

COMINCO LTD.

EXPLORATION  
NTS 105 A/13

WESTERN DISTRICT

1997 ASSESSMENT REPORT

ITCH PROPERTY

GEOCHEMISTRY, GEOPHYSICS & LINECUTTING

WATSON LAKE M.D., YUKON

PELLY MOUNTAINS AREA

WORK PERIOD:  
MARCH 21,22, JULY14, AUGUST 2, 1997



LATITUDE: 60°55'

LONGITUDE: 129°50'

SEPTEMBER, 1997

VICTORIA L. BANNISTER  
DAVID C. HALL

This report has been examined by  
the Geological Evaluation Unit  
under Department Order (4) Yukon Quartz  
Mineral Rights Act. It is allowed as  
representative work in the amount  
of \$ 13,100.

*for* Registered Geologist, Exploration and  
Geological Services for Commissioner,  
Yukon Territory.

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**1997 Assessment Report  
ITCH Property, Yukon Territory**

**1. Summary**

The ITCH property is located north of Hasselberg Lake, approximately 70 kms southeast of Cominco's ABM VHMS Deposit and about 120 kms northwest of Watson Lake.

The property was originally staked to cover airborne geophysical targets identified during a Cominco survey conducted in 1994. With additional ground being added to this block of claims in 1996/97.

The rocks underlying this part of the Pelly Mountain area of the Yukon have been assigned to the Yukon-Tanana Terrane (YTT) with some occurrences of Slide Mountain Terrane (SMT). The YTT is primarily composed of a layered sequence of metamorphosed rocks. The lower unit of the YTT is pre-Devonian quartzite, pelitic schist and minor marble marker-beds, while a late Devonian to mid-Mississippian carbonaceous phyllite, and schist with interbanded mafic to felsic metavolcanics makes the middle unit. The upper unit is made of Pennsylvanian marbles and quartzites. Volcanism in the middle unit was accompanied by the intrusion of 2-3, mafic to felsic metaplutonic suites. Felsic volcanics occurring in the middle units of the YTT are the host to Cominco's ABM VHMS Deposit.

The ITCH property, specifically, is underlain by a late Devonian to mid-Mississippian sequence of middle unit-type carbonaceous mudstones and silty mudstone with minor siltstone and quartzite interbeds of the YTT. A thrust panel of serpentinized ultramafic rocks, thought to be from the SMT, underlies the hills to the west of the property.

**2. Location and Access**

The ITCH property is located about 5 kms north of the SEL property that is located on the northwest shore of Hasselberg Lake. The area is about 70 kms southeast of Cominco's ABM VHMS deposit and 120 kms northwest of Watson Lake (Figure 1). The gravel, all weather Robert Campbell Highway provides access to within 30 kms of the property. Direct access is by helicopter.

**3. Property and Ownership**

The ITCH property (126 units) is 100% owned by Cominco Ltd.

<u>Name</u>	<u>Units</u>	<u>Claim No.</u>	<u>Due Date</u>
ITCH 1-84	84	YB50105-188	April 7/98
ITCH 84 <sup>5</sup> -126	42	YB <del>85</del> 933-974	March 21/98

#### **4. Previous Work**

With the exception of placer Au claims (Minfile #34) found approximately 2 kms west of the SEL property there are no recorded showings in the immediate area of the ITCH (and SEL) property.

Previous work by Cominco Ltd. includes a regional mapping and soil geochemical sampling programme in 1994, as well as follow-up in 1996. Soil sampling of the western portion of the ITCH property returned strong Ni-Cr-Co-As-Fe-Mo-V-Cu metal association reflecting the presence of (SMT) ultramafics. Outcrops were found to be poorly exposed and restricted to creek areas on the western side of the property. Felsic volcanics were not observed on the property.

#### **5. 1997 Field Work**

##### **SOIL GEOCHEMISTRY**

A total of 134 soil samples were collected on July 14, 1997. Data is presented in Appendix 4.

All samples were analyzed for Cu, Pb, Zn, Ag, As, Cd, Co, Ni, Fe, Mo, Cr, Bi, Sb, V, Sn, W, Sr, Y, La, Mn, Mg, Ti, Al, Ca, Na and K by I.C.P. at Cominco Exploration Research Laboratory (CERL) in Vancouver.

##### **GEOPHYSICS & LINECUTTING**

The Itch grid consists of 4.5 kilometres of cut line located as shown on figure 2. The grid was established on March 21 and 22, 1997 by a Coureur des Bois Ltd. linecutting crew from Whitehorse. Geophysical surveys on this grid were conducted by an in-house Cominco Ltd. crew based out of the Whitefish Lake exploration camp on August 2, 1997 and consisted of 3.8 line kilometres of HLEM/MAG. The purpose of these surveys was to define an airborne electromagnetic/magnetic anomaly on the ground and assess requirements for additional work.

#### **6. ITCH PROPERTY GEOCHEMISTRY, GEOPHYSICS**

##### **6.1 Geochemistry**

Of the 134 samples taken on the ITCH property, both on the geophysical grid and contours, no anomalous values of interest were returned.

##### **6.2 Geophysics**

Results indicate a 200-250 metre wide magnetic feature which is consistent across the grid giving it a strike length of at least 600 metres. The amplitude of this anomaly varies from 300 to 600 nT and appears to be strongest on the northmost line. Unfortunately the survey grid runs into the Tuchitua river in this area which restricts survey coverage to the north. Superimposed on this broader magnetic trend are a number of 50 m wide peaks of 200-300 nT amplitude likely due to shallower sources.


The HLEM survey indicates a number of areas of conductivity. The strongest of these is a 125 metre wide, 40-50 siemen conductor (A) which flanks the west side of the broad magnetic feature. This zone is evident on 2 lines and is open to the north where it intersects the Tuchitua river. A second, shallow conductor (B) is 25 metres wide with a conductivity less than 10 s. and is coincident with the magnetic trend across 2 lines. A number of other isolated conductors are also evident.

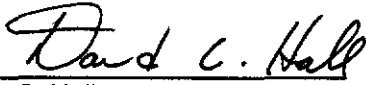
## **7. CONCLUSIONS and RECOMMENDATIONS**

A Cominco Ltd. geophysical survey crew completed 3.8 kms of HLEM/Mag surveys on the Itch grid on August 2, 1997 for the purpose of evaluating an anomalous airborne survey feature. Ground results indicate a well defined linear magnetic trend with some coincident conductivity. Unfortunately this conductivity is weak and of short strike length which limits the potential for significant mineralization.


The lack of anomalous geochemical values coupled with limited geophysical response makes it unlikely that an economic mineral deposit exists in this area. No further work is recommended for the Itch grid.

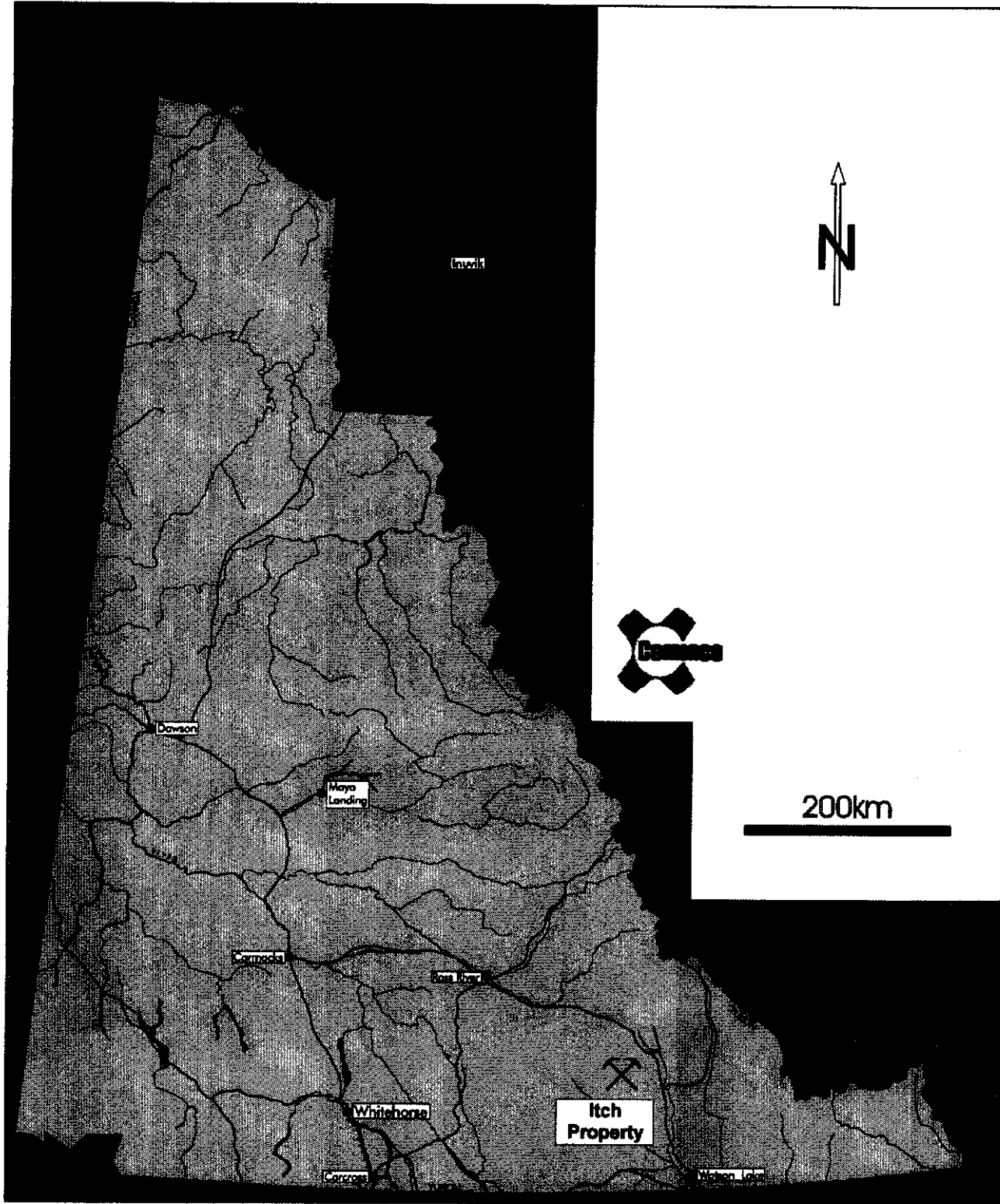
Report by:

  
\_\_\_\_\_  
V.L. Bannister  
Geologist

  
\_\_\_\_\_  
D.C. Hall  
Geophysicist

Endorsed and  
Approved for  
Release by:

  
\_\_\_\_\_  
W.J. Wolfe  
Manager, Canadian Exploration



Drawn by:		Traced by: <i>a. m. a.</i>	
Revised by:	Date:	Revised by:	Date:

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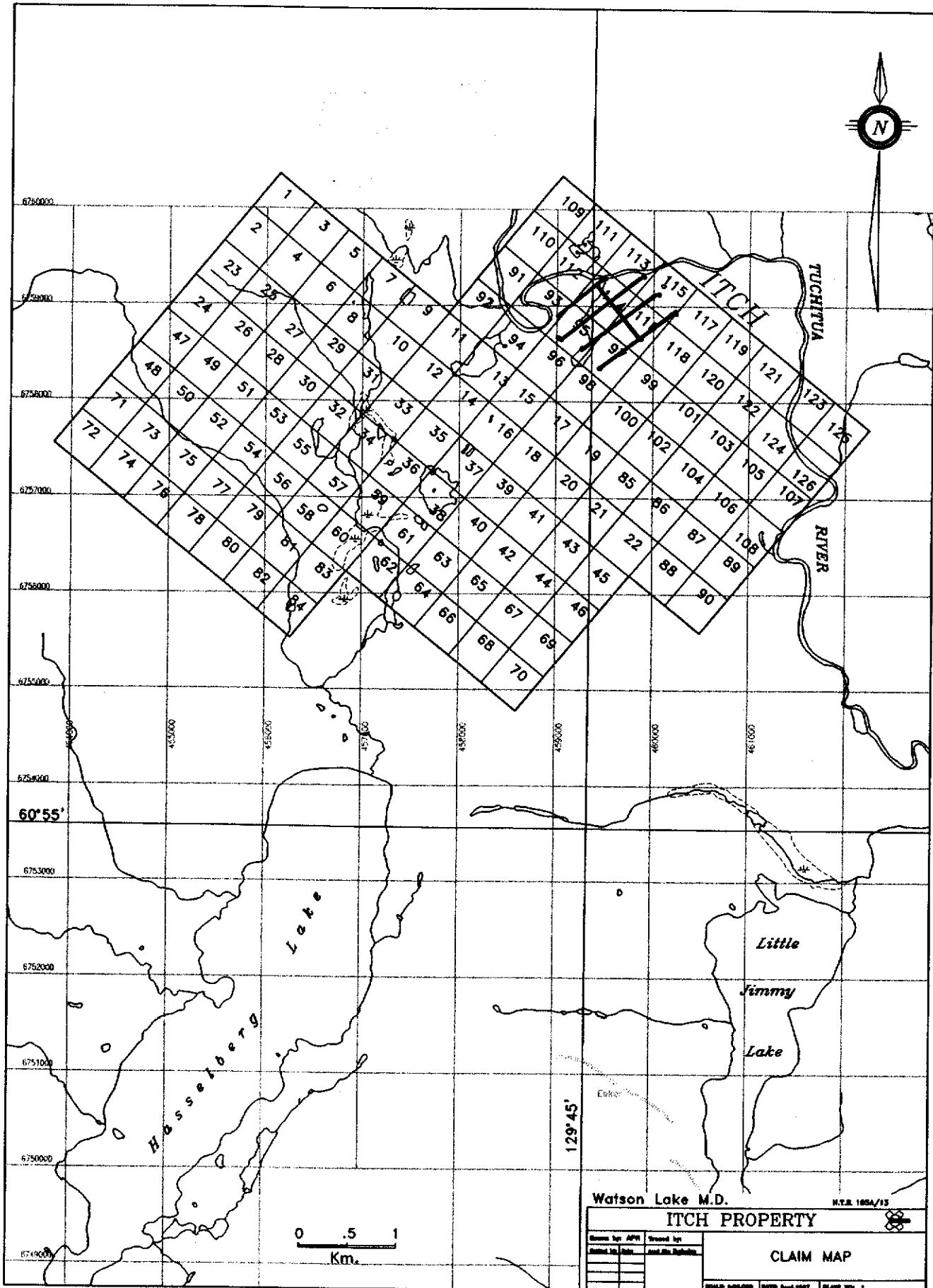
# ITCH PROPERTY LOCATION

Scale: As Shown

Date: August 1997

Plate: 1





6750000  
6752000  
6754000  
6756000  
6758000  
6750000  
6752000  
6754000  
6756000  
6758000  
6750000  
6752000  
6754000  
6756000  
6758000  
6750000

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126

TUTCHITUA RIVER

Lake

Hasselberg

Little Jimmy Lake

129°45'

0 .5 1  
Km.

Watson Lake M.D. N.T.S. 100A/15  
**ITCH PROPERTY**  
Checked by: APW Drawn by: [ ]  
Entered by: [ ] and Mr. [ ]  
**CLAIM MAP**  
SHEET 000000 0000 000007 PLATE 200 1

**APPENDIX I**

IN THE MATTER OF AN EXPLORATION PROGRAMME  
CARRIED OUT ON THE ITCH PROPERTY  
LOCATED 120 KMS NNW OF WATSON LAKE, YUKON  
IN THE WATSON LAKE MINING DISTRICT OF THE  
YUKON TERRITORY,  
MORE PARTICULARLY  
N.T.S. 105A/13

**STATEMENT**

I, David C. Hall, of 3476 W. 22nd Avenue, in the City of Vancouver, 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 annexed hereto and marked as "Exhibit A" to this statement is a true copy of expenditures incurred on a geophysical and geochemical survey on the Itch Property;
3. That the said expenditures were incurred on March 21, 22, July 14 and August 2, 1997 for the purpose of mineral exploration on the above noted property.



David C. Hall  
Geophysicist  
Cominco Ltd.

Dated this 29 day of September, 1997  
at Vancouver, B.C.

## APPENDIX II - EXHIBIT "A"

### STATEMENT OF EXPENDITURES

#### Itch Property

Geology Staff Costs	257.40
Geochemistry Staff Costs	492.26
Linecutting	2,847.00
Helicopter (associated with linecutting)	4,793.78
Geochemical Analyses	2,350.40
Geophysical Survey	529.67
Helicopter	975.00
Domicile	875.00
<b>Total</b>	<b>13,120.51</b>

### APPENDIX III

#### CERTIFICATION OF QUALIFICATIONS

I, DAVID C. HALL, of 3476 W. 22nd Avenue, in the City of Vancouver, in the Province of British Columbia, do hereby certify:

- i. THAT I graduated with a B.Sc., Honours in Geophysics from the University of Manitoba in 1976.
- ii. THAT I have been actively practising Geophysics from 1976 to 1997, and am presently an employee of Cominco Ltd.



David C. Hall, B.Sc.  
Geophysicist

September, 1997

I, Victoria L. Bannister, of #103-2168 W. 2<sup>nd</sup> Ave., Vancouver, B.C. hereby declare that I:

1. Graduated from The University of Toronto, Toronto, Ontario, with a B.Sc. in Geology in May, 1993.
2. Graduated from Queen's University, Kingston, Ontario, with a M.Sc. in Geology in May, 1996.
3. Have acted as a contract geologist in Ontario and Yukon, Canada and in Martinique and Guyana since the summer of 1991.
4. Have been actively engaged in mineral exploration in Western Canada as a geological assistant with Cominco Ltd. during the summer and fall of 1996 and as a full-time geologist since November, 1996.

Date: September, 1997



V.L. Bannister, M.Sc.  
Geologist I

## **Appendix IV**

### **Geochemistry Results**

Lab #	Cu	Pb	Zn	Ag	As	Ba	Cd	Co	Ni	Fe	Mo	Cr	Bi	Sb	V	Sn	W	Sr	Y	La	Mn	Mg	Ti	Al	Ca	Na	K
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	pp	ppm	ppm	pp	ppm	ppm	pp	pp	ppm	%	%	%	%	%	%
S9714907	8	5	18	0.4	14	69	-1	3	26	0.75	-2	34	6	-5	12	-2	-2	11	5	5	167	0.22	-0.01	0.64	0.19	0.01	0.01
S9714908	9	-4	9	-0.4	25	139	-1	2	50	0.38	2	27	-5	-5	3	-2	-2	37	4	4	40	0.3	-0.01	0.35	0.74	0.01	0.01
S9714909	10	8	79	0.4	46	99	-1	9	99	1.78	4	196	-5	-5	27	-2	-2	6	2	5	150	1.22	-0.01	0.69	0.09	-0.01	0.05
S9714910	16	5	45	-0.4	3	95	-1	17	202	2.15	-2	251	5	-5	31	-2	-2	8	4	6	351	2.14	-0.01	0.77	0.16	-0.01	0.01
S9714911	23	4	71	-0.4	62	169	-1	19	307	2.5	2	296	6	-5	36	-2	-2	26	7	7	283	2.17	-0.01	1.07	0.54	-0.01	0.03
S9714912	20	-4	52	-0.4	436	326	2	21	249	9.28	2	200	-5	8	30	-2	-2	44	5	4	531	1.48	-0.01	0.82	0.8	-0.01	0.03
S9714913	31	-4	29	-0.4	14	337	-1	13	393	1.12	2	90	-5	-5	13	-2	-2	63	5	4	3276	0.76	-0.01	0.52	1.73	0.03	0.02
S9714914	25	-4	79	0.4	14	242	-1	20	258	2.8	-2	295	-5	-5	39	-2	-2	21	9	8	352	2.16	-0.01	1.25	0.49	0.01	0.04
S9714915	26	5	55	-0.4	16	363	-1	15	195	3.72	2	229	-5	5	27	-2	-2	40	7	7	529	1.72	-0.01	0.92	0.58	-0.01	0.04
S9714916	22	4	36	-0.4	21	145	-1	11	167	1.81	2	186	-5	-5	27	-2	-2	9	7	9	239	1.66	0.01	0.82	0.2	-0.01	0.02
S9714917	26	4	66	0.6	7	144	-1	16	270	2.2	2	298	-5	-5	35	-2	-2	15	9	7	306	2.76	-0.01	1.09	0.39	-0.01	0.02
S9714918	26	5	78	-0.4	25	172	-1	18	314	2.23	4	323	-5	8	38	-2	-2	16	10	7	382	2.44	-0.01	1.17	0.4	-0.01	0.03
S9714919	35	5	64	-0.4	27	127	-1	17	254	2.09	2	227	-5	-5	31	2	-2	15	8	7	440	2.06	-0.01	0.9	0.38	-0.01	0.02
S9714920	58	5	57	-0.4	21	160	-1	11	255	1.78	-2	191	-5	-5	24	-2	-2	19	17	17	281	1.23	-0.01	0.91	0.49	0.01	0.04
S9714921	41	4	62	-0.4	18	128	-1	22	251	2.5	2	267	-5	-5	45	-2	-2	13	12	9	328	2.34	0.01	1.17	0.32	-0.01	0.03
S9714922	35	5	97	-0.4	37	231	-1	17	225	2.81	2	274	-5	9	48	-2	-2	21	13	8	402	2.37	-0.01	1.54	0.42	-0.01	0.04
S9714923	24	-4	54	-0.4	18	144	-1	19	212	2.24	3	339	-5	-5	40	-2	-2	14	7	7	357	2.66	-0.01	1.22	0.36	0.01	0.02
S9714924	29	5	83	-0.4	14	206	-1	20	216	3.11	5	392	-5	12	59	-2	-2	21	11	9	473	2.82	0.01	1.67	0.44	-0.01	0.04
S9714925	51	-4	30	0.4	17	327	-1	9	196	1.42	4	135	-5	-5	21	-2	-2	53	19	15	271	0.85	-0.01	1.31	1.21	0.01	0.02
S9714926	31	-4	71	-0.4	9	178	-1	14	197	2.34	2	253	-5	9	45	-2	-2	27	9	9	292	2.21	0.02	1.48	0.89	0.01	0.04
S9714927	38	4	33	-0.4	2	192	-1	12	123	1.75	-2	144	-5	6	39	-2	-2	35	8	6	346	0.94	0.01	1.21	0.86	0.04	0.03
S9714928	38	-4	55	-0.4	13	194	-1	12	155	2.22	3	142	-5	7	49	-2	-2	32	10	6	332	1.39	0.01	1.55	0.86	0.02	0.03
S9714929	7	-4	48	-0.4	5	146	-1	6	11	2.56	4	19	-5	-5	37	-2	-2	9	14	23	341	0.86	0.1	1.69	0.26	0.01	0.41
S9714930	8	-4	34	-0.4	13	53	-1	4	9	1.97	4	17	-5	-5	35	-2	-2	5	7	12	275	0.52	0.06	1.04	0.16	0.01	0.27
S9714931	28	11	46	-0.4	-2	92	2	3	11	1.55	7	14	-5	-5	29	-2	-2	7	11	26	316	0.06	-0.01	0.71	0.11	-0.01	0.06
S9714932	6	5	38	-0.4	-2	47	-1	3	8	1.44	5	12	5	-5	20	-2	-2	5	6	20	146	0.41	0.04	0.86	0.09	-0.01	0.17
S9714933	8	-4	50	-0.4	8	60	-1	4	14	2.11	3	19	-5	-5	27	-2	-2	6	9	20	236	0.59	0.08	1.2	0.1	-0.01	0.27
S9714934	12	6	63	-0.4	17	55	-1	3	11	2.35	6	18	-5	-5	33	-2	-2	4	7	21	180	0.52	0.08	1.16	0.06	-0.01	0.22
S9714935	12	13	21	-0.4	10	61	-1	1	4	0.88	-2	8	-5	-5	17	-2	-2	5	5	19	111	0.17	0.04	0.57	0.1	0.04	0.17
S9714936	8	5	57	-0.4	5	60	-1	3	7	2.61	5	12	-5	-5	34	-2	-2	7	7	22	220	0.64	0.13	1.33	0.15	-0.01	0.37
S9714937	10	14	46	-0.4	11	77	-1	6	6	2.09	10	10	-5	-5	41	-2	-2	5	5	26	617	0.28	0.08	0.84	0.07	0.03	0.31
S9714938	5	6	19	-0.4	8	42	-1	1	3	0.9	3	9	-5	-5	19	-2	-2	4	7	24	71	0.13	0.02	0.52	0.06	0.03	0.11
S9714939	8	5	39	-0.4	19	70	-1	4	11	2.14	3	15	-5	-5	26	-2	-2	9	10	26	192	0.61	0.03	1.34	0.17	0.01	0.21

S9714940	7	7	42	-0.4	29	43	-1	4	11	2.55	3	19	-5	-5	46	-2	-2	6	5	14	150	0.47	0.07	1.17	0.09	-0.01	0.23
S9714941	9	6	35	-0.4	6	116	-1	2	10	1.54	3	12	-5	-5	21	-2	-2	10	13	25	113	0.26	0.01	1.08	0.11	0.03	0.14
S9714942	9	7	52	-0.4	12	51	-1	4	12	1.94	3	15	-5	-5	32	-2	-2	8	8	15	175	0.47	0.05	1.11	0.13	-0.01	0.23
S9714943	10	14	84	-0.4	8	51	-1	4	11	1.98	4	13	-5	-5	34	-2	-2	5	6	18	183	0.47	0.05	1.11	0.06	0.01	0.27
S9714944	17	9	47	-0.4	12	84	-1	3	11	1.91	4	13	-5	-5	22	-2	-2	9	13	25	166	0.33	0.01	1.33	0.09	0.02	0.18
S9714945	8	5	18	-0.4	11	68	-1	1	5	0.65	2	8	-5	-5	11	-2	-2	8	7	15	29	0.09	-0.01	0.71	0.05	0.03	0.06
S9714946	8	8	52	0.6	8	57	-1	4	10	1.98	4	14	-5	-5	25	-2	-2	10	9	27	191	0.46	0.06	1.11	0.13	-0.01	0.28
S9714947	10	9	71	-0.4	-2	78	-1	5	15	2.3	4	19	-5	-5	37	-2	-2	14	11	27	286	0.59	0.07	1.42	0.22	-0.01	0.28
S9714948	10	7	46	-0.4	21	53	-1	4	12	2.62	3	20	-5	-5	39	-2	-2	6	7	19	164	0.42	0.04	1.6	0.08	-0.01	0.13
S9714949	8	5	17	-0.4	11	55	-1	1	4	0.74	-2	8	-5	-5	15	-2	-2	5	5	16	50	0.09	-0.01	0.51	0.06	0.05	0.05
S9714950	8	-4	16	-0.4	2	56	-1	1	4	0.61	3	7	-5	-5	11	-2	-2	5	6	17	35	0.04	-0.01	0.46	0.04	0.02	0.05
S9714951	2	-4	5	-0.4	4	26	-1	-1	1	0.21	-2	-4	-5	-5	3	-2	-2	4	-2	3	14	0.02	-0.01	0.17	0.04	0.01	0.02
S9714952	3	5	15	-0.4	7	30	-1	1	2	0.66	3	7	-5	-5	15	-2	-2	3	2	14	45	0.09	0.02	0.4	0.03	0.01	0.05
S9719131	9	9	36	-0.4	4	67	-1	4	19	1.97	5	33	-5	-5	44	-2	-2	3	-2	9	128	0.42	0.02	0.84	0.02	-0.01	0.05
S9719132	14	7	65	-0.4	12	98	-1	6	39	2.58	5	59	-5	12	37	-2	-2	3	-2	7	196	0.71	0.01	1.05	0.02	-0.01	0.06
S9719133	3	5	19	-0.4	-2	54	-1	1	6	0.66	-2	17	-5	5	21	-2	-2	2	-2	7	48	0.21	0.01	0.46	0.03	0.02	0.03
S9719134	3	4	24	-0.4	9	47	-1	3	21	0.76	2	31	-5	-5	14	-2	-2	2	-2	9	133	0.18	-0.01	0.44	0.02	-0.01	0.04
S9719135	14	5	40	-0.4	21	117	-1	7	75	2.11	3	74	-5	7	33	-2	-2	3	-2	7	148	0.48	0.01	0.97	0.02	-0.01	0.03
S9719136	5	6	33	-0.4	9	94	1	23	130	2.82	-2	212	-5	-5	27	-2	-2	5	-2	2	568	0.46	0.01	0.46	0.05	0.02	0.01
S9719137	4	7	28	1.3	7	63	-1	4	15	1.08	-2	20	-5	7	19	-2	3	3	-2	8	106	0.33	0.01	0.64	0.03	-0.01	0.02
S9719138	9	12	40	-0.4	7	144	-1	5	30	1.96	-2	37	-5	-5	29	-2	-2	5	-2	8	169	0.54	0.01	1.04	0.06	-0.01	0.03
S9719139	17	13	49	-0.4	6	53	-1	5	48	2.62	3	60	-5	8	64	-2	-2	3	-2	4	184	0.23	0.01	0.62	0.03	0.02	0.02
S9719140	9	-4	23	-0.4	5	57	-1	4	17	0.66	-2	35	-5	-5	11	-2	-2	4	-2	4	150	0.27	-0.01	0.44	0.06	0.02	0.04
S9719141	8	6	30	-0.4	9	77	-1	3	21	1.16	-2	43	-5	5	23	-2	-2	4	-2	9	104	0.46	0.01	0.8	0.04	-0.01	0.03
S9719142	10	6	48	-0.4	4	50	-1	5	45	3.09	4	73	-5	9	64	-2	-2	2	-2	4	188	0.37	0.02	0.79	0.01	-0.01	0.03
S9719143	14	6	62	-0.4	21	53	-1	7	54	2.21	3	90	-5	-5	43	-2	-2	3	-2	7	164	0.58	-0.01	0.79	0.02	-0.01	0.04
S9719144	6	-4	30	-0.4	-2	91	-1	6	14	0.54	-2	52	-5	9	10	-2	-2	5	-2	5	538	0.27	-0.01	0.4	0.07	0.03	0.02
S9719145	13	6	44	-0.4	23	104	-1	7	58	1.68	2	67	-5	10	26	-2	-2	5	-2	6	217	0.59	-0.01	0.88	0.09	0.02	0.04
S9719146	15	6	22	-0.4	-2	123	-1	3	21	0.58	-2	81	-5	7	10	-2	-2	5	2	6	56	0.26	0.01	0.52	0.09	0.02	0.02
S9719147	8	7	57	-0.4	4	71	-1	7	30	2.25	2	55	-5	5	37	-2	-2	4	-2	6	279	0.56	0.02	0.89	0.04	-0.01	0.05
S9719148	9	-4	41	-0.4	3	73	1	3	24	1.27	4	42	-5	6	23	-2	-2	5	-2	6	123	0.41	-0.01	0.63	0.06	0.02	0.05
S9719149	15	7	55	0.5	7	102	-1	4	24	1.26	3	37	-5	-5	20	-2	-2	6	-2	4	132	0.36	-0.01	0.69	0.04	0.03	0.03
S9719150	12	9	24	-0.4	4	106	-1	2	11	0.73	2	28	-5	-5	14	-2	-2	5	-2	5	60	0.24	-0.01	0.62	0.05	0.02	0.04
S9719151	23	6	79	-0.4	21	95	-1	8	58	3.11	11	92	-5	-5	47	-2	-2	5	2	8	267	0.71	-0.01	1.03	0.05	-0.01	0.05
S9719152	38	-4	54	-0.4	-2	353	6	11	96	1.1	4	41	5	9	9	-2	-2	120	11	9	601	0.4	-0.01	0.66	2.01	0.03	0.04
S9719153	15	-4	15	-0.4	3	215	-1	5	93	0.98	-2	76	-5	9	9	-2	-2	104	2	3	108	0.61	-0.01	0.68	2.27	0.02	0.03

S9719154	33	-4	28	-0.4	8	231	1	4	93	0.8	4	52	-5	8	7	-2	-2	108	5	6	155	0.41	-0.01	0.76	2.33	0.03	0.02
S9719155	20	-4	14	-0.4	2	248	-1	4	142	0.41	-2	36	-5	-5	4	-2	-2	154	2	3	472	0.41	-0.01	0.36	4.07	0.03	0.02
S9719156	23	7	45	-0.4	21	222	-1	11	78	1.86	2	81	-5	8	22	-2	-2	29	3	5	436	0.71	-0.01	0.9	0.53	0.03	0.03
S9719157	30	-4	23	-0.4	-2	319	1	4	100	0.69	3	27	-5	-5	6	-2	-2	172	5	5	689	0.47	-0.01	0.5	4.06	0.03	0.02
S9719158	28	6	42	-0.4	5	156	-1	18	208	1.79	-2	123	-5	13	19	-2	-2	51	4	5	601	0.86	-0.01	0.76	1.16	0.03	0.04
S9719159	12	-4	41	-0.4	-2	101	-1	10	127	1.81	2	175	-5	-5	22	-2	-2	9	-2	4	206	1.51	-0.01	0.84	0.17	-0.01	0.03
S9719160	8	-4	46	-0.4	-2	88	-1	8	61	1.84	3	121	-5	-5	27	-2	-2	4	-2	4	245	0.92	-0.01	0.87	0.04	-0.01	0.03
S9719161	22	7	47	0.6	3	133	-1	8	81	2.02	2	109	-5	-5	29	-2	-2	8	2	6	196	0.85	-0.01	1.03	0.09	-0.01	0.04
S9719162	57	6	63	0.7	7	193	2	35	304	2.12	-2	169	-5	8	21	-2	-2	28	7	8	786	1.28	-0.01	0.91	0.44	0.03	0.05
S9719163	14	4	25	-0.4	9	95	-1	5	41	1.13	-2	76	-5	-5	21	-2	-2	8	-2	4	139	0.45	-0.01	0.56	0.13	0.02	0.05
S9719164	63	5	63	0.7	14	281	-1	16	380	1.95	-2	163	-5	10	22	-2	-2	77	15	10	579	1.27	-0.01	1.11	1.83	0.03	0.05
S9719165	19	4	42	-0.4	9	113	-1	13	93	2.08	-2	94	-5	7	27	-2	-2	23	-2	5	289	1.18	0.01	0.96	0.48	0.02	0.06
S9719166	9	-4	29	-0.4	-2	88	-1	5	62	1.41	5	77	-5	-5	31	-2	-2	10	-2	6	161	0.67	0.01	0.7	0.17	-0.01	0.05
S9719167	6	4	36	-0.4	-2	45	-1	7	51	2.01	-2	120	-5	12	35	-2	-2	3	-2	6	182	0.98	0.02	0.87	0.03	-0.01	0.05
S9719168	7	-4	45	-0.4	17	51	-1	11	77	2.29	5	174	-5	6	34	-2	-2	3	-2	5	257	1.18	0.02	0.93	0.04	-0.01	0.08
S9719169	10	-4	40	-0.4	3	78	-1	8	91	1.91	-2	131	-5	-5	27	-2	-2	6	-2	4	177	1.06	-0.01	0.83	0.07	0.02	0.04
S9719170	31	5	49	-0.4	10	163	-1	14	112	1.61	3	98	-5	6	20	-2	-2	14	3	6	262	0.83	-0.01	0.77	0.22	0.02	0.06
S9719171	84	9	77	-0.4	12	274	1	15	149	2.44	2	111	-5	8	23	-2	-2	26	7	9	218	1.02	-0.01	1.19	0.38	0.02	0.11
S9719172	57	22	266	0.7	62	166	3	7	53	2.83	10	30	6	-5	69	-2	-2	21	6	9	215	0.37	0.01	0.8	0.12	-0.01	0.08



**Appendix V**  
**Geophysical Equipment**  
**And Procedures**

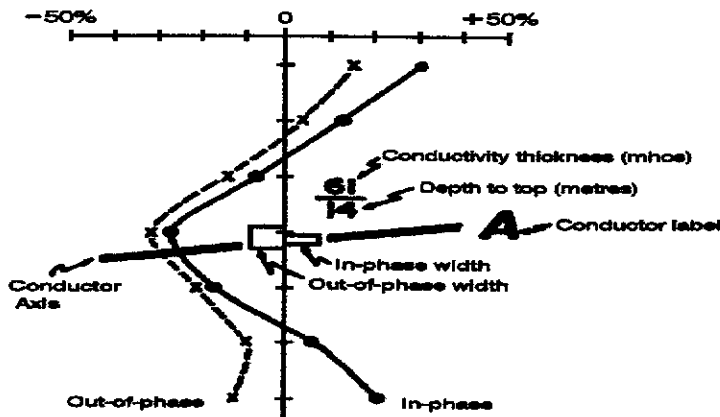
## APPENDIX V - GEOPHYSICAL EQUIPMENT AND PROCEDURES

### HORIZONTAL LOOP ELECTROMAGNETIC SURVEY

The HLEM system used was a Max-Min I-9 and a MMC data logger, manufactured by Apex Parametrics Ltd. The survey employed a 100 metre coil spacing. Three frequencies: 440, 1760, and 3520 Hz, were read at a 25 metre station interval. For data collection, the receiver (Rx) and transmitter (Tx) were simultaneously tilted in a coplanar orientation paralleling the topographic slope (horizontal loop mode). The Rx-Tx separation of 100 metres was kept constant by using the interconnecting reference cable as a chain.

The HLEM results are presented in stacked profile form on 1:5000 plan maps, one map for each frequency. Data points are plotted half way between the Tx-Rx location. In-Phase (IP) data points are indicated by dots joined by a solid line; Out-of-Phase (OP) data is indicated by a dashed line. The conductor width, conductivity-thickness, and depth to top are indicated on all the plots, but are discussed using the lowest frequency (usually 440 Hz) that adequately defines the conductor. An interpretation legend which describes these features is shown below.

A conductor will show a negative IP and/or OP trough of width (with respect to background values) equal to that of the conductor width plus the length of the coil separation. The IP and OP widths due to a conductive source are shown, respectively, above and below the zero line. The shallower a conductor is from the surface, the higher will be the amplitude of the IP and OP responses. Better conductors will respond on progressively lower frequencies whereas poor conductors are seen only on the higher frequencies. A higher IP/OP response amplitude ratio is also indicative of better conductance.

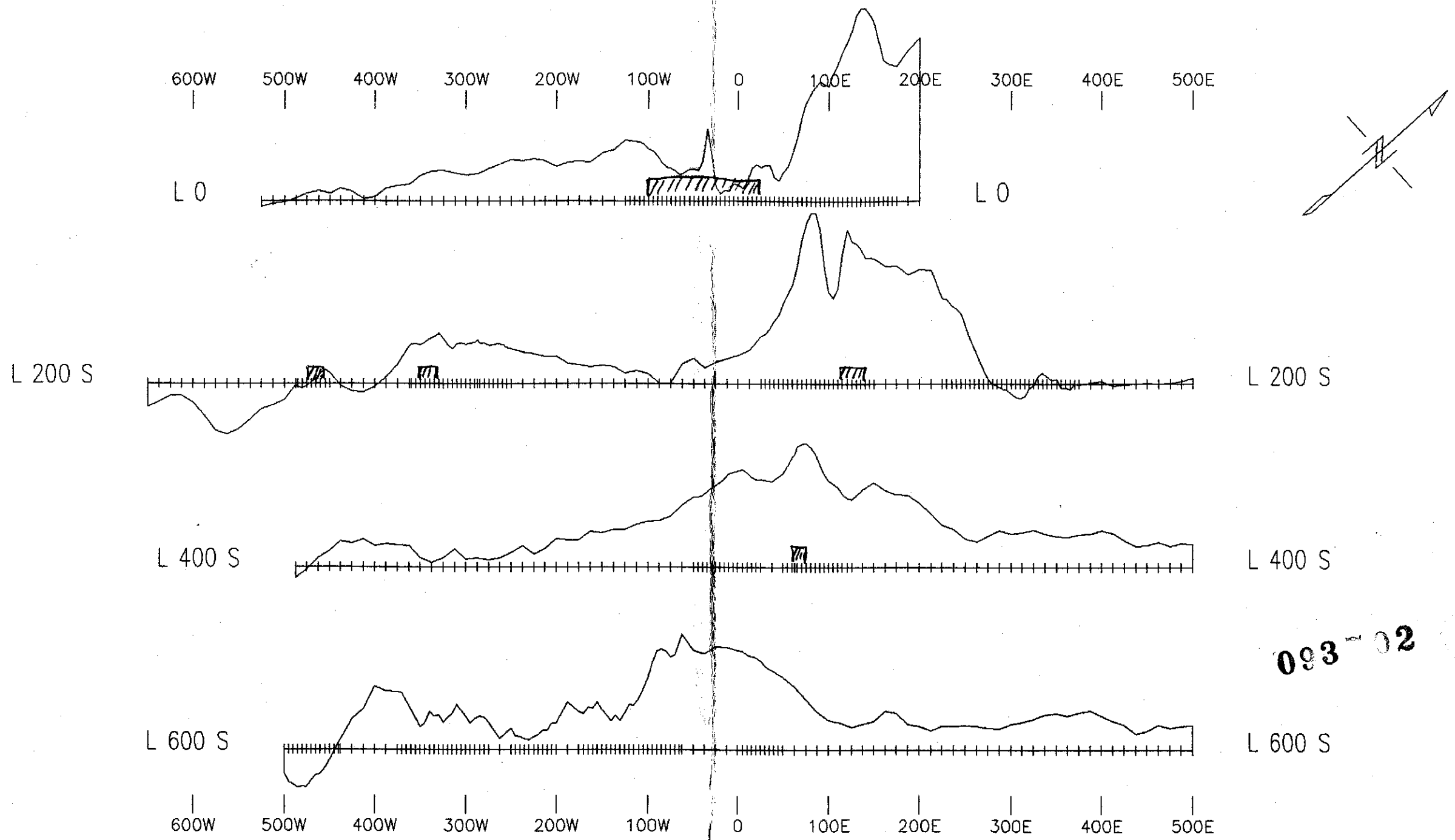


### HLEM INTERPRETATION LEGEND

### MAGNETIC SURVEY

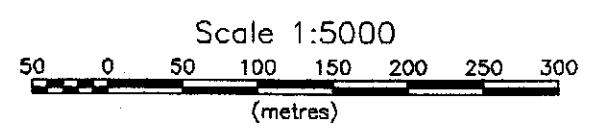
The instrumentation for the magnetic survey consisted of a pair of GSM-19 magnetometers, one set up as a recording base station (taking readings every 3 sec.) and the other taking measurements at each point of the survey grid. Readings were taken every 12.5 metres, which was decreased to every 5 metres in locations where the magnetic response changed rapidly. At the end of a survey day the two units were connected to a computer and the day's data was transferred to the computer memory. Corrections for diurnal magnetic field variations were applied to each survey station value before plots were made. Reading accuracies of  $\pm 5$  nT were attained for the magnetics survey.

The total field magnetic data is presented in stacked profile form at a scale of 1:5000. HLEM conductor axes are traced on the magnetic profile map.



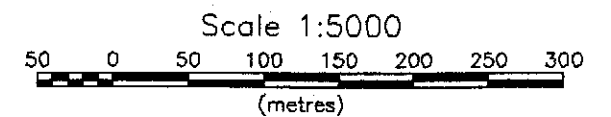
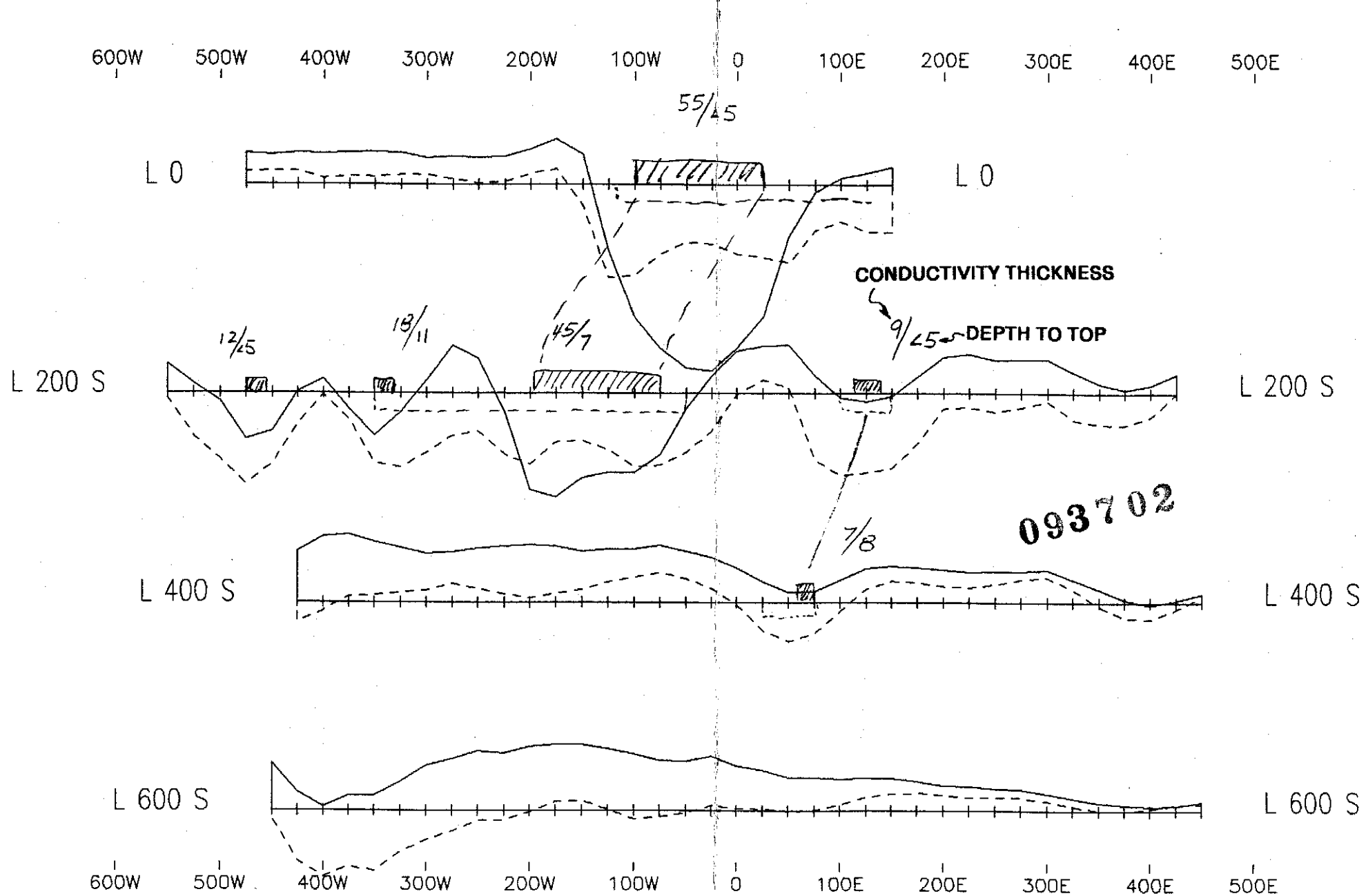
093-02

HLEM CONDUCTOR




VERTICAL SCALE:  
1cm = 200 nT  
  
BASE LEVEL 58900 nT

<b>COMINCO EXPLORATION</b>					NTS 1056
Drawn by:		Traced by:		PELLY MOUNTAIN PROPERTIES ITCH GRID TOTAL FIELD MAGNETICS SURVEY	
Revised by:	Date:	Revised by:	Date:		
				Scale: as shown      Date: AUG. 1997      Plate: <b>FIGURE 3</b>	

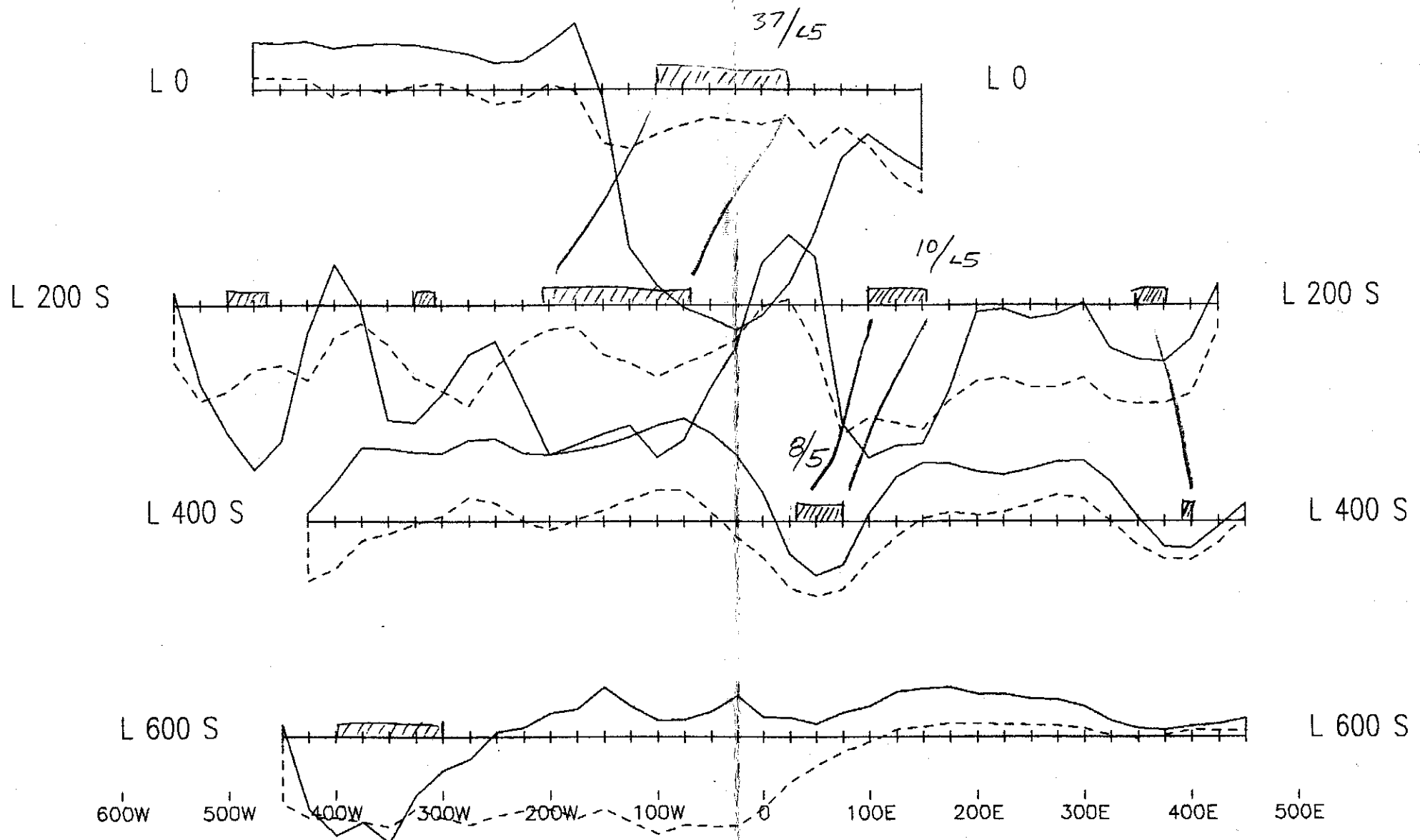
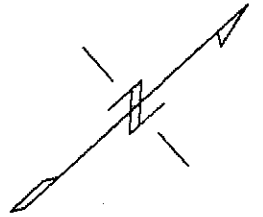


VERTICAL SCALE:  
1cm = 20%

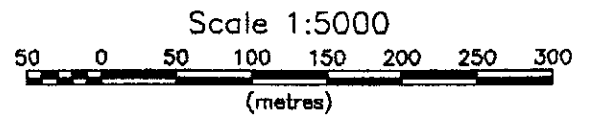
OUT OF PHASE - - - - -  
IN PHASE - - - - -

COMINCO EXPLORATION						NTS 105G	
Drawn by:		Traced by:		PELLY MOUNTAIN PROPERTIES ITCH GRID HORIZONTAL LOOP EM SURVEY: 440 Hz. 100 metre coil spacing			
Revised by:	Date:	Revised by:	Date:				
				Scale: as shown		Date: AUGUST 1997	
						Plate: <b>FIGURE 4</b>	

600W 500W 400W 300W 200W 100W 0 100E 200E 300E 400E 500E




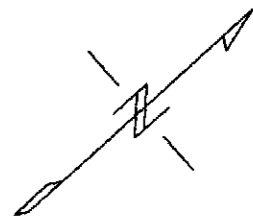
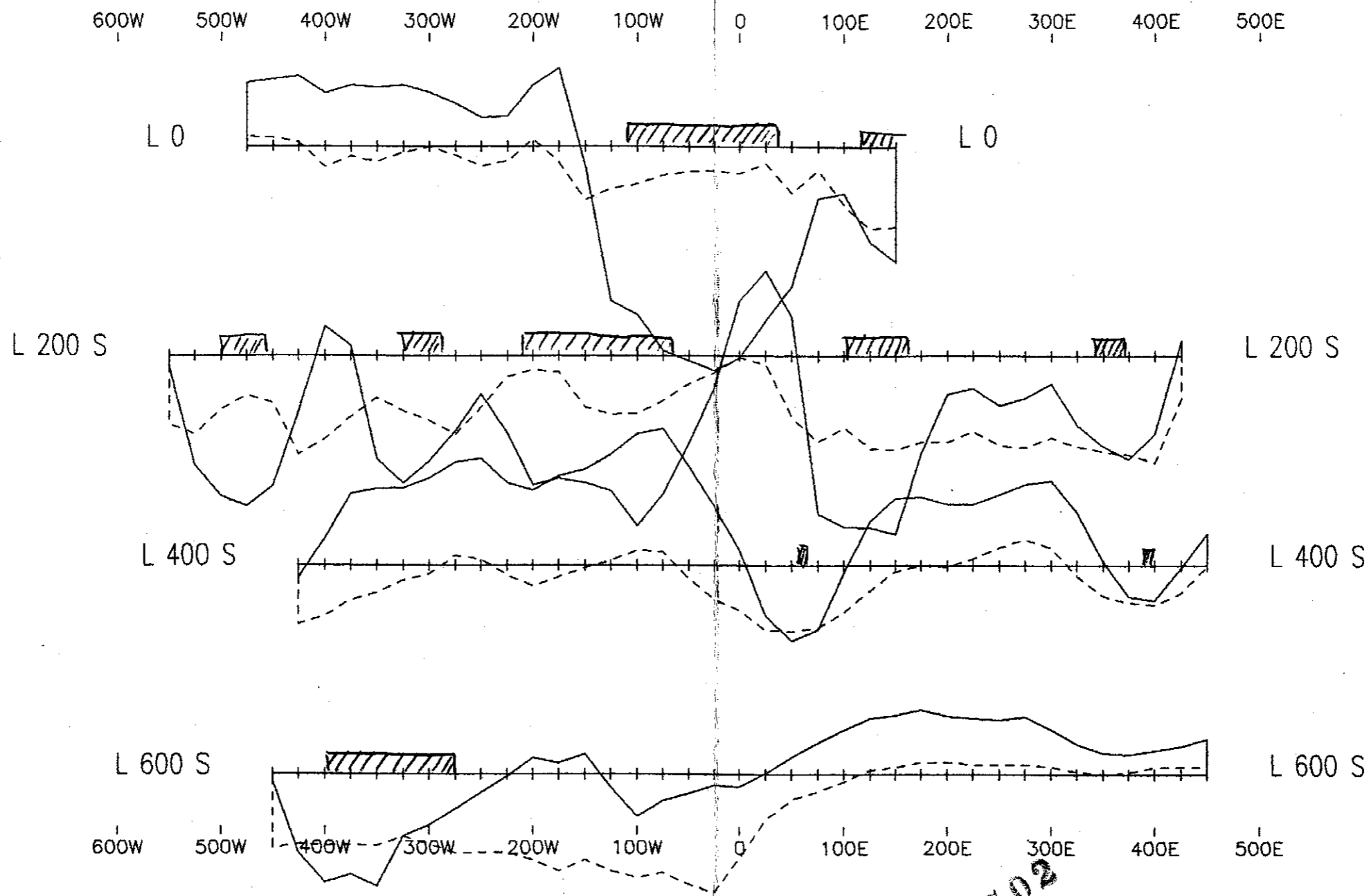
093702



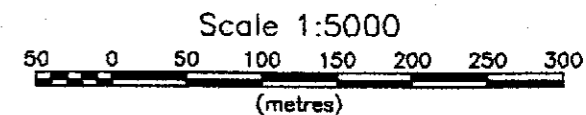
VERTICAL SCALE:  
1cm = 20%

OUT OF PHASE -----  
IN PHASE —————

COMINCO EXPLORATION				 NTS 105G	
Drawn by:		Traced by:		PELLY MOUNTAIN PROPERTIES ITCH GRID HORIZONTAL LOOP EM SURVEY: 1760 Hz. 100 metre coil spacing	
Revised by:	Date:	Revised by:	Date:		
				Scale: as shown      Date: AUGUST 1997      Plate: <b>FIGURE 5</b>	




093702



VERTICAL SCALE:  
1cm = 20%

OUT OF PHASE -----  
IN PHASE \_\_\_\_\_

<b>COMINCO EXPLORATION</b>				 NTS 105G	
Drawn by:		Traced by:		<b>PELLY MOUNTAIN PROPERTIES</b> <b>ITCH GRID</b> <b>HORIZONTAL LOOP EM SURVEY: 3520 Hz.</b> <b>100 metre coil spacing</b>	
Revised by:	Date:	Revised by:	Date:		
				Scale: as shown      Date: AUGUST 1997      Plate: <b>FIGURE 6</b>	