



896170

Chu - Chua

1979.11.20

Mr. Nels Vollo
Craigmont Mines Ltd.,
#270 - 180 Seymour Street
KAMLOOPS, B.C.
V2C 2E2

Dear Nels:

Enclosed are some results from semi-quantitative spectrographic analyses of several massive sulphide and magnetite samples from Chu Chua. A few X-ray results from various holes are also included.

These data are not meaningful quantitatively but suggest that the massive sulphides may carry interesting levels of molybdenite, cobalt and tin. As I said, these results are not quantitative but were used to help decide elements for which I should request quantitative analyses. When the quantitative results are available I will send you a copy (early January, I hope).

Thanks for your comments on my write-up for Fieldwork.

All the best,

W.J. McMillan, Ph.D., P.Eng.,
Geologist, Geological Division,
Mineral Resources Branch.

WJM:evt

c.c. Gordon White
District Geologist, Kamloops, B.C.

J. Michael Kenyon
Director, Vestor Exploration Ltd.,
Richmond, B.C.

Chu Chua Massive Sulphides and Massive Magnetite Samples
Semi-Quantitative Spectrographic Analyses

Sample	Pb%	Cu%	Zn%	Ag	V	Ti	Ni	ppm Co	ppm Sn	Ba%	Mo%	As%	Sr%	Sb%	Elements in Trace Amounts	Sample Type
CC1	68.7	.05	2.5	2	T++	T	T	170	1000	.08	T	-	-	-	Bi Cd Zr Sr Cr W	Massive Sulphides
	71.5	.05	1.25	.015	T+	T	T	200	700	5	.07	-	.04	-	Bi - Zr - Cr W	" "
	75.5	.05	.55	.4	T+	ND	T	400	100	.08	.02	.03	-	-	- Cd Zr Sr Cr W	" "
	79.5	.04	.75	.015	T+	T	T	250	200	2	T	-	-	-	Bi - Zr - Cr W	" "
	83.5	.01	.60	.025	T+	T	T	200	200	1	T	-	-	-	- - Zr Sr Cr W	" "
CC11	29.5	T	1.0	.02	T+	T	T	600	ND	.16	.01	.04	-	-	Bi - - Sr Cr W	" "
CC12	217.5	.04	1.75	.07	T+	ND	T	350	T	.025	T	.07	-	-	Bi - Zr Sr Cr -	" "
CC14	176.5	.05	1.0	.25	T+	T	T	400	ND	.05	T	-	.03	-	Bi - Zr - Cr W	" "
	181.5	.025	1.0	.25	T+	T	T	250	300	5	.01	-	.02	-	Bi - Zr - Cr -	" "
	185.5	.05	1.0	.5	T+	T	T	400	200	5	T	-	.025	-	- Zr - Cr W	" "
	190.5	.12	.17	.35	T+	ND	T	T	T	5	T	.04	.05	-	- Zr - Cr W	" "
CC26	37.5	T	1.0	T	T+	T	T	1200	T	.02	.02	.03	-	.04	- Zr Sr Cr W	" "
	45.5	T	.3	.3	T	T	T	1400	ND	.01	.025	.02	-	-	- Zr Sr Cr W	" "
	49.5	ND	.05	.02	T-	T	T	150	ND	T	.025	-	-	-	- Zr - Cr W	Magnetite Lode
	56.5	ND	T	T	ND	ND	T	100	ND	.01	T-	-	-	-	- Zr - Cr W	" "
CC17	19.9	.02	5	.25	T+	ND	T	.01	700	100	.04	.01	.04	-	Bi Zr Sr Cr W	Massive Sulphides
	22.5	T	.7	.02	T	T	T	T	100	500	.015	T	-	-	Bi Zr - Cr W	" "
	31.5	.05	1.0	.04	T+	T	T	T	100	.025	T	.05	-	-	Bi Zr - Cr W	" "
*	83.5	.01	.55	.03	T+	T	T	T	250	170	1	T	-	-	Bi Zr - Cr W	Duplicate of CC1:83.5
*	49.5	ND	.06	.02	T-	T	T	T	160	ND	T	.025	-	-	- Zr - Cr W	Duplicate of CC26:49.5

LAB. NO.	MARK	LABORATORY REPORT		FILE
22609 M	GW2-79	<p>X-Ray</p> <p>Minerals identified include plagioclase, pyroxene (augite?), chlorite, epidote and a very minor amount of quartz and amphibole (magnesian hornblende?). Due to interference problems, the opaques have not been positively identified by XRD. However, the weak magnetism, inferior hardness and color suggest that most of the disseminated opaque minerals are pyrrhotite. But some pyrite could be present too.</p>		DATE OUT
22610 M	GW3-79	<p>The black veins (1) and the bulk rock (2) share similar mineralogy. Both are dominated by quartz, chlorite, sericite and calcite. The ^{small} black opaque minerals are mostly pyrite whereas those diffuse and brownish looking ones (under reflected light) seem amorphous.</p>		DATE IN
				SUBJECT

LAB. NO.	MARK	LABORATORY REPORT	
22611 M	GW4-79	<p>Chlorite, quartz, plagioclase (albite?), arkenite, calcite and sericite have been identified. The opaque minerals are most likely pyrite though a bit pyrrhotite could be present too. Neither of the two have been positively identified by XRD.</p>	
22612 M	GW5-79	<p>Minerals identified are as follows: Plagioclase (albite-sigolase), chlorite, pyroxene (augite?), epidote, calcite, ^{quartz} a little bit of amphibole and a trace amount of sericite.</p>	
22613 M	GW6-79	<p>Quartz, chlorite, armenite ($BaCa_2Mg_6Si_9O_{30} \cdot 2H_2O$, for whose optical properties, please refer to Winchell, Elements of Optical Mineralogy), sericite and calcite have been confirmed to be present. Feldspars are apparently absent.</p>	
22614 M	GW7-79	<p>The sheaf-like bundles of crystals with high birefringence are stilpnomelane, possibly mixed with a little bit of talc. Associated carbonates include magnesite and arkenite/dolomite.</p>	

LAB. NO.	MARK	LABORATORY REPORT		FILE
22615 M	GW8-79	<p>Plagioclase, chlorite, quartz, pyroxene, epidote, calcite and a little bit of amphibole have been detected. Most of the opaques are likely to be pyrite.</p>		DATE OUT
22616 M	GW9-79	<p>Quartz, pyrite and chlorite are the only crystalline</p>		DATE IN

REFERENCE NUMBER	SAMPLE NUMBER	[Na ₂ O + K ₂ O] (Percent)	[Fe ₂ O ₃ tot] (Percent)	[MgO] (Percent)
1	22369	10.44	57.74	31.81
2	22370	10.98	56.66	32.36
3	22371	17.41	51.90	36.69
4	22374	15.30	52.72	31.92
5	22372	18.86	50.60	30.54
6	22373	12.90	53.47	33.63
8	22375	11.45	50.00	38.54
9	22376	0.23	74.83	24.94
11	22377	8.42	54.44	37.14
12	22378	12.18	54.39	33.43
13	22379	12.19	52.80	35.01
14	22381	12.66	54.92	32.42
15	22382	15.22	54.58	30.21
16	22383	18.06	52.29	29.65
17	22384	11.15	55.51	33.34
19	22385	0.26	11.85	87.89
20	22386	2.30	60.80	36.90
21	22387	15.51	55.95	28.54
23	22389	13.81	53.35	32.84
24	22390	16.38	52.58	31.04
25	22391	10.92	53.93	35.14
26	22393	14.72	54.28	31.00
27	22394	14.03	53.52	32.45
28	22395	6.61	57.29	36.10
29	22396	15.09	53.69	31.22
31	22397	15.31	53.19	31.50
32	22398	11.17	55.45	33.38
33	22399	9.22	57.72	33.06
35	22401	1.12	60.79	38.09
36	22402	1.28	61.98	36.74
1b	22403	19.51	48.27	31.62
2b	22404	17.84	49.03	33.12
3b	22405	4.53	59.57	35.90
4b	22406	12.32	84.04	3.63
5b	22407	32.85	49.76	17.39
6b	22408	8.47	54.93	36.60
9b	22410	15.41	51.30	33.30
11b	22411	8.28	77.94	13.78
12b	22412	23.69	51.05	25.26
13b	22413	16.86	51.00	32.14
14b	22414	18.34	49.56	32.10
15b	22415	13.17	54.50	32.33
16b	22416	13.37	54.35	32.28
17b	22417	16.04	51.96	32.00
20b	22419	12.49	54.55	32.96
21b	22420	13.78	52.73	33.49
23b	22421	10.31	58.90	30.79
24b	22422	12.24	54.28	33.49

REFERENCE NUMBER	SAMPLE NUMBER	[K ₂ O + Na ₂ O] (percent)	[Fe ₂ O ₃ tot] (percent)	[MgO] (percent)
25b	22423	15.29	51.79	32.91
26b	22424	13.67	54.13	32.20
27b	22425	0.20	9.17	90.63
28b	22426	0.05	51.69	48.27
29b	22427	18.23	56.58	25.18
30b	22428	24.94	51.30	23.76
31b	22429	29.17	44.49	26.34
32b	22430	17.49	49.97	32.54
33b	22431	17.32	53.66	29.01
35b	22432	22.73	52.22	25.05
36b	22433	18.38	53.07	28.55