COMINCO LTD.

EXPLORATION

NTS: 115P 14

GEOPHYSICAL SURVEY

ON THE

NEL GROUP

Clear Creek Area, Mayo M.D., Yukon

LATITUDE: 63°49' N

LONGITUDE: 137°10' W

Work Performed: Aug. 11-30, 1980

Claims Covered:

NEL 18-22, 34-36

STERLING 1,2,5,9,10

28 NOVEMBER 1980

INGO JACKISCH
This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $4,200.

[Signature]
Resident Geologist or Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

[Signature]
Supervising Mining Recorder

[Signature]
Commissioner of Yukon Territory
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ATTACHMENTS

Plate 187-80-1 Location Map
Plate 187-80-2 Claim and Grid Map
Plate 187-80-3 Plan of chargeability at n=1
Plate 187-80-4 Plan of resistivity at n=1
Plate 187-80-5 to 22 Pseudo sections of resistivity and chargeability from lines 10,000N to 11,700N

* * * * *
INTRODUCTION

A five man Cominco geophysical crew completed an 18.9 km induced polarization survey on the Nel Group from Aug. 11-29.

The exploration objective was to use I.P. to define possible sources of geochemical Sn anomalies. The cassiterite mineralization is believed to be associated with pyritized quartz plugs and dykes, which should respond to the IP method.

This report describes the procedure and results of the I.P. survey completed on the Nel Group.

LOCATION AND ACCESS

The Nel Group is located approximately 35 kms northeast of McQuesten, Yukon, and is within 12 km of a road. The closest point of this road to the property can be reached by turning east off the Klondike highway 30 kms up the road from McQuesten (heading towards Dawson City). This turnoff by Barlow Lake runs through a department of highways gravel pit. Approximately 20 kms from the highway the winding single lane dirt road reaches Clear Creek, where the left fork of the road heading up the stream must be taken. After another 5 kms and numerous creek crossings one reaches the beginning of a long uphill ascent, just past Nel's Placer Claim. A large clearing at the bottom of this hill is the closest point of the road to the Nel Group. A helicopter from Mayo or Dawson City is then required for the last 12 kms.

GEOPHYSICAL SURVEYS

Induced Polarization (I.P.)

A Huntec Mark III receiver was used in conjunction with a Phoenix IPTI 2.5 kw transmitter and generator. Resistivity and chargeability readings were taken for 4 separations (ie. n=1,2,3 and 4) which are presented in
pseudo-section form on plates 187-80-5 through 187-80-22. The anomalies on these plates have been classified as follows:

**Chargeability**

- 40-60 msec. on n=1,2 moderate
- >60 msec. on n=1,2 strong
- >40 msec. on n=3,4

**Resistivity**

- <500 $\Omega$meters at n=1,2

The lines were surveyed 100 metres apart at a station interval of 50 meters. Chargeability and resistivity values for n=1 are presented in plan form on plates 187-80-3 and 187-80-4. Anomalies indicated in pseudo-section are also included in the chargeability plan to incorporate anomalies at depth with what is plotted for n=1.

Mention should also be made to the problem of transmitting good, steady currents, especially in the areas above tree line where abundant talus and scree occurred. Tin foil electrodes and plenty of salt water were used for current stakes, in trying to improve on currents which were sometimes below 0.1 amps.

**Description of Results**

Three anomalies stand out which have high chargeabilities coincident with low resistivity. They have been labelled A, B, & C on plates 187-80-3 and 4.

Anomaly A rises quickly from background to a plateau having considerable width, extending almost the full length of the last few southern lines. High chargeabilities of about 2 to 3 times background are maintained in conjunction with low resistivities. Chargeabilities vary within this anomaly to give four distinctive peaks more or less symmetrically bisected by the creek. The resistivity low, on the other hand, is limited to the area on the east side of the creek. This zone remains open to the south.

Anomaly B, to the north, is very narrow and strikes sub-parallel to line 11,500N. The chargeabilities form a very sharp, strong high at the baseline, where the resistivities also take a sharp dip with respect to their surroundings. Significantly higher resistivities to the north of this anomaly point to the possibility of a change in lithology. This zone remains open to the east and west.

Anomaly C, centered on line 11,300N, station 4800E, is associated with disseminated pyrite found nearby. The chargeability high is not quite as large as the previous 2 anomalies discussed, but it is still greater than double the background values. The resistivity over this small, sharp anomaly is also very low.
Two eastern extensions were surveyed on lines 11,100N and 11,200N, where a previous McPhar I.P. survey had spotted metal factor anomalies. The present survey encountered an area of lower resistivity (which could account for a metal factor anomaly), but no coincident chargeability high.

CONCLUSIONS

The I.P. survey has discovered 3 anomalous zones having chargeabilities considerably higher than background. They are associated with low resistivity. Anomaly A to the south has a wide, plateau-like chargeability high. Anomaly B to the north is a long, narrow zone which is close to and possibly associated with anomaly C centered on line 11,300N, station 4800E.

Respectfully submitted by: Ingo Jackisch
Ingo Jackisch
Geophysicist

Approved for release by: G. Harden
G. Harden
Manager,
Western District

Distribution

Mining Recorder (2)
Western District (1)
Geophysics File (1)
STATUTORY DECLARATION

I, ROBIN LAWSON WOODS, of the District of North Vancouver, in the Province of British Columbia, DO SOLEMNLY DECLARE THAT:

1. I am the Supervisor, Exploration and Foreign Accounting for Cominco Ltd., 2300 - 200 Granville Street, Vancouver, British Columbia, and, as such have knowledge of the facts deposed to herein.

2. Attached to this Statutory Declaration, as Schedule A, is a statement of expenditures indicating the expenditures charged by Cominco Ltd. to the Nel Group account for the period January 1, 1980 to September 30, 1980.

3. The statement of expenditures referred to in paragraph 2 is true and accurate to the best of my knowledge, information and belief.

4. This Statutory Declaration is made in support of an application for a Certificate of Work pursuant to the Yukon Quartz Mining Act.

AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

DECLARED before me at the City of Vancouver in the Province of British Columbia, this 9th day of October 1980.

Robin Lawson Woods

A Notary Public in and for the Province of British Columbia
This is Schedule A referred to in the Statutory Declaration of ROBIN LAWSON WOODS declared before me this 9th day of October 1980

A Notary Public in and for the Province of British Columbia

STATEMENT OF EXPENDITURES

NEL GROUP

MAYO M.D., YUKON

JANUARY 1, 1980 TO SEPTEMBER 30, 1980

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<th>Item</th>
<th>Cost</th>
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<td>Geophysics</td>
<td>14,116</td>
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<td>Transportation including mobilization</td>
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<td>Camp costs</td>
<td>6,640</td>
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<td>Administrative services</td>
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<td><strong>Total</strong></td>
<td><strong>$48,343</strong></td>
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Cominco Ltd.
Vancouver Office
October 8, 1980

Copies: Mining Recorder (2)
Manager, Administration Exploration File (2)

Robin Lawson Woods
Supervisor, Exploration & Foreign Accounting
APPENDIX I

CERTIFICATION

I, INGO JACKISCH, OF 424 SOMERSET STREET, IN THE CITY OF VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, DO HEREBY CERTIFY:

(1) THAT I graduated from the University of British Columbia in 1975 with a B.Sc in geophysics;

(2) THAT I am registered with the Association of Professional Engineers of British Columbia as an engineering pupil, and am a member of the British Columbia Geophysical Society;

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

Signed: Ingo Jackisch

Geophysicist

28 November 1980
22 January 1981

Dear Sir:

Re: Assessment Report
Geophysical - NEL Claims

I have enclosed a claim map of the NEL Claim as requested in your letter of January 8th, 1981. Attached is a list of the names and tag numbers for both the NEL and STERLING Claims. The NEL Claim is 100% Cominco owned; the STERLING Claim is owned by Silver Standard. I trust this information will be sufficient to adequately locate the claims and geophysical grid.

Also included is a breakdown of costs for crew salaries, expenses and rental of geophysical equipment. This adds up to the amount indicated in the assessment report as follows:

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<th>Description</th>
<th>Amount</th>
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<td>General Roll</td>
<td>$966</td>
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<td>Expense Accounts</td>
<td>$1,837</td>
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<tr>
<td>Internal</td>
<td>$11,313</td>
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</table>

Total: $14,116

The names and addresses of the survey personnel are: Ingo Jackisch, 424 Somerset Street, North Vancouver; Glenn Nolan, 5411 Larch Street, Vancouver; Gail Wetmore, 202 - 6566 Marlborough Avenue, Burnaby; Brian Price, 2536 W. 7th Avenue, Vancouver; and Carrie Frechette, Winnipeg, Manitoba. I.J. and G.N. are on permanent staff, G.W. and B.P. were hired for the duration of the summer and C.F. was hired in Dawson City to help on the NEL survey only.

Any questions relating to geology should be covered by the geological report submitted to the Mayo M.D. office by Sandy Denton, Cominco Geologist stationed in Whitehorse and responsible for the NEL Claim.
Should you have any further queries about the I.P. survey, please feel free to contact Alan Scott or Ingo Jackisch at the above address (telephone no. - 604-682-0611).

Yours truly,

Ingo Jackisch

Ingo Jackisch
Geophysicist
Western District
NEL CLAIM

Statement of Expenditures
(Induced Polarization Survey)

1. Salaries

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<tr>
<th>Name</th>
<th>Position</th>
<th>Dates</th>
<th>Rate</th>
<th>Days</th>
<th>Amount</th>
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<td>J. Jackisch</td>
<td>Geophysicist</td>
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<td>G. Nolan</td>
<td>Technician</td>
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<td>G. Wetmore</td>
<td>Helper</td>
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<td>B. Price</td>
<td>Helper</td>
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<td>$83.00</td>
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<td>C. Frechette</td>
<td>Helper</td>
<td>August 11-30</td>
<td>$48.30/day</td>
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<td>966.00</td>
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Paid by general roll @ $48.30/day

Total Salaries: $8,886

2. Equipment Rentals

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<td>2.5 KW I.P. survey system</td>
<td>1,117.50</td>
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3. Operating Charges (towards drafting, report, supervision)

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<td>13 days I.P. survey @ $175/survey day</td>
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<td>3 days standby, 4 days travel</td>
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Total Operating Charges: $2,275

4. Miscellaneous Expenses

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<td>food, lodging, gas, consumables</td>
<td>$1,837.00</td>
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Total Miscellaneous Expenses: $1,837.00

Total Expenditures: $14,115.50
NEL GROUP (M.S. 14099)

Cominco Interest = 100%

On the West Fork of Fortymile Cr., 7 mi. WSW of Cominco's "SUNSHINE CREEK GROUP", Mayo M.D., Y.T.

Property: 23 Claims

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Silver Standard

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REVISED: June 9, 1980 - D.L.G.
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COMINCO LTD.
NEL GROUP
MAYO M.D., YUKON

LINE NO. 10600 N
POLE-DIPOLE ELECTRODE CONFIGURATION

APPROVED

TRANSMITTER - PHOENIX (FT)
RECEIVER - HUNTED WAP WPS-705

duced polarization and resistivity survey
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION
COMINCO LTD.
NEL GROUP
MAYO M.D., YUKON

LINE NO. 11401-N
POLY-DIPOLAR
ELECTRONIC CONFIGURATION

NO. LOCATED AT

10,900 M
4600X

PLANNING POINT

CURRENT ELECTRODE VOLTAGE OF POTENTIAL DIPOLE
AMMUNITION MINED PERIOD
MONITORING PERIOD
APPROVED
APPROVED
APPROVED

MEASURED VALUES
APPROVED
APPROVED
APPROVED

TRANSMITTER CAPA
RECEIVER HUNTER UNITS

INDUCED POLARIZATION AND RESISTIVITY SURVEY
SURVEYED BY COMINCO LTD., EXPLORATION DIVISION
COMINCO LTD.
NEL GROUP
MAYO M.D., YUKON

LINE NO 11,500N

POLY-D-POLY
ELECTRONIC CONFIGURATION

H-1
H-2
H-3
H-4

RESISTIVITY (OHM-M)

CHANGEABILITY (OBJECT)

N-1
N-2
N-3
N-4

LOCATION BY
10,000N

CURRENT ELECTRICAL RESISTIVITY SURVEY

COORDINATE SYSTEM

DATE SURVEYED: AUGUST 15, 1993

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