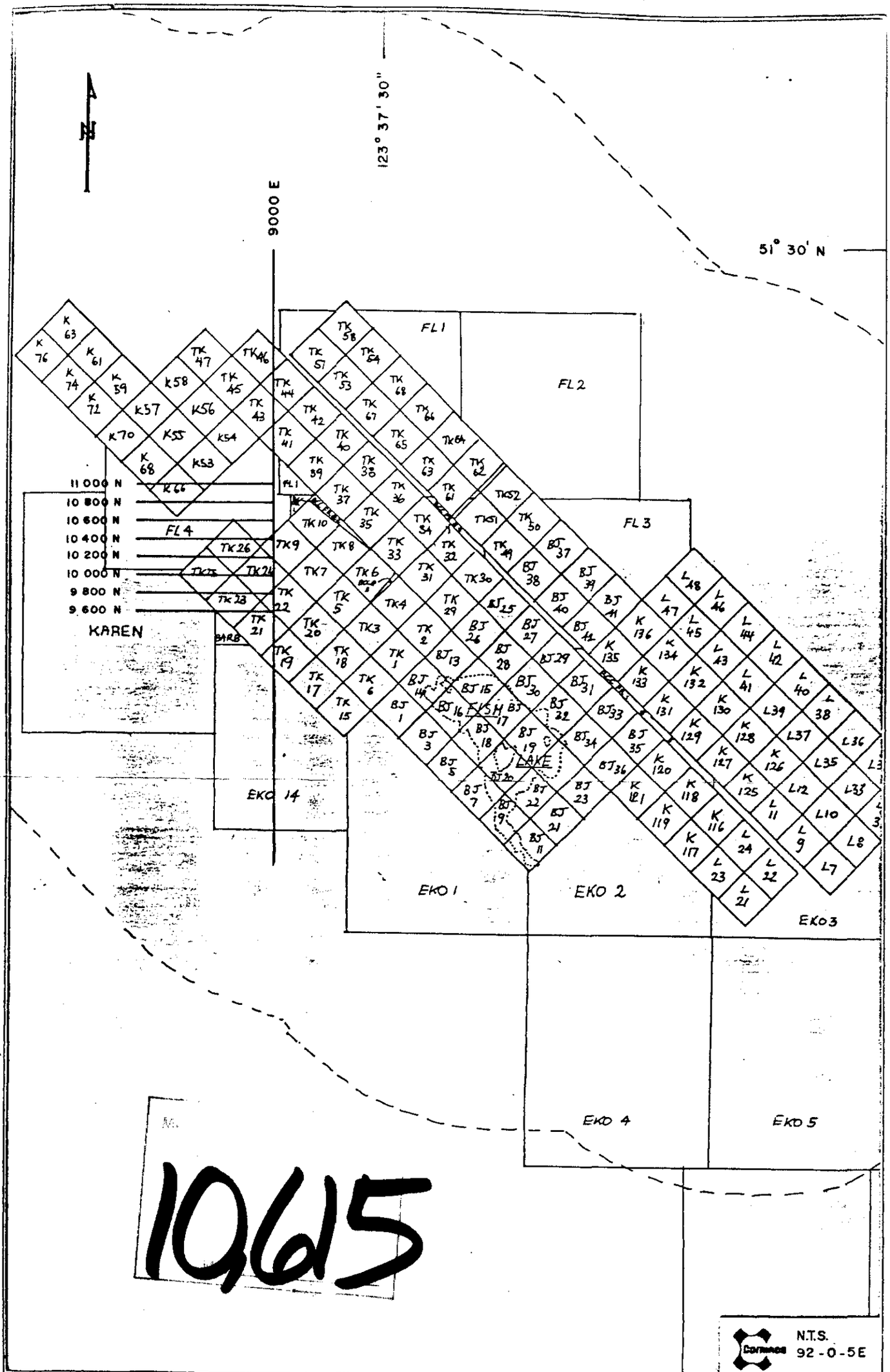
DATE JULY 16/82

TRANSMITTER - HUNTEC 7.5 KW
RECEIVER - HUNTEC MK4

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD. EXPLORATION DIVISION

10615

LINE 96N
LINE 98N



N.T.S. 92-O-5E

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

FISH LAKE
CLAIM LOCATION, INDUCED POLARIZATION and MAGNETIC SURVEY GRID

CLINTON M.D., B.C.

Scale:	Date:	Plate
1 : 50,000	JUNE 15 / 82	226-82-2

N

10 200 N

10 000 N

9 800 N

9 600 N

7 500 E

8 500 E

1575

1575

1575

INSTRUMENT SCINTREX MP2 PROTON PRECESSION MAGNETOMETER

1982 GEOPHYSICS GROUND GRID

BASE 52,000 GAMMAS

CONTOUR INTERVAL 250 GAMMAS

100 50 0 100 200 300

METRES

10615

NO.

FISH LAKE PROJECT

COMINCO

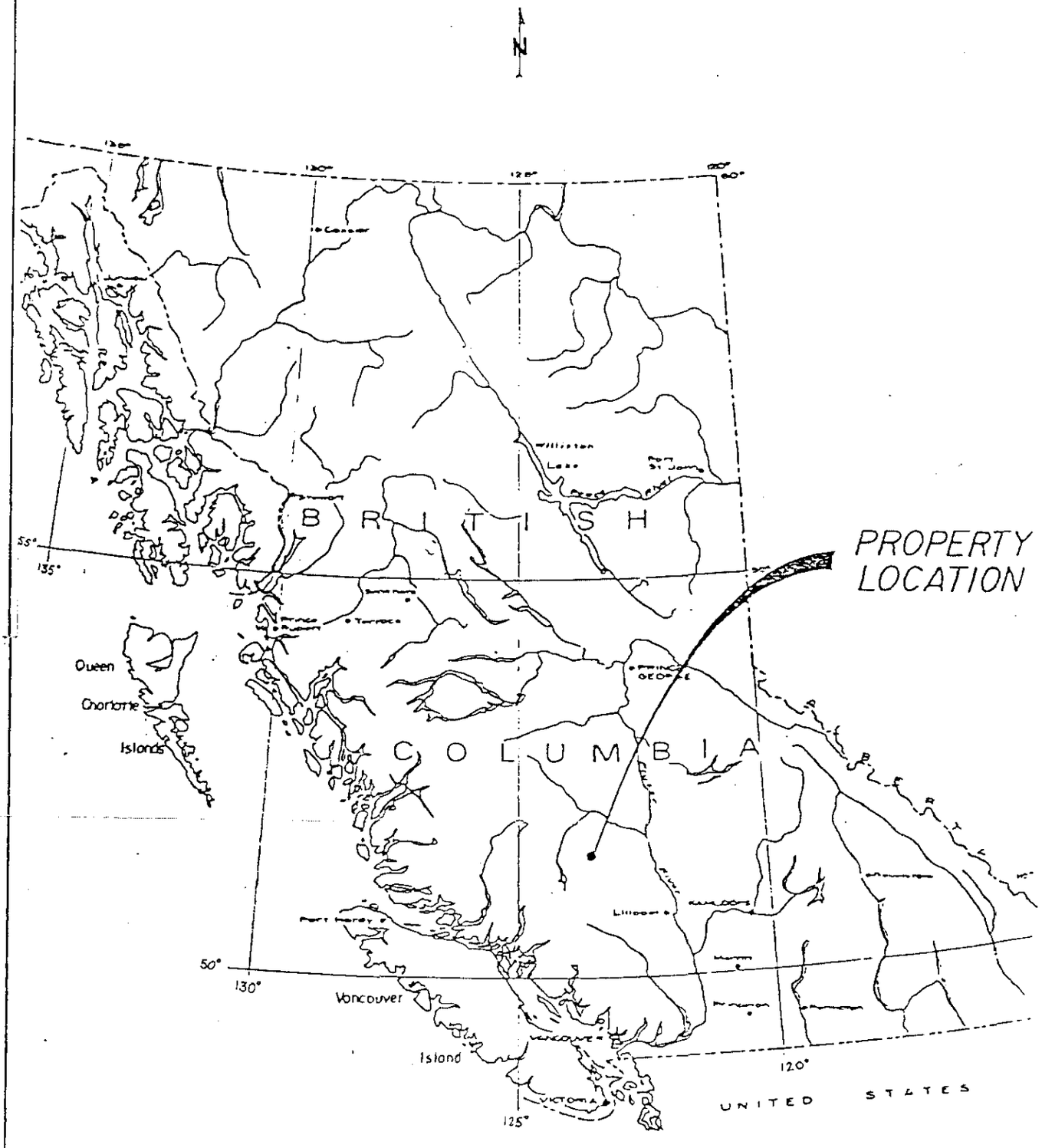
NTS 92 O/5 E

Drawn by	Traced by
Revised by Date	Revised by Date

MAGNETOMETER SURVEY

CLINTON M.D., B.C.

Scale 1:5000 Date JULY 1982 Plate 226-82-3



SCALE
Km 100 50 0 100 200 300 400 Km
Miles 100 50 0 100 200

Cominco

N.T.S.
92-0-5E

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

FISH LAKE PROPERTY
LOCATION PLAN
CLINTON M.D., B.C.

Scale:	Date: JUNE 15 / 82	Plate: 226-82-1

BCIL-2187-C

210-0610