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COMINCO LTD.

EXPLORATION

WESTERN CANADA

NTS: 93L/7

ASSESSMENT REPORT

GEOLOGICAL MAPPING

ON THE CROW-RAVEN PROPERTY

OMENICA MINING DISTRICT, B.C.

LATITUDE: 54° 17' N

LONGITUDE: 126° 50' W

TIME PERIOD: JULY 9, 10 AND 12, 1994

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,698

DECEMBER 1994

DARIN WAGNER

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COMINCO LTD.**EXPLORATION****WESTERN DISTRICT****ASSESSMENT REPORT****GEOLOGICAL MAPPING ON THE****CROW-RAVEN PROPERTY****I. INTRODUCTION**

Between July 9 and 12, 1994 Cominco geologist Darin Wagner and summer assistant Darren Senft completed three days of geological mapping on the Crow-Raven property located 15 km southwest of Houston, B.C.

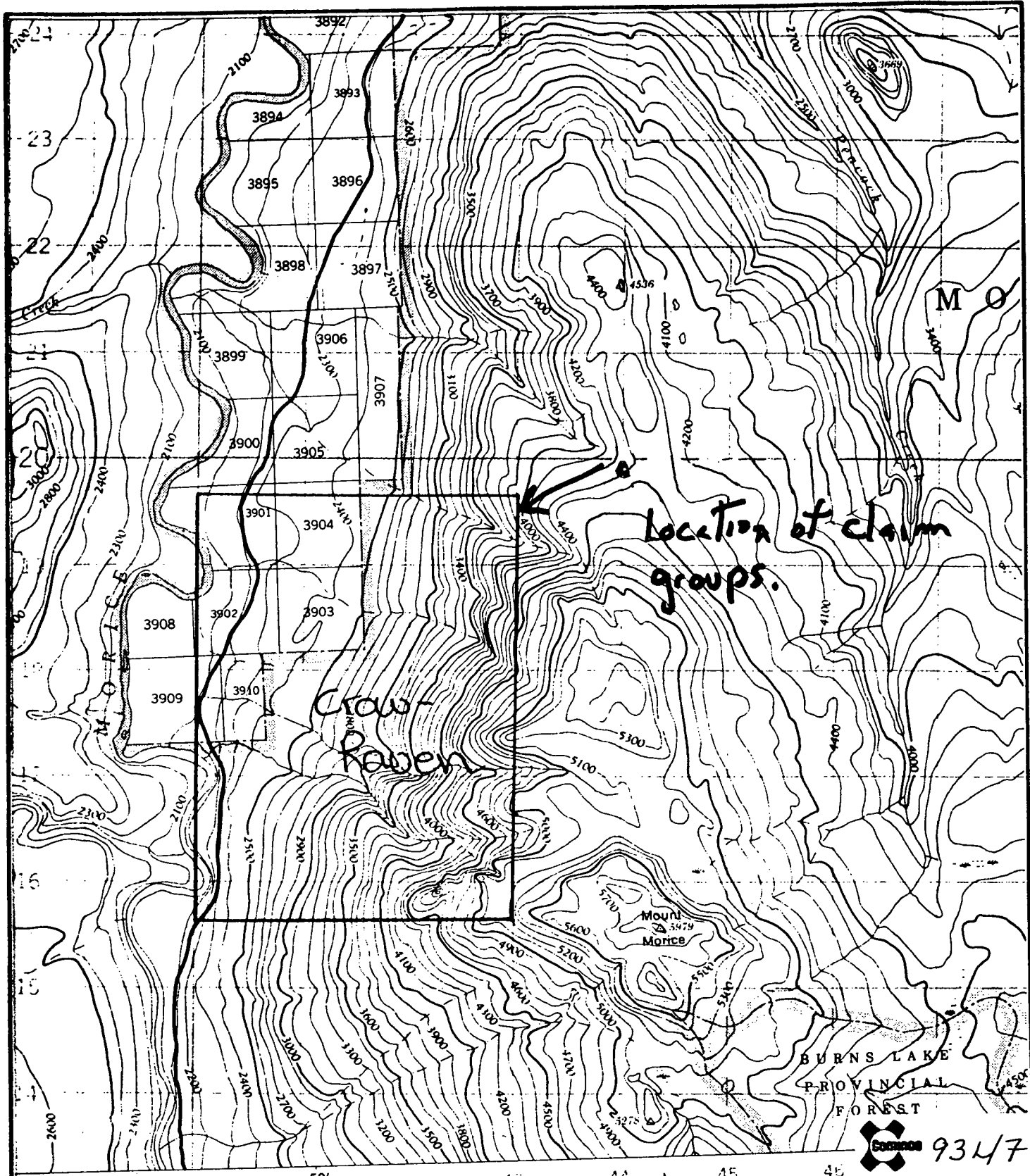
The western portion of the Crow-Raven property is completely overburden covered by till and glacial-fluvial sediments which have accumulated in the Morice River valley. Abundant exposures of mafic to intermediate volcanic rocks and minor limestone of the Jurassic Hazelton Group are present on the eastern half of the property. The Hazelton rocks are intruded by several small quartz monzonite plugs belonging to the Eocene Nanika Intrusive suite. A single, isolated outcrop of rhyolite, of presumed Eocene age, was located on the west flank of Mount Morice.

Strong bleaching (silica-sericite+/-carbonate alteration) of Hazelton volcanic lithologies is evident adjacent quartz monzonite stocks on the southeast and northeast portions of the property. To the southeast this alteration is accompanied by vein-hosted and disseminated pyrite-chalcopyrite+/-molybdenite mineralization and chlorite alteration. To the northeast pyrite and hematite are abundant with only minor chalcopyrite and molybdenite observed.

II. LOCATION AND ACCESS

The Crow-Raven property is located approximately 15 km SW of Houston, B.C.; between Mount Morice and the Morice River (Figure 1). The property is accessible via the Morice River road off Highway 16, 4 km west of Houston. Two, now abandoned and ditched, logging roads provide easy access to the western half of the property.

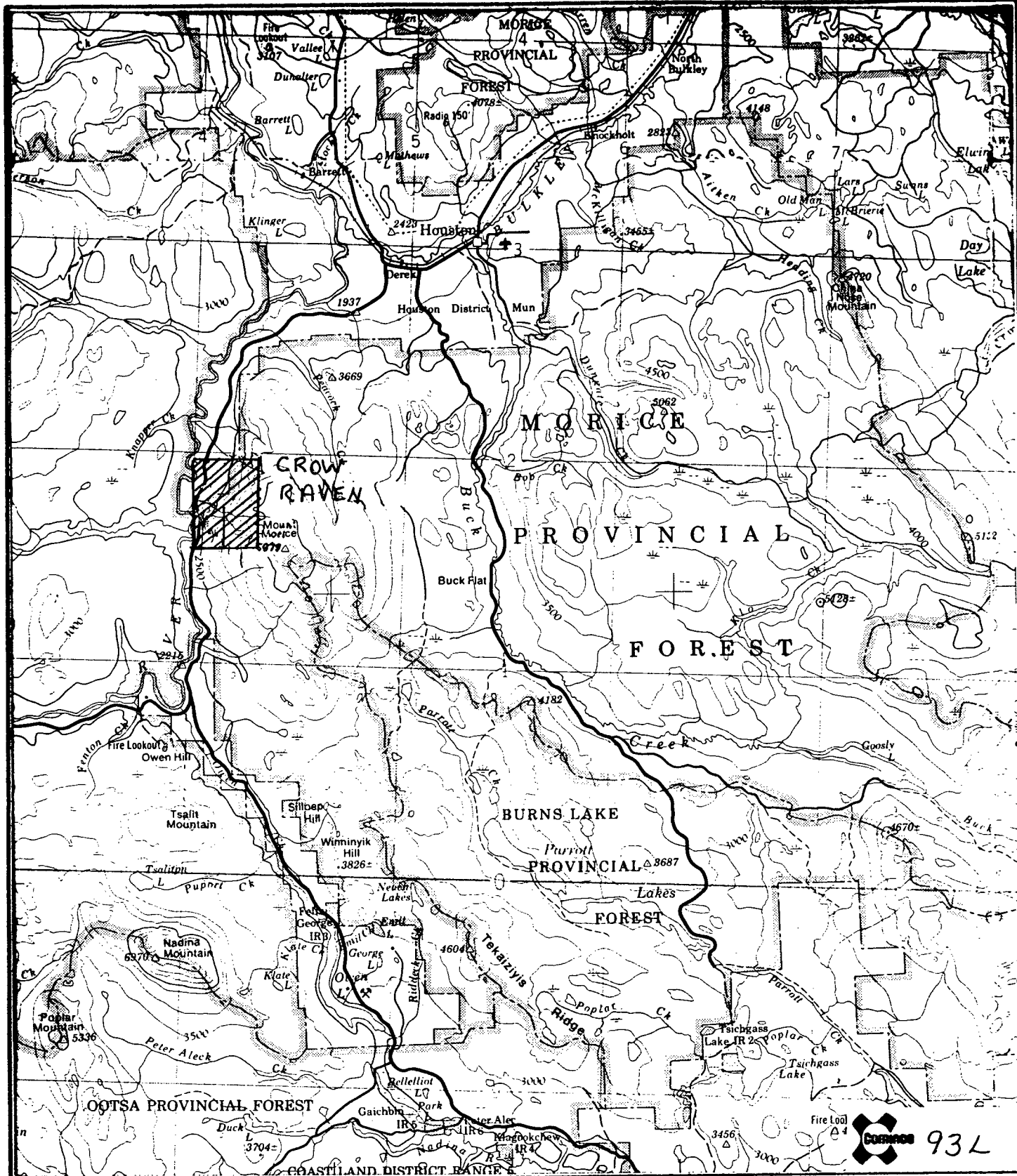
The property is located on the western flank of Mount Morice (elevation 1822 m). The western third of the property covers shallowly sloping, heavily vegetated portions of the Morice River flood plain. The central, moderately sloping, portion of the property has largely been logged off. Re-forested trees reach heights of one to two metres. The eastern portion of the property



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Revised by	Date	Revised by	Date

CROW-RAVEN

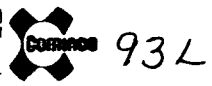
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Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

CROW-RAVEN

Scale: 1:250,000 Date: Plate: 1



is steeply sloping with deeply incised river canyons and mature pine forest. Sub-alpine meadows with scattered one to two metre high trees cover the upper reaches of the property (typically above 5100 feet).

III. TENURE

The Crow-Raven property consists of four twelve unit claim groups (CR 1-4; Tenure Numbers 324929-324932) and 18 two-post claims (see Appendix I) internal to the CR claims. The claims are under option (100% subject to an NSR royalty) by Cominco Ltd., 700-409 Granville St., Vancouver, B.C., V6C 1T2 from J.W. and M.J Moll of Houston, B.C.; P.O. Box 1182, Houston, B.C.; V0J 1Z0.

IV. GEOLOGY

Outcrop on the Crow-Raven property is limited to the moderately to steeply sloping terrain on the eastern half of the property. The lower elevations are completely covered by a mixture of bouldery till and glacial-fluvial sediments (Figure 3).

The majority of the Crow-Raven property is underlain by mafic to intermediate volcanic rocks of the Jurassic Hazelton Group. The volcanics are generally fine-grained, grey-green to mauve in colour and weakly fractured. Good exposures on the eastern edge of the property suggest the majority of the volcanic rocks are fine- to medium-grained tuffs with lesser flows. The volcanic units appear to be shallowly dipping ($< 15^\circ$) to the east. Minor epidote and lesser pyrite and hematite staining is observed on fractures throughout the property. Intercalated with the volcanics are thin horizons, typically < 2 metres thick, of volcanically-derived sandstone. A single outcrop of fine-grained, massive, white weakly marbilized limestone was located near the western edge of the outcropping area on the property. This unit appears to underlay the volcanics.

The volcanic package is intruded by several small plugs of medium-grained quartz monzonite belonging to the Eocene-aged Nanika suite. The intrusions on the property appear to be barely unroofed. They are characterized by being medium to coarse-grained, weakly biotite porphyritic and weakly magnetic. Where observed the plugs typically contain tr-1% pyrite and are weakly to strongly sericite-altered.

A single, isolated outcrop of white weathering, fine-grained rhyolite exhibiting minor flow-banding was located on the southeastern edge of the property (Figure 3). The rhyolite is presumed to be of Eocene age.

V. ALTERATION AND MINERALIZATION

Large areas of Hazelton volcanic rocks underlying the Crow-Raven property are strongly bleached and veined, in particular in the northeast and southeast corners of the property. The bleached appearance of these rocks is the result of moderate to strong silica and sericite alteration. Local weak to moderate carbonate alteration is also observed. The altered sequences are commonly spatially associated with the Nanika plugs.

The bleached volcanic rocks are moderately to strongly fractured and cut by fine quartz-pyrite veining. The altered area on the southern portion of the property is also cut by quartz-chalcopyrite-molybdenite veins. Moderate, pervasive chlorite alteration is associated with areas of copper-molybdenum mineralization. The quartz monzonite plugs in this area are strongly sericite-altered and contain trace to 1% disseminated chalcopyrite with lesser pyrite and molybdenite.

To the northeast the intensity of pyrite veining is much greater. The altered rocks here typically contain 3-5% disseminated and vein-hosted pyrite with local concentrations up to 15%. Chalcopyrite and molybdenite are only rarely observed within this altered sequence. Hematite, in both specular and earthy form, is common on fractures and in veins throughout the northeast altered sequence.

Previous operators on the property have reported copper grades to 0.35% over 70' from drill holes into the altered quartz-monzonite/basalt package in the southeast. Visual estimates of the mineralized outcrops in this area support these results.

Nine rock samples obtained from outcrops of altered volcanic and intrusive rocks in the northeast corner of the property show only weakly elevated (to 234 ppm) copper and molybdenum (to 8 ppm) values (Appendix 2 for results). Elevated gold (178 ppb) and silver (14.4 ppm) values were returned from a sample of biotite-altered quartz monzonite (sample WR94-21; Figure 3). A second sample from the same location (WR94-21R), however, failed to reproduce these results. The only other elements to return elevated values were iron (to 4.74%), zinc (to 3463 ppm) and lead (to 55 ppm).

VI. CONCLUSIONS AND RECOMMENDATIONS

The Crow-Raven property is underlain mainly by mafic to intermediate volcanic rocks of the Jurassic Hazelton Group. The volcanics are intruded locally by small plugs of Eocene-aged quartz monzonite.


Silica-sericite alteration of the volcanic rocks is common on the northeastern quarter of the property where it is associated with

abundant pyrite and hematite mineralization. Rock samples from this well-exposed portion of the property failed to give any indication of economic mineralization.

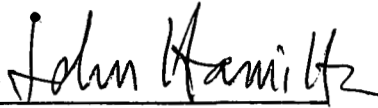
To the southeast a second area of altered volcanics is associated with a strongly sericite-altered quartz monzonite plug. Chlorite alteration of the volcanic rocks in this area is more common and appears to be associated with pyrite-chalcopyrite-molybdenite mineralization which is observed in both volcanic and intrusive lithologies. The copper-molybdenum mineralization in this area appears to be sub-economic in grade and very restricted in extent.

No further work is recommended on the Crow-Raven property.

Report By: _____


Darin Wagner
Geologist II,
Western District

Approved For Release By: _____


J.M. Hamilton, P.Eng/P.Geo
Manager, Exploration
Western District

Distribution:

Mining Recorder (2)
Western District Files
J.W. and M.J. Moll

APPENDIX I

TENURE

PROPERTY HOLDING SHEET

NAME: CROW-RAVEN PROV. B.C. NTS 93 L/7W DOC. Vancouver
 MS NUMBER: 14835 COMINCO INTEREST (*) <100% METALS Cu, Mo
 EXPENDITURE TO: Dec. 31/93 TOTAL \$ NYA COMINCO PORTION \$ NYA

LOCATION: ± 15 km SSW of Houston, Omineca M.D.
 Lat. 54°17' N; Long. 126°49' W

PROPERTY: 22 Mineral Claims (66 Units), Total Area = ± 1,200 Ha. [48 Units]
 (± 2,964 Acres)
 ...Note: [Of the 22 claims; 18 claims (18 units) have been completely staked
 over by the most recent acquisition of 4 claims (48 units)...
 explanation of holdings indicated below.]

<u>Claims</u>	<u>Tenure Nos.</u>	<u>Units</u>	<u>Date Recorded</u>	<u>Assessment Work Due</u>
CR 1	324929	12	Apr. 28/94	Apr. 28/98
CR 2	324930	12	"	"
CR 3	324931	12	"	"
CR 4	324932	12	"	"

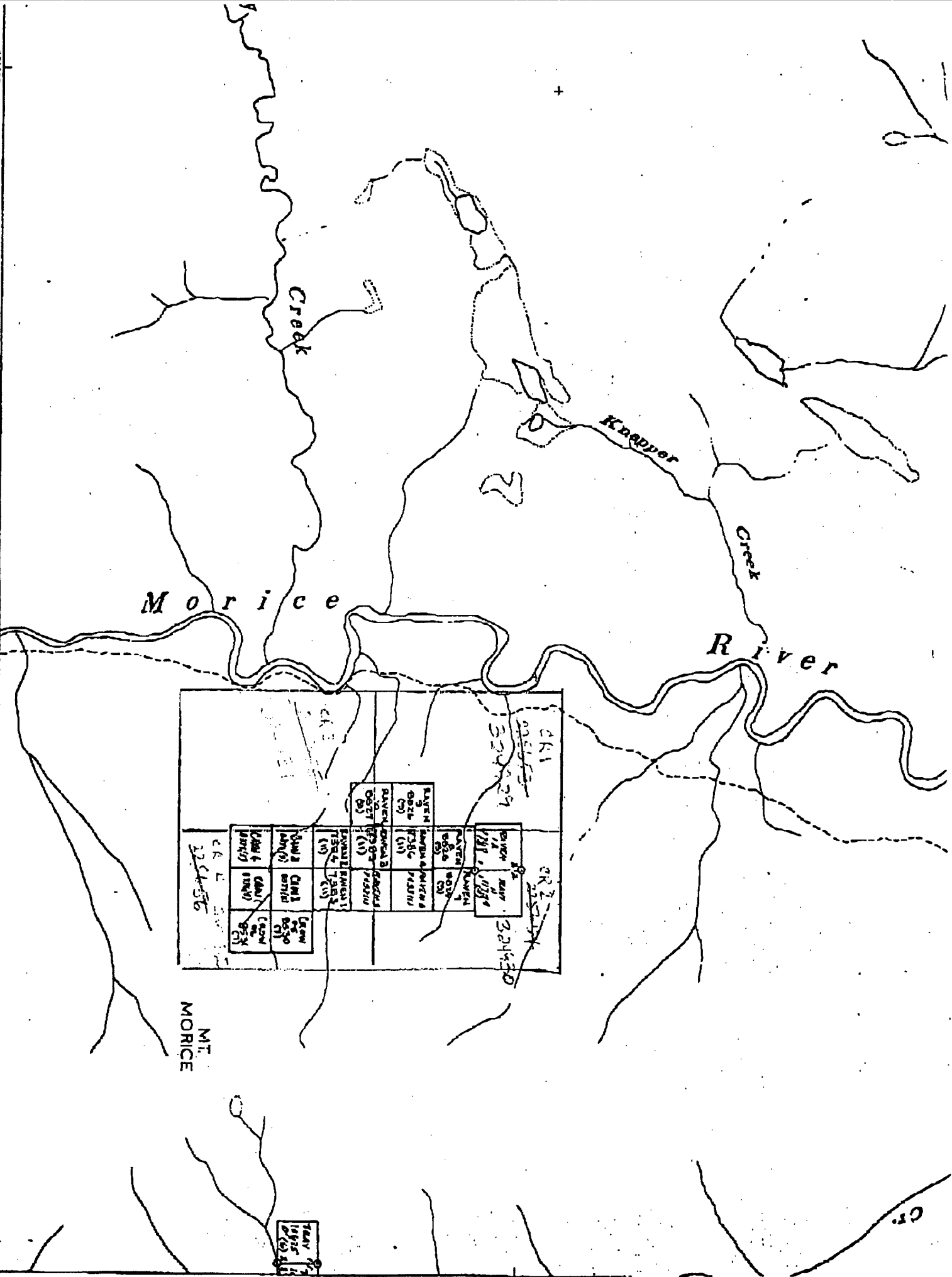
NOTE: The following 18 Mineral Claims (18 Units), total area = ±450 Ha. (±1,112 Acres), represent the original claims acquired under Option from J.W. & M.J. Moll in 1994. These are currently enveloped in a portion of the 4 claims listed above, and until which time approval is obtained from the Government and the Owners to abandon all or a portion of these 18 claims, they are to be considered separate claims and must have provision of assessment credits for each (meaning all 22 claims).

Crow 1	239451	1	May 08/87	May 08/96
Crow 2	239452	1	"	"
Crow 3	239453	1	"	"
Crow 4	239454	1	"	"
Crow 5	239519	1	Jul. 06/87	Jul. 06/96
Crow 6	239520	1	"	"
Raven 1	239046	1	Nov. 04/85	Nov. 04/96
Raven 2	239047	1	"	"
Raven 3	239048	1	"	"
Raven 4	239049	1	"	"
Raven 5	239072	1	Jan. 03/86	Jan. 03/96
Raven 6	239073	1	"	"
Raven 7	239648	1	Sep. 04/87	Sep. 04/96
Raven 8	239649	1	"	"
Raven 9	239650	1	"	"
Raven 10	239651	1	"	"
Raven 11	241912	1	Apr. 23/90	Apr. 23/96
Raven 12	241913	1	"	"

532600

639935

4628 045



M o r i c e

Knapper

R i v e r

CR 1		CR 2	
BLVD 1 1/1 1954	BLVD 2 1/1 1954	BLVD 3 1/1 1954	BLVD 4 1/1 1954
BLVD 5 1/1 1954	BLVD 6 1/1 1954	BLVD 7 1/1 1954	BLVD 8 1/1 1954
BLVD 9 1/1 1954	BLVD 10 1/1 1954	BLVD 11 1/1 1954	BLVD 12 1/1 1954
BLVD 13 1/1 1954	BLVD 14 1/1 1954	BLVD 15 1/1 1954	BLVD 16 1/1 1954
BLVD 17 1/1 1954	BLVD 18 1/1 1954	BLVD 19 1/1 1954	BLVD 20 1/1 1954
BLVD 21 1/1 1954	BLVD 22 1/1 1954	BLVD 23 1/1 1954	BLVD 24 1/1 1954
BLVD 25 1/1 1954	BLVD 26 1/1 1954	BLVD 27 1/1 1954	BLVD 28 1/1 1954
BLVD 29 1/1 1954	BLVD 30 1/1 1954	BLVD 31 1/1 1954	BLVD 32 1/1 1954
BLVD 33 1/1 1954	BLVD 34 1/1 1954	BLVD 35 1/1 1954	BLVD 36 1/1 1954
BLVD 37 1/1 1954	BLVD 38 1/1 1954	BLVD 39 1/1 1954	BLVD 40 1/1 1954
BLVD 41 1/1 1954	BLVD 42 1/1 1954	BLVD 43 1/1 1954	BLVD 44 1/1 1954
BLVD 45 1/1 1954	BLVD 46 1/1 1954	BLVD 47 1/1 1954	BLVD 48 1/1 1954
BLVD 49 1/1 1954	BLVD 50 1/1 1954	BLVD 51 1/1 1954	BLVD 52 1/1 1954
BLVD 53 1/1 1954	BLVD 54 1/1 1954	BLVD 55 1/1 1954	BLVD 56 1/1 1954
BLVD 57 1/1 1954	BLVD 58 1/1 1954	BLVD 59 1/1 1954	BLVD 60 1/1 1954
BLVD 61 1/1 1954	BLVD 62 1/1 1954	BLVD 63 1/1 1954	BLVD 64 1/1 1954
BLVD 65 1/1 1954	BLVD 66 1/1 1954	BLVD 67 1/1 1954	BLVD 68 1/1 1954
BLVD 69 1/1 1954	BLVD 70 1/1 1954	BLVD 71 1/1 1954	BLVD 72 1/1 1954
BLVD 73 1/1 1954	BLVD 74 1/1 1954	BLVD 75 1/1 1954	BLVD 76 1/1 1954
BLVD 77 1/1 1954	BLVD 78 1/1 1954	BLVD 79 1/1 1954	BLVD 80 1/1 1954
BLVD 81 1/1 1954	BLVD 82 1/1 1954	BLVD 83 1/1 1954	BLVD 84 1/1 1954
BLVD 85 1/1 1954	BLVD 86 1/1 1954	BLVD 87 1/1 1954	BLVD 88 1/1 1954
BLVD 89 1/1 1954	BLVD 90 1/1 1954	BLVD 91 1/1 1954	BLVD 92 1/1 1954
BLVD 93 1/1 1954	BLVD 94 1/1 1954	BLVD 95 1/1 1954	BLVD 96 1/1 1954
BLVD 97 1/1 1954	BLVD 98 1/1 1954	BLVD 99 1/1 1954	BLVD 100 1/1 1954

MT.
MORICE

TAYLOR
1958

APPENDIX II
GEOCHEMICAL ANALYSIS OF
ROCK SAMPLES
FROM 1994 EXPLORATION ON THE
CROW-RAVEN PROPERTY

CROW/RAVEN--WD

Job V 94-0368R

H. IP ANOMALY

Report date 11 AUG 1994

LAB NO	FIELD NUMBER	Au ppb	Wt Au gram
R9404834	WR94-21R	<10	5
R9404835	WR94-60	<10	5
R9404836	WR94-62A	<10	5
R9404837	WR94-62B	<10	5
R9404838	WR94-64	<10	5
R9404839	WR94-65	<10	5
R9403236	WR94-20	<10	5
R9403237	WR94-21	178	5
R9403238	WR94-23	<10	5

I=insufficient sample X=small sample E=exceeds calibration C=being checked R=revised
If requested analyses are not shown ,results are to follow

ANALYTICAL METHODS

Au Aqua regia decomposition / solvent extraction / AAS
Wt Au The weight of sample taken to analyse for gold (geochem)

H.IP ANOMALY

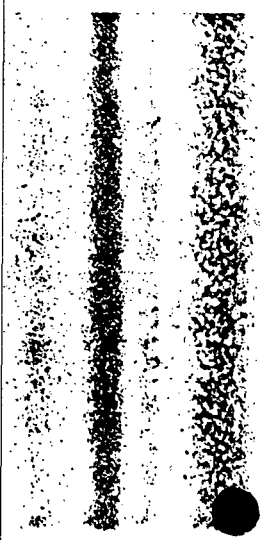
Report date 11 AUG 1994

LAB NO	FIELD NUMBER	Cu	Pb	Ba	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	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%
9404834	WS94-21R	55	55	414	.9	12	133	.2	19	30	4.74	2	89	<5	5	132	3	<2	100	26	30	951	2.02	.37	2.20	2.41	.04	.10
9404835	WS94-60	147	44	168	.4	7	368	<1	2	2	.93	<2	56	<5	<5	19	<2	<2	80	9	4	421	.46	.01	1.71	1.10	.15	.31
9404836	WS94-62A	112	18	85	.9	8	274	<1	2	2	2.31	<2	48	<5	<5	27	<2	<2	10	9	9	152	.24	<.01	.93	.19	.01	.24
9404837	WS94-62B	124	16	84	2.0	<2	337	<1	4	3	2.75	<2	65	<5	<5	33	<2	<2	8	6	6	234	.37	<.01	1.00	.11	<.01	.19
9404838	WS94-64	7	8	110	<.4	<2	37	<1	7	2	2.33	<2	75	<5	<5	30	<2	<2	15	2	3	187	1.43	<.01	1.64	.15	.01	.03
9404839	WS94-65	24	9	39	<.4	5	84	<1	6	5	2.41	<2	34	<5	<5	3	<2	<2	29	5	6	61	.24	<.01	.85	.14	.04	.19
9403236	WS94-20	18	10	28	.5	14	51	<1	10	13	3.57	<2	26	<5	<5	6	<2	<2	26	2	3	48	.22	<.01	.72	.10	.04	.21
9403237	WS94-21	138	49	1139	14.4	9	70	4	3	2	4.00	8	59	<5	5	3	<2	<2	7	4	4	314	.04	<.01	.33	.18	.01	.25
9403238	WS94-23	234	20	3463	.8	4	64	<1	1	1	1.26	2	68	5	<5	2	<2	<2	72	24	10	1205	.34	<.01	.18	.19	<.01	.09

-insufficient sample X-small sample E-exceeds calibration C-being checked R-revised
 f requested analyses are not shown ,results are to follow

- ANALYTICAL METHODS**
- ICP PACKAGE :0.5 gram sample digested in hot reverse aqua regia (soil,silt) or hot Aqua Regia(rocks).
- PRINT THE JOBS
 - Return to LABDATA3
 - Add more jobs
 - change an entry
 - delete an entry
 - erase this stack

0 HALF PRINTING ANY JOB ,OR TO CHANGE THE STACK PRESS ANY BF KEY




APPENDIX III

IN THE MATTER OF THE B.C. MINERAL ACT
AND IN THE MATTER OF THE GEOLOGICAL MAPPING
PROGRAM CARRIED OUT ON
THE CROW-RAVEN PROPERTY,
LOCATED 15 KM SOUTHWEST OF HOUSTON, B.C.,
IN THE OMENICA MINING DISTRICT OF THE
PROVINCE OF BRITISH COLUMBIA,
MORE PARTICULARLY NTS 93L/7

STATEMENT

I, Darin W. Wagner, of 12211 210th Street, in the City of Maple Ridge, in the Province of British Columbia, make oath and say:

1. That I am employed as a geologist by Cominco Ltd. and, as such have a personal knowledge of the facts to which I herein-after dispose;
2. That annexed hereto and marked as Exhibit "A" to this statement is a true copy of expenditures incurred during a geological mapping program on the Crow-Raven Property;
3. That said expenditures were incurred in July 1994 for the purpose of mineral exploration on the above noted property.


Darin W. Wagner
Geologist
Cominco Ltd.

Dated this th day of December, 1994
at Vancouver, B.C.

APPENDIX IV - EXHIBIT "A"

STATEMENT OF EXPENDITURES

CROW-RAVEN PROPERTY - JULY 1994

JULY 9,10 AND 12, 1994

Salaries : D. Wagner	\$ 1000.00
D. Senft	600.00


	1600.00
 Truck Rental	 400.00
Helicopter Rental	450.00
Expenses (Food, Accommodations, Gas)	640.00
Rock Geochemical Analysis (9 x 14.50)	130.00
Misc. Supplies (Sample Bags/boxes, Acid)	100.00
Report Preparation	500.00

	\$3820.00

APPENDIX IV**CERTIFICATION OF QUALIFICATIONS**

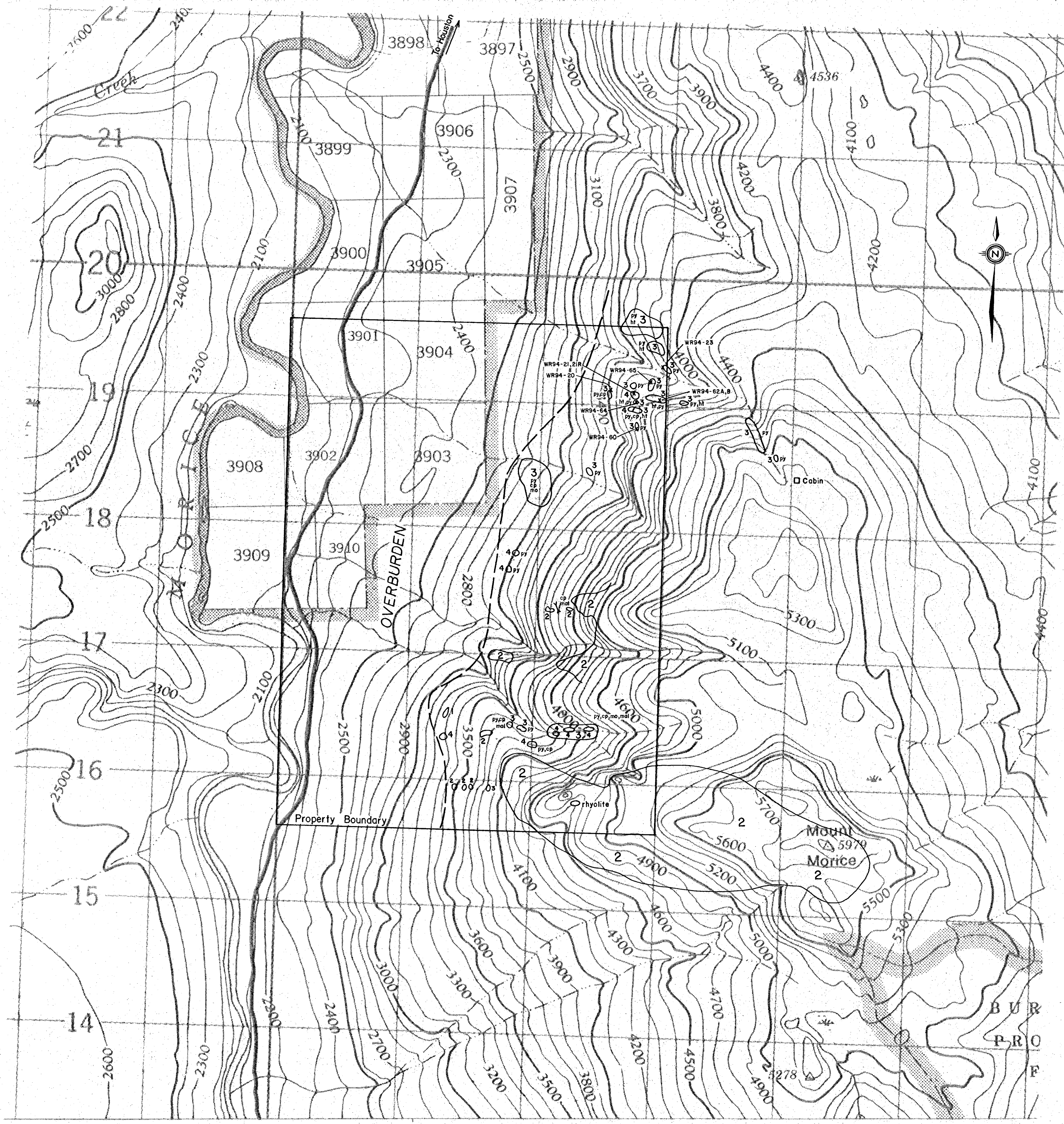
I, Darin W. Wagner, of 12211 210th Street, in the City of Maple Ridge, in the Province of British Columbia, do hereby certify:

- i. That I graduated with a B.Sc. in Earth Sciences from the University of Waterloo in 1989.
- ii. That I graduated with a M.Sc. in Earth Sciences from Carleton University in 1993.
- iii. That I have been actively practising geology from 1989 to 1994 and am presently an employee of Cominco Ltd.



Darin W. Wagner, M.Sc.

December, 1994



LEGEND

Eocene

4 Nanika Quartz Monzonite

Jurassic

3 Hazelton Group
Bleached Mafic to Intermediate Volcanics

2 Hazelton Group
Mafic to Intermediate Volcanics

1 Hazelton Group
Limestone

- py pyrite
- cp chalcopyrite
- mal malachite
- mo molybdenum
- ht hematite
- x rock sample

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,698



38 39 40 41 50' 42 43 44 45 46

CROW - RAVEN PROPERTY 93 L/7

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

GEOLOGY

Scale: 1 : 20,000 Date: Dec., '94 Plate: 2