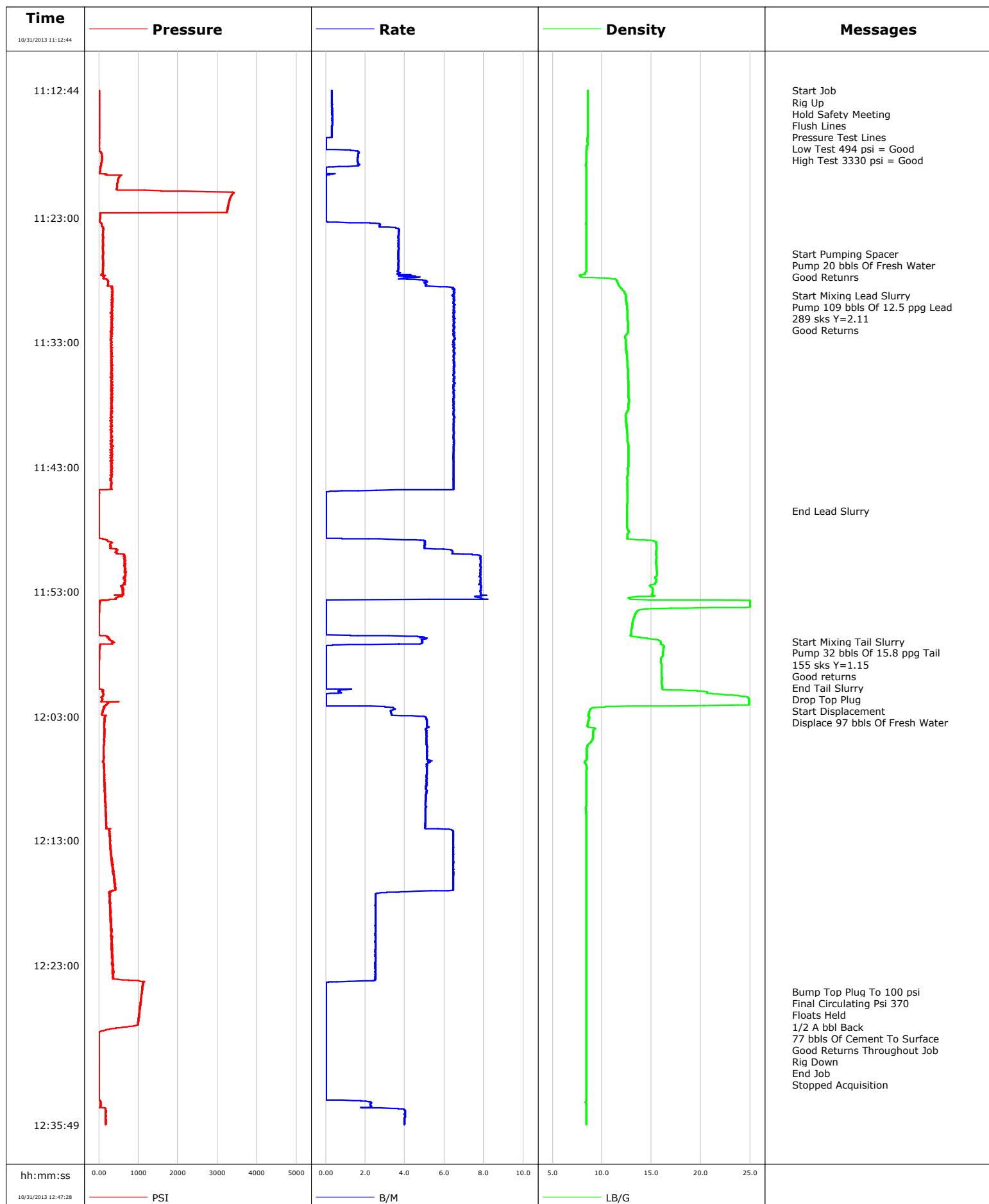


<b>Well</b>	Rose 22-4C	<b>Client</b>	Encana
<b>Field</b>	Mamm Creek	<b>SIR No.</b>	
<b>Engineer</b>	Justin Zika/Stacy Terry	<b>Job Type</b>	Surface
<b>Country</b>	United States	<b>Job Date</b>	10-31-2013

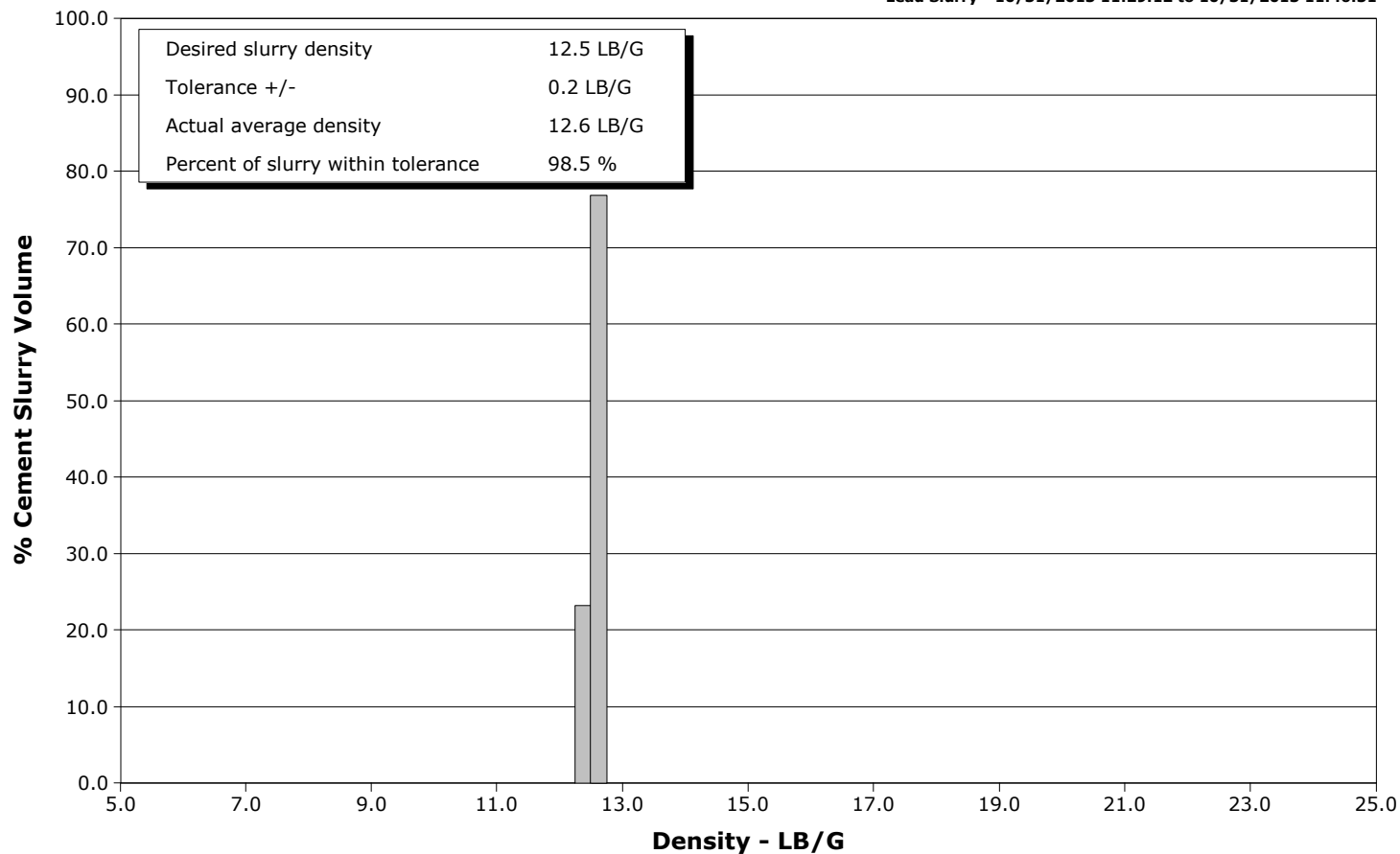


# Schlumberger Cementing Qa/Qc Density Report

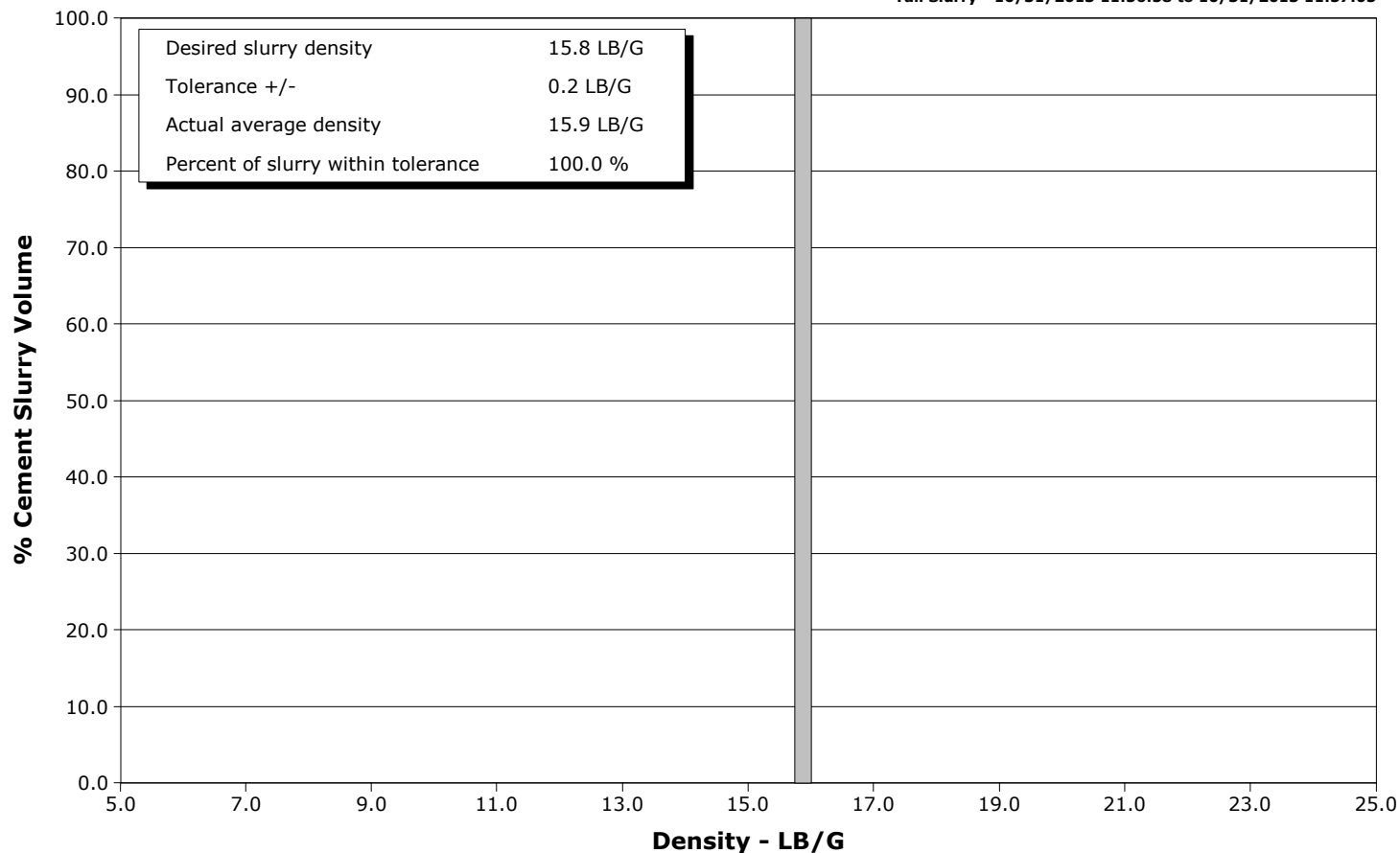
**Well** Rose 22-4C  
**Field** Mamm Creek  
**Engineer** Justin Zika/Stacy Terry  
**Country** United States

**Client** Encana  
**SIR No.**  
**Job Type** Surface  
**Job Date** 10-31-2013

Lead Slurry - 10/31/2013 11:29:12 to 10/31/2013 11:46:31



Tail Slurry - 10/31/2013 11:56:58 to 10/31/2013 11:57:05





# Cementing Service Report

				Customer Encana			Job Number 1866139								
Well Rose 22-4C 22-4C			Location (legal) Grand Junction			Schlumberger Location GCO			Job Start Oct/31/2013						
Field Mamm Creek		Formation Name/Type shale			Deviation		Bit Size 12.7 in		Well MD 1295.0 ft		Well TVD 1295.0 ft				
County Garfield		State/Province Colorado			BHP		BHST 94 degF		BHCT 82 degF		Pore Press. Gradient				
Well Master 0631485486		API/UWI 05045221110000													
Rig Name Patterson 303		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	
						1295.0		9.630		36.0		J55		8RD	
Drilling Fluid Type		Max. Density		Plastic Viscosity		Tubing/Drill Pipe									
						Depth,		Size,		Weight,		Grade		Thread	
Service Line Cementing		Job Type Surface													
Max. Allowed Tub. Press 641 psi		Max. Allowed Ann. Press		WH Connection Single Cement head		Perforations/Open Hole									
Service Instructions Rig Up Hold Safety Meeting Flush Lines Pressure Test Lines Pump 20 bbls Of Fresh Water Pump 109 bblsf Of 12.5 ppg Lead Pump 32 bbls Of 15.8 ppg Tail Shut Down Drop Top Plug Displace						Top,		Bottom,				No. of Shots		Total Interval	
						Treat Down Casing		Displacement 97.0 bbl		Packer Type		Packer Depth			
						Tubing Vol.		Casing Vol. 100.0 bbl		Annular Vol. 87.0 bbl		Openhole Vol. 190.0 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				Shoe Type Float				Squeeze Type							
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 1295.0 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 Oct/31/2013 07:30		Arrived on Location Oct/31/2013 07:30		Leave Location Oct/31/2013 14:00		Collar Type Float				Tail Pipe Depth					
						Collar Depth 1249.0 ft				Sqz. Total Vol.					
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message									
10/31/2013	10:44:36					Started Acquisition									
10/31/2013	11:12:44	4	0.3	8.54	0.0										
10/31/2013	11:12:45					Start Job									
10/31/2013	11:12:45	4	0.3	8.54	0.0										
10/31/2013	11:12:48					Rig Up									
10/31/2013	11:12:48					Hold Safety Meeting									
10/31/2013	11:12:48					Flush Lines									
10/31/2013	11:12:48	4	0.3	8.54	0.0										
10/31/2013	11:12:54					Pressure Test Lines									
10/31/2013	11:12:54	4	0.3	8.54	0.1										
10/31/2013	11:12:56	4	0.3	8.54	0.1										
10/31/2013	11:12:59					Low Test 494 psi = Good									
10/31/2013	11:12:59					High Test 3330 psi = Good									
10/31/2013	11:12:59	5	0.3	8.54	0.1										
10/31/2013	11:14:36	5	0.3	8.54	0.6										
10/31/2013	11:16:16	1	0.3	8.54	1.1										
10/31/2013	11:17:56	70	1.6	8.39	1.9										
10/31/2013	11:19:36	553	0.0	8.39	3.4										
10/31/2013	11:21:16	3340	0.0	8.39	3.4										
10/31/2013	11:22:56	27	0.0	8.39	3.4										
10/31/2013	11:24:36	112	3.7	8.39	7.6										

Well			Field		Job Start	Customer	Job Number
Rose 22-4C 22-4C			Mamm Creek		Oct/31/2013	Encana	1866139
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
10/31/2013	11:25:52	108	3.7	8.39	12.2		
10/31/2013	11:25:54					Pump 20 bbls Of Fresh Water	
10/31/2013	11:25:54					Good Returnrs	
10/31/2013	11:25:54	99	3.7	8.39	12.3		
10/31/2013	11:26:16	95	3.7	8.39	13.7		
10/31/2013	11:27:56	191	4.1	11.41	20.0		
10/31/2013	11:29:12					Start Mixing Lead Slurry	
10/31/2013	11:29:12	349	6.5	12.39	27.3		
10/31/2013	11:29:15					Pump 109 bbls Of 12.5 ppg Lead	
10/31/2013	11:29:15	342	6.4	12.41	27.6		
10/31/2013	11:29:16					289 sks Y=2.11	
10/31/2013	11:29:16					Good Returns	
10/31/2013	11:29:16	340	6.4	12.42	27.8		
10/31/2013	11:29:36	331	6.5	12.44	29.9		
10/31/2013	11:31:16	326	6.5	12.60	40.7		
10/31/2013	11:32:56	311	6.4	12.40	51.5		
10/31/2013	11:34:36	334	6.5	12.57	62.3		
10/31/2013	11:36:16	315	6.5	12.66	73.1		
10/31/2013	11:37:56	313	6.5	12.69	83.9		
10/31/2013	11:39:36	306	6.5	12.46	94.7		
10/31/2013	11:41:16	316	6.5	12.67	105.5		
10/31/2013	11:42:56	305	6.5	12.66	116.2		
10/31/2013	11:44:36	300	6.5	12.56	127.0		
10/31/2013	11:46:16	-1	0.0	12.55	128.8		
10/31/2013	11:46:31					End Lead Slurry	
10/31/2013	11:46:31	-0	0.0	12.55	128.8		
10/31/2013	11:47:56	-1	0.0	12.56	128.8		
10/31/2013	11:49:36	464	5.9	15.49	132.8		
10/31/2013	11:51:16	657	7.8	15.54	145.3		
10/31/2013	11:52:56	605	7.8	15.11	158.3		
10/31/2013	11:54:36	1	0.0	13.53	163.9		
10/31/2013	11:56:16	-5	0.0	12.95	163.9		
10/31/2013	11:56:58					Start Mixing Tail Slurry	
10/31/2013	11:56:58	318	4.9	15.87	166.0		
10/31/2013	11:57:01					Pump 32 bbls Of 15.8 ppg Tail	
10/31/2013	11:57:01	365	4.9	15.91	166.2		
10/31/2013	11:57:02					155 sks Y=1.15	
10/31/2013	11:57:02					Good returns	
10/31/2013	11:57:02	365	4.9	15.92	166.3		
10/31/2013	11:57:05					End Tail Slurry	
10/31/2013	11:57:05	358	4.9	15.94	166.6		
10/31/2013	11:57:20					Drop Top Plug	
10/31/2013	11:57:20	27	0.2	16.22	167.4		
10/31/2013	11:57:22					Start Displacement	
10/31/2013	11:57:22	25	0.0	16.24	167.4		
10/31/2013	11:57:23					Displace 97 bbls Of Fresh Water	
10/31/2013	11:57:23	25	0.0	16.24	167.4		
10/31/2013	11:57:56	5	0.0	16.16	167.4		
10/31/2013	11:59:36	-3	0.0	16.02	167.4		
10/31/2013	12:01:16	117	0.0	22.12	167.7		
10/31/2013	12:02:56	80	3.3	8.64	170.1		
10/31/2013	12:04:36	138	5.1	9.08	178.5		
10/31/2013	12:06:16	123	5.1	8.47	187.0		
10/31/2013	12:07:56	142	5.1	8.40	195.5		

Well			Field		Job Start	Customer	Job Number
Rose 22-4C 22-4C			Mamm Creek		Oct/31/2013	Encana	1866139
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
10/31/2013	12:11:16	178	5.0	8.38	212.4		
10/31/2013	12:12:56	275	6.4	8.39	222.0		
10/31/2013	12:14:36	318	6.4	8.38	232.8		
10/31/2013	12:16:16	382	6.4	8.39	243.5		
10/31/2013	12:17:56	265	2.5	8.39	251.0		
10/31/2013	12:19:36	298	2.5	8.39	255.1		
10/31/2013	12:21:16	319	2.5	8.39	259.3		
10/31/2013	12:22:56	346	2.5	8.39	263.5		
10/31/2013	12:24:36	1105	0.0	8.39	266.9		
10/31/2013	12:25:08					Bump Top Plug To 100 psi	
10/31/2013	12:25:08	1087	0.0	8.39	266.9		
10/31/2013	12:25:11					Final Circulating Psi 370	
10/31/2013	12:25:11					Floats Held	
10/31/2013	12:25:11	1084	0.0	8.39	266.9		
10/31/2013	12:25:12					1/2 A bbl Back	
10/31/2013	12:25:12					77 bbls Of Cement To Surface	
10/31/2013	12:25:12	1084	0.0	8.39	266.9		
10/31/2013	12:25:13					Good Returns Throughout Job	
10/31/2013	12:25:13					Rig Down	
10/31/2013	12:25:13	1083	0.0	8.39	266.9		
10/31/2013	12:25:15					End Job	
10/31/2013	12:25:15	1081	0.0	8.39	266.9		
10/31/2013	12:26:16	1043	0.0	8.39	266.9		
10/31/2013	12:27:56	768	0.0	8.40	266.9		
10/31/2013	12:29:36	-11	0.0	8.40	266.9		
10/31/2013	12:31:16	-11	0.0	8.40	266.9		
10/31/2013	12:32:56	-11	0.0	8.40	266.9		
10/31/2013	12:34:36	175	4.0	8.42	268.7		
10/31/2013	12:36:16	2	3.8	7.49	275.4		
10/31/2013	12:37:56	260	0.0	8.41	275.7		
10/31/2013	12:39:36	-10	0.0	8.41	276.3		
10/31/2013	12:41:16	92	0.0	8.39	276.3		
10/31/2013	12:42:56	101	0.0	8.39	276.3		
10/31/2013	12:44:36	83	0.0	8.40	276.3		
10/31/2013	12:46:16	69	0.0	8.40	276.3		

Post Job Summary

Average Pump Rates,					Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry 140.0	Mud	Spacer 20.0	N2	
Treating Pressure Summary,					Breakdown Fluid			
Maximum 3000	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density	
Avg. N2 Percent		Designed Slurry Volume 140.0 bbl	Displacement 97.0 bbl	Mix Water Temp 59 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>		Volume 77.0 bbl	
					Washed Thru Perfs <input type="checkbox"/>		To	
Customer or Authorized Representative Charlie Brown			Schlumberger Supervisor Justin Zika/Stacy Terry			Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>	
					-		-	