

## **APPENDIX B WATER QUALITY DATA**

The analytical results from the historic mine sites mine drainage sampling are organized according to Regional Office and are in the following order:

Smithers  
Kamloops  
Cranbrook  
Prince George  
Nanaimo

**SMITHERS REGION**

<u>MINE SITE NAME</u>	<u>BIG ONION</u>	<u>CRONIN</u>	<u>RED ROSE</u>	<u>ROCHER DEBOULE</u>
Date (yy mm dd)	00 08 14	00 08 14	00 08 15	00 08 15
Sample type	Adit drainage	Adit drainage	Adit drainage	Stream adjacent to mill
pH	4.11	7.37	7.11	7.48
SO4 (ppm)	215	24	405	19
Hardness (ppm)	138.77	191.32	430.34	26.93
<b>Metals (ppm)</b>	<b>Dissolved</b> <b>Total</b>	<b>Dissolved</b> <b>Total</b>	<b>Dissolved</b> <b>Total</b>	<b>Dissolved</b> <b>Total</b>
Aluminum	6.2	<0.2	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	<0.01	0.03	<0.01	<0.01
Beryllium	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	41.3	26.8	123	9.84
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	0.02	<0.01	0.07	<0.01
Copper	0.67	<0.01	1.65	<0.01
Iron	22.6	0.08	0.18	<0.03
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	9.9	29.8	32.7	0.9
Manganese	0.126	0.266	0.053	<0.005
Molybdenum	<0.03	<0.03	0.06	<0.03
Nickel	<0.05	<0.05	0.07	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	4	<2
Selenium	<0.2	<0.2	<0.2	<0.2
Silicon	16.2	1.52	6.05	1.36
Silver	<0.01	<0.01	<0.01	<0.01
Sodium	3	<2	6	<2
Strontium	0.098	0.288	0.305	0.037
Thallium	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03
Zinc	0.011	0.02	0.029	<0.005

**SMITHERS REGION**

MINE SITE NAME	SULTANA		EMERALD GLACIER		MARMOT		PORTER-IDAHO		DUNWELL	
	Date (yy mm dd)	Adit drainage	Date (yy mm dd)	Adit drainage	Date (yy mm dd)	Adit drainage	Date (yy mm dd)	Adit drainage	Date (yy mm dd)	Adit drainage
Sample type	00 08 15	00 08 16	00 08 16	00 08 19	00 08 19	00 08 19	00 08 19	00 08 19	00 08 19	00 08 19
pH	3.54	6.73	6.73	7.2	7.3	7.3	7.3	6.89	6.89	6.89
SO4 (ppm)	78	30	30	16	15	15	118	118	118	118
Hardness (ppm)	23.53	88.43	88.43	44.31	62.67	62.67	154.4	154.4	154.4	154.4
Metals (ppm)										
Aluminum	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2
Antimony	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2
Arsenic	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2
Barium	Total 0.02	Total 0.04	Total 0.04	Total 0.01	Total 0.02	Total 0.02	Total 0.02	Total 0.01	Total 0.01	Total 0.01
Beryllium	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005	Dissolved <0.005
Bismuth	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1	Total <0.1
Boron	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1	Dissolved <0.1
Cadmium	Total <0.01	Total 0.02	Total 0.02	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total 0.07	Total 0.07	Total 0.09
Calcium	Dissolved 8.28	Dissolved 24.1	Dissolved 23.4	Dissolved 14.7	Dissolved 18.4	Dissolved 19	Dissolved 18.4	Dissolved 55.2	Dissolved 55.2	Dissolved 56.7
Chromium	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01
Cobalt	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01
Copper	Total 0.56	Total 0.48	Total 0.48	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01
Iron	Dissolved 0.22	Dissolved 7.52	Dissolved 7.52	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved 0.04	Dissolved 0.04	Dissolved 0.04
Lead	Total <0.05	Total <0.05	Total 0.16	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05
Lithium	Dissolved <0.01	Dissolved <0.01	Total <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01
Magnesium	Dissolved 0.9	Dissolved 7.5	Dissolved 7.3	Dissolved 1.6	Dissolved 3.6	Dissolved 3.7	Dissolved 3.6	Dissolved 4	Dissolved 4	Dissolved 4
Manganese	Total 0.008	Total 0.032	Total 0.088	Total <0.005	Total <0.005	Total <0.005	Total <0.005	Total 0.789	Total 0.789	Total 0.866
Molybdenum	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03	Dissolved <0.03
Nickel	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05	Total <0.05
Phosphorus	Dissolved <0.3	Dissolved <0.3	Total <0.3	Dissolved <0.3	Dissolved <0.3	Dissolved <0.3	Dissolved <0.3	Dissolved <0.3	Dissolved <0.3	Dissolved <0.3
Potassium	Total <2	Total <2	Total <2	Total <2	Total <2	Total <2	Total <2	Total <2	Total <2	Total <2
Selenium	Dissolved <0.2	Dissolved <0.2	Total <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2	Dissolved <0.2
Silicon	Total 2.02	Total 1.49	Total 1.46	Total 1.08	Total 2.05	Total 2.04	Total 2.05	Total 3.3	Total 3.3	Total 4.18
Silver	Dissolved <0.01	Dissolved <0.01	Total <0.01	Dissolved <0.01	Dissolved <0.01	Total <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01	Dissolved <0.01
Sodium	Total <2	Total 3	Total 3	Total <2	Total <2	Total <2	Total <2	Total 3	Total 3	Total 3
Strontium	Dissolved 0.076	Dissolved 0.571	Total 0.551	Dissolved 0.079	Dissolved 0.38	Total 0.382	Dissolved 0.38	Dissolved 0.37	Dissolved 0.37	Total 0.371
Thallium	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2	Total <0.2
Tin	Dissolved <0.03	Dissolved <0.03	Total <0.03	Dissolved <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03
Titanium	Dissolved <0.01	Dissolved <0.01	Total <0.01	Dissolved <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01	Total <0.01
Vanadium	Dissolved <0.03	Dissolved <0.03	Total <0.03	Dissolved <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03	Total <0.03
Zinc	Dissolved 0.036	Dissolved 0.029	Total 4.22	Dissolved 0.01	Total 0.083	Total 0.084	Total 0.083	Total 7.44	Total 7.44	Total 11.9

# KAMLOOPS REGION

MINE SITE NAME	WAYSIDE		CONGRESS		TWIN LAKES		WINDPASS		SWEETHOME	
	Date (yy mm dd)	Adit drainage	Adit drainage	Adit drainage	Adit drainage	Adit drainage	Adit drainage	Adit drainage	Adit drainage	Adit drainage
Sample type	8.49 (LB00-1201)	8.53 (LB00-1302)	7.98 (LB00-1401)	8.13 (LB00-1506)	8.01 (LB00-1502)	8.1 (LB00-1504)	8.13 (LB00-1507)	8.1 (LB00-1502)	8.1 (LB00-1504)	8.01 (LB00-1504)
pH	94 (LB00-1202)	279 (LB00-1303)	81 (LB00-1403)	56 (LB00-1507)	88 (LB00-1504)	88 (LB00-1504)	56 (LB00-1507)	88 (LB00-1502)	88 (LB00-1504)	88 (LB00-1504)
SO4 (ppm)	193.96	282.24	324.17	122.52	181.25	181.25	122.52	181.25	181.25	181.25
Hardness (ppm)										
Metals (ppm)										
(sample ID #)										
Aluminum	<0.2 (LB00-1201)	<0.2 (LB00-1302)	<0.2 (LB00-1401)	<0.2 (LB00-1506)	<0.2 (LB00-1502)	<0.2 (LB00-1504)	<0.2 (LB00-1507)	<0.2 (LB00-1502)	<0.2 (LB00-1504)	<0.2 (LB00-1504)
Antimony	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Barium	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron	6	7.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Calcium	43.8	48.7	88	40.2	82.6	37.2	40.2	62.3	62	60.2
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.54
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.69
Lithium	<0.01	0.02	0.02	0.02	0.02	0.03	0.01	0.01	<0.01	<0.05
Magnesium	20.5	37.5	31.3	7.9	28.7	7.2	8.1	8.1	8.1	7.5
Manganese	<0.005	0.007	<0.005	<0.005	0.076	0.017	0.156	0.156	0.154	0.159
Molybdenum	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	3	3	<2	4	<2	<2	<2	<2	<2
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silicon	7.17	5.85	4.7	8.02	5.39	7.79	5.53	5.53	5.55	4.75
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	40	122	5	22	4	20	14	14	14	13
Strontium	0.376	0.802	0.804	0.044	0.762	0.042	0.096	0.096	0.096	0.095
Thallium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	<0.005	<0.005	<0.005	<0.005	0.009	0.007	0.008	0.008	0.008	0.024

## KAMLOOPS REGION

MINE SITE NAME	KAMAD		Upper adit (Homestake Crk)		Homestake Crk. @ foot of property		ENTERPRISE	
	00 09 08 Lower adit		Dissolved	Total	Dissolved	Total	00 09 09 Adit drainage	
Date (yy mm dd)	3.35		3.00		7.90		8.21	
Sample type	7770		1660		36		2910	
pH	6096		1131.9		192.53		2212.7	
SO4 (ppm)								
Hardness (ppm)								
Metals (ppm)								
	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Aluminum	7.4	8	2.9	2.8	<0.2	<0.2	<0.2	<0.2
Antimony	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Barium	<0.02	<0.02	<0.01	<0.01	0.02	0.02	0.01	0.02
Beryllium	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	<2	<2	<0.1	<0.1	<0.1	<0.1	<0.6	<0.6
Boron	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.02	<0.02	0.06	0.07	<0.01	<0.01	<0.01	<0.01
Calcium	349	372	190	192	47	47	108	111
Chromium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	0.05	0.05	0.06	0.07	<0.01	<0.01	<0.01	<0.01
Copper	0.03	0.04	1.17	1.2	<0.01	<0.01	<0.01	0.01
Iron	19.1	21.5	40.5	83	<0.03	0.32	<0.03	<0.03
Lead	<0.1	<0.1	0.42	0.46	<0.05	<0.05	<0.05	<0.05
Lithium	0.21	0.22	0.02	0.02	<0.01	<0.01	0.06	0.06
Magnesium	1200	1260	160	159	18.8	18.3	462	472
Manganese	44.3	46.4	12.7	13.2	<0.005	0.012	<0.005	<0.005
Molybdenum	<0.06	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.6	<0.6	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<4	<4	<2	<2	<2	<2	54	54
Selenium	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silicon	14.9	12.8	5.05	5.27	4.53	4.87	5.95	6.36
Silver	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	437	461	15	15	3	3	415	423
Strontium	2.27	2.39	1.66	1.7	0.224	0.228	3.12	3.23
Thallium	<0.4	<0.4	<0.2	<0.2	<0.2	<0.2	0.2	<0.2
Tin	<0.06	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.06	<0.06	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	1.33	1.41	30.1	31.5	<0.005	0.006	0.026	0.032

**CRANBROOK REGION**

MINE SITE NAME	PHOENIX	MOTHERLODE	SPITZEE	GOPHER
Date (yy mm dd)	00 09 11	00 09 12	00 09 12	00 09 13
Sample type	Tailings pond	Flooded open pit	Adit drainage	Adit drainage
pH	8.00 (LB00-1803)	7.98 (LB00-1903)	8.03 (LB00-2003)	7.91 (LB00-2103)
SO4 (ppm)	637 (LB00-1803)	823 (LB00-1903)	300 (LB00-2003)	76 (LB00-2103)
Hardness (ppm)	796.28	901.59	390.89	219.26
<b>Metals (ppm)</b> (sample #)	<u>Dissolved</u> (LB00-1801)	<u>Dissolved</u> (LB00-1901)	<u>Dissolved</u> (LB00-2001)	<u>Dissolved</u> (LB00-2101)
Aluminum	<0.2	<0.2	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	0.01	<0.01	0.02	<0.01
Beryllium	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	269	218	131	78.1
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	<0.03	<0.03	<0.03
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	0.01	0.01	<0.01
Magnesium	31	100	18.4	6.1
Manganese	<0.005	0.008	0.184	0.017
Molybdenum	<0.03	0.25	<0.03	<0.03
Nickel	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	3	3	4	<2
Selenium	<0.2	<0.2	<0.2	<0.2
Silicon	5.46	5.9	7.71	8.16
Silver	<0.01	<0.01	<0.01	<0.01
Sodium	7	47	14	5
Strontium	1.84	9.93	0.989	0.608
Thallium	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03
Zinc	<0.005	0.006	<0.005	0.052
				<u>Total</u> (LB00-2102)
				<0.2
				<0.2
				<0.2
				0.01
				<0.005
				<0.1
				<0.1
				<0.01
				77.7
				<0.01
				<0.01
				0.04
				<0.05
				<0.01
				6.1
				0.017
				<0.03
				<0.05
				<0.3
				<2
				<0.2
				8.16
				<0.01
				5
				0.608
				<0.2
				<0.03
				<0.01
				<0.03
				0.052

## CRANBROOK REGION

MINE SITE NAME	SECOND RELIEF		YMIR TAILINGS		KOOTENAY FLORENCE	
	Date (yy mm dd)	Adit drainage	00 09 13	00 09 14	00 09 13	00 09 14
Sample type	(LB00-2307)	(LB00-2307)	Pond on tailings	Adit drainage	(LB00-2403)	(LB00-2503)
pH	8.00	6.81	4.92	7.73	7.73	7.73
SO4 (ppm)	16	45	410	412	412	412
Hardness (ppm)	74.94	47.85	348.72	580.2	580.2	580.2
	(LB00-2307)	(LB00-2307)	(LB00-2403)	(LB00-2503)	(LB00-2403)	(LB00-2503)
	(LB00-2307)	(LB00-2307)	(LB00-2403)	(LB00-2503)	(LB00-2403)	(LB00-2503)
<b>Metals (ppm)</b>						
(sample #)						
Aluminum	Dissolved (LB00-2305)	Dissolved (LB00-2301)	Dissolved (LB00-2401)	Dissolved (LB00-2501)	Dissolved (LB00-2501)	Total (LB00-2502)
Antimony	<0.2	<0.2	2.6	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Barium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Beryllium	<0.01	<0.01	0.04	<0.01	<0.01	0.01
	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	0.82	<0.01	<0.01	<0.01
Calcium	29.1	17.1	106	207	196	196
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Copper	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Iron	<0.03	0.1	0.73	<0.03	<0.03	7.13
Lead	<0.05	<0.05	0.41	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	0.01	0.02	0.02	0.02
Magnesium	1	0.9	19	23.1	22	22
Manganese	<0.005	0.198	2.14	2.29	2.11	2.11
Molybdenum	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	3	3	3
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silicon	4.08	4.03	8.3	7.17	7.18	7.18
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	2	<2	2	4	3	3
Strontium	0.094	0.051	0.51	0.967	0.914	0.914
Thallium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	0.011	0.041	25.1	1.47	1.54	1.54
		0.043	25.8	1.47	1.54	1.54

**CRANBROOK REGION**

MINE SITE NAME	HIGHLAND		CANEX TAILINGS		MIDWAY		CORK-PROVINCE			
	Date (yy mm dd) Sample type pH SO4 (ppm) Hardness (ppm)	00 09 14 Adit drainage 7.41 497 557.06	00 09 14 Pond at foot of tailings 8.11 37 104.3	00 09 14 Upper adit drainage 3.85 160 93.67	00 09 19 Adit drainage 8.05 36 113.8	(LB00-2603) (LB00-2603)	(LB00-2703) (LB00-2703)	(LB00-2803) (LB00-2803)	(LB00-2903) (LB00-2903)	
Metals (ppm) (sample #)	Dissolved (LB00-2601)	Total (LB00-2602)	Dissolved (LB00-2701)	Total (LB00-2702)	Dissolved (LB00-2801)	Total (LB00-2802)	Dissolved (LB00-2804)	Total (LB00-2805)	Dissolved (LB00-2902)	Total (LB00-2901)
Aluminum	<0.2	1	<0.2	0.4	0.3	0.4	0.8	1	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	<0.2
Barium	0.01	0.01	0.02	0.02	0.01	0.01	0.02	0.02	<0.01	<0.01
Beryllium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Calcium	170	171	35.6	32.7	23.2	23.2	43.3	41.7	39.9	36.5
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	0.01	0.01	<0.01	<0.01	0.01	0.01	0.02	0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01	0.05	0.06	<0.01	<0.01	<0.01	<0.01
Iron	0.87	11.4	<0.03	0.28	2.71	17.4	3.28	20.5	<0.03	0.1
Lead	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lithium	0.03	0.03	<0.01	<0.01	<0.01	0.01	0.02	0.01	<0.01	<0.01
Magnesium	31.1	31.6	6.1	5.5	8.7	8.7	11.9	11.2	5.8	5.5
Manganese	8.2	8.03	<0.005	0.011	2.6	2.6	5.49	5.25	0.021	0.021
Molybdenum	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	0.07	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2	2	3	4	3	<2	<2
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silicon	5.57	6.28	5.37	5.11	12.7	12.4	18.8	18.2	3.53	3.5
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	2	2	5	4	8	8	11	11	<2	<2
Strontium	0.701	0.712	0.14	0.128	0.086	0.083	0.162	0.161	0.59	0.541
Thallium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	6.59	6.98	0.013	0.028	0.62	0.614	0.752	0.703	0.919	0.875



# CRANBROOK REGION

MINE SITE NAME	CAMBORNE		JACKSON		SLOCAN SOVEREIGN		RENO	
	Date (yy mm dd) Sample type	(LB00-3003) (LB00-3003)	Date (yy mm dd) Adit drainage - 1862 m	(LB00-3103) (LB00-3103)	Date (yy mm dd) Adit drainage - 1770 m	(LB00-3106) (LB00-3106)	Date (yy mm dd) Adit drainage	(LB00-3303) (LB00-3303)
pH	5.4	8.09	8.11	8.09	8.03	8.03	8.03	8.03
SO4 (ppm)	434	106	74	106	11	11	11	11
Hardness (ppm)	269.69	259.46	193.84	243.69	43.95	43.95	43.95	43.95
<b>Metals (ppm)</b> (sample #)	<b>Dissolved</b> (LB00-3002)	<b>Total</b> (LB00-3001)	<b>Dissolved</b> (LB00-3102)	<b>Total</b> (LB00-3101)	<b>Dissolved</b> (LB00-3105)	<b>Total</b> (LB00-3104)	<b>Dissolved</b> (LB00-3302)	<b>Total</b> (LB00-3301)
Aluminum	0.3	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Barium	<0.01	<0.01	0.02	0.02	0.02	0.01	<0.01	0.01
Beryllium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium	0.36	0.36	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Calcium	59.8	53.1	53.6	59.5	53.4	49	62	15.8
Chromium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cobalt	0.05	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	0.52	0.52	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron	0.06	0.22	0.09	<0.03	<0.03	<0.03	<0.03	0.06
Lead	2.76	3.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lithium	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Magnesium	36.2	33.4	30.6	33.4	18.8	17.4	2.2	2
Manganese	3.92	3.65	0.014	0.009	<0.005	<0.005	<0.005	0.01
Molybdenum	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Nickel	0.11	0.11	0.07	0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2	<2	<2	<2	<2
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Silicon	5.48	5.38	2.43	2.5	2.63	2.55	2.84	2.75
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	<2	<2	<2	<2	<2	<2	<2	<2
Strontium	0.344	0.292	0.491	0.546	0.479	0.44	0.068	0.062
Thallium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc	76.8	72.6	0.607	0.608	1.17	1.1	0.033	0.035

**PRINCE GEORGE REGION**

MINE SITE NAME	TAKLA SILVER	BRALORNE TAKLA	SNOWBIRD	CARIBOO HUDSON
Date (mm dd yy)	9/25/00	9/25/00	9/26/00	9/27/00
Sample type	adit drainage	Flooded shaft	Flooded decline	adit drainage
pH	7.76 (LB00-3403)	7.82 (LB00-3504)	7.84 (LB00-3603)	8.19 (LB00-3804)
SO4 (ppm)	55 (LB00-3403)	7 (LB00-3504)	492 (LB00-3603)	5 (LB00-3804)
Hardness (ppm)	228.04	211.14	1173.2	67.54
Metals (ppm)				
(Sample #)				
Aluminum	Dissolved (LB00-3402) <0.2	Dissolved (LB00-3502) <0.2	Dissolved (LB00-3602) <0.2	Dissolved (LB00-3802) <0.2
Antimony	Total (LB00-3401) 0.6	Total (LB00-3501) <0.2	Total (LB00-3601) <0.2	Total (LB00-3801) <0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	0.2	<0.2	0.4	<0.2
Beryllium	<0.01	0.1	0.01	<0.01
	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.2	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	65.6	50.4	135	15.3
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	0.25	<0.03	<0.03
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	14.5	2.9	203	6.9
Manganese	0.027	<0.005	0.342	<0.005
Mercury	-	0.0015	-	-
Molybdenum	<0.03	<0.03	<0.03	<0.03
Nickel	<0.05	<0.05	0.09	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	<2	<2	<2	<2
Selenium	<0.2	<0.2	<0.2	<0.2
Silicon	1.48	1.61	9.74	1.23
Silver	<0.01	<0.01	<0.01	<0.01
Sodium	<2	<2	12	<2
Strontium	0.073	0.046	1.43	0.051
Thallium	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03
Zinc	0.365	0.068	<0.005	<0.005
		0.108	<0.005	0.006

**PRINCE GEORGE REGION**

MINE SITE NAME	JIM	JANE/SNOWSHOE	MIDAS	WARSPITE
Date (mm dd yy)	9/27/00	9/27/00	9/27/00	9/28/00
Sample type	adit drainage	composite upper/lower portal	adit drainage	adit drainage
pH	8.03 (LB00-3903)	8.13 (LB00-4003)	8.1 (LB00-4103)	8.18 (LB00-4203)
SO4 (ppm)	14 (LB00-3903)	9	27 (LB00-4103)	40 (LB00-4203)
Hardness (ppm)	98.59	70.98	191.11	160.69
Metals (ppm)				
(sample #)				
Aluminum	Dissolved (LB00-3902) <0.2	Dissolved (LB00-4002) <0.2	Dissolved (LB00-4102) <0.2	Dissolved (LB00-4202) <0.2
Antimony	Total (LB00-3901) <0.2	Total (LB00-4001) <0.2	Total (LB00-4101) <0.2	Total (LB00-4201) <0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	<0.2	<0.2	<0.2	<0.2
Beryllium	0.03	<0.01	<0.01	<0.01
	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	15	15.7	40.4	30.1
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	0.26	<0.03	<0.03
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	14.9	7.7	22.3	21.1
Manganese	<0.005	<0.005	<0.005	0.104
Molybdenum	-	<0.03	<0.03	<0.03
Nickel	<0.03	<0.05	<0.05	<0.05
Phosphorus	<0.05	<0.3	<0.3	<0.3
Potassium	<0.3	<2	<2	<2
Selenium	<2	<0.2	<0.2	<0.2
Silicon	<0.2	1.79	2.86	2.09
Silver	2.34	<0.01	<0.01	<0.01
Sodium	<0.01	<2	<2	<2
Strontium	<2	0.046	0.097	0.123
Thallium	0.085	<0.2	<0.2	<0.2
Tin	<0.2	<0.03	<0.03	<0.03
Titanium	<0.03	<0.01	<0.01	<0.01
Vanadium	<0.01	<0.03	<0.03	<0.03
Zinc	<0.03	<0.005	0.006	0.007
		0.006	0.01	0.081

**PRINCE GEORGE REGION**

MINE SITE NAME	JIM	JANE/SNOWSHOE	MIDAS	WARSPITE
Date (mm dd yy)	9/27/00	9/27/00	9/27/00	9/28/00
Sample type	adit drainage	composite upper/lower portal	adit drainage	adit drainage
pH	8.03 (LB00-3903)	8.13 (LB00-4003)	8.1 (LB00-4103)	8.18 (LB00-4203)
SO4 (ppm)	14 (LB00-3903)	9 (LB00-4003)	27 (LB00-4103)	40 (LB00-4203)
Hardness (ppm)	98.59	70.98	191.11	160.69
Metals (ppm)	Dissolved	Dissolved	Dissolved	Dissolved
(Sample #)	(LB00-3902)	(LB00-4002)	(LB00-4102)	(LB00-4202)
Aluminum	<0.2	<0.2	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	0.03	<0.01	<0.01	<0.01
Beryllium	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	15	15.7	40.4	30.1
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	<0.03	<0.03	<0.03
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	14.9	7.7	22.3	21.1
Manganese	<0.005	<0.005	<0.005	0.104
Molybdenum	-	<0.03	<0.03	<0.03
Nickel	<0.03	<0.05	<0.05	<0.05
Phosphorus	<0.05	<0.3	<0.3	<0.3
Potassium	<0.3	<2	<2	<2
Selenium	<2	<0.2	<0.2	<0.2
Silicon	<0.2	1.79	2.86	2.09
Silver	2.34	<0.01	<0.01	<0.01
Sodium	<0.01	<2	<2	<2
Strontium	<2	0.046	0.097	0.123
Thallium	0.085	<0.2	<0.2	<0.2
Tin	<0.2	<0.03	<0.03	<0.03
Titanium	<0.03	<0.01	<0.01	<0.01
Vanadium	<0.01	<0.03	<0.03	<0.03
Zinc	<0.03	<0.005	0.006	0.007
	0.007	<0.005	0.006	0.007
		0.05	0.099	0.127
		<0.2	<0.2	<0.2
		<0.3	<0.3	<0.3
		0.014	<0.005	0.249
		<0.03	<0.03	<0.03
		<0.05	<0.05	<0.05
		<0.3	<0.3	<0.3
		<2	<2	<2
		<0.2	<0.2	<0.2
		1.95	2.83	2.32
		<0.01	<0.01	<0.01
		<2	<2	<2
		0.05	0.097	0.127
		<0.2	<0.2	<0.2
		<0.03	<0.03	<0.03
		<0.01	<0.01	<0.01
		<0.03	<0.03	<0.03
		<0.01	<0.01	<0.01
		<0.03	<0.03	<0.03
		<0.005	0.006	0.007
		0.018	0.01	0.081

## PRINCE GEORGE REGION

MINE SITE NAME	ISLAND MOUNTAIN		CARIBOO GOLD QUARTZ	
Date (mm dd yy)	9/29/00	9/29/00	9/29/00	9/29/00
Sample type	drainage - ventilation house	main adit drainage	adit drainage	
pH	7.52 (LB00-4303)	8.17 (LB00-4306)	8.01 (LB00-4403)	
SO4 (ppm)	1060 (LB00-4303)	45 (LB00-4306)	225 (LB00-4403)	
Hardness (ppm)	1295.8	250.14	327.45	
Metals (ppm)	Dissolved	Dissolved	Dissolved	Total
(sample #)	(LB00-4302)	(LB00-4305)	(LB00-4402)	(LB00-4401)
Aluminum	<0.2	<0.2	<0.2	<0.2
Antimony	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	0.01	0.03	0.02	0.04
Beryllium	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	<0.01	<0.01
Calcium	251	58.4	64.5	66.2
Chromium	<0.01	<0.01	<0.01	<0.01
Cobalt	<0.01	<0.01	<0.01	<0.01
Copper	<0.01	<0.01	<0.01	<0.01
Iron	<0.03	<0.03	<0.03	19.5
Lead	<0.05	<0.05	<0.05	<0.05
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	162	25.5	39.3	39.5
Manganese	1.12	<0.005	0.205	0.555
Molybdenum	<0.03	<0.03	<0.03	<0.03
Nickel	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	<0.3
Potassium	3	<2	<2	<2
Selenium	<0.2	<0.2	<0.2	<0.2
Silicon	4.57	3.41	2.28	3.31
Silver	<0.01	<0.01	<0.01	<0.01
Sodium	5	<2	<2	<2
Strontium	1.31	0.327	0.28	0.297
Thallium	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.03	<0.03	<0.03	<0.03
Zinc	0.012	0.005	<0.005	0.031

# NANAIMO REGION

<u>MINE SITE NAME</u>	<u>LENORA</u>			
Date (mm dd yy)	11/23/00			
Sample type	stream at edge of dump			
pH	7.52 <small>(LB00-4503)</small>	4.75 <small>(LB00-4506)</small>		
SO4 (ppm)	9 <small>(LB00-4503)</small>	470 <small>(LB00-4506)</small>		
Hardness (ppm)	28.515	371.48		
Metals (ppm) <small>(sample #)</small>	<u>Dissolved</u> <small>(LB00-4501)</small>	<u>Total</u> <small>(LB00-4502)</small>	<u>Dissolved</u> <small>(LB00-4504)</small>	<u>Total</u> <small>(LB00-4505)</small>
Aluminum	<0.2	<0.2	5.8	16.1
Antimony	<0.2	<0.2	<0.2	<0.2
Arsenic	<0.2	<0.2	<0.2	<0.2
Barium	0.04	0.04	0.01	3.13
Beryllium	<0.005	<0.005	<0.005	<0.005
Bismuth	<0.1	<0.1	<0.1	<0.1
Boron	<0.1	<0.1	<0.1	<0.1
Cadmium	<0.01	<0.01	0.13	0.12
Calcium	9.93	9.93	110	103
Chromium	<0.01	<0.01	<0.01	0.01
Cobalt	<0.01	<0.01	0.02	0.02
Copper	0.04	0.04	10.7	10.6
Iron	0.2	0.2	<0.03	47.7
Lead	<0.05	<0.05	0.05	2.2
Lithium	<0.01	<0.01	<0.01	<0.01
Magnesium	0.9	0.9	25.5	27.8
Manganese	<0.005	<0.005	1.48	1.55
Molybdenum	<0.03	<0.03	<0.03	0.05
Nickel	<0.05	<0.05	<0.05	<0.05
Phosphorus	<0.3	<0.3	<0.3	0.7
Potassium	<2	<2	<2	5
Selenium	<0.2	<0.2	<0.2	<0.2
Silicon	2.41	2.41	8.2	10.9
Silver	<0.01	<0.01	<0.01	0.03
Sodium	<2	<2	3	3
Strontium	0.022	0.022	0.298	0.328
Thallium	<0.2	<0.2	<0.2	<0.2
Tin	<0.03	<0.03	<0.03	<0.03
Titanium	<0.01	<0.01	<0.01	0.18
Vanadium	<0.03	<0.03	<0.03	0.03
Zinc	0.319	0.319	28.8	26.4