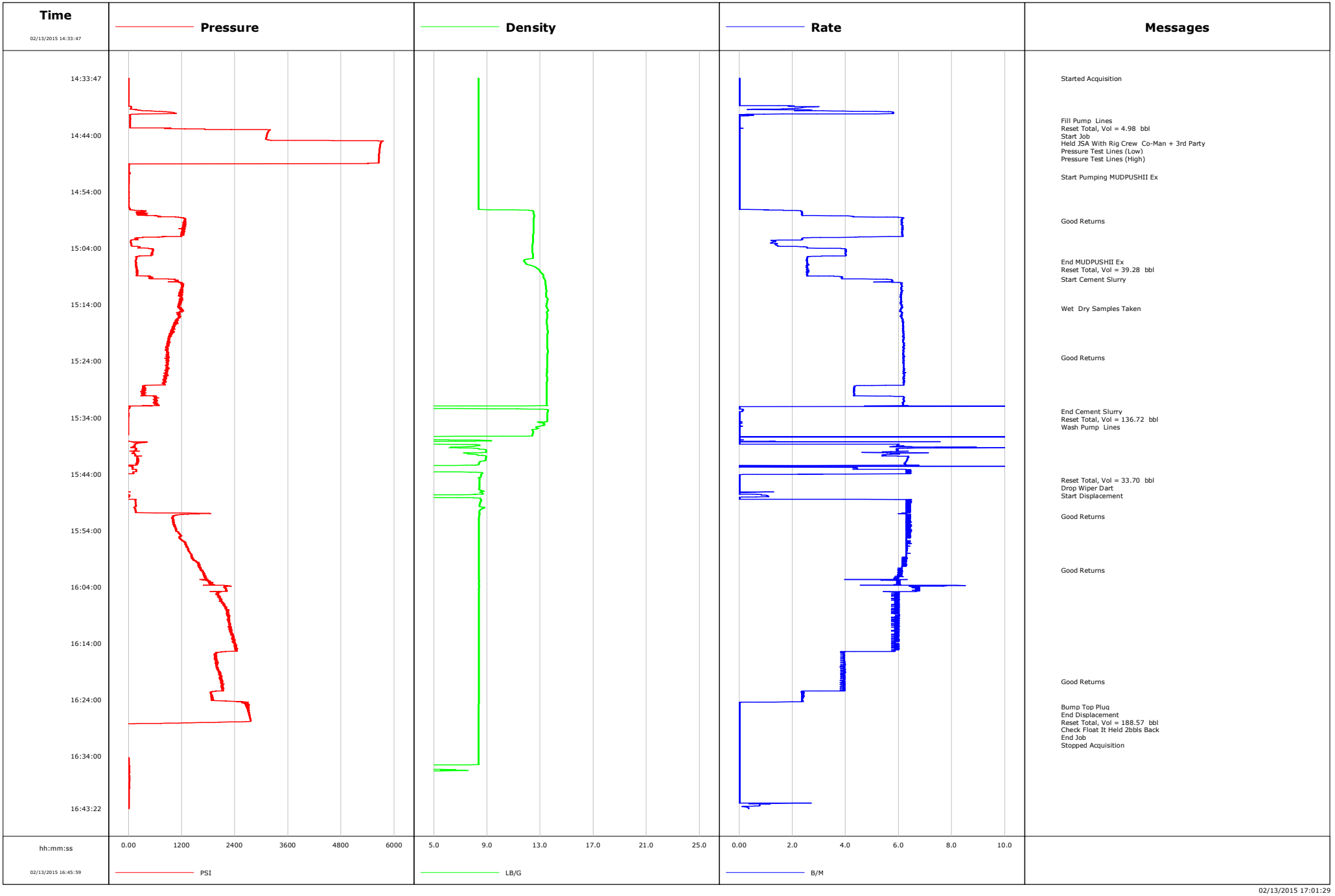
Schlumberger

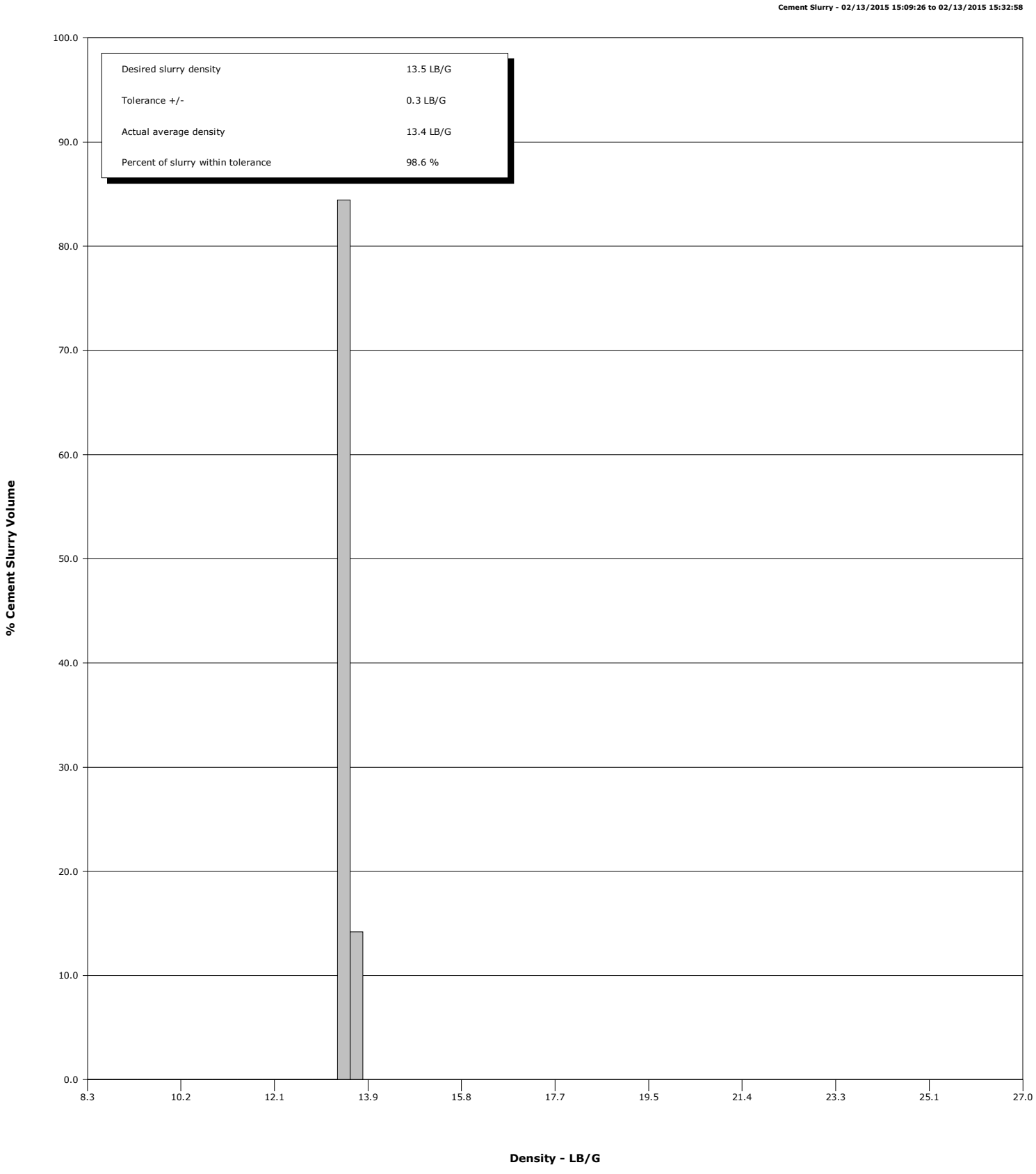
Cementing Job Report

Well	Sprague 3C-9H	**Client**	Encana
Field	DJ	**SIR No.**	CWJN-00849
Engineer	Wayne Silvester/Paul Kroeger	**Job Type**	Production
Country	United States	**Job Date**	02-13-2015



Cementing Qa/Qc Density Report

Well	Sprague 3C-9H	**Client**	Encana
Field	DJ	**SIR No.**	CWJN-00849
Engineer	Wayne Silvester/Paul Kroeger	**Job Type**	Production
Country	United States	**Job Date**	02-13-2015



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Cementing Service Report

Customer	Job Number
Encana	CWJN-00849

Well	Location (legal)	Schlumberger Location	Job Start
Sprague 3C-9H 3C-9H	217304	Cheyenne	Feb/13/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
DJ	Shale	deg	6.1 in	12632.0 ft	12636.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Weld	Colorado	3008 psi	215 degF	215 degF	lb/gal

Well Master	API/UWI
0631548278	05123392660000

Rig Name	Drilled For	Service Via
Patterson 272	Oil & Gas	Land

Offshore Zone	Well Class	Well Type
	New	Other

Drilling Fluid Type	Max. Density	Plastic Viscosity
Bentonite	11.10 lb/gal	cP

Service Line	Job Type
Cementing	Production

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
psi	10000 psi	1502

Service Instructions

1.Rig-Up, Prime-Up Pressure-Test (2.5% variance in 3 minute) per Standard 5
2.Confirm design with Client Representative
3.Check Mud Density and Rheology.
4.Perform Water Quality test prior to job.
5.Pump Lead Slurry at least 0.5ppg heavier than Mud.
6.DO NOT pump any slurry below mud weight.
7.ENSURE TATTLE-TAIL DEPARTURE.
8.Count exact tanks for displacement.
9.MAXIMUM OVERDISPLACEMENT = 2bbls (ONLY IF TATTLE-TAIL DEPARTURE ON TIME). Verify with Company Representative.
451 sks 13.5ppg Slurry - 1.68 yield

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
12636.0	4.5	13.5	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	188.5 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	188.6 bbl	bbl	bbl

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

Lift Pressure	3008 psi

Pipe Rotated	Pipe Reciprocated
☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type	3rd Party

Job Scheduled For	Arrived on Location	Leave Location
Feb/13/2015	Feb/13/2015	Feb/13/2015

Casing Tools		Squeeze Job	
Shoe Type	Float	Squeeze Type	
Shoe Depth	12636.0 ft	Tool Type	
Stage Tool Type		Tool Depth	ft
Stage Tool Depth	ft	Tail Pipe Size	in
Collar Type	Float	Tail Pipe Depth	ft
Collar Depth	12632.0 ft	Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/13/2015	14:33:47	-1	0.0	8.36	0.0	Started Acquisition
02/13/2015	14:38:48	53	2.1	8.35	0.3	
02/13/2015	14:41:20	35	0.0	8.35	5.0	Fill Pump Lines
02/13/2015	14:41:34	35	0.0	8.35	5.0	Reset Total, Vol = 4.98 bbl
02/13/2015	14:41:58	34	0.0	8.35	5.0	Start Job
02/13/2015	14:41:59	34	0.0	8.35	5.0	Held JSA With Rig Crew Co-Man + 3rd Party
02/13/2015	14:43:21	3145	0.0	8.35	5.0	Pressure Test Lines (Low)
02/13/2015	14:43:49	3122	0.0	8.35	5.0	
02/13/2015	14:45:09	5700	0.0	8.35	5.0	Pressure Test Lines (High)
02/13/2015	14:48:50	5641	0.0	8.35	5.0	
02/13/2015	14:51:18	1	0.0	8.35	5.0	Start Pumping MUDPUSHII Ex
02/13/2015	14:53:51	0	0.0	8.35	5.0	
02/13/2015	14:58:52	1275	6.1	12.49	11.1	
02/13/2015	14:59:09	1276	6.1	12.48	12.8	Good Returns
02/13/2015	15:03:53	216	2.6	12.38	33.6	
02/13/2015	15:06:26	167	2.5	11.83	42.1	End MUDPUSHII Ex
02/13/2015	15:07:17	180	2.5	12.60	44.3	Reset Total, Vol = 39.28 bbl
02/13/2015	15:08:54	493	3.4	13.22	48.4	
02/13/2015	15:09:26	906	5.2	13.31	50.5	Start Cement Slurry
02/13/2015	15:13:55	1163	6.1	13.46	77.6	
02/13/2015	15:14:36	1166	6.1	13.53	81.7	Wet Dry Samples Taken

Well	Field	Job Start	Customer	Job Number
Sprague 3C-9H 3C-9H	DJ	Feb/13/2015	Encana	CWJN-00849

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
02/13/2015	15:23:26	928	6.2	13.52	136.1	Good Returns
02/13/2015	15:23:57	884	6.2	13.50	139.3	
02/13/2015	15:28:58	307	4.3	13.49	169.1	
02/13/2015	15:32:58	-14	0.0	13.56	187.0	End Cement Slurry
02/13/2015	15:33:04	-16	0.0	13.55	187.0	Reset Total, Vol = 136.72 bbl
02/13/2015	15:33:27	-6	0.0	13.53	187.0	Wash Pump Lines
02/13/2015	15:33:59	-7	0.0	13.52	187.0	
02/13/2015	15:39:00	148	6.0	8.24	191.4	
02/13/2015	15:44:01	-65	2.5	8.58	220.5	
02/13/2015	15:45:11	-29	0.0	8.43	220.6	Reset Total, Vol = 33.70 bbl
02/13/2015	15:45:25	-17	0.0	8.42	220.6	Drop Wiper Dart
02/13/2015	15:49:02	158	6.4	8.48	224.5	
02/13/2015	15:51:29	998	6.5	8.39	240.0	Good Returns
02/13/2015	15:54:03	1085	6.4	8.37	256.3	
02/13/2015	15:59:04	1428	6.3	8.37	288.0	
02/13/2015	16:01:05	1675	6.0	8.37	300.4	Good Returns
02/13/2015	16:04:05	2151	6.8	8.38	318.7	
02/13/2015	16:09:06	2250	5.9	8.37	349.0	
02/13/2015	16:14:07	2380	5.7	8.37	378.6	
02/13/2015	16:19:08	2047	4.0	8.37	400.9	
02/13/2015	16:20:52	2084	3.9	8.37	407.7	Good Returns
02/13/2015	16:24:09	1915	2.3	8.37	418.1	
02/13/2015	16:25:19	2687	0.0	8.35	418.8	Bump Top Plug
02/13/2015	16:25:22	2658	0.0	8.35	418.8	Reset Total, Vol = 188.57 bbl
02/13/2015	16:28:48	-29	0.0	8.35	418.8	Check Float It Held 2bbls Back
02/13/2015	16:29:10	-27	0.0	8.35	418.8	
02/13/2015	16:29:58	-29	0.0	8.35	418.8	End Job
02/13/2015	16:30:01	-29	0.0	8.35	418.8	Stopped Acquisition
02/13/2015	16:34:11	-30	0.0	8.35	418.8	
02/13/2015	16:39:12	1	0.0	0.04	418.8	

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
5.1		4.0	25.0	136.7	39.1	4.5	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
6000	20	1258	3508			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
%	136.0 bbl	188.6 bbl	60 degF	☐	bbl
				Washed Thru Perfs ☐	To ft

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Norm Mccreary	Wayne Silvester/Paul Kroeger	☐	☒
		-	-