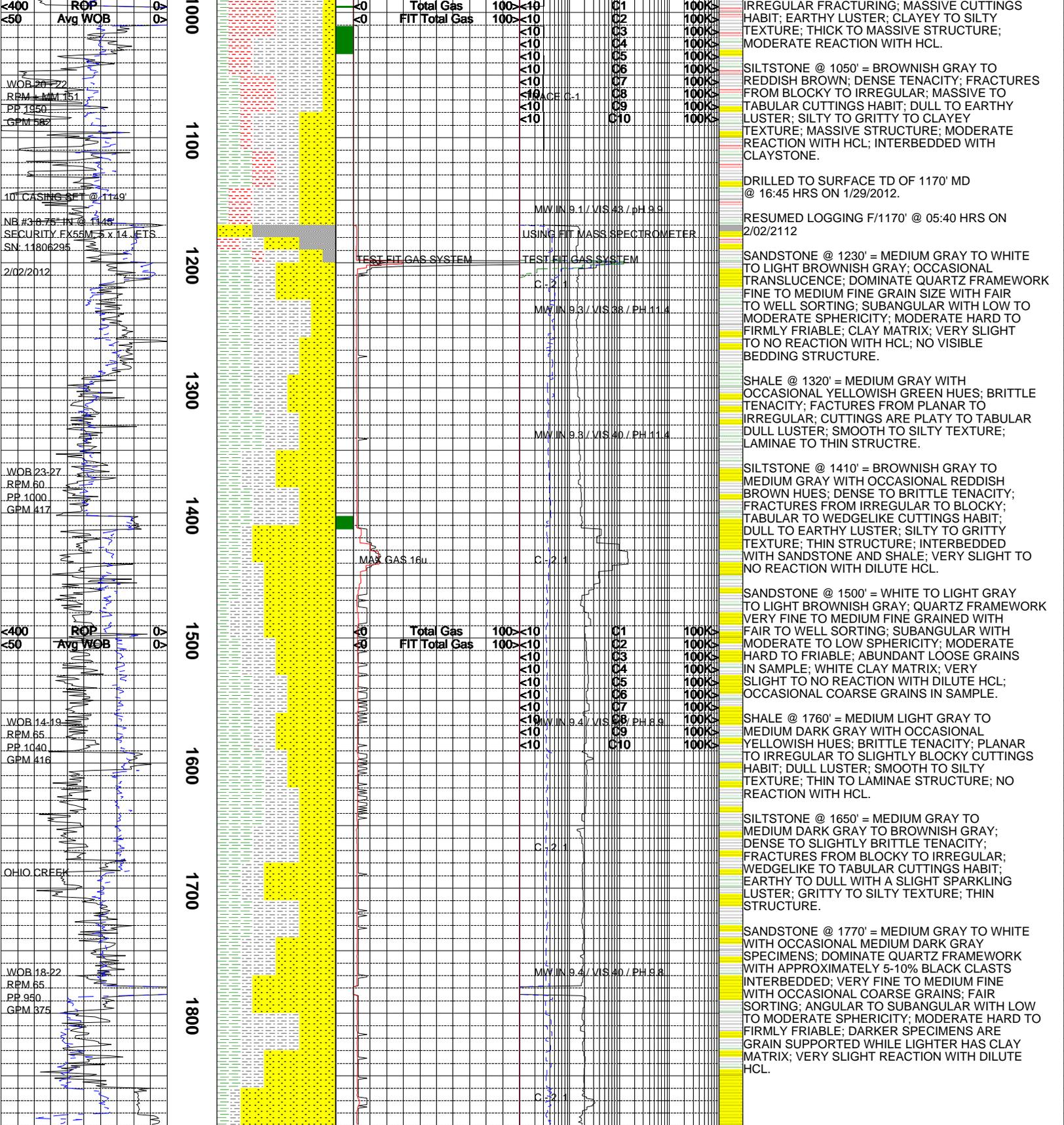


Encana Oil_Gas			Twin Creek 12-5D1										2/3/2012					
ROP			Depth	Lithology	Slide	Total Gas		Interp. Lith										Remarks
ft/hr						units		C1 100K<										
Avg WOB			ft	Lithology	Slide	units		C2 100K<										Survey Data, Mud Reports, Other Info.
klbs						units		C3 100K<										
			ft	Lithology	Slide	units		C4 100K<										Survey Data, Mud Reports, Other Info.
						units		C5 100K<										
			ft	Lithology	Slide	units		C6 100K<										Survey Data, Mud Reports, Other Info.
						units		C7 100K<										
			ft	Lithology	Slide	units		C8 100K<										Survey Data, Mud Reports, Other Info.
						units		C9 100K<										
			ft	Lithology	Slide	units		C10 100K<										Survey Data, Mud Reports, Other Info.
						units		C10 100K<										
BIT RR#1 12.25" IN @ 72'						MW 9.2+ / VIS 45 / PV 10 / VP 15		GSA ROCK COLOR CHART. ROCK CONSTITUENTS ARE DESCRIBED WET AND LISTED IN ORDER OF MOST ABUNDANT TO LEAST ABUNDANT WITH RESPECT TO PERCENTAGE IN SAMPLE.										
RIVAL CHIG.MS. 3 x 20 JETS						GEL 7.25 / FI 10.5 / SOL 8.96												
SN: 6457						pH 9.2 / Ca+ 80 / Cl- 800												
FTG: 122 HRS: 1.4						LOW GAS - CIRCULATING MUD TO CELLAR												
1/28/2012						LOW GAS - CIRCULATING MUD TO CELLAR												
1/29/2012			100					CANRIG DML COMMENCED LOGGING FROM 72' MD @ 23:45 HRS ON 1/28/2012.										
								SANDSTONE @ 90' = WHITE TO OLIVE GRAY TO GRAYISH GREEN AND TRANSLUCENT WITH OCCASIONAL SALMON OVERTONES AND TRACE BLACK LITHIC CLASTS; MOSTLY UNCONSOL; FINE TO COARSE SIZE GRAINS WITH POOR SORTING; ANGULAR TO SUBANG WITH VERY LOW SPHERICITY; MODERATELY HARD FRIABLE TO CRUMBLY; STRONG REACTION WITH DILUTE HCL.										
NB RR#2 12.25" IN @ 194'								USING CANRIG CHROMATOGRAPH										
PDC LOGIC PL519.7 x 13 JETS																		
SN: S07050																		
ETG: 976 HRS: 6.5								MW 9.1+ / VIS 41 / pH 9.9										
1/28/2012																		
1/29/2012																		
WOB 6 - 10								SILTSTONE @ 210' = MEDIUM GRAY TO LIGHT BROWNISH GRAY WITH REDDISH AND GREEN HUES; HARD WITH A DENSE TENACITY; IRREGULAR FRACTURING; MASSIVE TO WEDGELIKE CUTTINGS HABIT; DULL TO SLIGHTLY SPARKLING LUSTER; SILTY TO GRITTY TO CLAYEY TEXTURE; MASSIVE TO THICK STRUCTURE; MODERATE REACTION WITH DILUTE HCL.										
RPM: + MM 436								TRACE C-1										
PP: 694																		
GPM 500																		
1/28/2012																		
1/29/2012																		
								SANDSTONE @ 300' = LIGHT GRAY TO WHITE OCCASIONAL GREENISH HUES; QUARTZ FRAMEWORK; MEDIUM FINE TO VERY FINE GRAIN SIZE WITH FAIR TO WELL SORTING; ANGULAR TO SUBANGULAR WITH LOW TO MODERATE SPHERICITY; HARD TO FIRMLY FRIABLE; CALCITE CEMENT; STRONG REACTION WITH DILUTE HCL; CLAY MATRIX SUPPORT; INTERBEDDED WITH SILTSTONE AND CLAYSTONE AND SHALE.										
WOB 14 - 19								MW IN 9.1 / VIS 44 / pH 9.7										
RPM: + MM 93								TRACE C-1										
PP: 1375																		
GPM 582																		
1/28/2012																		
1/29/2012																		
								SHALE @ 420' = MEDIUM GRAY TO MEDIUM LIGHT GRAY WITH SOME OCCASIONAL RED AND GREEN HUES; DENSE TO BRITTLE TENACITY; PLANAR TO IRREGULAR TO BLOCKY FRACTURE; PLATY TO WEDGELIKE CUTTINGS HABIT; DULL LUSTER; SMOOTH TO SILTY TEXTURE; THIN TO LAMINAE STRUCTURE; SLIGHT REACTION WITH DILUTE HCL.										
WOB 16 - 20								SILTSTONE @ 510' = BROWNISH GRAY TO REDDISH BROWN TO MEDIUM GRAY; INTERBEDDED WITH CLAYSTONE; DENSE TO TOUGH TENACITY; IRREGULAR TO BLOCKY FRACTURING; MASSIVE TO WEDGELIKE TO SLIGHTLY TABULAR CUTTINGS HABIT; EARTHY TO DULL LUSTER; SILTY TO GRITTY TO CLAYEY TEXTURE; THICK TO MASSIVE STRUCTURE; MODERATE REACTION WITH DILUTE HCL.										
RPM: + MM 93								TRACE C-1										
PP: 1525																		
GPM 580																		
1/28/2012																		
1/29/2012																		
								CLAYSTONE @ 600' = MODERATE BROWN TO REDDISH BROWN TO BROWNISH GRAY; FIRM WITH A DENSE TO SLIGHTLY BRITTLE TENACITY; IRREGULAR FRACTURE; MASSIVE TO WEDGELIKE CUTTINGS HABIT; EARTHY TO SILTY LUSTER; CLAYEY TO SILTY TEXTURE; THICK STRUCTURE MODERATE REACTION WITH HCL; INTERBEDDED WITH SILTSTONE.										
WOB 16 - 20								SHALE @ 690' = MEDIUM GRAY; DENSE TO BRITTLE TENACITY; PLANAR TO BLOCKY FRACTURE; PLATY TO SLIGHTLY TABULAR CUTTINGS HABIT; DULL LUSTER; SMOOTH TO SILTY WITH OCCASIONAL GRITTY TEXTURE; THIN STRUCTURE; SLIGHT REACTION WITH HCL										
RPM: + MM 93								MW IN 9.1 / VIS 40 / pH 9.9										
PP: 1525																		
GPM 580																		
1/28/2012																		
1/29/2012																		
								SILTSTONE @ 780' = FIRM TO HARD WITH A DENSE TENACITY; FRACTURES FROM IRREGULAR TO BLOCKY; MASSIVE TO WEDGELIKE CUTTINGS HABIT; EARTHY TO DULL WITH A SLIGHT SPARKLING LUSTER; SILTY TO GRITTY TO CLAYEY TEXTURE; THICK TO MASSIVE STRUCTURE; MODERATE REACTION WITH DILUTE HCL.										
WOB 19 - 24								SANDSTONE @ 870' = LIGHT GRAY TO LIGHT BROWNISH GRAY TO WHITE WITH GREEN AND RED HUES; QUARTZ FRAMEWORK; FINE TO MEDIUM FINE GRAINED WITH WELL SORTING; ANGULAR TO SUBANGULAR WITH LOW TO MODERATE SPHERICITY; FIRMLY FRIABLE TO MODERATE HARDNESS; CALCITE CEMENT; STRONG REACTION WITH DILUTE HCL; INTERBEDDED WITH SILTSTONE; MATRIX SUPPORT.										
RPM: + MM 151								MW IN 9.1 / VIS 43 / pH 9.8										
PP: 1650																		
GPM 582																		
1/28/2012																		
1/29/2012																		
								CLAYSTONE @ 960' = MODERATE BROWN TO REDDISH BROWN TO DUSKY RED; FIRM WITH A DENSE TO SLIGHTLY BRITTLE TENACITY;										



The log data, interpretations and recommendation provided by Canrig are inferences and assumptions based on measurements of drilling fluids. Such inferences and assumptions are not infallible and reasonable professionals may differ. Canrig does not represent or warrant the accuracy, correctness or completeness of any log data, interpretations, recommendations or information provided by Canrig, its officers, agents or employees. Canrig does not and cannot guarantee the accuracy of any such interpretation of the log data, interpretations or recommendations and Company is fully responsible for all decisions and actions it takes based on such log data, interpretations and recommendations.