674210

CAMP CHARLIE #4

June 25/73 Monday

Cam:

Sample BF-73-6-20-⑤ (Mineralized green mudstone - redbed contact) (Is this similar to what was found in previous years?) was found as float ~ 2 miles northwest of camp in a small creek. This sample seems to show all the characteristics we are looking for. It is hard to say which direction this float come from, Lord mentions that in the McConnell creek map sheet ice flow directions for Continental Ice was east and southeast, but many of the valleys have been modified by a valley glacial stage going transverse to the continental ice flow directions. Large boulders of biotite-hornblende quartz diorite are abundant on the north slope of this valley, maybe these come from the east, indicating a westerly ice flow direction in the valley stage. (No large bodies of granitic rx to the NW.)

Redbed sequences are found on both sides of the valley - red mudstones, coarse + fine grained Tuffs, siltstones, sandstone + Tuffaceous conglomerate.

One contact between red mudstone and a very fine grained green andesite (JS-73-6-22-⑦⑧,+⑨) had a few flecks of malachite but no primary minerals were seen. This is at the top of the little hill directly south of camp, ~~at these~~ specimens when compared to BF-73-6-20-⑤ looked very similar except for the hornfels.

The usual small amount of malachite - chalcs in conglomerate was observed along the north ridge, and bornite in red Tuffaceous conglomerate was seen near the top of the south ridge in small localized showing. There are 2 claims staked in '70 near the showing on the south ridge but are probably expired. Quite a varied sequence of rocks occur on the south side - we should be able to get an idea of what going on. An andesite porphyry (large outcrop) contains a few flecks of chalcs.

The sample of mineralized green mudstone was found at about where the snow starts to get too deep to walk. To get further North than this requires most of the time being spent in wading through the snow.

We tried the subcamic on the samples showing the area where 6-20-⑤

over →

was found, but no indication of anything. Do we have any standard copper solutions? We could make up some standard strips for comparison if it wasn't too much trouble to get the standard solutions. The standard strips used at UBC last for several years.

—We will be ready to move on saturday (To the magnetic low?)

The radio sched at 6:30 is too early for most of the work we are doing, 8:00 pm would be a better time if this is possible.

— Jo.

June 26/73.

Camp Charlie

Hope the helicopter finally makes contact with you at a reasonable time.

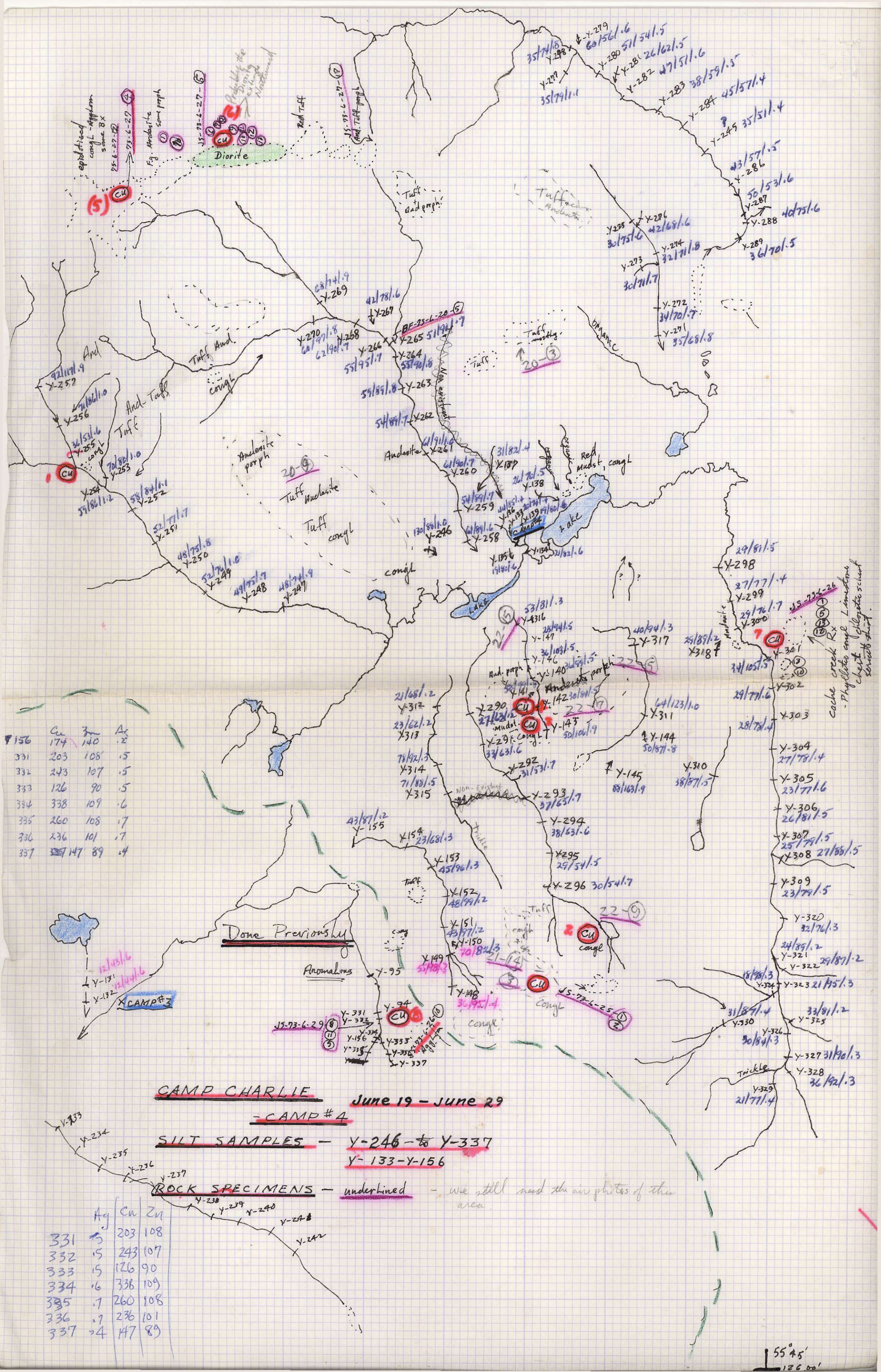
The float specimen you found (BF-73-6-20-5) appears to be the right sort of thing. Most of the copper previously found - including the ~~of~~ Northstar - Koza Copper showings to the north are of chalcocite - bornite apparently associated with fracture systems.

Your specimen seems to be a very narrow zone of small fragments veined with bornite and ~~of~~ chalcocite at the top of the green mudstone. Very fine disseminated chalcocite appears in the green material. The red bed appears to be barren - the malachite in it seems to be secondary and to have migrated along small fractures for short distances from the contact.

The copper showing found west or south west of Mt Bates was of course very small but was also apparently strata bound - a 2 - 3 foot thick green bed of sediment.

Best of luck and thanks for the neat classification + numbering of rocks.

Cam



	Cu	Zn	Ag
156	174	140	.2
331	203	108	.5
332	243	107	.5
333	126	90	.5
334	338	109	.6
335	260	108	.7
336	236	101	.7
337	147	89	.4

	Ag	Cu	Zn
331	.5	203	108
332	.5	243	107
333	.5	126	90
334	.6	338	109
335	.7	260	108
336	.7	236	101
337	.4	147	89

CAMP CHARLIE

June 30/73

CAMP #4

Date: June 19th to June 29th/73

Location: N.E. of Takla Lake, ~4 miles west of camp #3, near 55°45', 126°00'

Maps: 93 M/16E, Airborne magnetic - Lion creek.

Air photo # - BC 1581 #-83, 84, 82, BC 2067 - 100, 101, 99, 98

Silt Samples - Y-246 - Y-337, Y-133 - Y-156 - 114 samples

Anomalous silt value Y-94 (from camp #3) was investigated in some detail. Y-94 was resampled and samples taken at 300' spacing up the creek. When Y-94 was taken there was 3' of snow (June 10th) but on June 29th the snow had virtually disappeared. Traces of malachite stain are common in the Red tuffaceous conglomerate that outcrops near Y-94 and a few hundred feet upstream the creek flows over bedrock. The conglomerate is locally highly epidotized (JS-73-6-29-5) and some of the red clasts have chalcocite? (JS-73-6-29-11). At the top of the creek float is commonly stained with malachite. Just downstream from Y-94 a small lense-like body of green mudstone (JS-73-6-29-8) was found in outcrop in the conglomerate. The sample seems to be bedded with more chalcocite concentrated in the upper part than in the lower. Lenses of red mudstone - siltstone are common and it seems this green mudstone was the product of a localized reducing environment rather than being a detrital.

Mineralization: Copper showings are as follows;

(1) Malachite - chalco in conglomerate - North side. (no sample)

(2) Malachite - Bornite in Tuffaceous congl - south side (BF-73-6-22-9)

(3) Malachite - at contact between Red mudstone and very fine-grained andesite (JS-73-6-22-7 8 9)

(4) Chalco (small flecks) in Andesite porphyry (JS-73-6-22-)

(5) Chalcocite in intense epidotized band - near location of a previous showing - exact location of previous showing is not plotted on map - not known if this is the same (JS-73-6-27-4) or a new showing (on top of North ridge)

(6) Traces of malachite in a stain zone near the middle of the Diorite stock. Abundant pyrite, intense biotitization, some sericite (JS-73-6-27-7 8 etc)

(on back) →

(7) Traces of Malachite in Phyllite sandstone - conglomerate (Cache Creek group)

(8) ~~green~~ mudstone lenses in Red kp. tuffaceous conglomerate (discussed under silt samples above)

(9) and of course BF-78-6-20-(5)

Geology: Camp #4 area is characterized by a sequence of intercalated lavas and pyroclastics with mudstones, sandstones and conglomerate. The pyroclastics grade from obvious tuffs to Tuffaceous andesite ~~one~~ one bed ~~and to~~ Tuffaceous sandstones and tuffaceous conglomerate. The area is also characterized by a fair amount of alteration, this is probably due to the intrusion of a diorite stock that outcrops on the far north ridge.

The Diorite stock was traced for 3000' along the ridge, starting with a Hornblende - biotite diorite (27-(5) HBL dominate & coarse grained), (covered Contacts are probably faults) to a fine grained diorite (27-12?) then to a coarse grained Biotite - hornblende diorite (biotite dominate) to a Biotite diorite (coarse grained). Qtz is absent. A small stain zone occurs near the western boundary, a suite of representive rocks was collected (73-6-27-(7) etc) Traces of Malachite were seen

The stock seems to be responsible for the abundant epidote inclusions and veins found in the surrounding sediment and lavas. (slight contact meta) The magnetic anomaly is probably due largely to the intrusive rocks themselves and the magnetism in the ~~rocks~~ andesites from PXN → HBL + magnetite.

Red beds are found on both sides of the valley, conglomerate is still the dominate rock type. Strikes in NW-SE and dips seem to be mostly to the west. The conglomerate is more distinctively tuffaceous. Has the area to the south of Mt Bates been looked at? - maybe we can take a look later in the summer, the environment for gr. mudstone - Cu seems to be favourable around Mt Bates.

Cache Creek Group outcrops on both sides of the dividing creek but (familiar) conglomerate steps near the western top of the creek valley.

— Jo.

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CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

CHARLIE #4

COLLECTORS: J. Shearer
AREA: NE of Takla Lake, Camp 3 + 4
FIELD MAP: Air photos – BC 1591 - 91-92 etc. BC 20067 - 99-100 etc
DATE: June 9th → 29th/73

RESULTS PLOTTED BY: J. Shearer
POSTING MAP: Tracing
DATE:

ANALYST:
METHOD: (A):
(B):
DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
camp #3 Y-131	1000' NW of Camp #3 - creek coming out of Lk	X	X	X		X	X	X	3'	2"	S															
camp #3 Y-132	1000' downstream from Y-131	X	X	X		X	X	X	3'	2"	S															
camp #4 Y-133	CAMP #4 creek,		X	X				X	2'	4"	S-M															
Y-134	~~camp~~ creek at large swamp		X	X		X		X	2'	5"	S															
Y-135	small creek W of camp		X	X		X		X	1½	3"	S.															
Y-136	1000' NW of camp on Camp Cr		X	X		X		X	3'	2"	S															
Y-137	small creek draing SW		X	X		X		X	2'	3"	S															
Y-138	small creek 090°		X	X		X		X	2'	4"	S															
Y-139	cr 400' E of camp		X	X		X		X	3'	6"	S															
Y-140	Fault creek 175°	X	X	X				X	2'	6"	F															
Y-141	Trb, 270°, 600' upstream Y-140								1'	2"	S															
Y-142	1000' upstream Y-140, 175°,								3'	3"	F															
Y-143	800' upstream Y-142, trace organics above	X	X	X		X		X	3'	4"	F															
Y-144	Small Cr., going E	X	X	X		X		X	1'	2"	S															
Y-145	130°, good sample, smaller		X	X		X		X	6"	4"	S															
Y-146	1000' downstream from Y-140	X	X	X				X	3'	6"	F															
Y-147	800' downstream from Y-146 trace organic bottom	X	X	X				X	4'	12"	M															
Y-148	at top of talus slope, start of creek	X	X	X				X	3'	6"	F															
Y-149	1000' downstream Y-148,	X	X	X				X	3'	6"	F															
Y-150	Trb, 120°, small creek, 600' Y-149	X	X	X				X	4'	4"	S															
Y-151	1000' downstream Y-149 camp on E side.	X	X	X				X	4'	5"	F															
Y-152	1000' downstream Y-151	X	X	X				X	6'	4"	F															
Y-153	1000' downstream Y-152	X	X	X				X	6'	3"	F															
Y-154	1000' downstream Y-153 old Burn Area.	X	X	X				X	5'	6"	F															
Y-155	– at swamp – 1000+ Y-154	X	X	X				X	6'	5"	M															
Y-156	on West Trb 1000+ Y-94	X	X	X				X	2'	4"	F															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER
AREA: CAMP 3 – CHARLIES
FIELD MAP:
DATE: JUNE 10-13 /73.

RESULTS PLOTTED BY:
POSTING MAP:
DATE:

ANALYST:
METHOD: (A):
(B):
DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-86			✓	✓					8'	8"	MF															
Y-87	WELL-RND. COBBLE BED.		✓	✓					18'	6"	MF															
Y-88			✓	✓					14'	10"	M															
Y-89	CANYON (SMALL).		✓	✓					8'	1'	M															
Y-90	WELL-RND CRS. GRAV. BED.		✓	✓					16'	8"	MF															
Y-91	SLIGHT CANYON.		✓	✓					14'	6"	MF															
Y-92.			✓	✓					12'	8"	M.															
Y-93	MOD. GULLY.		✓	✓					14'	8"	MF															
Y-94	POOR SAM. SNOW COVERED. CANYON.	✓	✓						5'	4"	MF															
Y-95	SNOW-COVERED BANKS.	✓	✓	✓					6'	4"	MF															
Y-96	"	✓	✓						6'	4"	MF.															
Y-97			✓	✓					5'	6"	M															
Y-98	BELOW SWAMP.		✓	✓		✓			5'	1'	M-SL.															
Y-99	SWAMP		✓	✓		✓			4'	1'	SL.															
Y-100	SWAMP	✓	✓	✓		✓			5'	1'	SL.															
Y-201	SWAMPY AREA.		✓	✓					10'	1'	M.															
Y-202.	SWAMPY AREA.		✓	✓		✓			4'	3"	M-SL															
Y-203	BELOW BEAVER DAM		✓	✓		✓			7'	2"	M-SL															
Y-204	SWAMPY		✓	✓					5'	8"	M-SL															
Y-205	POOR SAM.	✓	✓			✓			2½'	3"	M-SL															
Y-206			✓	✓		✓			2½'	5"	M-SL															
Y-207			✓	✓		✓			3'	5"	M-SL															
Y-208	SWAMPY		✓	✓					16'	3"	M-SL.															
Y-209	HIGH WATER			✓		✓			10'	3½'	M-SL															
Y-210	NEAR BANK.			✓		✓			20'	3½'	M-SL															
Y-211			✓	✓					12'	3"	M.															
Y-212.				✓		✓			10'	3'	MF															
Y-213			✓	✓					12'	2'	MF															
Y-214	HIGH WATER, CANYON.	✓	✓						10'	3'	F.															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER

AREA: CAMP 3 – CHARLIE

FIELD MAP:

DATE: JUNE 13-17/73.

RESULTS PLOTTED BY:

POSTING MAP:

DATE:

ANALYST:

METHOD: (A):

(B):

DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-215	SLUMPING. UPSTREAM.		✓	✓					16'	2'	MF.															
Y-216	CANYON.		✓	✓					12'	3'	F.															
Y-217			✓	✓					12'	10"	MF.															
Y-218			✓	✓					14'	1'	MF.															
Y-219			✓	✓		✓			2'	2"	M.															
Y-220	ORIGINAL SAMPLE LOST. RE-TAKEN FROM AREA.																									
Y-221		✓	✓						1½'	3"	MF.															
Y-222	PATCHY SNOW (2'-3')	✓	✓	✓					2½'	4"	M.															
Y-223		✓	✓						2½'	4"	VF.															
Y-224	MOD-STEEP NARROW GULLY	✓	✓	✓					4'	3"	VF.															
Y-225	SMALL CANYON.	✓	✓	✓					4'	4"	F.															
Y-226		✓	✓	✓					5'	4"	MF.															
Y-227			✓	✓					6'	4"	M.															
Y-228	WILLOW SWAMP.		✓	✓					4'	4"	M-SL.															
Y-229	WILLOW SWAMP			✓					6'	1'	M-SL.															
Y-230				✓					6'	1'	M-SL.															
Y-231			✓	✓		✓			8'	6"	M.															
Y-232		✓	✓	✓					6'	8"	MF.															
Y-233			✓	✓		✓			4'	1'	M-SL.															
Y-234			✓	✓					4'	1'	M-SL.															
Y-235			✓	✓		✓			3'	4"	M-SL.															
Y-236			✓	✓					4'	10"	M-SL.															
Y-237		✓	✓	✓		✓			4'	10"	M-SL.															
Y-238			✓	✓					3'	8"	M.															
Y-239			✓	✓		✓			3'	6"	M.															
Y-240	POOR SAM	✓	✓						3'	5"	MF.															
Y-241	PATCHY SNOW.	✓	✓	✓		✓			3'	6"	M.															
Y-242	SNOWY BANKS.	✓	✓	✓		✓			2'	4"	M.															
Y-243	PATCHY SNOW (2'-3')	✓	✓	✓					2½'	4"	F.															
Y-244		✓	✓	✓		✓			2'	4"	M.															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER

AREA:

FIELD MAP:

DATE: JUNE 13 – 17 /73.

RESULTS PLOTTED BY:

POSTING MAP:

DATE:

ANALYST:

METHOD: (A):

(B):

DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-245			✓	✓		✓			2'	2"	M-SL.															
Y-246	SEMI-SWAMP			✓		✓			4'	6"	M-SL															
Y-247		✓	✓	✓					8'	1'	M.															
Y-248			✓	✓					10'	8"	MF.															
Y-249			✓	✓					10'	10"	MF.															
Y-250			✓	✓					10'	1'	M															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER.
AREA:
FIELD MAP:
DATE: JUNE 19 – JUNE 21 /73.

RESULTS PLOTTED BY:
POSTING MAP:
DATE:

ANALYST:
METHOD: (A):
(B):
DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-251		✓	✓	✓					9'	10"	MF.															
Y-252		✓	✓						10'	8"	MF.															
Y-253.	TRIBUTARY.	✓	✓						4'	3"	M.															
Y-254		✓	✓						10'	10"	MF.															
Y-255		✓	✓						8'	8"	M.															
Y-256.			✓	✓					5'	4"	M.															
Y-257		✓	✓	✓					6'	6"	M.															
Y-258			✓	✓					10'	10"	M.															
Y-259			✓	✓					12'	10"	M.															
Y-260			✓	✓					10'	10"	MF															
Y-261			✓	✓					16'	8"	M.															
Y-262.			✓	✓					16'	8"	M.															
Y-263.			✓	✓					12'	1'	MF.															
Y-264			✓	✓					12'	10"	M.				✓											
Y-265		✓	✓	✓					6'	6"	M.				✓											
Y-266.		✓	✓	✓					10'	10"	M.				✓											
Y-267		✓	✓	✓					4'	3"	M.															
Y-268			✓	✓					10'	10"	M.															
Y-269			✓	✓					5'	10"	M.															
Y-270		✓	✓	✓					9'	8"	M.															
Y-271			✓	✓					3'	1'	M-Sh.															
Y-272.			✓	✓.					3½'	9"	M.															
Y-273		✓	✓	✓		✓			3'	6"	M.															
Y-274		✓	✓	✓					3'	5"	M.															
Y-275		✓	✓	✓		✓			3½'	5"	M.															
Y-276	SEVERAL TRICKLES, POOR SAM.	✓	✓	✓		✓			9'	2"	M-Sh.															
Y-277		✓	✓	✓					6'	5"	F															
Y-278		✓	✓						4'	4"	M.															
Y-279.			✓	✓					10'	1'	MF.															
Y-280		✓	✓						10'	1'	MF.															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER

AREA:

FIELD MAP:

DATE: JUNE 21 – 24 / 73

RESULTS PLOTTED BY:

POSTING MAP:

DATE:

ANALYST:

METHOD: (A):

(B):

DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-281		✓	✓	✓					3'	3"	M.															
Y-282			✓	✓					20'	6"	M.															
Y-283			✓	✓					18'	10"	M.															
Y-284			✓	✓					20'	6"	M.															
Y-285			✓	✓					14'	1'	MF.															
Y-286.			✓	✓					13'	1'	M.															
Y-287			✓	✓					12'	1'	M.															
Y-288		✓	✓	✓					5'	4"	M.															
Y-289		✓	✓	✓		✓			6'	1½'	M-SL.															
Y-290			✓	✓					4'	6"	M-SL.															
Y-291			✓	✓					4'	6"	M.															
Y-292			✓	✓					4'	6"	M.															
Y-293			✓	✓					4'	6"	M.															
Y-294		✓	✓	✓		✓			4'	6"	MF															
Y-295			✓	✓					4'	6"	MF															
Y-296		✓	✓	✓					3½'	4"	M.															
Y-297	TRICKLE.			✓	✓	✓			2'	3"	M															
Y-298	SLUMPING.		✓	✓					10'	6"	M.															
Y-299	"		✓	✓					12'	8"	MF.															
Y-300	"		✓	✓					12'	8"	M															
Y-301	"		✓	✓					20'	8"	M															
Y-302.	"		✓	✓					14'	10"	M.															
Y-303	"		✓	✓					16'	1'	M.															
Y-304	"		✓	✓					14'	1'	M.															
Y-305	"		✓	✓					14'	1'	M.															
Y-306	"		✓	✓		✓			12'	1'	M															
Y-307	"		✓	✓					11'	1'	M.															
Y-308			✓	✓					4'	4"	M.															
Y-309			✓	✓					10'	6"	M.															
Y-310.		✓	✓	✓		✓			3'	4"	M.															

CHEMEX LABS LTD.
STREAM SEDIMENTS – WATER

COLLECTORS: B. FRASER

AREA:

FIELD MAP:

DATE: JUNE 24– 29. /73.

RESULTS PLOTTED BY:

POSTING MAP:

DATE:

ANALYST:

METHOD: (A):

(B):

DATE:

SAMPLE NUMBER	NOTES	SEDIMENT DATA					STREAM DATA						DRY GULLY	SPRING	SEDIMENT RESULTS									WATER RESULTS		
															Field Tests			Lab. Tests								
		Gravel	Sand	Silt	Clay	Organic	Bank	Active	Width	Depth	Velocity	pH			Cu	HM		Mo	Cu	Pb	Zn					
Y-311		✓	✓						3'	3"	M.															
Y-312	WITH J. SHEARER.			✓		✓			3½'	8"	SL.															
Y-313.	"		✓	✓					3½'	6"	M-SL.															
Y-314	"	✓	✓	✓		✓			4'	3"	M.															
Y-315	"		✓	✓	✓	✓			2½'	3"	M.															
Y-316.	"	✓	✓	✓		✓			3'	10"	SL.															
Y-317.	"	✓	✓	✓		✓			3'	4"	M-SL.															
Y-318	"		✓	✓		✓			4'	5"	M-SL.															
Y-319		✓	✓	✓		✓			2½'	3"	M-SL.															
Y-320		✓	✓	✓		✓			10'	10"	MF.															
Y-321			✓	✓					10'	10"	MF.															
Y-322			✓	✓					6'	3"	M.															
Y-323.			✓	✓					10'	10"	M.															
Y-324		✓	✓	✓					6'	5"	M.															
Y-325		✓	✓	✓					5'	6"	MF.															
Y-326.		✓	✓	✓					10'	10"	MF.															
Y-327		✓	✓	✓					9'	10"	MF.															
Y-328		✓	✓	✓		✓			5'	4"	M.															
Y-329.		✓	✓	✓					6'	4"	MF.															
Y-330		✓	✓			✓			5'	4"	MF.															
Y-331	SAME AS Y-94.	✓	✓	✓					4'	4"	MF.															
Y-332.	SILTS Y-331 THROUGH	✓	✓	✓					4'	4"	MF.															
Y-333	TO Y-337 ARE FOL-	✓	✓	✓					3'	3"	MF.															
Y-334	LOW UP WORK.	✓	✓	✓		✓			2'	3"	MF.															
Y-335	SEE FIELD NOTES.	✓	✓	✓		✓			2'	3"	MF.															
Y-336.	AND DESCRIPTIVE.	✓	✓	✓		✓			3'	2"	MF.															
Y-337.	MAP.		✓	✓		✓			TRICKLE.		M.															