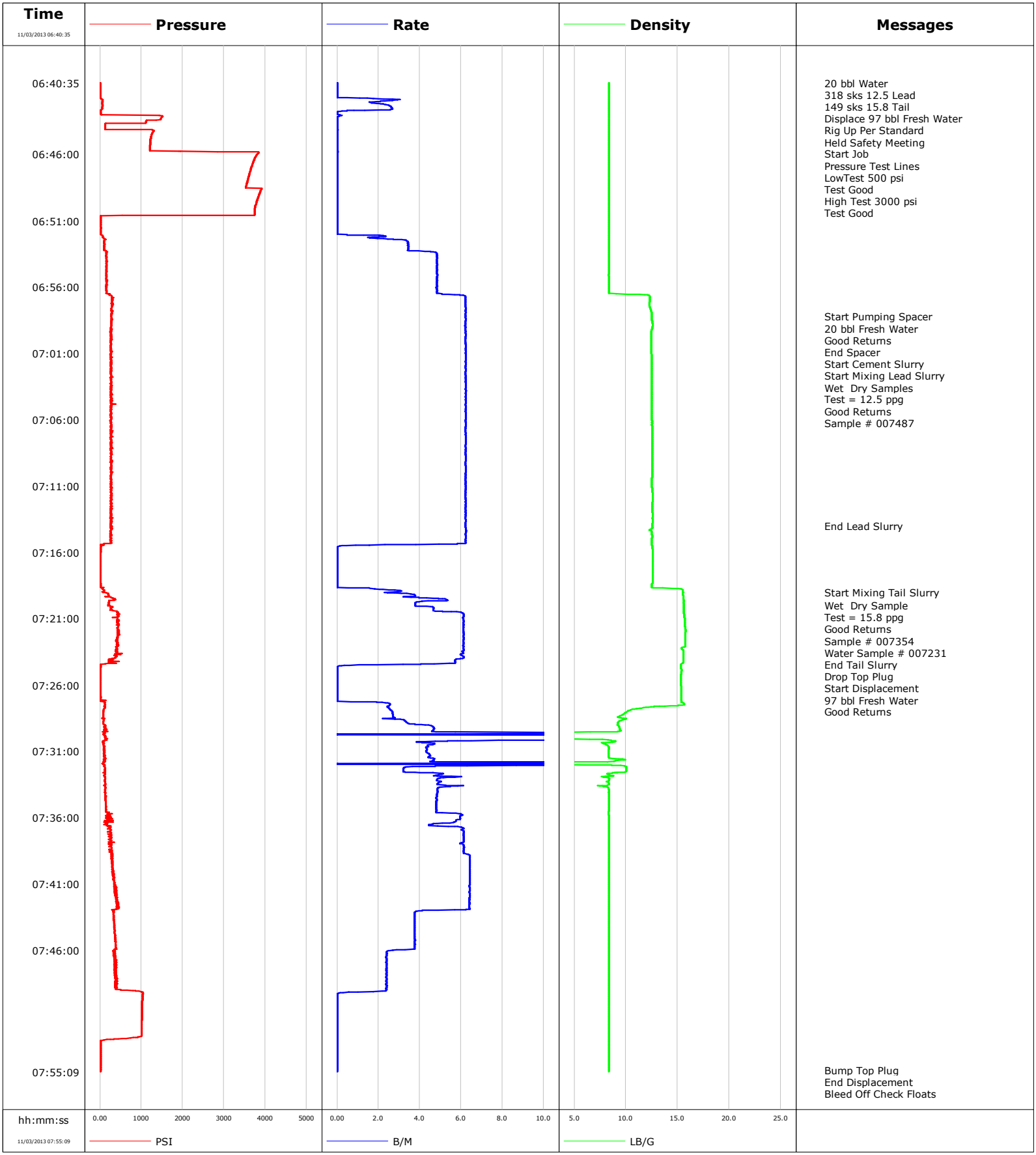
Schlumberger Cementing Job Report

Well	Rose 22-1C	**Client**	Encana
Field	Mamm Creek	**SIR No.**	C459-01964
Engineer	Jordan Moreland/ TJ Morrow	**Job Type**	9 5/8 Surface
Country	United States	**Job Date**	11-03-2013



Cementing Service Report

Customer	Job Number
Encana	C459-01964

Well	Location (legal)	Schlumberger Location	Job Start
Rose 22-1C	K22W	GCO	Nov/03/2013

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Mamm Creek	Shale		12.7 in		

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Garfield	Colorado		94 degF	82 degF	

Well Master	API/UWI
0631485491	05045221180000

Rig Name	Drilled For	Service Via
Patterson 303	Gas	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity

Service Line	Job Type
Cementing	9 5/8 Surface

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
3000 psi		Single Cement head

Service Instructions

Rate And Density Checked
10 bbl MUDPUSH EXPRESS
318 sks 12.5 G Lead
149 sks 15.8 G Tail
Displace 97 bbl Fresh Water

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
1295.0	9.630	36.0	J55	8RD
0.0	0.000	0.0		

Tubing/Drill Pipe

Depth,	Size,	Weight,	Grade	Thread

Perforations/Open Hole

Top,	Bottom,		No. of Shots	Total Interval
				Diameter

Treat Down	Displacement	Packer Type	Packer Depth
Casing	97.0 bbl		

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
	100.0 bbl	88.0 bbl	190.0 bbl

Casing/Tubing Secured	1 Hole Vol. Circulated prior to Cement
X	X

Lift Pressure	Pipe Rotated	Pipe Reciprocated
641 psi	☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type
Single

Job Scheduled For	Arrived on Location	Leave Location
Nov/03/2013	Nov/03/2013	Nov/03/2013

Casing Tools		Squeeze Job	
Shoe Type	Guide	Squeeze Type	
Shoe Depth	1295.0 ft	Tool Type	
Stage Tool Type		Tool Depth	
Stage Tool Depth		Tail Pipe Size	
Collar Type	Float	Tail Pipe Depth	
Collar Depth	1251.0 ft	Sqz. Total Vol.	

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
11/03/2013	06:13:40					Started Acquisition
11/03/2013	06:40:35					20 bbl Water
11/03/2013	06:40:35					318 sks 12.5 Lead
11/03/2013	06:40:35	3	0.0	8.34	0.0	
11/03/2013	06:40:36					149 sks 15.8 Tail
11/03/2013	06:40:36					Displace 97 bbl Fresh Water
11/03/2013	06:40:36					Rig Up Per Standard
11/03/2013	06:40:36					Held Safety Meeting
11/03/2013	06:40:36	3	0.0	8.35	0.0	
11/03/2013	06:40:37					Start Job
11/03/2013	06:40:37	3	0.0	8.35	0.0	
11/03/2013	06:40:39					Pressure Test Lines
11/03/2013	06:40:39	3	0.0	8.34	0.0	
11/03/2013	06:40:41					LowTest 500 psi
11/03/2013	06:40:41					Test Good
11/03/2013	06:40:41					High Test 3000 psi
11/03/2013	06:40:41	3	0.0	8.35	0.0	
11/03/2013	06:40:42					Test Good
11/03/2013	06:40:42	3	0.0	8.35	0.0	
11/03/2013	06:41:40	3	0.0	8.35	0.0	
11/03/2013	06:43:40	132	0.0	8.34	2.2	

Well	Field	Job Start	Customer	Job Number
Rose 22-1C	Mamm Creek	Nov/03/2013	Encana	C459-01964

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
11/03/2013	06:47:40	3598	0.0	8.34	2.2	
11/03/2013	06:49:40	3784	0.0	8.35	2.2	
11/03/2013	06:51:40	22	0.0	8.34	2.2	
11/03/2013	06:53:40	149	4.8	8.34	7.8	
11/03/2013	06:55:40	156	4.8	8.34	17.4	
11/03/2013	06:57:40	271	6.2	12.37	28.6	
11/03/2013	06:58:12					Start Pumping Spacer
11/03/2013	06:58:12	266	6.2	12.50	31.9	
11/03/2013	06:58:13					20 bbl Fresh Water
11/03/2013	06:58:13					Good Returns
11/03/2013	06:58:13	278	6.2	12.50	32.0	
11/03/2013	06:58:14					End Spacer
11/03/2013	06:58:14	283	6.2	12.50	32.1	
11/03/2013	06:58:15					Start Cement Slurry
11/03/2013	06:58:15	269	6.2	12.50	32.2	
11/03/2013	06:58:16					Start Mixing Lead Slurry
11/03/2013	06:58:16	269	6.2	12.50	32.3	
11/03/2013	06:58:17					Wet Dry Samples
11/03/2013	06:58:17					Test = 12.5 ppg
11/03/2013	06:58:17	282	6.2	12.51	32.4	
11/03/2013	06:58:18					Good Returns
11/03/2013	06:58:18					Sample # 007487
11/03/2013	06:58:18	298	6.2	12.51	32.5	
11/03/2013	06:59:40	259	6.2	12.45	41.0	
11/03/2013	07:01:40	285	6.2	12.51	53.5	
11/03/2013	07:03:40	287	6.2	12.51	65.9	
11/03/2013	07:05:40	279	6.2	12.52	78.3	
11/03/2013	07:07:40	269	6.2	12.56	90.8	
11/03/2013	07:09:40	264	6.2	12.54	103.2	
11/03/2013	07:11:40	268	6.2	12.58	115.6	
11/03/2013	07:13:40	292	6.2	12.58	128.1	
11/03/2013	07:14:00					End Lead Slurry
11/03/2013	07:14:00	255	6.2	12.57	130.1	
11/03/2013	07:15:40	21	0.0	12.53	138.9	
11/03/2013	07:17:40	10	0.0	12.59	138.9	
11/03/2013	07:19:00					Start Mixing Tail Slurry
11/03/2013	07:19:00	93	2.4	15.53	139.8	
11/03/2013	07:19:40	222	4.4	15.60	142.4	
11/03/2013	07:20:00					Wet Dry Sample
11/03/2013	07:20:00					Test = 15.8 ppg
11/03/2013	07:20:00					Good Returns
11/03/2013	07:20:00					Sample # 007354
11/03/2013	07:20:00					Water Sample # 007231
11/03/2013	07:20:00	211	3.8	15.59	143.7	
11/03/2013	07:21:40	444	6.1	15.73	153.2	
11/03/2013	07:23:20					End Tail Slurry
11/03/2013	07:23:20	402	6.1	15.49	163.4	
11/03/2013	07:23:40	509	6.0	15.55	165.4	
11/03/2013	07:24:17					Drop Top Plug
11/03/2013	07:24:17					Start Displacement
11/03/2013	07:24:17	247	5.7	15.54	169.1	
11/03/2013	07:24:18					97 bbl Fresh Water
11/03/2013	07:24:18	247	5.7	15.54	169.1	
11/03/2013	07:24:19					Good Returns

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Rose 22-1C	Mamm Creek	Nov/03/2013	Encana	C459-01964

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
11/03/2013	07:25:40	6	0.0	15.32	170.0	
11/03/2013	07:27:40	114	2.5	12.18	171.0	
11/03/2013	07:29:40	96	6.3	0.02	179.6	
11/03/2013	07:31:40	103	4.7	9.49	195.4	
11/03/2013	07:33:40	128	5.2	8.11	206.7	
11/03/2013	07:35:40	217	5.8	8.33	216.4	
11/03/2013	07:37:40	232	6.1	8.34	228.1	
11/03/2013	07:39:40	306	6.4	8.34	240.6	
11/03/2013	07:41:40	350	6.4	8.34	253.4	
11/03/2013	07:43:40	334	3.7	8.34	264.4	
11/03/2013	07:45:40	381	3.7	8.34	271.9	
11/03/2013	07:47:40	402	2.4	8.34	277.1	
11/03/2013	07:49:40	1027	0.0	8.34	280.6	
11/03/2013	07:51:40	1009	0.0	8.34	280.6	
11/03/2013	07:53:40	14	0.0	8.34	280.6	
11/03/2013	07:55:02					Bump Top Plug
11/03/2013	07:55:02	14	0.0	8.34	280.6	
11/03/2013	07:55:03					End Displacement
11/03/2013	07:55:03	14	0.0	8.34	280.6	
11/03/2013	07:55:04					Bleed Off Check Floats
11/03/2013	07:55:04	14	0.0	8.34	280.6	
11/03/2013	07:55:05					Floats Held
11/03/2013	07:55:05					1/2 bbl Back
11/03/2013	07:55:05					67 bbl Cement To Surface
11/03/2013	07:55:05					End Job
11/03/2013	07:55:05	14	0.0	8.34	280.6	

Post Job Summary

Average Pump Rates,				Volume of Fluid Injected,			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2

Treating Pressure Summary,					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
			66 degF	X	
				Washed Thru Perfs ☐	To

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Charlie Brown	Jordan Moreland/ TJ Morrow	☐ -	X -