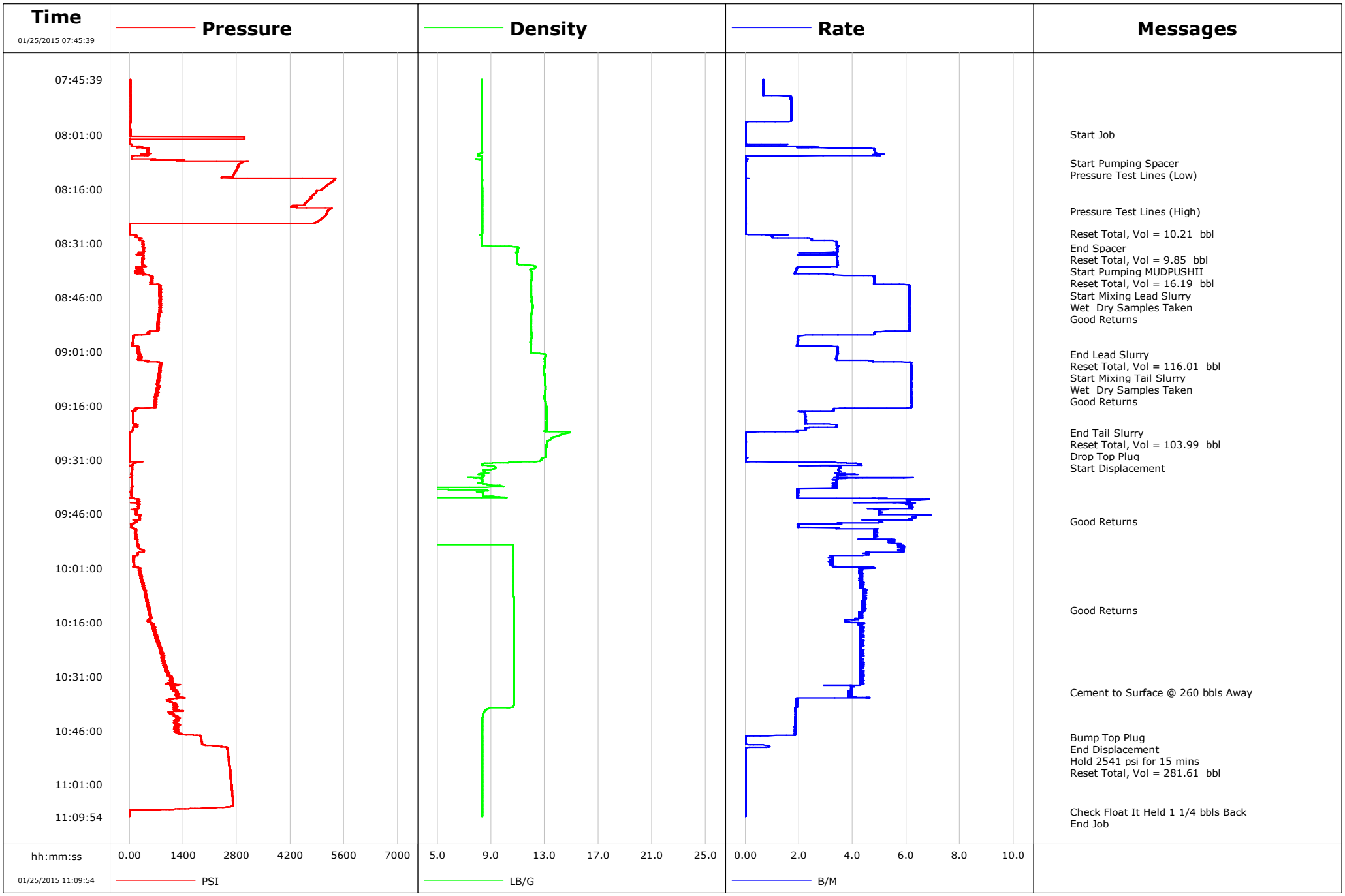
Schlumberger

Cementing Job Report

CemCAT v1.6

Well	Ruhl 1B-32H-B264	**Client**	Encana
Field	DJ	**SIR No.**	D8FO-00037
Engineer	Wayne Silvester/Terry Tischmak	**Job Type**	Intermediate
Country	United States	**Job Date**	01-25-2015



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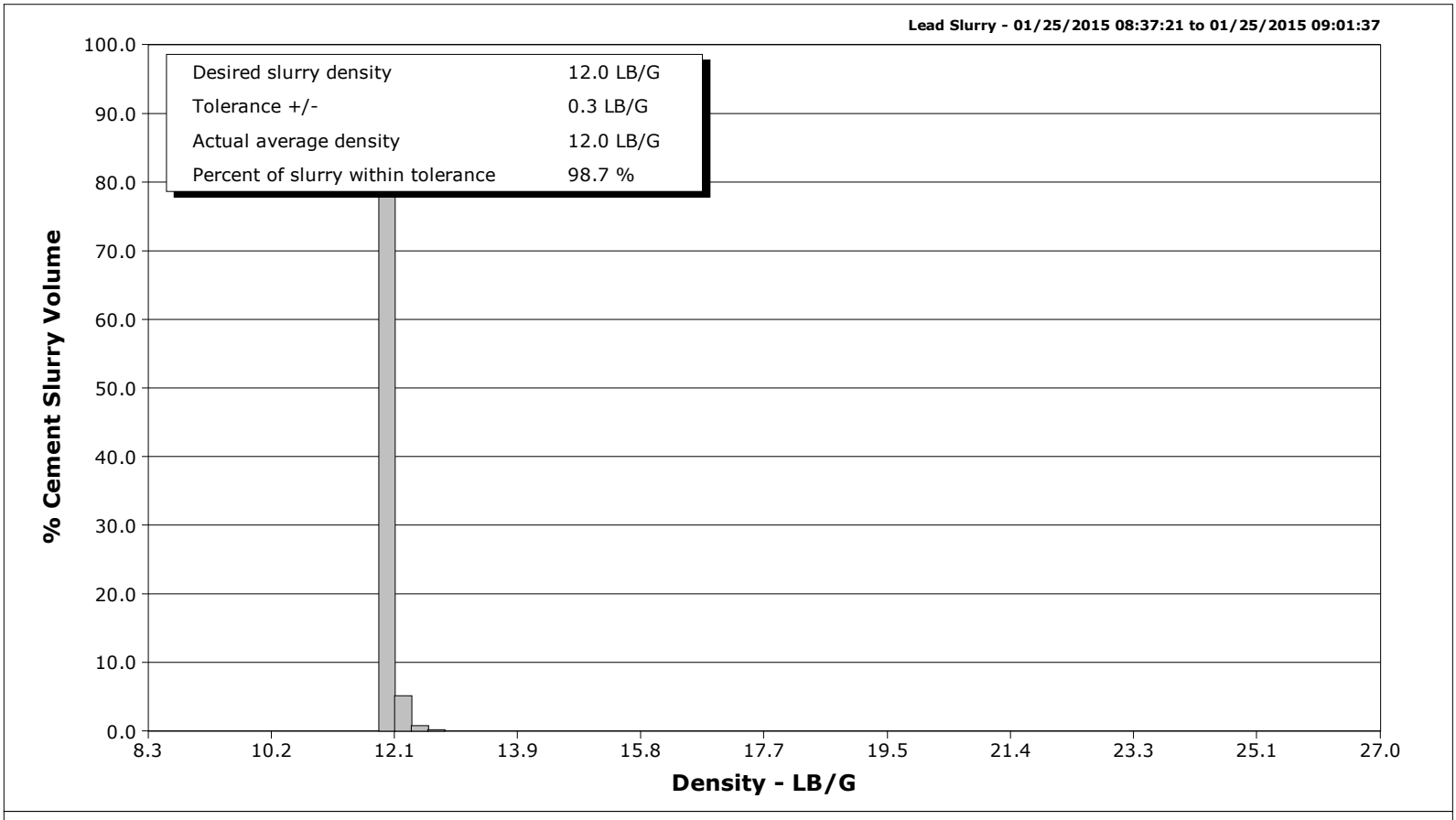
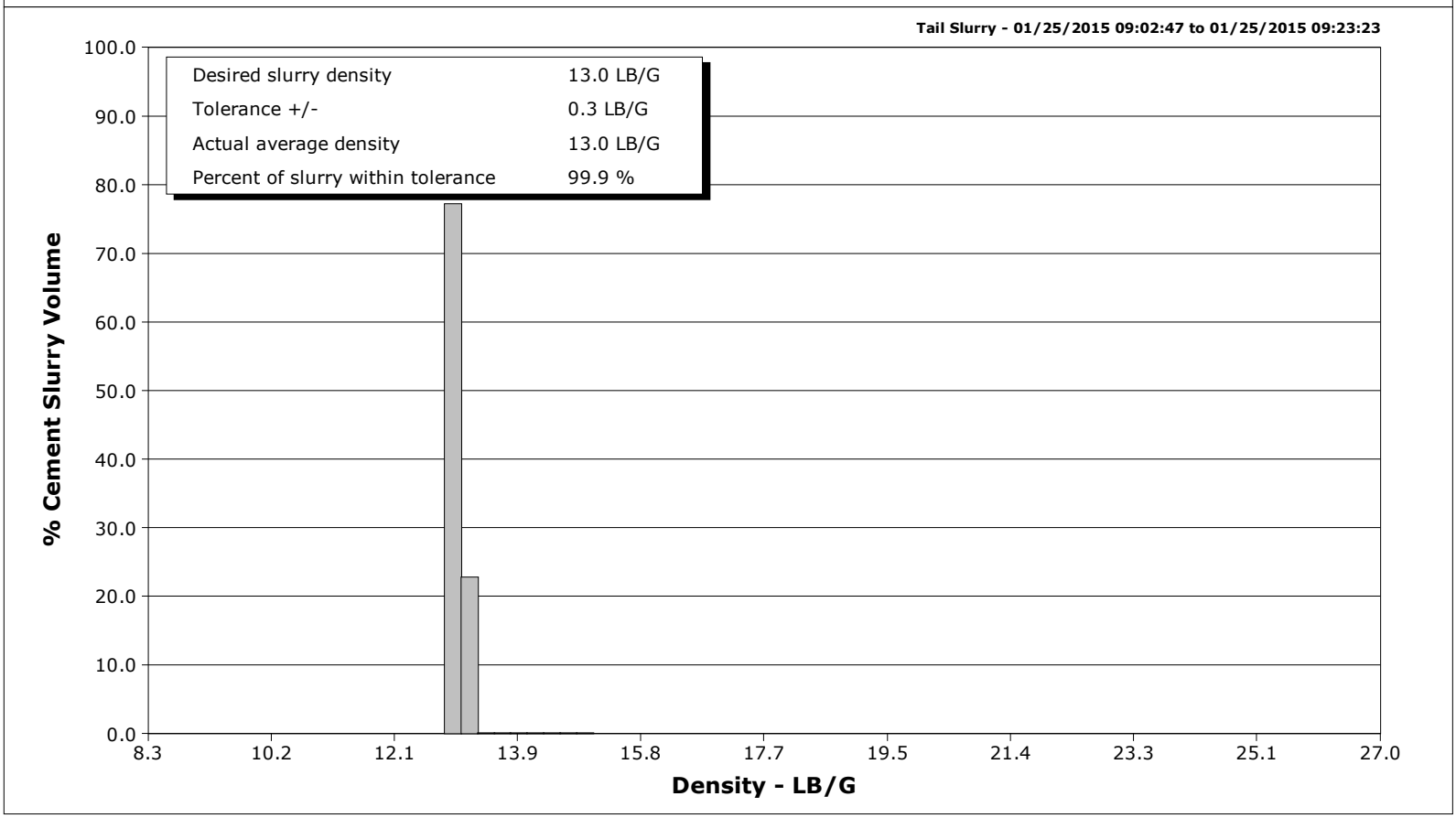
Cementing Qa/Qc Density Report

Well	Ruhl 1B-32H-B264	**Client**	Encana
Field	DJ	**SIR No.**	D8FO-00037
Engineer	Wayne Silvester/Terry Tischmak	**Job Type**	Intermediate
Country	United States	**Job Date**	01-25-2015





Schlumberger

Cementing Service Report

Customer	Job Number
Encana	D8FO-00037

Well	Location (legal)	Schlumberger Location	Job Start
Ruhl 1B-32H-B264 1B-32H-B264	217304	Cheyenne	Jan/25/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
DJ	Shale	deg	8.8 in	7393.0 ft	7408.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Weld	Colorado	610 psi	degF	degF	lb/gal

Well Master	API/UWI
0631588860	05123402840000

Rig Name	Drilled For	Service Via
H&P 278	Oil & Gas	Land

Offshore Zone	Well Class	Well Type
	New	Other

Drilling Fluid Type	Max. Density	Plastic Viscosity
Bentonite	11.00 lb/gal	cP

Service Line	Job Type
Cementing	Intermediate

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
psi	4000 psi	7

Service Instructions

1.Rig-Up, Prime-Up Pressure-Test (2.5% variance in 3 minutes) per Standard 5
2.Confirm design with Client Representative
3.Check Mud Density and Rheology.
4.Perform Water Quality test prior to job.
5.If Losses seen reduce pump rate to decrease ECD.
6.ENSURE TATTLE-TAIL DEPARTURE.
7.COUNT EXACT TANKS ON DISPLACEMENT.
8.MAXIMUM OVERDISPLACEMENT Verify with Company Represenataive.

Min Volume = Design - 20 bbls

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
7393.0	7.0	26.0	N/A	8RD
0.0	0.0	0.0		

Tubing/Drill Pipe

T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread

Perforations/Open Hole

Top, ft	Bottom, ft	shot/ft	No. of Shots	Total Interval
ft	ft			ft
ft	ft			Diameter
ft	ft			in

Treat Down	Displacement	Packer Type	Packer Depth
Casing	281.0 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	283.0 bbl	199.7 bbl	bbl

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

Lift Pressure	Pipe Rotated	Pipe Reciprocated
4995 psi	☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	1

Cement Head Type
Double

Job Scheduled For	Arrived on Location	Leave Location
Jan/25/2015	Jan/25/2015	Jan/25/2015

Casing Tools

Shoe Type	Float
Shoe Depth	7391.5 ft
Stage Tool Type	
Stage Tool Depth	ft
Collar Type	Float
Collar Depth	7344.7 ft

Squeeze Job

Squeeze Type	
Tool Type	
Tool Depth	ft
Tail Pipe Size	in
Tail Pipe Depth	ft
Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
01/25/2015	07:45:39	20	0.7	8.30	0.0	Water Test Complete
01/25/2015	07:50:40	34	1.7	8.31	0.0	
01/25/2015	07:55:41	35	1.7	8.30	0.0	
01/25/2015	08:00:42	15	0.0	8.30	0.0	
01/25/2015	08:00:45	15	0.0	8.30	0.0	Start Job
01/25/2015	08:05:43	474	4.8	8.31	6.5	
01/25/2015	08:08:49	2918	0.0	8.31	12.0	Start Pumping Spacer
01/25/2015	08:09:40	2828	0.0	8.31	12.0	Pressure Test Lines (Low)
01/25/2015	08:10:44	2790	0.0	8.31	12.0	
01/25/2015	08:15:45	5063	0.0	8.32	12.0	
01/25/2015	08:20:46	4237	0.0	8.32	12.0	
01/25/2015	08:22:13	5169	0.0	8.32	12.0	Pressure Test Lines (High)
01/25/2015	08:25:47	-1	0.0	8.32	12.0	
01/25/2015	08:28:24	0	0.0	8.32	12.0	Reset Total, Vol = 10.21 bbl
01/25/2015	08:30:48	343	3.4	8.31	16.5	
01/25/2015	08:32:17	365	3.4	11.05	0.4	End Spacer
01/25/2015	08:32:22	348	3.4	11.06	0.7	Reset Total, Vol = 9.85 bbl
01/25/2015	08:32:27	362	3.4	11.07	1.0	Start Pumping MUDPUSHII
01/25/2015	08:35:49	368	3.4	10.95	11.9	
01/25/2015	08:37:16	360	3.4	12.11	16.9	Reset Total, Vol = 16.19 bbl
01/25/2015	08:37:21	368	3.4	12.24	17.2	Start Mixing Lead Slurry

Well	Field	Job Start	Customer	Job Number
Ruhl 1B-32H-B264 1B-32H-B264	DJ	Jan/25/2015	Encana	D8FO-00037

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
01/25/2015	08:40:50	620	4.8	12.01	27.2	
01/25/2015	08:42:09	593	4.8	11.95	33.6	Good Returns
01/25/2015	08:45:51	840	6.1	12.00	55.8	
01/25/2015	08:50:52	791	6.1	11.99	86.5	
01/25/2015	08:55:53	491	4.8	12.05	116.6	
01/25/2015	09:00:54	237	3.4	11.94	130.2	
01/25/2015	09:01:37	252	3.4	12.69	132.7	End Lead Slurry
01/25/2015	09:01:41	209	3.4	12.80	132.9	Reset Total, Vol = 116.01 bbl
01/25/2015	09:02:47	223	3.4	13.00	136.6	Start Mixing Tail Slurry
01/25/2015	09:02:53	227	3.4	12.99	137.0	Wet Dry Samples Taken
01/25/2015	09:05:55	770	6.2	12.94	153.4	
01/25/2015	09:10:56	782	6.2	13.03	184.5	
01/25/2015	09:13:28	697	6.2	12.97	200.1	Good Returns
01/25/2015	09:15:57	669	6.2	13.07	215.5	
01/25/2015	09:20:58	97	2.2	13.13	230.6	
01/25/2015	09:23:23	9	0.2	14.88	236.9	End Tail Slurry
01/25/2015	09:23:43	9	0.0	14.61	236.9	Reset Total, Vol = 103.99 bbl
01/25/2015	09:24:29	9	0.0	13.96	236.9	Drop Top Plug
01/25/2015	09:24:30	9	0.0	13.93	236.9	Start Displacement
01/25/2015	09:25:59	9	0.0	13.20	236.9	
01/25/2015	09:31:00	8	0.0	12.73	236.9	
01/25/2015	09:36:01	16	5.5	7.56	15.5	
01/25/2015	09:41:02	41	1.9	8.39	29.8	
01/25/2015	09:46:03	197	5.0	-0.04	56.0	
01/25/2015	09:48:03	163	5.0	-0.05	68.0	Good Returns
01/25/2015	09:51:04	176	4.8	-0.04	78.8	
01/25/2015	09:56:05	348	5.9	10.63	105.5	
01/25/2015	10:01:06	279	4.7	10.65	124.8	
01/25/2015	10:06:07	353	4.4	10.64	146.3	
01/25/2015	10:11:08	477	4.4	10.68	168.3	
01/25/2015	10:12:43	502	4.3	10.67	175.2	Good Returns
01/25/2015	10:16:09	562	4.1	10.67	189.6	
01/25/2015	10:21:10	704	4.3	10.68	211.1	
01/25/2015	10:26:11	886	4.3	10.69	232.7	
01/25/2015	10:31:12	1087	4.3	10.69	254.3	
01/25/2015	10:35:23	1266	4.0	10.69	271.6	Cement to Surface @ 260 bbls Away
01/25/2015	10:36:13	1226	4.0	10.69	274.9	
01/25/2015	10:41:14	1090	1.9	8.43	286.4	
01/25/2015	10:46:15	1277	1.8	8.32	295.7	
01/25/2015	10:47:50	1855	0.0	8.32	298.0	Bump Top Plug
01/25/2015	10:47:51	1856	0.0	8.32	298.0	End Displacement
01/25/2015	10:50:43	2541	0.3	8.33	298.6	Hold 2541 psi for 15 mins
01/25/2015	10:50:56	2549	0.0	8.33	298.6	Reset Total, Vol = 281.61 bbl
01/25/2015	10:51:16	2551	0.0	8.33	298.6	
01/25/2015	10:56:17	2611	0.0	8.32	298.6	
01/25/2015	11:01:18	2657	0.0	8.32	298.6	
01/25/2015	11:06:19	2699	0.0	8.32	298.6	
01/25/2015	11:08:26	1	0.0	8.32	298.6	Check Float It Held 1 1/4 bbls Back

Well	Field	Job Start	Customer	Job Number
Ruhl 1B-32H-B264 1B-32H-B264	DJ	Jan/25/2015	Encana	D8FO-00037

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
3.8		4.1	6.9	219.6	18.5	20.5	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5380	3	989	1110			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
%	219.0 bbl	281.5 bbl	65 degF	[X]	20.0 bbl
				Washed Thru Perfs [ ]	To ft

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Jim Quesenvury	Wayne Silvester/Terry Tischmak	-	[X] -