

COMINCO LTD.

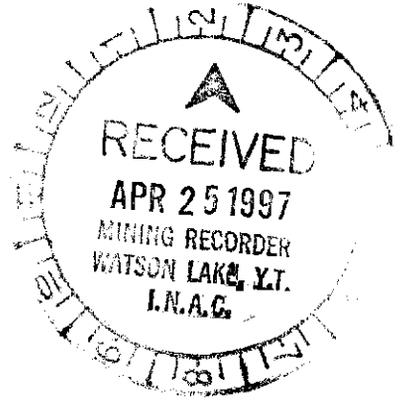
EXPLORATION

WESTERN DISTRICT

NTS 105 A/13

1996 ASSESSMENT REPORT

ITCH AND SEL PROPERTIES



GEOLOGICAL MAPPING/PROSPECTING, SOIL GEOCHEMISTRY AND  
GROUND GEOPHYSICS (HLEM/MAG)

WATSON LAKE M.D., YUKON

HASSELBERG LAKE AREA, PELLY MOUNTAINS

WORK PERIOD

JULY 5 TO AUGUST 27, 1996

093651

LATITUDE: 60°58'

APRIL, 1997



LONGITUDE: 129°50'

DARREN A. SENFT

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 7200.

*M. Burke*  
for Regional Manager, Exploration and  
Geological Services for Commissioner,  
of Yukon Territory.

# TABLE OF CONTENTS

	<u>Page</u>
1.0 SUMMARY	1
2.0 LOCATION AND ACCESS	1
3.0 PROPERTY AND OWNERSHIP	1
4.0 PREVIOUS WORK	1
5.0 REGIONAL GEOLOGY	3
6.0 1996 FIELD WORK	3
6.1 GEOLOGY, PROSPECTING AND GEOCHEMISTRY	
6.2 GEOPHYSICS	
7.0 ITCH PROPERTY	4
7.1 GEOLOGY AND MINERALIZATION	
8.0 SEL PROPERTY	5
8.1 GEOLOGY AND MINERALIZATION	
8.2 GEOCHEMISTRY	
8.3 GEOPHYSICS	
9.0 CONCLUSIONS AND RECOMMENDATIONS	5
10.0 REFERENCES	7

## FIGURES

FIGURE 1 GENERAL LOCATION	2
---------------------------	---

## APPENDICES

APPENDIX I STATEMENT OF QUALIFICATIONS	
APPENDIX II 1996 GEOCHEMISTRY DATA	
APPENDIX III HORIZONTAL LOOP EM INTERPRETATION LEGEND	
APPENDIX IV STATEMENTS OF EXPENDITURES	

## ATTACHMENTS

FIGURE 2 CLAIM MAP (1:31,500)	
FIGURE 3 GEOLOGY MAP (1:10,000)	
FIGURE 4 GEOCHEMICAL SAMPLE LOCATIONS (1:10,000)	
FIGURE 5a HLEM PROFILES:(100m c.s.) 440 Hz	
FIGURE 5b HLEM PROFILES:(100m c.s.) 1760 Hz	
FIGURE 5c HLEM PROFILES:(100m c.s.) 3520 Hz	
FIGURE 5d TOTAL FIELD MAGNETIC PROFILES	

## 1996 ASSESSMENT REPORT ITCH AND SEL PROPERTIES, YUKON TERRITORY

### 1.0 SUMMARY

The ITCH and SEL properties, comprising 101 units, are located just north of Hasselberg Lake, about 70 kms southeast of Cominco's ABM VHMS Deposit and approximately 115 kms northwest of Watson Lake.

These properties were staked to cover airborne geophysical targets identified during a Cominco survey conducted in early 1994.

The rocks underlying this part of southeastern Yukon have been assigned to the Yukon-Tanana Terrane (YTT) and the Slide Mountain Terrane (SMT). The YTT consists primarily of a layered sequence of metamorphosed rocks comprising a "lower unit" of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian "middle unit" comprising carbonaceous phyllite and schist with interbanded mafic and, locally significant, felsic metavolcanics, and an "upper unit" of Pennsylvanian marbles and quartzite. Volcanism within the "middle unit" was accompanied by the intrusion of 2-3, late Devonian to Mississippian, mafic to felsic metaplutonic suites. Felsic volcanics of the "middle unit" are host to Cominco's ABM VHMS Deposit.

Both the ITCH and SEL properties are underlain by a late Devonian to mid-Mississippian sequence of "middle unit" carbonaceous mudstone and silty mudstone with minor siltstone and quartzite interbeds of the YTT. A thrust panel of serpentized ultramafic rocks of the SMT underlies the hills to the west of the ITCH property.

Work completed on the ITCH and SEL properties in 1996 included three person days of mapping, one day of prospecting, and three person days of grid-based soil silt sampling. Results from the soil sampling on the SEL grid returned anomalous Ag, but low values for all other base metals.

Further work on the ITCH property should include additional geochemical sampling as follow-up to the 1994 sampling, as well as ground geophysical surveys (HLEM/MAG) to test airborne EM features. Although no rock exposure has been noted on the SEL property, further evaluation of the geophysical and geochemical results will possibly define a drill target on the SEL grid.

### 2.0 LOCATION AND ACCESS

The ITCH property is located 1km north of the SEL property, which is located on the northwest shore of Hasselberg Lake. This area is about 70 kms southeast of Cominco's ABM VHMS Deposit and approximately 115 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.

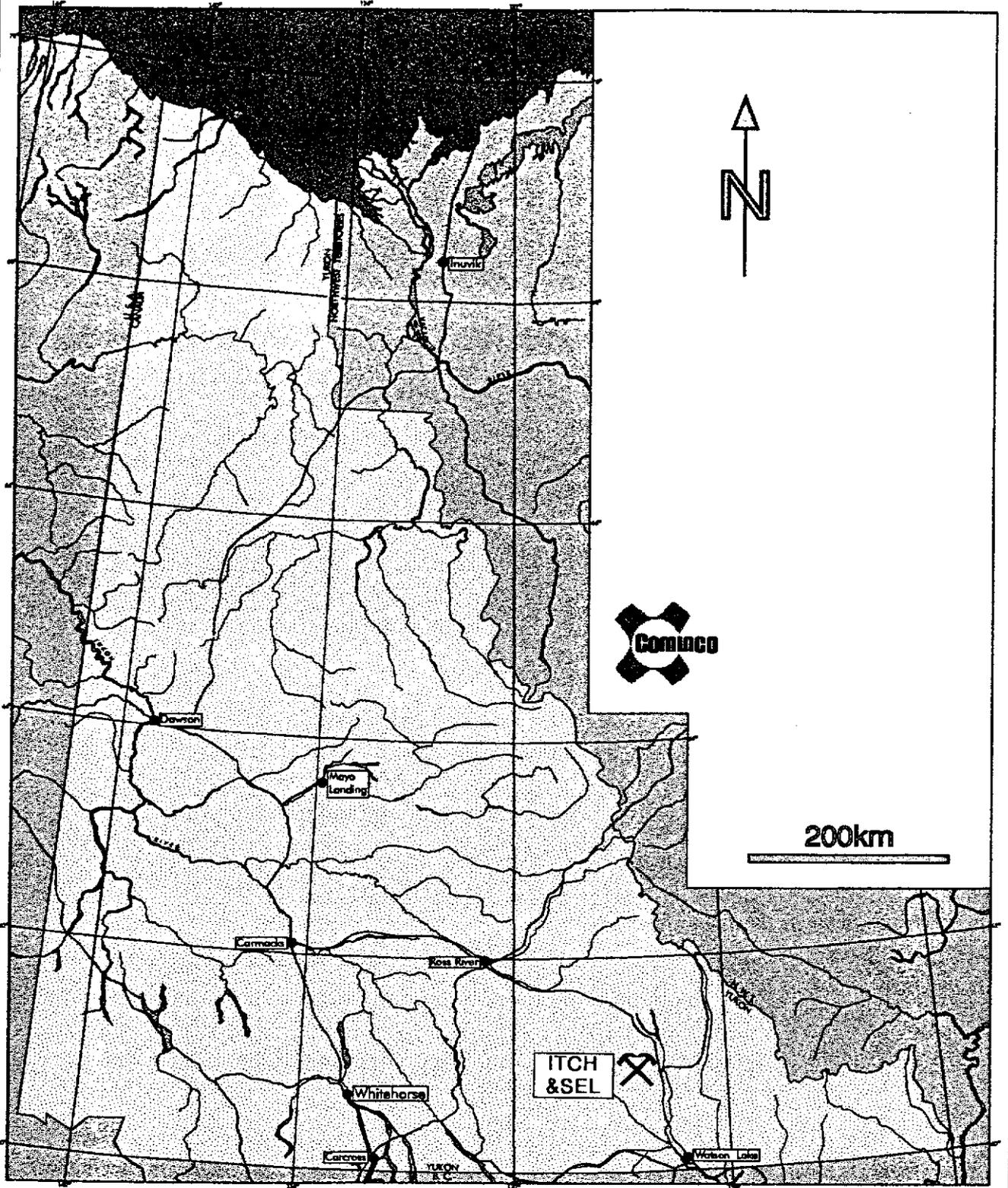
### 3.0 PROPERTY AND OWNERSHIP

The ITCH and SEL properties, comprising 101 units, are 100% owned by Cominco Ltd. (Figure 2).

<u>NAME</u>	<u>UNITS</u>	<u>CLAIM NO.</u>	<u>DUE DATES</u>
ITCH 1-84	84	YB50105-188	April 7/97
SEL 1-17	17	YB50088-104	June 15/98

### 4.0 PREVIOUS WORK

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



Drawn by:		Traced by: a. m. a.	
Revised by:	Date:	Revised by:	Date:

## ITCH and SEL PROPERTY LOCATIONS

105 A/13

Scale: As Shown

Date: April, 1996

Plate: 1

Cominco work in this area began in 1994 with an airborne EM geophysical survey, followed up by regional mapping/prospecting and contour soil sampling. The results from soil sampling returned strong Ni values with a coincident Cr-Co-As-V±Cu metal signature on the ITCH property, and several samples anomalous in Ag (up to 3.2 ppm) on the SEL property. No work was completed on either of the properties in the 1995 field season.

## 5.0 REGIONAL GEOLOGY

The rocks underlying this part of southeastern Yukon have been assigned to 2 terranes: the Yukon-Tanana Terrane (YTT) and the Slide Mountain Terrane (SMT) (Mortensen, 1983a; Mortensen and Jilson, 1985).

The YTT consists primarily of a layered sequence of metamorphosed rocks comprising a "lower unit" (3I) of pre-Devonian quartzite, pelitic schist and minor marble, a late Devonian to mid-Mississippian "middle unit" (3F) comprising carbonaceous phyllite and schist with interbanded mafic and, locally significant, felsic metavolcanics (3G), and an "upper unit" of Pennsylvanian marbles and quartzite. Volcanism within the "middle unit" was accompanied by the intrusion of 2-3, late Devonian to Mississippian, mafic to felsic metaplutonic suites (Simpson Range suite and augen and monzonitic orthogneisses). This sequence appears to reflect stable platformal or shelf sedimentation with an intervening period of mafic to felsic arc volcanism developed within a more reduced basinal setting. Felsic volcanoclastics of the "middle unit" are host to Cominco's ABM VHMS Deposit.

The late Devonian to Triassic SMT comprises a heterogenous package of mafic to ultramafic plutonic rocks, mafic volcanics, massive carbonate and chert. This sequence was structurally emplaced as thrust bounded klippen on YTT rocks or as thrust slices imbricated within YTT rocks during a period of crustal shortening (D2). The SMT is thought to represent a disrupted oceanic crust and volcanic arc assemblage thought to be located between the YTT and ancestral North America(?).

A subhorizontal to moderately north to northeast dipping, penetrative ductile deformation fabric (S2) and associated middle greenschist facies (chlorite-biotite grade) metamorphism affects all YTT rocks. This fabric reflects the first, and most significant, deformational and metamorphic event (D1) perhaps related to a continent-arc collision during late Permian to early Triassic time.

Late Triassic immature clastics comprising micaceous argillite, siltstone and sandstone unconformably(?) overlie the deformed and metamorphosed YTT rocks. These sediments are often closely associated with SMT volcanics and are invariably in fault contact with YTT rocks.

The SMT, Late Triassic sediments and Late Triassic to Middle Jurassic plutons are all affected by a period of Middle Jurassic to Late Cretaceous thrust faulting (D2), during which the Finlayson Lake Fault Zone was formed. This complex fault zone contains both thrust and steep, transcurrent(?) faults and separates the YTT from autochthonous North America (Mortensen, 1983a; Mortensen and Jilson, 1985).

## 6.0 1996 FIELD WORK

### 6.1 GEOLOGY, PROSPECTING AND GEOCHEMISTRY

Regional scale mapping, prospecting and contour soil geochemistry was completed by recce traverses on the ITCH and SEL properties. Prospecting was carried out by two prospectors from GL Geoservice Ltd. of Rouyn-Noranda, Quebec. The following table summarizes 1996 field work.

PROPERTY	GEOLOGY	PROSPECTING	GEOCHEMISTRY
ITCH	Jul 5, Aug 27; MOK, LAT	Jul 9; GLGS	N/A
SEL	Jul 5; MOK	N/A	Jul 25; 73 soils

## 6.2 GEOPHYSICAL SURVEYS

The 1996 geophysical program for the SEL property involved ground surveys (HLEM/MAG) on one grid. This grid was chosen for the purpose of evaluating conductors observed from airborne geophysical information.

GEOPHYSICAL GRID	SURVEY TYPE	# KM'S SURVEYED	DATES WORKED
SEL	HLEM/MAG	3.6	Jul 25

### 6.2.1 HORIZONTAL LOOP EM SURVEY

The HLEM system used was a Max-Min I-10 in combination with an MMC data recorder, both manufactured by Apex Parametrics Ltd. The survey employed a 100 metre coil separation and a 25 metre station interval. Three frequencies: 440, 1760, and 3520 Hz, were read.

For data collection, the receiver (Rx) and transmitters (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 the plots which provide the best definition of the conductors. These results are discussed below using the lowest frequency (usually 440 Hz) that adequately defines the conductor. An interpretation legend which describes these features is appended to this report.

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.

Accuracy of readings is dependent on maintaining a constant spacing between transmitter and receiver. A 1% error in separation will result in a 3% in-phase error in reading. Generally, accuracy should be within 2% except in rugged terrain where it is more difficult to maintain a constant receiver-transmitter spacing. Under these conditions readings should be within 5%.

### 6.2.2 MAGNETIC SURVEY

The instrumentation for the magnetic survey consisted of a pair of OMNI PLUS magnetometers, one set up as a recording base station (taking readings every 15 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.

## 7.0 ITCH PROPERTY

### 7.1 GEOLOGY AND MINERALIZATION

The ITCH property is underlain by late Devonian to mid-Mississippian mixed "middle unit" of the Yukon Tanana Terrane, comprising sequences of carbonaceous phyllite and metasedimentary schist, with intervals of mafic metavolcanics.

The property is generally poorly exposed, with outcrops restricted to creek cuts along the west side of the property. The stratigraphy on the property generally trends north to northwest, with variably moderate to steep dips of 45-70° to the east and northeast (Figure 3).

The stratigraphy on the west side of the property consists of grey to black, variably carbonaceous mudstone and silty mudstone with minor interbedded quartzite and siltstone. The base of this unit has not been defined. The mudstones are characteristic of typical Selwyn Basin shales of the late Devonian Earn Group, and similar to the shale section underlying Westmin/Atna's Wolverine Zone east of Wolverine Lake, or the argillaceous section above Columbia Gold's Kona Zone at Fyre Lake. No felsic volcanics or significant mineralization was found on the ITCH property.

A thrust fault is inferred immediately to the west of the property, which has emplaced strongly magnetic serpentinized ultramafics of the SMT on top of the YTT sediments.

## **8.0 SEL PROPERTY**

### **8.1 GEOLOGY AND MINERALIZATION**

The SEL property, located on the northwest shore of Hasselberg Lake, is believed to be underlain by the same stratigraphy as the ITCH property, 1km to the north. Although no exposure was noted within the SEL claim boundary, several outcrops do occur to the west of the property. These outcrops are all comprised of slaty, carbonaceous mudstone. No mineralization was found.

### **8.2 GEOCHEMISTRY**

Grid-based soil sampling was completed on the SEL property in 1996. A total of 73 soil samples were collected at 50m intervals along the gridlines (Figure 4). Results from this sampling returned anomalous values for Ag (>0.8 up to 2.9 ppm), but no elevated results for any other base metals.

### **8.3 GEOPHYSICS**

The SEL grid was located on a horseshoe shaped aeromagnetic feature with coincident conductivity. Several conductors were defined by the ground survey. These trend diagonally across the grid in a roughly north-south orientation with widths varying from a few metres to over a hundred metres, and lengths in excess of 600 metres. Conductivity thicknesses vary from a few siemens (s) to 30 s and depths from several metres to over 30 metres. The grid area is very active magnetically with each line displaying 100 to 300 metre wide anomalies 200-700 nT in amplitude.

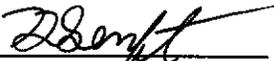
The broad nature of the magnetic anomalies suggests a deeper source than is indicated for the conductivity. Generally, the conductive and magnetic features do not appear to be closely associated with one another. However on line 200E between 100S and 200S there is a discreet 500nT magnetic feature which appears to be relatively shallow and a weak conductor coincident with it. Also, on line 400E, a narrow conductor is coincident with a 250 metre-wide, 700 nT magnetic high.

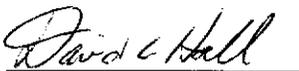
## **9.0 CONCLUSIONS and RECOMMENDATIONS**

Both the ITCH and SEL properties are underlain by a late Devonian to mid-Mississippian sequence of "middle unit" carbonaceous mudstone and silty mudstone with minor siltstone and quartzite interbeds of the YTT. A thrust panel of serpentinized ultramafic rocks of the SMT underlies the hills to the west of the ITCH property.

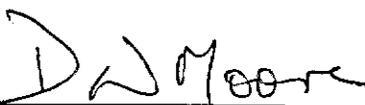
Work completed on the ITCH and SEL properties in 1996 included three person days of mapping, one day of prospecting, and three person days of grid-based soil silt sampling. Results from the soil sampling on the SEL grid returned anomalous Ag, but low values for all other base metals.

Further work on the ITCH property should include additional geochemical sampling as follow-up to the 1994 sampling, as well as ground geophysical surveys (HLEM/MAG) to test airborne EM features. Although no rock exposure has been noted on the SEL property, further evaluation of the geophysical and geochemical results will possibly define a drill target on the SEL grid.

Report by:   
D. A. Senft, B.Sc.  
Geologist

Report by:   
D.C. Hall, B.Sc.  
Geophysicist

Endorsed by:   
D. Rhodes,  
Senior Geologist

Approved for  
Release by:   
D. W. Moore  
Manager, Exploration  
Western Canada

DAS/

DISTRIBUTION:  
W.D. Files  
Mining Recorder (2)

**10.0 REFERENCES**

PLINT, H. E., 1994. GEOLOGICAL MAPPING IN THE CAMPBELL RANGE, SOUTHEASTERN YUKON (PARTS OF 105 G/8, G/9 AND 105 H/5,H/12); Yukon Exploration and Geology 1994: Part C, Exploration and Geological Services Division, Yukon, Indian and Northern Affairs, Canada, p. 47-58.

MORTENSEN, J. K., 1983a. AGE AND EVOLUTION OF THE YUKON-TANANA TERRANE, SOUTHEASTERN YUKON TERRITORY [Ph.D. Thesis]; Santa Barbara, University of California, 155 p.

MORTENSEN, J. K. AND JILSON, G. A., 1985. EVOLUTION OF THE YUKON-TANANA TERRANE : EVIDENCE FROM SOUTHEASTERN YUKON TERRITORY; Geology, 13, p. 806-810.

MACROBBIE, P.A., 1995. 1994 ASSESSMENT REPORT : ITC AND SEL PROPERTIES ; SOIL GEOCHEMISTRY AND GEOLOGICAL MAPPING; Cominco Assessment Report, 6p.

**APPENDIX I**  
**STATEMENT OF QUALIFICATIONS**

## STATEMENT OF QUALIFICATIONS

I, Darren A. Senft, of #4-2415 W. 4th Ave., Vancouver, B.C. hereby declare that I:

1. Graduated from The University of British Columbia, Vancouver, B.C. with a B.Sc. in Geology in May, 1994.
2. Have been actively engaged in mineral exploration in Western Canada as a geological assistant with Cominco Ltd. during the summers of 1992-93 and as a contract geologist with Cominco Ltd. since May, 1994.

Date: April, 1997

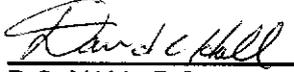
  
\_\_\_\_\_  
D.A. SENFT, B.Sc.  
GEOLOGIST

## STATEMENT 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:

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

Date: April, 1997

  
D.C. HALL, B.Sc.  
GEOPHYSICIST

**APPENDIX II**  
**1996 GEOCHEMISTRY DATA**

**SEL SOIL GEOCHEMISTRY**

LAB	FIELD	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	Au	Au Wt.	Ba (xrf)
NUMBER	NUMBER	ppm	%	ppm	%	%	%	%	%	%	%	%	%																		
S9619410	338554	20	8	112	1.5	31	123	1	6	35	2.07	5	33	12	2	32	1	1	6	1	3	181	0.51	0.01	1.1	0.04	0.01	0.07	5	10	1311
S9619411	338555	26	8	70	0.2	5	62	1	5	42	1.96	1	42	2	6	38	1	1	4	1	3	206	1	0.03	1.3	0.03	0.01	0.04	5	10	1210
S9619412	338556	22	10	114	0.9	4	152	1	7	45	2.12	5	35	2	2	35	1	1	5	1	3	523	0.88	0.03	0.99	0.04	0.01	0.09	5	10	1502
S9619413	338557	18	6	83	0.8	20	116	1	4	35	1.74	2	31	2	2	35	1	1	6	1	3	182	0.55	0.02	0.91	0.04	0.01	0.06	5	10	1321
S9619414	338558	22	10	125	2	53	98	1	5	36	2.58	9	35	2	27	51	12	1	5	1	4	214	0.88	0.02	1.4	0.03	0.01	0.09	5	10	1689
S9619415	338559	18	7	69	2.4	31	63	1	4	37	2.14	1	36	2	2	35	1	1	4	1	4	181	0.63	0.02	1.08	0.02	0.01	0.07	5	9	1240
S9619416	338560	9	6	64	0.6	26	115	1	2	19	1.77	2	31	10	9	36	1	1	4	1	4	206	0.77	0.03	1.23	0.01	0.01	0.07	5	10	1112
S9619417	338561	38	7	126	1.1	48	114	1	6	58	3.3	3	50	2	11	49	12	1	5	1	3	302	1.13	0.04	1.88	0.03	0.01	0.1	5	10	1204
S9619418	338562	12	10	70	1.2	18	128	1	2	17	1.47	2	17	2	2	29	1	1	6	1	4	277	0.32	0.01	0.76	0.03	0.01	0.04	5	10	1423
S9619419	338563	12	14	97	1.8	16	132	1	3	18	2.17	3	22	2	2	45	10	1	5	1	5	242	0.46	0.02	1.14	0.04	0.01	0.05	5	10	1324
S9619420	338564	16	8	116	1.3	25	69	1	4	28	2.41	7	28	5	2	49	1	1	10	1	5	170	0.39	0.04	0.93	0.04	0.01	0.07	5	10	1377
S9619421	338565	24	11	166	0.2	49	67	1	7	52	3.83	9	61	13	2	94	5	1	6	2	4	235	0.7	0.06	1.64	0.03	0.01	0.06	5	10	1164
S9619422	338566	35	8	85	0.4	20	102	1	5	53	1.72	7	41	2	9	32	1	1	10	4	6	253	0.92	0.02	1.15	0.2	0.01	0.18	5	10	1075
S9619423	338567	22	10	124	0.7	56	76	1	9	62	2.53	10	57	2	7	75	1	1	11	1	4	236	0.96	0.04	1.72	0.1	0.01	0.07	5	10	1040
S9619424	338568	73	10	69	2.3	23	90	6	6	43	1.27	9	22	2	2	35	1	1	28	28	44	206	0.32	0.02	0.93	0.66	0.04	0.04	5	10	973
S9619425	338569	27	14	169	1.1	30	130	1	7	40	2.45	9	46	12	6	79	6	1	16	2	6	344	0.96	0.03	1.62	0.08	0.01	0.06	5	10	1064
S9619426	338570	68	13	236	0.9	119	165	1	17	101	3.53	12	67	2	18	85	3	1	37	4	9	637	1.56	0.04	2.59	0.39	0.03	0.22	5	7	926
S9619427	338571	17	11	91	0.2	8	77	1	3	40	1.61	7	57	2	9	82	1	1	8	1	6	282	0.9	0.04	1.53	0.03	0.01	0.06	5	10	1103
S9619428	338572	37	14	200	0.6	58	140	1	13	84	3.71	7	81	5	16	91	6	1	21	4	9	298	1.15	0.03	2.46	0.07	0.01	0.07	5	10	1120
S9619429	338573	12	9	63	0.4	15	59	1	2	24	1.62	6	33	6	7	54	1	1	12	1	6	114	0.38	0.02	0.77	0.02	0.01	0.04	5	10	1156
S9619430	338574	11	2	7	0.2	1	130	3	1	11	0.25	3	5	2	2	5	1	1	53	1	2	162	0.14	0.01	0.31	1.54	0.05	0.02	5	10	892
S9619431	338575	21	8	114	0.9	18	50	1	5	42	2.86	3	44	5	10	47	3	1	3	1	4	154	0.56	0.03	1.14	0.01	0.01	0.06	5	10	1226
S9619432	338576	22	11	91	0.4	18	96	1	7	56	3.35	6	62	2	8	58	7	1	10	2	5	232	0.8	0.05	1.46	0.07	0.01	0.09	5	10	1264
S9619433	338577	67	4	70	2.6	18	283	1	4	73	1.13	5	26	13	2	14	1	1	75	11	11	253	0.4	0.01	0.99	1.83	0.03	0.05	5	9	965
S9619434	338578	17	7	90	0.6	41	85	1	5	33	1.9	5	36	2	2	43	2	1	8	1	6	249	0.63	0.02	0.98	0.1	0.01	0.12	5	10	1152
S9619435	338579	61	13	97	2.1	44	141	1	6	45	1.93	14	45	5	2	35	7	1	13	6	11	323	0.55	0.02	1.11	0.13	0.03	0.06	5	10	1219
S9619436	338580	17	11	85	0.6	24	180	1	4	23	2.31	4	32	2	5	38	1	1	8	1	8	480	1.29	0.02	1.8	0.15	0.01	0.07	5	10	981
S9619437	338581	6	5	25	1.2	8	54	1	2	10	1.08	3	25	2	8	20	2	1	8	1	5	165	0.07	0.01	0.76	0.05	0.01	0.04	5	10	1116
S9619438	338582	24	12	104	0.4	32	69	1	8	51	3.23	7	64	6	2	52	6	1	9	2	8	245	0.76	0.04	1.4	0.06	0.01	0.08	5	10	1161
S9619439	338583	16	9	86	0.7	39	77	1	4	31	2.17	4	37	2	14	37	1	1	4	2	9	237	0.6	0.02	1.06	0.04	0.01	0.08	5	10	1325
S9619440	338584	6	8	58	0.9	21	114	1	2	15	1.32	3	26	2	8	27	1	1	4	1	12	126	0.48	0.02	0.92	0.03	0.01	0.07	5	10	1307
S9619441	338585	17	13	60	1.4	31	163	1	3	22	1.72	5	23	2	13	33	2	1	6	2	6	277	0.45	0.01	0.92	0.02	0.01	0.05	5	10	1522
S9619442	338586	12	5	24	1.9	9	96	1	1	15	0.72	1	19	2	5	11	1	1	7	1	6	67	0.25	0.01	0.54	0.05	0.03	0.05	5	10	1264
S9619443	338587	6	6	18	0.2	8	57	1	2	8	0.42	1	10	2	2	6	5	1	3	1	7	126	0.15	0.01	0.34	0.02	0.01	0.05	5	10	1335
S9619444	338588	28	15	64	0.4	31	188	1	12	93	2.4	5	70	2	7	33	1	1	18	9	12	347	0.9	0.02	1.05	0.34	0.01	0.13	5	10	1165
S9619445	338589	4	9	30	0.2	9	62	1	2	11	1.28	1	22	7	5	24	1	1	4	1	10	108	0.14	0.01	0.68	0.03	0.01	0.04	5	10	1052
S9619446	338590	7	12	63	0.6	9	64	1	4	19	2.62	7	27	9	2	40	1	1	4	1	10	200	0.34	0.02	0.98	0.03	0.01	0.05	5	10	1049
S9619447	338591	6	8	61	0.2	9	44	1	4	19	1.64	3	27	2	2	28	2	1	3	2	10	169	0.34	0.01	0.88	0.02	0.01	0.05	5	10	1079
S9619448	338592	3	7	31	0.2	1	40	1	2	11	1.11	3	19	2	5	19	1	1	2	1	8	77	0.13	0.01	0.46	0.02	0.01	0.02	5	10	1121
S9619449	338593	50	13	220	1.1	26	204	6	9	78	2.11	7	49	2	2	30	1	1	47	2	6	660	0.71	0.01	1.13	1.23	0.03	0.07	5	10	1103
S9619450	338594	42	2	37	1.7	11	166	2	1	70	0.26	2	6	2	2	2	1	1	85	2	2	207	0.24	0.01	0.38	2.86	0.01	0.01	5	8	551
S9619451	338595	3	6	14	0.2	14	85	1	1	3	0.44	3	10	2	2	12	8	1	4	1	3	61	0.11	0.01	0.47	0.02	0.01	0.02	5	10	1125
S9619452	338596	24	8	59	0.9	23	80	1	7	63	2.05	4	54	2	2	32	1	1	4	1	5	163	0.56	0.01	1.29	0.02	0.01	0.03	5	10	1025
S9619453	338597	16	7	65	0.7	19	92	1	7	51	2.81	5	66	5	14	47	10	1	5	1	4	201	0.67	0.03	1.31	0.03	0.01	0.04	5	10	1021
S9619454	338598	6	10	73	0.4	10	67	1	4	15	2.3	6	29	2	2	44	1	1	4	1	7	262	0.33	0.03	0.99	0.03	0.01	0.06	5	10	1067
S9619455	338599	44	8	10	1	5	276	3	1	55	0.51	4	18	6	5	6	6	1	35	4	8	21	0.12	0.01	0.5	0.75	0.03	0.03	5	10	1061
S9619456	338600	10	8	53	0.6	5	73	1	3	21	1.33	4	35	2	5	42	1	1	7	1	8	133	0.38	0.03	0.74	0.08	0.01	0.04	5	10	1248
S9619457	338601	54	14	147	0.9	48	80	1	15	94	3.46	6	61	2	2	44	1	1	9	3	8	290	0.61	0.01	1.93	0.06	0.01	0.07	5	10	1102
S9619458	338603	36	11	125	0.2	41	168																								

S9619460	338605	36	9	71	2	40	234	1	7	56	1.82	9	76	2	15	33	1	1	55	14	20	371	0.75	0.01	1.27	1.24	0.03	0.11	5	10	989
S9619461	338606	7	10	53	0.4	5	62	1	2	14	1.37	3	26	2	2	51	3	1	6	1	4	120	0.27	0.03	0.78	0.01	0.01	0.04	5	10	1120
S9619462	338607	19	11	183	0.5	29	209	1	12	54	2.14	8	57	2	11	98	1	1	19	2	1	404	1.03	0.04	1.7	0.11	0.01	0.06	5	10	1355
S9619463	338608	14	12	227	0.2	2	136	1	17	55	2.05	3	50	2	14	75	8	1	28	1	1	317	0.85	0.04	1.48	0.37	0.01	0.1	5	10	1001
S9619464	338609	18	11	280	0.2	28	91	2	13	45	2.68	6	56	9	18	78	10	1	13	1	6	295	0.76	0.05	1.49	0.06	0.01	0.08	5	10	843
S9619465	338610	16	13	120	0.2	37	59	1	5	42	2.58	7	66	8	21	101	1	1	7	1	6	196	0.67	0.06	1.33	0.02	0.01	0.04	5	10	1072
S9619466	338611	8	11	223	0.2	9	85	3	11	36	2.53	7	57	2	11	81	4	1	6	1	6	318	0.56	0.03	1.33	0.02	0.01	0.04	5	10	1285
S9619467	338612	9	2	35	0.2	11	46	1	5	11	0.9	3	18	2	2	28	1	1	4	1	2	1081	0.11	0.01	0.62	0.02	0.03	0.02	5	10	1116
S9619468	338613	18	11	96	0.5	6	109	1	10	67	3.31	4	104	2	20	66	1	7	8	2	6	254	0.77	0.03	1.69	0.03	0.01	0.07	5	10	1287
S9619469	338614	19	11	84	0.7	29	81	1	7	61	2.99	3	72	7	19	69	13	7	10	1	5	197	0.68	0.03	1.47	0.02	0.01	0.05	5	10	1165
S9619470	338615	13	7	84	0.2	10	88	1	7	50	2.56	7	64	5	14	56	1	4	6	1	5	159	0.49	0.03	1.25	0.02	0.01	0.04	5	10	1074
S9619471	338616	8	9	36	0.2	13	55	1	3	22	1.51	4	34	2	2	38	8	4	6	1	5	92	0.29	0.02	0.71	0.01	0.01	0.04	5	10	1269
S9619472	338617	24	9	68	2.9	35	85	1	9	58	2.79	4	54	5	11	52	1	4	9	1	4	246	0.69	0.03	1.4	0.06	0.01	0.08	5	10	1248
S9619473	338618	41	11	122	0.5	44	232	1	13	70	2.19	1	42	11	13	39	1	4	17	2	6	1059	0.83	0.03	1.55	0.19	0.01	0.09	5	10	1482
S9619474	338619	23	8	63	0.2	26	107	1	9	54	2.02	11	55	2	8	41	1	7	14	3	7	396	0.68	0.02	1.23	0.16	0.03	0.06	5	10	1216
S9619475	338620	12	6	89	0.2	29	109	1	3	22	2.21	4	31	2	2	33	1	4	3	1	7	219	0.55	0.02	1.14	0.03	0.01	0.06	5	10	1309
S9619476	338621	42	11	97	0.6	31	135	1	8	59	2.73	4	48	2	2	45	7	3	7	2	7	320	0.89	0.02	1.47	0.05	0.01	0.13	5	10	1501
S9619477	338622	20	11	182	0.7	40	90	1	8	55	3.08	5	70	5	8	67	1	6	8	2	6	235	0.73	0.03	1.23	0.09	0.01	0.09	5	10	1368
S9619478	338623	59	10	102	1.1	28	257	1	9	117	2	8	76	2	12	35	1	1	51	14	16	437	0.8	0.01	1.34	1.3	0.01	0.1	5	10	1098
S9619479	338624	8	11	64	0.5	13	70	1	4	25	3.12	5	37	7	2	45	1	8	4	1	9	253	0.26	0.02	1.04	0.04	0.01	0.05	5	10	960
S9619480	338625	7	9	39	0.2	12	43	1	3	15	1.98	2	20	6	5	31	1	5	2	1	5	329	0.2	0.01	0.86	0.02	0.01	0.03	5	10	981
S9619481	338626	7	8	32	0.4	7	51	1	3	12	1.5	3	19	2	2	25	1	3	2	1	6	221	0.13	0.01	1.11	0.02	0.01	0.02	5	10	1006
S9619482	338627	5	9	36	0.6	5	88	1	2	14	1.88	1	19	2	12	31	1	7	2	1	6	130	0.18	0.01	0.96	0.01	0.01	0.02	5	10	996

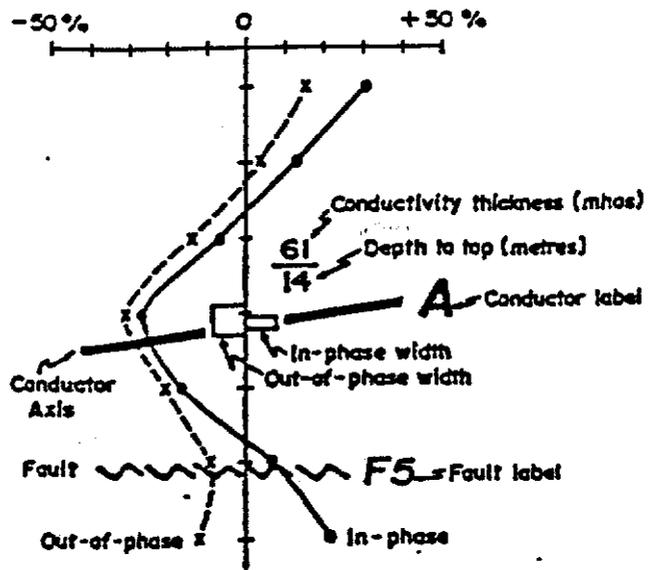
ANALYTICAL METHODS :

ICP PACKAGE : 0.5 gram sample digested in hot reverse aqua regia (soil, silt) or hot Aqua Regia (rocks)

**APPENDIX III**

**HORIZONTAL LOOP EM INTERPRETATION LEGEND**

# HORIZONTAL LOOP EM INTERPRETATION LEGEND



**APPENDIX IV**  
**STATEMENTS OF EXPENDITURES**

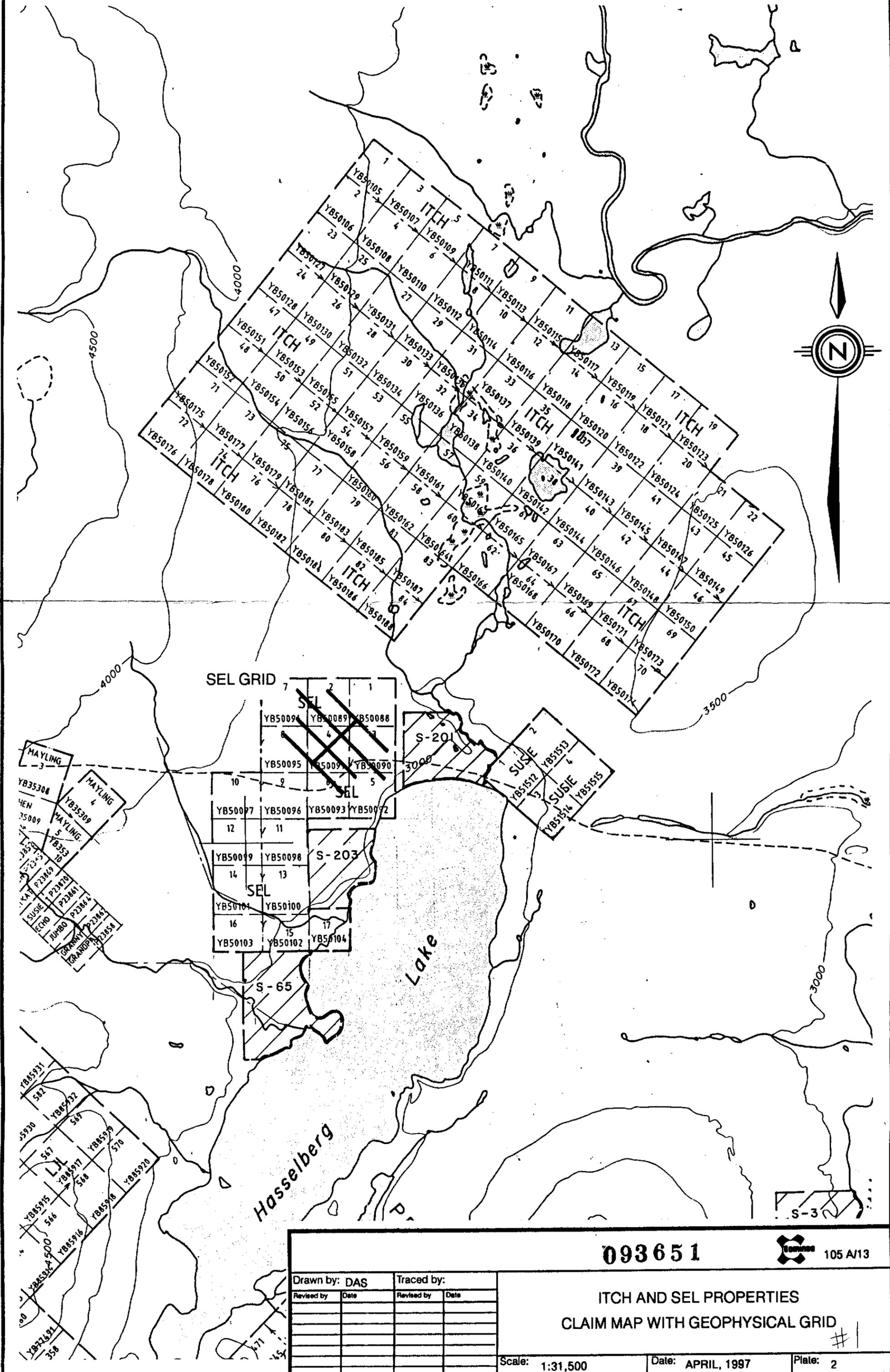
**ITCH PROPERTY**

<u>EXPENDITURE ITEM</u>	<u>COST \$</u>
GEOLOGY STAFF COST	320
PROSPECTING STAFF COSTS	520
DOMICILE	500
HELICOPTER	1,105
<b>TOTAL</b>	<b>2,445</b>

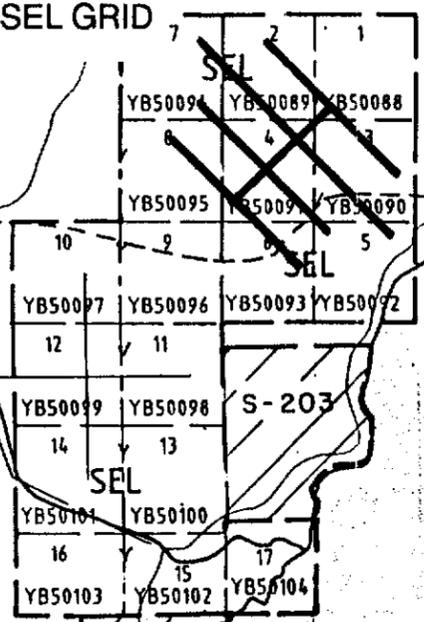
---

**SEL PROPERTY**

<u>EXPENDITURE ITEM</u>	<u>COST \$</u>
GEOLOGY STAFF COST	175
GEOCHEMISTRY STAFF COSTS	454
GEOCHEMICAL ANALYSES	1,320
GEOPHYSICAL SURVEYS	2,106
DOMICILE	500
HELICOPTER	260
<b>TOTAL</b>	<b>4,815</b>



SEL GRID



093651

105 A/13

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

ITCH AND SEL PROPERTIES  
CLAIM MAP WITH GEOPHYSICAL GRID

Scale: 1:31,500

Date: APRIL, 1997

Plate: 2

#1

600N —  
 500N —  
 400N —  
 300N —  
 200N —  
 100N —  
 0 —  
 100S —  
 200S —  
 300S —  
 400S —  
 500S —  
 600S —

L 0

L 200 E

L 400 E

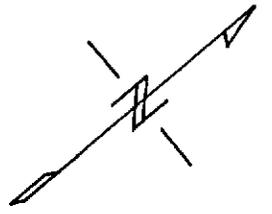
L 600 E

L 0

L 200 E

L 400 E

L 600 E



093651

MAGNETIC BASE = 58000 nT

Vert. Scale  
 1cm = 200nT

Scale 1:5000  
 50 0 50 100 150  
 (meters)

COMINCO EXPLORATION



NTS  
 105C

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

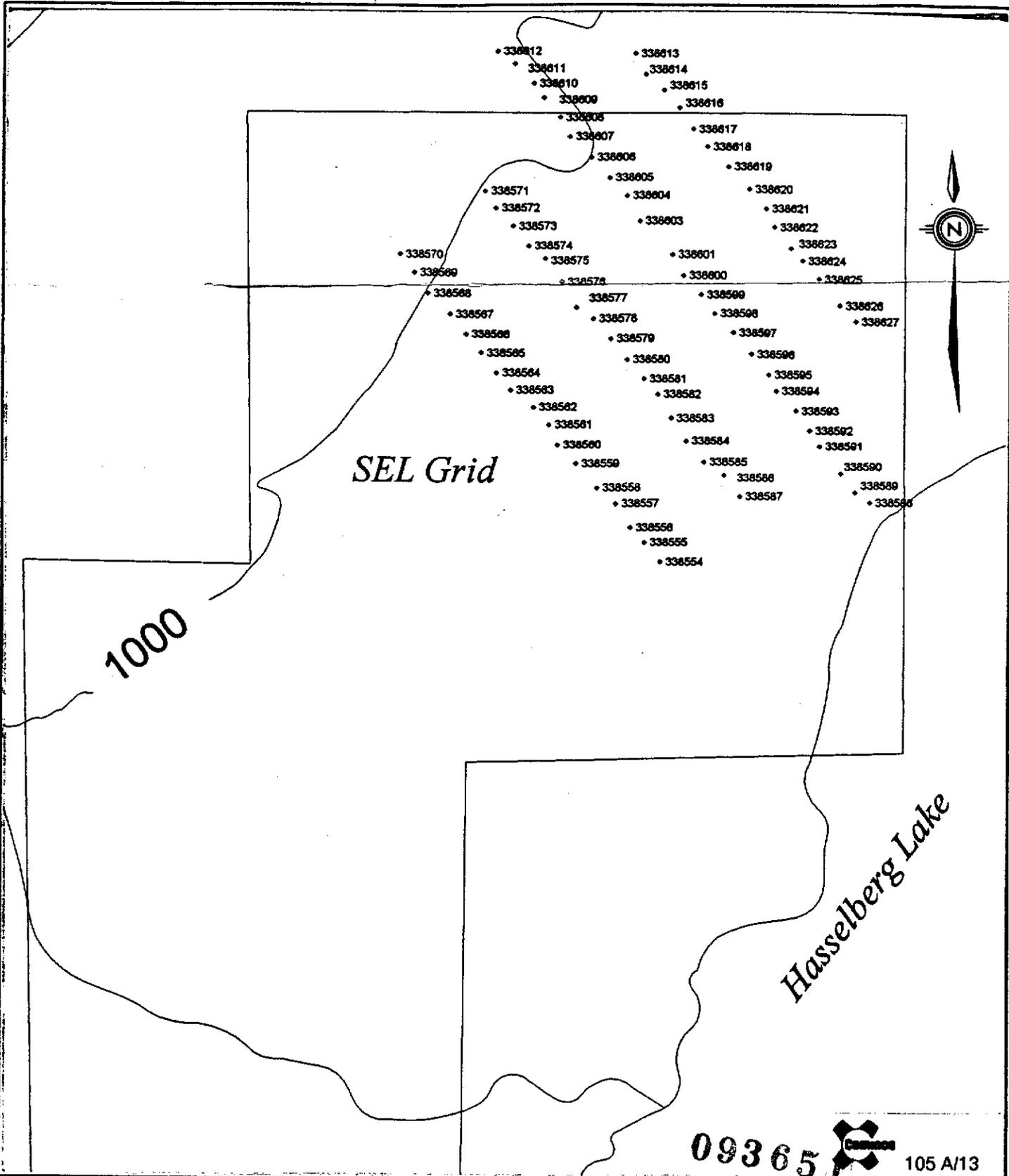
PELLEY MTN PROPERTIES  
 SEL GRID  
 TOTAL FIELD MAGNETICS SURVEY

#2

Scale: as shown

Date: JULY, 1996

Plate: 5d



09365



105 A/13

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

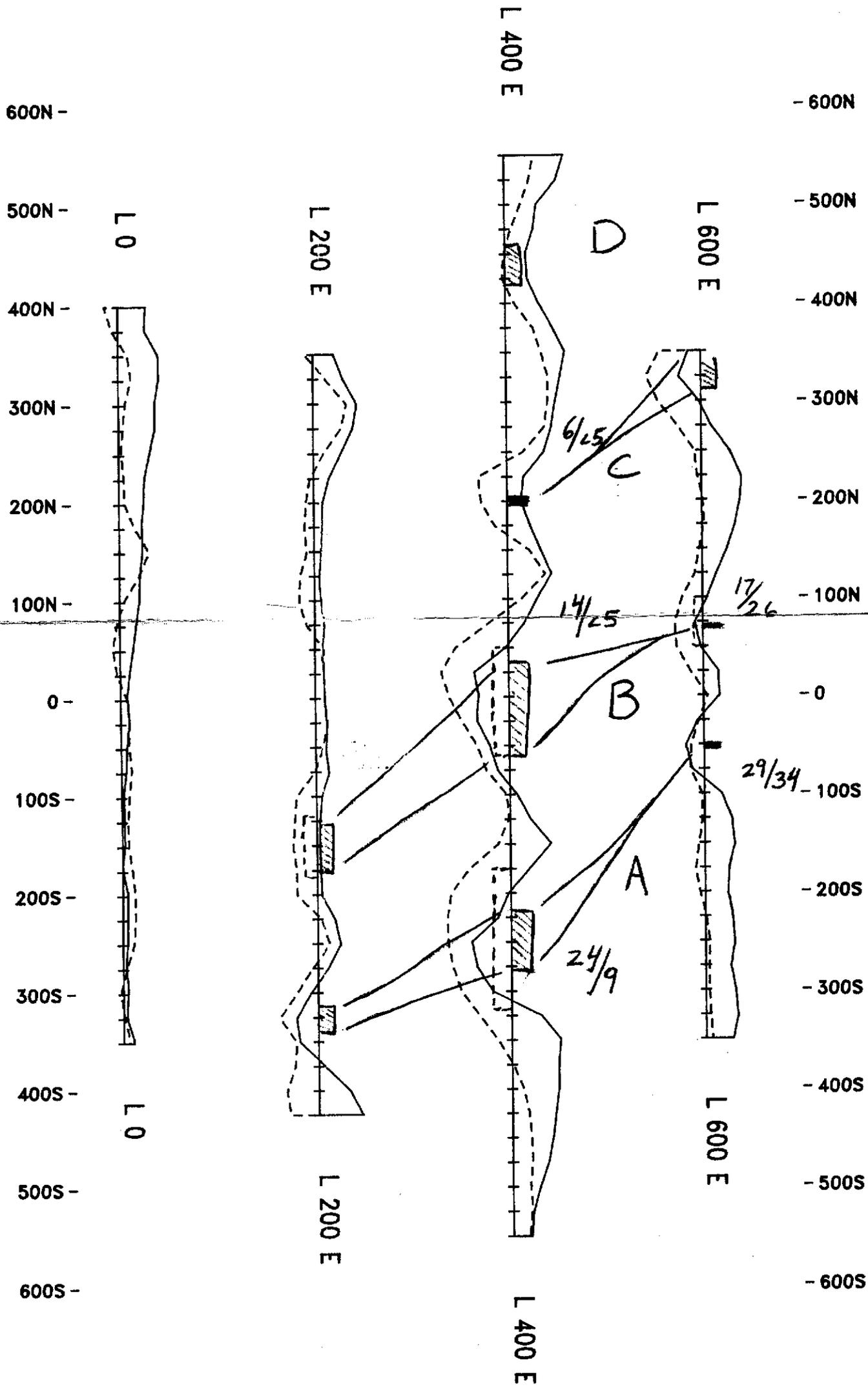
SEL PROPERTY  
GEOCHEMICAL SAMPLE LOCATIONS

#3

Scale: 1:10,000

Date: April, 1997

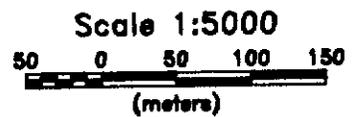
Plate: 4



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

VERTICAL SCALE: I  
 1cm = 20%

093651



COMINCO EXPLORATION



NTS 105G

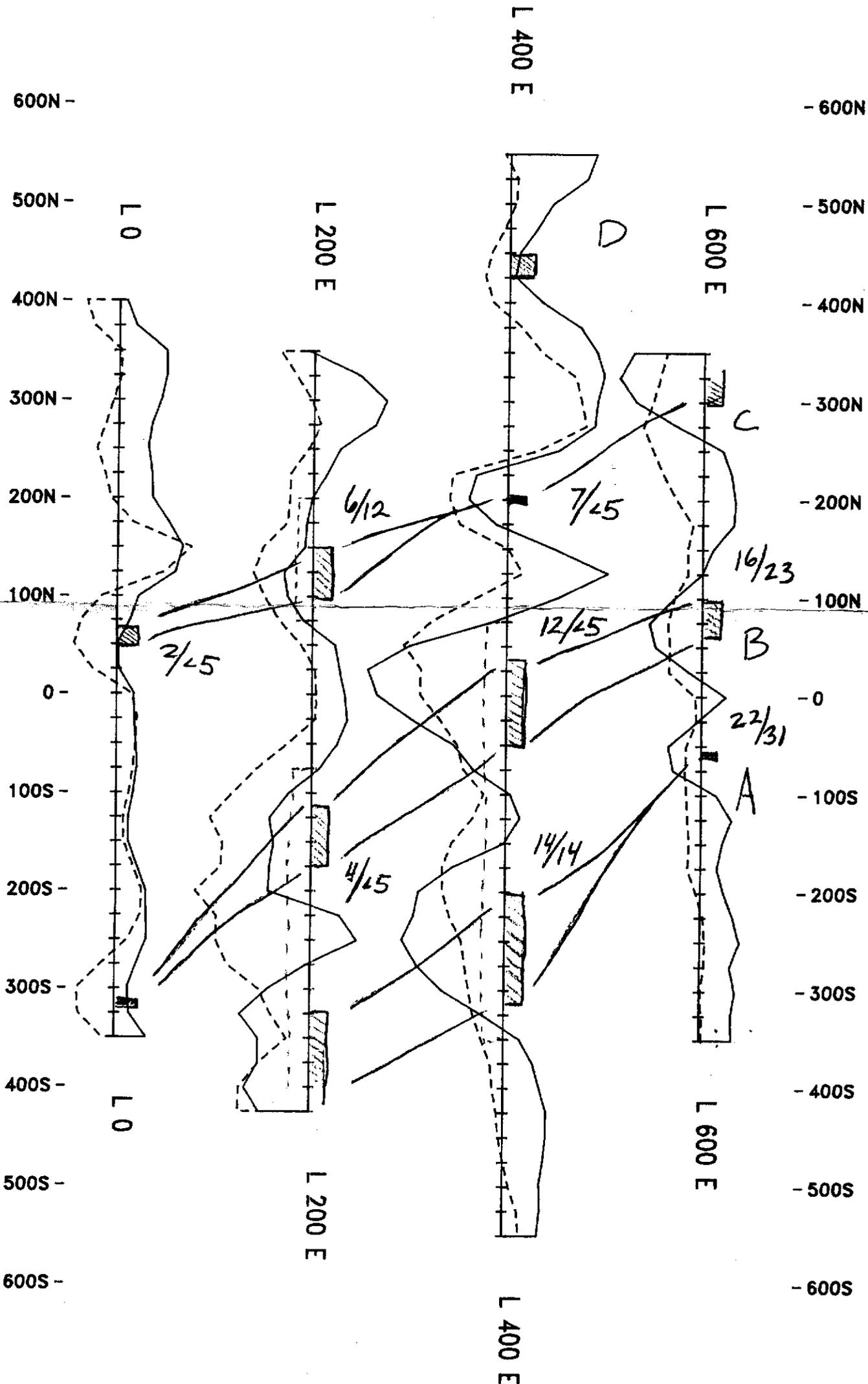
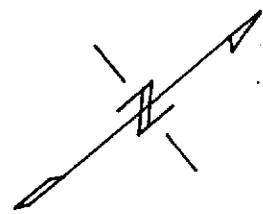
Drawn by:		Traced by:	
Revised by:	Date:	Revised by:	Date:

PELLEY MTN PROPERTIES #4  
 SEL GRID  
 HLEM SURVEY: 440 HZ, 100 M C. S.

Scale: as shown

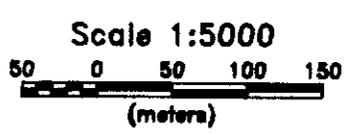
Date: JULY, 1996

Plate: 5a



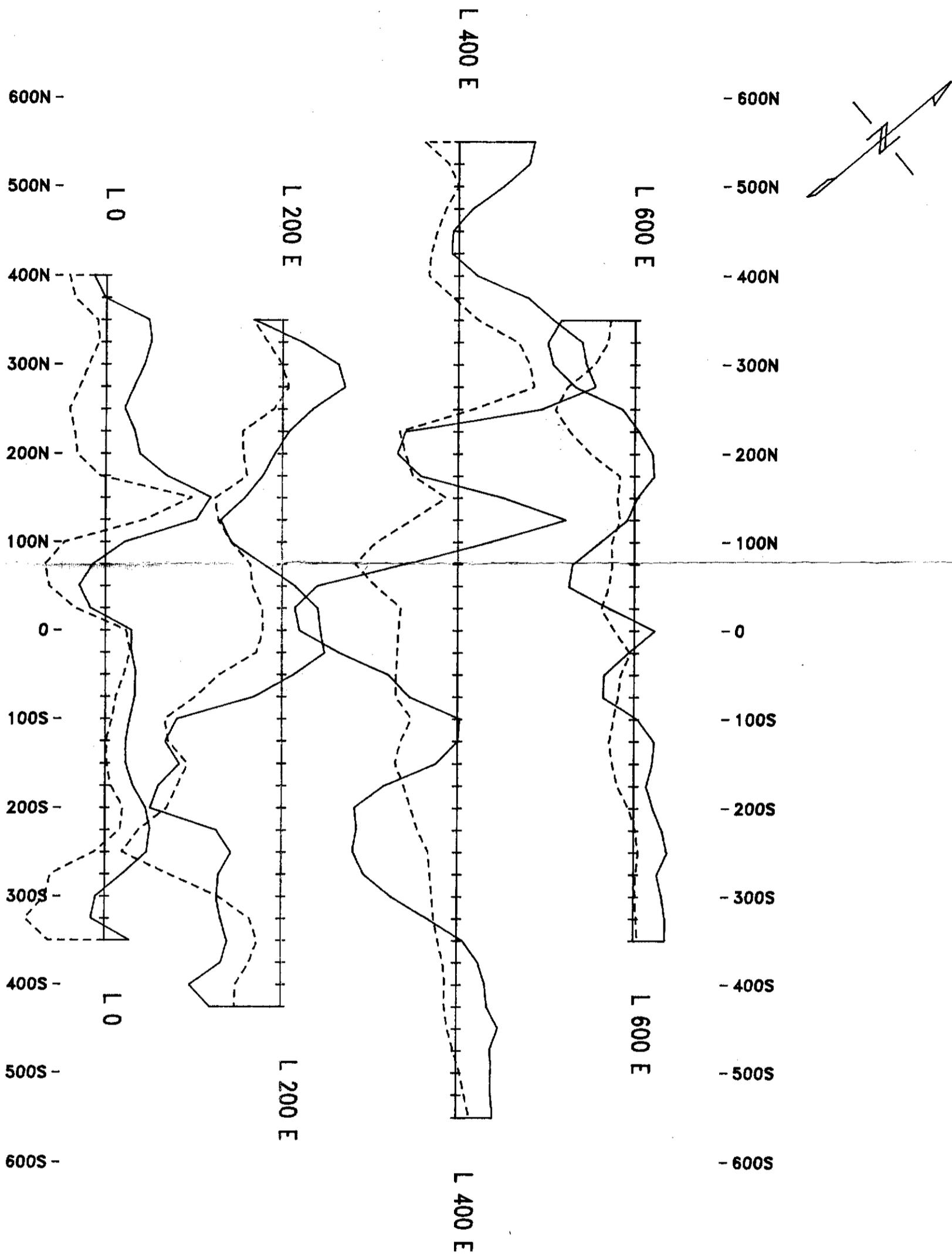
093651

OUT OF PHASE -----  
IN PHASE —————



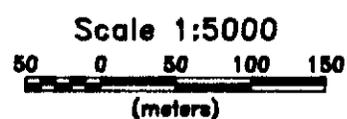
VERTICAL SCALE: 1cm = 20%

COMINCO EXPLORATION				 NTS 105G
Drawn by:		Traced by:		PELY MTN PROPERTIES #5 SEL GRID HLEM SURVEY: 1760 HZ, 100 M C. S.
Revised by:	Date:	Revised by:	Date:	
				Scale: as shown      Date: JULY, 1996      Plate: 5b



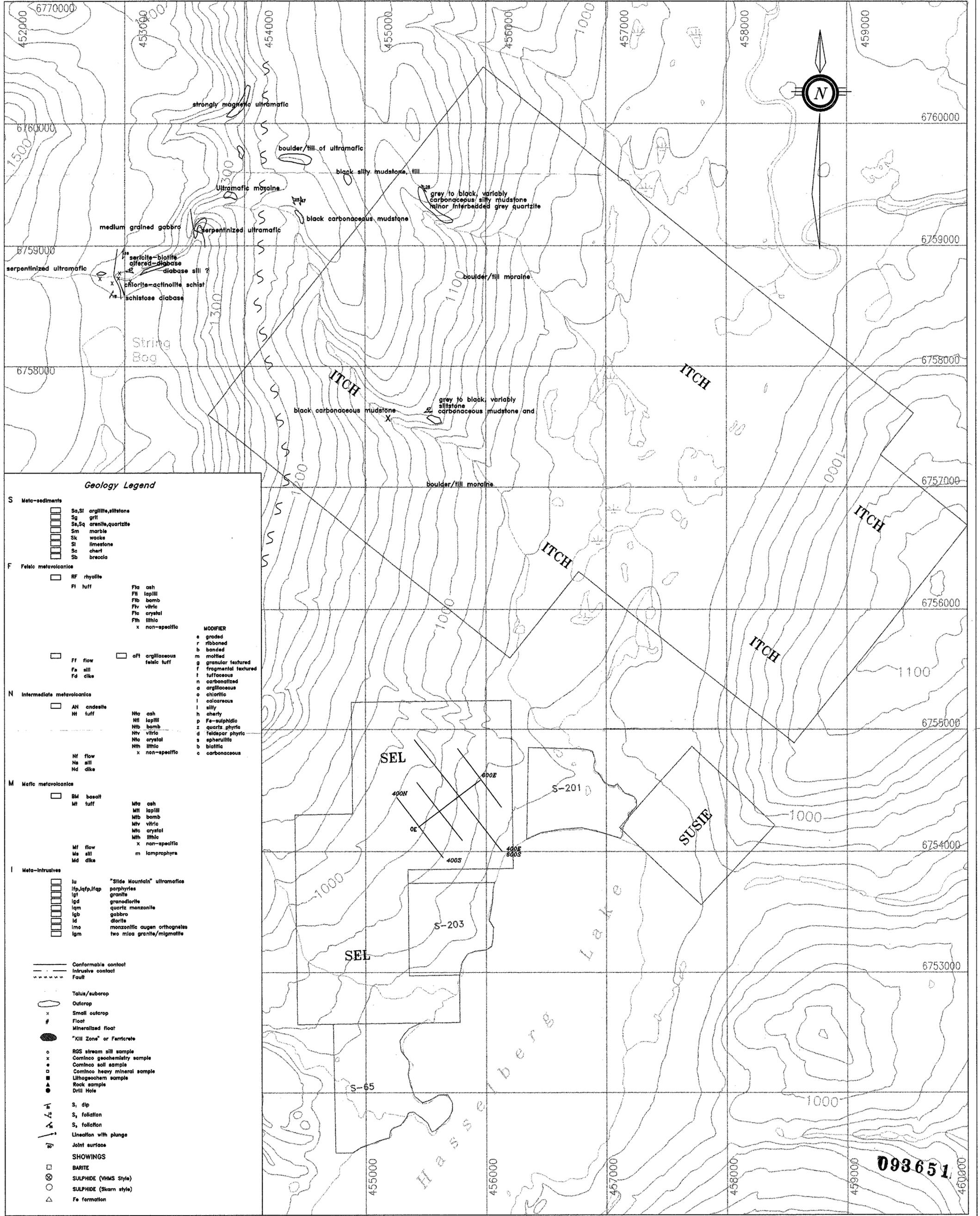
093651

OUT OF PHASE -----  
IN PHASE —————



VERTICAL SCALE: 1cm = 20%

COMINCO EXPLORATION				 <small>NTS 105G</small>
Drawn by:		Traced by:		PELLY MTN PROPERTIES #6 SEL GRID HLEM SURVEY: 3520 HZ, 100 M C. S.
Revised by:	Date:	Revised by:	Date:	
				Scale: as shown      Date: JULY, 1996      Plate: 5c



### Geology Legend

**S Meta-sediments**

[Symbol]	Sa, Si argillite, siltstone
[Symbol]	Sg grit
[Symbol]	Sa, Sq granite, quartzite
[Symbol]	Sm marble
[Symbol]	Sk waste
[Symbol]	Sl limestone
[Symbol]	Sc chert
[Symbol]	Sb breccia

**F Felsic metavolcanics**

[Symbol]	RF rhyolite
[Symbol]	FI tuff
[Symbol]	Flo ash
[Symbol]	Fli lapilli
[Symbol]	Fib bomb
[Symbol]	Fiv vitric
[Symbol]	Fic crystal
[Symbol]	Fih ilitic
[Symbol]	x non-specific
[Symbol]	Ff flow
[Symbol]	Fa sill
[Symbol]	Fd dike
[Symbol]	aFi argillaceous felsic tuff

**N Intermediate metavolcanics**

[Symbol]	AN andesite
[Symbol]	NI tuff
[Symbol]	Nta ash
[Symbol]	Nli lapilli
[Symbol]	Nib bomb
[Symbol]	Niv vitric
[Symbol]	Nic crystal
[Symbol]	Nih ilitic
[Symbol]	x non-specific
[Symbol]	Nf flow
[Symbol]	Na sill
[Symbol]	Nd dike

**M Mafic metavolcanics**

[Symbol]	BM basalt
[Symbol]	MT tuff
[Symbol]	Mta ash
[Symbol]	Mli lapilli
[Symbol]	Mib bomb
[Symbol]	Miv vitric
[Symbol]	Mic crystal
[Symbol]	Mih ilitic
[Symbol]	x non-specific
[Symbol]	m lamprophyre
[Symbol]	Mf flow
[Symbol]	Ma sill
[Symbol]	Md dike

**I Meta-intrusives**

[Symbol]	Iu "Slide Mountain" ultramafics
[Symbol]	Ifp, Iqf, Ifq porphyries
[Symbol]	Igt granite
[Symbol]	Igd granodiorite
[Symbol]	Iqm quartz monzonite
[Symbol]	Igb gabbro
[Symbol]	Id diorite
[Symbol]	Ims monzonitic augen orthogneiss
[Symbol]	Igm two mica granite/migmatite

**Structural Features**

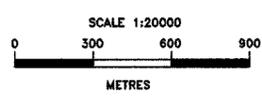
- Conformable contact
- Intrusive contact
- Fault
- Talus/subcrop
- Outcrop
- Small outcrop
- Flot
- Mineralized float
- "Kill Zone" or Ferricrete
- RGS stream silt sample
- Cominco geochemistry sample
- Cominco soil sample
- Cominco heavy mineral sample
- Lithogeochem sample
- Rock sample
- Drill Hole
- S<sub>1</sub> dip
- S<sub>2</sub> foliation
- S<sub>3</sub> foliation
- Lineation with plunge
- Joint surface

**SHOWINGS**

- BARITE
- SULPHIDE (VHMS Style)
- SULPHIDE (Skarn style)
- Fe formation

**MODIFIER**

- e graded
- r ribboned
- b banded
- m mottled
- g granular textured
- f fragmental textured
- t tuffaceous
- n carbonatized
- a argillaceous
- o chloritic
- i calcareous
- l silty
- h cherty
- p Fe-sulphidic
- z quartz phytic
- d feldspar phytic
- s spherulitic
- b biotitic
- c carbonaceous



N.T.S. 105 A 13

### ITCH & SEL

Drawn by:	Checked by:
Revised by:	and the ITCHERS
<b>GEOLOGY</b>	
SCALE: 1:20000 DATE: 170497 PAGE NO: 3	

093651