

83-#104-#11336

COMINCO LTD.

EXPLORATION
NTS: 92 1/9W

WESTERN DISTRICT
2 MAY 1983

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,336

ASSESSMENT REPORT
PERCUSSION DRILLING
AND PROPERTY
SEPARATION LAKE AREA
KAMLOOPS, M.D., B.C.

LONGITUDE: 120°17' LATITUDE: 50°32'

DRILLING PERFORMED APRIL 18-23, 1983 ON
MINERAL CLAIM AND 70

REPORT BY:

STEPHEN B. BUTRENCHUK

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ASSESSMENT REPORT

PERCUSSION DRILLING

AND PROPERTY

INTRODUCTION

The And property is an alkaline porphyry copper prospect located 13 km south of Kamloops immediately west of the Merritt-Kamloops highway. Sporadic exploration has been done in the area of the And property since 1950. Cominco's involvement in this area began in 1976 with the acquisition of the And claims and since that time Cominco has completed mapping, geochemical and IP surveys and drilled 3 percussion holes. This work outlined a small copper occurrence (Phil Showing) near the southern extremity of the Iron Mask Batholith on the And 70 mineral claim. The 1983 percussion drill program, described in this report, was designed to test for extensions of the copper occurrence.

SUMMARY

During the period April 18-23, 1983, six vertical percussion holes totalling 548.64 meters were drilled on the And property. Minor sulphide mineralization, mainly in the form of pyrite was intersected in all of the holes. With the exception of the occasional short interval no significant chalcopyrite was intersected in the drilling. Alteration, mainly in the form of feldspar altered to clay, was encountered in the majority of the drill holes. Albitization is generally weak or absent except in the immediate area of the Phil Showing where it is strong to very strong.

LOCATION AND ACCESS

Longitude: 120°17'

Latitude: 50°32'

Mining District:

Kamloops

The And property is located 13 km south of Kamloops immediately west of the Merritt-Kamloops highway. Access to the property is by private roads from Jackson Road.

PROPERTY GEOLOGY

The And property is situated at the southwestern extremity of the Iron Mask Batholith, a multi-phase intrusion of Triassic age. Intrusive phases of the Batholith abut against Triassic Nicola volcanic rocks to the east and are overlain by Tertiary Kamloops Group volcanic rocks to the west. Those intrusive phases present include the Hybrid, Sugarloaf and Cherry Creek. The Hybrid phase is dioritic to gabbroic with coarse blebs of magnetite. It tends to be very heterogeneous in both texture and mineralogy. The Sugarloaf

phase is comprised of a fine to medium-grained diorite that is both porphyritic and very often brecciated. It is this unit with which copper mineralization is associated. The youngest phase of the Batholith on the property is represented by Cherry Creek fine to medium-grained diorite and monzonite. The unit is characterized by ragged mafic minerals - principally biotite.

PERCUSSION DRILLING

During the period April 18-23, 1983, six vertical percussion drill holes totalling 548.64 meters (1800 feet) were drilled on the And 70 mineral claim. Drilling was done by Al Miller Percussion Drilling using a truck mounted percussion drill. Percussion cuttings were sampled at conventional ten foot (3 meter) intervals. Samples were collected in plastic refuse containers, a flocculating agent added to settle out the fines and the free water decanted. The remaining material was then transferred to a plastic sample bag where as much of the water as possible was removed. Samples were transported to Cominco's Laboratory in Vancouver where they were analyzed for copper using standard A.A. techniques. Gold and silver analyses were done on 50 foot composites. A portion of the sample was retained for visual examination.

Except for a single sample(10 foot interval)in percussion hole PH83-6 all copper values were less than 1000 ppm. This single interval registered a value of 1709 ppm Cu. Gold and silver values were also low.

ROCK DESCRIPTION

Ph82-1

Length: 300' (91 m)

<u>Interval (meters)</u>	<u>Unit</u>	<u>Description</u>
0 - 23	Overburden	
23 - 88	Sugarloaf	Dioritic intrusive; fine-grained, porphyritic, dark green, weakly albitized to 64 meters, 0.5-1.0% epidote, trace k-feldspar, 0.5% pyrite, 64-88 m
88 - 91	Cherry Creek	Dioritic to monzonitic intrusive, fine-grained, dark green to pinkish, 1.0% pyrite, 0.5% epidote.

PH83-2

Length: 300' (91 m)

<u>Interval (meters)</u>	<u>Unit</u>	<u>Description</u>
0 - 1.1	Overburden	
1.1 - 24.4	Sugarloaf	Dioritic intrusive: fine-grained, porphyritic, dark green, weak to moderately albitized, minor epidote. trace k-feldspar.
24.4 - 91	Cherry Creek	Dioritic-monzonitic intrusive; fine-grained, greenish coloured rock, trace to minor biotite present, traces of pyrite, trace chalcopyrite 79-85 m.

PH83-3

Length: 300' (91 m)

<u>Interval</u>	<u>Unit</u>	<u>Description</u>
0 - 13.4	Overburden	
13.4 - 91.0	Sugarloaf	Dioritic intrusive: very fine-grained, porphyritic, dark green, very weak to weak albitization to 70 m; weak to moderate albitization 70-91 m; trace to 2% pyrite; 0.5-1.0% chalcopyrite, 42.7 to 48.7 m; minor epidote throughout; trace to minor k-feldspar.

PH83-4

Length: 300' (91 m)

<u>Interval (meters)</u>	<u>Unit</u>	<u>Description</u>
0 - 7.0	Overburden	
7.0 - 61.0	Sugarloaf	Dioritic intrusive: fine-grained, dark green, porphyritic, trace magnetite, throughout, traces of pyrite, trace chalcopyrite 42.7-61.0, trace to minor epidote and k-feldspar; weak to moderately albitized.
61.0 - 91.0	Nicola	Augite porphyry: very fine-grained, dark green porphyritic, trace epidote, minor magnetite, unaltered, abundant hematite throughout (up to 15%) at 61.0 meters - possible fault. at 79.2 meters - possible fault.

PH83-5

Length: 300' (91 m)

<u>Interval</u>	<u>Unit</u>	<u>Description</u>
0 - 1.5	Overburden	
1.5 - 91.0	Sugarloaf	Dioritic intrusive: fine-grained, porphyritic, green, unaltered, trace epidote and k-feldspar, short intervals with trace pyrite or chalcopyrite, minor magnetite throughout.

PH83-6

Length: 300' (91 m)

<u>Interval</u>	<u>Unit</u>	<u>Description</u>
0 - 1.7	Overburden	
1.7 - 91.0	Sugarloaf	Dioritic intrusive: fine-grained, porphyritic, green to dark green, very weak to weak albitization to 39.6 m; trace magnetite, 0.5-5.0% pyrite to 39.6 m; 51.8-91.0 trace pyrite. 27.4-39.6: 0.2-1.0% chalcopyrite - minor epidote and k-feldspar, trace chlorite 42.6-45.6: gabbroic appearing rock - possible Hybrid.

CONCLUSIONS

The 1983 percussion drilling on the And property intersected a single 10 foot (3 meter) intervals of low grade copper mineralization. It would appear that the mineralized zone does not extend to the north, south and east.

Report by: Stephen B. Butrenchuk
 Stephen B. Butrenchuk,
 Geologist,
 Exploration,
 Western District.

Endorsed by: W. J. Wolfe
 W.J. Wolfe,
 Assistant Manager,
 Exploration,
 Western District.

Approved for
 Release by: W. J. Wolfe for
 G. Harden,
 Manager, Exploration,
 Western District.

Attachments:

Statement of Expenditures
 Statement of Qualifications
 Location Map
 Assay Sheets
 Geology and 1983 Percussion Drill Hole Locations

Distribution

Mining Recorder
 Western District
 E and B
 FLW, SBB

SBB/mar

STATEMENT OF EXPENDITURES

AND PROPERTY

Percussion Drilling: 1800 feet @ \$7.50/ft.	\$13,500
Water Hauling	1,275
Analyses	1,200
Truck Rental	550
Salaries: S.B. Butrenchuk 10 days @ \$150/day	1,500
R.A. Ryzluk 5 days @ \$125/day	625
Domicile	400
Equipment and Supplies.	<u>100</u>
TOTAL	\$19,150

STATEMENT OF QUALIFICATIONS

AND PROPERTY

I, Stephen B. Butrenchuk, with business address at 700-409 Granville Street, Vancouver, British Columbia, V6C 1T2, do hereby certify that I have supervised the percussion drilling program on the And property.

I also certify that:

- (1) I am a graduate of the University of Manitoba with a B.Sc degree in 1966 and an M.Sc. degree in Geology 1970.
- (2) I have been involved in exploration work for Cominco Ltd. since 1970.
- (3) I have been involved with the exploration work on the And property during the period January 1, 1983 to the present.

Respectfully submitted: Stephen B. Butrenchuk.
Stephen B. Butrenchuk, B.Sc, M.Sc.
Geologist, Western District.

2 May 1983

REPORTING DATE 9 MAY 1983

PAGE

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL FROM	INTERVAL TO	Cu PPM
R83 01577	PH83-1		76.0	90.0	63
R83 01578	PH83-1		90.0	100.0	215
R83 01579	PH83-1		100.0	110.0	258
R83 01580	PH83-1		110.0	120.0	270
R83 01581	PH83-1		120.0	130.0	577
R83 01582	PH83-1		130.0	140.0	113
R83 01583	PH83-1		140.0	150.0	146
R83 01584	PH83-1		150.0	160.0	108
R83 01585	PH83-1		160.0	170.0	103
R83 01586	PH83-1		170.0	180.0	92
R83 01587	PH83-1		180.0	190.0	86
R83 01588	PH83-1		190.0	200.0	74
R83 01589	PH83-1		200.0	210.0	107
R83 01590	PH83-1		210.0	220.0	81
R83 01591	PH83-1		220.0	230.0	75
R83 01592	PH83-1		230.0	240.0	79
R83 01593	PH83-1		240.0	250.0	60
R83 01594	PH83-1		250.0	260.0	65
R83 01595	PH83-1		260.0	270.0	65
R83 01596	PH83-1		270.0	280.0	56
R83 01597	PH83-1		280.0	290.0	68
R83 01598	PH83-1		290.0	300.0	61
R83 01599	PH83-2		4.0	20.0	114
R83 01600	PH83-2		20.0	30.0	136
R83 01601	PH83-2		30.0	40.0	84
R83 01602	PH83-2		40.0	50.0	37
R83 01603	PH83-2		50.0	60.0	57
R83 01604	PH83-2		60.0	70.0	134
R83 01605	PH83-2		70.0	80.0	192
R83 01606	PH83-2		80.0	90.0	80
R83 01607	PH83-2		90.0	100.0	87
R83 01608	PH83-2		100.0	110.0	140
R83 01609	PH83-2		110.0	120.0	172
R83 01610	PH83-2		120.0	130.0	98
R83 01611	PH83-2		130.0	140.0	62
R83 01612	PH83-2		140.0	150.0	164
R83 01613	PH83-2		150.0	160.0	87
R83 01614	PH83-2		160.0	170.0	90

REPORTING DATE 9 MAY 1983

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL INTERVAL		Cu PPM
			FROM	TO	
R83 01615	PH83-2		170.0	180.0	60
R83 01616	PH83-2		180.0	190.0	57
R83 01617	PH83-2		190.0	200.0	203
R83 01618	PH83-2		200.0	210.0	132
R83 01619	PH83-2		210.0	220.0	132
R83 01620	PH83-2		220.0	230.0	179
R83 01621	PH83-2		230.0	240.0	136
R83 01622	PH83-2		240.0	250.0	113
R83 01623	PH83-2		250.0	260.0	105
R83 01624	PH83-2		260.0	270.0	105
R83 01625	PH83-2		270.0	280.0	96
R83 01626	PH83-2		280.0	290.0	93
R83 01627	PH83-2		290.0	300.0	83
R83 01628	PH83-3		44.0	60.0	76
R83 01629	PH83-3		60.0	70.0	52
R83 01630	PH83-3		70.0	80.0	140
R83 01631	PH83-3		80.0	90.0	275
R83 01632	PH83-3		90.0	100.0	616
R83 01633	PH83-3		100.0	110.0	106
R83 01634	PH83-3		110.0	120.0	175
R83 01635	PH83-3		120.0	130.0	149
R83 01636	PH83-3		130.0	140.0	88
R83 01637	PH83-3		140.0	150.0	103
R83 01638	PH83-3		150.0	160.0	115
R83 01639	PH83-3		160.0	170.0	117
R83 01640	PH83-3		170.0	180.0	131
R83 01641	PH83-3		180.0	190.0	62
R83 01642	PH83-3		190.0	200.0	61
R83 01643	PH83-3		200.0	210.0	104
R83 01644	PH83-3		210.0	220.0	109
R83 01645	PH83-3		220.0	230.0	93
R83 01646	PH83-3		230.0	240.0	56
R83 01647	PH83-3		240.0	250.0	60
R83 01648	PH83-3		250.0	260.0	122
R83 01649	PH83-3		260.0	270.0	116
R83 01650	PH83-3		270.0	280.0	156
R83 01651	PH83-3		280.0	290.0	157
R83 01652	PH83-3		290.0	300.0	110

REPORTING DATE 9 MAY 1983

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL INTERVAL FROM	TO	Cu PPM
R83 01653	PH83-4		23.0	40.0	128
R83 01654	PH83-4		40.0	50.0	46
R83 01655	PH83-4		50.0	60.0	55
R83 01656	PH83-4		60.0	70.0	45
R83 01657	PH83-4		70.0	80.0	76
R83 01658	PH83-4		80.0	90.0	61
R83 01659	PH83-4		90.0	100.0	56
R83 01660	PH83-4		100.0	110.0	28
R83 01661	PH83-4		110.0	120.0	39
R83 01662	PH83-4		120.0	130.0	89
R83 01663	PH83-4		130.0	140.0	211
R83 01664	PH83-4		140.0	150.0	57
R83 01665	PH83-4		150.0	160.0	164
R83 01666	PH83-4		160.0	170.0	52
R83 01667	PH83-4		170.0	180.0	39
R83 01668	PH83-4		180.0	190.0	82
R83 01669	PH83-4		190.0	200.0	82
R83 01670	PH83-4		200.0	210.0	83
R83 01671	PH83-4		210.0	220.0	78
R83 01672	PH83-4		220.0	230.0	69
R83 01673	PH83-4		230.0	240.0	51
R83 01674	PH83-4		240.0	250.0	73
R83 01675	PH83-4		250.0	260.0	72
R83 01676	PH83-4		260.0	270.0	51
R83 01677	PH83-4		270.0	280.0	56
R83 01678	PH83-4		280.0	290.0	62
R83 01679	PH83-4		290.0	300.0	44
R83 01680			5.0	20.0	195
R83 01681	PH83-5		20.0	30.0	273
R83 01682	PH83-5		30.0	40.0	157
R83 01683	PH83-5		40.0	50.0	131
R83 01684	PH83-5		50.0	60.0	63
R83 01685	PH83-5		60.0	70.0	99
R83 01686	PH83-5		70.0	80.0	136
R83 01687	PH83-5		80.0	90.0	84
R83 01688	PH83-5		90.0	100.0	86
R83 01689	PH83-5		100.0	110.0	223
R83 01690	PH83-5		110.0	120.0	118

REPORTING DATE 9 MAY 1983

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL INTERVAL FROM	TO	Cu PPM
R83 01691	PH83-5		120.0	130.0	589
R83 01692	PH83-5		130.0	140.0	96
R83 01693	PH83-5		140.0	150.0	63
R83 01694	PH83-5		150.0	160.0	35
R83 01695	PH83-5		160.0	170.0	57
R83 01696	PH83-5		170.0	180.0	53
R83 01697	PH83-5		180.0	190.0	66
R83 01698	PH83-5		190.0	200.0	55
R83 01699	PH83-5		200.0	210.0	105
R83 01700	PH83-5		210.0	220.0	93
R83 01701	PH83-5		220.0	230.0	116
R83 01702	PH83-5		230.0	240.0	102
R83 01703	PH83-5		240.0	250.0	57
R83 01704	PH83-5		250.0	260.0	189
R83 01705	PH83-5		260.0	270.0	488
R83 01706	PH83-5		270.0	280.0	760
R83 01707	PH83-5		280.0	290.0	656
R83 01708	PH83-5		290.0	300.0	910
R83 01709	PH83-6		6.0	20.0	52
R83 01710	PH83-6		20.0	30.0	157
R83 01711	PH83-6		30.0	40.0	226
R83 01712	PH83-6		40.0	50.0	61
R83 01713	PH83-6		50.0	60.0	108
R83 01714	PH83-6		60.0	70.0	912
R83 01715	PH83-6		70.0	80.0	416
R83 01716	PH83-6		80.0	90.0	498
R83 01717	PH83-6		90.0	100.0	838
R83 01718	PH83-6		100.0	110.0	1709
R83 01719	PH83-6		110.0	120.0	276
R83 01720	PH83-6		120.0	130.0	427
R83 01721	PH83-6		130.0	140.0	150
R83 01722	PH83-6		140.0	150.0	86
R83 01723	PH83-6		150.0	160.0	93
R83 01724	PH83-6		160.0	170.0	98
R83 01725	PH83-6		170.0	180.0	85
R83 01726	PH83-6		180.0	190.0	70
R83 01727	PH83-6		190.0	200.0	74
R83 01728	PH83-6		200.0	210.0	70

REPORTING DATE 9 MAY 1983

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL INTERVAL FROM	DRILL INTERVAL TO	CU PPM
R83 01729	PH83-6		210.0	220.0	83
R83 01730	PH83-6		220.0	230.0	70
R83 01731	PH83-6		230.0	240.0	63
R83 01732	PH83-6		240.0	250.0	68
R83 01733	PH83-6		250.0	260.0	66
R83 01734	PH83-6		260.0	270.0	68
R83 01735	PH83-6		270.0	280.0	59
R83 01736	PH83-6		280.0	290.0	55
R83 01737	PH83-6		290.0	300.0	54

WHERE ANALYSIS REQUESTED BUT NO VALUES SHOWN, RESULTS ARE TO FOLLOW

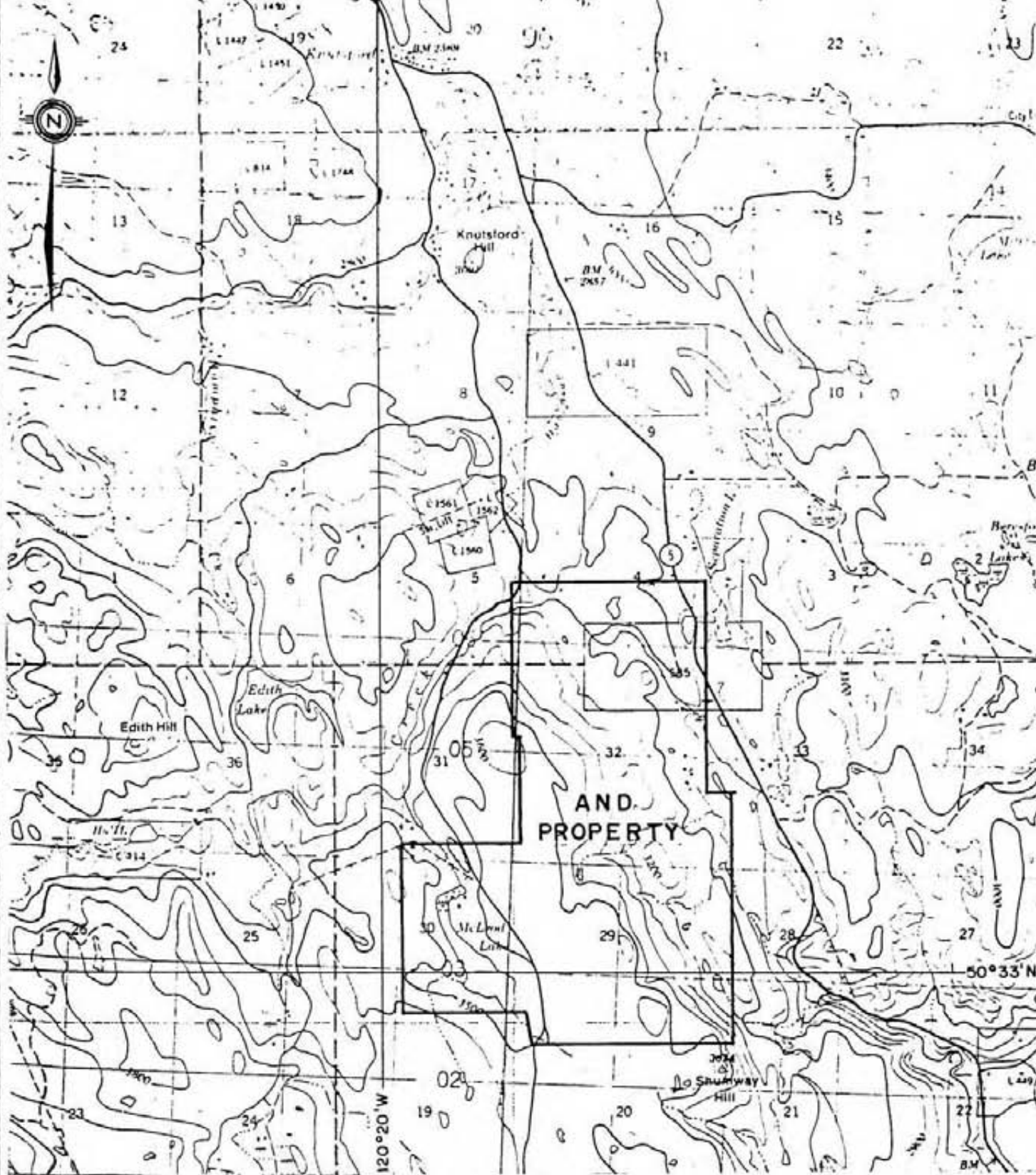
ANALYTICAL METHODS

CU AQUA REGIA DECOMPOSITION / AAS

IRON MASK

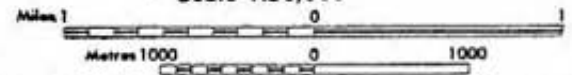
REPORTING DATE 18 MAY 1983

SAMPLE NUMBER	FIELD NUMBER	HOLE No.	DRILL INTERVAL FROM	TO	AU PPB	WT AU GRAM	Ag PPM
R83 01738	PH83-1		76.0	100.0	<10	5.0	<.4
R83 01739	PH83-1		100.0	150.0	<10	5.0	<.4
R83 01740	PH83-1		150.0	200.0	<10	5.0	<.4
R83 01741	PH83-1		200.0	250.0	<10	5.0	<.4
R83 01742	PH83-1		250.0	300.0	<10	5.0	<.4
R83 01743	PH83-2		4.0	50.0	<10	5.0	<.4
R83 01744	PH83-2		50.0	100.0	<10	5.0	<.4
R83 01745	PH83-2		100.0	150.0	<10	5.0	<.4
R83 01746	PH83-2		150.0	200.0	<10	5.0	<.4
R83 01747	PH83-2		200.0	250.0	<10	5.0	<.4
R83 01748	PH83-2		250.0	300.0	<10	5.0	<.4
R83 01749	PH83-3		44.0	100.0	20	5.0	<.4
R83 01750	PH83-3		100.0	150.0	<10	5.0	<.4
R83 01751	PH83-3		150.0	200.0	<10	5.0	<.4
R83 01752	PH83-3		200.0	250.0	<10	5.0	<.4
R83 01753	PH83-3		250.0	300.0	<10	5.0	<.4
R83 01754	PH83-4		23.0	50.0	<10	5.0	<.4
R83 01755	PH83-4		50.0	100.0	<10	5.0	<.4
R83 01756	PH83-4		100.0	150.0	<10	5.0	<.4
R83 01757	PH83-4		150.0	210.0	<10	5.0	<.4
R83 01758	PH83-4		210.0	250.0	<10	5.0	<.4
R83 01759	PH83-4		250.0	300.0	<10	5.0	<.4
R83 01760	PH83-5		5.0	50.0	140	5.0	<.4
R83 01761	PH83-5		50.0	100.0	72	5.0	<.4
R83 01762	PH83-5		100.0	150.0	156	5.0	<.4
R83 01763	PH83-5		150.0	200.0	<10	5.0	<.4
R83 01764	PH83-5		200.0	250.0	40	5.0	<.4
R83 01765	PH83-5		250.0	300.0	60	5.0	<.4
R83 01766	PH83-6		6.0	50.0	<10	5.0	<.4
R83 01767	PH83-6		50.0	100.0	106	5.0	.7
R83 01768	PH83-6		100.0	150.0	<10	5.0	<.4
R83 01769	PH83-6		150.0	200.0	<10	5.0	<.4
R83 01770	PH83-6		200.0	250.0	<10	5.0	<.4
R83 01771	PH83-6		250.0	300.0	<10	5.0	<.4



KAMLOOPS DIVISION OF YALE LAND DISTRICT
BRITISH COLUMBIA

Scale 1:50,000



AND PROPERTY



NTS
92-1/9

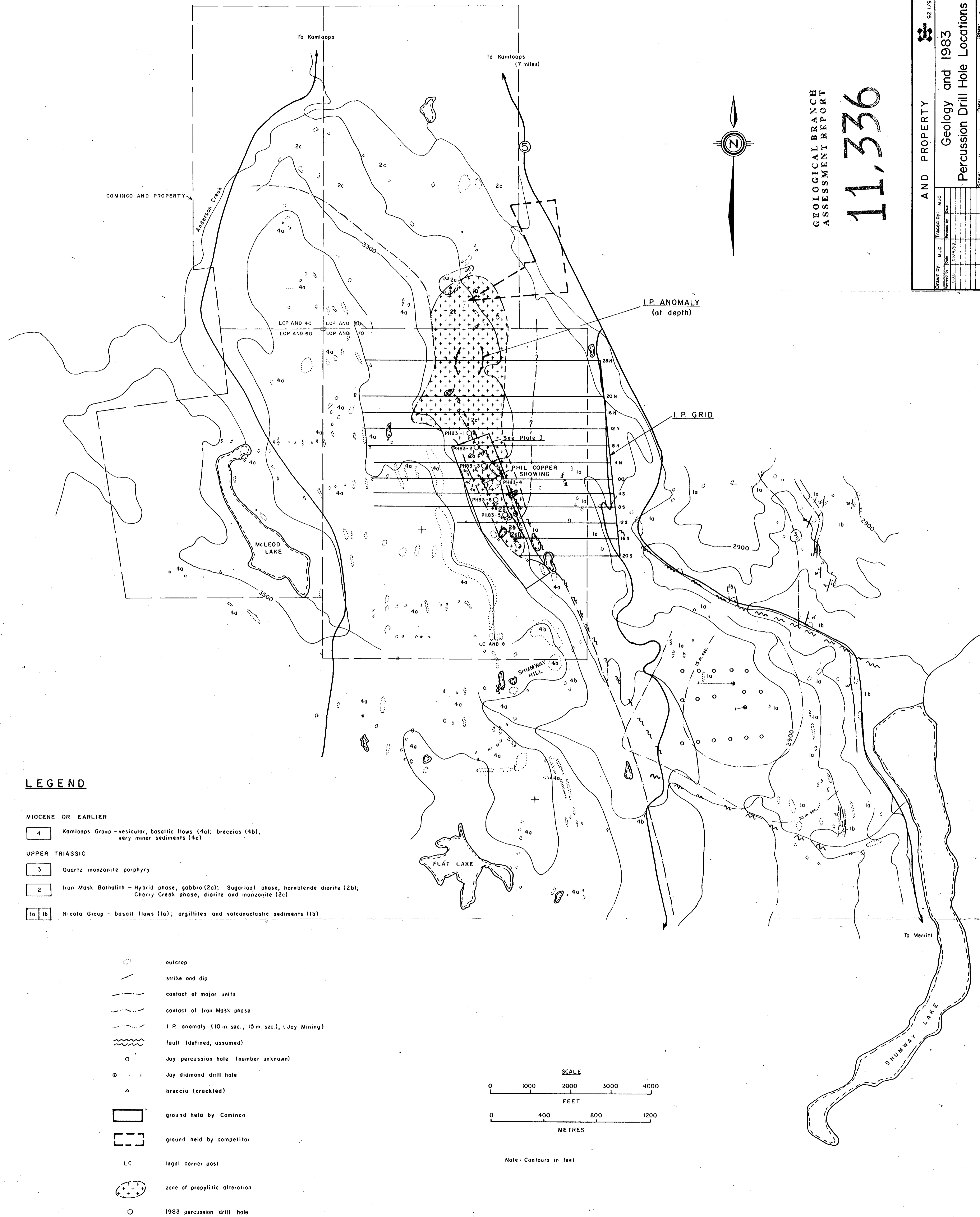
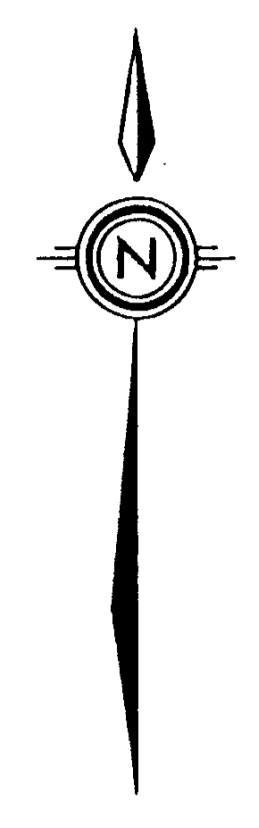
Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

LOCATION MAP

KAMLOOPS M.D., B.C.

Scale:	1: 50,000	Date:	APRIL 1983	Plate:	A 83 1
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GEOLOGICAL BRANCH
ASSESSMENT REPORT
11,336



LEGEND

MIOCENE OR EARLIER

4 Kamloops Group - vesicular, basaltic flows (4a); breccias (4b); very minor sediments (4c)

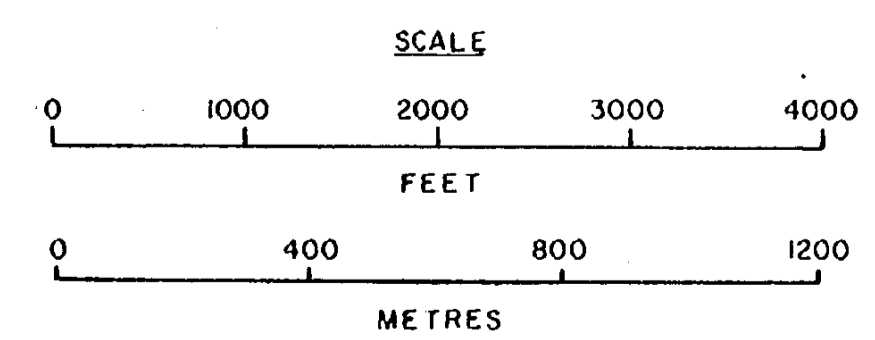
UPPER TRIASSIC

3 Quartz monzonite porphyry

2 Iron Mask Batholith - Hybrid phase, gabbro (2a); Sugarloaf phase, hornblende diorite (2b); Cherry Creek phase, diorite and monzonite (2c)

1a 1b Nicola Group - basalt flows (1a); argillites and volcanoclastic sediments (1b)

- outcrop
- strike and dip
- contact of major units
- contact of Iron Mask phase
- I.P. anomaly (10 m. sec., 15 m. sec.) (Joy Mining)
- fault (defined, assumed)
- Joy percussion hole (number unknown)
- Joy diamond drill hole
- breccia (crackled)
- ground held by Cominco
- ground held by competitor
- legal corner post
- zone of propylitic alteration
- 1983 percussion drill hole



Note: Contours in feet