ENVIRONMENT CANADA
CONSERVATION AND PROTECTION
ENVIRONMENTAL PROTECTION
PACIFIC AND YUKON REGION
NORTH VANCOUVER, B.C.

SUMMARY REPORT
SEDIMENT QUALITY OF STREAMS SURROUNDING OPERATING OR PROPOSED MINES IN BRITISH COLUMBIA

Regional Data Report DR 92-12

By

Michael E. Hagen

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1.0 INTRODUCTION

From 1981 to 1992, the Freshwater Assessment Division, Environmental Effects Branch, Environmental Protection, Environment Canada, monitored environmental quality in salmon-bearing streams that could be impacted by proposed or operating mines. Occasionally, such monitoring included metal content of stream and lake sediments. The projects for which this occurred are described in Section 2, Project and Sampling Site Description.

Sediment quality parameters are relatively stable, unlike water quality parameters which may fluctuate on a daily basis. There are no standards for sediment quality similar to the CCREM (1987) water quality guidelines for protection of aquatic life. Such guidelines are under development. A necessary first step for this development is to summarize existing sediment data.

This report is a summary of sediment data from streams surrounding proposed or operating mines in British Columbia. A variety of collection methods have been used which are described in Section 3, Materials and Methods. Regional Data Reports containing more detailed information on these projects are listed in the Bibliography.

2.0 PROJECT AND SAMPLING SITE DESCRIPTION

Fourteen mineral exploration or mining projects that were monitored for sediment quality are included in this report. Between 3 and 19 sampling sites per project included sampling above the potential impact area, baseline sampling prior to project start-up, and sampling for indications of potential impacts during or following operations. Studies were conducted in different months of the same year or in different years. The projects are described in Table 1, and are shown in Figures 1 to 16.

TABLE 1: PROJECT DESCRIPTION

Project	Total Sites	Years Sampled	Sites Sampled	Remarks
Catear (Fig. 12)	3	1988 1989	3 3	Upstream on Catear Creek which drains into Brucejack Lake, upstream of Sulphurets Project. Pilot mill operated 1981. Underground gold and silver pilot mine operated 1988 - 1990.
Cinola (Fig. 2)	11	1982 1983 1987 1989	7 7 7 3	Ore body on Barbie Creek tributary of Yakoun River, planned tailings pond discharge to Florence Creek. Exploration for project development 1980 to 1989.
Congress (Fig. 15)	2	1988	2	Gold mine on Lajoie Creek tributary to Bridge River. Project inactive.
Dome Mtn (Fig. 3)	4	1988	4	Ore body on east slope of Dome Mountain, mill and tailings pond planned for Fedral Creek tributary of Guess Creek, in Fulton River Drainage. Small scale mine with no on-site mill. Start-up in 1991.
Endako (Fig. 4)	10	1981	10	Between Endako River on north and Francois Lake on south, 3 tailings ponds, gold mine started operations in 1973.
Equity Silver (Fig. 5)	19	1983 1985 1987 1988 1989 1990	1 16 7 4 5 4	At headwaters of Foxy Creek and Buck Creek tributaries to Bulkley River, impacts on Goosly Lake. The largest silver mine in B.C. had two open pits and a tailings pond and operated 1980 - 1992.

TABLE 1 (Cont.): PROJECT DESCRIPTION

Project	Total Sites	Years Sampled	Sites Sampled	Remarks
Eskay Creek (Fig. 6)	5	1990	5	Between MacKay and Eskay Creek tributaries to Unuk River. Gold, silver, lead, and zinc mine exploration and review continuing.
Golden Bear (Fig. 7)	6	1987	6	On Bearskin Lake, drainage via Bearskin Creek, Samotua River, Sheslay River, and Inklin River to Taku River. Gold mine started operating in 1990.
Lara (Fig. 16)	2	1988	2	Gold mine on Solly Creek tributary to Chemainus River. Project inactive.
Premier Gold (Fig. 8)	12	1987 1988 1989 1990 1991	9 6 5 5 2	Open pit gold mine on Cascade Creek just upstream from Salmon River in Alaska. Waste dumps on Cooper Creek and Fletcher Creek, tailings pond drainage into Cascade Creek. Operated since 1988.
Quesnel River (Fig. 9)	5	1989	5	Gold mine in Maud Creek drainage of Quesnel River. Project inactive.
Samatosum (Fig. 10)	10	1988 1990	7 4	Lead/zinc/silver mine in Sinmax Creek drainage system. Start-up in 1989. Silver mine activity on Homestake Creek in 1971.
Skyline (Fig. 11)	9	1987 1988 1989 1990	7 6 6 5	Gold and silver underground mine on Johnny Mountain plateau south of Iskut River. Property drained by Johnny Creek and Stonehouse Creek. Upstream of Snip project. Operated 1988 - 1990.
Snip (Fig.11)	9	1987 1988 1989 1990	1 6 6 5	Gold and silver underground mine between Monsoon and Bronson Creek tributaries to Iskut River. Downstream of Skyline project. Operated since 1991.
Sulphurets (Fig. 12)	5	1988 1989	4 5	Gold mine at headwaters of Sulphurets Creek tributary to the Unuk River. Downstream of Catear project. Project inactive.
Windy Craggy (Fig. 13)	9	1988 1990	1 8	Ore body on Windy Craggy peak. Tailings pond planned for branch of Tats Creek, a tributary to the Tatshenshini River. Currently at project review stage.
Yellow Giant (Fig. 14)	2	1987	2	Gold mine on Sproatt Creek, Banks Island. Project inactive.

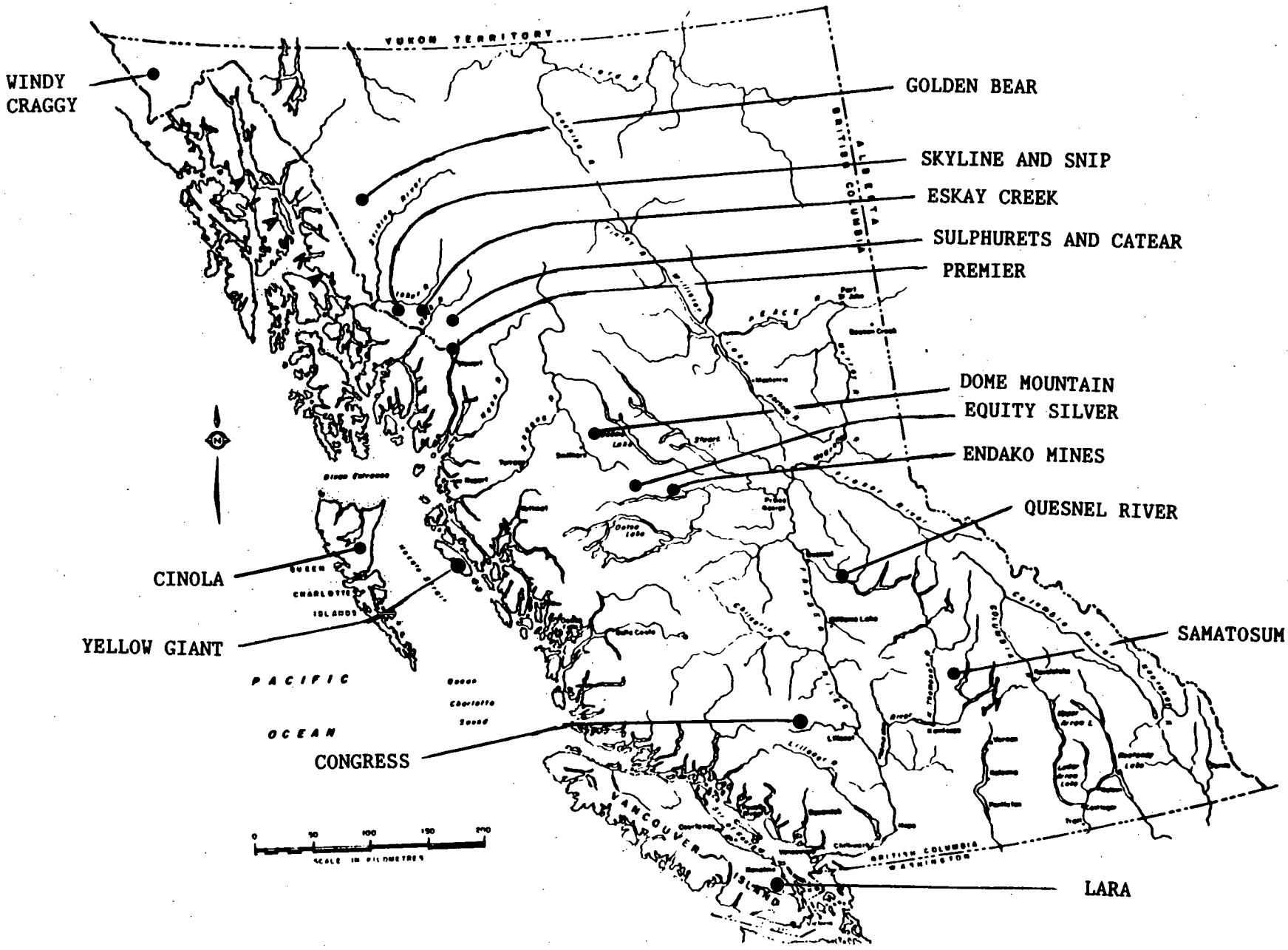

FIGURE 1: PROJECT LOCATION KEY MAP

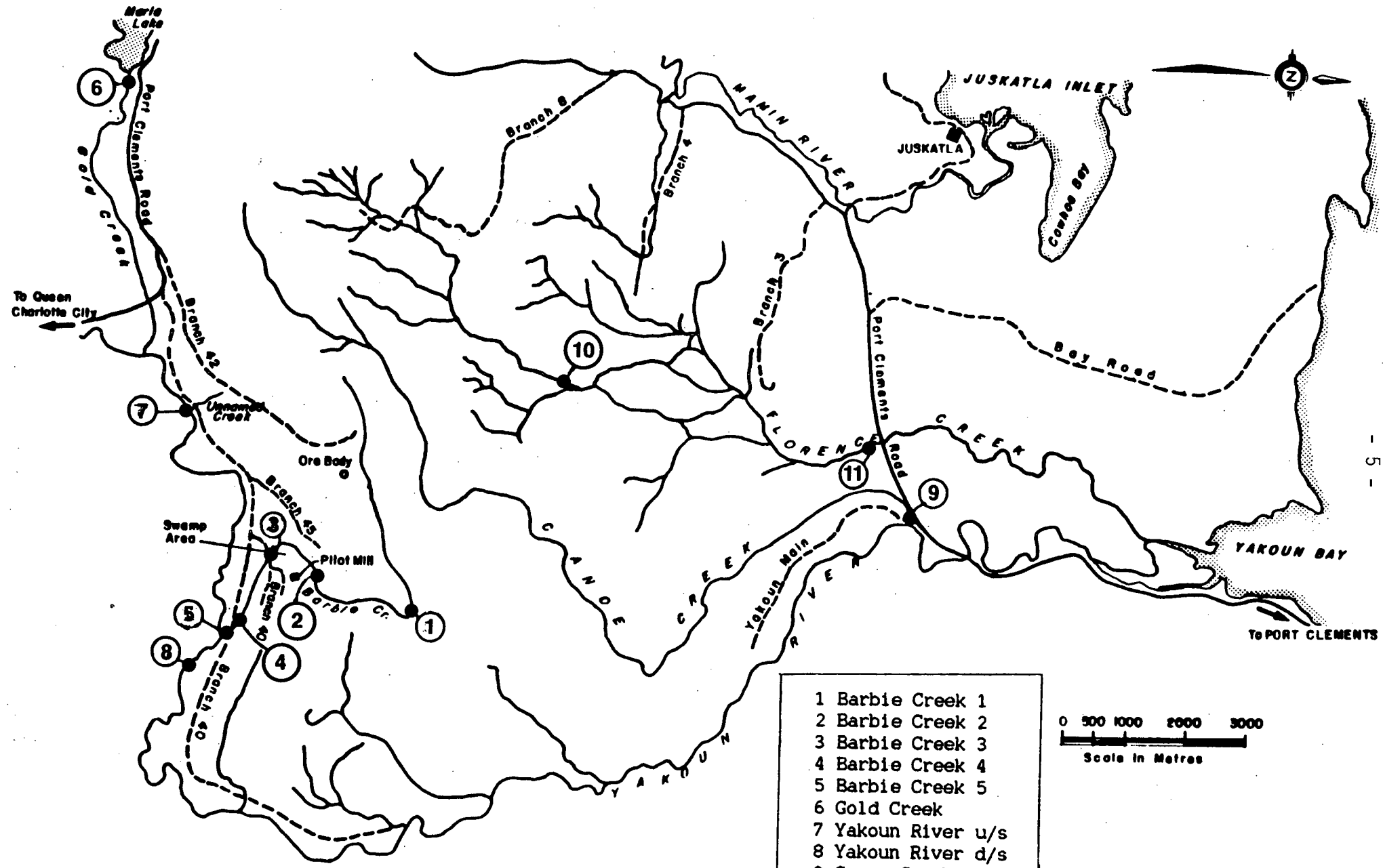

FIGURE 2: SEDIMENT SAMPLING SITES - CINOLA PROJECT

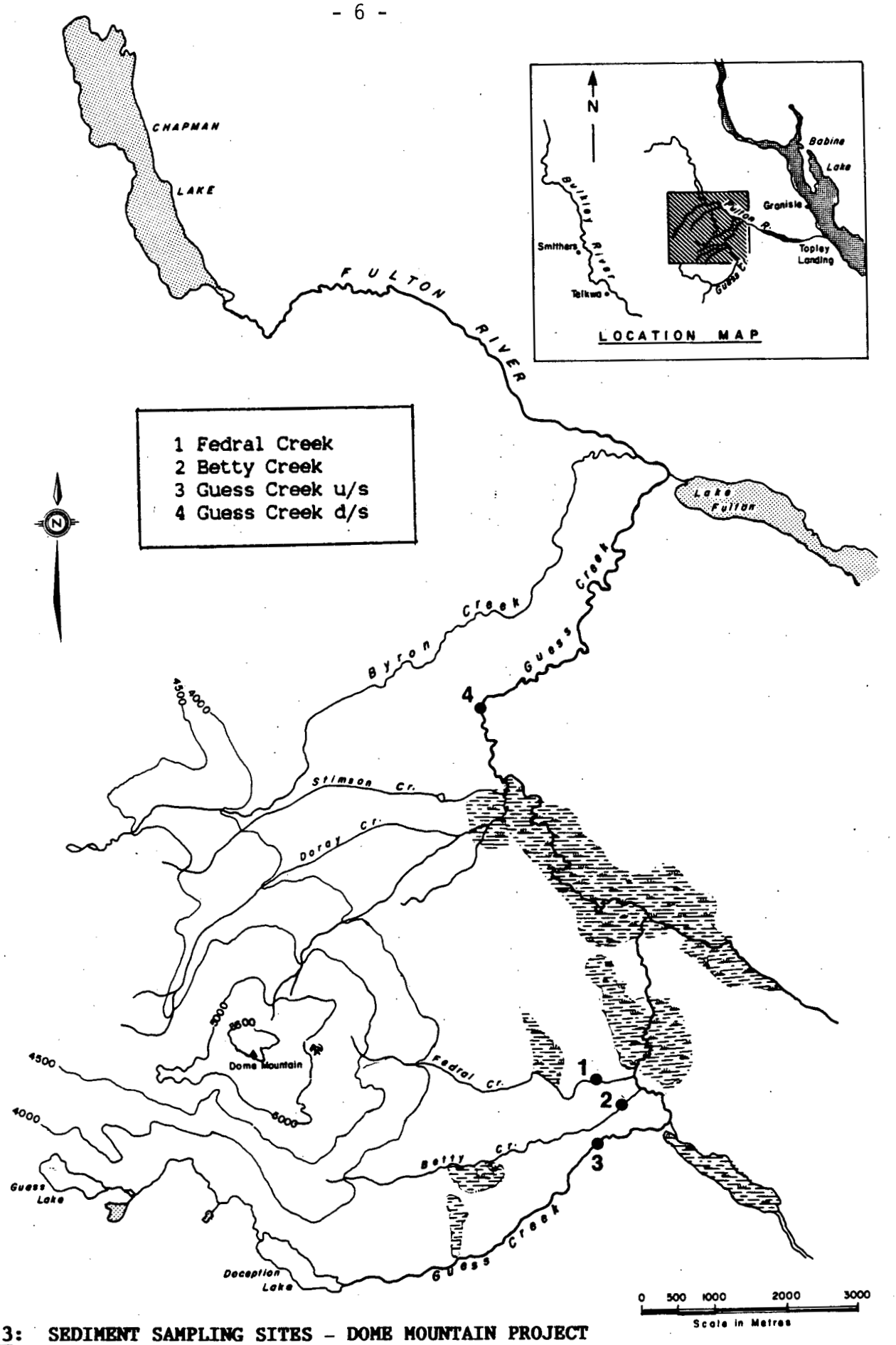

FIGURE 3: SEDIMENT SAMPLING SITES - DOME MOUNTAIN PROJECT

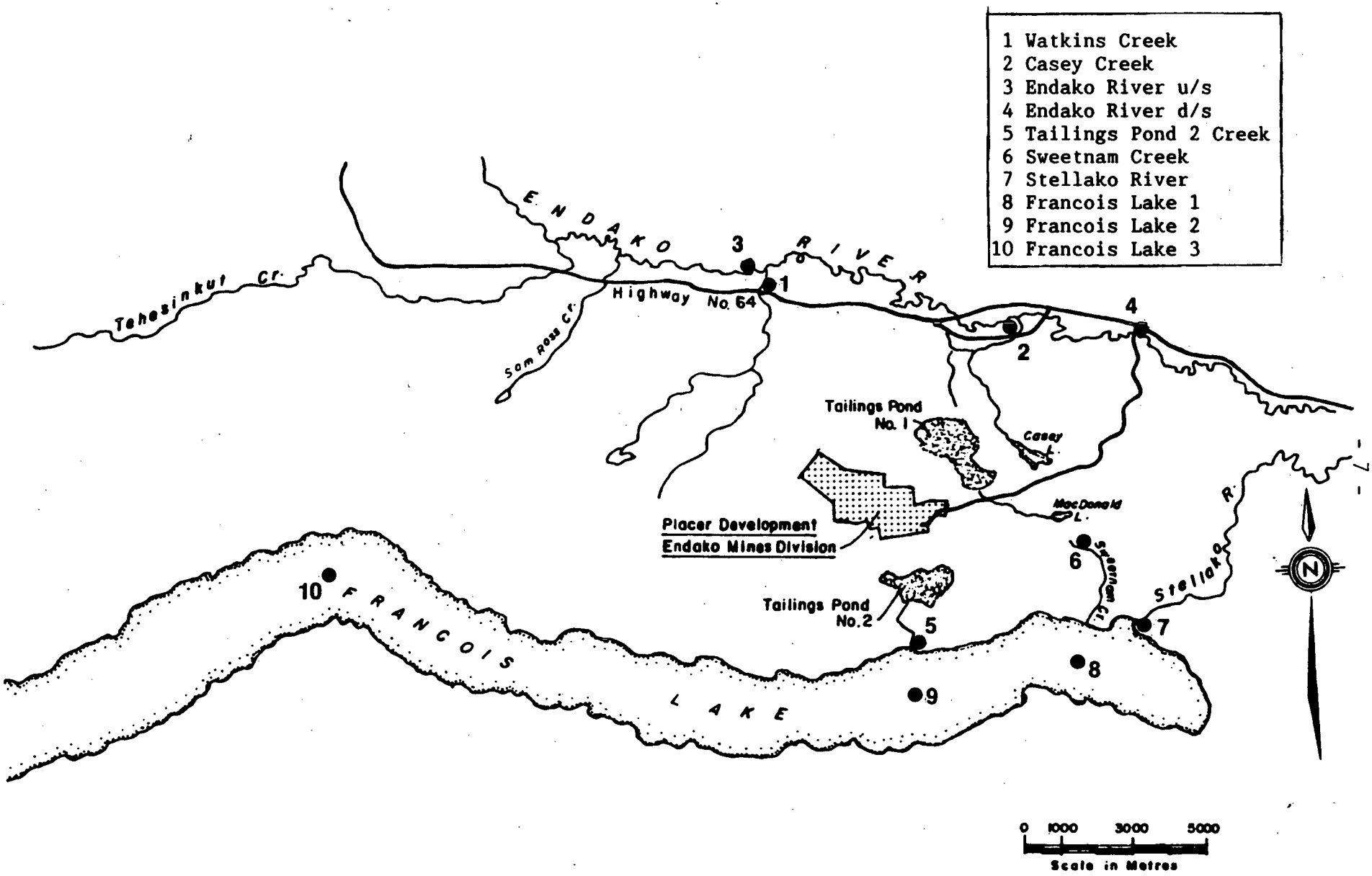

FIGURE 4: SEDIMENT SAMPLING SITES - ENDAKO MINES PROJECT

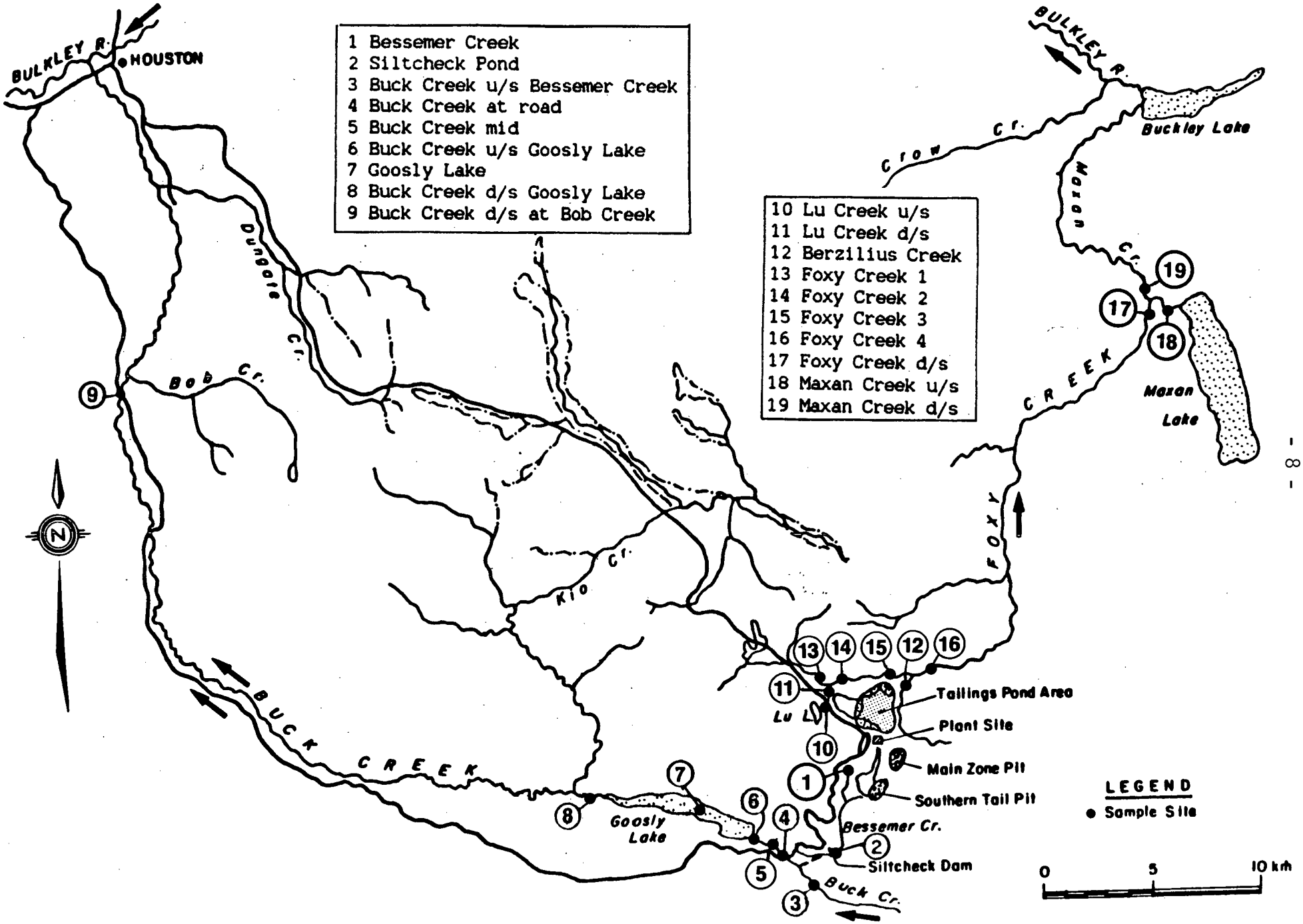

FIGURE 5: SEDIMENT SAMPLING SITES - EQUITY SILVER PROJECT

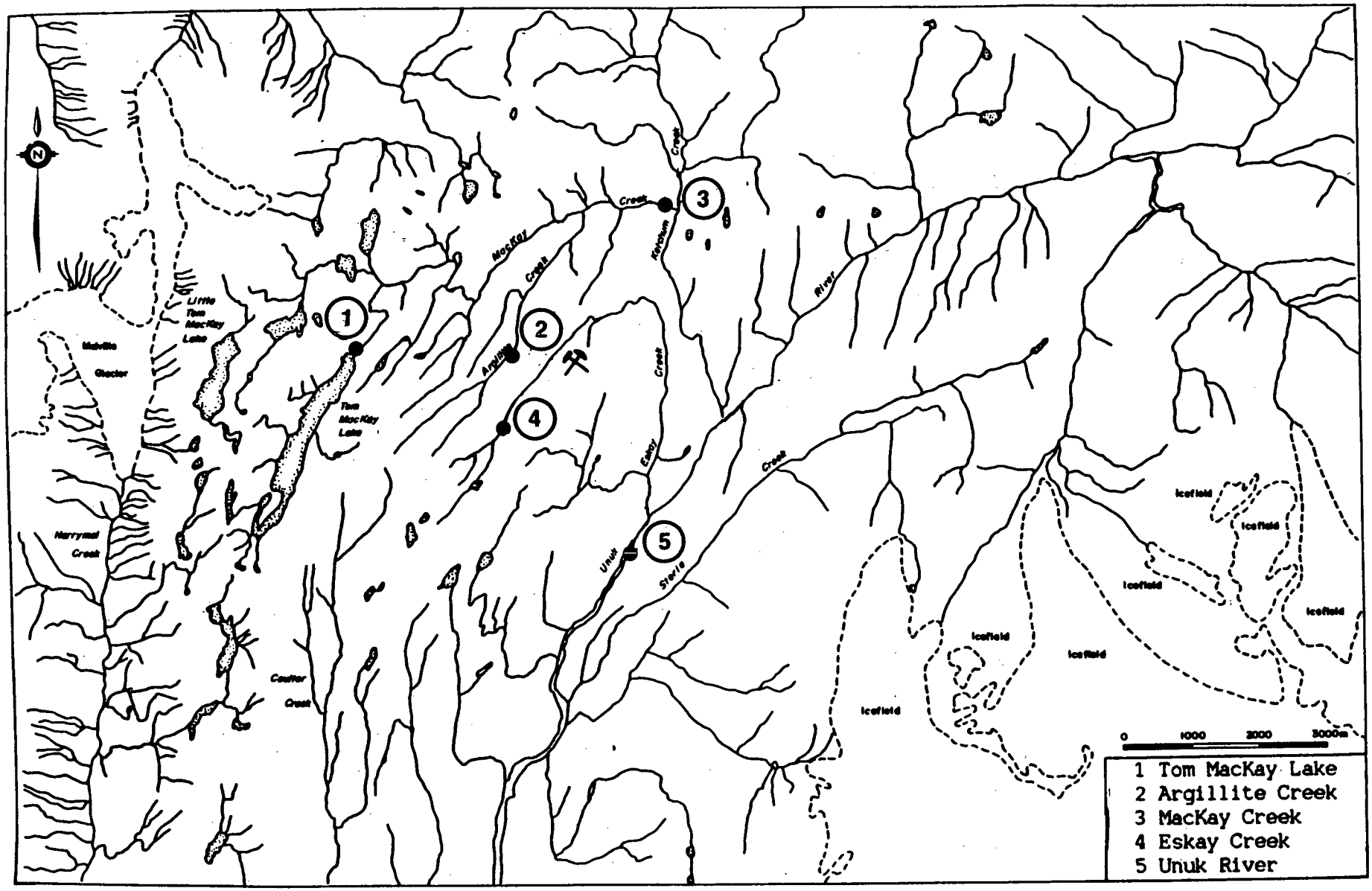

FIGURE 6: SEDIMENT SAMPLING SITES - ESKAY CREEK PROJECT

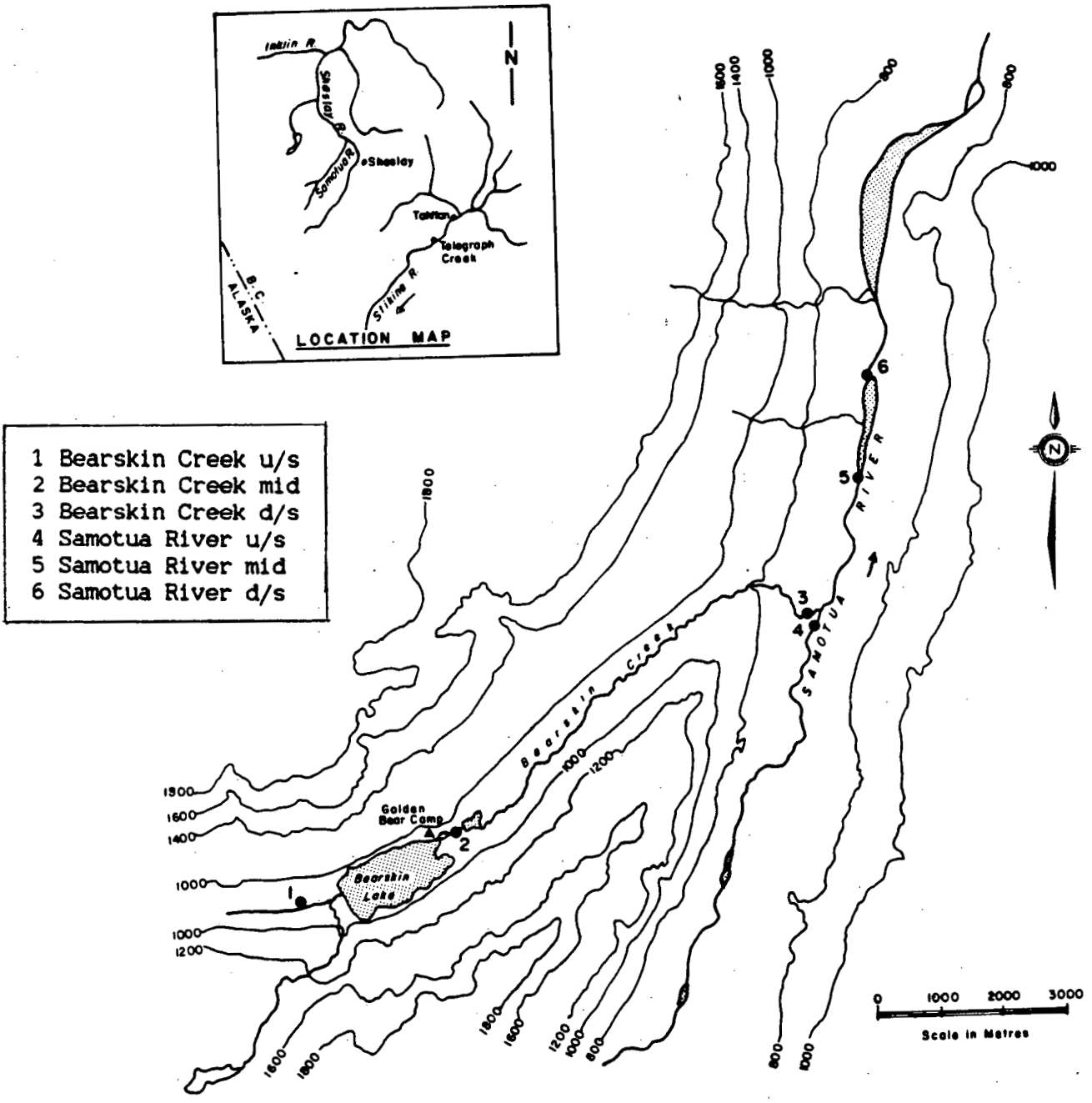

FIGURE 7: SEDIMENT SAMPLING SITES - GOLDEN BEAR PROJECT

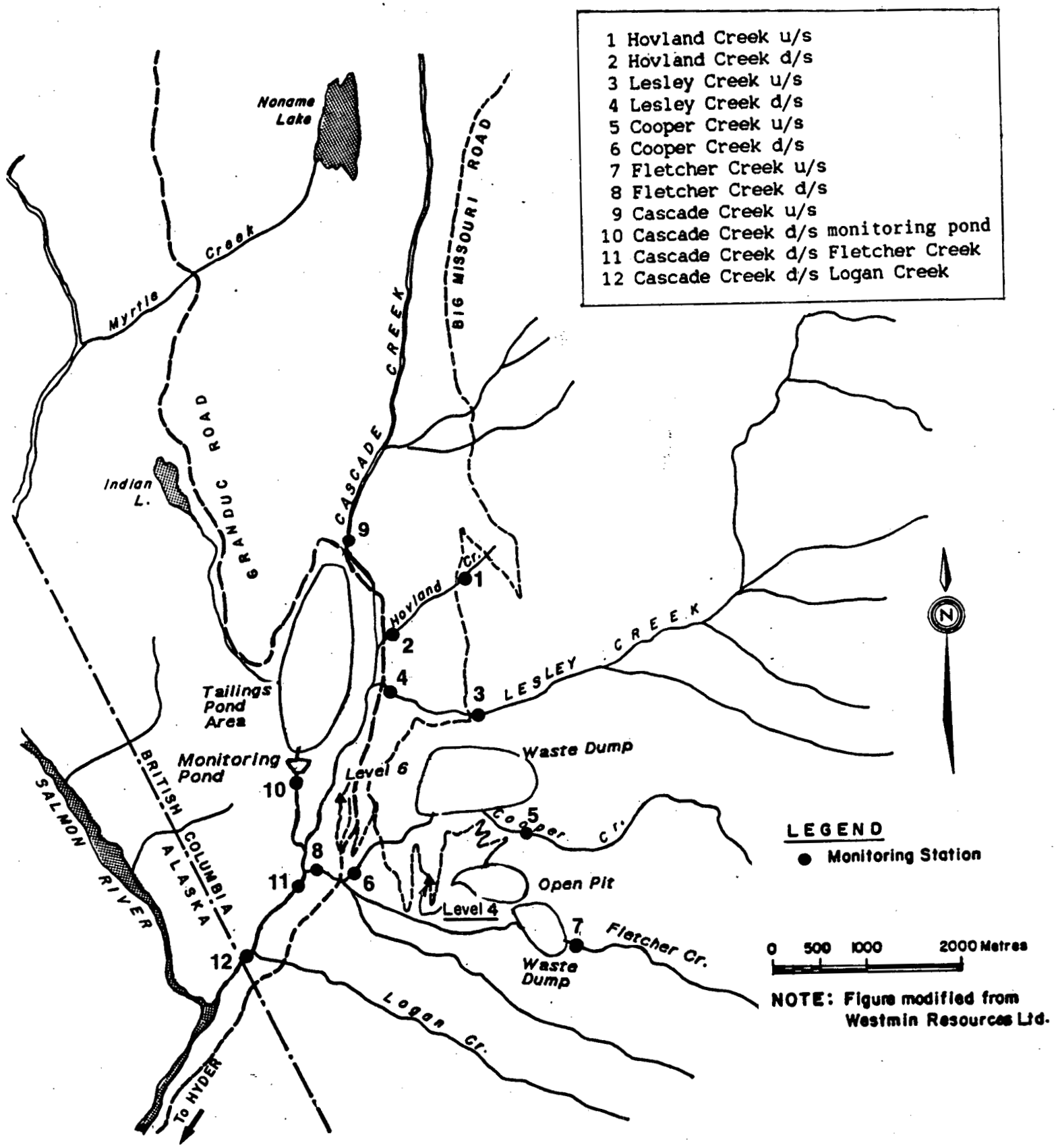

FIGURE 8: SEDIMENT SAMPLING SITES - PREMIER GOLD PROJECT

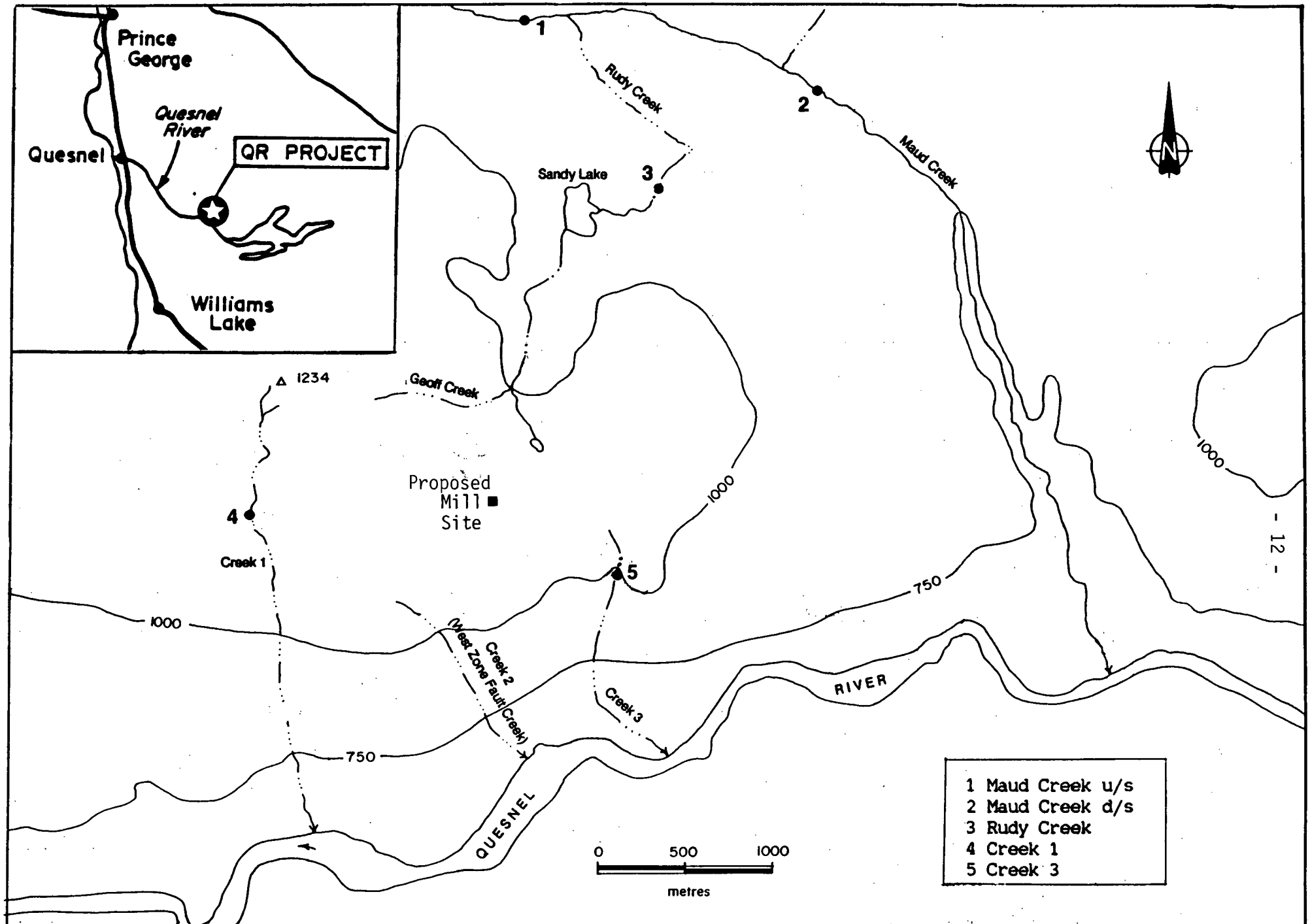

FIGURE 9: SEDIMENT SAMPLING SITES - QUESNEL RIVER PROJECT

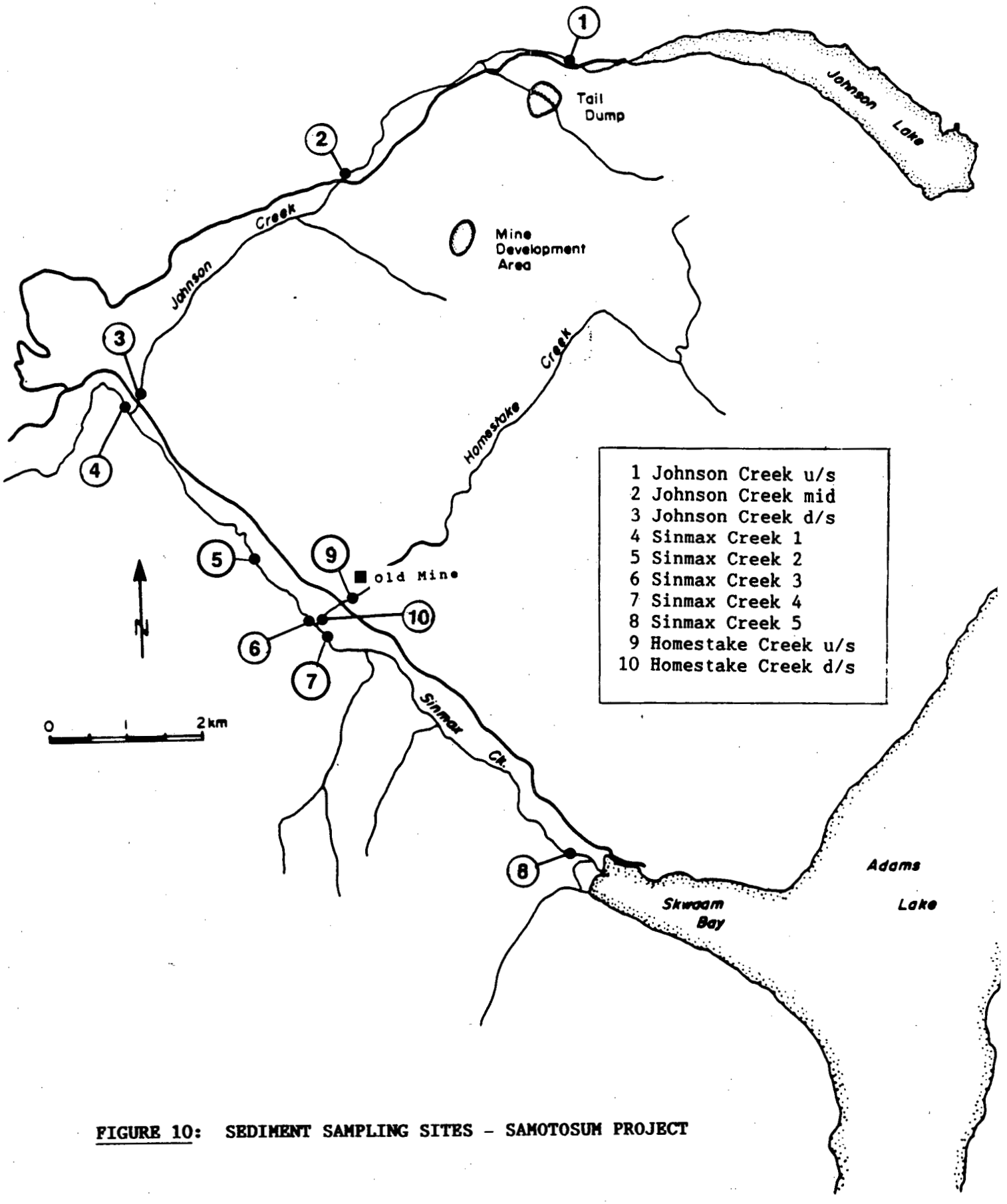

FIGURE 10: SEDIMENT SAMPLING SITES - SAMOTOSUM PROJECT

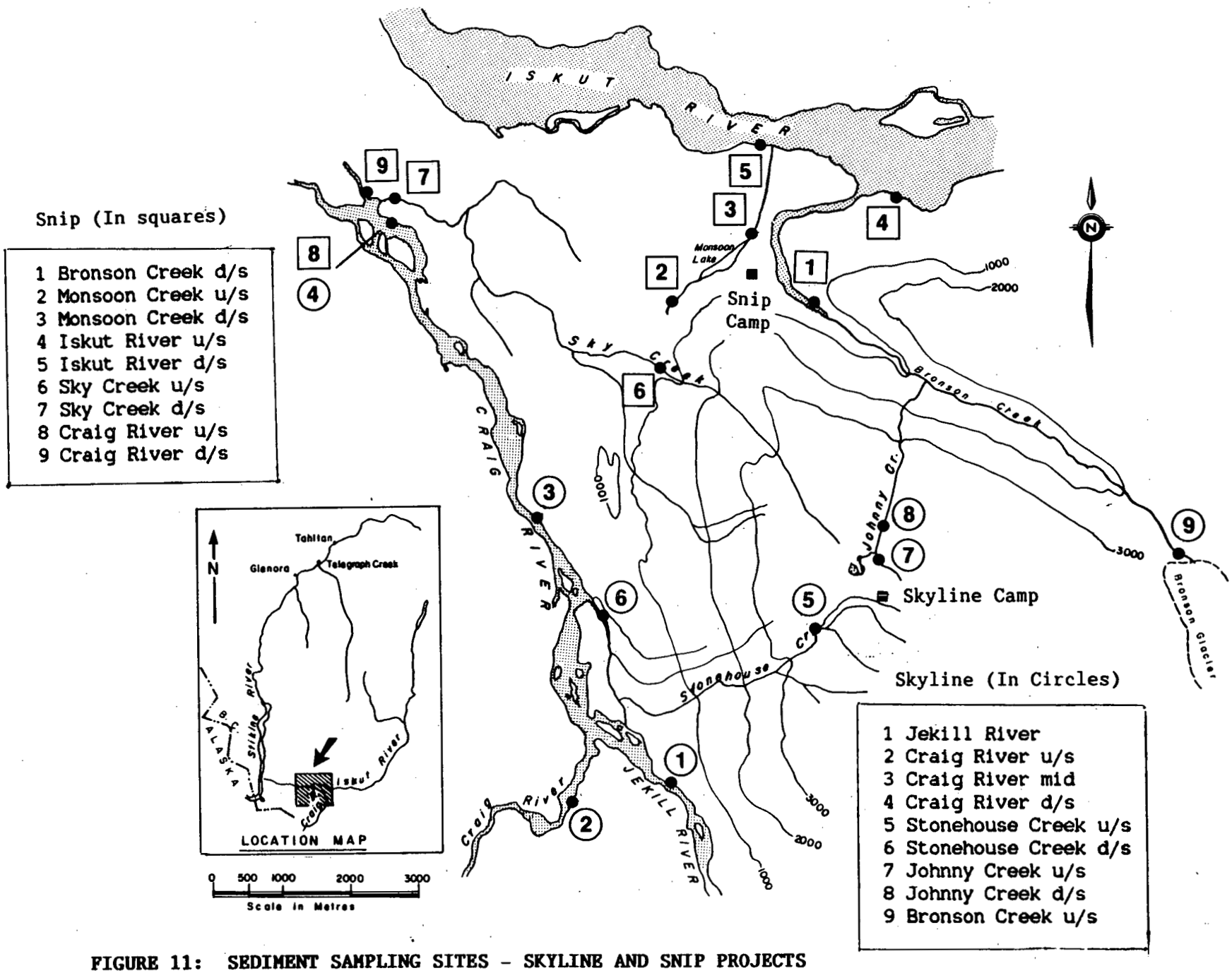

FIGURE 11: SEDIMENT SAMPLING SITES - SKYLINE AND SNIP PROJECTS

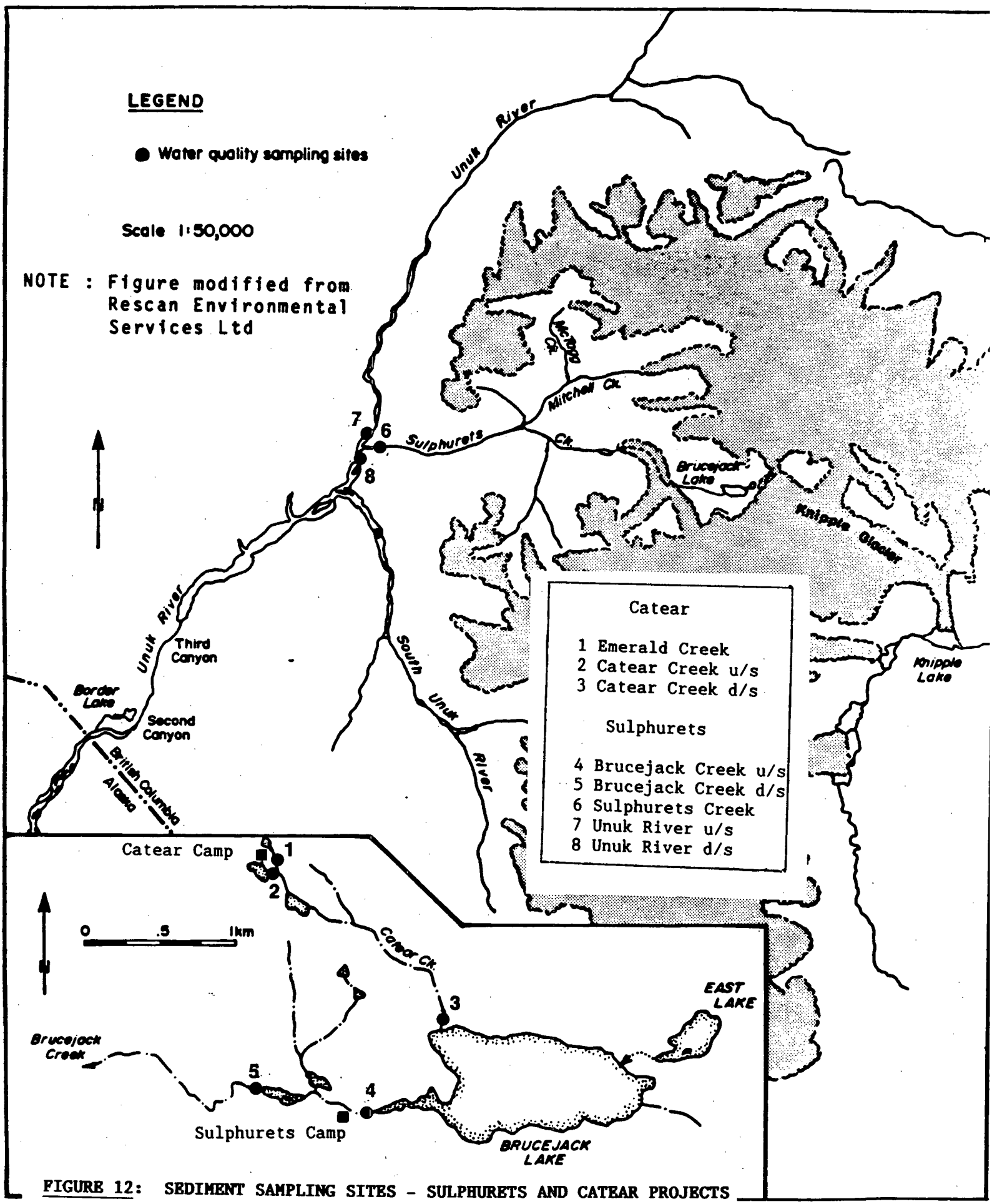

FIGURE 12: SEDIMENT SAMPLING SITES - SULPHURETS AND CATEAR PROJECTS

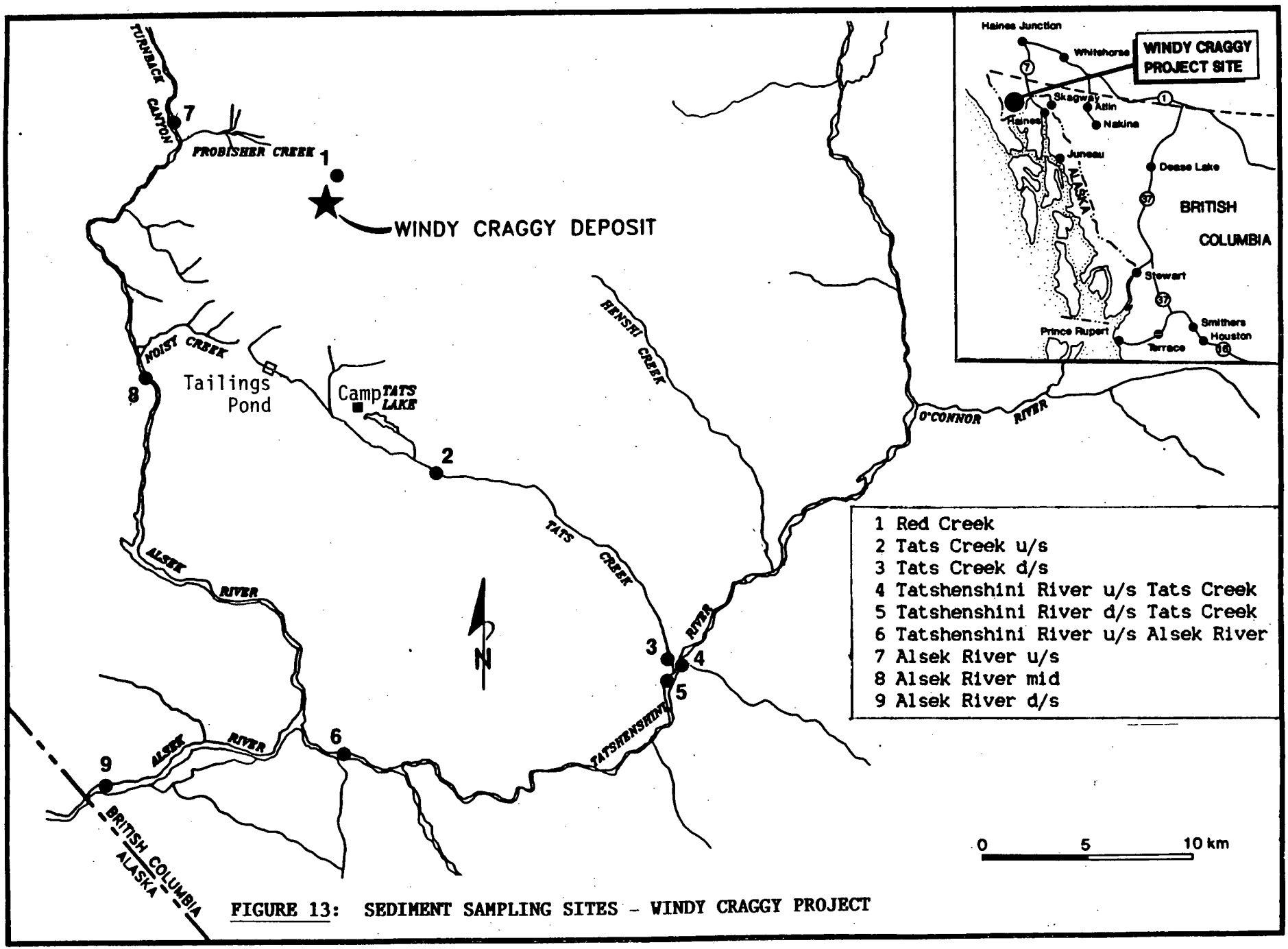

FIGURE 13: SEDIMENT SAMPLING SITES - WINDY CRAGGY PROJECT

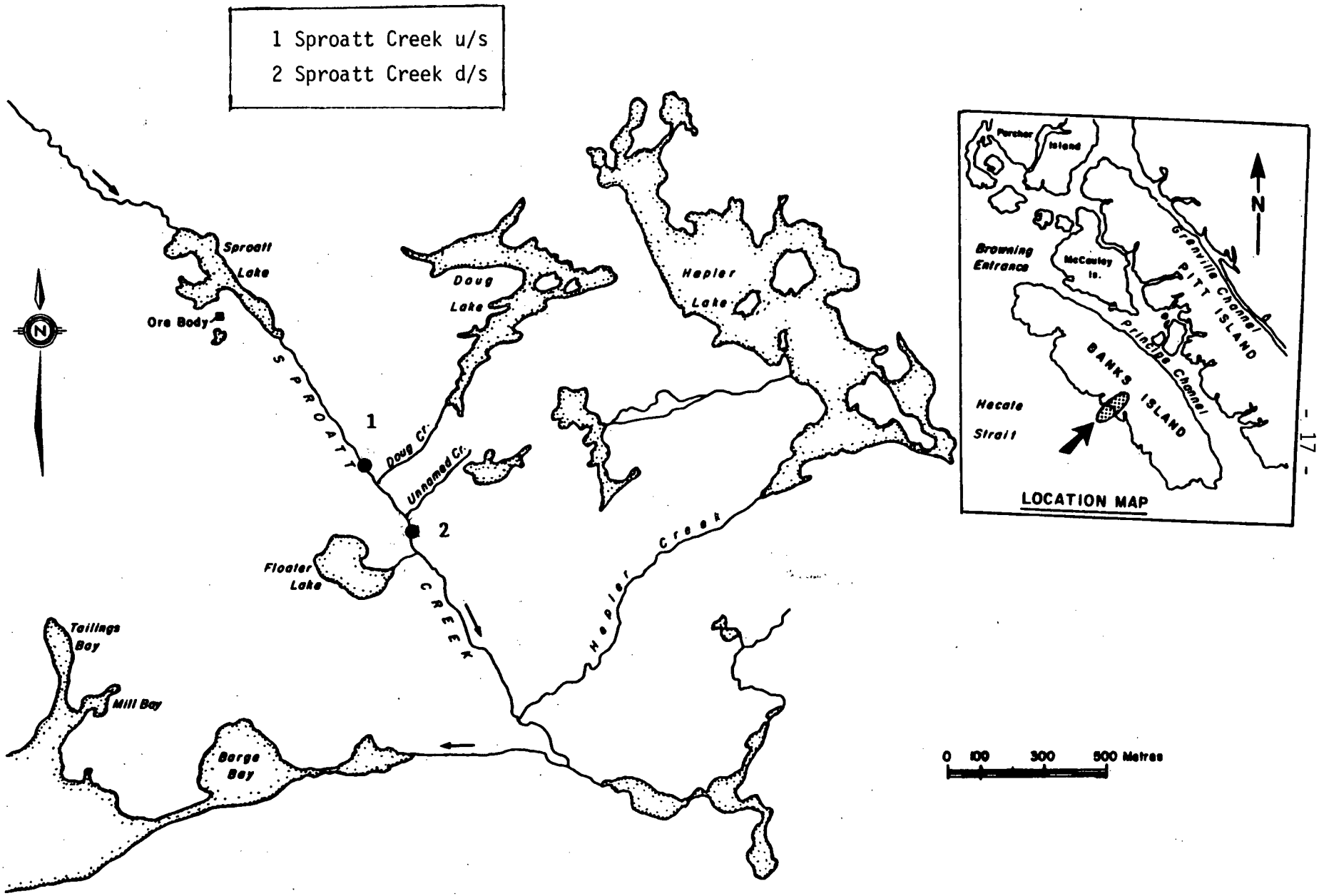

FIGURE 14: SEDIMENT SAMPLING SITES - YELLOW GIANT PROJECT

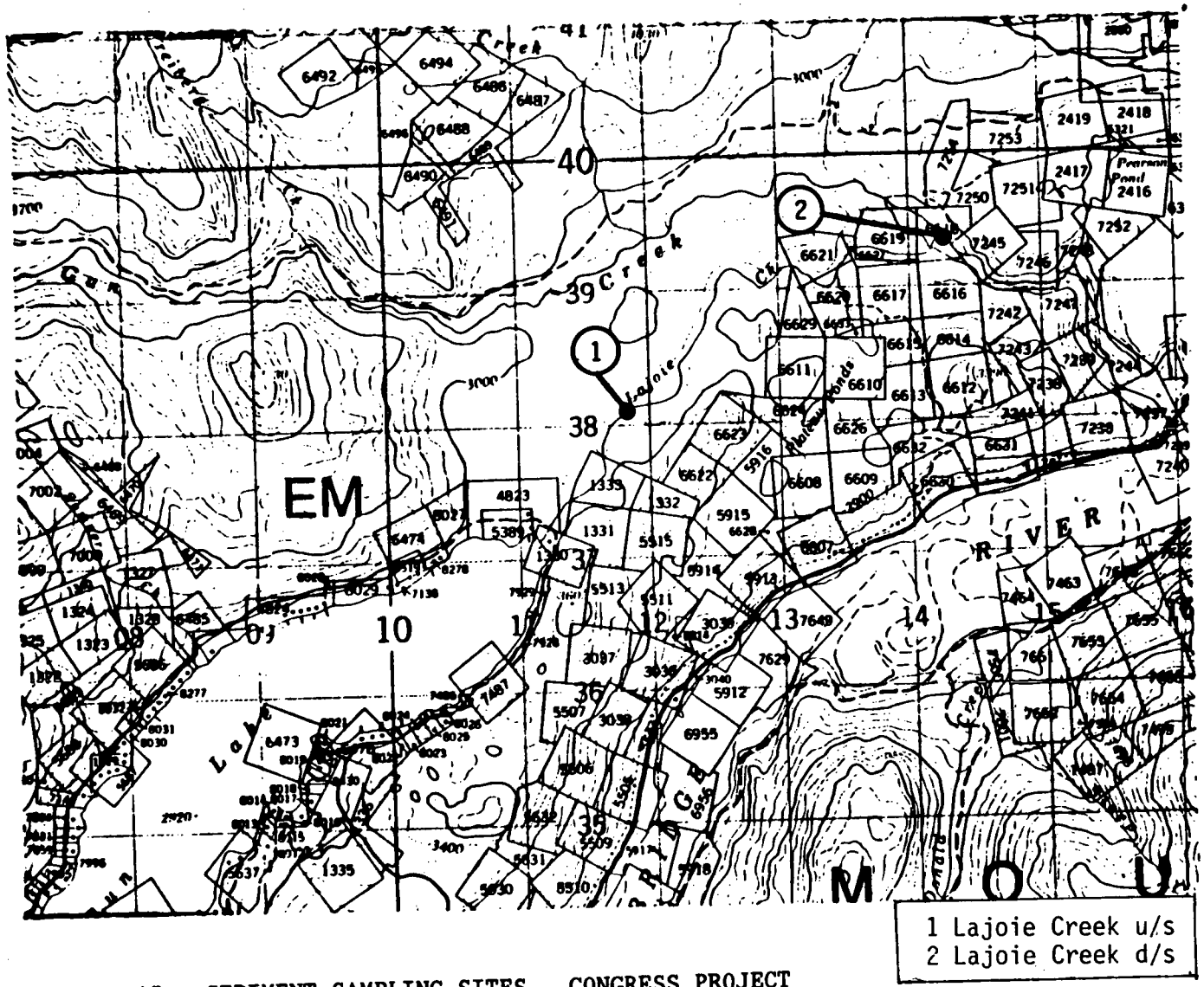

FIGURE 15: SEDIMENT SAMPLING SITES - CONGRESS PROJECT

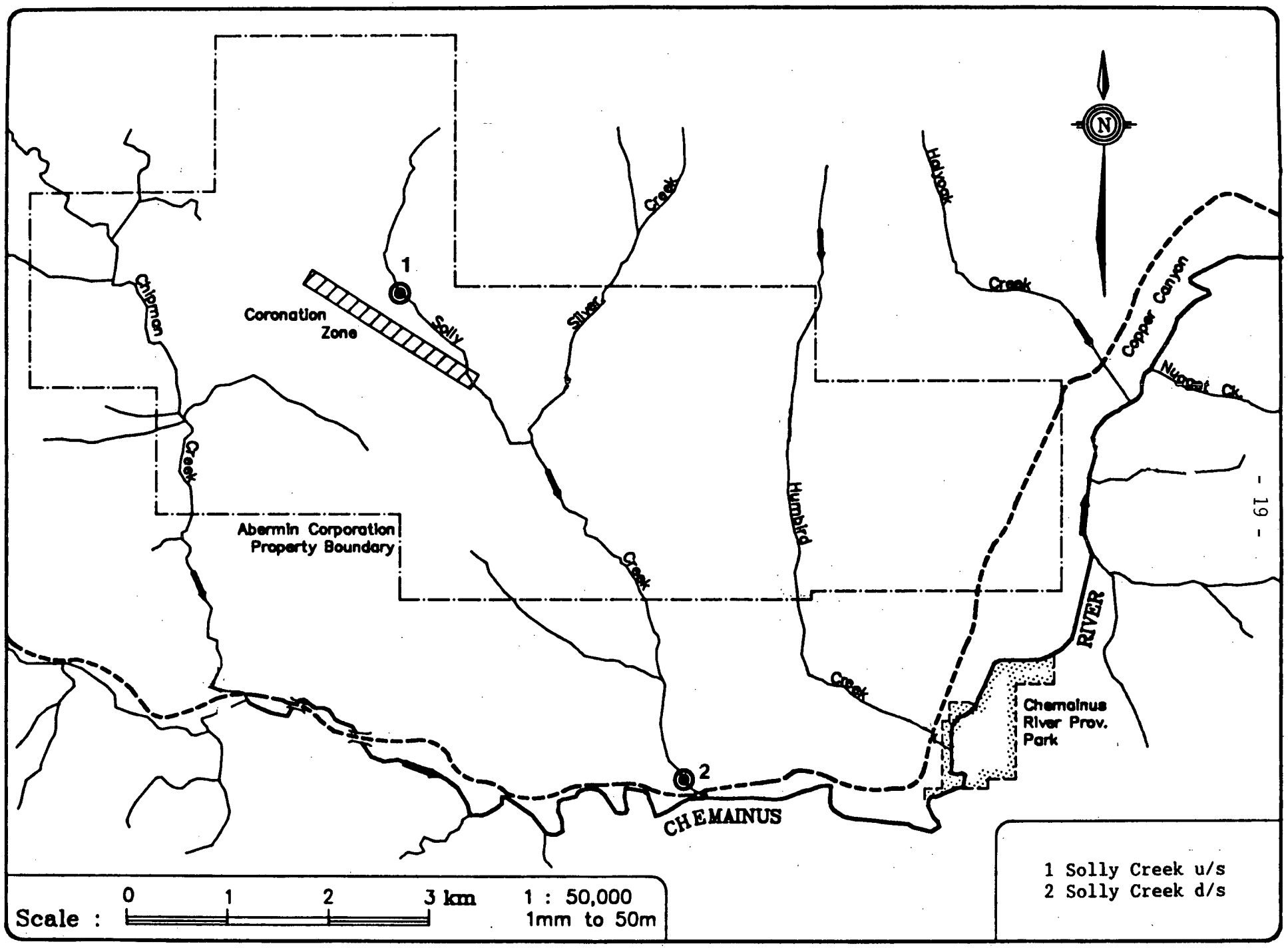

FIGURE 16: SEDIMENT SAMPLING SITES - LARA PROJECT

3.0 MATERIALS AND METHODS

Normally three or four replicates were taken at each site, though other replicate numbers also occurred. Sampling normally took place during summer; only one survey (Premier Gold, 1991) was conducted during the winter. A variety of collection methods were used, including an acrylic corer and stainless steel syringe for stream sediment collection, and an Eckman dredge, sediment trap, and pelagic corer for lake bed sediment collection.

The acrylic and pelagic corers are plastic-lined tubes with internal diameter of 4.6 cm. The acrylic corer is hand operated, while the pelagic corer is dropped from a boat and winched up. Between 5 and 8 cm of the top part of the core is extruded and placed in plastic or Kraft soil sample envelopes, contained in a Whirl-pac bag, and kept cool until analysed.

Stainless steel syringes with a tip hole diameter up to 2 mm are inserted into the sediment and a sample drawn up. While the sample contains finer material than the sample taken by other methods, the laboratory sieves all samples to produce a fraction less than 150 μm (0.15 mm) (Derksen, 1983).

The Plexiglas sediment trap has a 45 cm internal diameter and 5 cm height and is based on a design described by Håkanson (1976). Four lead- weighted arms are attached to the bottom to add stability and prevent the trap from tipping. The trap is left in place for four weeks. A Plexiglas lid is lowered during retrieval on a stainless steel cable fixed in the middle of the trap to avoid sample loss.

The Eckman dredge is a jaw-like device lowered open. It is triggered when reaching the bottom and closes to collect a sample. Only the top surface sediment of the sample is submitted for analysis.

Samples were dried, sieved to less than 150 μm or to less than 63 μm, digested, and analysed for heavy metals using Inductively Coupled Argon Plasma (ICP) emission spectrometry. Samples sieved to <63 μm usually result in a higher metal content. In some analyses, a portion of the sediments was ignited at 550° C in a muffle furnace. The loss of weight was reported as volatile residue and the remainder as fixed residue.

4.0 RESULTS

Sediment data presented in Tables 2 to 4 are organized alphabetically by project. Sampling sites are organized approximately by increasing stream order, and data are listed chronologically for a particular site. The code column gives sample instrument, sieve size, and sampling month. Abbreviations are listed below.

LIST OF ABREVIATIONS USED IN TABLES 2 to 4

C	Creek
Cr	Creek
d/s	downstream
L	Lake
mg/kg	milligrams per kilogram
mid	midway site
n	number of replicates
P	Pond
R	River
rd	road
s.d.	standard deviation
u/s	upstream
ug/g	micrograms per gram

CODE COLUMN ABREVIATIONS

		Fe	February
a	sieved to less than 150 μm	Mr	March
b	sieved to less than 63 μm	Ap	April
c	acrylic corer	My	May
d	Eckman dredge	Je	June
p	pelagic corer	Jl	July
s	stainless steel syringe	Au	August
t	sediment trap	Se	September
u	unsieved	Oc	October

TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	s.d.	Antimony ug/g	s.d.	Arsenic ug/g	s.d.	Barium ug/g	s.d.	Beryllium ug/g	s.d.	Cadmium ug/g	s.d.	Calcium ug/g	s.d.	Chromium ug/g	s.d.	Cobalt ug/g	s.d.	Copper ug/g	s.d.
Catear	Emerald Cr	1988	ca,Au	4	21900	942	---		297	16	260	23	0.5	0.1	<.08	-	6590	102	11.4	3.7	<20	-	37.1	4.5
		1989	ca,Jl	4	19725	750	---		210	16	259	21	0.4	0.0	<.08	-	6835	334	9.5	1.9	<20	-	44.1	0.5
	Catear Cr u/s	1988	ca,Au	4	24200	529	---		357	422	265	16	0.5	0.0	<.08	-	6685	73	4.8	0.4	<20	-	36.0	3.8
		1989	ca,Jl	4	21100	365	---		186	12	378	22	0.5	0.0	<.08	-	6490	61	15.6	4.0	<20	-	45.8	2.5
	Catear Cr d/s	1988	ca,Au	4	23600	841	---		251	20	438	74	0.5	0.1	<.08	-	7068	534	17.6	16.3	<20	-	34.8	3.7
		1989	ca,Jl	4	24650	1127	---		123	32	640	248	0.5	0.0	<.08	-	6505	646	7.3	0.4	<20	-	45.6	2.5
Cinola	Barbie Cr 1	1982	sa,Se	4	27325	741	---		30	4	127	23	0.3	0	<0.3	-	4635	247	131	51	15	1.7	27	6
		1983	sa,Fe	5	32660	6353	---		46	13	106	6	0.3	0.1	<0.3	-	3524	372	61	14	10.7	6.1	27	6
		1987	sa,Se	5	32500	2200	---		21	10	---		---		---		6460	590	63.5	6	---		26.6	4.5
		1987	ca,Se	5	19000	1400	---		54	18	---		---		---		4140	430	25.7	1.9	---		17.3	2.3
	Barbie Cr 2	1988	ca,Au	5	24300	1100	---		68	14	174	16	---		1.3	0.4	4360	390	22.9	1.1	---		17.1	0.8
		1988	ca,Se	5	25700	5000	---		68	14	155	15	---		1.5	0.5	4010	370	21.6	0.9	---		17.2	2
	Barbie Cr 3	1982	sa,Se	4	28600	678	---		42	10	113	5	0.3	0.1	<0.3	-	3650	136	55	9	12.8	1.2	23	3
		1983	sa,Fe	5	32320	1574	---		63	14	122	13	0.2	0	<0.3	-	3264	683	45	8	5.2	0.7	30	4
	Barbie Cr 4	1987	ca,Se	5	25100	900	---		45	10	---		---		---		3440	320	21.4	1.2	---		17	0.8
		1988	ca,Au	5	18700	1000	---		82	9	96.7	3.1	---		1.7	0.5	3010	50	22.9	1.8	---		18.3	1.3
		1988	ca,Se	5	30600	1200	---		54	16	121	9	---		<0.8	-	2910	240	24.5	0.5	---		15.9	0.8
	Barbie Cr 5	1982	sa,Se	4	35525	1477	---		62	6	192	11	0.4	0.1	<0.3	-	5920	207	55	5	31.9	8.4	22	2
		1983	sa,Fe	5	39260	1297	---		42	9	42	9	0.4	0.1	<0.3	-	5076	460	53	7	23.9	3.6	39	2
		1987	sa,Se	5	38700	700	---		33	28	---		---		---		7430	950	48.5	3.2	---		27.6	1.4
	Gold Creek	1988	ca,Au	5	20300	1500	---		96	14	47.6	7.8	---		1.6	0.4	4270	240	10.3	0.9	---		17.5	1.1
		1988	ca,Se	5	31300	6100	---		16	9	54.2	6.8	---		<0.8	-	3790	540	11.6	1.7	---		15.2	2.8
	Yakoun R u/s	1982	sa,Se	5	35275	419	---		11	3	197	5	0.5	0.1	<0.3	-	7890	180	63	4	16.3	1.4	33	5
		1983	sa,Fe	5	43960	1571	---		<8	-	202	6	0.4	0	<0.3	-	7700	234	50	4	5.8	1.1	37	4
		1987	sa,Oc	4	32500	7400	---		21	14	---		---		---		7670	1450	55.4	4.7	---		31.3	3.4
	Yakoun R d/s	1982	sa,Se	4	36800	983	---		13	3	209	6	0.5	0.1	<0.3	-	6925	105	80	7	17.5	1.5	32	3
		1983	sa,Fe	5	43500	2293	---		<8	-	210	10	0.4	0	<0.3	-	6460	224	53	3	7.2	2.6	40	4
		1987	sa,Oc	5	26200	500	---		33	6	---				---		6660	60	63.3	5.6			30	0.4
	Canoe Creek	1982	sa,Se	4	26875	1895	---		10	4	79	2	0.2	0	<0.3	-	4428	154	58	12	14.1	3.8	16	3
		1983	sa,Fe	5	31200	1901	---		<8	-	104	17	0.2	0	<0.3	-	4660	310	49	7	3.7	2.1	28	10
	Florence C u/s	1987	sa,Oc	5	35600	1100	---		<8	-	---		---		---		6800	210	39.2	2.5			37.4	1
	Florence C d/s	1982	sa,Se	4	32825	1014	---		<8	-	106	12	0.4	0.2	<0.3	-	6425	298	62	15	29.2	12.6	22	5
		1983	sa,Fe	5	34180	1648	---		<8	-	107	8	0.4	0.1	<0.3	-	7052	424	47	9	15	14	22	6
		1987	sa,Oc	5	33700	1600	---		<8	-	---		---		<0.8	-	5820	210	41.9	3.7	---		30.6	6.2
		1987	ca,Oc	5	19300	1100	---		26	4	---		---		---		3950	200	21.7	1	---		22.2	4.3
Congress	Lajoie Cr u/s	1988	sa,My	5	14800	2300	---		49	7	---		---		0.08	0.05	7860	900	175	23.1	---		33.9	10.6
	Lajoie Cr d/s	1988	sa,My	5	13700	700	---		50	2	---		---		0.18	0.24	9400	400	208	15.3	---		43.7	5.7

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TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	Aluminium s.d.	Antimony ug/g	Antimony s.d.	Arsenic ug/g	Arsenic s.d.	Barium ug/g	Barium s.d.	Beryllium ug/g	Beryllium s.d.	Cadmium ug/g	Cadmium s.d.	Calcium ug/g	Calcium s.d.	Chromium ug/g	Chromium s.d.	Cobalt ug/g	Cobalt s.d.	Copper ug/g	Copper s.d.
Dome	Fedral Creek	1988	ca,Je	4	16625	1559	---		42	5	377	35	0.5	0.0	1.2	0.5	5458	651	35.1	3.5	<20	-	36.3	2.9
	Betty Creek	1988	ca,Je	4	15325	892	---		25	1	243	76	0.4	0.0	<.08	-	4018	1391	27.3	4.9	<20	-	31.6	1.5
	Guess Cr u/s	1988	ca,Je	4	20800	548	---		10	0	214	8	0.4	0.0	<.08	-	5908	273	31.0	1.3	<20	-	31.8	7.7
	Guess Cr d/s	1988	ca,Je	4	15500	1092	---		22	2	244	30	0.5	0.1	<.08	-	5848	410	26.0	2.9	<20	-	21.9	1.8
Endako	Watkins Creek	1981	ca,Ap	6	17717	873	---		---		279	63	1.1	0.1	1.71	0.25	7682	637	46.8	6.3	---		232	90.0
		1981	ca,Jl	6	18050	839	<8	-	33	8	256	23	0.7	0.0	<0.65	-	7822	408	27.3	2.2	---		97.0	35.4
		1981	ca,Se	6	18833	831	---		---		272	25	0.8	0.0	<0.65	-	7946	287	28.9	2.3	---		108	35.6
	Casey Creek	1981	ca,Ap	6	16750	561	---		---		191	8	1.2	0.1	1.03	0.13	6558	875	35.1	1.0	---		19.1	1.1
		1981	ca,Jl	5	1648	986	<8	-	59	22	209	20	0.4	0.1	<0.65	-	7296	2521	33.1	2.6	---		25.6	1.8
		1981	ca,Se	6	18767	1659	---		---		223	17	0.5	0.1	<0.65	-	6390	595	37.6	2.3	---		25.8	2.5
	Endako R u/s	1981	ca,Ap	6	19117	873	---		---		199	11	1.2	0.1	0.78	0.07	5790	195	31.6	1.8	---		14.1	1.2
		1981	ca,Jl	6	19600	660	<8	-	25	3	210	6	0.5	0.0	<0.66	-	6412	191	31.7	2.0	---		17.8	0.6
		1981	ca,Se	6	17860	1228	---		---		208	30	0.5	0.1	<0.65	-	7232	480	34.7	1.8	---		18.7	3.9
	Endako R d/s	1981	ca,Ap	6	18750	826	---		---		184	10	1.3	0.1	0.96	0.07	6353	205	32.9	0.9	---		17.5	2.5
		1981	ca,Jl	6	21667	834	<8	-	38	12	208	8	0.7	0.0	<0.65	-	7425	755	35.3	2.1	---		22.0	2.4
		1981	ca,Se	6	17200	1071	---		---		169	16	0.4	0.1	<0.66	-	6735	377	33.0	2.5	---		22.8	3.2
	Tailings Pond	1981	ca,Ap	6	15817	1745	---		---		908	650	1.0	0.1	1.32	0.29	15658	5290	24.9	2.5	---		32.2	18.5
	No 2 Creek	1981	ca,Jl	6	16467	1938	<8	-	20	2	1462	257	0.8	0.1	1.11	1.14	21250	164	23.4	2.2	---		1006	755
		1981	ca,Se	6	13833	480	---		---		1788	169	0.7	0.0	0.78	0.19	21133	931	19.6	1.2	---		32.3	6.1
	Sweetnam Cr	1981	ca,Ap	6	39600	6246	---		---		260	36	1.3	0.2	1.11	0.14	11210	1701	29.7	3.9	---		66.3	16.7
		1981	ca,Jl	6	15567	1060	<8	-	<8	-	85	17	0.4	0.1	<0.66	-	12117	776	15.8	0.9	---		45.5	11.5
		1981	ca,Se	6	19917	6143	---		---		135	43	0.5	0.2	<0.66	-	9180	1213	19.5	3.4	---		93.5	49.7
	Stellako River	1981	ca,Ap	6	9575	263	---		---		115	8	0.6	0.0	0.89	0.28	6128	96	23.7	7.0	---		224	16.4
		1981	ca,Jl	6	8012	357	<8	-	10	1	81	3	0.2	0.0	<0.66	-	5745	128	13.7	1.1	---		30.6	25.3
		1981	ca,Se	4	9273	665	---		---		100	4	0.7	0.0	<0.66	-	5825	145	18.8	2.1	---		239	15.4
	Francois L 1	1981	pa,Jl	3	18233	1939	---		22	22	319	135	0.5	0.1	<0.66	-	8622	1717	21.6	1.9	---		23.6	4.2
		1981	pa,Se	3	18400	405	---		---		930	75	0.5	0.0	<0.66	-	7235	99	23.9	0.3	---		26.2	1.6
	Francois L 2	1981	pa,Jl	3	18533	885	---		3.4	2	178	37	0.5	0.0	<0.66	-	5333	101	21.3	1.1	---		33.6	1.7
		1981	pa,Se	3	20400	1053	---		---		552	153	0.5	0.0	<0.66	-	6170	380	25.1	1.3	---		32.9	1.8
	Francois L 3	1981	pa,Jl	3	22767	539	---		35	5	501	74	0.6	0.0	<0.66	-	5898	235	26.5	0.7	---		38.3	0.2
		1981	pa,Se	3	19867	2067	---		---		428	108	0.5	0.0	<0.66	-	5382	684	25.4	1.8	---		34.5	4.2
Equity Silver (Buck Cr Drainage)	Bessemer Creek	1985	ca,Oc	4	19350	1150	---		<8	-	---		---		6.9	1.4	12250	1502	---		---		648	106
	Siltcheck Pond	1985	sa,Oc	4	19900	1309	---		87	16	---		---		1.9	0.7	8243	212	---		---		368	38
		1987	da,My	4	26033	2442	---		124	62	434	2	0.9	0.1	2.0	0.4	8557	106	38.7	1.4	23.5	4.4	520	81
		1989	da,My	4	19650	794	---		89	7	457	15	1.0	0.1	3.9	0.1	7893	207	28.4	1.4	<20	-	547	22.4
	Buck Cr u/s	1985	sa,Oc	4	21475	2609	---		<8	-	---		---		<0.3	-	10818	1389	---		---		46.4	10.6
	Bessemer Cr	1987	ca,Je	4	13250	265	---		<8	-	229	19	0.2	0.0	0.8	0.3	6913	508	44.5	1.7	15.1	2.5	21.1	1.2
		1987	cb,Je	4	17700	744	---		<9	-	295	11	0.7	0.0	1.8	0.5	8105	325	52.6	2.0	16.9	4.9	28.7	2.0
		1988	ca,Je	4	17975	971	---		<50	-	345	17	0.5	0.0	0.1	0.0	8225	236	57.3	2.9	15.0	6.0	29.0	2.0
		1989	ca,Jl	4	14750	700	---		10	0	284	24	0.5	0.1	<.08	-	7733	378	39.4	1.4	<20	-	<0.8	-
		1990	ca,Je	4	18125	1242	<8	-	21	3	308	17	0.6	0.0	<.08	-	7198	147	43.7	1.8	<20	-	23.0	1.2

TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	s.d.	Antimony ug/g	s.d.	Arsenic ug/g	s.d.	Barium ug/g	s.d.	Beryllium ug/g	s.d.	Cadmium ug/g	s.d.	Calcium ug/g	s.d.	Chromium ug/g	s.d.	Cobalt ug/g	s.d.	Copper ug/g	s.d.
Equity Silver (Cont.)	Buck Cr at rd	1985	ca,Oc	4	24000	3219	---		<8	-	---		---		4.2	2.3	---		---		---		544	197
		1987	ca,Je	4	14925	1682	---		<8	-	208	30	0.3	0.1	2.1	0.5	7595	273	59.5	8.2	18.9	3.3	56.3	5.4
		1987	cb,Je	4	17625	1615	---		21	10	264	27	0.9	0.1	2.1	0.2	8830	274	54.8	4.9	22.7	6.9	68.3	1.5
	Buck Cr mid	1985	sa,Oc	4	18300	1227	---		<8	-	---		---		<0.3	-	---		---		---		52.0	3.8
	Buck Cr u/s	1985	ca,Oc	4	17100	2338	---		<8	-	---		---		<0.3	-	7405	489	---		---		41.6	0.1
	Goosly Lake	1987	ca,Je	4	14325	624	---		<9	-	206	17	0.3	0.0	1.2	0.8	7708	376	41.2	3.2	16.0	3.4	36.5	2.6
		1987	cb,Je	4	17700	935	---		<9	-	259	43	0.8	0.0	2.1	0.1	8735	182	45.5	1.9	15.4	1.9	45.5	3.0
		1988	ca,Je	4	19625	950	---		<50	-	330	39	0.6	0.1	0.7	0.2	6825	263	43.3	2.3	14.0	5.0	74.0	8.0
		1989	ca,Jl	4	14025	1282	---		15	6	233	28	0.5	0.1	1.0	0.0	8375	599	36.0	1.1	<20	-	25.7	11.4
		1990	ca,Je	4	13750	1690	<8	-	24	6	192	24	0.5	0.1	<0.8	-	7360	387	38.4	1.0	<20	-	37.6	6.4
	Goosly Lake	1987	ta,Je	8	31756	2950	---		<8	-	567	16	0.7	0.0	3.6	1.2	10367	1142	39.1	1.6	28.5	2.4	116	13.9
		1988	tb,Je	5	29800	1512	---		53	6	510	32	---		0.9	0.1	9720	879	32.8	0.9	19.0	2.0	96.0	6.0
		1989	da,Jl	5	27000	5096	---		43	10	250	29	0.5	0.1	1.0	0.1	9504	854	39.8	5.7	<20	-	86.2	12.2
		1990	da,Je	5	31280	2950	<8	-	50	15	578	77	1.0	0.0	<0.8	-	8756	306	37.3	2.2	<20	-	109	2.0
	Buck Cr d/s	1987	ca,Je	4	18925	4135	---		<9	-	265	48	0.6	0.1	1.8	0.5	10638	1654	84.1	10.4	17.6	5.3	51.2	22.7
	Goosly Lake	1987	cb,Je	4	14967	1222	---		<8	-	216	20	0.7	0.1	1.3	0.5	8897	458	78.7	9.1	2.5	2.1	34.2	4.3
		1988	ca,Je	4	16500	1904	---		<50	-	281	74	0.5	0.1	0.2	0.0	8725	650	40.6	4.9	10.0	1.0	35.0	2.0
		1989	ca,Jl	4	14625	741	---		10	1	250	29	0.5	0.1	1.2	0.7	9405	299	41.7	3.4	<20	-	3.9	5.0
		1990	ca,Je	4	15700	775	---		<8	-	225	10	0.4	0.1	<0.8	-	9163	212	45.1	2.1	<20	-	35.6	4.0
	Buck Cr d/s at Bob Creek	1987	ca,Je	4	14575	1517	---		<8	-	268	24	0.3	0.1	2.0	0.2	6663	186	40.1	3.5	18.2	2.8	21.8	2.5
		1987	cb,Je	4	15533	777	---		<8	-	310	11	0.8	0.0	0.9	0.2	7960	269	53.1	2.4	7.4	4.4	21.1	0.9
Equity Silver (Foxy Cr Drainage)	Lu Creek u/s	1985	ca,Oc	3	19300	843	---		<8	-	---		---		<0.3	-	12700	1100	---		---		42.7	5.8
	Lu Creek d/s	1985	ca,Oc	3	23367	833	---		<8	-	---		---		<0.3	-	12433	1589	---		---		53.9	5.6
	Berzilius Cr	1985	sa,Oc	3	22067	351	---		<8	-	---		---		<0.3	-	9990	105	---		---		91.7	1.4
	Foxy Creek 1	1985	sa,Oc	4	25900	2112	---		<8	-	---		---		<0.3	-	9775	352	---		---		48.4	5.3
	Foxy Creek 2	1985	sa,Oc	4	24875	1338	---		<8	-	---		---		1.2	0.7	10775	377	---		---		100	24.7
	Foxy Creek 3	1983	sa,Je	4	29050	3600	---		27	3	543	63	0.7	0.1	1.0	0.1	12417	2490	73	14	18.3	2.2	58	2
		1985	sa,Oc	4	24225	629	---		<8	-	---		---		1.0	0.3	10925	359	---		---		68.5	8.3
	Foxy Creek 4	1985	sa,Oc	4	23050	1223	---		<8	-	---		---		0.5	0.2	10675	275	---		---		85.3	3.3
	Foxy Creek d/s	1985	sa,Oc	4	22500	1200	---		<8	-	---		---		<0.3	-	11200	408	---		---		40.9	3.3
	Maxan Cr u/s	1985	sa,Oc	4	21275	685	---		<8	-	---		---		<0.3	-	10168	230	---		---		28.9	1.6
	Maxan Cr d/s	1985	sa,Oc	4	22050	900	---		<8	-	---		---		<0.3	-	11000	216	---		---		33.8	3.1

TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	s.d.	Antimony ug/g	s.d.	Arsenic ug/g	s.d.	Barium ug/g	s.d.	Beryllium ug/g	s.d.	Cadmium ug/g	s.d.	Calcium ug/g	s.d.	Chromium ug/g	s.d.	Cobalt ug/g	s.d.	Copper ug/g	s.d.
Eskay Creek	Tom MacKay L	1990	ca,Jl	4	30375	1788	<8	-	<2	-	224	67	1.9	0.2	2.2	0.3	3783	710	80.0	5.0	<20	-	50.8	4.1
	Argillite Cr	1990	ca,Jl	4	29275	1509	<8	-	42	12	228	30	2.1	0.1	2.9	0.6	4535	253	101	4.2	<20	-	48.6	3.0
	MacKay Creek	1990	ca,Jl	4	15850	995	<8	-	22	7	494	41	1.0	0.0	2.0	0.1	6058	569	55.2	2.0	<20	-	63.5	7.5
	Eskay Creek	1990	ca,Jl	4	29025	1320	<8	-	96	1	329	45	2.6	0.2	8.0	3.4	4175	144	55.2	2.4	<20	-	93.3	6.6
	Unuk River	1990	ca,Jl	4	16275	1207	<8	-	45	12	302	49	1.0	0.0	1.0	0.0	33725	1201	43.8	3.2	<20	-	70.3	5.8
Golden Bear	Bearskin C u/s	1987	ca,Au	4	11750	557	---		27	5	63	4.7	0.3	0.0	<0.3	-	12625	1343	52.4	1.3	14.9	5.6	63.3	7.6
	Bearskin C mid	1987	ca,Au	4	30200	1324	---		60	16	216	23	0.9	0.0	0.5	0.1	11850	289	122	1.0	23.6	3.6	114.0	3.5
	Bearskin C d/s	1987	ca,Au	4	13875	1014	---		51	6	101	7.3	0.3	0.0	1.0	0.0	17050	1287	101	17.4	16.2	6.5	80.9	10.6
	Samotua R u/s	1987	ca,Au	4	13000	258	---		54	15	84	8.3	0.3	0.0	0.7	0.4	16450	129	71.4	5.9	16.9	2.3	50.3	2.1
	Samotua R mid	1987	ca,Au	4	12425	1187	---		91	56	123	6.2	0.3	0.0	0.6	0.3	17450	1320	107	14.6	15.6	6.6	62.7	1.9
	Samotua R d/s	1987	ca,Au	4	13950	451	---		37	5	98.4	3.8	0.4	0.1	0.9	0.1	17550	666	86.1	7.8	15.8	4.1	59.3	5.4
Lara	Solly Cr u/s	1988	ca,Je	5	29420	1101	---		<8	-	203	8.9	0.5	0.0	<0.8	-	7872	669	126	6.8	<20	-	104	2.1
	Solly Cr d/s	1988	ca,Je	5	28100	695	---		<8	-	168	8.4	0.4	0.0	<0.8	-	6916	300	138	23.2	<20	-	85.7	4.7
Premier	Hovland Cr u/s	1987	ca,Au	4	23575	1997	---		55	7	649	118	0.6	0.1	1.8	0.5	12975	2615	34.5	20.7	19.0	2.2	24.9	1.7
	Hovland Cr d/s	1987	ca,Au	4	24850	810	---		112	27	783	82	0.7	0.1	2.7	1.1	11900	1194	11.3	0.5	23.5	2.5	72.5	34.1
	Lesley Cr u/s	1987	ca,Au	4	16750	2419	---		31	12	380	89	0.7	0.1	2.1	1.1	4225	537	29.2	24.0	14.8	2.3	32.1	10.4
		1988	ca,Au	4	19325	2201	---		82	17	444	96	0.5	0.0	1.0	1.0	12465	7668	20.4	6.6	<20	-	44.1	11.4
	Lesley Cr d/s	1987	ca,Au	4	15800	698	---		34	13	325	29	0.7	0.1	1.7	0.6	4703	151	14.0	1.4	16.0	3.7	26.5	1.5
		1988	ca,Au	4	16150	208	---		42	7	168	14	0.4	0.0	<.08	-	3553	121	13.0	0.8	<20	-	23.5	4.7
		1990	ca,Jl	4	12250	265	15	7	65	46	319	59	0.5	0.0	3.5	1.0	6695	1468	8.4	1.2	<20	-	45.0	15.1
	Cooper Cr u/s	1987	ca,Au	4	20675	789	---		39	13	821	91	0.5	0.0	1.2	0.7	6555	568	15.0	0.8	10.7	3.9	23.8	1.3
		1988	ca,Au	4	26200	2174	---		59	5	933	102	0.7	0.0	<.08	-	8143	555	14.5	3.8	<20	-	33.2	2.1
		1989	ca,Se	4	22100	1169	---		39	4	929	21	0.9	0.1	<.08	-	6230	269	8.6	0.5	<20	-	31.9	1.8
	Cooper Cr d/s	1987	ca,Au	4	17600	1278	---		53	20	613	309	0.4	0.1	28.0	16.9	4930	542	13.3	1.5	18.4	5.4	242	157
		1988	ca,Au	4	13400	1445	---		84	8	870	166	0.3	0.0	7.0	4.0	11875	1115	8.5	1.0	<20	-	108	51.3
	Fletcher C u/s	1989	ca,Se	4	12850	436	---		18	6	564	49	0.6	0.0	<0.8	-	5440	278	6.8	0.6	<20	-	30.8	4.7
	Fletcher C d/s	1987	ca,Au	4	13425	1066	---		50	23	590	156	0.5	0.1	8.5	2.8	7215	684	6.7	0.9	22.3	2.9	66.9	20.9
		1989	ca,Se	4	13750	129	---		51	4	704	43	0.4	0.0	20.3	2.8	6238	273	7.3	2.7	<20	-	128	17.3
		1990	ca,Jl	4	11625	629	13	6	50	15	482	54	0.4	0.0	10.7	2.5	7330	595	7.1	0.1	<20	-	98.3	24.5
	Cascade Cr u/s	1987	ca,Au	4	13175	499	---		58	11	520	65	0.4	0.0	3.0	0.8	3075	144	25.4	2.0	11.4	3.9	31.5	3.6
		1988	ca,Au	4	18700	2399	---		103	10	737	125	0.6	0.1	3.0	2.0	3748	147	39.0	6.4	<20	-	74.3	37.9
		1989	ca,Se	4	13075	640	---		67	6	744	82	0.5	0.0	2.9	0.2	3070	103	20.0	1.3	<20	-	42.0	11.0
		1990	ca,Jl	4	12775	862	12	5	63	16	593	62	0.5	0.1	4.4	1.2	4975	689	13.0	0.0	<20	-	43.3	3.0
		1991	ca,Fe	4	18550	1570	<10	-	128	67	1449	604	0.8	0.1	6.4	1.4	4878	808	87.9	49.0	<20	-	69.2	17.0
	Cascade Cr d/s	1989	ca,Se	4	3318	435	---		95	21	646	121	0.2	0.0	17.4	8.3	16025	1090	3.2	0.6	<20	-	76.5	5.2
	Monitoring P	1991	ca,Fe	4	14225	1744	22	2	107	7	963	180	0.5	0.1	24.2	3.0	41725	15954	10.8	1.0	<20	-	228	62.9

TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	s.d.	Antimony ug/g	s.d.	Arsenic ug/g	s.d.	Barium ug/g	s.d.	Beryllium ug/g	s.d.	Cadmium ug/g	s.d.	Calcium ug/g	s.d.	Chromium ug/g	s.d.	Cobalt ug/g	s.d.	Copper ug/g	s.d.
Premier (Cont.)	Cascade Cr d/s	1987	ca,Au	4	15125	690	---		86	7	571	63	0.5	0.0	7.0	0.3	4280	232	20.1	1.5	17.1	1.1	60.0	10.5
	Fletcher Creek	1988	ca,Au	4	14625	1367	---		126	29	396	40	0.4	0.0	6.0	2.0	5093	782	15.0	0.8	<20	-	106	32.0
		1989	ca,Se	4	11925	568	---		76	11	623	75	0.4	0.0	7.4	1.9	6400	1693	9.0	0.6	<20	-	59.3	5.0
		1990	ca,Jl	4	12425	1162	10	1	96	27	303	47	0.4	0.1	4.0	1.5	8133	1934	5.5	1.5	<20	-	74.0	25.9
	Cascade Cr d/s	1990	ca,Jl	4	11975	670	15	6	139	64	295	88	0.4	0.0	3.4	0.8	6858	356	4.2	1.3	20.0	0.0	75.1	23.3
	Logan Creek	1991	ca,Fe	4	14600	2393	19	1	120	27	696	87	0.6	0.1	27.2	3.2	11163	1293	22.7	8.2	<20	-	208	38.1
Quesnel River	Maud Cr u/s	1989	ca,Je	4	27200	1824	---		<8	-	158	16	0.6	0.0	<0.8	-	14900	424	128	26.0	<20	-	66.7	95.7
	Maud Cr d/s	1989	ca,Je	4	18400	1219	---		<8	-	183	19	0.5	0.0	2.6	0.6	10240	602	76.0	7.0	<20	-	24.9	5.0
	Rudy Creek	1989	ca,Je	4	15850	2690	---		<8	-	71.9	12.1	0.4	0.0	1.9	0.1	26750	2445	63.7	10.3	<20	-	46.9	12.8
	Creek 1	1989	ca,Je	4	23725	3383	---		<8	-	119	8	0.6	0.1	<0.8	-	14825	1576	60.1	5.4	<20	-	13.3	6.3
	Creek 3	1989	ca,Je	4	11525	814	---		<8	-	186	112	0.3	0.0	1.5	0.6	31375	3506	29.8	2.2	<20	-	<0.8	-
Samatosum	Johnson Cr u/s	1988	sa,My	5	21500	1900	---		35	3	---		---		0.23	0.04	46700	17200	115	12.2	---		39.8	2.9
	Johnson Cr mid	1988	sa,My	5	14700	2100	---		22	3	---		---		0.08	0.01	9100	1100	107	19.8	---		24.3	7.3
	Johnson Cr d/s	1988	sa,My	5	16500	1000	---		31	5	---		---		0.24	0.02	30000	1200	125	28.2	---		52.5	3.0
	Sinmax Cr 1	1988	sa,My	5	12100	800	---		28	2	---		---		0.1	0.0	10700	900	89.7	7.3	---		40.0	2.9
	Sinmax Cr 2	1990	sa,My	1	11600	-	---		<8	-	---		---		<0.8	-	13900	-	---		---		22.8	-
		1990	su,My	1	9600	-	---		<8	-	---		---		0.7	-	9680	-	---		---		12.0	-
		1990	sa,Au	1	16400	-	---		<8	-	---		---		0.5	-	23600	-	---		---		45.1	-
	Sinmax Cr 3	1988	sa,My	5	14700	900	---		41	11	---		---		1.7	0.5	17000	1600	75.8	8.8	---		22.2	4.3
	Sinmax Cr 4	1990	sa,My	1	8340	-	---		50	-	---		---		10	-	8990	-	---		---		348	-
		1990	su,My	1	7360	-	---		39	-	---		---		8	-	8420	-	---		---		188	-
		1990	sa,Au	1	11200	-	---		43	-	---		---		6.7	-	13100	-	---		---		204	-
	Sinmax Cr 5	1988	sa,My	5	12200	700	---		46	3	---		---		1.3	0.1	14000	700	71.5	4.1	---		37.4	1.0
		1990	sa,My	1	10800	-	---		<8	-	---		---		1	-	13300	-	---		---		78.7	-
		1990	su,My	1	10200	-	---		<8	-	---		---		<0.8	-	10800	-	---		---		62.8	-
	Homestake u/s	1990	sa,My	1	7250	-	---		51	-	---		---		8.6	-	11700	-	---		---		427	-
		1990	su,My	1	6280	-	---		44	-	---		---		7.5	-	11200	-	---		---		276	-
	Homestake d/s	1988	sa,My	5	8400	300	---		100	6	---		---		8.1	0.8	8000	1000	34.6	3.5	---		288	14
Skyline	Jekill River	1987	ca,My	4	8433	832	---		26	5	132	13	0.3	0.1	4.2	3.0	7190	527	45.9	19.6	8.8	5.0	36.2	5.2
		1988	ca,Au	4	7290	322	---		<8	-	100	3	<0.2	-	<0.8	-	7220	170	30.2	1.4	<20	-	46.1	5.2
		1989	ca,Jl	4	12300	1655	---		<8	-	190	22	0.2	0.0	<0.8	-	8718	369	34.3	6.8	<20	-	76.3	14.7
	Craig R u/s	1987	ca,My	4	10698	565	---		17	13	185	12	0.3	0.0	2.7	0.9	24050	1277	14.8	1.5	10.8	3.2	73.4	8.4
	Craig R mid	1987	ca,My	4	8353	320	---		13	6	139	3	0.3	0.1	0.8	0.3	15800	392	11.3	0.5	7.7	1.8	51.7	1.2
	Craig R d/s	1988	ca,Au	4	8885	271	---		<8	-	109	7	<0.2	-	<0.8	-	9415	564	27.4	1.1	<20	-	49.8	6.0

TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	s.d.	Antimony ug/g	s.d.	Arsenic ug/g	s.d.	Barium ug/g	s.d.	Beryllium ug/g	s.d.	Cadmium ug/g	s.d.	Calcium ug/g	s.d.	Chromium ug/g	s.d.	Cobalt ug/g	s.d.	Copper ug/g	s.d.
Skyline (Cont.)	Stonehouse u/s	1987	ca,Jl	4	12000	455	---		43	13	173	6	0.5	0.0	5.0	0.6	4748	152	8.0	0.7	14.4	4.5	201	52.2
		1989	ca,Jl	4	9948	629	---		10	1	187	24	0.2	0.0	<0.8	-	10950	443	5.4	0.8	<20	-	1029	627
		1990	ca,Jl	4	13750	3264	<8	-	16	11	235	43	0.7	0.2	2.6	0.9	5978	706	8.1	2.0	<20	-	1458	898
	Stonehouse d/s	1987	ca,My	4	13825	2446	---		29	10	195	17	0.5	0.1	5.0	1.0	5058	134	18.7	1.3	10.6	2.4	87.4	17.2
		1988	ca,Au	4	12513	2990	---		<8	-	155	31	0.3	0.1	<0.8	-	6033	809	36.8	15.4	<20	-	67.0	12.1
		1989	ca,Jl	4	13525	2655	---		<8	-	175	23	0.3	0.1	<0.8	-	18300	5893	22.0	6.6	<20	-	144	115
		1990	ca,Jl	4	7555	469	<8	-	<8	-	110	8	0.6	0.1	<0.8	-	8578	676	33.8	8.5	<20	-	42.8	3.8
	Johnny Cr u/s	1988	ca,Au	4	9468	885	---		10	0	177	7	0.3	0.0	<0.8	-	18400	1577	3.7	1.0	<20	-	40.9	6.4
		1989	ca,Jl	4	8968	1007	---		<8	-	232	33	0.3	0.1	1.0	0.0	14000	1105	5.4	2.1	<20	-	56.1	0.8
		1990	ca,Jl	4	9770	1937	<8	-	10	0	269	52	0.5	0.0	1.7	0.5	11950	1348	4.9	0.6	<20	-	50.4	7.9
	Johnny Cr d/s	1987	ca,My	4	7845	1427	---		<8	-	241	58	0.3	0.1	2.4	1.7	15073	4840	3.1	1.5	6.9	2.5	37.2	10.6
		1988	ca,Au	4	10523	1057	---		<8	-	188	21	0.3	0.0	<0.8	-	14500	2978	6.6	1.5	<20	-	43.5	8.9
		1989	ca,Jl	4	10835	1295	---		<8	-	231	13	0.4	0.0	<0.8	-	11680	3282	7.1	1.7	<20	-	67.5	9.7
		1990	ca,Jl	4	9325	1181	<8	-	25	1	189	27	0.6	0.0	1.9	0.7	10950	723	7.3	2.7	<20	-	58.1	13.9
	Bronson Cr u/s	1987	ca,My	4	16250	614	---		79	37	253	33	0.4	0.0	6.6	2.1	23725	978	22.4	1.3	43.7	11.0	288	57.9
		1988	ca,Au	4	17100	804	---		73	14	287	36	0.3	0.0	1.5	0.6	30750	968	19.7	0.7	<20	-	227	17.7
		1989	ca,Jl	4	16375	1050	---		93	60	281	68	0.3	0.1	<0.8	-	22050	2927	24.8	3.6	20.0	0.0	302	51.0
		1990	ca,Jl	4	14900	548	<8	-	116	65	383	72	0.5	0.0	3.1	0.7	20550	1173	21.7	1.4	<20	-	130	12.0
Snip	Bronson Cr d/s	1987	ca,My	4	13900	1322	---		200	86	181	33	0.4	0.0	3.4	1.6	20250	1954	20.3	1.3	84.0	30.9	367	55.3
		1988	ca,Au	4	16500	606	---		149	59	203	30	0.3	0.0	<0.8	-	19800	4961	22.6	0.8	26.7	5.8	353	51.5
		1989	ca,Jl	4	15375	780	---		92	44	200	16	0.2	0.0	2.0	0.3	20900	1273	22.9	1.2	20.0	0.0	248	55.0
		1990	ca,Jl	4	14650	480	<8	-	108	15	297	14	0.3	0.1	5.3	0.2	16075	1204	19.4	0.8	<20	-	180	31.1
	Monsoon Cr u/s	1988	ca,Au	4	22150	1690	---		72	11	800	129	0.4	0.0	1.5	0.7	17075	275	44.2	5.2	<20	-	140	13.5
	Monsoon Cr d/s	1988	ca,Au	4	17600	510	---		48	5	459	41	0.3	0.0	<0.8	-	12100	245	22.0	0.4	<20	-	165	8.5
		1989	ca,Jl	4	17300	1030	---		64	19	591	153	0.3	0.0	2.1	0.3	11333	1662	34.6	0.3	<20	-	221	78.9
		1990	ca,Jl	4	19975	2232	<8	-	24	14	598	95	0.5	0.1	3.1	0.3	8765	1268	25.8	3.0	<20	-	218	44.8
	Iskut R u/s	1988	ca,Au	4	16150	332	---		91	17	211	23	0.3	0.0	<0.8	-	15600	779	29.1	1.7	<20	-	235	8.8
		1989	ca,Jl	4	16350	1050	---		44	18	261	15	0.3	0.0	1.5	0.6	14450	1079	30.1	2.9	<20	-	166	43.4
		1990	ca,Jl	4	20250	839	<8	-	<8	-	360	26	0.6	0.0	<0.8	-	14075	443	47.7	1.6	<20	-	55.5	4.3
	Iskut R d/s	1988	ca,Au	4	17600	400	---		49	18	289	10	0.4	0.0	<0.8	-	17200	316	47.5	3.7	<20	-	105	13.0
		1989	ca,Jl	4	18000	383	---		35	14	291	18	0.4	0.0	<0.8	-	13250	238	47.3	0.9	<20	-	78.1	10.8
		1990	ca,Jl	4	22400	739	<8	-	35	22	449	49	0.7	0.1	1.6	0.6	11130	1002	52.0	3.0	<20	-	107	20.8
	Sky Cr u/s	1988	ca,Au	4	28000	726	---		68	6	244	5	0.6	0.0	1.0	0.0	8700	146	62.4	6.2	<20	-	185	9.6
	Sky Cr d/s	1988	ca,Au	4	11000	878	---		<8	-	132	12	0.2	0.0	<0.8	-	8128	281	19.4	1.4	<20	-	47.7	4.5
		1989	ca,Jl	4	11560	2303	---		<8	-	156	38	0.3	0.0	<0.8	-	11980	3694	19.6	1.4	<20	-	20.4	3.8
		1990	ca,Jl	4	13125	1533	<8	-	<8	-	598	424	0.5	0.1	3.2	1.3	7048	342	27.9	4.5	<20	-	44.3	7.0
	Craig R u/s	1988	ca,Au	4	8885	271	---		<8	-	109	7	<0.2	-	<0.8	-	9415	564	27.4	1.1	<20	-	49.8	6.0
	Craig R d/s	1988	ca,Au	4	9400	127	---		<8	-	121	4	<0.2	-	<0.8	-	12675	645	12.5	0.6	<20	-	51.9	5.2
		1989	ca,Jl	4	12425	1417	---		<8	-	149	10	0.3	0.0	<0.8	-	18800	2560	17.0	2.9	<20	-	12.9	2.3

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TABLE 2: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (ALUMINIUM TO COPPER)

PROJECT	STREAM	YEAR	CODE	n	Aluminium ug/g	Aluminium s.d.	Antimony ug/g	Antimony s.d.	Arsenic ug/g	Arsenic s.d.	Barium ug/g	Barium s.d.	Beryllium ug/g	Beryllium s.d.	Cadmium ug/g	Cadmium s.d.	Calcium ug/g	Calcium s.d.	Chromium ug/g	Chromium s.d.	Cobalt ug/g	Cobalt s.d.	Copper ug/g	Copper s.d.
Sulphurets	Brucejack u/s	1989	ca,Jl	4	7335	600	---		353	33	324	61	0.5	0.0	3.9	0.4	8895	5623	13.4	4.1	<20	-	109	17.0
	Brucejack d/s	1988	ca,Au	4	10795	836	---		244	22	383	33	0.6	0.1	3.9	0.5	3820	547	7.9	2.5	<20	-	94.2	7.1
		1989	ca,Jl	4	10635	1650	---		238	25	586	95	0.7	0.0	3.9	1.9	4835	741	11.3	4.9	<20	-	133.0	29.0
	Sulphurets Cr	1988	ca,Au	4	13075	465	---		58	15	258	10	0.3	0.0	1.7	0.5	18700	594	18.8	1.5	<20	-	203.0	30.6
		1989	ca,Jl	4	12425	896	---		62	23	259	28	0.2	0.0	<0.8	-	17800	572	18.2	0.8	<20	-	236.0	10.0
	Unuk R u/s	1988	ca,Au	4	17200	762	---		20	2	328	40	0.6	0.0	0.9	0.0	21625	1173	44.9	1.4	<20	-	71.8	2.3
		1989	ca,Jl	4	15975	718	---		19	8	298	92	0.7	0.1	<0.8	-	29025	2085	41.8	0.4	<20	-	78.0	1.8
	Unuk R d/s	1988	ca,Au	4	15950	1518	---		47	18	263	29	0.4	0.0	1.8	0.6	20200	909	27.9	2.5	<20	-	168.0	18.4
		1989	ca,Jl	4	12950	823	---		37	12	251	48	0.3	0.0	<0.8	-	19375	877	21.8	1.8	<20	-	187.0	8.0
Windy Craggy	Red Creek	1988	ca,Se	4	20700	1098	---		15	7	24.2	2.4	0.4	0.0	1.7	0.5	45450	3615	140	8.0	<20	-	390	102
	Tats Cr u/s	1990	ca,Mr	4	15475	842	<8	-	24	9	41.2	5.9	0.7	0.1	1.7	0.5	65000	7101	57.4	2.9	50.0	0.0	112	23.5
		1990	cb,Mr	4	15500	294	<8	-	16	6	60.7	4.3	0.8	0.0	1.7	0.5	79200	5033	61.2	1.7	50.0	8.0	125	27.1
	Tats Cr d/s	1990	ca,Mr	4	10773	1182	<8	-	21	1	52.1	3.6	0.7	0.0	1.0	0.0	32200	4127	42.7	1.4	40.0	0.0	81.3	25.5
		1990	cb,Mr	4	17275	1719	<8	-	<8	-	90.5	12.8	0.7	0.0	<0.9	-	51525	4061	57.6	7.7	28.0	5.0	83.7	8.3
	Tatshenshini R u/s Tats Creek	1990	ca,Mr	4	11925	685	<8	-	17	13	125	12.8	0.9	0.1	1.2	0.4	45400	1098	44.6	9.1	35.0	6.0	69.5	12.5
		1990	cb,Mr	4	14125	2244	<8	-	28	5	207	23.4	0.9	0.1	<.08	-	63375	9241	53.9	9.5	25.0	6.0	72.0	5.7
	Tatshenshini R d/s Tats Creek	1990	ca,Mr	4	13625	1176	<8	-	<8	-	110	22.6	0.7	0.1	1.0	0.1	48050	3161	33.3	5.3	28.0	5.0	55.6	4.7
		1990	cb,Mr	4	15400	1510	<8	-	21	2	154	36.5	0.8	0.1	0.9	0.1	61550	3292	48.7	9.8	20.0	0.0	69.1	4.8
	Tatshenshini R u/s Alsek R	1990	ca,Mr	4	14700	1353	<8	-	<8	-	116	7.8	0.8	0.0	1.0	0.0	49650	3807	42.4	1.2	30.0	0.0	49.6	3.1
		1990	cb,Mr	4	18925	1646	<8	-	<8	-	170	9.5	0.9	0.1	1.4	0.4	66350	1500	48.9	3.7	33.0	5.0	59.1	1.4
	Alsek R u/s	1990	ca,Mr	4	8498	649	<8	-	<8	-	48.3	3.9	0.5	0.0	1.0	0.1	61350	3291	25.2	2.9	20.0	0.0	27.2	1.9
		1990	cb,Mr	4	8913	628	<8	-	15	7	67.7	10.6	0.7	0.1	<0.8	-	77150	3283	35.8	8.4	20.0	0.0	39.0	2.0
	Alsek R mid	1990	ca,Mr	4	9573	642	<8	-	<8	-	62.4	4.4	0.7	0.1	2.0	0.0	70425	2964	33.4	6.8	25.0	6.0	34.9	4.5
		1990	cb,Mr	4	10413	876	<8	-	<8	-	64	4.5	0.7	0.1	<0.8	-	84775	3433	32.3	3.1	20.0	0.0	41.7	3.6
	Alsek R d/s	1990	ca,Mr	4	10648	986	<8	-	<8	-	57.2	1.1	0.6	0.0	<0.8	-	60950	4110	27.8	2.1	20.0	0.0	37.7	7.0
		1990	cb,Mr	4	10180	1083	<8	-	<8	-	88.5	14	0.7	0.1	1.2	0.4	59525	4401	37.8	7.7	30.0	0.0	60.9	6.8
Yellow Giant	Sproatt Cr u/s	1987	sa,Je	6	22150	3146	---		10	2.5	---		---		1.6	0.4	9073	673	88.4	8.9	---		26.7	4.1
	Sproatt Cr d/s	1987	sa,Je	6	17617	2624	---		<8	-	---		---		0.8	0.3	8231	1180	95.8	15.4	---		11.4	8.6

TABLE 3: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (IRON TO SILICON)

PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Catear	Emerald Cr	1988	ca,Au	4	50000	887	28	13	11000	271	1833	171	0.404	0.050	17	5	10	1	---		1525	50	683	28
		1989	ca,Jl	4	49775	2231	21	3	10800	346	1473	120	0.340	0.024	3	1	<3	-	1000	0	1500	82	955	46
	Catear Cr u/s	1988	ca,Au	4	49525	1889	22	4	10850	208	836	18	0.592	0.135	17	5	6	2	---		1683	35	791	173
		1989	ca,Jl	4	57250	4011	27	3	11675	250	1743	210	0.417	0.121	6	1	<3	-	1900	200	1525	50	1045	63
	Catear Cr d/s	1988	ca,Au	4	55025	793	38	27	12550	443	1910	202	0.452	0.064	19	2	15	12	---		1653	86	793	29
		1989	ca,Jl	4	40000	2317	26	4	10365	1611	676	38	0.496	0.106	3	2	<3	-	3025	699	1475	96	1018	67
Cinola	Barbie Cr 1	1982	sa,Se	4	32075	2061	4	1	6475	253	820	190	0.32	0.03	---		66	32	---		818	90	3465	458
		1983	sa,Fe	5	37820	5308	<3	-	5642	673	1246	527	0.23	0.05	---		32	10	---		1008	307	4960	203
		1987	sa,Se	5	44400	7500	18	4	3390	180	1170	770	0.23	0.04	---		19	1	---		---		---	
		1987	ca,Se	5	37000	8900	<8	-	2950	200	1610	800	0.15	0.04	---		9	1	---		---		---	
	Barbie Cr 2	1988	ca,Au	5	36900	3800	18	4	3760	190	4530	800	0.28	0.02	---		10	0	---		---		1330	50
		1988	ca,Se	5	38400	4200	15	8	3930	660	2800	730	0.24	0.01	---		9	2	---		---		1100	40
	Barbie Cr 3	1982	sa,Se	4	29800	283	4	1	5463	66	406	18	0.32	0.02	---		29	7	---		835	10	3235	304
		1983	sa,Fe	5	38320	3369	4	1	5334	523	603	67	0.36	0.05	---		25	6	---		1109	158	5452	272
	Barbie Cr 4	1987	ca,Se	5	32200	2700	18	5	3840	290	1850	360	0.35	0.01	---		9	1	---		---		---	
		1988	ca,Au	5	45700	4500	14	6	4310	240	1220	220	0.09	0	---		8	1	---		---		129	80
		1988	ca,Se	5	47100	4000	<8	-	6570	120	1690	990	0.12	0.01	---		10	1	---		---		1230	40
	Barbie Cr 5	1982	sa,Se	4	48550	1636	<3	-	8165	282	1938	99	0.47	0.09	---		31	6	---		1257	61	3737	394
		1983	sa,Fe	5	51280	3249	5	1	8256	710	1478	252	0.32	0.04	---		35	13	---		1162	79	5274	398
		1987	sa,Se	5	58100	10700	<8	-	4810	280	4150	510	0.27	0.08	---		29	4	---		---		---	
	Gold Creek	1988	ca,Au	5	49600	7400	18	4	2430	310	2430	310	0.14	0.01	---		<3	-	---		---		640	40
		1988	ca,Se	5	25400	6200	<8	-	3950	120	3950	120	0.16	0.04	---		4	0	---		---		750	210
	Yakoun R u/s	1982	sa,Se	5	44025	1952	<3	-	9420	146	1477	303	0.21	0.06	---		33	6	---		989	73	4325	453
		1983	sa,Fe	5	45260	1927	<3	-	10012	437	1388	370	0.33	0.11	---		24	3	---		966	71	5444	482
		1987	sa,Oc	4	44100	1200	18	10	6460	270	1100	50	0.19	0.01	---		25	3	---		---		---	
	Yakoun R d/s	1982	sa,Se	4	43225	585	<3	-	9285	290	1415	357	0.21	0.04	---		41	4	---		936	19	3808	917
		1983	sa,Fe	5	42140	773	<3	-	9576	288	1328	113	0.25	0.03	---		26	3	---		887	31	6460	224
		1987	sa,Oc	5	44800	100	25	2	5650	270	1130	20	0.2	0.02	---		30	3	---		---		---	
	Canoe Creek	1982	sa,Se	4	35975	4539	<3	-	5262	288	1390	225	0.21	0.01	---		28	4	---		1099	274	4400	197
		1983	sa,Fe	5	27840	2555	<3	-	5390	506	383	60	0.29	0.04	---		25	2	---		1177	198	4884	661
	Florence C u/s	1987	sa,Oc	5	51800	1100	<8	-	5960	150	1970	270	0.16	0.02	---		19	1	---		---		---	
	Florence C d/s	1982	sa,Se	4	48950	4809	<3	-	5588	365	1752	443	0.23	0.05	---		31	12	---		1310	114	3290	418
		1983	sa,Fe	5	59140	11189	<3	-	5946	296	1556	234	0.25	0.11	---		25	9	---		1640	305	4696	539
		1987	sa,Oc	5	48700	3300	8	0	4070	280	2330	480	0.17	0.03	---		19	9	---		---		---	
		1987	ca,Oc	5	44000	1500	21	3	4010	100	1690	210	0.13	0.04	---		9	0	---		---		---	
Congress	Lajoie Cr u/s	1988	sa,My	5	32000	3600	3.7	0.5	12300	2600	635	237	0.028	0.007	---		128	36	---		---		---	
	Lajoie Cr d/s	1988	sa,My	5	37100	2000	2.6	0.8	13500	400	502	45	0.030	0.001	---		142	8	---		---		---	

TABLE 3: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (IRON TO SILICON)

PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Dome	Fedral Creek	1988	ca,Je	4	49825	2238	31	3	6140	221	2053	349	0.116	0.017	7	1	28	3	---		933	38	645	25
	Betty Creek	1988	ca,Je	4	49950	10490	10	1	5130	772	1610	1104	0.108	0.015	4	1	13	5	---		883	43	637	63
	Guess Cr u/s	1988	ca,Je	4	37750	1196	<8	-	7030	130	1330	164	0.186	0.221	3	1	19	2	---		818	22	586	16
	Guess Cr d/s	1988	ca,Je	4	40000	2211	<8	-	5933	181	1223	159	0.078	0.009	3	1	12	3	---		925	57	541	35
Endako	Watkins Creek	1981	ca,Ap	6	42950	5077	70	15	4487	656	759	307	---		116	45	37	3.6	---		1307	93	3077	541
		1981	ca,Jl	6	38283	3726	58	6	4145	181	1852	138	0.184	0.181	100	21	20	6	---		1157	55	4417	788
		1981	ca,Se	6	40117	3273	67	11	4123	150	2220	191	---		103	17	16	4	---		1258	59	4263	321
	Casey Creek	1981	ca,Ap	6	40517	1560	<5	-	4500	119	721	67	---		21	13	22	1	---		804	76	2490	453
		1981	ca,Jl	5	40280	2325	6	0	4268	138	869	87	<0.08	-	14	4.2	19	1	---		815	177	4248	664
		1981	ca,Se	6	38833	1250	11	6	4507	245	904	184	---		46	34	17	2	---		720	29	4415	191
	Endako R u/s	1981	ca,Ap	6	28283	567	<5	-	4803	123	394	8	---		<2	-	18	1	---		890	42	2943	228
		1981	ca,Jl	6	24400	1244	<7	-	4922	109	272	16	<0.08	-	2.5	0.0	17	2	---		709	24	3703	414
		1981	ca,Se	6	37517	2354	8	3	4795	234	1262	251	---		<2.5	-	17	4	---		926	71	4472	335
	Endako R d/s	1981	ca,Ap	6	32100	1439	<5	-	5088	55	690	136	---		<2	-	21	1	---		902	79	2925	162
		1981	ca,Jl	6	34300	2073	17	11	5432	289	703	71	<0.08	-	5.1	4.3	16	2	---		923	59	3615	249
		1981	ca,Se	6	33633	1662	7	1	5172	206	844	82	---		<2.5	-	16	1	---		851	63	4265	443
	Tailings Pond	1981	ca,Ap	6	22367	2633	11	5	4590	274	302	467	---		231	257	21	4	---		871	56	3357	378
	No 2 Creek	1981	ca,Jl	6	22733	1429	67	41	4677	669	<0.2	-	0.142	0.105	386	224	28	6	---		894	49	4338	428
		1981	ca,Se	6	23867	1279	16	1	4378	168	<0.2	-	---		477	18	25	1	---		930	52	5403	170
	Sweetnam Cr	1981	ca,Ap	6	30950	5537	24	3	4013	262	1123	164	---		158	19	17	3	---		1282	69	2732	155
		1981	ca,Jl	6	15750	1226	10	1	3022	204	588	182	<0.08	-	701	456	8	2	---		994	53	4095	815
		1981	ca,Se	6	16300	1833	12	2	3177	131	975	368	---		508	376	8	1	---		1017	68	4648	538
	Stellako River	1981	ca,Ap	6	20283	977	33	2	3132	78	909	224	---		4.6	1.7	22	1	---		1373	64	3188	233
		1981	ca,Jl	6	16583	588	20	5	2377	73	357	17	<0.08	-	2.5	0.0	7	0	---		1138	32	3443	400
		1981	ca,Se	4	24025	1305	39	4	3135	323	569	61	---		<2.5	-	11	2	---		1333	21	4533	466
	Francois L 1	1981	pa,Jl	3	32650	3839	9	4	4408	160	1672	598	---		3.2	1.2	13	4	---		1712	236	4055	350
		1981	pa,Se	3	41967	3215	7	0	4347	50	971	232	---		12.8	3.4	12	1	---		2673	287	5067	478
	Francois L 2	1981	pa,Jl	3	19083	5405	10	1	3928	234	397	149	---		2.5	0	12	1	---		1015	440	3655	1108
		1981	pa,Se	3	46217	8493	7	1	4445	236	1965	598	---		3.2	0.8	13	4	---		2197	534	4663	515
	Francois L 3	1981	pa,Jl	3	47767	6868	9	2	4610	89	1373	304	---		2.5	0	15	1	---		2405	396	3355	716
		1981	pa,Se	3	41933	9765	7	1	4135	424	1963	596	---		2.5	0.1	16	2	---		2122	827	4755	602
Equity Silver (Buck Cr Drainage)	Bessemer Creek	1985	ca,Oc	4	45125	1626	192	29	7563	797	1525	116	0.21	0.02	---		36	2	---		---		---	
	Siltcheck Pond	1985	sa,Oc	4	46625	2123	94	6	6365	206	0	130	0.14	0.01	---		50	5	---		---		---	
		1987	da,My	4	56200	3464	147	8	7280	233	659	56	---		<0.9	-	40	2	---		2900	87	1373	179
		1989	da,My	4	44175	1258	180	6	6200	188	813	14	0.166	0.027	8	1	39	2	3150	289	1720	42	743	43
	Buck Cr u/s	1985	sa,Oc	4	65775	13620	32	5	7805	403	1858	676	0.11	0.03	---		62	13	---		---		---	
	Bessemer Cr	1987	ca,Je	4	36050	1250	19	3	5868	69	1040	545	---		7.6	1.9	27	1	---		1678	52	465	64
		1987	cb,Je	4	40425	1247	25	5	7203	226	1227	604	---		<0.9	-	31	2	---		1943	108	1020	54
		1988	ca,Je	4	37425	750	20	3	7575	287	1955	277	0.108	0.029	<5	-	41	3	---		1925	96	1400	82
		1989	ca,Jl	4	33300	1324	10	0	6125	417	1323	255	0.114	0.015	<2	-	28	2	1000	0	1475	50	744	63
		1990	ca,Je	4	34850	1310	<8	-	5885	271	945	78	0.099	0.009	<2	-	28	2	1425	506	1525	96	923	65

TABLE 3: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (IRON TO SILICON)

PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Equity Silver (Cont.)	Buck Cr at rd	1985	ca,Oc	4	61373	12810	79	13	7213	1339	2430	772	0.15	0.02	---		81	39	---		---		---	
		1987	ca,Je	4	46600	5382	32	4	6555	240	1066	220	---		9	1.9	33	2	---		2308	144	463	130
		1987	cb,Je	4	47425	3419	37	4	7390	383	1380	209	---		<0.9	-	35	1	---		2333	141	960	95
	Buck Cr mid	1985	sa,Oc	4	63175	10572	34	2	6815	59	2791	337	0.24	0.22	---		61	16	---		---		---	
	Buck Cr u/s	1985	ca,Oc	4	39050	2374	28	3	6150	518	561	141	0.09	0.01	---		24	3	---		---		---	
	Goosly Lake	1987	ca,Je	4	40000	2085	26	3	6395	231	621	118	---		10.1	1.9	27	1	---		2220	58	545	33
		1987	cb,Je	4	46625	2414	36	11	7628	537	688	130	---		<0.9	-	31	2	---		2515	127	898	51
		1988	ca,Je	4	42000	1383	26	1	6475	287	750	57	0.188	0.026	<5	-	33	2	---		2075	50	1300	82
		1989	ca,Jl	4	36525	1945	17	5	5670	233	907	227	0.438	0.628	<2	-	27	2	975	50	1790	54	698	67
		1990	ca,Je	4	35475	991	10	1	4985	304	599	116	0.051	0.010	<2	-	24	2	1250	500	1858	57	867	48
	Goosly Lake	1987	ta,Je	8	69600	3070	70	13	8032	464	1942	478	---		17.1	3.4	32	1	---		3707	182	959	203
		1988	tb,Je	5	61300	2726	50	10	7440	270	4294	1131	0.387	0.043	<5	-	37	2	---		3280	259	1954	173
		1989	da,Jl	5	61980	8494	38	15	7690	809	3194	959	0.614	0.273	<2	-	40	8	2480	497	2778	338	1196	259
		1990	da,Je	5	71700	5241	26	2	6906	374	3000	744	0.259	0.017	3	1	39	4	3060	462	3334	339	1518	109
	Buck Cr d/s	1987	ca,Je	4	37575	3980	25	10	8633	519	670	222	---		9.1	4.1	48	5	---		2548	109	535	310
	Goosly Lake	1987	cb,Je	4	32067	1665	70	69	7190	191	443	53	---		<0.8	-	39	2	---		2310	125	743	40
		1988	ca,Je	4	31950	1323	26	6	7275	457	764	239	0.110	0.045	<5	-	31	3	---		2475	171	1125	50
		1989	ca,Jl	4	30675	2199	10	0	7145	562	868	223	0.102	0.036	<2	-	31	3	1000	0	1978	32	680	73
		1990	ca,Je	4	24575	1909	<8	-	6165	378	285	30	0.056	0.008	<2	-	24	2	1000	0	2078	130	840	61
	Buck Cr d/s at Bob Creek	1987	ca,Je	4	33225	3243	26	3	6970	66	887	26	---		5	1.2	24	1	---		1443	63	448	50
		1987	cb,Je	4	35233	971	27	6	6690	147	1028	48	---		<0.8	-	24	1	---		1567	31	807	31
Equity Silver (Foxy Cr Drainage)	Lu Creek u/s	1985	ca,Oc	3	40000	608	27	6	7897	718	1049	227	0.09	0.05	---		34	1	---		---		---	
	Lu Creek d/s	1985	ca,Oc	3	42067	404	27	2	9670	546	1169	367	0.14	0.03	---		37	3	---		---		---	
	Berzilius Cr	1985	sa,Oc	3	50567	971	40	3	7610	62	1450	72	0.10	0.01	---		66	9	---		---		---	
	Foxy Creek 1	1985	sa,Oc	4	42250	1717	29	3	8733	589	1100	27	0.09	0.02	---		45	5	---		---		---	
	Foxy Creek 2	1985	sa,Oc	4	42000	1476	31	2	7868	300	1920	852	0.10	0.01	---		48	4	---		---		---	
	Foxy Creek 3	1983	sa,Je	4	45625	6335	13	1	7970	589	1745	176	0.19	0.01	---		44	7	---		2142	108	3560	460
		1985	sa,Oc	4	42525	899	33	3	7658	183	2765	293	0.13	0.05	---		50	2	---		---		---	
	Foxy Creek 4	1985	sa,Oc	4	46100	1033	36	2	8037	154	2118	177	0.17	0.12	---		61	3	---		---		---	
	Foxy Creek d/s	1985	sa,Oc	4	44200	1007	28	3	9190	243	1378	272	0.09	0.02	---		45	5	---		---		---	
	Maxan Cr u/s	1985	sa,Oc	4	43575	2988	22	2	9395	937	829	86	0.08	0.03	---		51	4	---		---		---	
	Maxan Cr d/s	1985	sa,Oc	4	44525	1652	26	2	9173	196	1194	254	0.08	0.02	---		46	4	---		---		---	

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PROJECT	STREAM	YEAR	CODE	n	Iron		Lead		Magnesium		Manganese		Mercury		Molybdenum		Nickel		Potassium		Phosphorus		Silicon	
					ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.	ug/g	s.d.
Eskay Creek	Tom MacKay L	1990	ca,Jl	4	47875	1952	25	4	14800	600	657	76	0.065	0.007	<2	-	128	5	3200	216	908	58	1163	33
	Argillite Cr	1990	ca,Jl	4	57625	2591	21	3	15125	741	2383	352	0.265	0.015	6	1	99	7	2500	82	1050	100	1125	45
	MacKay Creek	1990	ca,Jl	4	42600	1364	17	5	9780	419	434	8	0.692	0.024	6	1	120	0	2400	392	595	21	971	41
	Eskay Creek	1990	ca,Jl	4	62950	624	253	7	10893	631	8045	4571	0.650	0.027	11	6	76	8	2475	222	1200	0	1098	61
	Unuk River	1990	ca,Jl	4	39100	2447	22	8	12725	624	733	25	0.140	0.026	<2	-	33	2	2000	82	1690	66	824	48
Golden Bear	Bearskin C u/s	1987	ca,Au	4	28275	2136	7	1	9615	615	511	16	0.037	0.042	2.6	0.5	16	4	---		991	78	533	17
	Bearskin C mid	1987	ca,Au	4	46575	1144	24	9	19875	699	2133	547	0.080	0.017	3	0.9	61	3	---		1188	56	760	38
	Bearskin C d/s	1987	ca,Au	4	55475	12249	25	9	13625	1287	648	53	0.026	0.008	1.5	0.5	46	7	---		1290	73	593	92
	Samotua R u/s	1987	ca,Au	4	36800	3879	22	6	11925	450	613	13	0.044	0.008	<0.9	-	38	3	---		1140	67	533	30
	Samotua R mid	1987	ca,Au	4	67175	15580	26	9	11775	1047	593	32	0.017	0.005	2.6	1.6	40	4	---		1405	91	503	17
	Samotua R d/s	1987	ca,Au	4	46925	5331	14	10	12700	294	666	11	0.031	0.001	2.2	1.6	35	4	---		1238	40	538	50
Lara	Solly Cr u/s	1988	ca,Je	5	44640	718	10	0.4	14020	414	1008	43	---		7.0	0.8	78	5	---		1012	41	1009	306
	Solly Cr d/s	1988	ca,Je	5	43100	1498	9	0.8	12220	481	789	44	---		8.2	1.6	82	14	---		804	25	1360	65
Premier	Hovland Cr u/s	1987	ca,Au	4	45025	2131	44	11	7425	765	2965	348	0.205	0.034	6	2	17	14	---		1230	115	748	68
	Hovland Cr d/s	1987	ca,Au	4	58775	2604	107	14	7413	363	4080	759	0.435	0.025	3.1	0.8	8	1	---		1475	75	935	44
	Lesley Cr u/s	1987	ca,Au	4	49750	3918	1225	90	9433	676	1298	224	0.115	0.024	4.7	2.5	31	22	---		1225	90	493	39
		1988	ca,Au	4	43800	3202	99	27	7258	595	1608	196	0.080	0.020	10	1	22	11	---		1100	82	677	103
	Lesley Cr d/s	1987	ca,Au	4	46275	1362	46	5	10000	147	1263	48	0.128	0.039	<.08	-	25	5	---		1268	49	520	29
		1988	ca,Au	4	36200	1086	39	13	7598	30	1477	1032	0.040	0.000	8	1	19	3	---		893	26	555	35
		1990	ca,Jl	4	51000	9669	230	117	7058	55	997	46	0.200	0.070	4	1	18	6	567	153	1150	100	846	29
	Cooper Cr u/s	1987	ca,Au	4	49750	3918	42	5	7420	112	1843	217	0.301	0.079	2.5	1.7	10	1	---		1310	45	523	17
		1988	ca,Au	4	58300	1807	32	13	7443	138	2295	117	0.090	0.020	10	0	13	5	---		1350	58	779	44
		1989	ca,Se	4	57900	2041	98	9	8893	323	2843	264	0.106	0.012	<2	-	10	0	3450	300	1325	50	1355	45
	Cooper Cr d/s	1987	ca,Au	4	48675	10345	862	508	7055	518	2013	768	1.340	0.435	3.4	0.8	18	5	---		1148	146	685	230
		1988	ca,Au	4	49600	3152	722	269	5685	208	1470	205	0.460	0.090	10	0	10	1	---		1225	50	625	74
	Fletcher C u/s	1989	ca,Se	4	52000	2491	64	5	10400	271	1140	74	0.043	0.011	<2	-	9	2	1875	150	1150	58	1408	69
	Fletcher C d/s	1987	ca,Au	4	56250	8115	305	132	9600	204	1135	180	0.462	0.342	1.9	0.2	7	1	---		1380	105	508	36
		1989	ca,Se	4	57350	2895	817	103	7225	130	2668	1057	0.180	0.088	<2	-	15	6	1375	435	1020	54	1101	101
		1990	ca,Jl	4	51600	7282	557	171	6135	407	1310	75	0.162	0.074	3	1	15	6	1100	794	1200	82	882	61
	Cascade Cr u/s	1987	ca,Au	4	41475	1797	89	10	7085	312	914	63	0.243	0.034	3.6	0.4	34	3	---		1233	95	453	17
		1988	ca,Au	4	53800	2902	336	325	8043	515	1968	242	0.300	0.090	10	0	51	8	---		1275	50	674	30
		1989	ca,Se	4	45475	988	188	3	6823	202	1633	110	0.276	0.039	<2	-	30	6	1175	350	1075	50	1033	29
		1990	ca,Jl	4	42575	1420	233	12	5955	171	2375	378	0.310	0.055	3	1	22	2	1825	690	1325	50	747	25
		1991	ca,Fe	4	57050	4230	500	149	7468	480	3253	1016	0.410	0.161	12	6	74	34	2750	624	1570	185	1025	99
	Cascade Cr d/s	1989	ca,Se	4	33200	6268	715	525	1525	330	1398	57	0.477	0.124	<2	-	<3	-	1750	500	885	86	529	12
	Monitoring P	1991	ca,Fe	4	49675	2623	784	144	5065	130	2518	208	0.530	0.062	5	1	10	1	3875	793	1250	100	1300	597

TABLE 3: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (IRON TO SILICON)

PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Premier (Cont.)	Cascade Cr d/s	1987	ca,Au	4	55950	2370	268	74	8338	239	1303	22	0.353	0.056	2.8	0.7	27	4	---		1300	27	440	24
	Fletcher Creek	1988	ca,Au	4	80250	13814	753	507	7325	90	1455	310	0.280	0.100	17	5	16	5	---		1225	50	813	159
		1989	ca,Se	4	51625	4037	330	81	6738	321	1305	125	0.243	0.027	<2	-	10	1	1250	500	1125	50	968	126
		1990	ca,Jl	4	65050	12204	268	130	6570	214	1240	105	1.122	2.032	4	1	12	5	1633	551	1375	96	984	25
	Cascade Cr d/s	1990	ca,Jl	4	77500	21670	354	147	6318	340	1113	29	1.943	3.141	5	2	15	5	1200	608	1350	58	966	134
	Logan Creek	1991	ca,Fe	4	56825	9596	633	74	5133	882	2918	578	0.538	0.035	7	1	20	3	2650	173	1400	141	787	135
Quesnel River	Maud Cr u/s	1989	ca,Je	4	49575	4337	91	125	17375	2598	2635	513	---		4	1	58	8	2250	173	1558	68	572	24
	Maud Cr d/s	1989	ca,Je	4	41275	3383	23	1	9988	820	1087	117	---		4	2	55	5	2625	310	1175	96	666	33
	Rudy Creek	1989	ca,Je	4	26450	3880	13	5	6163	1216	1534	754	---		2	0	36	9	1625	419	1083	239	410	68
	Creek 1	1989	ca,Je	4	39525	2291	10	0	9123	269	647	110	---		3	1	35	1	2291	263	1010	66	827	116
	Creek 3	1989	ca,Je	4	31400	3186	9	1	3630	289	3660	2599	---		8	7	21	2	3186	0	2030	238	426	27
Samatosum	Johnson Cr u/s	1988	sa,My	5	40900	3700	10.4	1.03	17200	1400	1080	400	0.034	0.005	---		81	8	---		---		---	
	Johnson Cr mid	1988	sa,My	5	27200	3900	5.2	0.97	9300	1500	870	680	0.024	0.005	---		68	14	---		---		---	
	Johnson Cr d/s	1988	sa,My	5	44700	2400	28	8.9	15300	1000	920	50	0.154	0.059	---		87	17	---		---		---	
	Sinmax Cr 1	1988	sa,My	5	41100	2200	13.4	0.7	7600	100	960	70	0.031	0.006	---		75	4	---		---		---	
	Sinmax Cr 2	1990	sa,My	1	35200	-	26	-	8870	-	639	-	0.02	-	---		52	-	---		---		---	
		1990	su,My	1	29600	-	12.4	-	8650	-	707	-	<0.008	-	---		37	-	---		---		---	
		1990	sa,Au	1	43500	-	33	-	13800	-	1220	-	0.064	-	---		70	-	---		---		---	
	Sinmax Cr 3	1988	sa,My	5	39800	3200	41	11	10100	300	680	130	0.633	0.313	---		59	4	---		---		---	
	Sinmax Cr 4	1990	sa,My	1	72300	-	1140	-	6110	-	517	-	4.35	-	---		35	-	---		---		---	
		1990	su,My	1	52300	-	651	-	6140	-	580	-	2.6	-	---		25	-	---		---		---	
		1990	sa,Au	1	63800	-	669	-	9080	-	649	-	2.4	-	---		45	-	---		---		---	
	Sinmax Cr 5	1988	sa,My	5	43200	1000	46	3.0	8600	200	930	50	0.257	0.019	---		62	2	---		---		---	
		1990	sa,My	1	40800	-	160	-	7520	-	832	-	0.3	-	---		52	-	---		---		---	
		1990	su,My	1	38500	-	150	-	7180	-	729	-	0.2	-	---		42	-	---		---		---	
	Homestake u/s	1990	sa,My	1	63800	-	1590	-	5160	-	1590	-	2.3	-	---		34	-	---		---		---	
		1990	su,My	1	43500	-	1110	-	4990	-	1220	-	1.7	-	---		25	-	---		---		---	
	Homestake d/s	1988	sa,My	5	69000	4800	1142	71	5900	20	1120	150	2.458	0.231	---		32	3	---		---		---	
Skyline	Jekill River	1987	ca,My	4	62225	30522	7	4	5303	531	429	74	0.035	0.006	7.3	5.6	13	5	---		1525	264	405	37
		1988	ca,Au	4	36350	1622	<8	-	4335	256	314	9	0.024	0.006	4	0	10	1	---		1450	129	425	23
		1989	ca,Jl	4	35725	8467	10	1	8018	1079	452	63	<0.008		<2	-	17	5	3650	480	1425	50	726	93
	Craig R u/s	1987	ca,My	4	43375	9701	5	1	7815	547	387	11	0.020	0.008	2.2	0.3	15	7	---		1453	68	578	29
	Craig R mid	1987	ca,My	4	24750	2275	<3	-	5738	207	292	7	0.010	0.000	<0.9	-	8	1	---		1153	84	535	66
	Craig R d/s	1988	ca,Au	4	84925	3941	<8	-	5460	204	493	63	0.014	0.003	7	1	10	0	---		1663	49	604	27

TABLE 3(SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (IRON TO SILICON)

PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Skyline (Cont.)	Stonehouse u/s	1987	ca,Jl	4	69700	11838	57	4	7288	247	1228	10	0.042	0.013	2.1	1.5	6	3	---		1473	62	543	33
		1989	ca,Jl	4	40050	5308	74	31	6840	306	1178	92	0.010	0.000	<2	-	<3	-	4775	287	1350	100	576	20
		1990	ca,Jl	4	61425	6628	98	23	7463	1276	1290	147	<0.008		<2	-	7	2	4775	763	1350	100	775	44
	Stonehouse d/s	1987	ca,My	4	60975	13477	42	8	8345	1169	773	82	0.050	0.007	<0.9	-	10	0	---		1673	97	543	45
		1988	ca,Au	4	91275	55646	27	7	7228	1899	621	170	0.033	0.006	7	3	9	2	---		1425	50	587	125
		1989	ca,Jl	4	48350	24651	18	10	13617	4235	473	68	0.016	0.005	<2	-	9	1	3625	746	1790	351	758	94
		1990	ca,Jl	4	77450	24947	10	0	5075	382	418	53	<0.008		<2	-	10	0	2025	126	1350	129	813	95
	Johnny Cr u/s	1988	ca,Au	4	39700	3582	41	3	5760	252	1455	21	0.021	0.004	3	1	6	1	---		1753	51	524	28
		1989	ca,Jl	4	47275	7274	50	7	6148	401	1453	91	0.030	0.034	<2	-	<3	-	4675	96	1625	101	551	46
		1990	ca,Jl	4	65925	12025	54	7	6115	859	1425	211	0.010	0.001	<2	-	6	2	4350	656	1633	38	763	49
	Johnny Cr d/s	1987	ca,My	4	49425	15923	43	13	5670	861	1450	160	0.026	0.009	<0.8		5	1	---		1795	99	443	33
		1988	ca,Au	4	45625	9092	45	8	6458	557	1430	133	0.021	0.005	4	1	7	3	---		1703	128	528	22
		1989	ca,Jl	4	50825	12221	47	6	6753	606	1478	85	0.018	0.005	<2	-	4	1	4400	469	1720	99	619	68
		1990	ca,Jl	4	55700	14325	57	17	6078	527	1268	133	0.010	0.001	<2	-	7	2	4050	332	1350	129	713	63
	Bronson Cr u/s	1987	ca,My	4	72175	16414	40	10	7603	441	951	42	0.014	0.008	9.6	4.9	35	9	---		1820	154	518	36
		1988	ca,Au	4	65275	9828	63	16	8160	389	1135	49	0.038	0.020	11	3	34	3	---		1618	88	644	47
		1989	ca,Jl	4	92800	32551	71	28	8268	756	1009	63	<0.008		9	2	42	13	6000	424	1758	118	806	86
		1990	ca,Jl	4	66050	17089	145	100	7858	339	900	14	0.012	0.004	<2	-	29	7	5850	370	1563	149	750	113
Snip	Bronson Cr d/s	1987	ca,My	4	137050	42824	173	79	7190	381	899	35	<0.008		8	3	46	11	---		1675	99	468	42
		1988	ca,Au	4	99725	20641	111	34	8220	288	1008	63	0.020	0.004	24	7	48	8	---		1910	163	754	70
		1989	ca,Jl	4	95375	20752	95	41	7760	303	924	38	<0.008		6	2	45	8	5850	342	1425	50	641	61
		1990	ca,Jl	4	78950	11347	203	53	6345	209	882	34	0.012	0.005	7	6	40	4	5000	245	1518	120	1185	70
	Monsoon Cr u/s	1988	ca,Au	4	120000	9764	17	5	14250	968	7708	205	0.044	0.010	42	6	61	9	---		3548	166	1085	248
	Monsoon Cr d/s	1988	ca,Au	4	54550	2869	41	4	8470	265	3133	496	0.021	0.009	13	5	24	1	---		1840	122	814	53
		1989	ca,Jl	4	79400	17356	62	17	9778	614	6895	3262	0.016	0.005	16	7	40	8	5100	141	1655	42	979	195
		1990	ca,Jl	4	61800	6210	58	6	7655	927	3080	1601	0.100	0.000	15	6	32	4	4925	574	1823	161	1453	120
	Iskut R u/s	1988	ca,Au	4	84475	12912	68	12	9148	464	874	8	0.023	0.008	14	5	42	5	---		1643	115	839	33
		1989	ca,Jl	4	63725	10037	51	5	10058	647	947	48	0.010	0.001	5	2	33	3	5050	705	1450	129	766	52
		1990	ca,Jl	4	40050	2339	10	1	11025	171	695	16	0.046	0.004	<2	-	51	1	1450	526	955	27	1448	64
	Iskut R d/s	1988	ca,Au	4	72425	12766	24	7	11775	310	762	21	0.039	0.003	10	1	43	2	---		1225	96	823	35
		1989	ca,Jl	4	64725	3887	33	4	12500	216	823	8	0.029	0.009	4	1	48	3	2350	265	1175	50	723	53
		1990	ca,Jl	4	58725	3160	30	7	11000	392	802	44	0.038	0.019	5	2	55	4	2575	250	1200	71	1403	113
	Sky Cr u/s	1988	ca,Au	4	66575	1382	43	3	18225	492	1723	46	0.025	0.003	8	1	61	2	---		1873	29	888	71
	Sky Cr d/s	1988	ca,Au	4	40975	5387	<8	-	6465	545	397	27	0.024	0.016	4	0	10	0	---		1475	50	590	120
		1989	ca,Jl	4	41525	7141	10	0	8733	2416	411	64	0.010	0.001	<2	-	10	1	2525	1021	1350	58	618	146
		1990	ca,Jl	4	72050	13764	10	0	5670	812	8748	7311	0.028	0.022	9	1	43	25	2250	387	1400	71	1195	152
	Craig R u/s	1988	ca,Au	4	84925	3941	<8	-	5460	204	493	63	0.014	0.003	7	1	10	0	---		1663	49	604	27
	Craig R d/s	1988	ca,Au	4	25175	1834	<8	-	5903	42	308	6	0.010	0.001	3	1	8	0	---		1325	96	562	32
		1989	ca,Jl	4	40450	13484	10	1	13025	2256	377	17	0.010	0.001	<2	-	10	0	3000	327	1575	50	658	51

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PROJECT	STREAM	YEAR	CODE	n	Iron ug/g	Iron s.d.	Lead ug/g	Lead s.d.	Magnesium ug/g	Magnesium s.d.	Manganese ug/g	Manganese s.d.	Mercury ug/g	Mercury s.d.	Molybdenum ug/g	Molybdenum s.d.	Nickel ug/g	Nickel s.d.	Potassium ug/g	Potassium s.d.	Phosphorus ug/g	Phosphorus s.d.	Silicon ug/g	Silicon s.d.
Sulphurets	Brucejack u/s	1989	ca,Jl	4	58575	5302	340	43	1820	211	931	98	0.319	0.056	10	1	13	5	2600	294	1250	58	528	41
	Brucejack d/s	1988	ca,Au	4	51525	2620	140	22	3993	451	1176	200	0.356	0.044	9	1	16	7	---		1475	50	764	53
		1989	ca,Jl	4	50025	4298	241	54	3200	838	1143	78	0.397	0.045	8	1	10	1	2800	392	1593	127	678	41
	Sulphurets Cr	1988	ca,Au	4	55400	6024	24	6	8903	428	672	48	0.071	0.013	10	0	24	5	---		1665	90	997	135
		1989	ca,Jl	4	70375	7381	29	8	8848	693	651	41	0.074	0.003	13	6	20	1	1875	150	1850	29	852	45
	Unuk R u/s	1988	ca,Au	4	40200	283	13	5	13325	330	827	33	0.214	0.021	5	0	42	4	---		1723	51	1330	85
		1989	ca,Jl	4	38225	2690	18	5	13675	492	797	22	0.092	0.015	<2	-	33	2	1625	435	1773	121	952	24
	Unuk R d/s	1988	ca,Au	4	54550	8995	22	4	11125	981	790	80	0.105	0.013	9	1	28	3	---		1643	130	1173	189
		1989	ca,Jl	4	58500	4936	23	5	9600	658	652	39	0.071	0.005	9	2	19	2	1975	96	1658	111	800	29
Windy Craggy	Red Creek	1988	ca,Se	4	80050	6858	10	0	25675	1255	847	67	0.100	0.008	7	2	100	1	---		4148	147	2155	182
	Tats Cr u/s	1990	ca,Mr	4	40150	4503	30	28	13700	356	647	37	---		<2	-	47	2	675	126	1738	42	595	119
		1990	cb,Mr	4	40425	3775	9	1	13450	592	762	22	---		<2	-	52	4	750	58	1845	53	823	201
	Tats Cr d/s	1990	ca,Mr	4	44775	3615	<8	-	7503	556	358	29	---		<2	-	32	2	900	82	1845	101	1618	421
		1990	cb,Mr	4	38700	3028	24	21	12275	974	557	41	---		<2	-	51	11	1250	500	2065	70	2353	696
	Tatshenshini R	1990	ca,Mr	4	53400	14678	10	1	8643	340	355	9	---		<2	-	28	2	950	58	1033	81	1313	192
	u/s Tats Creek	1990	cb,Mr	4	54500	12645	<8	-	11023	1612	436	38	---		<2	-	37	2	925	150	1435	282	2185	545
	Tatshenshini R	1990	ca,Mr	4	33350	8151	<8	-	9838	759	377	19	---		<2	-	26	2	975	50	1000	136	1720	235
	d/s Tats Creek	1990	cb,Mr	4	40825	9124	<8	-	11525	907	487	31	---		<2	-	37	4	1000	0	1580	133	2198	156
	Tatshenshini R	1990	ca,Mr	4	39650	2114	<8	-	10348	850	414	29	---		<2	-	28	2	1000	0	1075	50	1243	116
	u/s Alsek R	1990	cb,Mr	4	35500	1197	10	0	13525	964	524	33	---		<2	-	34	2	1725	499	1350	58	1553	343
	Alsek R u/s	1990	ca,Mr	4	26800	5449	<8	-	7603	475	257	10	---		<2	-	19	2	900	82	783	84	364	18
		1990	cb,Mr	4	37075	9692	<8	-	8445	625	308	8	---		<2	-	22	1	925	96	1275	236	333	17
	Alsek R mid	1990	ca,Mr	4	36000	10328	<8	-	8345	392	283	10	---		<2	-	21	2	975	50	893	85	451	28
		1990	cb,Mr	4	30475	3220	<8	-	9343	576	325	15	---		<2	-	25	3	975	50	1200	115	425	40
	Alsek R d/s	1990	ca,Mr	4	27800	3713	<8	-	8080	605	292	17	---		<2	-	19	2	900	82	895	119	633	70
		1990	cb,Mr	4	40100	9337	<8	-	7753	706	299	12	---		<2	-	22	1	825	96	1503	249	584	75
Yellow Giant	Sproatt Cr u/s	1987	sa,Je	6	37133	7302	26.8	13.0	15000	3007	1667	720	0.127	0.022	---		52	9	---		---		---	
	Sproatt Cr d/s	1987	sa,Je	6	36200	17762	18.8	5.0	7150	938	1127	326	0.158	0.048	---		51	8	---		---		---	

TABLE 4: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	s.d.	Sodium ug/g	s.d.	Strontium ug/g	s.d	Tin ug/g	s.d.	Titanium ug/g	s.d.	Vanadium ug/g	s.d.	Zinc ug/g	s.d.	Residue Total mg/kg	s.d.	Residue Volatile mg/kg	s.d.
Catear	Emerald Cr	1988	ca,Au	4	<2	-	360	20	38	1	19	17	1200	63	87	2	77	17	963500	1915	36350	1902
		1989	ca,Jl	4	<2	-	390	16	37	2	<8	-	1438	87	88	5	126	9	965750	3775	34100	3713
	Catear Cr u/s	1988	ca,Au	4	<2	-	438	92	45	4	<8	-	1640	68	89	2	62	1	957000	3367	42800	3344
		1989	ca,Jl	4	<2	-	230	20	37	2	<8	-	991	60	100	1	152	18	959250	2217	41025	2142
	Catear Cr d/s	1988	ca,Au	4	<2	-	333	104	41	2	45	37	898	107	105	6	132	28	964000	5477	35925	5333
		1989	ca,Jl	4	2	0	343	42	48	5	<8	-	1211	221	91	13	120	8	947000	4082	52950	3978
Cinola	Barbie Cr 1	1982	sa,Se	4	---		443	26	53.7	7.3	<2	-	---		72	4	83.9	5	---		---	
		1983	sa,Fe	5	---		334	18	45.4	5.2	2	1	---		82	7	79.1	6.5	---		---	
		1987	sa,Se	5	---		---		---		---		---		---		196	31	890000	-	110000	37000
		1987	ca,Se	5	---		---		---		---		---		---		107	3	926000	-	74000	19000
	Barbie Cr 2	1988	ca,Au	5	---		---		---		---		---		91	4	246	19	720000	-	280000	33000
		1988	ca,Se	5	---		---		---		---		---		89	4	189	10	710000	-	290000	25000
	Barbie Cr 3	1982	sa,Se	4	---		450	29	44.9	1.4	<3	-	---		67	1	79.8	4.2	---		---	
		1983	sa,Fe	5	---		462	153	50.1	9.5	2	1	---		81	7	84.6	6.5	---		---	
	Barbie Cr 4	1987	ca,Se	5	---		---		---		---		---				181	35	707000	-	293000	53000
		1988	ca,Au	5	---		---		---		---		---		86	7	128	9	865000	-	135000	20000
		1988	ca,Se	5	---		---		---		---		---		93	5	116	10	858000	-	142000	34000
	Barbie Cr 5	1982	sa,Se	4	---		578	38	88	3.3	3	1	---		90	4	130	3.8	---		---	
		1983	sa,Fe	5	---		598	90	87	18	3	1	---		105	3	127	1.6	---		---	
		1987	sa,Se	5	---								---				224	60	848000	-	152000	72000
	Gold Creek	1988	ca,Au	5	---								---		78	8	164	28	769000	-	231000	21000
		1988	ca,Se	5	---						---		---		73	14	68	9.5	741000	-	249000	44000
	Yakoun R u/s	1982	sa,Se	5	---		738	24	103	0.6	3	1	---		95	1	119	3.6	---		---	
		1983	sa,Fe	5	---		690	87	106	6.8	4	1	---		118	5	122	2.7	---		---	
		1987	sa,Oc	4	---		---		---		---		---		---		208	15	901000	-	89000	7000
	Yakoun R d/s	1982	sa,Se	4	---		710	24	102	14	3	0	---		98	2	121	3.8	---		---	
		1983	sa,Fe	5	---		636	40	99.9	3.1	4	1	---		110	4	125	2	---		---	
		1987	sa,Oc	5	---		---		---		---		---		---		115	3	937000	-	66000	1000
	Canoe Creek	1982	sa,Se	4	---		645	40	45.2	1.2	<2	-	---		82	10	63.4	2.1	---		---	
		1983	sa,Fe	5	---		726	112	54.7	6.3	3	1	---		68	3	66.8	3.3	---		---	
	Florence C u/s	1987	sa,Oc	5	---		---		---		---		---		---		144	15	885000	-	115000	9000
	Florence C d/s	1982	sa,Se	4	---		1038	174	66.2	5.0	5	2	---		105	5	83.5	2.3	---		---	
		1983	sa,Fe	5	---		1122	134	74.7	4.8	6	2	---		127	15	81	0.8	---		---	
		1987	sa,Oc	5	---		---		---		---		---		---		81	1	864000	-	136000	16000
		1987	ca,Oc	5	---		---		---		---		---		---		107	22	917000	-	83000	11000
Congress	Lajoie Cr u/s	1988	sa,My	5	0.03	0.01	---		---		---		---		---		73.8	7.4	958600	-	41400	11400
	Lajoie Cr d/s	1988	sa,My	5	0.03	0.00	---		---		---		---		---		70.2	6.3	928000	-	72000	19000

TABLE 4: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	Silver s.d.	Sodium ug/g	Sodium s.d.	Strontium ug/g	Strontium s.d	Tin ug/g	Tin s.d.	Titanium ug/g	Titanium s.d.	Vanadium ug/g	Vanadium s.d.	Zinc ug/g	Zinc s.d.	Residue Total mg/kg	Residue Total s.d.	Residue Volatile mg/kg	Residue Volatile s.d.
Dome	Fedral Creek	1988	ca,Je	4	<8	-	548	454	40	4	<8	-	319	20	78	3	240	16	951750	7805	48425	7948
	Betty Creek	1988	ca,Je	4	<8	-	438	321	33	7	<8	-	369	12	76	3	131	53	962250	23627	37775	23264
	Guess Cr u/s	1988	ca,Je	4	<8	-	335	228	37	2	<8	-	380	23	75	3	443	585	929750	4992	70025	4833
	Guess Cr d/s	1988	ca,Je	4	<8	-	193	19	43	3	<8	-	354	39	77	5	123	12	951500	10472	48600	10176
Endako	Watkins Creek	1981	ca,Ap	6	---		372	46	112	14	30	6	758	159	58	5	322	63	---		---	
		1981	ca,Jl	6	---		323	28	111	8	<8	-	774	62	57	2	272	34	---		---	
		1981	ca,Se	6	---		352	40	97	2	19	3	864	77	57	3	317	37	---		---	
	Casey Creek	1981	ca,Ap	6	---		390	21	92	21	<12	-	1542	141	95	5	65	1.3	---		---	
		1981	ca,Jl	5	---		375	74	86	30	<8	-	1298	204	91	9	61	1.7	---		---	
		1981	ca,Se	6	---		494	57	80	7	17	2	1385	104	86	7	66	4.5	---		---	
	Endako R u/s	1981	ca,Ap	6	---		469	28	64	3	<12	-	1507	70	69	3	60	1.8	---		---	
		1981	ca,Jl	6	---		466	39	68	3	<8	-	1310	140	68	2	61	1.8	---		---	
		1981	ca,Se	6	---		447	37	74	6	25	4	1515	178	83	9	62	3.6	---		---	
	Endako R d/s	1981	ca,Ap	6	---		432	20	65	3	<12	-	1553	64	78	2	74	1.8	---		---	
		1981	ca,Jl	6	---		576	63	75	7	<8	-	1652	78	87	4	77	2.9	---		---	
		1981	ca,Se	6	---		408	56	66	4	20	2	1320	106	76	4	71	3.5	---		---	
	Tailings Pond	1981	ca,Ap	6	---		780	196	462	247	<12	-	722	272	49	12	96	6.1	---		---	
	No 2 Creek	1981	ca,Jl	6	---		882	81	730	167	20	10	593	206	42	8	145	31	---		---	
		1981	ca,Se	6	---		1109	106	898	90	16	1	536	17	36	3	104	5.1	---		---	
	Sweetnam Cr	1981	ca,Ap	6	---		402	22	179	29	<12	-	659	66	66	15	128	20	---		---	
		1981	ca,Jl	6	---		360	27	223	21	<8	-	637	24	32	1	54	2.1	---		---	
		1981	ca,Se	6	---		414	27	169	31	17	1	697	69	33	2	75	1.1	---		---	
	Stellako River	1981	ca,Ap	6	---		381	18	58	2	31	7	644	18	46	3	78	4.8	---		---	
		1981	ca,Jl	6	---		398	28	48	2	<8	-	758	44	42	1	52	1.7	---		---	
		1981	ca,Se	4	---		319	23	58	2.1	38	1	619	39	55	3	78	2.8	---		---	
	Francois L 1	1981	pa,Jl	3	---		586	40	82	2	17	0.2	1032	15	63	1	75	3.4	---		---	
		1981	pa,Se	3	---		547	34	86	2	16	0.3	881	32	59	1	79	1.5	---		---	
	Francois L 2	1981	pa,Jl	3	---		516	33	60	3	17	0.1	671	45	52	4	71	3.7	---		---	
		1981	pa,Se	3	---		533	29	72	5	17	0.1	788	58	59	4	81	4.3	---		---	
	Francois L 3	1981	pa,Jl	3	---		499	50	73	4	16	0.2	687	28	58	1	82	0.7	---		---	
		1981	pa,Se	3	---		432	39	64	10	16	0.3	603	64	52	5	79	8.6	---		---	
Equity Silver (Buck Cr Drainage)	Bessemer Creek	1985	ca,Oc	4	5.2	2.9	---		---		---		---		---		717	91	976000	-	24000	1780
	Siltcheck Pond	1985	sa,Oc	4	1.1	0.1	---		---		---		---		---		317	25	960000	-	40000	7000
		1987	da,My	4	---		540	148	150	15	<2	-	821	34	104	2	447	39	956000	7000	44067	6808
		1989	da,My	4	4	1	320	16	210	7	<8	-	554	23	74	4	579	14	952500	1708	49725	1569
	Buck Cr u/s	1985	sa,Oc	4	0.13	0.05	---		---		---		---		---		111	4	978000	-	22000	7600
	Bessemer Cr	1987	ca,Je	4	---		278	26	85	9	9	2	1138	90	107	9	93	10	962500	5508	37625	5695
		1987	cb,Je	4	---		<20	-	94	8	6	4	1235	65	108	6	102	16	---		---	
		1988	ca,Je	4	0.07	0	1750	1279	110	0	<8	-	1325	34	82	1	138	13	948000	2944	51950	2995
		1989	ca,Jl	4	<2	-	343	26	93	6	<8	-	1040	29	85	3	106	4	946500	5260	53200	5203
		1990	ca,Je	4	<2	-	365	31	95	1	<8	-	1140	34	88	5	114	9	---		---	

TABLE 4: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	s.d.	Sodium ug/g	s.d.	Strontium ug/g	s.d	Tin ug/g	s.d.	Titanium ug/g	s.d.	Vanadium ug/g	s.d.	Zinc ug/g	s.d.	Residue Total mg/kg	s.d.	Residue Volatile mg/kg	s.d.
Equity Silver (Cont.)	Buck Cr at rd	1985	ca,Oc	4	0.88	0.46	---		---		---		---		---		547	227	847000	-	15300	23500
		1987	ca,Je	4	---		338	25	97	9	7	2	1318	155	150	18	150	14	964500	9678	35500	9628
		1987	cb,Je	4	---		<20	-	110	9	6	6	1265	58	123	5	154	9	---		---	
	Buck Cr mid	1985	sa,Oc	4	0.2	0.08	---		---		---		---		---		147	7	982000	-	18000	3400
	Buck Cr u/s	1985	ca,Oc	4	0.15	0.05	---		---		---		---		---		117	8	973000	-	27000	1910
	Goosly Lake	1987	ca,Je	4	---		303	46	105	4	9	2	1070	56	103	7	152	9	956000	4397	43975	4177
		1987	cb,Je	4	---		<20	-	114	9	<2	-	1208	10	106	3	162	7	---		---	
		1988	ca,Je	4	0.3	0.06	825	150	105	6	<8	-	1180	67	86	5	180	13	930000	9832	69925	9410
		1989	ca,Jl	4	<2	-	295	39	149	23	<8	-	1017	34	85	3	147	12	938500	15716	61500	15878
		1990	ca,Je	4	<2	-	285	35	99	10	<8	-	1095	37	83	1	153	15	---		---	
	Goosly Lake	1987	ta,Je	8	---		451	149	198	18	8	2	722	40	116	4	277	37	850833	9065	149167	9064
		1988	tb,Je	5	0.6	0.06	660	152	176	21	<8	-	893	75	77	2	299	41	837000	11705	163000	11705
		1989	da,Jl	5	<2	-	622	342	161	22	<8	-	746	87	101	10	365	122	856800	28244	143100	28453
		1990	da,Je	5	<2	-	484	114	174	2	<8	-	806	72	98	2	300	37	---		---	
	Buck Cr d/s	1987	ca,Je	4	---		500	73	132	22	16	3	2170	62	121	17	234	75	940000	14177	59900	13872
	Goosly Lake	1987	cb,Je	4	---		<20	-	96	8	8	4	1830	20	95	10	161	7	---		---	
		1988	ca,Je	4	0.09	0.01	725	206	101	13	<8	-	1903	185	61	3	135	6	908000	32975	92050	33019
		1989	ca,Jl	4	<2	-	430	24	128	8	<8	-	1703	223	80	9	161	15	904500	29366	95500	29366
		1990	ca,Je	4	<2	-	420	42	130	10	<8	-	1858	124	53	3	149	10	---		---	
	Buck Cr d/s at Bob Creek	1987	ca,Je	4	---		475	31	103	13	10	1	1335	53	99	13	125	5	966500	10344	33450	10308
		1987	cb,Je	4	---		<20	-	102	3	8	3	1520	56	100	3	123	2	---		---	
Equity Silver (Foxy Cr Drainage)	Lu Creek u/s	1985	ca,Oc	3	0.18	0.12	---		---		---		---		---		99.4	18.4	991000	-	9000	1000
	Lu Creek d/s	1985	ca,Oc	3	0.13	0.02	---		---		---		---		---		127	9	982000	-	18000	6000
	Berzilius Cr	1985	sa,Oc	3	0.26	0.06	---		---		---		---		---		181	14	965000	-	35000	5000
	Foxy Creek 1	1985	sa,Oc	4	0.20	0.06	---		---		---		---		---		121	8	965000	-	35000	10000
	Foxy Creek 2	1985	sa,Oc	4	0.25	0.05	---		---		---		---		---		172	32	953000	-	47000	15000
	Foxy Creek 3	1983	sa,Je	4	---		865	17	171	19	4	1	---		118	10	157	3	---		---	
		1985	sa,Oc	4	0.28	0.08	---		---		---		---		---		184	13	943000	-	57000	4000
	Foxy Creek 4	1985	sa,Oc	4	0.25	0.05	---		---		---		---		---		193	6	955000	-	45000	5000
	Foxy Creek d/s	1985	sa,Oc	4	0.09	0.01	---		---		---		---		---		108	5	964000	-	36000	8000
	Maxan Cr u/s	1985	sa,Oc	4	0.18	0.12	---		---		---		---		---		101	5	949000	-	51000	11000
	Maxan Cr d/s	1985	sa,Oc	4	0.13	0.02	---		---		---		---		---		98.4	2.7	954000	-	46000	6000

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TABLE 4 : SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	Silver s.d.	Sodium ug/g	Sodium s.d.	Strontium ug/g	Strontium s.d	Tin ug/g	Tin s.d.	Titanium ug/g	Titanium s.d.	Vanadium ug/g	Vanadium s.d.	Zinc ug/g	Zinc s.d.	Residue Total mg/kg	Residue Total s.d.	Residue Volatile mg/kg	Residue Volatile s.d.
Eskay Creek	Tom MacKay L	1990	ca,Jl	4	<2	-	1103	427	43	5	<8	-	853	341	71	3	472	56	951000	8206	49100	7931
	Argillite Cr	1990	ca,Jl	4	<2	-	828	145	38	2	<8	-	1403	75	115	6	383	40	931000	6218	69075	6208
	MacKay Creek	1990	ca,Jl	4	<2	-	175	53	58	5	<8	-	20	3	47	3	397	12	962500	1291	37525	1153
	Eskay Creek	1990	ca,Jl	4	<2	-	923	123	38	1	<8	-	1035	94	63	4	1054	183	914500	1732	85325	1613
	Unuk River	1990	ca,Jl	4	<2	-	375	10	130	6	<8	-	1498	56	108	10	132	22	983750	957	16100	860
Golden Bear	Bearskin C u/s	1987	ca,Au	4	---		198	13	46	4	<2	-	1113	80	65	6	56	10	996750	500	3200	424
	Bearskin C mid	1987	ca,Au	4	---		638	22	73	2	<2	-	1603	54	103	2	110	6	961500	5323	38450	5592
	Bearskin C d/s	1987	ca,Au	4	---		265	113	59	4	<2	-	1463	195	146	51	74	12	993750	2872	6150	2793
	Samotua R u/s	1987	ca,Au	4	---		233	17	56	2	<2	-	1318	48	87	14	61	3	994500	1732	5305	1413
	Samotua R mid	1987	ca,Au	4	---		195	25	64	7	<2	-	1683	66	202	59	63	4	993500	1291	6600	1534
	Samotua R d/s	1987	ca,Au	4	---		258	29	62	3	<2	-	1505	95	122	19	73	6	991500	1291	8425	1212
Lara	Solly Cr u/s	1988	ca,Je	5	<2	-	586	354	50	6	<8	-	2604	56	108	4	215	47	---		---	
	Solly Cr d/s	1988	ca,Je	5	<2	-	422	165	37	2	<8	-	1928	76	108	4	190	27	---		---	
Premier	Hovland Cr u/s	1987	ca,Au	4	---		2953	2494	157	31	<2	-	545	47	52	2	226	40	773250	47759	226750	47759
	Hovland Cr d/s	1987	ca,Au	4	---		225	121	150	15	<2	-	453	40	50	3	345	43	835000	29200	165000	29200
	Lesley Cr u/s	1987	ca,Au	4	---		675	791	38	9	<2	-	419	50	63	4	199	15	979750	6021	20400	5864
		1988	ca,Au	4	<2	-	100	0	71	32	21	20	361	14	57	9	227	20	968750	8995	31375	8986
	Lesley Cr d/s	1987	ca,Au	4	---		100	0	40	3	<2	-	514	19	66	2	205	17	983250	2217	16750	2047
		1988	ca,Au	4	2	1	73	5	30	0	<8	-	436	22	54	2	111	9	982750	1708	17075	1965
		1990	ca,Jl	4	6	4	118	56	35	5	<8	-	467	96	48	6	541	179	976750	4349	23400	4240
	Cooper Cr u/s	1987	ca,Au	4	---		485	489	63	6	<2	-	480	55	63	5	198	15	910000	15011	90150	14915
		1988	ca,Au	4	3	0	193	29	73	7	<8	-	259	76	79	8	212	51	873500	12042	126500	12042
		1989	ca,Se	4	<2	-	100	0	51	2	<8	-	195	13	69	3	201	21	922000	8206	77750	8198
	Cooper Cr d/s	1987	ca,Au	4	53	20	150	64	50	9	<2	-	740	55	47	2	2953	1583	968250	12447	31675	12425
		1988	ca,Au	4	<2	-	65	10	73	2	<8	-	606	78	47	5	2088	688	980250	5737	19675	5410
	Fletcher C u/s	1989	ca,Se	4	<2	-	125	50	37	2	<8	-	692	32	76	3	127	9	988000	2449	12200	2235
	Fletcher C d/s	1987	ca,Au	4	---		230	100	52	6	<2	-	858	155	858	155	858	155	988250	5058	11900	5292
		1989	ca,Se	4	20	1	93	5	46	1	27	3	588	43	48	2	2175	311	973000	2449	26875	2655
		1990	ca,Jl	4	20	7	88	19	41	3	<8	-	505	93	44	7	1375	294	976250	4113	23700	3910
	Cascade Cr u/s	1987	ca,Au	4	---		75	13	34	4	<2	-	46	7	27	1	285	12	867750	228501	132050	228635
		1988	ca,Au	4	2	0	85	17	42	6	23	3	74	12	39	6	526	268	977750	2630	22525	2636
		1989	ca,Se	4	<2	-	83	21	30	3	<8	-	49	3	27	1	412	23	980500	707	19300	849
		1990	ca,Jl	4	<2	-	95	10	36	4	<8	-	90	11	28	2	521	27	974750	4573	25075	4479
		1991	ca,Fe	4	<2	-	98	5	52	15	102	61	91	27	41	3	637	98	---		---	
	Cascade Cr d/s	1989	ca,Se	4	63	10	28	5	79	3	<8	-	26	14	6	1	2068	954	979000	3742	21050	4093
	Monitoring P	1991	ca,Fe	4	45	7	155	64	129	20	<8	-	290	79	32	3	2888	402	972000	3742	28050	3749

TABLE 4 : SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	Silver s.d.	Sodium ug/g	Sodium s.d.	Strontium ug/g	Strontium s.d	Tin ug/g	Tin s.d.	Titanium ug/g	Titanium s.d.	Vanadium ug/g	Vanadium s.d.	Zinc ug/g	Zinc s.d.	Residue Total mg/kg	Residue Total s.d.	Residue Volatile mg/kg	Residue Volatile s.d.
Premier (Cont.)	Cascade Cr d/s	1987	ca,Au	4	---		470	426	43	4	<2	-	310	23	50	3	676	44	980750	1258	19475	1147
	Fletcher Creek	1988	ca,Au	4	<2	-	93	10	39	5	14	6	533	50	78	6	808	132	977750	4573	22225	4379
		1989	ca,Se	4	12	5	213	272	41	7	<8	-	332	45	36	3	908	214	979500	1291	20625	1021
		1990	ca,Jl	4	7	4	85	19	37	3	<8	-	371	117	44	9	586	169	971750	5377	28250	5270
	Cascade Cr d/s	1990	ca,Jl	4	11	5	95	10	34	2	<8	-	433	44	48	7	624	45	968250	12093	31800	11881
	Logan Creek	1991	ca,Fe	4	33	19	100	0	68	3	10	0	364	44	39	6	3168	320	957000	3464	43267	3580
Quesnel River	Maud Cr u/s	1989	ca,Je	4	<2	-	438	45	79	4	121	158	2053	239	140	12	203	44	921250	16317	78900	16106
	Maud Cr d/s	1989	ca,Je	4	<2	-	250	38	62	5	<8	-	1040	62	79	7	156	20	962000	2944	38125	3082
	Rudy Creek	1989	ca,Je	4	<2	-	463	201	57	7	<8	-	803	146	60	9	153	68	453250	76917	546750	76917
	Creek 1	1989	ca,Je	4	<2	-	363	74	76	5	<8	-	1480	168	109	23	110	11	941000	26870	58950	26817
	Creek 3	1989	ca,Je	4	<2	-	458	156	65	6	<8	-	788	113	69	5	139	7	551250	41596	448750	41596
Samatosum	Johnson Cr u/s	1988	sa,My	5	0.08	0.01	---		---		---		---		---		128	8	933900	-	67100	10900
	Johnson Cr mid	1988	sa,My	5	0.07	0.07	---		---		---		---		---		109	32	940300	-	59700	20100
	Johnson Cr d/s	1988	sa,My	5	0.09	0.01	---		---		---		---		---		155	30	930400	-	69600	9400
	Sinmax Cr 1	1988	sa,My	5	0.07	0.01	---		---		---		---		---		110	12	959000	-	41000	6600
	Sinmax Cr 2	1990	sa,My	1	<2	-	---		---		---		---		---		107	-	---		---	
		1990	su,My	1	<2	-	---		---		---		---		---		82.5	-	---		---	
		1990	sa,Au	1	<2	-	---		---		---		---		---		148	-	936000	-	64000	-
	Sinmax Cr 3	1988	sa,My	5	5.4	5.8	---		---		---		---		---		574	166	944600	-	55400	7100
	Sinmax Cr 4	1990	sa,My	1	37	-	---		---		---		---		---		2810	-	---		---	
		1990	su,My	1	18	-	---		---		---		---		---		2150	-	---		---	
		1990	sa,Au	1	22	-	---		---		---		---		---		1640	-	960000	-	40000	-
	Sinmax Cr 5	1988	sa,My	5	1.6	0.3	---		---		---		---		---		475	13	954900	-	45100	4100
		1990	sa,My	1	<2	-	---		---		---		---		---		576	-	---		---	
		1990	su,My	1	<2	-	---		---		---		---		---		437	-	---		---	
	Homestake u/s	1990	sa,My	1	24	-	---		---		---		---		---		3390	-	---		---	
		1990	su,My	1	10	-	---		---		---		---		---		2640	-	---		---	
	Homestake d/s	1988	sa,My	5	29	4	---		---		---		---		---		2296	186	970800	-	29200	3200
Skyline	Jekill River	1987	ca,My	4	---		373	37	38	2	<2	-	1213	122	172	81	72	13	994500	577	5375	718
		1988	ca,Au	4	<2	-	513	187	33	2	<8	-	1038	53	105	6	45	11	995500	577	4500	744
		1989	ca,Jl	4	<2	-	465	44	44	2	<8	-	1615	214	105	32	102	32	989500	1915	10325	1953
	Craig R u/s	1987	ca,My	4	---		983	484	94	8	<2	-	1308	34	129	23	62	9	993750	1258	6475	1204
	Craig R mid	1987	ca,My	4	---		483	66	68	1	<2	-	1025	17	76	6	41	4	996000	1414	4125	1284
	Craig R d/s	1988	ca,Au	4	<2	-	593	208	54	2	<8	-	1235	68	228	12	36	7	994500	577	5725	330

TABLE 4: SEDIMENT QUALITY OF STREAMS NEAR OPERATING OR PROPOSED MINE SITES IN BRITISH COLUMBIA (SILVER TO VOLATILE RESIDUE)

PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	s.d.	Sodium ug/g	s.d.	Strontium ug/g	s.d	Tin ug/g	s.d.	Titanium ug/g	s.d.	Vanadium ug/g	s.d.	Zinc ug/g	s.d.	Residue Total mg/kg	s.d.	Residue Volatile mg/kg	s.d.
Skyline (Cont.)	Stonehouse u/s	1987	ca,Jl	4	---		125	50	36	1	<2	-	1425	86	92	14	275	22	991000	816	9125	946
		1989	ca,Jl	4	<2	-	125	50	60	4	<8	-	963	51	53	3	260	88	989750	2630	10325	2666
		1990	ca,Jl	4	<2	-	250	121	44	7	<8	-	1303	226	64	9	479	115	981750	3403	18175	3593
	Stonehouse d/s	1987	ca,My	4	---		570	380	37	1	<2	-	1533	169	115	14	256	33	979000	7394	20625	7499
		1988	ca,Au	4	<2	-	613	312	39	6	<8	-	1493	170	220	118	127	35	981250	10404	18825	10362
		1989	ca,Jl	4	<2	-	470	65	56	8	<8	-	1473	116	123	50	106	43	987500	1915	12450	1857
		1990	ca,Jl	4	<2	-	333	42	44	3	<8	-	1104	123	182	57	88	7	994000	816	5990	1078
	Johnny Cr u/s	1988	ca,Au	4	<2	-	210	55	97	6	<8	-	1100	53	54	5	235	25	992500	1732	7525	1962
		1989	ca,Jl	4	<2	-	168	47	75	1	<8	-	1195	102	64	8	361	19	991500	2380	8450	2403
		1990	ca,Jl	4	<2	-	280	29	75	8	<8	-	1490	74	83	12	323	59	995250	957	4843	992
	Johnny Cr d/s	1987	ca,My	4	---		518	525	84	14	<2	-	1199	211	64	19	290	105	997250	1258	2638	912
		1988	ca,Au	4	<2	-	350	277	82	15	<8	-	1160	37	62	7	251	25	993000	1155	6875	1201
		1989	ca,Jl	4	<2	-	193	15	70	13	<8	-	1320	121	70	11	308	11	986750	2217	13075	2590
		1990	ca,Jl	4	<2	-	188	15	61	3	<8	-	1340	88	71	14	314	52	993750	1893	6190	1853
	Bronson Cr u/s	1987	ca,My	4	---		758	13	106	3	<2	-	1160	14	82	1	282	49	979500	7326	20550	7340
		1988	ca,Au	4	<2	-	760	84	111	5	<8	-	1178	55	83	1	313	59	981750	3202	18125	3399
		1989	ca,Jl	4	<2	-	688	42	94	9	<8	-	1245	97	92	13	332	60	956250	19311	43700	19425
		1990	ca,Jl	4	<2	-	580	36	91	5	<8	-	1328	57	83	10	376	91	982750	5188	17200	5372
Snip	Bronson Cr d/s	1987	ca,My	4	---		595	107	89	10	16	7	1170	39	86	5	367	76	949750	33837	50300	33974
		1988	ca,Au	4	<2	-	640	39	92	14	<8	-	1198	29	88	5	402	31	962750	10813	37075	10935
		1989	ca,Jl	4	<2	-	625	47	86	5	<8	-	1075	42	82	4	385	34	949500	12557	50525	12310
		1990	ca,Jl	4	<2	-	445	11	81	6	<8	-	1163	50	89	7	473	9	968500	2693	31350	2687
	Monsoon Cr u/s	1988	ca,Au	4	<2	-	218	25	130	4	<8	-	2945	382	150	8	294	30	802750	19138	197250	19138
	Monsoon Cr d/s	1988	ca,Au	4	<2	-	670	29	95	4	<8	-	1253	32	78	1	262	10	978250	3500	21650	3371
		1989	ca,Jl	4	<2	-	578	84	106	20	<8	-	1303	57	89	4	396	73	953750	9912	46025	10055
		1990	ca,Jl	4	<2	-	603	54	89	12	<8	-	1363	125	89	7	328	41	975250	9038	24850	8869
	Iskut R u/s	1988	ca,Au	4	<2	-	548	36	73	2	<8	-	1168	49	100	7	254	15	978000	6272	22125	6538
		1989	ca,Jl	4	<2	-	515	49	73	5	<8	-	1168	102	85	8	279	50	977000	2944	23275	2893
		1990	ca,Jl	4	<2	-	363	43	56	1	<8	-	1093	46	100	6	109	2	986250	829	13850	792
	Iskut R d/s	1988	ca,Au	4	<2	-	415	17	68	1	<8	-	1218	67	150	27	136	22	981750	2217	18100	2214
		1989	ca,Jl	4	<2	-	490	74	61	3	<8	-	1203	28	115	6	206	33	975000	1826	24850	1611
		1990	ca,Jl	4	<2	-	513	83	62	4	<8	-	1343	71	133	4	204	25	984750	1090	15125	965
	Sky Cr u/s	1988	ca,Au	4	<2	-	588	438	81	3	<8	-	2703	209	130	0	523	16	948750	4031	51225	3891
	Sky Cr d/s	1988	ca,Au	4	<2	-	503	142	52	2	<8	-	1328	90	99	10	61	10	982750	3500	17375	3336
		1989	ca,Jl	4	<2	-	358	53	51	6	<8	-	1248	171	93	25	85	18	978750	5252	21175	5129
		1990	ca,Jl	4	<2	-	538	193	50	5	<8	-	1368	79	148	28	250	99	973750	3631	26175	3846
	Craig R u/s	1988	ca,Au	4	<2	-	593	208	54	2	<8	-	1235	68	228	12	36	7	994500	577	5725	330
	Craig R d/s	1988	ca,Au	4	<2	-	405	10	63	32	<8	-	1098	69	76	6	27	3	994500	577	5585	603
		1989	ca,Jl	4	<2	-	433	41	56	4	<8	-	1220	75	102	33	63	4	984000	816	15950	624

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PROJECT	STREAM	YEAR	CODE	n	Silver ug/g	s.d.	Sodium ug/g	s.d.	Strontium ug/g	s.d	Tin ug/g	s.d.	Titanium ug/g	s.d.	Vanadium ug/g	s.d.	Zinc ug/g	s.d.	Residue Total mg/kg	s.d.	Residue Volatile mg/kg	s.d.
Sulphurets	Brucejack u/s	1989	ca,Jl	4	44	11	95	6	48	13	<8	-	67	4	24	1	747	108	965000	2828	35125	2998
	Brucejack d/s	1988	ca,Au	4	48	8	143	51	30	3	16	8	182	19	38	5	423	71	979500	577	20575	602
		1989	ca,Jl	4	76	28	100	0	39	6	<8	-	150	56	150	56	150	56	972500	1915	27500	1606
	Sulphurets Cr	1988	ca,Au	4	<2	-	210	8	84	4	16	8	1298	61	87	6	131	17	981000	2449	18775	2960
		1989	ca,Jl	4	<2	-	203	13	77	3	<8	-	1190	70	93	5	175	10	972500	4203	27400	3927
	Unuk R u/s	1988	ca,Au	4	<2	-	313	22	106	4	<8	-	925	57	108	5	135	19	983750	1500	16150	1162
		1989	ca,Jl	4	<2	-	295	25	124	6	<8	-	1215	48	110	0	117	12	980750	1500	19100	1334
	Unuk R d/s	1988	ca,Au	4	<2	-	265	19	94	5	<8	-	1293	111	98	3	149	14	981000	5477	18700	5356
		1989	ca,Jl	4	<2	-	218	10	85	6	<8	-	1240	61	93	2	149	9	976500	4041	23300	4101
Windy Craggy	Red Creek	1988	ca,Se	4	<2	-	200	0	165	11	<8	-	2135	141	87	7	352	45	986000	816	13775	929
	Tats Cr u/s	1990	ca,Mr	4	<2	-	125	50	235	37	<8	-	2218	322	76	5	110	20	---		---	
		1990	cb,Mr	4	<2	-	120	40	288	22	25	3	2320	445	76	5	126	14	984500	2380	15200	2255
	Tats Cr d/s	1990	ca,Mr	4	<2	-	208	15	112	15	25	3	1638	118	85	4	76	21	---		---	
		1990	cb,Mr	4	<2	-	345	104	175	16	<8	-	1915	145	79	3	128	25	979333	1155	20867	1002
	Tatshenshini R u/s Tats Creek	1990	ca,Mr	4	<2	-	263	32	137	9	28	9	1370	91	146	48	68	9	---		---	
		1990	cb,Mr	4	<2	-	320	41	183	28	29	7	1453	53	150	45	89	9	986500	1732	13525	1836
	Tatshenshini R d/s Tats Creek	1990	ca,Mr	4	<2	-	295	25	155	9	16	6	1255	38	77	29	64	5	---		---	
		1990	cb,Mr	4	<2	-	335	31	178	11	16	8	1700	156	104	31	91	7	985000	1414	14825	1284
	Tatshenshini R u/s Alsek R	1990	ca,Mr	4	<2	-	380	29	163	9	22	3	1463	81	109	9	94	20	---		---	
		1990	cb,Mr	4	<2	-	553	90	211	11	21	1	1813	253	93	6	138	26	985250	2062	14800	1837
	Alsek R u/s	1990	ca,Mr	4	<2	-	240	22	162	12	14	5	1370	56	70	18	41	1	---		---	
		1990	cb,Mr	4	<2	-	300	22	184	8	17	7	1763	200	108	39	54	2	993250	500	6650	719
	Alsek R mid	1990	ca,Mr	4	<2	-	260	22	193	8	17	8	1520	156	100	35	51	5	---		---	
		1990	cb,Mr	4	<2	-	330	20	210	15	10	0	1745	149	79	9	63	5	993500	1000	6565	899
	Alsek R d/s	1990	ca,Mr	4	<2	-	253	31	179	14	10	0	1463	180	74	13	47	3	---		---	
		1990	cb,Mr	4	<2	-	270	37	175	14	22	9	1740	68	118	38	57	3	993500	1000	6750	947
Yellow Giant	Sproatt Cr u/s	1987	sa,Je	6	0.11	0.04	---		---		---		---		---		178	26	---		---	
	Sproatt Cr d/s	1987	sa,Je	6	0.09	0.03	---		---		---		---		---		131	42	---		---	

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