

**APPENDIX 6**  
**ROCK CHEMISTRY**

## Phase 1 – Cacouna Energy, Gros Cacouna, Quebec

Geochemical Laboratories  
Earth and Planetary Sciences  
McGill University, 3450 University Street  
Montreal, QC CANADA H3A 2A7

### Major Element Package:

Sample	SiO2	TiO2	Al2O3	Fe2O3	MnO	MgO	CaO	Na2O	K2O	P2O5	BaO	Ce	V	Zn	LOI	Total	Lab No.
Mud seam (BH-2 34')	57.49	1.139	18.44	7.30	0.115	2.27	1.18	2.57	6.06	0.215	1041	96	86	55	3.18	100.08	05-001
Rock (BH-2 34')	57.67	1.143	18.38	7.14	0.110	2.27	1.11	2.59	6.09	0.206	803	103	84	101	2.91	99.73	05-003
Mud seam (BH-3 3'10")	52.09	1.318	19.90	9.50	0.124	3.15	0.79	1.79	6.84	0.222	864	111	105	152	4.10	99.96	05-002
Rock (BH-3 3'10")	52.75	1.352	19.93	9.40	0.121	3.12	0.82	1.89	6.85	0.228	776	114	103	166	3.78	100.36	05-004
Detection Limits(ppm):	60	35	120	30	30	95	15	75	25	35	17	15	10	2	100		

**Note:** The results are expressed as weight percent, the trace elements (BaO to Zn) as ppm (ug/g).  
Total iron present has been recalculated as Fe2O3. In cases where most of the iron was originally in the ferrous state (usually the case with unaltered rocks) a higher total is the result.  
Analyses done on fused beads prepared from ignited samples.  
Detection limits are based on three times the background sigma values.  
"int" indicates that there is interference from unusually high quantities of other trace elements.

Table 1: Rock chemistry for mud and surrounding rock in boreholes BH-2 and BH-3. The nearness of the values indicates that the rock and the mud are the same material and the mud can be attributed to surrounding rock ground up by the drill.



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Trace Element Package

Identifier	Ga	Nb	Pb	Rb	Sr	Th	U	Y	Zr	Lab No.
Mud seam (BH-2 34')	32.0	20.9	19.6	226.3	126.8	12.7	2.8	46.3	428.9	05-001
Rock (BH-2 34')	33.0	20.5	12.4	226.4	116.7	11.7	3.1	44.0	400.5	05-003
Mud seam (BH-3 3'10")	37.6	23.8	23.4	297.1	125.5	13.3	2.6	42.4	376.0	05-002
Rock (BH-3 3'10")	36.7	23.9	17.4	293.4	122.7	12.6	2.5	41.0	366.3	05-004
Detection Limits(ppm):	1.0	0.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	

**Note:** The results are expressed as ppm (ug/g).  
Analyses done on pressed powder pellets.  
Detection limits are based on three times the background sigma values.  
"int" indicates that there is interference from unusually high quantities of other trace elements.

Table 2: Trace rock chemistry for mud and surrounding rock in boreholes BH-2 and BH-3. Trace elements are good indicators for differences in rock type. The values above support that the fine silt and sand mud found in boreholes BH-2 and BH-3 were a result of the adjacent rock being ground up.



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