COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 82L-4W

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION AND MAGNETOMETER SURVEYS

DOBBIN PROPERTY

Esperon and Tadpole Lake Grids

North Lambly Creek area, B.C.,

Vernon Mining Division

LATITUDE: 50°01'N

LONGITUDE: 119046'W

Work performed: July 14-18, 21-26,28 - Aug. 7

On claims: TAD 1-3, ESPERON 5-8, 12, 14

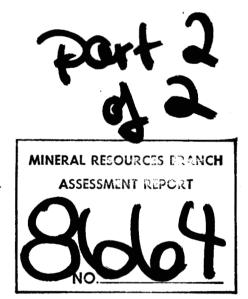


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ATTACHMENTS

Plate 177-80-1	Location Map
Plate 177-80-2	Claims and grid map - Esperon Grid
Plate 177-80-3	Claims and grid map - Tadpole Lake Grid
Plate 177-80-4-12	IP/resistivity pseudosections - Esperon Grid
Plate 177-80-13	Magnetic field contour plan, and IP anomaly plan; Esperon Grid
Plate 177-80-14,15	IP/resistivity pseudosections; Tadpole Lake Grid
Plate 177-80-16	IP contour plan (n=1); Tadpole Lake Grid

EXPLORATION NTS: 82L-4W

WESTERN DISTRICT 10 November 1980

GEOPHYSICAL REPORT

ON

INDUCED POLARIZATION AND MAGNETOMETER SURVEYS

DOBBIN PROPERTY

INTRODUCTION

During the period July 14 - Aug. 7, 1980, a Cominco geophysical crew completed 27.4 line kilometers of multiseparation induced polarization survey on the Dobbin property, 23.4 line kilometers on the Esperon grid and 4.0 line kilometers on the Tadpole Lake grid. Additionally, a total field magnetometer survey was conducted on the Esperon grid.

The Dobbin property is located some 27 kilometers west of Kelowna, B.C. The general location of the property is indicated on plate 177-80-1 and the location of the survey grids in relation to the claims on plates 2 (Tadpole Lake) and 3 (Esperon). The exploration target on the Dobbin property is the porphyry molybdenum type of deposit, and the objective of the IP survey was to define the extent of any sulphide systems detected in the survey area.

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

GEOPHYSICAL SURVEYS

A Huntec 7.5 kw IP motor generator transmitter in combination with two Scintrex IPR-8 receivers were used on the Dobbin surveys. Readings were taken in the time domain using a 2 second current on/2 second current off alternating square wave signal. The chargeability (IP) values plotted are those for the M232 window of from 650-1170 milliseconds following cessation of the current pulse. The units of measurement are expressed in millivolts/volt.

A pole dipole electrode array was used on the survey with an "a" spacing of 100 meters and "n" separations of 1, 2, and 3 (and also n=4 on some lines). The current electrode was kept to the east of the potential dipole on the Esperon grid and to the west on the Tadpole Lake grid.

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

resistivity = (V/I) • K

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

Magnetics

A Scintrex MP-2 total field proton precession magnetometer was used for the magnetics survey. Corrections for diurnal drift were made by reference to a Scintrex MBS-2 base station magnetometer.

DISCUSSION OF RESULTS

The chargeability and apparent resistivity results from the Esperon grid are presented in pseudo section format on accompanying plates 177-80-4 to 12. The Esperon survey was of a regional reconnaissance nature with lines spaced 400 meters apart. The objective was to locate any major sulphide systems that may be present in the survey area.

IP response on the Esperon grid was generally quite low, with values typically in the range of 3-5 mv/v. A somewhat lower scale for rating anomalies has been used to describe features on the Esperon Grid than on the Tadpole Lake Grid, namely:



weak IP high (>6 at n=1)
moderate IP high (>10 at n=1)
>6 at further separations

Weak anomalies (>6 mv/v) were detected on survey lines 33N to 57N and are indicated on the pseudo sections and on the magnetic field contour plan (plate 177-80-13). Moderate IP highs (>10 $\frac{\text{mv}}{\text{V}}$) were detected on line 4500N at 650W and on line 4100N at the baseline. The anomaly on line 4100N shows two distinct "pant leg type" limbs on either side of a low centered at 50 meters west of the baseline. Such a response is often indicative of a source too narrow for the electrode array and the actual anomaly may be centered at the location of the apparent low. Detail IP at a smaller spacing would clarify this.

The trend of these weak IP anomalies is indicated by the dashed lines and shaded area on plate 13. The shaded area shows areas of greater than 6 $\frac{m_V}{V}$, and may indicate an area of weakly increased volume percent sulphides.

Tadpole Lake Grid

The 1980 Tadpole Lake survey grid ties on to the south end of the Cominco 1978 Dobbin Mo IP survey grid. The 1978 survey work was done with an "a" spacing of 50 m (n=1,2,3,4) on lines 200 meters apart and the 1980

work with an "a" spacing of 100 m (n=1,2,3,4) on lines 200N (200 meters south of the southernmost 1978 survey line) and line 200S. The 1980 results are plotted in pseudo section format on plates 177-80-14 and 15, and the n=1 IP values are plotted in contour plan form on plate 177-80-16. The 1978 n=1 IP values are also shown on plate 16.

Chargeability anomalies detected on the Tadpole Lake survey were of much higher amplitude than on the Esperon grid. A very strong IP anomaly was detected in 1968 on the west side of the grid (86 mv/v on line 10N). A second area of strong response was detected on the easternmost side of the 1978 grid (48 mv/v on line 12N). The 1980 survey work indicates that these strong IP response zones extend to at least line 4S and that they may be joining into one very broad zone in the vicinity on line 4S. Geophysically, the overall appearance of the high IP high response zone is strongly suggestive of a pyrite halo containing several volume percent disseminated sulphides. Such a pattern would suggest that any weak IP highs within the central low IP response core, are prime targets for drill testing.

CONCLUSIONS

Portions of the Dobbin property were surveyed with time domain IP in the summer of 1980. The work was done on two separate grids, namely on the Esperon grid and the Tadpole Lake grid.

The Esperon survey was the larger of the two. This survey was of a reconnaissance nature using a 100 meter electrode spacing at separations of 1,2,3, and 4 on cross lines 400 meters apart. The IP response on this grid was generally quite low with background values typically in the 3-5 mv/v range. A somewhat lower scale was used to describe anomalous features on this grid than on the higher response Tadpole Lake grid. Weak anomalies on the Esperon were defined as >6 mv/v and moderate anomalies as >10 mv/v. A broad trend of weakly anomalous IP response is indicated on plate 13 and may indicate an area of weakly increased volume percent sulphides.

Two lines were surveyed on the Tadpole Lake grid. They extend the coverage to the south of a previous (1978) survey. Response on the 1980 Tadpole Lake grid was much stronger than on the Esperon Grid. (The central portion of the 1978 Tadpole Lake grid, however, gives values in the same general range as for the Esperon). The previous survey detected strong IP response on the west and east sides of the grid. The present survey suggests a closure of these two high response zones south of line 2S. The overall pattern of the IP is suggestive of a pyrite halo containing several volume percent disseminated sulphides.

Respectfully submitted:

A.R. Scott, Geophysicist

Endorsed for Release by:

ARS/skg

G. Harden, Manager, W.D.

Distribution Mining Recorder (2) Western District (1)

Vernon office (1) Geophysics file (1)

APPENDIX I

IN THE MATTER OF THE B.C. MINERAL ACT

AND IN THE MATTER OF A GEOPHYSICAL PROGRAMME

CARRIED OUT ON PORTIONS OF THE DOBBIN GROUP OF MINERAL CLAIMS

ON THE DOBBIN PROPERTY

LOCATED 27 KM WEST OF KELOWNA IN THE VERNON MINING DIVISION OF THE PROVINCE OF BRITISH COLUMBIA, MORE PARTICULARLY

N.T.S.: 82L-4W

STATEMENT

I, Alan R. Scott, of the City of Vancouver, in the Province of British Columbia, make oath and say:-

- 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 Dobbin Mineral claims;
- 3. THAT the said expenditures were incurred for the purpose of mineral exploration of the above noted claims between the 14th day of July and the 7th day of August, 1980.

Signed:

Alan R. Scott

Geophysicist

APPENDIX II

DOBBIN PROPERTY

Esperon and Tadpole Lake grids

Statement of Expenditures

(Induced polarization, magnetometer surveys)

	CALADIEC			
1.	SALARIES			
	S. Holland, geophysicist in training, July 14-18, 21-26 July 28-August 7			
	22 days @ 105	=	\$ 2,310	
	D. Milne, technician, July 14-18, 21-26, 28-Aug. 7 22 days @ 105	=	2,310	
	Y. Fortin, IP crewman, July 14-18, 21-26, 28-Aug. 7 22 days @ 83	=	1,826	
	22 days @ 83 E. Bernshaw, IP crewman, July 14-18, 21-26, Aug. 5-7	-		
	14 days @ 83	=	1,162	
	D. Campbell, IP crewman, July 14-18, 21-26, 28-Aug. 7 22 days @ 83	=	1,826	
	J. Allen, IP crewman, July 14-18, 21-26, 28-Aug. 7 22 days @ 83	=	1,826	
	22 33/5 2 3			\$ 11,260
2.	EQUIPMENT RENTALS			
	7.5 kw IP survey system, magnetometers, truck			5,904
3.	CHARGES PER OPERATING DAY(towards drafting, report, supersivion)			
	13 days IP survey (Esperon grid) @ 175	=	2,275	
	2 days IP survey (Tadpole Lake grid)@ 175 7 days travel and standby	=	350 N/C	
	, days craver and sounds			2,625
4.	MISCELLANEOUS EXPENSES			
	food, lodging, gas, consumables			5,270
	TOTAL EXPENDITURES			\$ 25,059

APPENDIX III

CERTIFICATION

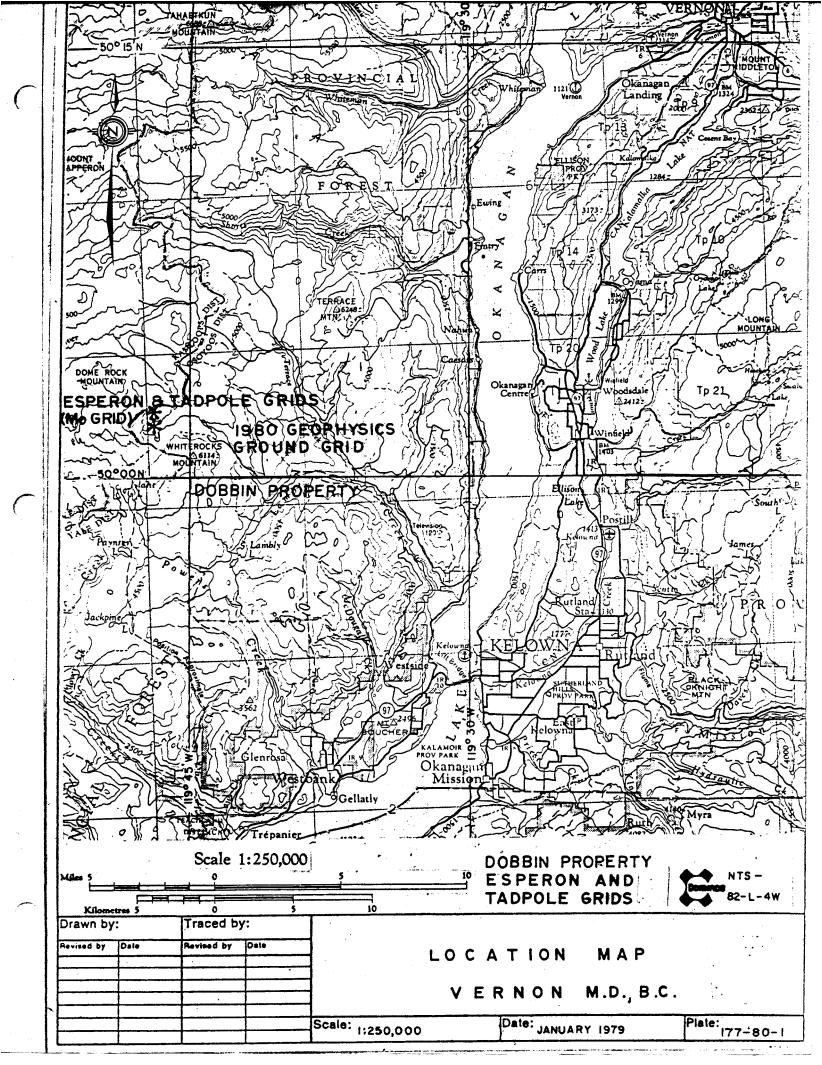
I, Alan R. Scott, of 4013 West 14th Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:-

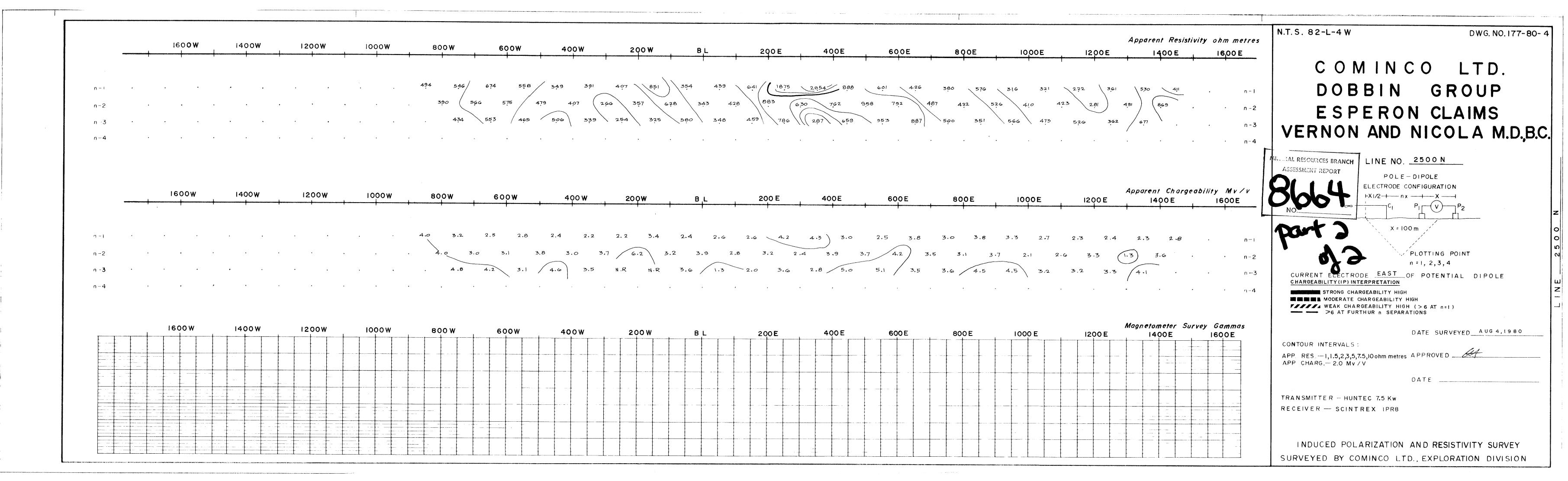
- 1. THAT I graduated from the University of British Columbia in 1970 with a B.Sc. in Geophysics;
- 2. THAT I am a member of the Association of Professional Engineers of the Province of Saskatchewan, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society.
- 3. THAT I have been practising my profession for the past ten years.

Signed:

Geophysicist

10 November 1980





N.T.S. 82-L-4 W

DWG. NO. 177-80-5

COMINCO LTD.

DOBBIN GROUP

ESPERON CLAIMS

VERNON AND NICOLA M.D.,B.C.

	•							
N. L RESOURCES BRANCH	LINE NO.	2900 N						
ASSESSMENT REPORT	POLE-	- DIPOLE						
n 1 11	ELECTRODE C	ONFIGURATION						
	+X1/2-+nx	x						
JOO F	Cı	P ₁ V P ₂						
X = 100 m /								
DOST &								
43	``'	PLOTTING POIN	IT					
0) O		n = 1, 2,3,4						
CURRENT ELECTRO		F POTENTIAL	DIPOLE					
-	REABILITY HIGH							
WEAK CHAR	HARGEABILITY HIGH							
	THUR n SEPARA							
		DATE SUBVEYE	D AUG 2,3, 1980					
CONTOUR INTERVALS:		DATE SURVEYE	D 400 2,0, 13 00					
	'5 10 abm matera	A PPROVED	4					
APP RES1,1.5,2,3,5,7.5,10 ohm metres APPROVEDAPP CHARG 2.0 Mv / V								
		DATE						

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

