

COMINCO LTD.

EXPLORATION

WESTERN CANADA

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30 November 1988

ASSESSMENT REPORT
ON GEOCHEMICAL AND GEOLOGICAL WORK ON THE
OPUS (1-4) CLAIMS
CARIBOO MINING DIVISION, BRITISH COLUMBIA
LATITUDE: 54°50.1'N LONGITUDE: 123°07.5'W

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BY

MICHAEL G. WESTCOTT, B.Sc.

OCTOBER 28, 1988

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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TABLE OF CONTENTS

SUMMARY AND CONCLUSIONS.....	1
INTRODUCTION.....	1
Location and Access.....	1
Physiography.....	1
SUMMARY OF WORK.....	2
GEOLOGY.....	3
Regional Geology.....	3
Local Geology.....	4
GEOCHEMISTRY.....	7
CONCLUSIONS.....	10

PLATES & FIGURES

- FIGURE 1 - Index Map
- FIGURE 2 - Regional Geology west of the McLeod Lake Fault

PLATES

- PLATE 1 - OPUS Geology
- PLATE 2 - Sample Locations
- PLATE 3 - Geochemistry Au, Ag
- PLATE 4 - Geochemistry Pb/Zn/Cu
- PLATE 5 - Geochemistry As/Hg

- APPENDIX I Affidavit and Statement of Expenditures
- APPENDIX II Soil and Silt Sample Results
- APPENDIX III Pan Concentrate and Rock Sample Results
- APPENDIX IV Certificates
- APPENDIX V References

SUMMARY AND RECOMMENDATIONS

The 80 unit Opus claim group staked by Cominco Ltd. in 1987 was acquired in order to cover coincident magnetic and geochemical anomalies. Preliminary silt sampling in 1987 revealed two gold anomalies, which in large were responsible for the 1988 geochemical program described herein.

Samples obtained for geochemical analysis took the form of silt, soil, rock and pan concentrate samples. Silt and pan concentrate samples were taken at the two anomalous sample sites as well as along all major drainages. Results from the repeat sampling of the anomalous sites were mixed, with the pan concentrate samples yielding values of 2320 ppb and 1140 ppb Au, while the silts had no detectable gold.

A soil line along a north trending road cut, located 1.5 km east of the property, was part of a "down ice" prospecting program. The soil line has identified a northwest trending zone with continuously elevated zinc, silver and mercury values. Anomalous gold values up to 120 ppb were also obtained from the soil samples. The trend of the anomalous zone is the same as that of the underlying sedimentary strata, and is therefore suspected to be derived from underlying geology.

Recommendations for further work involve additional prospecting and soil lines in the vicinity of the zone yielding high gold, silver, mercury and zinc values.

INTRODUCTION

Location and Access

The Opus (1-4) claims lie within the Cariboo Mining District on N.T.S. Sheet 93J/14. The 80 unit claim group is centered about a common legal corner post located at latitude 54°50.1'N and longitude 123°07'W.

An extensive network of logging roads provides access to the claim group and surrounding area. The claim group is some 25 km along the logging roads which branch westward off the Hart Highway from Bear Lake and McLeod Lake. Helicopter and fixed wing services are available out of Prince George, 100 km to the south and MacKenzie, 60 km to the north.

Physiography

The claims overlie the northeastern portion of the subdued Nechako plateau. The subtle relief of the country rock is further masked by 25-100 feet of drift, leaving a rolling landscape averaging 3000' elevation.

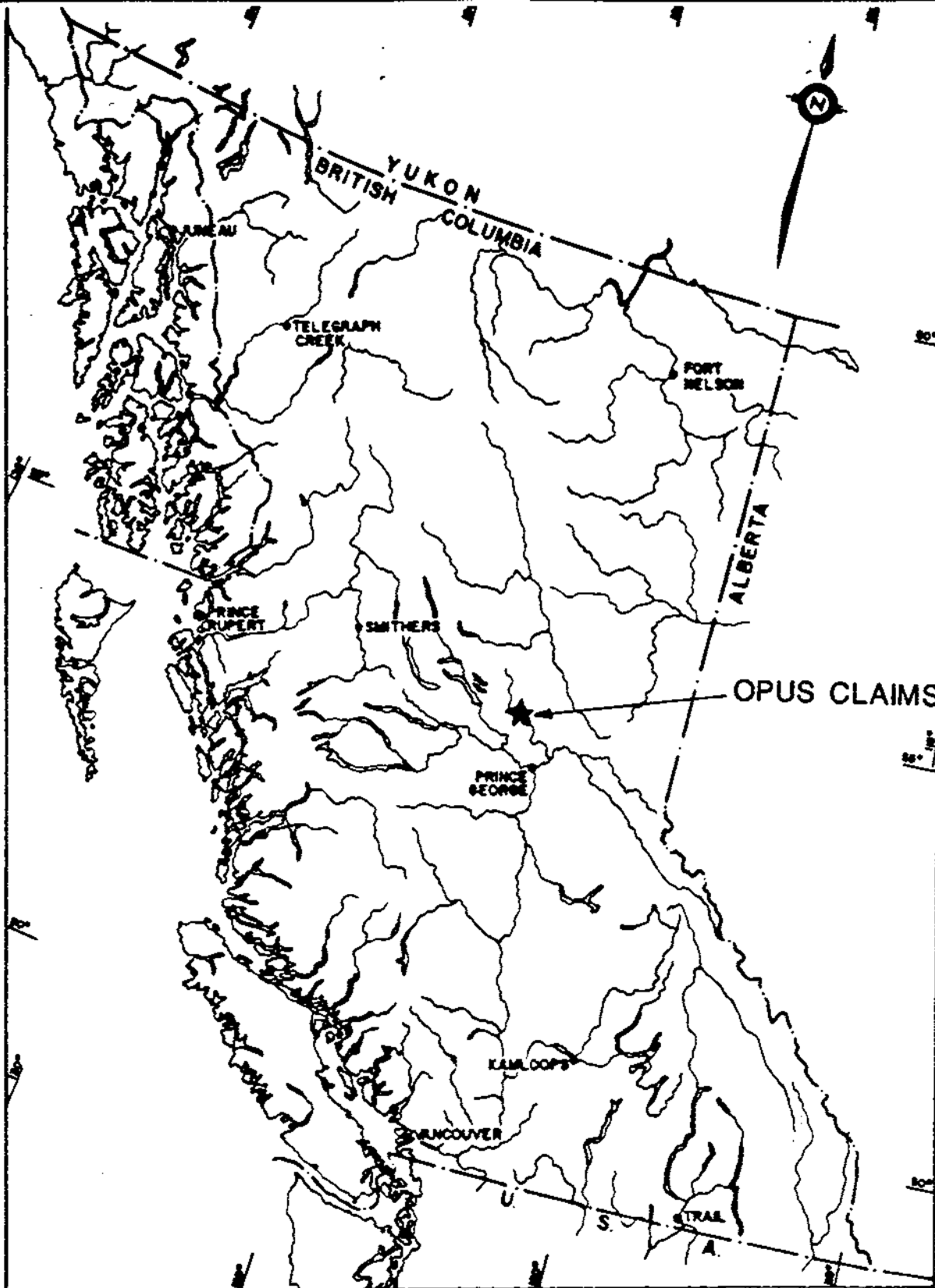


FIGURE 1



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

INDEX MAP OPUS 1-4

Scale: AS ABOVE

Date: OCT 21, 1988

Plate: 93J/14

2.

Numerous well defined drumlins, eskers, melt water channels and crag and tail structures indicate the direction of the last ice movement across the area was from southwest to northeast.

Lakes, swamps and streams are plentiful, occupying 5-10 percent of the area. The drainage, highly influenced by the glacial landforms, flows to the northeast eventually emptying into McLeod lake.

A mature forest of lodge pole pine and spruce with occasional stands of deciduous trees covers the northern two thirds of the property, while much of the southern third is occupied by recent logging cut blocks. Devils club and willows flank many of the small swamps.

SUMMARY OF WORK

Commencing June 2, 1988 a 4-5 man crew worked on the claims for a total of 52 man days. The program included:

1. Cutting 3.5 km of trail, facilitating access to portions of the claims distal to roads.
2. Obtaining pan concentrate samples from all major drainages on the property. A total of 12 pan concentrates were taken. "Pan concentrating" was done using a 5-mesh screen and an 18" conical pan. The screened material was panned down to a concentration of 50 times the original.
3. Obtaining duplicate silt samples at sites that gave anomalous gold values during preliminary sampling in 1987. In addition, pan concentrate samples were taken at these sites.
4. Silt sampling major streams and their tributaries. A total of 60 silt samples were taken at 200-300 m intervals.
5. Three soil lines totalling 10 km and 47 samples were taken. Wherever possible samples were taken from B-horizon soil at depths of 15-30 cm.
6. Prospecting and mapping of outcrop and float. A total of 20 rock samples were submitted for analysis.

N.B. Due to the scarcity of outcrop on the property and the obvious influence of glaciation in the area, much of the sampling and prospecting was carried out in logged areas and along road cuts immediately down ice from the claims.

3.

GEOLOGY

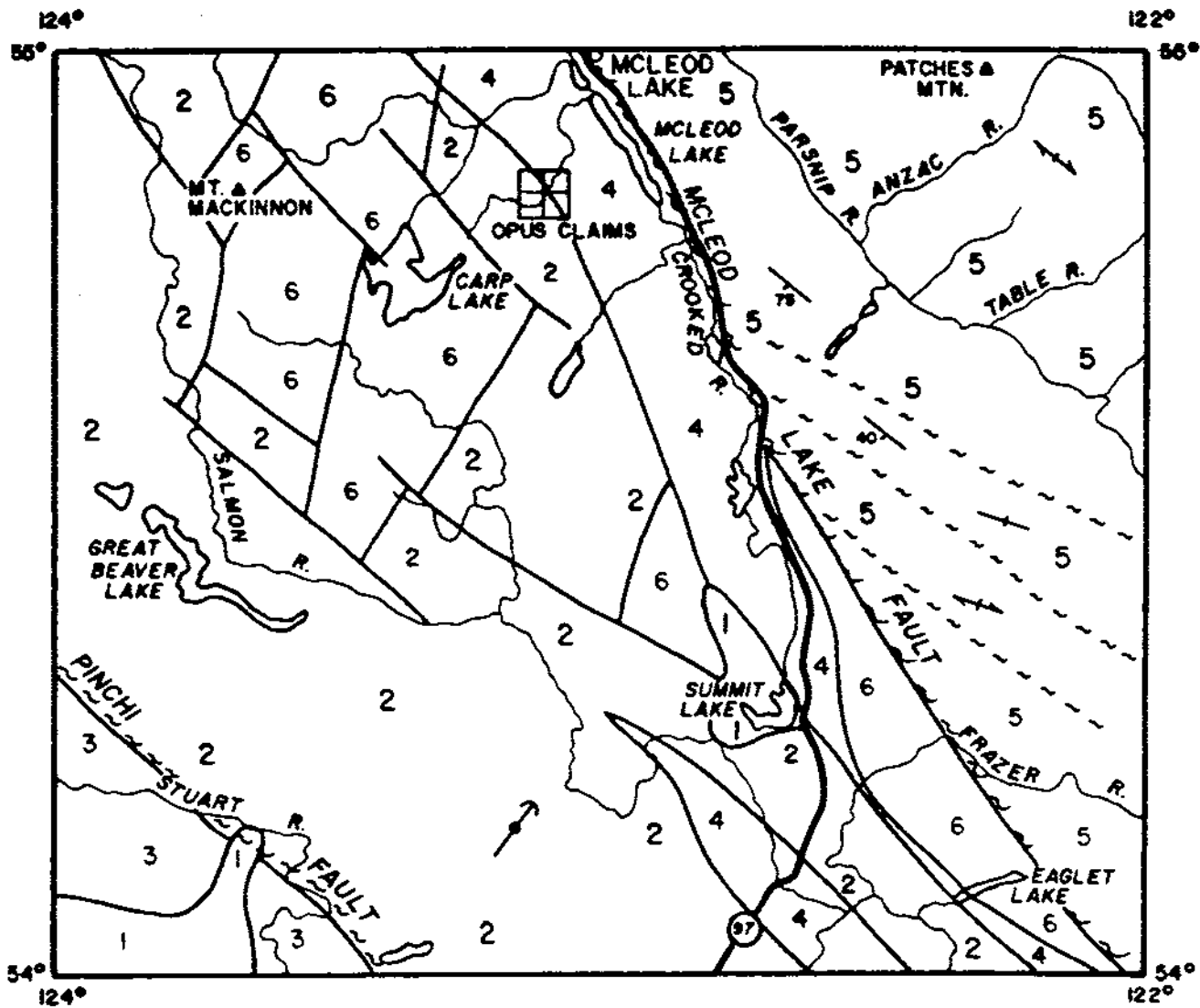
Regional Geology

Geology of the McLeod Lake area is divisible into two distinct packages, a sequence comprising the Nechako plateau in central British Columbia, and a sequence to the east forming the McGregor plateau and ultimately the Rocky Mountains. The division between the Nechako plateau and the McGregor plateau is marked by a northwest trending depression controlled by the McLeod Lake fault.

To the east of the fault, Paleozoic and Precambrian limy sediments, intermediate to basic volcanics, and low grade metasediments are the dominant lithologies. Structure east of the fault is marked by a northwest striking, southwest dipping sequence of rock, which is provisionally interpreted as a series of folded fault blocks.

West of the McLeod Lake fault the geology can be subdivided as follows: (see figure 2).

- TERTIARY
 - CHILCOTIN and ENDAKO GROUPS
basalt, andesite, related tuffs and breccias
- TRIASSIC AND JURASSIC
 - TAKLA GROUP
andesite to basaltic flows, tuffs, breccias, conglomerate, greywacke, argillite, limestone
- PENNSYLVANIAN and PERMIAN
 - CACHE CREEK GROUP
limestone, ribbon chert, argillite
- MID-PALEOZOIC
 - SLIDE MOUNTAIN GROUP
limestone, basaltic pillow lavas, andesite, related pyroclastic rocks, argillite, chert, greywacke
- PRECAMBRIAN to TERTIARY
 - WOLVERINE METAMORPHIC COMPLEX and younger granitoid rocks.
granitoid gneiss, micaceous garnetiferous chlorite schists, pegmatite



Regional geology for McLeod Lake Area.

LEGEND

Scale 1: 850,000

TERTIARY

1 Chilcotin and Endako Groups

TRIASSIC AND JURASSIC

2 Takla Group

UPPER PALEOZOIC

3 Cache Creek Group

4 Slide Mountain Group

PALEOZOIC AND PRECAMBRIAN

5 Limy sediments, intermediate
- basic volcanics

PRECAMBRIAN TO TERTIARY

6 Wolverine Metamorphic Complex,
and younger granitoid rocks

FIGURE 2

4.

Structure west of the fault, largely interpreted from aeromagnetic data due to the scarcity of outcrop, includes a series of north-northwest trending normal or strike slip faults, and a similar less abundant set of faults crossing at right angles.

Struik 1988, suggests Precambrian rock of the Wolverine metamorphic complex may have been brought into contact with younger low grade metamorphic volcanics of the Takla and Slide Mountain groups by regional extension faults. Crustal thinning and shallow extension faults may have facilitated the elevation of warmer lower crustal rocks like those of the Wolverine Complex. The presence of a high level heat source may generate a heat pump for the circulation of meteoric and metamorphic waters and associated mineral brines.

Local Geology

Outcrop exposed in the lower portions of stream cut gullies, along road cuts, and occasionally on topographic highs accounts for approximately one percent of the total claim area. Lithologies observed as outcrop and/or float on and immediately adjacent to the property are as follows:

TAKLA GROUP

Augite Porphyry

This unit, comprising the majority of the outcrops encountered on the claims, is a dark-medium green auite porphyritic flow. Augite phenocrysts, comprising up to 60% of the rock, are from 1-15 mm long and occur as subhedral to euhedral crystals. The rock is locally foliated generally striking northwest. The rock is pervaisvely magnetic although the intensity varies locally.

Crystal/Lapilli Tuff

This unit is monolithic tuff with calcareous siltstone fragments comprising 10-15% of the rock. The matrix is lime green and hosts 1-2% pyrite as fine disseminations and blebs.

5.

Dark Grey Siltstone

This unit is foliated and friable, often exhibiting good laminations. This dark grey-black siltstone striking northwest and dipping steeply to either side, is the most abundant sedimentary rock in the area. Pyrite, locally present in 1-2% abundance occurs as fine disseminations.

Light Green Muddy Siltstone

This light green clay rich siltstone is highly weathered and is readily friable along a well developed foliation. The unit is exposed in two good sized outcrops and is found adjacent to a black graphitic siltstone in both instances.

Black Graphitic Siltstone

This unit is distinguishable from the forementioned siltstones in that it is shaly and it leaves a heavy black streak.

SLIDE MOUNTAIN GROUP

Pillow Basalt/Andesite

This submarine lain unit is light-medium green, non magnetic, and displays good pillow structures. Swirled flow structures entrain coarse breccia of the same composition. Locally, stockwork quartz veining 2-20 mm wide at a 10-15 cm spacing coincides with an orange-brown ankeritic alteration. Disseminated pyrite is found in abundances of 2-5 percent within the altered portions of the outcrop. Epidote and chlorite are common.

Intercalated Tuffs and Siltstones

Fresh surfaces varying from light to dark grey, commonly weather to an orangey brown. Tuffs ranging from ash to lapilli size are found intercalated with finely laminated siltstones. Siltstone, the more abundant lithology, is interrupted by the tuffs at irregular intervals. Two or three tuff horizons are common in a 5-10 m thick sequence.

6.

Carbonatization is common within this unit. An orange-brown alteration rind several centimetres thick commonly flanks fractures. In other instances the alteration is pervasive and through going. Two-five percent pyrite is common within the carbonatized zones.

METAMORPHIC COMPLEX

Biotite-quartz garnetiferous gneiss, granitoid gneiss, and a muscovite pegmatite were all observed as subangular boulders on and around the property.

POST TRIASSIC INTRUSIVES

A few silicic dykes are found to intrude the augite porphyry. An altered feldspar porphyritic dyke or plug 3-4 m across is found abutting Takla siltstone.

Sulfide mineralization on the property is scarce. Minor disseminated pyrite, assumed to have a syngenetic origin, is not uncommon in the fine sediments of the Takla and Slide Mountain groups.

Two styles of epigenetic pyrite mineralization are recognized.

1. Blebs and disseminations of pyrite in abundances of 2-10 percent found along narrow veins and lenses of calcite and quartz. The quartz veins, which are generally less than 5 cm wide, are in the volcanic flows as well as in sediments.
2. Pyritization locally accompanies carbonatization of Slide Mountain tuffs and siltstones. Here pyrite can be found as massive patches 5-10 cm long as well as in thin quartz and calcite veins as described above.

Minor chalcopyrite was observed in an outcrop of carbonatized siltstone.

7.

An east-west trending peanut shaped magnetic high covers the central portion of the claim group. The magnetic high corresponds to the presence of augite porphyry. Finely disseminated magnetite within the augite porphyry is responsible at least in part for the observed magnetic anomaly.

Structural interpretation of the geology is difficult due to the lack of exposure. Aside from a few small scale shears, foliation is the only structural feature observed. The orientation of foliation was measured in several locations over the property and was found to consistently strike 130i-170i and dip steeply to the west. The trend of the foliation roughly parallels the McLeod Lake fault located 10 km to the east.

The inferred contact between lithologies of the Takla group and those of the Slide Mountain group trends north-northwest. The coincident trends of the foliation, contacts, and regional structures suggests the contact between the two groups may well be defined by a fault paralleling the prominent McLeod Lake fault.

GEOCHEMISTRY

A total of 107 silts and soils, 12 pan concentrates, and 20 rock samples were analysed for (Au, Ag, As, Cu, Pb, Zn, and Hg). Results for all samples are listed in Appendix II and III.

Background values for all elements analysed for are low. Gold concentrations are below the detection level in the majority of the silts and soils analyzed. Gold was detected in 15 of the 107 samples with 120 ppb, 114 ppb, 92 ppb and 72 ppb Au being the four highest values.

Anomalous values returning from analyses of the 104 silts and soils are highlighted as follows:

Element	Ag ppm	Pb ppm	Zn ppm	Cu ppm	As ppm	Hg ppb
three	2.6	52	426	129	424	430
highest	1.9	29	314	88	292	300
values	1.8	20	269	82	192	260

Pan concentrate samples proved more successful in detecting gold and mercury, while values for Ag, Pb, Zn, Cu and As are much the same as those attained from silt samples. Gold concentrations returned included 2320 ppb, 1438 ppb and 1140 ppb Au. The highest mercury value attained 820 ppb Hg, was from the same sample that yielded 2320 ppb Au.

8.

Of the twenty rock samples analysed, two produced anomalous values.

1. WR-29 - The sample was taken from one of several angular boulders up to 60 cm in diameter. The rock is carbonatized and epidotized with a tight stockwork of 2-3 mm quartz veinlets. Fuchsite comprises 25-30% of the rock. This sample was anomalous in arsenic yielding 1840 ppm As.
2. WR-30 - The sample was taken selectively from 1-2 cm quartz veins that form a stockwork in a pillowed basalt. 1-2% pyrite accompanies the quartz. This sample was anomalous in gold yielding 538 ppb.

Results from resampling sites which were anomalous in gold in 1987 are summarized as follows:

1987 SAMPLE			1988 SAMPLES		
Sample #	Sample Type	Au ppb	Sample #	Sample Type	Au ppb
51120	silt	189	51945	silt	<10
			VH-6	pan concentrate	1140
51118	silt	329	51986	silt	<19
			VH-21	pan concentrate	<10
			* VH-9	pan concentrate	2320
			* 51430	silt	<10

* samples taken 20 m down stream and on opposite side of creek from 5118, 51986, and VH-21

CONCLUSIONS

A magnetic high of 4600 gammas provided much of the original interest in the area now covered by the Opus claims. Prospecting identified magnetite bearing augite porphyry as the lithologic unit corresponding spatially to the anomaly. Magnetic properties of the augite porphyry outcrops are highly variable over the claim group.


9.

Two silt samples taken in 1987 yielding 189 ppb and 329 ppb Au provided a target for follow up in 1988. Repeat sampling in 1988 consisted of a silt and a pan concentrate sample at the site yielding 189 ppb Au, and two silts and two pan concentrate samples from the sample site yielding 329 ppb Au. The reproducibility of the two anomalies was met with mixed success. All three silt samples returned with gold values below the 10 ppb detection limit. Of the three pan concentrates samples, two returned with appreciable gold values while the other contained less than 10 ppb Au. The pan concentrate results were 2320 ppb and 1140 ppb Au corresponding to the 1987 silt anomalies of 329 ppb and 189 ppb Au respectively.

A relatively thin drift cover, along with well defined geomorphic features providing an accurate record of glacial direction, renders down ice prospecting a viable exploration method. Work immediately down ice of the claim group consisted of boulder train prospecting and 8 km of soil lines. Soils taken at 150 m intervals along the banks of a north trending road identify a northwest trending zone with several anomalous gold values, up to 120 ppb, and consistently elevated Hg, Zn and Ag values. The trend of the anomalous zone matches that of the underlying Slide Mountain sediments, suggesting the possibility of a local stratabound source for the anomaly. Dispersion from mineralization or alteration, which may accompany the northwest trending fault zone separating the Takla Group from the Slide Mountain Group, may also account for the observed anomaly. Because the drift cover in the area is moderately thin (2-10 m), additional soil lines with tighter sample spacing should substantiate or negate the possibility of an underlying local source for the anomaly.

Report by : 
Michael G. Westcott

Endorsed by : 
I.A. Paterson,
Senior Geologist

Approved for
Release by : 
W.J. Wolfe,
Manager, Exploration-
Western Canada

MGW/pm

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APPENDIX I

STATEMENT OF EXPENDITURES FOR OPUS (1-4) CLAIMS, 1988

The following expenditures were incurred by Cominco Ltd. during a geochemical field investigation of the OPUS 1-4 claims.

Salaries

<u>Personnel</u>	<u>Period</u>	<u>Days x Rate</u>	
I.A. Paterson	2- 5 June	4 @ \$350/day =	\$1400
M.G. Westcott	2-13 June	19 @ \$163/day =	1956
A. Travis	2-13 June	12 @ \$155/day =	1860
G. Wober	2-13 June	12 @ \$138/day =	1656
D. Owens	2-13 June	12 @ \$100/day =	<u>1200</u>
			\$ 8072

Analytical Costs

20 rocks: lab preparation	20 @ \$3.25 =	\$ 65.00	
Analyses (Au,Ag,As,Hg,Cu,Pb,Zn)	20 @ \$19 =	380.00	
12 pan concentrates: Lab preparation	12 @ \$2.50 =	30.00	
Analyses (Au,Ag,As,Hg,Cu,Pb,Zn)	12 @ \$19 =	1083.00	
47 soils: lab preparation, 47 @ \$1.00=		47.00	
Analyses (Au,Ag,As,Hg,Cu,Pb,Zn)	47 @ \$19 =	893.00	
60 silts: Lab preparation, 60 @ \$1.00=		60.00	
Analyses (Au, Ag, As, Hg, Cu, Pb, Zn) 60 @ \$19=		<u>1140.00</u>	
			\$ 3698.00

Transportation

Truck rental 12 days @ \$50/day =	\$ 600.00	
Truck rental 4 days @ \$50/day =	<u>200.00</u>	
		\$ 800.00

Food

52 man days @ \$20/man day =		\$ 1040.00
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2.

Miscellaneous

Maps, Airphotos, sampling supplies - \$ 500.00

Data Compilation and Report Preparation

M. G. Westcott	6 days @ \$163/day	\$ 978.00	
Draftsman -	2 days @ \$200/day	<u>400.00</u>	
			\$1,378.00

Total expenditures: \$ 15488.00

APPENDIX II

SOIL AND SILT SAMPLE RESULTS

GPUS (1-4)
SILT AND SOIL GEOCHEMISTRY

LAB	FIELD	Au	Ag	Pb	Zn	Cu	As	Hg
IBEF	NO	ppb	ppa	ppb	ppb	ppa	ppa	ppb
S8801023	51508	<10	0.7	4	67	11	16	<10
S8801024	51509	27	0.9	4	90	26	14	<10
S8801025	51510	<10	0.7	4	108	20	11	<10
S8801026	51511	11	1.1	4	99	19	14	<10
S8801027	51512	<10	<.4	<4	54	32	14	<10
S8801028	51513	11	0.4	6	119	53	61	<10
S8801029	51514	<10	0.4	5	87	28	16	390
S8801030	51515	<10	0.7	<4	64	16	6	125
S8801031	51516	10	0.5	29	62	23	8	51
S8801032	51517	<10	<.4	52	62	33	8	120
S8801124	51952	11	0.5	5	63	57	7	78
S8801125	51969	<10	<.4	<4	52	21	2	16
S8801128	51972	<10	0.7	4	54	61	3	<10
S8801129	51973	<10	<.4	<4	38	8	2	<10
S8801130	51974	<10	<.4	4	62	13	<2	<10
S8801131	51975	<10	<.4	<4	30	11	<2	<10
S8801142	51947	<10	<.4	<4	52	58	<2	<10
S8801143	51946	<10	<.4	<4	33	12	2	<10
S8801144	51949	<10	<.4	<4	56	22	2	<10
S8801145	51950	<10	1.8	7	314	73	18	260
S8801146	51951	<10	<.4	<4	59	35	2	<10
S8801061	51438	114	<.4	<4	38	24	2	<10
S8801127	51971	<10	<.4	<4	55	39	6	<10
S8801126	51970	<10	0.4	<4	87	69	15	<10
S8801060	51437	<10	<.4	<4	32	12	292	<10
S8801204	51985	<10	<.4	<4	64	42	2	<10
S8801205	51984	<10	<.4	<4	54	23	3	<10
S8801058	51434	<10	<.4	<4	44	13	85	<10
S8801059	51435	<10	<.4	<4	30	5	424	<10
S8801147	51959	<10	<.4	4	54	9	7	<10
S8801148	51960	<10	0.4	<4	39	47	6	300
S8801055	51431	<10	<.4	<4	63	14	5	<10
S8801056	51432	<10	<.4	<4	73	17	5	<10
S8801057	51433	10	<.4	4	61	44	192	<10
S8801132	51169	<10	0.7	5	47	46	3	<10
S8801174	51986	<10	<.4	4	78	29	14	25
S8801175	51988	<10	<.4	4	64	21	14	<10
S8801176	51989	<10	<.4	10	52	18	4	<10
S8801177	51990	<10	<.4	<4	52	12	3	<10
S8801178	51991	<10	<.4	5	97	6	2	<10
S8802156	51992	<10	<.4	6	82	11	8	<10
S8801165	51993	<10	<.4	4	102	7	2	12
S8801166	51994	<10	<.4	4	99	23	2	<10
S8801167	51995	<10	<.4	<4	19	7	2	<10
S8801168	51996	<10	<.4	4	118	14	15	<10
S8801179	51997	10	<.4	5	70	27	11	18
S8801180	51998	<10	0.7	10	164	58	65	<10
S8801181	51999	<10	0.5	9	145	43	37	<10
S8801053	51507	<10	0.8	6	87	27	20	75
S8801046	51500	<10	2.6	17	426	129	60	90
S8801047	51501	<10	1.8	6	120	26	10	<10
S8801048	51502	<10	0.7	5	110	28	14	100

S8801049 51503	<10	0.4	6	122	30	20	<10
S8801050 51504	<10	<.4	5	119	26	18	31
S8801051 51505	14	0.8	8	105	50	18	20
S8801052 51506	72	0.7	20	269	82	37	430
S8801035 51932	<10	<.4	5	71	47	14	<10
S8801036 51933	12	0.6	8	121	79	36	83
S8801037 51934	<10	0.7	7	82	52	34	<10
S8801038 51935	92	<.4	7	70	39	27	<10
S8801039 51936	10	<.4	6	77	50	15	82
S8801040 51937	<10	1.1	5	85	21	10	20
S8801041 51938	<10	1.5	5	124	24	7	<10
S8801042 51939	<10	<.4	7	100	30	41	<10
S8801043 51940	<10	1.5	5	92	22	10	<10
S8801044 51941	32	0.5	7	138	30	17	<10
S8801045 51942	<10	0.8	11	190	82	31	<10
S8801149 51961	<10	<.4	4	68	12	11	47
S8801150 51962	<10	0.7	7	117	29	38	56
S8801151 51963	<10	<.4	<4	70	19	5	32
S8801152 51964	17	1.2	8	257	47	55	39
S8801153 51965	<10	<.4	<4	48	12	4	28
S8801154 51966	<10	<.4	<4	50	22	5	12
S8801155 51967	<10	<.4	<4	39	8	4	12
S8801156 51968	<10	<.4	5	51	35	5	<10
S8801200 51657	<10	<.4	<4	52	20	7	47
S8801201 51658	<10	<.4	<4	57	20	5	<10
S8801202 51659	10	0.4	<4	49	14	<2	<10
S8801203 51660	<10	<.4	<4	55	10	5	22
S8801182 51639	<10	0.7	5	86	37	11	20
S8801183 51640	<10	<.4	<4	74	22	22	25
S8801184 51641	<10	0.7	7	130	52	35	39
S8801185 51642	<10	<.4	4	106	35	21	<10
S8801186 51643	<10	0.5	4	69	15	26	<10
S8801187 51644	<10	1.7	<4	87	21	12	110
S8801188 51645	<10	<.4	5	12	5	3	30
S8801189 51646	11	<.4	5	64	39	17	<10
S8801190 51647	<10	<.4	<4	18	7	7	22
S8801191 51648	<10	1.1	4	145	25	15	170
S8801192 51649	<10	1.1	4	91	39	6	78
S8801193 51650	120	<.4	6	163	36	15	39
S8801194 51652	<10	0.7	<4	74	15	2	150
S8801195 51653	20	0.4	6	94	48	36	20
S8801196 51654	<10	0.7	<4	76	21	16	<10
S8801197 51982	<10	0.4	<4	87	18	10	<10
S8801170 51661	10	<.4	<4	70	16	19	<10
S8801171 51662	<10	0.4	5	63	17	8	<10
S8801172 51663	<10	<.4	5	53	27	16	<10
S8801173 51664	<10	<.4	6	70	20	16	56
S8801070 51910	<10	0.8	4	75	50	13	2
S8801071 51911	<10	0.4	4	89	50	10	2
S8801072 51912	<10	0.4	5	108	39	10	2
S8801075 51945	<10	0.4	4	85	62	10	2
S8801054 51430	<10	0.4	4	50	11	10	2
S8801199 51656	10	0.4	25	4	64	23	10
S8801033 51518	10	1.4	42	7	106	7	10
S8801034 51519	10	1.6	39	7	143	20	10
S8801073 51943	10	.4	49	4	71	13	78
S8801074 51944	10	0.7	36	6	141	8	100

APPENDIX III

PAN CONCENTRATE AND ROCK SAMPLE RESULTS

OPUS ROCK AND HEAVY CONCENTRATE GEOCHEMISTRY

LAB NO	FIELD NUMBER	Au	Ag	Pb	Zn	Cu	As	Hg
JOB V88-237R		ppb	ppb	ppb	ppb	ppb	ppb	ppb
R8804754	MR-9	< 10	2.1	5	67	122	2	13
R8804755	MR-10	< 10	< .4	< 4	67	55	8	100
R8804756	MR-11	< 10	< .4	< 4	62	16	3	46
R8804757	MR-8	< 10	< .4	< 4	13	139	10	< 10
R8804758	VR-1	< 10	< .4	10	34	82	11	< 10
R8804759	VH-2	80	< .4	25	52	35	24	490
R8804761	VH-5	< 10	< .4	6	61	33	2	62
R8804762	VH-6	1140	.6	< 4	57	44	14	72
R8804765	VH-9	2320	.6	< 4	39	10	4	820
R8804766	VH-10	< 10	.4	4	50	14	10	53
R8804767	VH-12	740	1	< 4	43	13	5	385
R8804768	VH-13	1438	.5	< 4	35	16	12	13
R8804769	VH-14	360	.6	< 4	25	26	8	< 10
R8804770	VH-15	98	.6	< 4	26	16	< 2	< 10
R8804772	VR-17	< 10	.4	12	491	126	35	100
R8804773	VR-18	< 10	.9	31	96	61	3	< 10
R8804776	VH-21	< 10	< .4	< 4	31	20	5	< 10
R8804777	MR-41	< 10	< .4	6	79	58	27	< 10
R8804780	MR-31	< 10	< .4	< 4	59	82	8	< 10
R8804781	TR-1	< 10	< .4	< 4	73	61	2	< 10
R8804782	MR-30	538	.6	< 4	64	59	55	< 10
R8804783	MR-28	< 10	< .4	< 4	2	4	3	< 10
R8804784	TR-7	< 10	.4	< 4	68	15	431	< 10
R8804785	MR-29	< 10	< .4	< 4	14	5	1840	< 10
R8804786	MR-36	20	< .4	< 4	69	44	29	38
R8804788	TH-14	< 10	< .4	< 4	46	22	9	< 10
R8804789	TR-12	< 10	< .4	< 4	19	7	4	10
R8804790	TR-15	< 10	.4	< 4	14	76	4	< 10
R8805097	TR-16	< 10	< .4	< 4	85	115	6	< 10
R8805219	VH-4	< 10	< .4	4	49	16	3	< 10
	VR-19	10	.4	14	9	36	5	10
	VR-20	10	.4	4	11	29	2	10

APPENDIX IV

I, Michael G. Westcott of 214-2025 West 1st Avenue, Vancouver, British Columbia, Canada, declare:

1. I am a Geologist, residing at the above address.
2. I am a Graduate of Geological Science from the University of British Columbia, in 1988 with a Bachelor of Science (Geology) degree.
3. This report is based on my personal field examination of the property.

Dated at Vancouver, BC., this
6 day of December 1988



Michael G. Westcott

APPENDIX IV

I, IAN A. PATERSON, WITH BUSINESS ADDRESS AT 700-409 GRANVILLE STREET, VANCOUVER, BRITISH COLUMBIA, DO HEREBY CERTIFY THAT:

1. I graduated from the University of Aberdeen, Scotland with a B.Sc. (Hons.) Degree in 1967.
2. I graduated from the University of British Columbia with a Ph.D. degree in 1973.
3. I am a registered Professional Engineer of the Province of British Columbia, a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
4. I have been engaged in my profession since my graduation in 1973.
5. I have been employed by Cominco Ltd. since 1974.

Respectfully submitted:



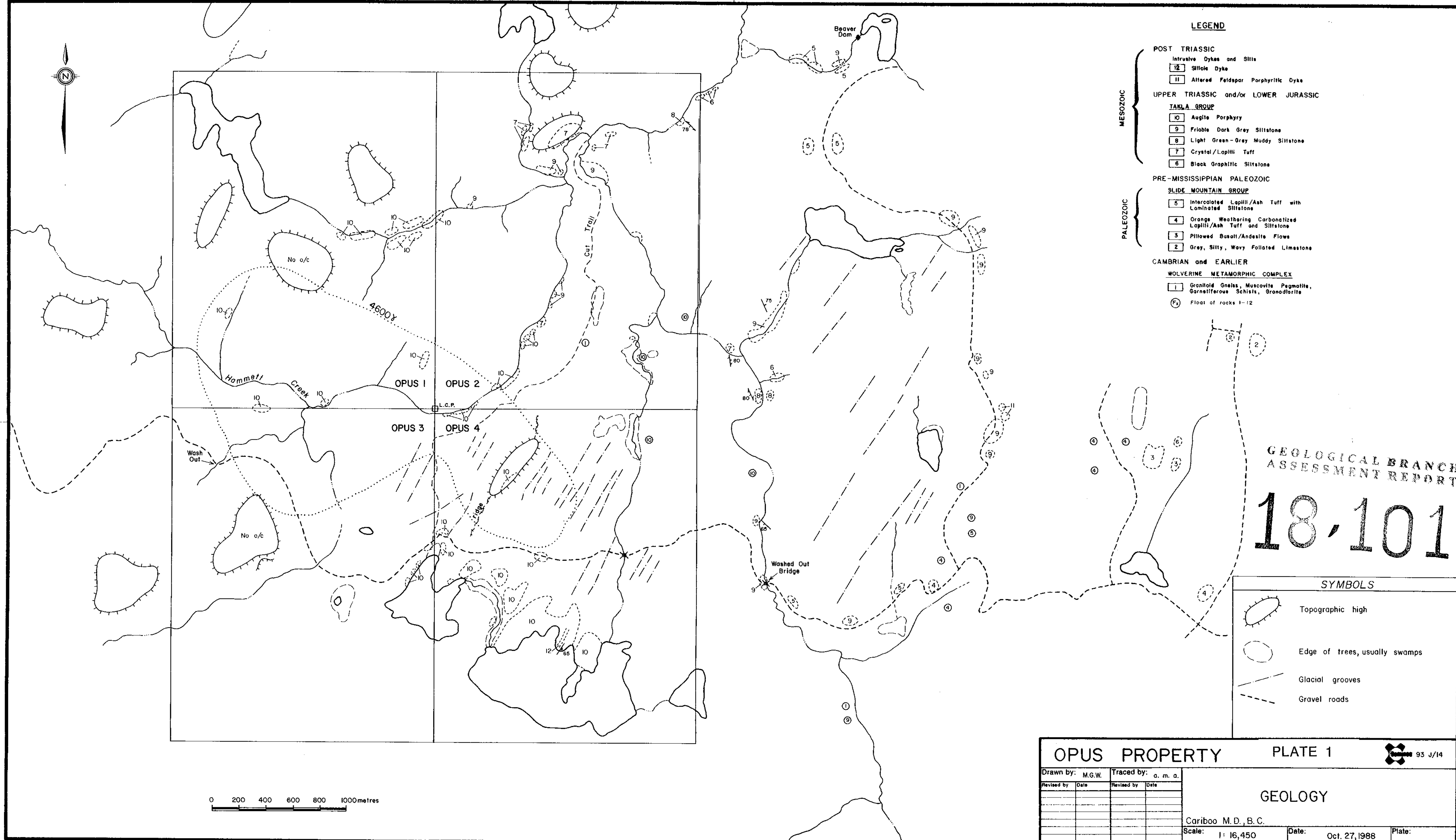
IAN A. PATERSON
SENIOR GEOLOGIST

Dated this 6 day of December 1988
at Vancouver, British Columbia

APPENDIX V

REFERENCES

1. Armstrong, J.E., Tipper, H.W., Hoadley, J.W., Muller, J.E.,
Geology of McLeod Lake, Cariboo District, British Columbia;
Geol. Surv. Can., Map 1204A (1969).
2. Struik, L.C. and Fuller, E.A.; Preliminary Report on the
Geology of the McLeod Lake Area, British Columbia, Geol. Surv.
Can., Paper 88-1E, (1988).



LEGEND

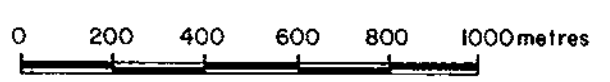
- POST TRIASSIC**
- Intrusive Dykes and Sills
 - 12 Sillite Dyke
 - 11 Altered Feldspar Porphyritic Dyke
- MESOZOIC**
- UPPER TRIASSIC and/or LOWER JURASSIC**
- TANLA GROUP**
 - 10 Aegle Porphyry
 - 9 Friable Dark Grey Siltstone
 - 8 Light Green-Grey Muddy Siltstone
 - 7 Crystal/Lapilli Tuff
 - 6 Black Graphitic Siltstone
- PRE-MISSISSIPPIAN PALEOZOIC**
- SLIDE MOUNTAIN GROUP**
 - 5 Intercalated Lapilli/Ash Tuff with Laminated Siltstone
 - 4 Orange Weathering Carbonized Lapilli/Ash Tuff and Siltstone
 - 3 Pillowed Basalt/Andesite Flows
 - 2 Grey, Silty, Wavy Foliated Limestone
- CAMBRIAN and EARLIER**
- WOLVERINE METAMORPHIC COMPLEX**
 - 1 Granitoid Gneiss, Muscovite Pegmatite, Garnetiferous Schists, Grondolomite
 - (F) Float of rocks 1-12

GEOLOGICAL BRANCH
ASSESSMENT REPORT

18-101

SYMBOLS

- Topographic high
- Edge of trees, usually swamps
- Glacial grooves
- Gravel roads



OPUS PROPERTY **PLATE 1** 93 J/14

Drawn by: M.G.W.		Traced by: a. m. a.	
Revised by	Date	Revised by	Date

GEOLOGY

Cariboo M.D., B.C.
Scale: 1: 16,450 Date: Oct. 27, 1988 Plate:

NC:118-REV1.C

FORM #210-0630

LEGEND

- POST TRIASSIC**
 Intrusive Dykes and Sills
 12 Silicic Dyke
 11 Altered Feldspar Porphyritic Dyke
- UPPER TRIASSIC and/or LOWER JURASSIC**
TAKLA GROUP
 10 Augite Porphyry
 9 Friable Dark Grey Siltstone
 8 Light Green-Grey Muddy Siltstone
 7 Crystal/Lapilli Tuff
 6 Black Graphitic Siltstone
- PRE-MISSISSIPPIAN PALEOZOIC**
SLIDE MOUNTAIN GROUP
 5 Intercalated Lapilli/Ash Tuff with Laminated Siltstone
 4 Orange Weathering Carbonatized Lapilli/Ash Tuff and Siltstone
 3 Pillowed Basalt/Andesite Flows
 2 Grey, Silty, Wavy Foliated Limestone
- CAMBRIAN and EARLIER**
WOLVERINE METAMORPHIC COMPLEX
 1 Granitoid Gneiss, Muscovite Pegmatite, Garnetiferous Schists, Granodiorite

MESOZOIC
 PALEOZOIC

GEOLOGICAL BRANCH ASSESSMENT REPORT

18-101

SYMBOLS

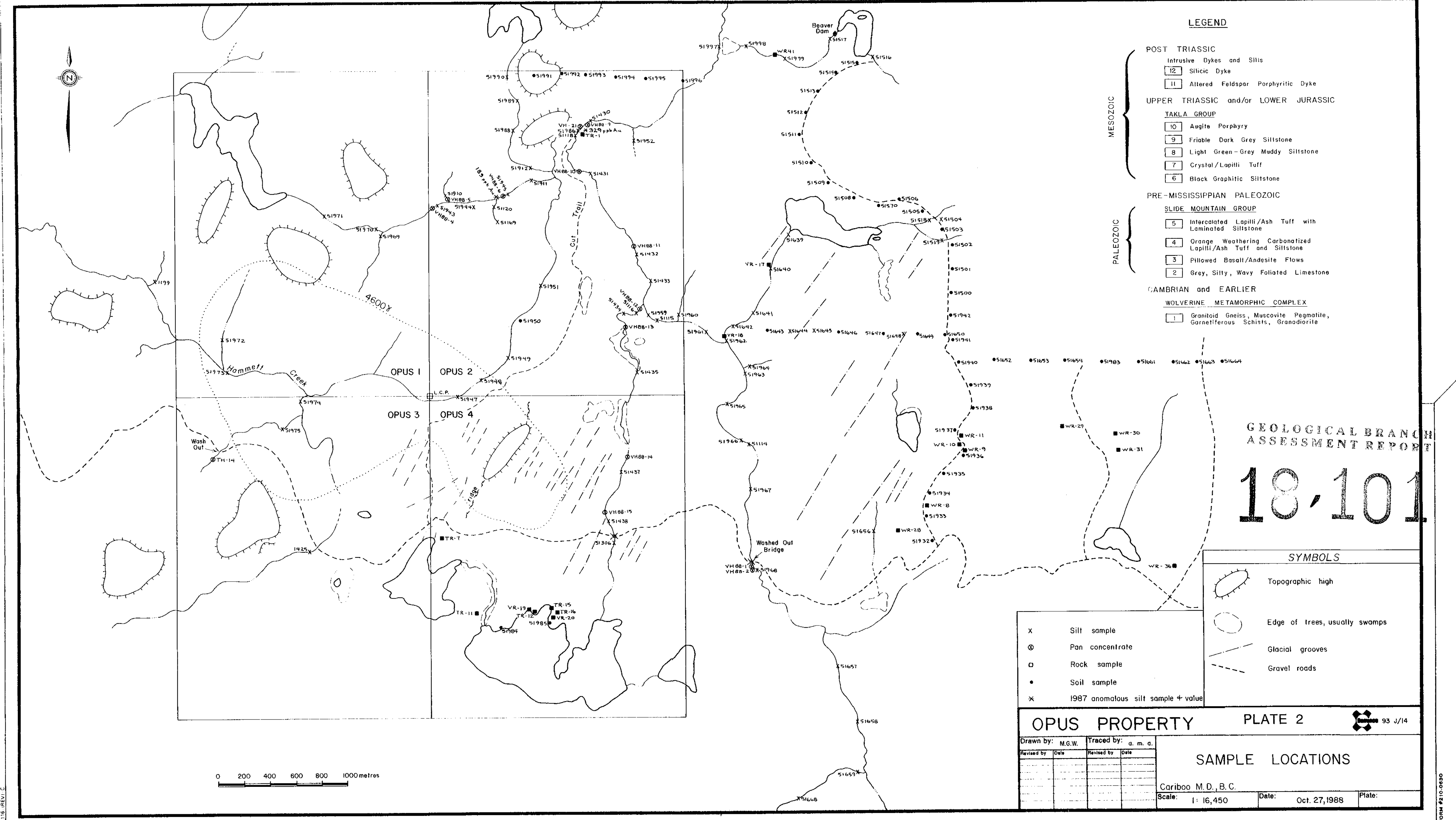
- Topographic high
- Edge of trees, usually swamps
- Glacial grooves
- Gravel roads

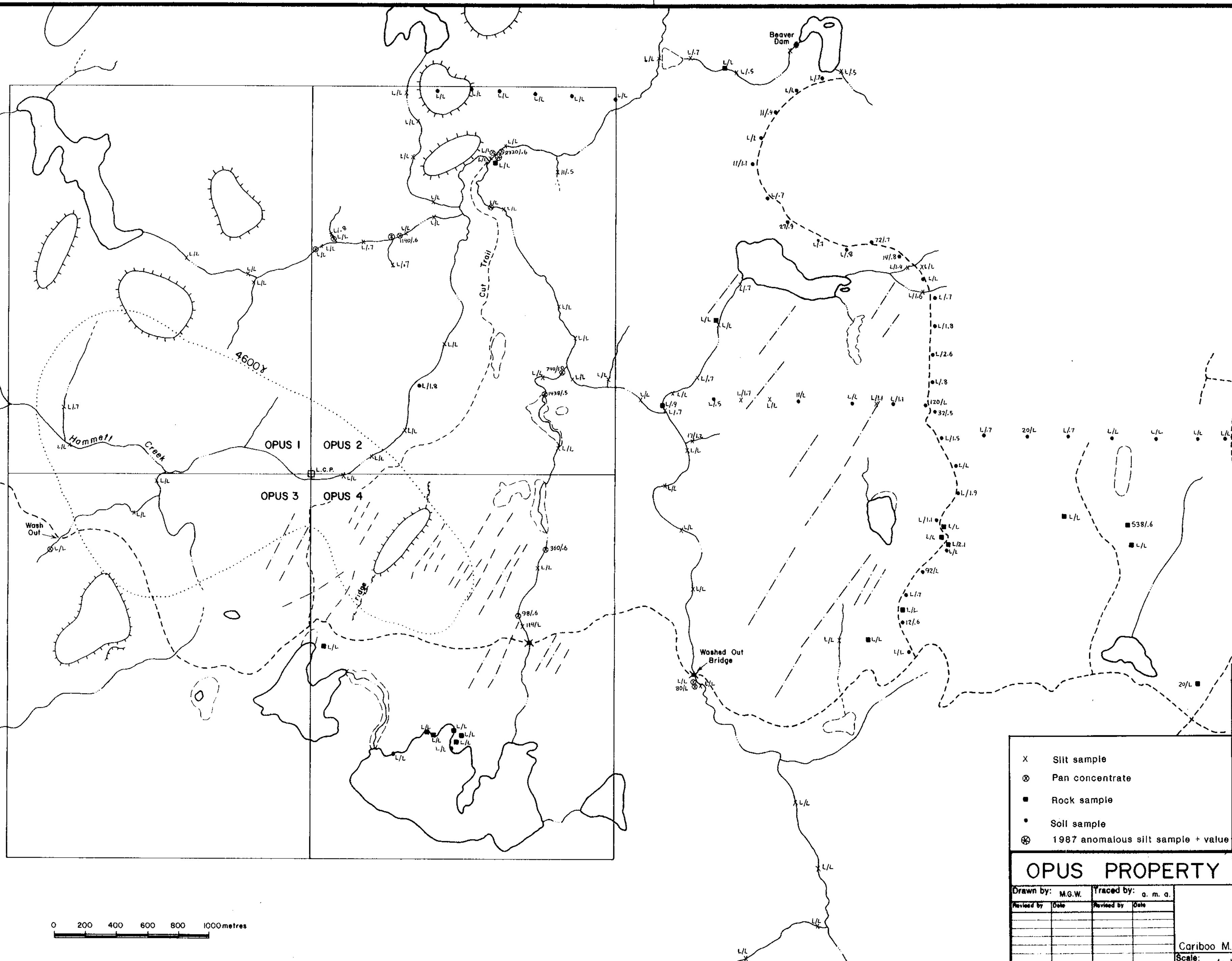
- x Silt sample
- ⊙ Pan concentrate
- Rock sample
- Soil sample
- ⊗ 1987 anomalous silt sample + value

OPUS PROPERTY PLATE 2 93 J/14

Drawn by: M.G.W.	Traced by: a. m. a.
Revised by: _____	Revised by: _____
Date: _____	Date: _____

SAMPLE LOCATIONS	
Cariboo M.D., B.C.	Date: Oct. 27, 1988
Scale: 1:16,450	Plate: _____





GEOLOGICAL BRANCH
ASSESSMENT REPORT

18-101

SYMBOLS

- Topographic high
- Edge of trees, usually swamps
- Glacial grooves
- Gravel roads

- X Silt sample
- ⊗ Pan concentrate
- Rock sample
- Soil sample
- ⊗ 1987 anomalous silt sample + value

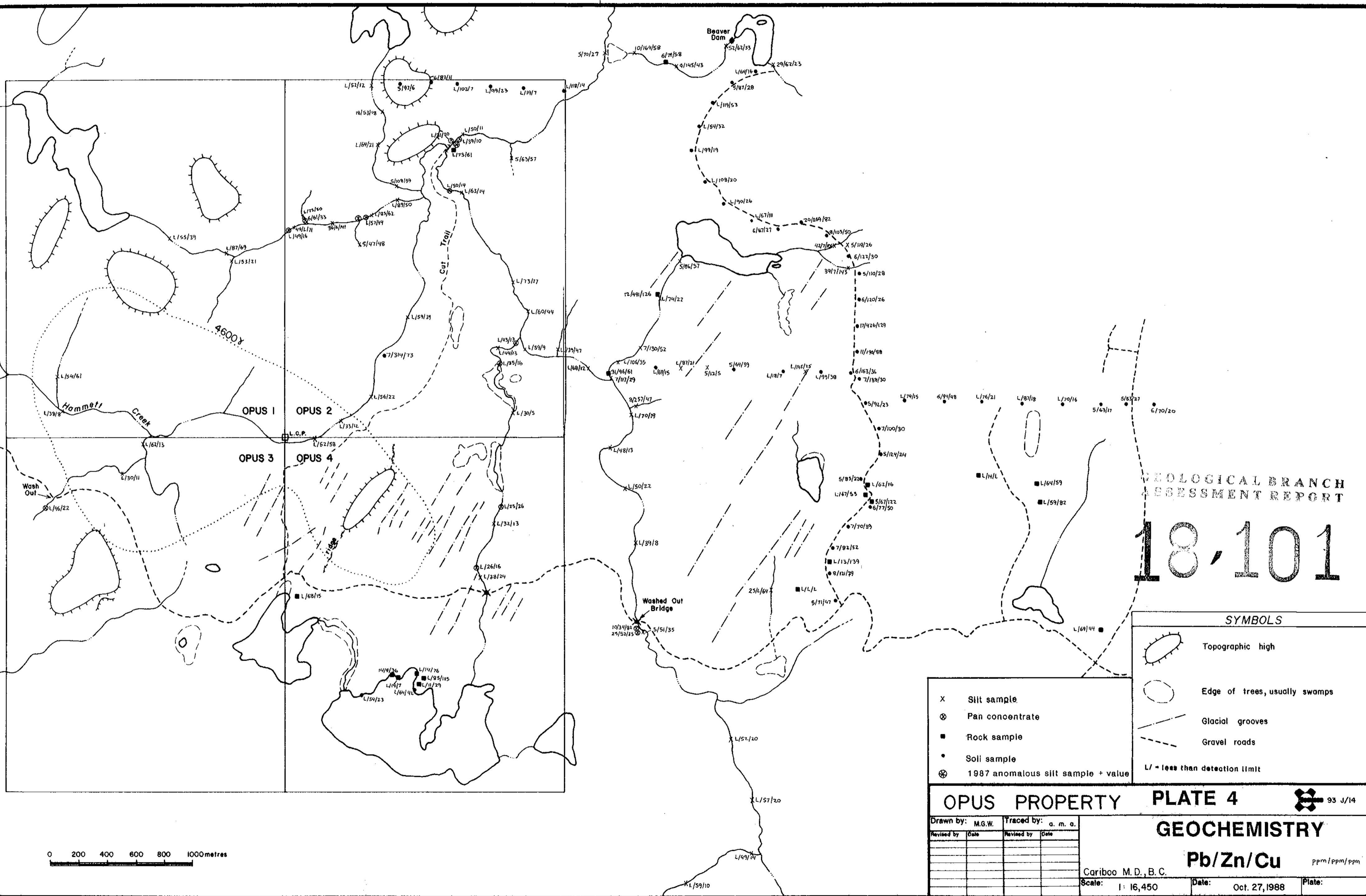


OPUS PROPERTY PLATE 3 93 J/14

GEOCHEMISTRY
Au/Ag ppb/ppm

Cariboo M.D., B.C.
Scale: 1:16,450 Date: Oct. 27, 1988 Plate:

Drawn by: M.G.W.		Traced by: a. m. a.	
Revised By	Date	Revised By	Date



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,101

SYMBOLS

- Topographic high
- Edge of trees, usually swamps
- Glacial grooves
- Gravel roads
- Silt sample
- Pan concentrate
- Rock sample
- Soil sample
- 1987 anomalous silt sample + value
- L/ = less than detection limit

OPUS PROPERTY PLATE 4 93 J/14

GEOCHEMISTRY

Pb/Zn/Cu ppm / ppm / ppm

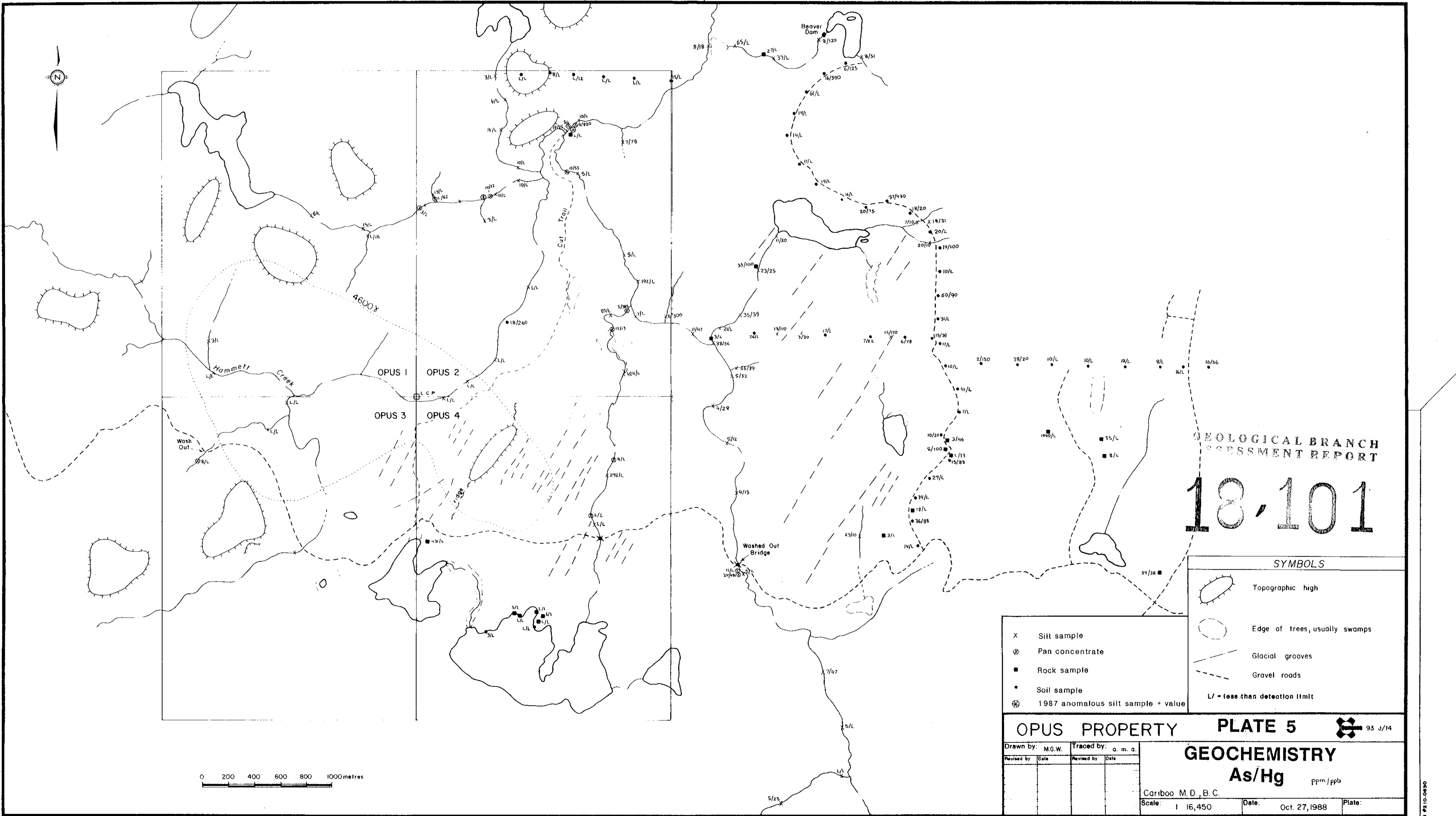
Drawn by:	M.G.W.	Traced by:	a. m. o.
Revised by:	Date	Revised by:	Date

Cariboo M.D., B.C.
Scale: 1: 16,450 Date: Oct. 27, 1988 Plate:



NCL 118 REV. C

FORM 12-10-0863



GEOLOGICAL BRANCH
ASSESSMENT REPORT

18,101

SYMBOLS

- Topographic high
- Edge of trees, usually swamps
- Glacial grooves
- Gravel roads
- L/ - less than detection limit

- X Silt sample
- ⊗ Pan concentrate
- Rock sample
- Soil sample
- ⊗ 1987 anomalous silt sample + value

OPUS PROPERTY **PLATE 5** 93 J/14

Drawn by:	M.G.W.	Traced by:	a. m. a.
Revised by:	Date	Revised by:	Date

GEOCHEMISTRY
As/Hg ppm/ppb
Cariboo M.D., B.C.
Scale: 1:16,450 Date: Oct. 27, 1988 Plate:

0 200 400 600 800 1000metres