

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS
DATE RECEIVED DEC 04 1996

ASSESSMENT REPORT  
GEOLOGY AND DRILLING REPORT

on the  
MASS CLAIM

CARIBOO MINING DIVISION

Latitude  $52^{\circ} 44' N$   
Longitude  $121^{\circ} 22' W$   
NTS 93A/11W, 14W

by

R. Yorston, Geologist

December 1996

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

24,662

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## SUMMARY

Percussion drilling at a roadcut showing on the Mass claim has returned very anomalous values of Cu, Pb, Zn, Ag and Au in the top 60 feet (18.3 m) of two drill holes. Over a 10 foot (3.04 m) drilling interval values ranged up to 1766 ppm Cu, 746 ppm Pb, 2969 ppm Zn, 4.8 ppm Ag and 792 ppb Au.

## INTRODUCTION

During the period September 3 and 4, 1996, two holes were drilled near the road edge from a truck mounted percussion drill rig. The holes were placed to test a zone containing lenses of pyrite and lesser chalcopyrite exposed in a road cut and an old trench.

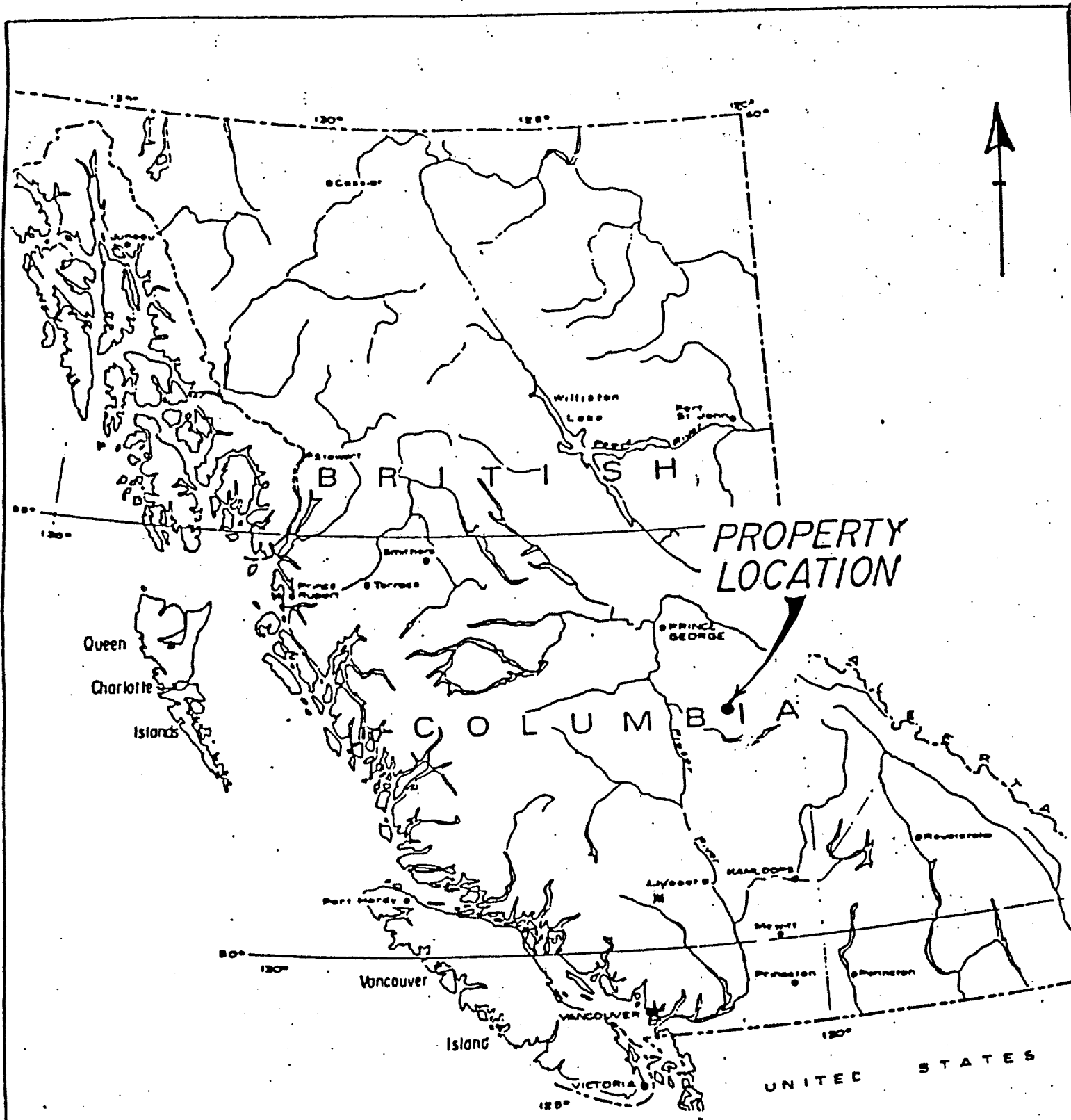
## LOCATION, ACCESS AND PHYSIOGRAPHY

The claim is situated on the south side of Cariboo Lake, approximately 15 km northeast of the village of Likely B.C. The claim is accessible by all-weather logging roads from Likely. The 8400 road which begins just south of the Cariboo River, leads to spur 8400 D which gives direct access to the claim.

Elevations on the claim range from 812 metres at Cariboo Lake to about 1200 metres. The claim is mainly covered by overgrown logging slash.

## CLAIM STATUS

The property consists of one 20 unit claim staked by R. Yorston in 1995. Record #341031

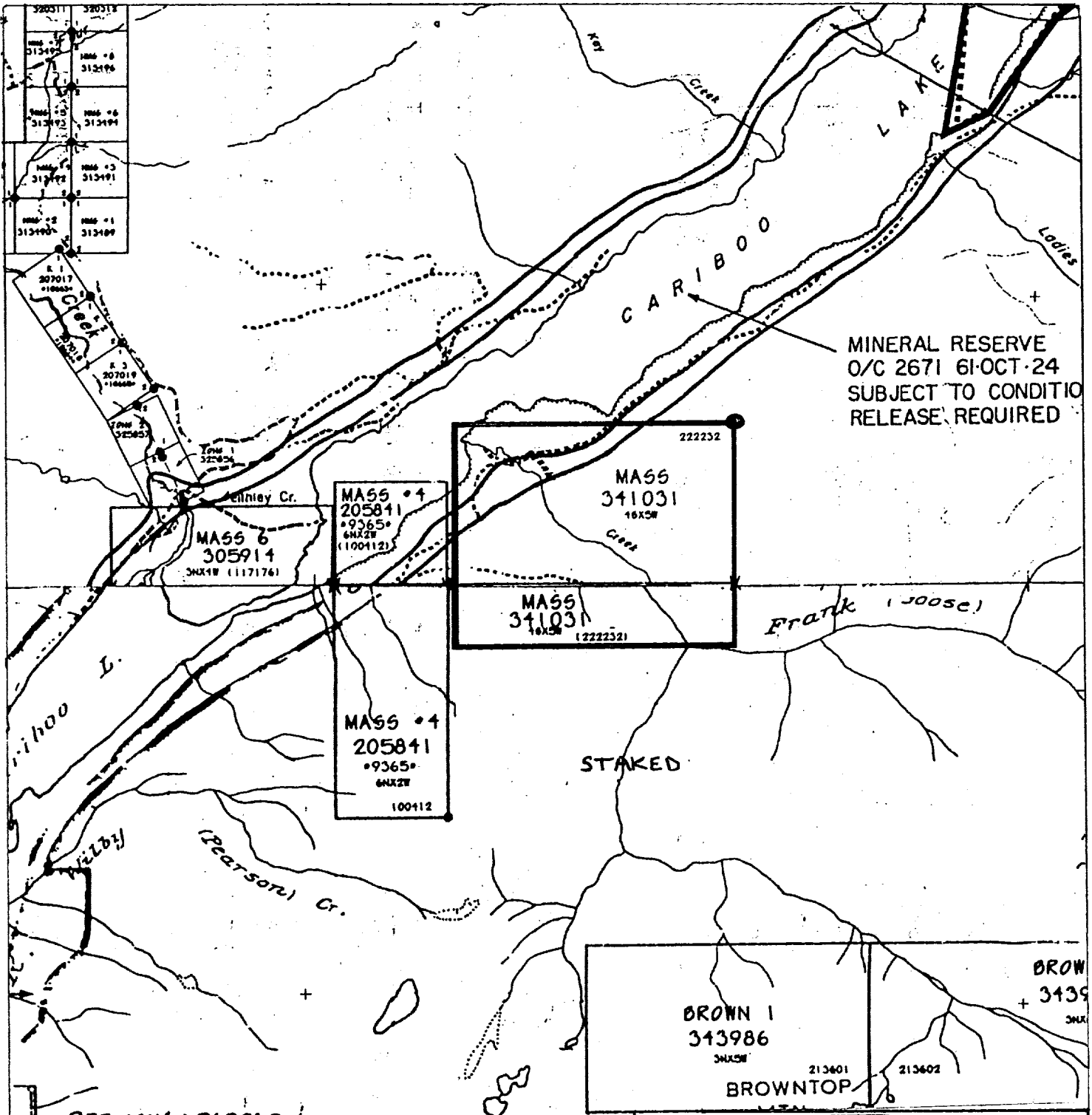


PROPERTY  
LOCATION

MASS CLAIM  
LOCATION MAP

Figure 1

NOV. 1996



Scale 1:50000

Guinet Management

MASS CLAIM  
LOCATION MAP

Figure 2

Nov. 1996

## PREVIOUS WORK

Placer mining activity in Frank creek during the period of 1984 to 1986 had exposed some boulders of massive sulfide.

In 1987, the area was staked by Golden Eye Minerals as the Mass group of claims.

In 1988, Formosa Resources Corporation optioned the Mass claims and carried out grid soil sampling, VLF-EM surveys and geological mapping over portions of the Mass claims. This work delineated a number of exploration targets consisting of coincident electromagnetic and coincident zinc-in-soil anomalies which Formosa geologists believed might be caused by massive sulphide mineralization.

In 1991, Rio Algom Exploration Inc. optioned the Mass property and conducted a program of reconnaissance mapping, prospecting, silt sampling and an airborne EM survey. Numerous EM conductors were identified by the airborne survey.

In 1992, Rio Algom continued exploration with more detailed surveys consisting of geological mapping, ground geophysical work, geochemical sampling and an excavator trenching program.

## REGIONAL GEOLOGY

The Mass claim lies in the Cariboo Gold Belt (Struik, 1988) in the Barkerville Terrane, one of four fault-bounded stratigraphic and tectonic terrains that were deposited in an ocean and consisting of continental shelf and slope clastics, carbonates and volcanoclastics.

Geology of the area consists of the Harveys Ridge succession, a member of the Palaeozoic Snowshoe Group and consists of quartzite, phyllite, schist, siltite, limestone, conglomerate and metatuff.

Regional geology in the immediate area of the Mass property consists of undifferentiated Snowshoe Group rocks to the east and Harveys Ridge succession to the north. To the west, the rocks are the Hadrynian(?) Keithley succession, consisting of quartzite, phyllite and minor marble. An intrusion of Palaeozoic Quesnel Lake granite orthogneiss occurs in this succession.

Structurally, the area is dominated by a northwest-striking, moderately southwest-dipping foliation, as determined from abundant metasedimentary rocks in the area. The Lightning Creek anticlinorium (a northwest-trending structure) occurs five kilometres north of Frank Creek. Structural disturbance was accompanied by regional prograde and retrograde metamorphism to a chlorite-grade facies.

The NTS 93A/14 mapsheet was mapped by L.C. Struik in 1977 - 1982 and released as map 1638A which accompanies GSC Memoir 421.

#### CLAIM GEOLOGY AND MINERALIZATION

Rocks containing the mineralization consist of a massively interbedded sequence of black phyllite and a pale greenish to tan coloured sericite and chlorite altered fissile unit.

Lenses of translucent grey quartz mainly in the light coloured unit can carry abundant fine and coarse pyrite and milk white lenses to 10 cm widths in both units contain goethite but little sulfides. Generally the milk white lenses fill cross fractures.

Stratigraphically the lowest part of the showing is a sheared light green schistose unit containing gobs and lenses to 5 cm of massive pyrite and lesser chalcopyrite. The interface between the black phyllite and the greenish unit may be important for localizing the mineralization. The black phyllite may be locally graphitic.

The rocks at the showing area strike about  $130^{\circ}$  and dip about  $50^{\circ}$  to the southwest. Apparent bedding plane movement between and within the units has produced breccia zones containing variable pyrite, chalcopyrite, malachite and covellite within the ground mass surrounding clasts of black and greenish phyllite and an occasional rounded clast of what appears to be altered greenstone.

The old trench was dug on a 2 metre wide breccia zone containing abundant secondary pyrite. Smaller breccia pods of a few centimetre widths are discontinuous within the black phyllite but usually they contain secondary copper minerals.

Altered greenstone is exposed in the road cut below the main showing. The greenstone may be sill-like in form and it may be related to the apparently conformable shear or breccia orientations at the showing. Its presence explains the greenstone clasts in the breccia.

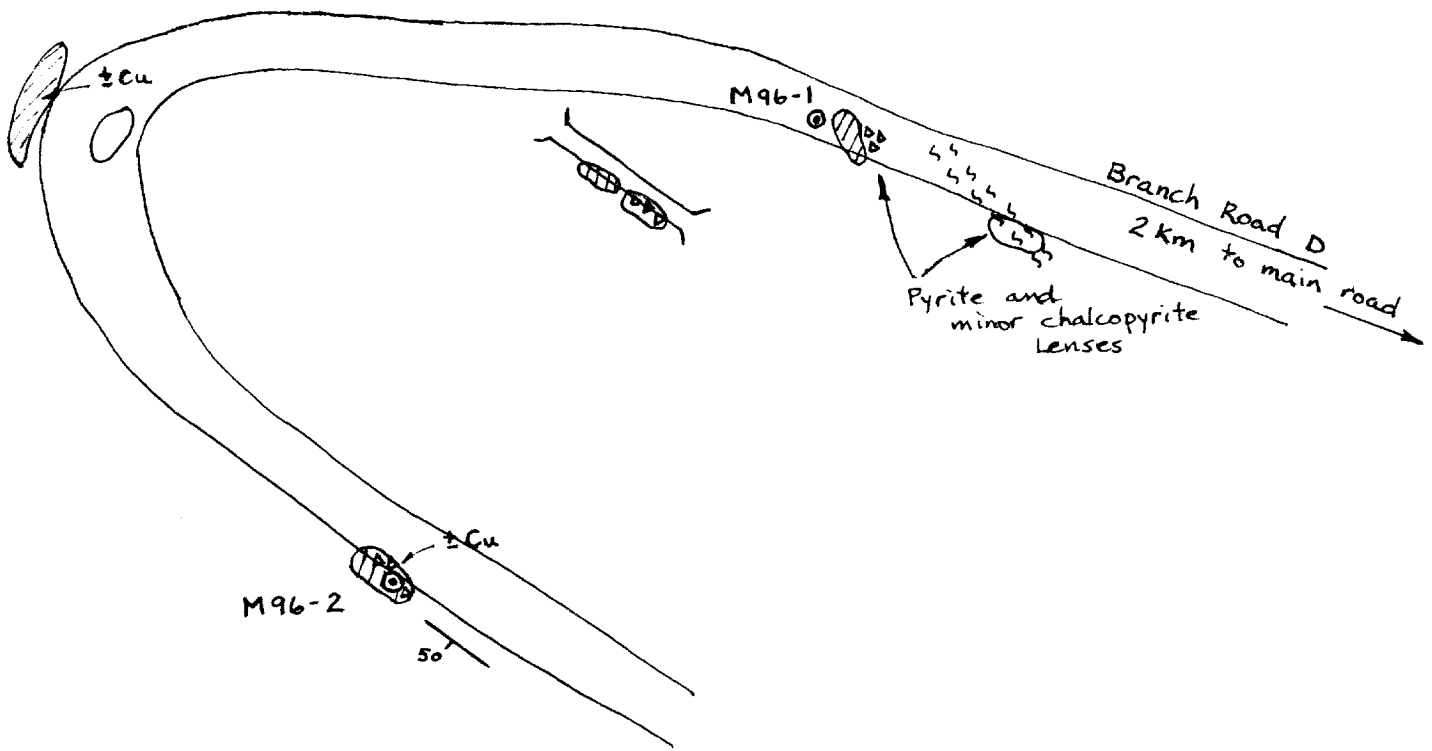
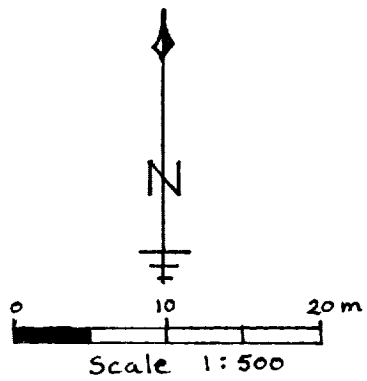
The greenstone where altered is variably brownish coloured with carbonate and talcose alteration. It can also contain minor disseminated secondary pyrite and mariposite. It is non-magnetic where altered but fresher material contains magnetite.

Since the altered greenstone may be intimately associated with the mineralization a low magnetic signature or a magnetic crossover may be expected when searching for similar zones.







#### DRILLING

Two holes were drilled on the claim from an existing roadway. The drilling was contracted to H.N. Horning Percussion Drilling Ltd. of Kamloops and the total footage drilled was 200 feet (60.9 m). The holes were drilled vertically or sub-vertically without water and the sample return consisted mainly of fine dust with an occasional chip. A generalized geologic log of the holes was determined mainly by the colour of the returned dust and the log sheets are included in the appendix.





Legend

-  Outcrop, Black Phyllite
-  Outcrop, Green Phyllite
-  Breccia
- M96-1  Percussion Drillhole
-  Strike and dip.
-  Shear

MASS CLAIM	
Drillhole Location and Geology Map	
Figure : 3	Nov. 1996

Both holes were sampled at 10 foot (3.04 m) intervals and the samples were treated at Acme Labs of Vancouver using the 30 element ICP plus geochem Au analysis. The results of analysis sheets are listed in the appendix.

The high Ca values contained in hole 1 from 70-100 feet may indicate the carbonate altered greenstone or may indicate dolomite or a dolomitic section of the greenish phyllite. On surface the greenish phyllite does not fizz to dilute HCL.

#### CONCLUSIONS AND RECOMMENDATIONS

Both percussion drill holes on the Mass claim encountered very anomalous base and precious metal values in the top 60 feet (18.3 m) of each hole.

Lenses of pyrite and lesser chalcopyrite to 5 cm widths occupy shears and irregular, but possibly conformable, breccia zones.

The anomalous metallic mineral assemblage and the semi-massive sulfide occurrence at the road showings indicate potential for economic grade massive sulfides.

Further work should focus on tracing the mineralized horizon along its projected strike direction with the anticipation that better sulfides probably exist at more favourable geologic or structural areas.

## REFERENCES

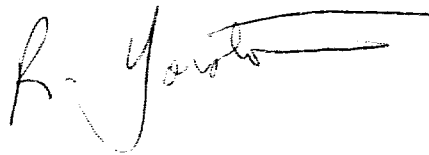
- Martin, L S                    Geological, Geochemical and Geophysical  
Report on the Mass Property, 1989.  
BCDM Assessment Report
- McClintock, J A                Mass and Annex Options. Geology, Geochemistry  
and Geophysics, 1991.    BCDM Assessment  
Report
- Donaldson, W S                Mass Property.    Geology, Geochemistry,  
Geophysics and Trenching, 1992.  
BCDM Assessment Report
- Struik, L C                    Structural Geology of the Cariboo Gold  
Mining District, East-Central British  
Columbia.    GSC Memoir 421, 1988

APPENDIX I

CERTIFICATE

R. YORSTON OF DUNCAN, B.C. CERTIFIES THAT:

- 1) I am a graduate of the University of British Columbia. BSc
- 2) I have practiced my profession since 1972.
- 3) I have personally conducted the work program discussed in this report.

A handwritten signature in black ink, appearing to read "R. Yorston", with a horizontal line extending to the right.

R. Yorston  
Stoltz Road RR2  
Duncan, B.C.  
V9L 1N9

December 1996

APPENDIX II

STATEMENT OF EXPENDITURES

Drilling:

200' @ \$7 Per Foot	\$1498.00
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Personnel:

R. Yorston - Geologist	2md @ 235	470.00
V. Guinet - Helper	2md @ 200	400.00

Expenses:

Mobilization	\$ 748.00	
Assays	325.28	
Materials	100.00	
Accomodation and Meals	60.72	
Fuel	56.00	
Report Preparation	<u>500.00</u>	
	\$1790.00	<u>1790.00</u>

Total Program Expenditures	<u>\$4158.00</u>
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APPENDIX III

DRILL LOGS

METRES			DESCRIPTION	ASSAY ppm			
FROM	TO	m		Cu	Pb	Zn	Ag
3.04	6.09	3.04	Black Phyllite	1766	241	635	2.4
6.09	9.14	"		1180	67	508	1.9
9.14	12.19	"		1426	219	842	3.2
12.19	15.24	"		1556	369	1333	4.8
15.24	18.28	"	Green Phyllite, minor pyrite  pyrite to 3-5%  water at 27.43m	684	345	1028	2.8
18.28	21.33	"		441	108	203	1.6
21.33	24.38	"		215	54	303	.8
24.38	27.43	"		92	16	157	<.3
27.43	30.48	"		71	32	132	<.3

METRES			DESCRIPTION	ASSAY ppm			
FROM	TO	m		Cu	Pb	Zn	Ag
1.22	3.04	3.04	Black Phyllite, minor pyrite	1444	201	882	2.6
3.04	6.09	"	Green quartz Phyllite and	739	746	2969	2.7
6.09	9.14	"	Black Phyllite	261	140	1542	.8
9.14	12.19	"	Black Phyllite, trace cpy	231	328	1620	1.7
12.19	15.24	"		202	126	1356	1.1
15.24	18.28	"	Greenish-grey Phyllite, 2-3% pyrite	572	138	1315	1.0
18.28	21.33	"		89	61	364	<.3
21.33	24.38	"	water at 24.38m	76	57	177	<.3
24.38	27.43	"	increased quartz at bottom	125	79	221	<.3
27.43	30.48	"		232	75	205	.6



APPENDIX IV

ANALYTICAL DATA



## GEOCHEMICAL ANALYSIS CERTIFICATE



Guinet Management File # 96-4310 Page 1  
310 Nigel Ave, Vancouver BC V5Y 2L9

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb	
M 96-1 10-20	1	1766	241	635	2.4	41	21	1578	9.92	55	<5	<2	4	6	1.2	<2	11	31	.18	.018	7	39	2.49	18	<.01	<3	2.89	.01	.05	<.03	<2	2
M 96-1 20-30	1	1180	67	508	1.9	31	25	1450	10.49	156	<5	<2	4	5	1.2	<2	23	29	.15	.011	5	31	2.69	18	<.01	<3	2.80	.01	.03	<.03	2	3
M 96-1 30-40	1	1426	219	842	3.2	34	16	1447	10.30	108	<5	<2	5	7	2.3	<2	10	24	.13	.023	8	26	3.12	14	<.01	<3	2.06	.03	.05	<.05	2	6
M 96-1 40-50	2	1556	369	1333	4.8	29	24	1021	7.64	136	<5	<2	3	7	4.2	<2	12	9	.12	.016	8	14	1.99	22	<.01	4	.55	.04	.08	12	140	
RE M 96-1 40-50	3	1562	361	1329	4.8	26	25	1019	7.61	141	<5	<2	4	7	4.2	3	10	9	.12	.017	8	14	1.98	24	<.01	4	.55	.04	.08	12	396	
M 96-1 50-60	2	684	345	1028	2.8	29	15	1362	7.96	92	<5	<2	4	17	2.5	2	4	15	.44	.016	9	17	2.56	26	<.01	<3	.79	.05	.09	3	13	
M 96-1 60-70	1	441	108	203	1.6	31	17	1221	8.02	49	<5	<2	5	11	.6	<2	7	4	.25	.014	8	10	1.51	37	<.01	<3	.32	.03	.12	3	792	
M 96-1 70-80	1	215	54	303	.8	38	16	1211	5.67	25	<5	<2	7	84	1.1	<2	4	6	3.49	.040	11	11	1.47	59	<.01	<3	.51	.02	.18	<.02	9	
M 96-1 80-90	1	92	16	157	<.3	33	13	1123	4.46	27	<5	<2	8	77	.5	<2	4	4	3.86	.035	13	8	1.53	50	<.01	<3	.40	.02	.20	2	3	
M 96-1 90-100	1	71	32	132	<.3	32	9	1141	4.12	23	<5	<2	7	68	<.2	<2	2	5	2.94	.025	14	12	1.92	44	<.01	<3	.66	.02	.18	3	2	
M 96-2 4-10	4	1444	201	802	2.6	45	21	463	8.84	296	<5	<2	3	5	1.2	2	13	69	.07	.015	6	58	.87	15	<.01	3	1.21	.02	.05	<.02	2	
M 96-2 10-20	1	739	746	2969	2.7	95	22	1908	9.62	140	<5	<2	5	9	7.1	3	7	9	.19	.044	8	38	2.56	30	<.01	<3	.42	.04	.12	<.02	24	
M 96-2 20-30	1	261	140	1542	.8	59	16	1637	6.63	116	<5	<2	7	10	3.9	<2	3	5	.22	.070	16	13	1.60	50	<.01	<3	.55	.03	.19	<.02	2	
M 96-2 30-40	1	231	328	1620	1.7	57	19	1777	8.36	174	<5	<2	7	9	4.2	<2	10	5	.20	.059	14	12	1.62	58	<.01	3	.54	.03	.20	<.02	5	
M 96-2 40-50	1	202	126	1356	1.1	51	16	1583	7.28	59	<5	<2	8	8	3.1	<2	5	6	.19	.056	17	11	1.35	58	<.01	<3	.62	.03	.21	<.02	3	
M 96-2 50-60	1	572	138	1315	1.0	45	19	1779	8.04	74	<5	<2	6	9	2.9	<2	9	4	.27	.034	14	10	1.42	60	<.01	<3	.46	.03	.22	<.02	23	
M 96-2 60-70	1	89	61	364	<.3	45	16	1639	5.49	46	<5	<2	8	14	.4	<2	<2	4	.53	.057	19	8	1.36	62	<.01	<3	.43	.03	.22	<.02	2	
M 96-2 70-80	1	76	57	177	<.3	40	16	1448	4.77	60	<5	<2	7	22	.3	<2	2	4	.97	.041	16	8	1.38	58	<.01	<3	.38	.03	.20	<.02	41	
M 96-2 80-90	1	125	79	221	<.3	34	12	1638	6.99	30	<5	<2	8	13	<.2	<2	<2	4	.50	.029	15	10	1.25	60	<.01	<3	.36	.03	.18	3	3	
M 96-2 90-100	2	232	75	205	.6	26	9	1416	6.94	39	<5	<2	8	9	<.2	<2	5	3	.26	.021	16	11	.95	65	<.01	<3	.36	.04	.15	3	3	
STANDARD C2/AU-R	20	61	41	146	7.0	74	34	1235	4.04	37	18	8	35	53	20.6	16	21	75	.55	.106	42	67	1.04	208	.08	28	2.11	.06	.15	11	476	

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.  
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
- SAMPLE TYPE: P1 TO P6 CUTTING P7 ROCK AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: SEP 6 1996

DATE REPORT MAILED

SIGNED BY

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS