

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													Total HMC (0.18 - 2.0 mm) / Table Feed (<2 mm) (g)	Total HMC (0.18 - 2.0 mm) / Table Feed (<2 mm) (g)	Total HMC (0.25 - 2.0 mm) SG>3.2 (g)	Total HMC (0.25 - 2.0 mm) SG>3.2 normalized to 10 kg Table Feed (<2 mm)	Nonferromagnetic HMC 0.25 - 0.5 mm picking fraction (g)	normalization to 50 g of 0.25 - 0.5 mm picking fraction
	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											
								0.25 to 0.5 mm	0.5 to 1.0 mm	1.0 to 2.0 mm									
15SUV001	1763.8	512.0	1251.8	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	1453.2	302.0	1151.2	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	1408.2	247.8	1160.4	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	2715.3	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	2263.7	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	1539.3	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)