



TABLE I
X-RAY DIFFRACTION ANALYSIS

Client:	PTS Laboratories, Inc.	MI#:	11182
PTS File #	41269; Marsland Core Project	Sample Type:	Sediment samples
PO#	11-133	Date:	06.06.11

X-Ray Diffraction Results

Mineral Constituents	Chemical Formula	M1454c				M1624c				
		Run #	Run 1	Run 2	Run 3	Run 4	Run 1	Run 2	Run 4	Run 5
		Lab ID	11182-01	11182-02	11182-03	11182-04	11182-05	11182-06	11182-07	11182-08
Quartz	SiO ₂	15	11	63	29	15	14	54	23	
Plagioclase Feldspar	(Na,Ca)AlSi ₃ O ₈	9	8	4	5	11	10	4	5	
K-Feldspar	KAlSi ₃ O ₈	2	2	8	5	5	3	8	4	
Calcite	CaCO ₃	47	35	trc		13	1	1		
Dolomite	(Ca,Mg)(CO ₃) ₂				3			2		
Siderite	FeCO ₃			1						
Pyrite	FeS ₂			1					1	
Magnetite	alpha-Fe ₃ O ₄		1	trc		2				
Magnesium Vanadium Oxide	beta-Mg(VO ₃)			2						
Kaolinite	Al ₂ Si ₂ O ₅ (OH) ₄			1	2			trc	2	
Chlorite	(Fe,Al,Mg) ₃ (Si,Al) ₄ O ₁₀ (OH) ₈				2		trc		2	
Illite/Mica	KAl ₂ (Si ₃ AlO ₁₀)(OH) ₂	2	5	2	6	5	12	3	8	
Mixed-Layered Illite/Smectite	K _{0.5} Al ₂ (Si,Al) ₄ O ₁₀ (OH) ₂ · 2H ₂ O		38	18	48	49	60	28	55	
Montmorillonite	Na _{0.3} (Al,Mg) ₂ Si ₄ O ₁₀ (OH) ₂ · xH ₂ O	25								
TOTAL		100	100	100	100	100	100	100	100	
% Illite Layers in ML Illite/Smectite	(+/- 5%)		45%	10%	25%	10%	25%	15%	20%	

PARTICLE SIZE SUMMARY
(METHODOLOGY: ASTM D422/D4464M)

PROJECT NAME: Marsland Core
PROJECT NO: N/A

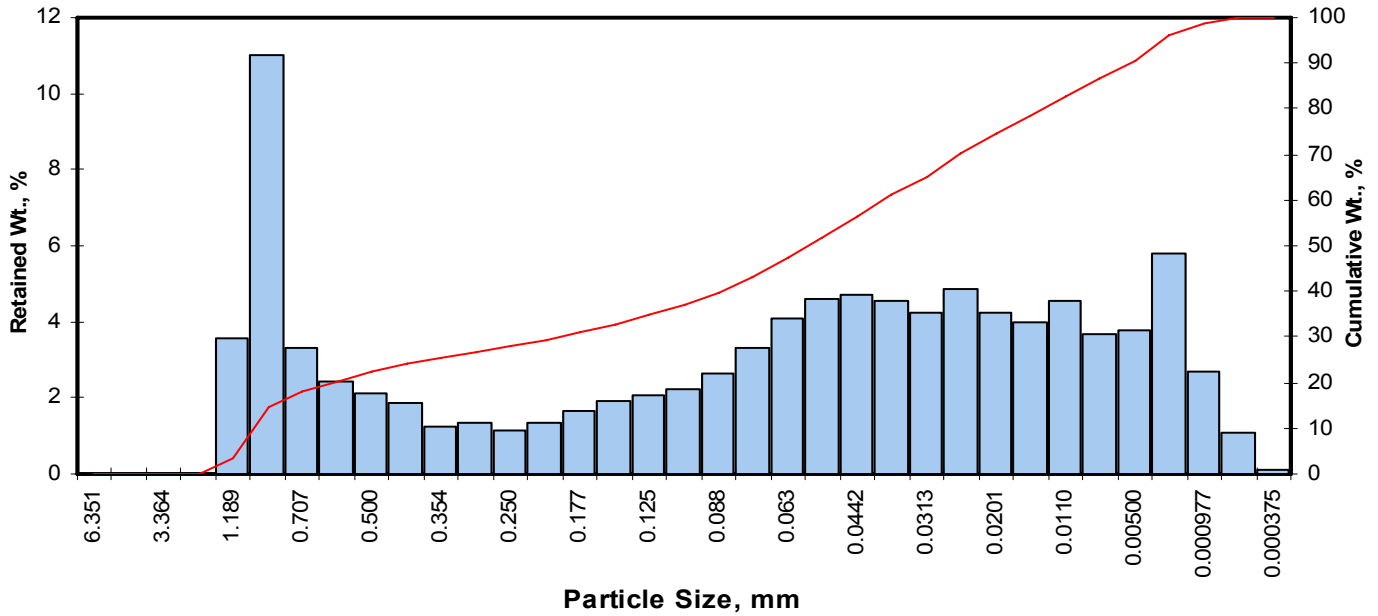
Sample ID	Depth, ft.	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
			Gravel	Sand Size			Silt	Clay	
				Coarse	Medium	Fine			
M-1454c Run 1	N/A	0.056	0.00	0.00	24.31	18.80	47.25	9.64	56.89
M-1454c Run 2	N/A	0.027	0.00	0.00	8.58	24.41	46.36	20.65	67.01
M-1454c Run 3	N/A	0.075	0.00	0.00	2.74	47.49	29.85	19.92	49.77
M-1454c Run 4	N/A	0.007	0.00	0.00	0.00	0.45	60.15	39.40	99.55
M-1624c Run 1	N/A	0.049	0.00	0.00	7.50	29.12	54.65	8.73	63.38
M-1624c Run 2	N/A	0.065	0.00	0.00	26.37	22.12	34.96	16.54	51.50
M-1624c Run 4	N/A	0.711	0.00	0.00	69.05	14.89	11.56	4.50	16.06
M-1624c Run 5	N/A	0.005	0.00	0.00	0.00	1.28	50.88	47.85	98.72

(1) Based on Mean from Trask

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1454c Run 1
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	3.58	3.58	3.58
0.0331	0.841	0.25	20	11.00	11.00	14.59
0.0278	0.707	0.50	25	3.31	3.31	17.90
0.0234	0.595	0.75	30	2.42	2.42	20.32
0.0197	0.500	1.00	35	2.14	2.14	22.46
0.0166	0.420	1.25	40	1.85	1.85	24.31
0.0139	0.354	1.50	45	1.22	1.22	25.53
0.0117	0.297	1.75	50	1.34	1.34	26.87
0.0098	0.250	2.00	60	1.13	1.13	28.00
0.0083	0.210	2.25	70	1.36	1.36	29.36
0.0070	0.177	2.50	80	1.63	1.63	30.99
0.0059	0.149	2.75	100	1.89	1.89	32.88
0.0049	0.125	3.00	120	2.06	2.06	34.94
0.0041	0.105	3.25	140	2.23	2.23	37.17
0.0035	0.088	3.50	170	2.62	2.62	39.80
0.0029	0.074	3.75	200	3.31	3.31	43.11
0.0025	0.063	4.00	230	4.09	4.09	47.20
0.0021	0.053	4.25	270	4.59	4.59	51.79
0.00174	0.0442	4.50	325	4.73	4.73	56.52
0.00146	0.0372	4.75	400	4.54	4.54	61.06
0.00123	0.0313	5.00	450	4.23	4.23	65.30
0.000986	0.0250	5.32	500	4.87	4.87	70.17
0.000790	0.0201	5.64	635	4.23	4.23	74.40
0.000615	0.0156	6.00		3.98	3.98	78.38
0.000435	0.0110	6.50		4.53	4.53	82.91
0.000308	0.00781	7.00		3.67	3.67	86.58
0.000197	0.00500	7.65		3.77	3.77	90.36
0.000077	0.00195	9.00		5.78	5.78	96.14
0.000038	0.000977	10.00		2.69	2.69	98.83
0.000019	0.000488	11.00		1.08	1.08	99.91
0.000015	0.000375	11.38		0.09	0.09	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.19	0.0448	1.137
10	0.04	0.0383	0.972
16	0.36	0.0307	0.781
25	1.39	0.0150	0.381
40	3.52	0.0034	0.087
50	4.15	0.0022	0.056
60	4.69	0.0015	0.039
75	5.69	0.0008	0.019
84	6.65	0.0004	0.010
90	7.58	0.0002	0.005
95	8.73	0.0001	0.002

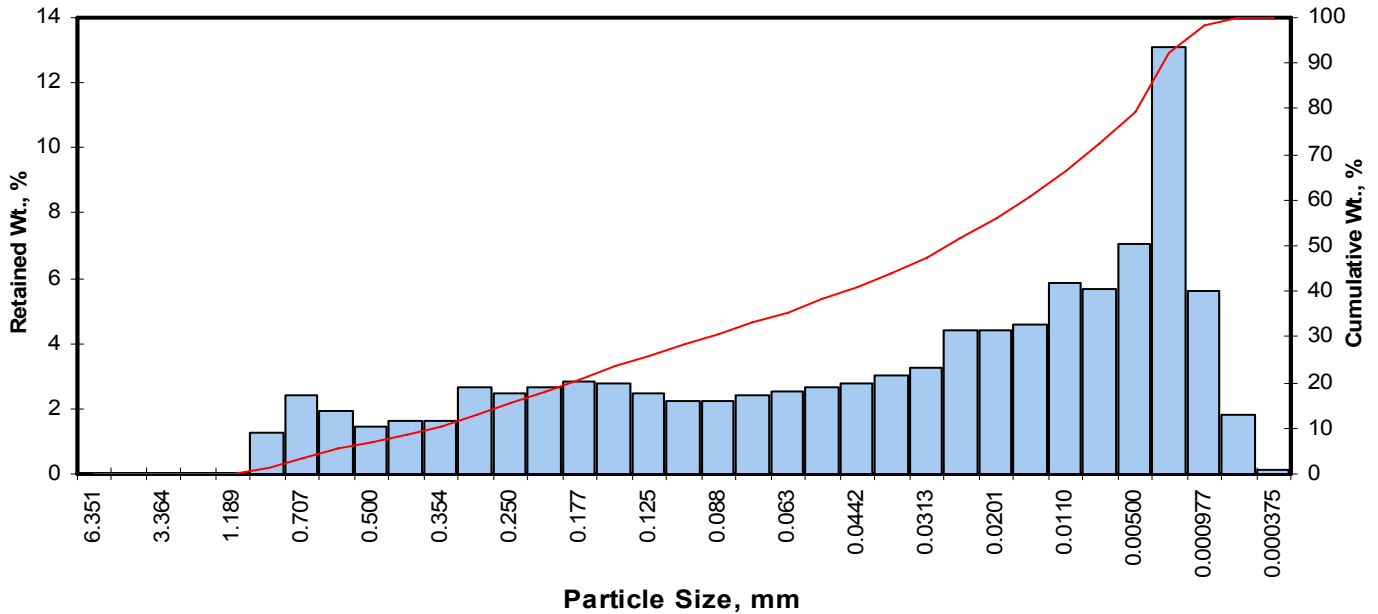
Measure	Trask	Inman	Folk-Ward
Median, phi	4.15	4.15	4.15
Median, in.	0.0022	0.0022	0.0022
Median, mm	0.056	0.056	0.056
Mean, phi	2.32	3.50	3.72
Mean, in.	0.0079	0.0035	0.0030
Mean, mm	0.200	0.088	0.076
Sorting	4.443	3.146	2.924
Skewness	1.526	-0.207	-0.090
Kurtosis	0.187	0.418	0.849
Grain Size Description (ASTM-USCS Scale)		Fine sand (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	24.31
Fine Sand	200	18.80
Silt	>0.005 mm	47.25
Clay	<0.005 mm	9.64
Total		100

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1454c Run 2
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	1.24	1.24	1.24
0.0278	0.707	0.50	25	2.40	2.40	3.64
0.0234	0.595	0.75	30	1.92	1.92	5.56
0.0197	0.500	1.00	35	1.42	1.42	6.98
0.0166	0.420	1.25	40	1.60	1.60	8.58
0.0139	0.354	1.50	45	1.64	1.64	10.22
0.0117	0.297	1.75	50	2.63	2.63	12.85
0.0098	0.250	2.00	60	2.46	2.46	15.31
0.0083	0.210	2.25	70	2.67	2.67	17.98
0.0070	0.177	2.50	80	2.82	2.82	20.80
0.0059	0.149	2.75	100	2.77	2.77	23.57
0.0049	0.125	3.00	120	2.49	2.49	26.06
0.0041	0.105	3.25	140	2.26	2.26	28.32
0.0035	0.088	3.50	170	2.26	2.26	30.58
0.0029	0.074	3.75	200	2.41	2.41	32.99
0.0025	0.063	4.00	230	2.55	2.55	35.54
0.0021	0.053	4.25	270	2.63	2.63	38.17
0.00174	0.0442	4.50	325	2.80	2.80	40.97
0.00146	0.0372	4.75	400	3.04	3.04	44.01
0.00123	0.0313	5.00	450	3.28	3.28	47.29
0.000986	0.0250	5.32	500	4.40	4.40	51.69
0.000790	0.0201	5.64	635	4.43	4.43	56.12
0.000615	0.0156	6.00		4.61	4.61	60.73
0.000435	0.0110	6.50		5.86	5.86	66.59
0.000308	0.00781	7.00		5.69	5.69	72.28
0.000197	0.00500	7.65		7.07	7.07	79.35
0.000077	0.00195	9.00		13.10	13.10	92.45
0.000038	0.000977	10.00		5.63	5.63	98.08
0.000019	0.000488	11.00		1.79	1.79	99.87
0.000015	0.000375	11.38		0.13	0.13	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.68	0.0246	0.625
10	1.47	0.0142	0.362
16	2.06	0.0094	0.239
25	2.89	0.0053	0.135
40	4.41	0.0018	0.047
50	5.20	0.0011	0.027
60	5.94	0.0006	0.016
75	7.25	0.0003	0.007
84	8.13	0.0001	0.004
90	8.75	0.0001	0.002
95	9.45	0.0001	0.001

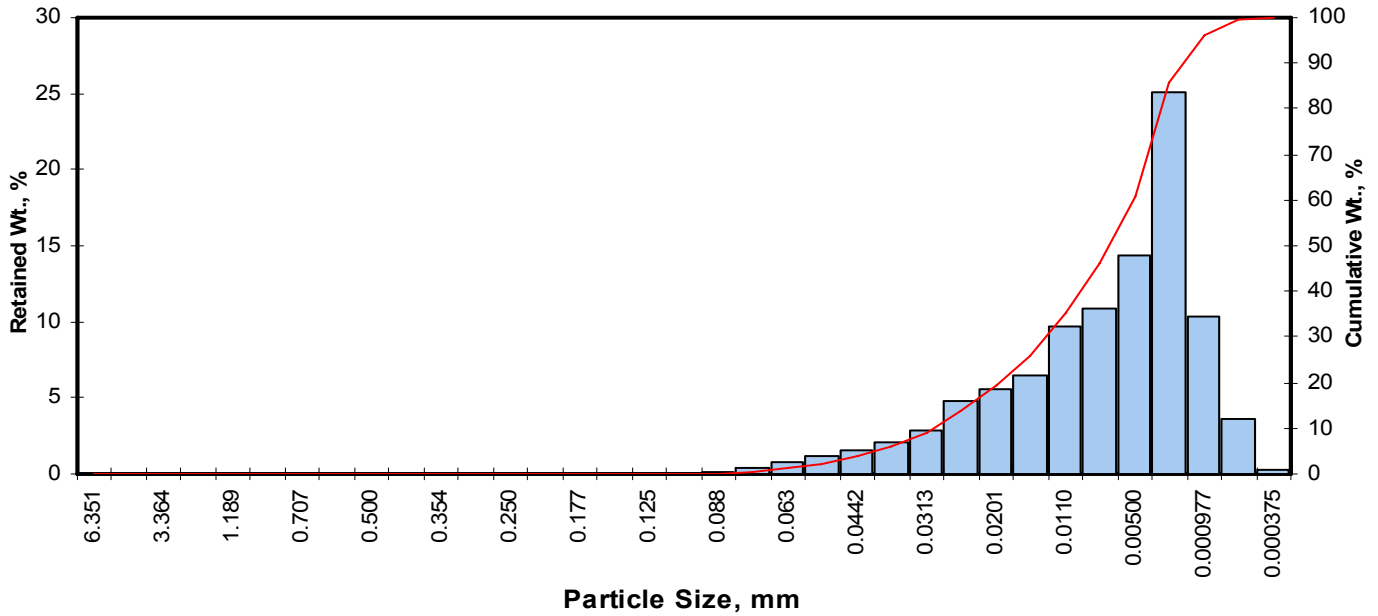
Measure	Trask	Inman	Folk-Ward
Median, phi	5.20	5.20	5.20
Median, in.	0.0011	0.0011	0.0011
Median, mm	0.027	0.027	0.027
Mean, phi	3.82	5.10	5.13
Mean, in.	0.0028	0.0012	0.0011
Mean, mm	0.071	0.029	0.029
Sorting	4.523	3.031	2.845
Skewness	1.091	-0.034	-0.032
Kurtosis	0.178	0.448	0.826
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	8.58
Fine Sand	200	24.41
Silt	>0.005 mm	46.36
Clay	<0.005 mm	20.65
Total		100

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1454c Run 4
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.00	0.00	0.00
0.0070	0.177	2.50	80	0.00	0.00	0.00
0.0059	0.149	2.75	100	0.00	0.00	0.00
0.0049	0.125	3.00	120	0.00	0.00	0.00
0.0041	0.105	3.25	140	0.00	0.00	0.00
0.0035	0.088	3.50	170	0.08	0.08	0.09
0.0029	0.074	3.75	200	0.36	0.36	0.45
0.0025	0.063	4.00	230	0.77	0.77	1.22
0.0021	0.053	4.25	270	1.14	1.14	2.36
0.00174	0.0442	4.50	325	1.55	1.55	3.91
0.00146	0.0372	4.75	400	2.10	2.10	6.01
0.00123	0.0313	5.00	450	2.87	2.87	8.88
0.000986	0.0250	5.32	500	4.78	4.78	13.66
0.000790	0.0201	5.64	635	5.62	5.62	19.28
0.000615	0.0156	6.00		6.45	6.45	25.73
0.000435	0.0110	6.50		9.67	9.67	35.40
0.000308	0.00781	7.00		10.90	10.90	46.30
0.000197	0.00500	7.65		14.30	14.30	60.60
0.000077	0.00195	9.00		25.10	25.10	85.70
0.000038	0.000977	10.00		10.40	10.40	96.10
0.000019	0.000488	11.00		3.62	3.62	99.72
0.000015	0.000375	11.38		0.28	0.28	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	4.63	0.0016	0.040
10	5.08	0.0012	0.030
16	5.45	0.0009	0.023
25	5.96	0.0006	0.016
40	6.71	0.0004	0.010
50	7.17	0.0003	0.007
60	7.62	0.0002	0.005
75	8.42	0.0001	0.003
84	8.91	0.0001	0.002
90	9.41	0.0001	0.001
95	9.89	0.0000	0.001

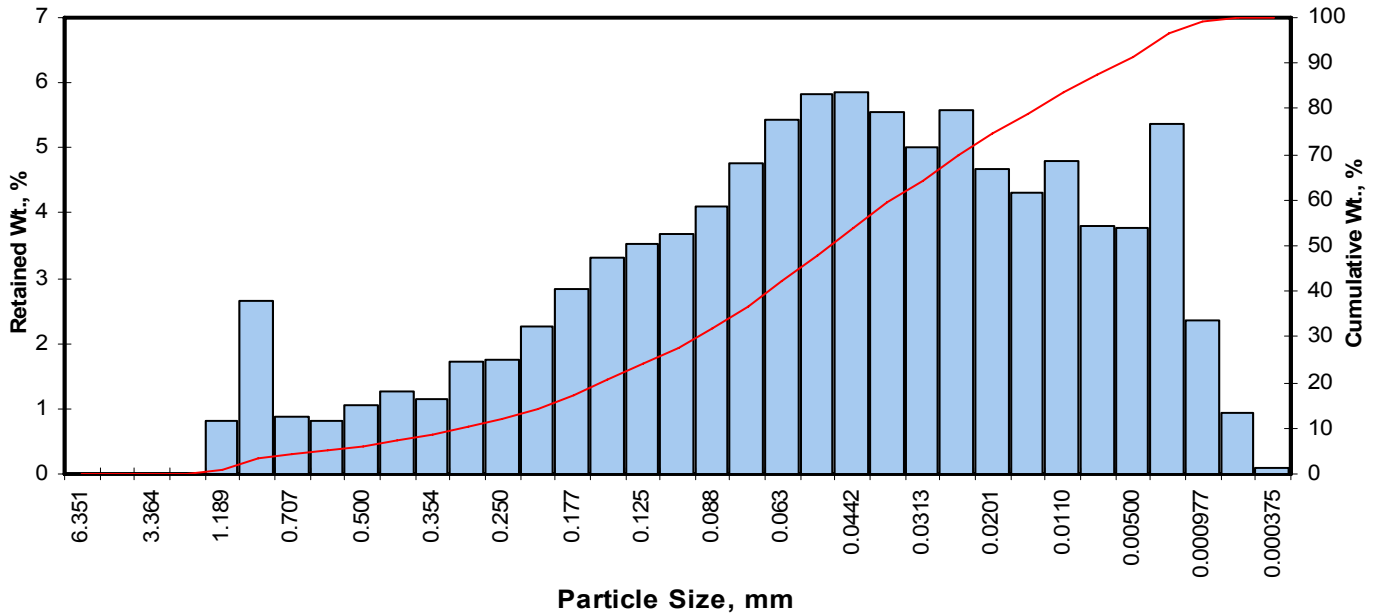
Measure	Trask	Inman	Folk-Ward
Median, phi	7.17	7.17	7.17
Median, in.	0.0003	0.0003	0.0003
Median, mm	0.007	0.007	0.007
Mean, phi	6.72	7.18	7.18
Mean, in.	0.0004	0.0003	0.0003
Mean, mm	0.009	0.007	0.007
Sorting	2.348	1.727	1.661
Skewness	0.984	0.008	0.022
Kurtosis	0.233	0.524	0.876
Grain Size Description		Silt	
(ASTM-USCS Scale)		(based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	0.45
Silt	>0.005 mm	60.15
Clay	<0.005 mm	39.40
Total		100

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1624c Run 1
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.81	0.81	0.81
0.0331	0.841	0.25	20	2.66	2.66	3.47
0.0278	0.707	0.50	25	0.89	0.89	4.36
0.0234	0.595	0.75	30	0.81	0.81	5.17
0.0197	0.500	1.00	35	1.05	1.05	6.22
0.0166	0.420	1.25	40	1.28	1.28	7.50
0.0139	0.354	1.50	45	1.16	1.16	8.66
0.0117	0.297	1.75	50	1.72	1.72	10.38
0.0098	0.250	2.00	60	1.76	1.76	12.14
0.0083	0.210	2.25	70	2.25	2.25	14.39
0.0070	0.177	2.50	80	2.84	2.84	17.23
0.0059	0.149	2.75	100	3.32	3.32	20.54
0.0049	0.125	3.00	120	3.52	3.52	24.06
0.0041	0.105	3.25	140	3.69	3.69	27.75
0.0035	0.088	3.50	170	4.10	4.10	31.85
0.0029	0.074	3.75	200	4.77	4.77	36.62
0.0025	0.063	4.00	230	5.44	5.44	42.06
0.0021	0.053	4.25	270	5.83	5.83	47.89
0.00174	0.0442	4.50	325	5.87	5.87	53.75
0.00146	0.0372	4.75	400	5.54	5.54	59.29
0.00123	0.0313	5.00	450	5.02	5.02	64.31
0.000986	0.0250	5.32	500	5.58	5.58	69.89
0.000790	0.0201	5.64	635	4.69	4.69	74.58
0.000615	0.0156	6.00		4.33	4.33	78.91
0.000435	0.0110	6.50		4.81	4.81	83.72
0.000308	0.00781	7.00		3.79	3.79	87.50
0.000197	0.00500	7.65		3.77	3.77	91.27
0.000077	0.00195	9.00		5.38	5.38	96.65
0.000038	0.000977	10.00		2.34	2.34	98.99
0.000019	0.000488	11.00		0.93	0.93	99.92
0.000015	0.000375	11.38		0.08	0.08	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	0.70	0.0243	0.616
10	1.70	0.0122	0.309
16	2.39	0.0075	0.191
25	3.06	0.0047	0.120
40	3.91	0.0026	0.067
50	4.34	0.0019	0.049
60	4.79	0.0014	0.036
75	5.68	0.0008	0.020
84	6.54	0.0004	0.011
90	7.43	0.0002	0.006
95	8.58	0.0001	0.003

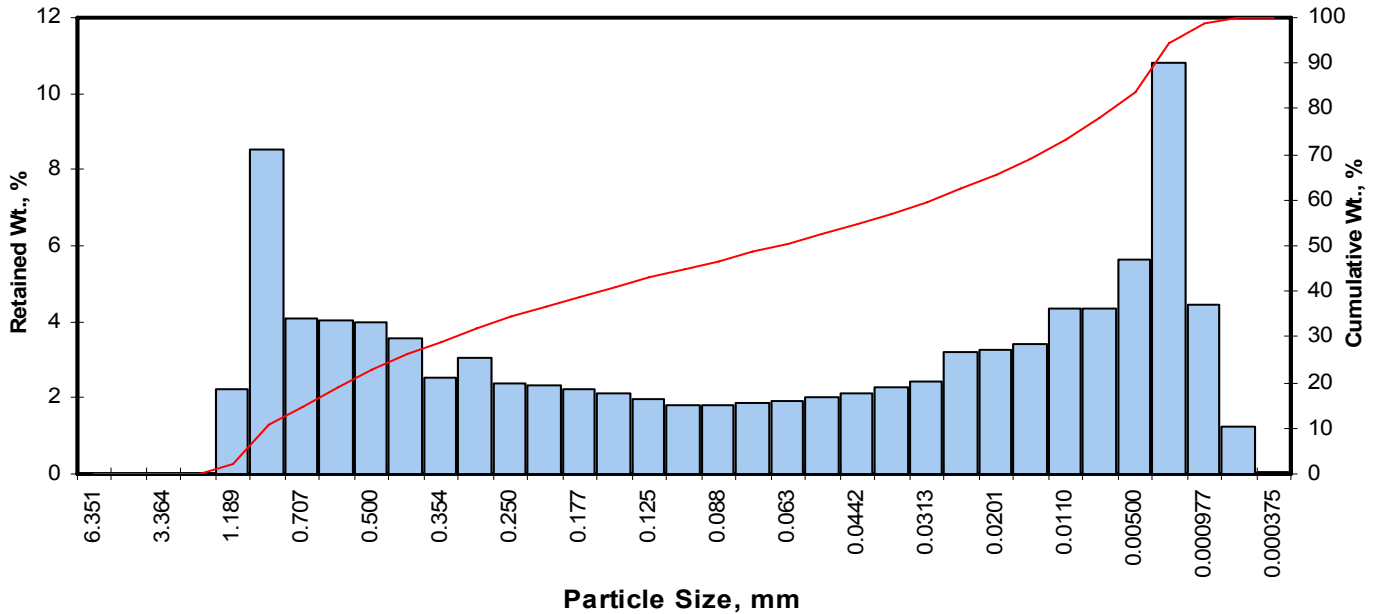
Measure	Trask	Inman	Folk-Ward
Median, phi	4.34	4.34	4.34
Median, in.	0.0019	0.0019	0.0019
Median, mm	0.049	0.049	0.049
Mean, phi	3.84	4.46	4.42
Mean, in.	0.0027	0.0018	0.0018
Mean, mm	0.070	0.045	0.047
Sorting	2.472	2.073	2.231
Skewness	0.980	0.060	0.068
Kurtosis	0.165	0.902	1.238
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	7.50
Fine Sand	200	29.12
Silt	>0.005 mm	54.65
Clay	<0.005 mm	8.73
Total		100

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1624c Run 2
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	2.23	2.23	2.23
0.0331	0.841	0.25	20	8.51	8.51	10.74
0.0278	0.707	0.50	25	4.07	4.07	14.81
0.0234	0.595	0.75	30	4.04	4.04	18.85
0.0197	0.500	1.00	35	3.97	3.97	22.82
0.0166	0.420	1.25	40	3.55	3.55	26.37
0.0139	0.354	1.50	45	2.54	2.54	28.91
0.0117	0.297	1.75	50	3.04	3.04	31.95
0.0098	0.250	2.00	60	2.40	2.40	34.35
0.0083	0.210	2.25	70	2.31	2.31	36.66
0.0070	0.177	2.50	80	2.24	2.24	38.91
0.0059	0.149	2.75	100	2.14	2.14	41.05
0.0049	0.125	3.00	120	1.98	1.98	43.03
0.0041	0.105	3.25	140	1.83	1.83	44.86
0.0035	0.088	3.50	170	1.79	1.79	46.65
0.0029	0.074	3.75	200	1.85	1.85	48.50
0.0025	0.063	4.00	230	1.93	1.93	50.43
0.0021	0.053	4.25	270	2.00	2.00	52.43
0.00174	0.0442	4.50	325	2.13	2.13	54.56
0.00146	0.0372	4.75	400	2.28	2.28	56.84
0.00123	0.0313	5.00	450	2.43	2.43	59.27
0.000986	0.0250	5.32	500	3.22	3.22	62.49
0.000790	0.0201	5.64	635	3.24	3.24	65.73
0.000615	0.0156	6.00		3.39	3.39	69.12
0.000435	0.0110	6.50		4.36	4.36	73.48
0.000308	0.00781	7.00		4.35	4.35	77.83
0.000197	0.00500	7.65		5.63	5.63	83.46
0.000077	0.00195	9.00		10.80	10.80	94.26
0.000038	0.000977	10.00		4.44	4.44	98.70
0.000019	0.000488	11.00		1.22	1.22	99.92
0.000015	0.000375	11.38		0.08	0.08	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.09	0.0418	1.062
10	0.21	0.0341	0.867
16	0.57	0.0265	0.672
25	1.15	0.0177	0.450
40	2.63	0.0064	0.162
50	3.94	0.0026	0.065
60	5.07	0.0012	0.030
75	6.67	0.0004	0.010
84	7.71	0.0002	0.005
90	8.47	0.0001	0.003
95	9.17	0.0001	0.002

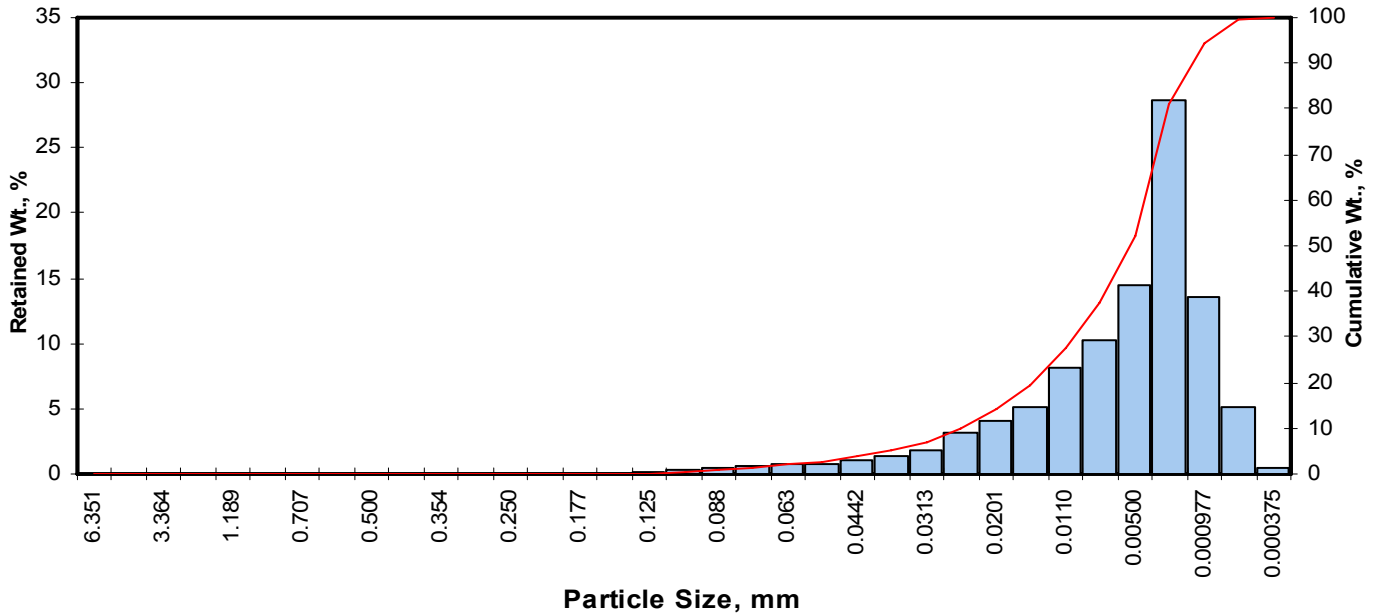
Measure	Trask	Inman	Folk-Ward
Median, phi	3.94	3.94	3.94
Median, in.	0.0026	0.0026	0.0026
Median, mm	0.065	0.065	0.065
Mean, phi	2.12	4.14	4.08
Mean, in.	0.0090	0.0022	0.0023
Mean, mm	0.230	0.057	0.059
Sorting	6.777	3.570	3.187
Skewness	1.022	0.056	0.092
Kurtosis	0.255	0.296	0.687
Grain Size Description (ASTM-USCS Scale)	Fine sand (based on Mean from Trask)		

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	26.37
Fine Sand	200	22.12
Silt	>0.005 mm	34.96
Clay	<0.005 mm	16.54
Total		100

Client: Crow Butte Resources, Inc.
Project: Marsland Core
Project No: N/A

PTS File No: 41269
Sample ID: M-1624c Run 5
Depth, ft: N/A

Grv	Sand Size			Silt	Clay
	crs	medium	fine		



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent
Inches	Millimeters					
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.00	0.00	0.00
0.0139	0.354	1.50	45	0.00	0.00	0.00
0.0117	0.297	1.75	50	0.00	0.00	0.00
0.0098	0.250	2.00	60	0.00	0.00	0.00
0.0083	0.210	2.25	70	0.00	0.00	0.00
0.0070	0.177	2.50	80	0.00	0.00	0.00
0.0059	0.149	2.75	100	0.01	0.01	0.01
0.0049	0.125	3.00	120	0.08	0.08	0.09
0.0041	0.105	3.25	140	0.24	0.24	0.33
0.0035	0.088	3.50	170	0.39	0.39	0.72
0.0029	0.074	3.75	200	0.56	0.56	1.28
0.0025	0.063	4.00	230	0.70	0.70	1.98
0.0021	0.053	4.25	270	0.81	0.81	2.79
0.00174	0.0442	4.50	325	0.99	0.99	3.78
0.00146	0.0372	4.75	400	1.31	1.31	5.09
0.00123	0.0313	5.00	450	1.80	1.80	6.89
0.000986	0.0250	5.32	500	3.15	3.15	10.03
0.000790	0.0201	5.64	635	4.11	4.11	14.14
0.000615	0.0156	6.00		5.11	5.11	19.25
0.000435	0.0110	6.50		8.22	8.22	27.47
0.000308	0.00781	7.00		10.20	10.20	37.66
0.000197	0.00500	7.65		14.50	14.49	52.15
0.000077	0.00195	9.00		28.70	28.69	80.84
0.000038	0.000977	10.00		13.60	13.59	94.43
0.000019	0.000488	11.00		5.15	5.15	99.58
0.000015	0.000375	11.38		0.42	0.42	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	4.73	0.0015	0.038
10	5.32	0.0010	0.025
16	5.77	0.0007	0.018
25	6.35	0.0005	0.012
40	7.10	0.0003	0.007
50	7.55	0.0002	0.005
60	8.02	0.0002	0.004
75	8.72	0.0001	0.002
84	9.23	0.0001	0.002
90	9.67	0.0000	0.001
95	10.11	0.0000	0.001

Measure	Trask	Inman	Folk-Ward
Median, phi	7.55	7.55	7.55
Median, in.	0.0002	0.0002	0.0002
Median, mm	0.005	0.005	0.005
Mean, phi	7.10	7.50	7.52
Mean, in.	0.0003	0.0002	0.0002
Mean, mm	0.007	0.006	0.005
Sorting	2.277	1.731	1.680
Skewness	1.008	-0.027	-0.037
Kurtosis	0.207	0.553	0.928
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.00
Fine Sand	200	1.28
Silt	>0.005 mm	50.88
Clay	<0.005 mm	47.85
Total		100