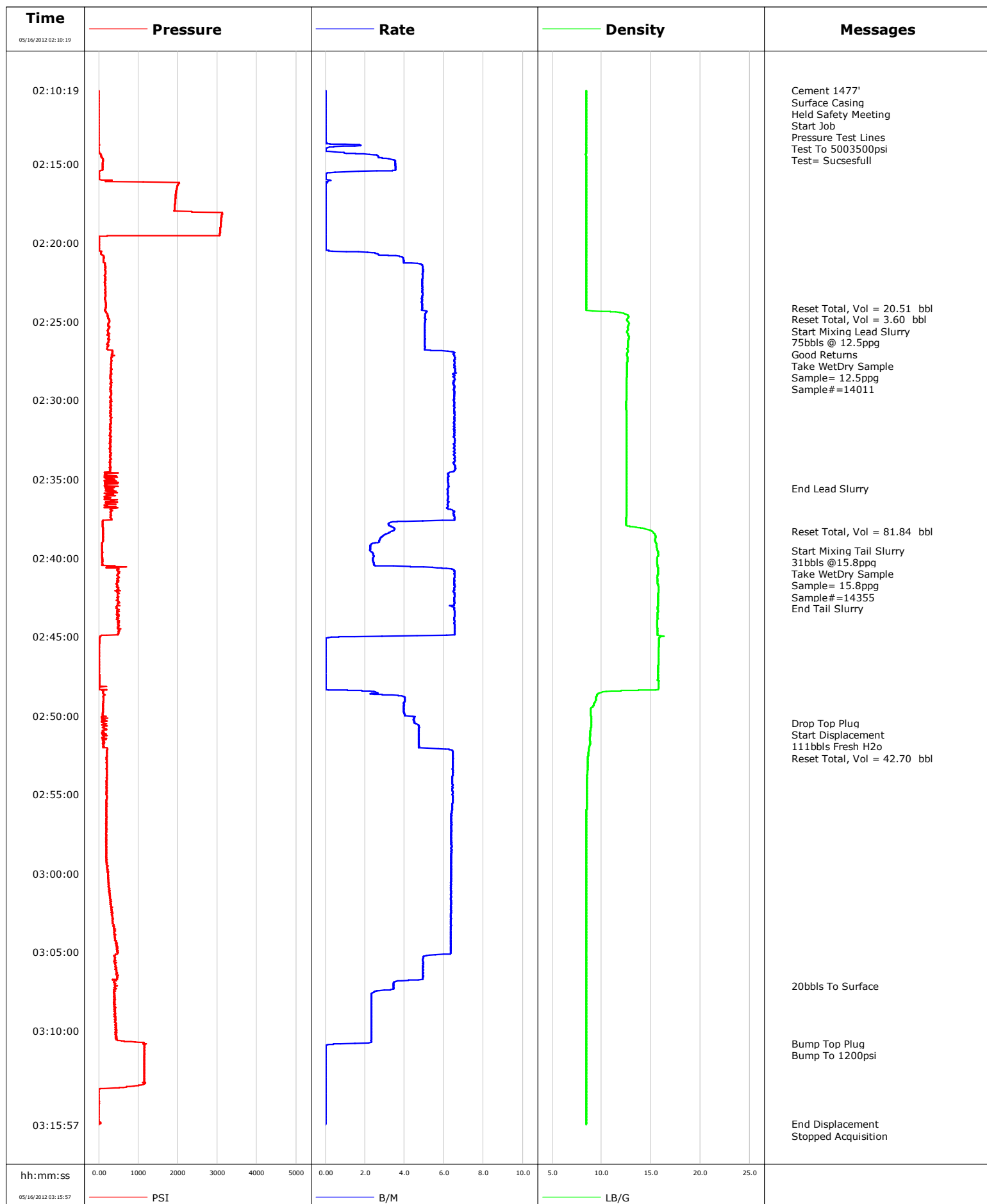


<b>Well</b>	MCU 22-13C	<b>Client</b>	ENCANA
<b>Field</b>	MAMM CREEK	<b>SIR No.</b>	C4HD-00237
<b>Engineer</b>		<b>Job Type</b>	SURFACE
<b>Country</b>	United States	<b>Job Date</b>	05-16-2012

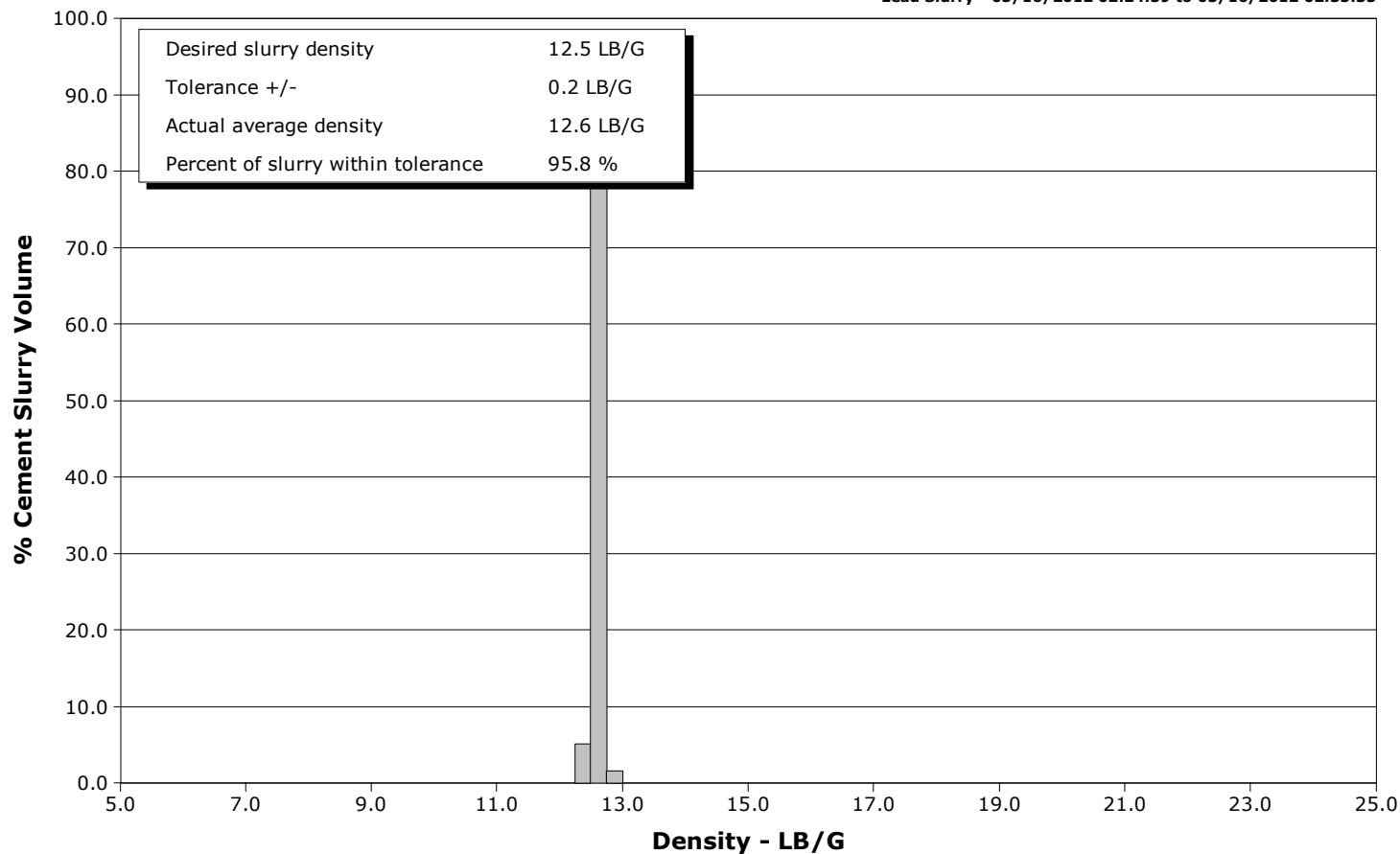


# SchlumbergerCementing Qa/Qc Density Report

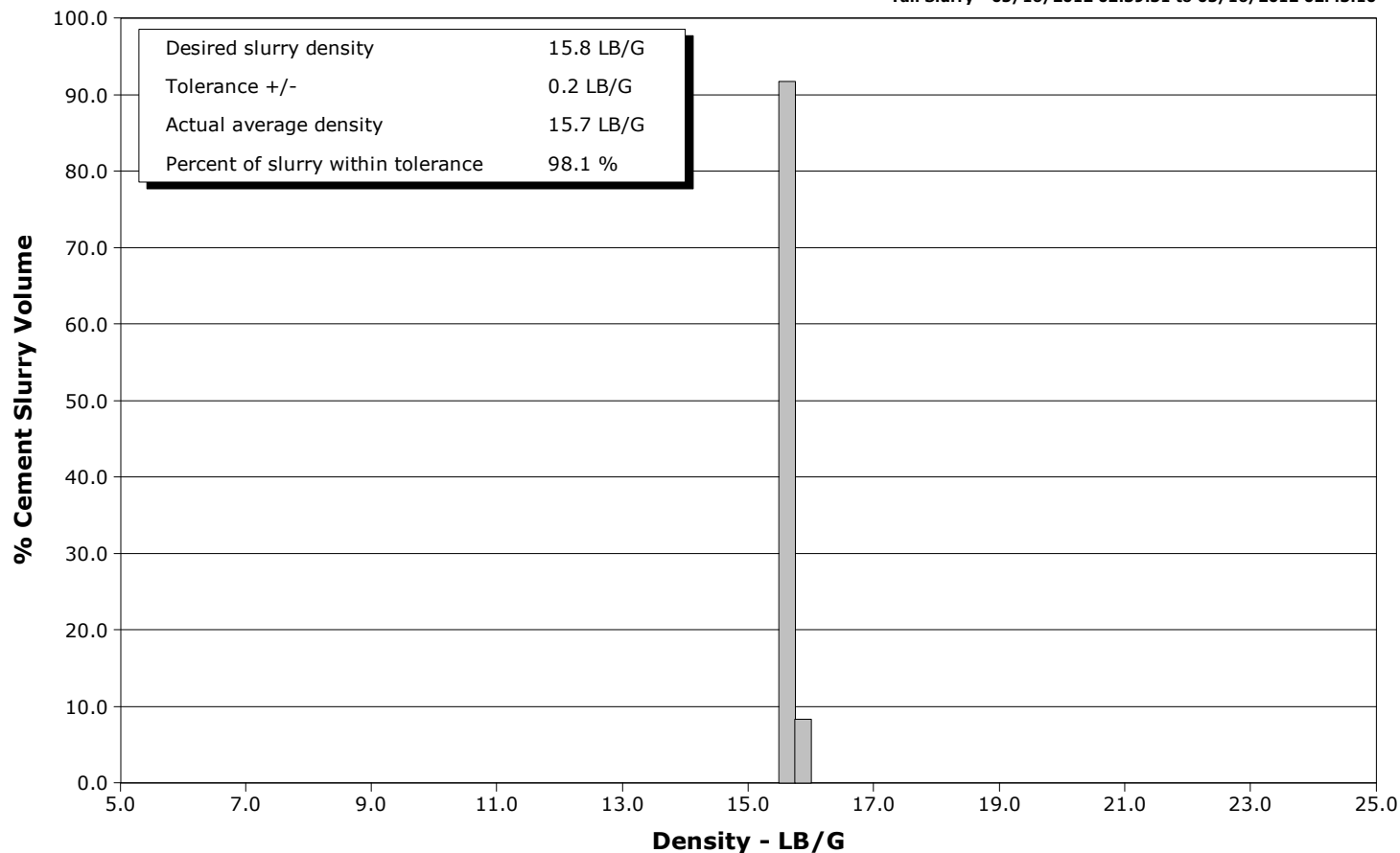
**Well** MCU 22-13C  
**Field** MAMM CREEK  
**Engineer**  
**Country** United States

**Client** ENCANA  
**SIR No.** C4HD-00237  
**Job Type** SURFACE  
**Job Date** 05-16-2012

**Lead Slurry - 05/16/2012 02:24:59 to 05/16/2012 02:35:35**



**Tail Slurry - 05/16/2012 02:39:31 to 05/16/2012 02:43:10**





# Cementing Service Report

				Customer ENCANA			Job Number C4HD-00237								
Well MCU 22-13C			Location (legal) MAMM CREEK			Schlumberger Location GCO			Job Start May/16/2012						
Field MAMM CREEK		Formation Name/Type			Deviation		Bit Size		Well MD 1477.0 ft		Well TVD 1477.0 ft				
County GARFILED		State/Province Colorado			BHP		BHST		BHCT		Pore Press. Gradient				
Well Master 0631347820		API/UWI													
Rig Name NABORS M-15		Drilled For Gas		Service Via Land		Casing/Liner									
Offshore Zone		Well Class New		Well Type Development		Depth, ft		Size, in		Weight, lb/ft		Grade		Thread	
						1477.0		9.630		36.0		J55		8RD	
Drilling Fluid Type Bentonite		Max. Density		Plastic Viscosity		Tubing/Drill Pipe									
						Depth,		Size,		Weight,		Grade		Thread	
Service Line Cementing		Job Type SURFACE													
Max. Allowed Tub. Press		Max. Allowed Ann. Press		WH Connection Single Cement head		Perforations/Open Hole									
						Top,		Bottom,				No. of Shots		Total Interval	
Service Instructions 313SKS 12.5 LEAD 150SKS 15.8 TAIL WATER TEST= GOOD														Diameter	
						Treat Down Casing		Displacement 111.0 bbl		Packer Type		Packer Depth			
Tubing Vol.		Casing Vol. 114.0 bbl		Annular Vol. 87.0 bbl		Openhole Vol. 206.0 bbl									
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>		Casing Tools				Squeeze Job							
Lift Pressure 731 psi				Shoe Type Guide				Squeeze Type							
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 1477.0 ft				Tool Type							
No. Centralizers		Top Plugs 1		Bottom Plugs		Stage Tool Type				Tool Depth					
Cement Head Type Single				Stage Tool Depth				Tail Pipe Size							
Job Scheduled For May/16/2012		Arrived on Location May/16/2012		Leave Location May/16/2012		Collar Type Diff-Fill				Tail Pipe Depth					
						Collar Depth 1432.0 ft				Sqz. Total Vol.					
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message									
05/16/2012	01:46:27					Started Acquisition									
05/16/2012	02:10:19					Cement 1477'									
05/16/2012	02:10:19					Surface Casing									
05/16/2012	02:10:19	-1	0.0	8.46	0.0										
05/16/2012	02:10:20					Held Safety Meeting									
05/16/2012	02:10:20	-1	0.0	8.46	0.0										
05/16/2012	02:10:22					Start Job									
05/16/2012	02:10:22	-1	0.0	8.46	0.0										
05/16/2012	02:10:26					Pressure Test Lines									
05/16/2012	02:10:26	-1	0.0	8.46	0.0										
05/16/2012	02:10:27					Test To 5003500psi									
05/16/2012	02:10:27	-1	0.0	8.46	0.0										
05/16/2012	02:10:28					Test= Sucsesfull									
05/16/2012	02:10:28	-1	0.0	8.46	0.0										
05/16/2012	02:12:27	-1	0.0	8.46	0.0										
05/16/2012	02:14:27	57	2.6	8.41	0.6										
05/16/2012	02:16:27	1984	0.0	8.47	4.1										
05/16/2012	02:18:27	3099	0.0	8.46	4.1										
05/16/2012	02:20:27	1	0.0	8.46	4.1										
05/16/2012	02:22:27	152	4.9	8.46	12.3										
05/16/2012	02:24:08					Reset Total, Vol = 20.51 bbl									

Well			Field		Job Start		Customer		Job Number	
MCU 22-13C			MAMM CREEK		May/16/2012		ENCANA		C4HD-00237	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
05/16/2012	02:24:27	192	5.1	12.05	22.1					
05/16/2012	02:24:51					Reset Total, Vol = 3.60 bbl				
05/16/2012	02:24:51	261	5.1	12.56	24.1					
05/16/2012	02:24:59					Start Mixing Lead Slurry				
05/16/2012	02:24:59	260	5.0	12.64	24.8					
05/16/2012	02:25:00					75bbls @ 12.5ppg				
05/16/2012	02:25:00					Good Returns				
05/16/2012	02:25:00					Take WetDry Sample				
05/16/2012	02:25:00					Sample= 12.5ppg				
05/16/2012	02:25:00					Sample#=14011				
05/16/2012	02:25:00	260	5.0	12.67	24.9					
05/16/2012	02:26:27	205	5.0	12.67	32.1					
05/16/2012	02:28:27	293	6.5	12.56	44.6					
05/16/2012	02:30:27	294	6.5	12.49	57.6					
05/16/2012	02:32:27	279	6.5	12.53	70.6					
05/16/2012	02:34:27	282	6.5	12.53	83.7					
05/16/2012	02:35:35					End Lead Slurry				
05/16/2012	02:35:35	164	6.2	12.53	90.8					
05/16/2012	02:36:27	467	6.2	12.53	96.1					
05/16/2012	02:38:18					Reset Total, Vol = 81.84 bbl				
05/16/2012	02:38:18	102	3.4	15.13	105.9					
05/16/2012	02:38:27	103	3.1	15.31	106.4					
05/16/2012	02:39:31					Start Mixing Tail Slurry				
05/16/2012	02:39:31	81	2.2	15.66	109.2					
05/16/2012	02:39:33					31bbls @15.8ppg				
05/16/2012	02:39:33					Take WetDry Sample				
05/16/2012	02:39:33					Sample= 15.8ppg				
05/16/2012	02:39:33	83	2.3	15.68	109.3					
05/16/2012	02:39:34					Sample#=14355				
05/16/2012	02:39:34	83	2.3	15.70	109.3					
05/16/2012	02:40:27	86	2.5	15.64	111.4					
05/16/2012	02:42:27	473	6.5	15.73	124.0					
05/16/2012	02:43:10					End Tail Slurry				
05/16/2012	02:43:10	435	6.5	15.70	128.6					
05/16/2012	02:44:27	475	6.5	15.64	137.0					
05/16/2012	02:46:27	10	0.0	15.75	140.3					
05/16/2012	02:48:27	114	2.2	11.06	140.5					
05/16/2012	02:50:27	78	4.5	8.93	148.3					
05/16/2012	02:50:28					Drop Top Plug				
05/16/2012	02:50:28					Start Displacement				
05/16/2012	02:50:28	137	4.5	8.93	148.3					
05/16/2012	02:50:30					111bbls Fresh H2o				
05/16/2012	02:50:30	122	4.6	8.93	148.5					
05/16/2012	02:50:32					Reset Total, Vol = 42.70 bbl				
05/16/2012	02:50:32	184	4.6	8.93	148.6					
05/16/2012	02:52:27	211	6.4	8.65	158.3					
05/16/2012	02:54:27	198	6.4	8.52	171.2					
05/16/2012	02:56:27	196	6.4	8.47	184.0					
05/16/2012	02:58:27	191	6.4	8.45	196.7					
05/16/2012	03:00:27	235	6.4	8.45	209.4					
05/16/2012	03:02:27	325	6.4	8.45	222.2					
05/16/2012	03:04:27	459	6.3	8.45	234.8					
05/16/2012	03:06:27	478	4.9	8.45	245.7					
05/16/2012	03:07:08					20bbls To Surface				

Well			Field		Job Start	Customer	Job Number
MCU 22-13C			MAMM CREEK		May/16/2012	ENCANA	C4HD-00237
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
05/16/2012	03:08:27	405	2.3	8.45	252.0		
05/16/2012	03:10:27	443	2.3	8.45	256.7		
05/16/2012	03:10:48					Bump Top Plug	
05/16/2012	03:10:48	1124	1.5	8.45	257.5		
05/16/2012	03:10:49					Bump To 1200psi	
05/16/2012	03:10:49	1124	0.8	8.45	257.5		
05/16/2012	03:12:27	1149	0.0	8.46	257.5		
05/16/2012	03:14:27	0	0.0	8.46	257.5		
05/16/2012	03:15:54					End Displacement	
05/16/2012	03:15:54	37	0.0	8.46	257.5		

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl				
Slurry 5.2	N2	Mud 0.0	Maximum Rate 6.6		Total Slurry 257.5	Mud 0.0	Spacer 24.7	N2	
Treating Pressure Summary, psi					Breakdown Fluid				
Maximum 3127	Final -0	Average 411	Bump Plug to	Breakdown	Type		Volume		Density
Avg. N2 Percent		Designed Slurry Volume		Displacement 109.1 bbl	Mix Water Temp 59 degF		Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 20.0 bbl
							Washed Thru Perfs <input type="checkbox"/>		To
Customer or Authorized Representative TERRY DUNN				Schlumberger Supervisor JASON CRICK			Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>
							-		-