

JAN 1 4 2000

Gold Commissioner's Office VANCOUVER, B.C.



INDUCED POLARIZATION and RESISTIVITY REPORT on the SKU 1-2, 5-8, 10-11, 31-33 and 51-52 MINERAL CLAIMS

SKU-LEO PROJECT

KAMLOOPS MINING DIVISION NTS 921/6E, 921/7W

Latitude 50° 20'

Longitude 120° 58'

for HIGHLAND VALLEY COPPER BOX 1500 LOGAN LAKE, BC V0K 1W0

Report by LORNE A. BOND

Logan Lake, BC December 27, 1999

GEOLOGICAL SURVEY BRANCH

U:\1999\ENG\LB99037



Table of Contents

			Page		
1.0	INTRODUCTION	1			
2.0	SURVEY PARAMETERS	1			
3.0	DATA PRESENTATION	4			
4.0	DESCRIPTION OF RESU	4			
5.0	STATEMENT OF COSTS	5			
6.0	STATEMENT OF QUALI	6			
List of Fig	jures				
Figure 1	Location Plan	Scale 1:50,000	2		
Figure 2	Claim and Grid Map	Scale 1:50,000	3		
In Pocket					
Figure 3	Chargeability/Resistivity Pseudosections Lines 7200S - 7800S				
Figure 4	Chargeability/Resistivity Pseudosections Lines 7600E and 10200E				
Figure 5	Chargeability/Resistivity Pseudosections				

1.0 INTRODUCTION

During the period September 13 to September 28, 1999, a program of induced polarization and resistivity surveys was conducted over a portion of the property holdings of the Highland Valley Copper partnership. The mineral claims on which the gridlines are located are situated approximately 14 kilometers south of the Highland Valley Copper mill and plant site. The north and south blocks of the SKU mineral claims straddle the Skuhun Creek valley and the gravel road that runs from Highway 8 to Chataway Lakes. *Figure 1* shows the general location of the survey grid and *Figure 2* illustrates the position of the gridlines relative to the mineral claim holdings of Highland Valley Copper.

The objective of the survey was to test for large tonnage porphyry type sulfide mineralization within the grid area. This report describes the procedures used for this survey, presents the data and discusses the results.

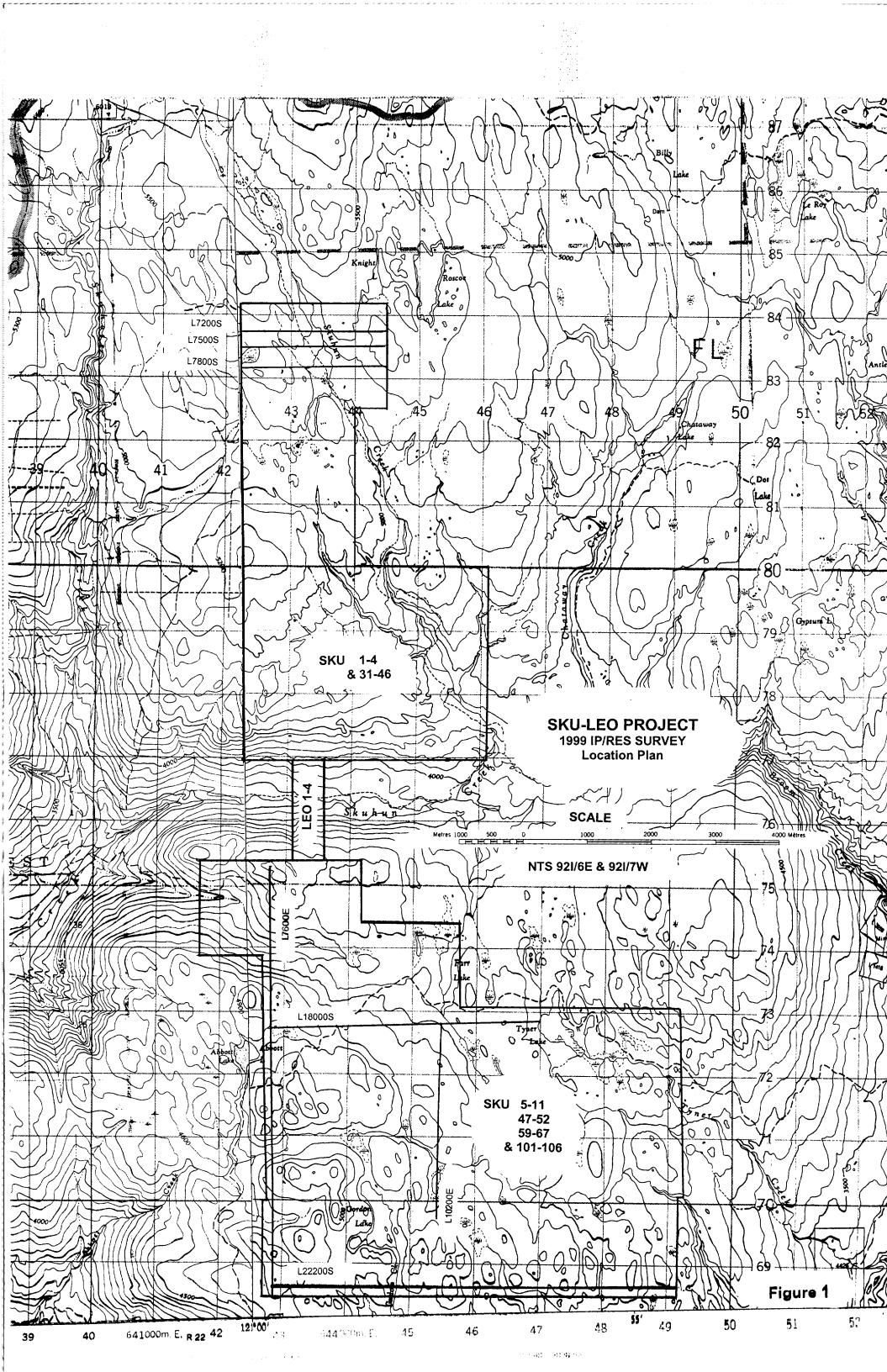
Expenditures on this program have been applied to property mineral claims on Statement of Work 3141409 (Group HVC-13) filed on November 1, 1999.

2.0 SURVEY PARAMETERS AND EQUIPMENT

The geophysical surveys were conducted on gridlines prepared in the previous exploration season. The lines were hand cut and chained with stations established at 100 metre intervals.

The contract for the 1999 Induced Polarizational/Resistivity survey was awarded to Scott Geophysics Ltd. of Vancouver. A five man crew was employed on the project.

Geophysical surveying of the grid was executed between September 13 and 28, 1999.



A total of 24.7 line kilometres was surveyed using north-south baselines and east-west gridlines. The exploration target was a large, low grade, porphyry copper system. The survey program was reconnaissance in scope. Lines surveyed in whole or in part were L7200S, L7500S, L7500S, L18000S, L22200S, L7600E and L10200E.

A pole-dipole array was used for the Induced Polarizational/Resistivity survey, with an electrode spacing of a = 100 metres and n separation of 1, 2, 3, 4, 5 and 6. A Scintrex IPR-12 receiver and Scintrex TSQ4 (10.0 kw) transmitter were used on the survey. Measurements were taken in the time domain using a two (2) second alternating square wave. Chargeabilities measured were for the interval 120 to 1,020 milliseconds after current interruption (midpoint at 570 m sec.).

3.0 DATA PRESENTATION

The chargeability and resistivity results are presented in standard pseudosection format. The location of the current electrode with respect to the receiving electrodes is given in the title block area of each pseudosection. Chargeability results are expressed in mV/Volt (M_x for 120 – 1.020 m secs) and apparent resistivities are reported in ohm–m. Horizontal scale on the pseudosections is 1:10,000 and contours are at 2.5 mV/Volt and 250 ohm-m increments for chargeability and apparent resistivity respectively.

4.0 DESCRIPTION OF RESULTS AND CONCLUSIONS

No chargeability highs were detected on this survey. Background levels for chargeabilities were in the 3 – 6 mV/Volt range. Apparent resistivity readings had a wider range likely reflecting variable depths of our overburden, changes in underlying lithologies and some local structural features. The lines surveyed were widespread and covered only a portion of the claim group. The Induced Polarization/Resistivity survey will be continued to provide coverage on a 300 metre line spacing which would provide sufficient density of coverage for a large porphyry copper target.

5.0 STATEMENT OF COSTS

SKU-LEO Mineral Claims

Geophysics – Induced Polarization/Resistivity survey – 24.7 kilometres

Conducted by Scott Geophysics Ltd. \$30,986

Project management, planning, supervision, report preparation

Lorne Bond, Highland Valley Copper

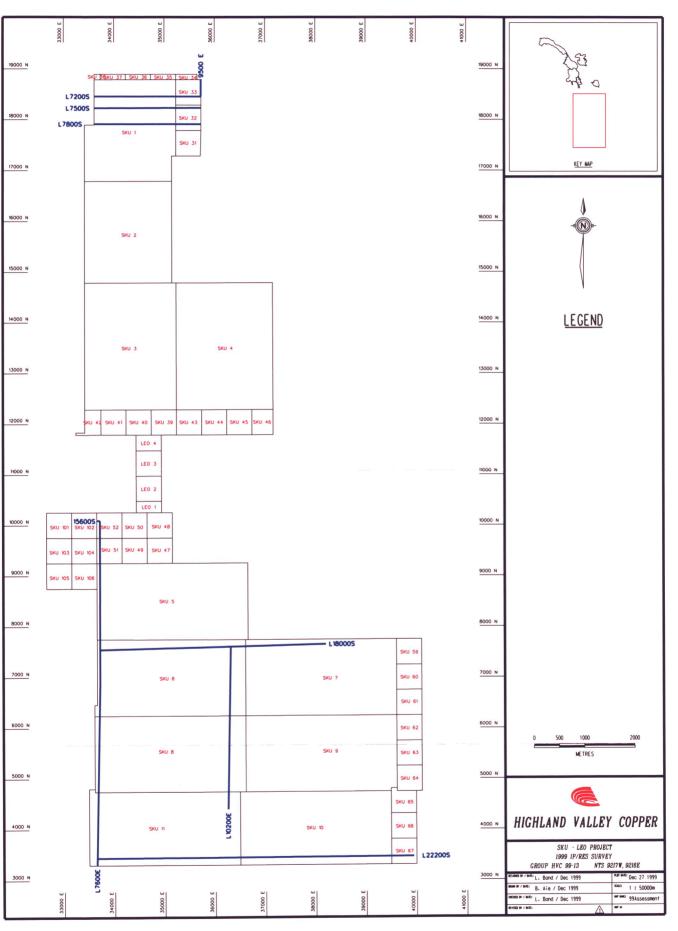
10 days @ \$400 per day \$<u>4,000</u>

TOTAL \$34,968

6.0 STATEMENT OF QUALIFICATIONS

- I, Lorne Allan Bond, of the city of Kamloops, British Columbia do hereby certify that:
- 1. I am a qualified, practicing Geologist.
- 2. I am a graduate of Loyola College (Concordia University), with a B. Sc. (1967) in Geotechnical Sciences.
- I have practiced my profession since 1967 while employed with Sherritt-Gordon Mines Ltd., Cominco Ltd., Afton Operating Corporation and Highland Valley Copper.
- 4. This report describes geophysical exploration performed under my direction during the period September 13 to September 28, 1999.

Lorne A. Bond Senior Mine Geologist Highland Valley Copper December 27, 1999



COMINCO LTD.

SKU-LEO CLAIMS, HIGHLAND VALLEY AREA, B.C.

LINE: 7800S

INDUCED POLARIZATION SURVEY (Pole-Dipole Arroy)
Scintrex IPR12 SCOTT GEOPHYSICS LTD. August/99 Pulse Rate: 2 sec

Current electrode East of potential electrodes (array heading W) Mix Chargeability is for the interval 120 to 1020 msecs after shutoff

В	100	200	400	600
·				

RESISTIMTY (ohm-m)		CHARGEABRITY (mV/Voit)	
8 8 8 8	100 a	5 5 5 5 5 a	
6 UI & UI N	- 3	E - 4 W 4 W 0	
1 1 1 1	7800E	7 60 E	
,Ā.		§ 1	
1195 1482 1284	78	ž ž	
10 2 799	~ i	a	
813	7900E		
987 913 790 769	783	3.98 5.98 5.00 5.00	
970 740 846 876 790	8100E	8100 E	
<u> </u>	82008	5 () () () () () () () () () (
792 8 80 21	8.2		
765 758 778 778	2	σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ	
74. 7684	8400E		
679 590 593	8500E		
\$ 23 E3	3600E	5.45 5.45 5.45	
g (8 B	- - [87		
815 1098	88	ω ' ω\ " + "	
	/	3.82 3.82 5.04 5.07	
	8900E	3 423 3.86 3.80 5.67 5.86	
1 428 872 2 1232 1 1222 1264 1 1222 1	30008	9000E 3 2.77 3.80 2 5.86 3.71 5.86 5.79	
772 517	9100E	# . # . # . # . # . # . # . # . # . # .	
8 8	9200€		
\$ 53 E		9200E 9300E 9400E 9500E 2.57 2.83 1.55 3.21 3.80 3.62 2.03 3.53 3.38 2.82 3.95 3.34 3.22 3.03 3.12 4.39 3.64 4.21	
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- 04	2.83 1 2.83 1 52 2.03 2.82 1 2.39 21 3.03	
, a	9400E 5	1.55 3.95	
	9500E	9500E 3.28	
	Cornte	Contair levels 2.5 5	
1508 008	Contour levels	G 12.	

COMINCO LTD.

SKU-LEO CLAIMS, HIGHLAND VALLEY AREA, B.C.

LINE: 7500S

INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
EOPHYSICS LTD. Scintrex IPR12

SCOTT GEOPHYSICS LTD. August/99

Pulse Rate: 2 sec

Current electrode East of potential electrodes (array heading W) Mx Chargeability is for the interval 120 to 1020 msecs after shutoff

0 	100 200	400 800	
	MET	ERS	
RESISTIMTY		CHARGEABILITY	
(ohm-m)		(mV/Valt)	
7 7 7 7 8	۵	9 9 9 9 9	٥
5 U 4 U 6	3	o	3
1 1 1 1 1 1	7600E		7 600 E
830	i	£ /*	ł
	7700€		7700€
1100	7800E	5.52 5.95	7800E
735	7900€		
	1	5.70 5.41	7900E
818 821 898	30008		8000E
78 783	Les .		8100E
827 877 927 760 877		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	
8 / S	8200E	5.7 × 5.7 ×	8200E
572 764 1106 2 1208	8300E	6.95 6.51	8300E
11 / 19 / II	8400E		1
() () () () () () () () () ()		5. S.	8400E -
\$ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	85,00K	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	85006
	3008		#8000E
	· i	136 345	1
~	87000	3.5	8700E
2/5	8800E	3.5.	300gg
N G /X	300-68	Ş \	8900E
ِ ۾ آھي <u>۽ آ</u>		5.27	1
85 1348 1091 85 1348 1091 85 1360 1060 1	30008		9000
ž 8 5	91006	8 2.74 4.07 1 5.08	30016
1090 1	· I		1
±1/ /¥ (₹	9200E	2.91 22 3.43 4.86 4.86	9200E
118 98 98	93/DE 94/OE	2.91 2.50 52 3.27 1 3.43 3.44 44 3.64 1 4.66 3.56 55 4.42	3000
3 8) [<u>*</u>	3. 3. 4. 6	9400€
₹ ₹		3.00 7 3.98 3.80	
Ä	3000£	8	3005
750	Combo	AGN	Corrido
7500S	Contour levels	7 5	Contour levels

COMINCO LTD.

SKU-LEO CLAIMS, HIGHLAND VALLEY AREA, B.C.

LINE: 7200S

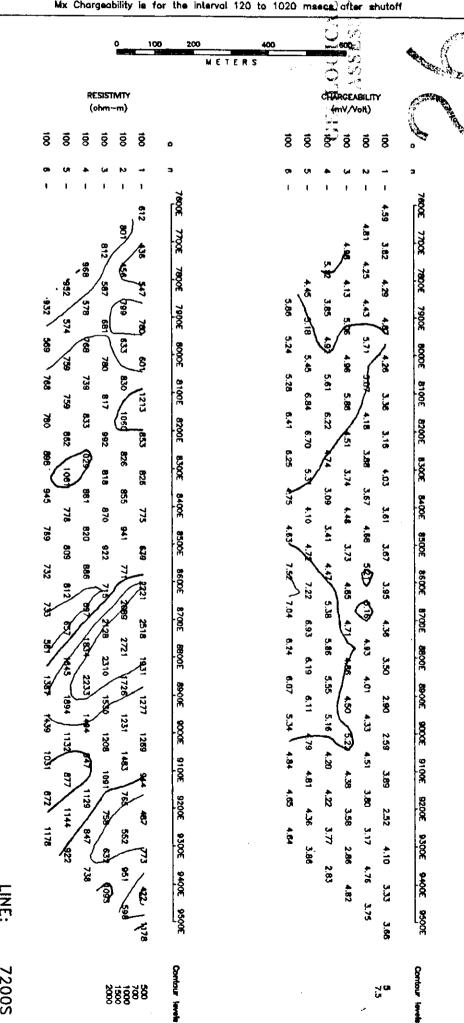
INDUCED POLARIZATION SURVEY (Pole-Dipole, Array)

EOPHYSICS LTD. Schitter IPR12 SCOTT GEOPHYSICS LTD.

August/99

Pulse Rote: 2 sec

Current electrode East of potential electrodes (array heading W)
Mx Chargeability is for the interval 120 to 1020 maecs after shutoff



5.32 5.70

1194 1278 1092

1302 793

1030 1119 1130

4.70 5.31 5.09

COMINCO LTD. SKU-LEO CLAIMS, HIGHLAND VALLEY AREA, B.C. 10200E LINE: INDUCED POLARIZATION SURVEY (Pole-Dipole Array) SCOTT GEOPHYSICS LTD. Scintrex IPR12 August/99 Pulse Rate: 2 sec Current electrode North of potential electrodes (array heading S) Mx Chargeability is for the interval 120 to 1020 msecs after shutoff CHARGEABILITY 1.12 1.40 1.35 3.48 3.63 1.04 3.65 3.56 510 1.58 1.47 1.75 1.75 1.65 1.48 1.34 1.84 1.71 1.41 1.46 1.63 3.97 3.79 3.96 1.19 3.53 1.34 5.41 1.35 1.56 1.46 1.50 1.18 5.25 5.09 1.66 1.80 1.79 5.27 1.51 1.50 1.65 3.51 1.22 1.90 5.00 1.52 1.70 1.36 1.36 1.37 5.95 1.32 5.31 1.32 1.32 1.30 1.52 1.70 1.36 1.36 1.36 1.37 5.31 1905 201905 200905 199005 199005 197005 198005 198005 19400S 19300S 19200S 19100S 19000S 18900S 18900S 18700S 18500S 18500S 18500S 18500S 18500S 18500S 18500S 2.45 117 220 209 254 2.50 3.00 4.04 3.59 4.07 4.08 4.00 4.05 4.19 3.79 4.14 4.07 4.11 3.32 005 201005 200005 189005 185005 187005 185005 185005 184005 183005 183005 181005 180005 180005 188005 180005 185005 185005 183005 183005 183005 183005 183005 200 288 789 482 27) 861 400 787 527 527 347 344 548 81 204 309 427 574 321 125 571 360 409 455 406 475 3 455 408 475 384 443 539 478 483 404 492 831 490 457 479 566 819 446 452

8888

9700E 9800E 9800E 10000E 10100E 10200E 10300E 10400E 10500E 10600E 10700E 10800E 10800E 11000E 11100E 11200E 11300E 11400E 11500E 11800E 11700E

