

Appendix 4B

Geological Survey of Canada
Banks Island KIM samples - HEAVY MINERAL CONCENTRATE PROCESSING WEIGHTS

Sample Number	Mass (g)												Normalized Picking Fraction Mass Determination							
	<2.0 mm Table Concentrate																			
	0.18 to 2.0 mm Heavy Liquid Separation S.G 3.20																			
	0.25-2.0 mm HMC SG>3.2																			
	Total	-0.18 mm	Total	Lights <3.2 S.G.	Total 0.18 to 0.25 mm HMC	Total	<0.25 mm (wash)	Mag HMC	Nonferromagnetic HMC Processed Split ¹											
Total									0.25 to 0.5 mm	0.5 to 1.0 mm	1.0 to 2.0 mm									
15SUV001	1,763.8	512.0	1,251.8	939.5	61.9	250.4	16.7	93.1	140.6	81.2	37.5	21.9	24,100	312.3	0.01296	250.4	103.9	81.2	0.616	
15SUV002	1,453.2	302.0	1,151.2	858.2	32.6	260.4	9.6	105.7	145.1	65.6	45.2	34.3	18,100	293.0	0.01619	260.4	143.9	65.6	0.762	
15SUV003	1,408.2	247.8	1,160.4	853.2	29.8	277.4	11.4	88.5	177.5	77.8	66.2	33.5	17,700	307.2	0.01736	277.4	156.7	77.8	0.643	
15SUV004	2,715.3	1,019.3	1,696.0	1,313.7	106.2	276.1	14.2	120.8	141.1	84.3	33.7	23.1	25,400	382.3	0.01505	276.1	108.7	84.3	0.593	
15SUV005	2,263.7	723.6	1,540.1	1,360.5	29.9	149.7	3.5	58.9	87.3	47.5	27.0	12.8	20,000	179.6	0.00898	149.7	74.9	47.5	1.053	
15SUV006	1,291.9	379.6	912.3	786.0	39.0	87.3	2.8	27.1	57.4	42.1	11.0	4.3	20,200	126.3	0.00625	87.3	43.2	42.1	1.188	
15SUV008	1,112.7	506.2	606.5	574.9	8.9	22.7	2.6	2.5	17.6	11.5	4.4	1.7	9,000	31.6	0.00351	22.7	25.2	11.5	4.348	
15SUV009	1,655.3	530.5	1,124.8	917.2	13.0	194.6	7.3	45.9	141.4	32.0	63.5	45.9	11,400	207.6	0.01821	194.6	170.7	32.0	1.563	
15SUV010	1,764.3	649.9	1,114.4	911.4	23.3	179.7	11.1	23.8	144.8	57.9	61.8	25.1	23,200	203.0	0.00875	179.7	77.5	57.9	0.864	
15SUV014	1,792.4	365.2	1,427.2	1,162.5	20.5	244.2	13.9	43.8	186.5	53.9	78.6	54.0	18,500	264.7	0.01431	244.2	132.0	53.9	0.928	
15SUV015	1,391.1	487.1	904.0	722.6	28.1	153.3	23.5	2.4	127.4	58.1	49.0	20.3	8,200	181.4	0.02212	153.3	187.0	58.1	0.861	
15SUV018	961.7	239.5	722.2	683.2	4.3	34.7	0.7	0.6	33.4	7.6	13.4	12.4	10,900	39.0	0.00358	34.7	31.8	7.6	6.579	
15SUV019	1,339.1	362.2	976.9	855.3	25.1	96.5	4.2	0.5	91.8	60.7	22.5	8.6	13,200	121.6	0.00921	96.5	73.1	60.7	0.824	
15SUV020	1,288.3	323.6	964.7	652.9	27.8	284.0	5.9	115.1	163.0	42.9	66.4	53.7	21,600	311.8	0.01444	284.0	131.5	42.9	1.166	
15SUV021	1,021.3	312.7	708.6	582.9	26.0	99.7	2.5	34.7	62.5	35.3	20.5	6.7	21,200	125.7	0.00593	99.7	47.0	35.3	1.416	
15SUV022	930.2	380.8	549.4	546.2	1.1	2.1	0.2	0.4	1.5	0.9	0.4	0.2	20,100	3.2	0.00016	2.1	1.0	0.9	55.556	
15SUV023	958.8	322.9	635.9	633.5	0.9	1.5	0.0	0.4	1.1	0.7	0.3	0.1	18,800	2.4	0.00013	1.5	0.8	0.7	71.429	
15SUV024	1,793.4	460.1	1,333.3	1,312.5	9.8	11.0	0.8	2.4	7.8	6.7	0.8	0.3	15,500	20.8	0.00134	11.0	7.1	6.7	7.463	
15SUV025	1,778.6	788.6	990.0	884.8	17.3	87.9	2.1	12.5	73.3	27.1	15.5	30.7	18,100	105.2	0.00581	87.9	48.6	27.1	1.845	
15SUV026	1,686.1	561.1	1,125.0	949.7	33.4	141.9	2.1	25.5	114.3	48.2	36.2	29.9	18,100	175.3	0.00969	141.9	78.4	48.2	1.037	
15SUV027	1,375.6	290.2	1,085.4	1,013.3	9.3	62.8	3.3	8.1	51.4	18.6	20.0	12.8	19,500	72.1	0.00370	62.8	32.2	18.6	2.688	
15SUV028	1,109.2	245.0	864.2	844.1	4.6	15.5	0.6	1.9	13.0	8.6	2.5	1.9	7,900	20.1	0.00254	15.5	19.6	8.6	5.814	
15SUV030	1,152.7	321.9	830.8	763.8	22.1	44.9	1.8	12.9	30.2	18.4	7.4	4.4	13,400	67.0	0.00500	44.9	33.5	18.4	2.717	
15SUV031	1,502.0	499.1	1,002.9	858.1	47.0	97.8	3.5	38.7	55.6	41.1	10.0	4.5	14,400	144.8	0.01006	97.8	67.9	41.1	1.217	
15SUV032	1,002.4	411.4	591.0	501.1	20.7	69.2	1.4	24.0	43.8	27.6	13.8	2.4	18,300	89.9	0.00491	69.2	37.8	27.6	1.812	
15SUV033	1,085.2	731.8	353.4	322.3	14.8	16.3	0.8	4.7	10.8	7.1	2.8	0.9	22,000	31.1	0.00141	16.3	7.4	7.1	7.042	
15SUV050	1,538.3	499.7	1,038.6	927.7	25.1	85.8	3.0	17.5	65.3	38.4	19.3	7.6	19,200	110.9	0.00578	85.8	44.7	38.4	1.302	
15SUV051	1,294.7	340.5	954.2	792.4	24.6	137.2	3.4	50.4	83.4	47.6	29.2	6.6	16,600	161.8	0.00975	137.2	82.7	47.6	1.050	
15SUV052	1,479.0	584.9	894.1	674.7	58.7	160.7	8.1	74.9	77.7	49.6	20.2	7.9	26,800	219.4	0.00819	160.7	60.0	49.6	1.008	
15SUV053	1,197.0	465.6	731.4	579.7	47.3	104.4	5.4	45.5	53.5	34.7	14.9	3.9	23,000	151.7	0.00660	104.4	45.4	34.7	1.441	
15SUV054	725.9	311.3	414.6	395.9	7.3	11.4	1.2	3.4	6.8	4.7	1.7	0.4	16,000	18.7	0.00117	11.4	7.1	4.7	10.638	
15SUV055*	1,417.0	429.0	988.0	860.3	37.8	89.9	4.2	32.9	52.8	38.4	10.3	4.1	12,200	127.7	0.01047	89.9	73.7	38.4	1.302	
16SUV-013	1734.2	814.7	919.5	870.5		49.0	4.6	13.00	31.4	18.1	6.3	7.0	9,800	49.0	0.00500	49.0	50.0	18.1	2.762	
16SUV-014	1096.0	503.8	592.2	341.8		250.4	13.0	141.30	96.1	36.1	23.0	37.0	19,000	250.4	0.01318	250.4	131.8	36.1	1.385	
16SUV-015	1655.0	850.8	804.2	764.2		40.0	4.4	6.20	29.4	14.2	8.3	6.9	23,300	40.0	0.00172	40.0	17.2	14.2	3.521	
16SUV-016	1409.5	740.8	668.7	611.3		57.4	4.7	8.90	43.8	19.9	14.1	9.8	19,800	57.4	0.00290	57.4	29.0	19.9	2.513	
16SUV-017	1670.1	769.8	900.3	899.4		0.9	0.0	0.01	0.8	0.8	0.01	0.03	6,200	0.9	0.00015	0.9	1.5	0.8	62.500	
16SUV-018	1603.1	649.6	953.5	951.6		1.9	0.2	0.01	1.7	1.5	0.1	0.08	11,000	1.9	0.00017	1.9	1.7	1.5	33.333	
16SUV-019	1033.0	838.7	194.3	181.2		13.1	3.6	0.50	9.0	3.5	3.2	2.3	14,100	13.1	0.00093	13.1	9.3	3.5	14.286	
16SUV-020	781.1	611.8	169.3	151.9		17.4	5.1	0.40	11.9	4.7	4.1	3.1	15,700	17.4	0.00111	17.4	11.1	4.7	10.638	
16SUV-022	861.5	811.0	50.5	49.4		1.1	0.1	0.01	1.0	0.7	0.1	0.2	23,100	1.1	0.00005	1.1	0.5	0.7	71.429	
16SUV-023	1095.2	678.6	416.6	410.0		6.6	0.5	0.40	5.7	2.6	1.6	1.5	11,200	6.6	0.00059	6.6	5.9	2.6	19.231	
16SUV-024	1941.1	1035.5	905.6	895.0		10.6	1.2	0.01	9.4	6.5	2.4	0.5	22,900	10.6	0.00046	10.6	4.6	6.5	7.692	
16SUV-025	2080.6	794.8	1285.8	1121.5		164.3	18.5	14.20	131.6	69.9	45.4	16.3	21,700	164.3	0.00757	164.3	75.7	69.9	0.715	
16SUV-026	1715.4	824.7	890.7	849.2		41.5	8.3	1.20	32.0	23.6	6.2	2.2	16,000	41.5	0.00259	41.5	25.9	23.6	2.119	
16SUV-027	1872.5	446.2	1426.3	1268.1		158.2	13.1	44.90	100.2	45.9	29.7	24.6	17,700	158.2	0.00894	158.2	89.4	45.9	1.089	
16SUV-028	1373.4	504.9	868.5	714.5		154.0	8.3	48.50	97.2	45.3	30.7	21.2	27,500	154.0	0.00560	154.0	56.0	45.3	1.104	
16SUV-030	960.3	315.8	644.5	572.7		71.8	6.2	24.20	41.4	18.8	10.7	11.9	15,800	71.8	0.00454	71.8	45.4	18.8	2.660	
Blanks																				
15SUV017	1,367.8	669.3	698.5	481.2	96.6	120.7	14.6	26.0	80.1	72.4	7.5	0.2	17,900	217.3	0.01214	120.7	67.4	72.4	0.691	
15SUV029	951.7	511.3	440.4	283.8	68.5	88.1	5.0	8.3	74.8	56.9	15.2	2.7	13,800	156.6	0.01135	88.1	63.8	56.9	0.879	
16SUV-021	1114.9	813.1	301.8	216.6		85.2	9.3	8.10	67.8	49.1	14.3	4.4	14,300	85.2	0.00596	85.2	59.6	49.1	1.018	
16SUV-029	1539.8	881.8	658.0	504.2		153.8	38.3	22.60	92.9	78.6	13.7	0.6	16,400	153.8	0.00938	153.8	93.8	78.6	0.636	

¹Values greater than 0.1 g were only weighed to one decimal place

*sample 15SUV055 is a field duplicate of 15SUV031

**Shading identifies Beaufort Formation samples.

Average	
Total HMC (0.25 - 0.5 mm) SG>3.2 Mass (g)	
Sediment Type	Normalized to 10 kg Table Feed (<2 mm)
Stream Sediments	74.6
Beaufort Fm.	53.8*
Till	5.9
Glaciofluvial	17.7
Bedrock	2.6

*Note, if sample 15SUV015 is excluded (187 g), the average total HMC mass for Beaufort Fm. samples is 31.6 g / 10 kg Table Feed (<2 mm)