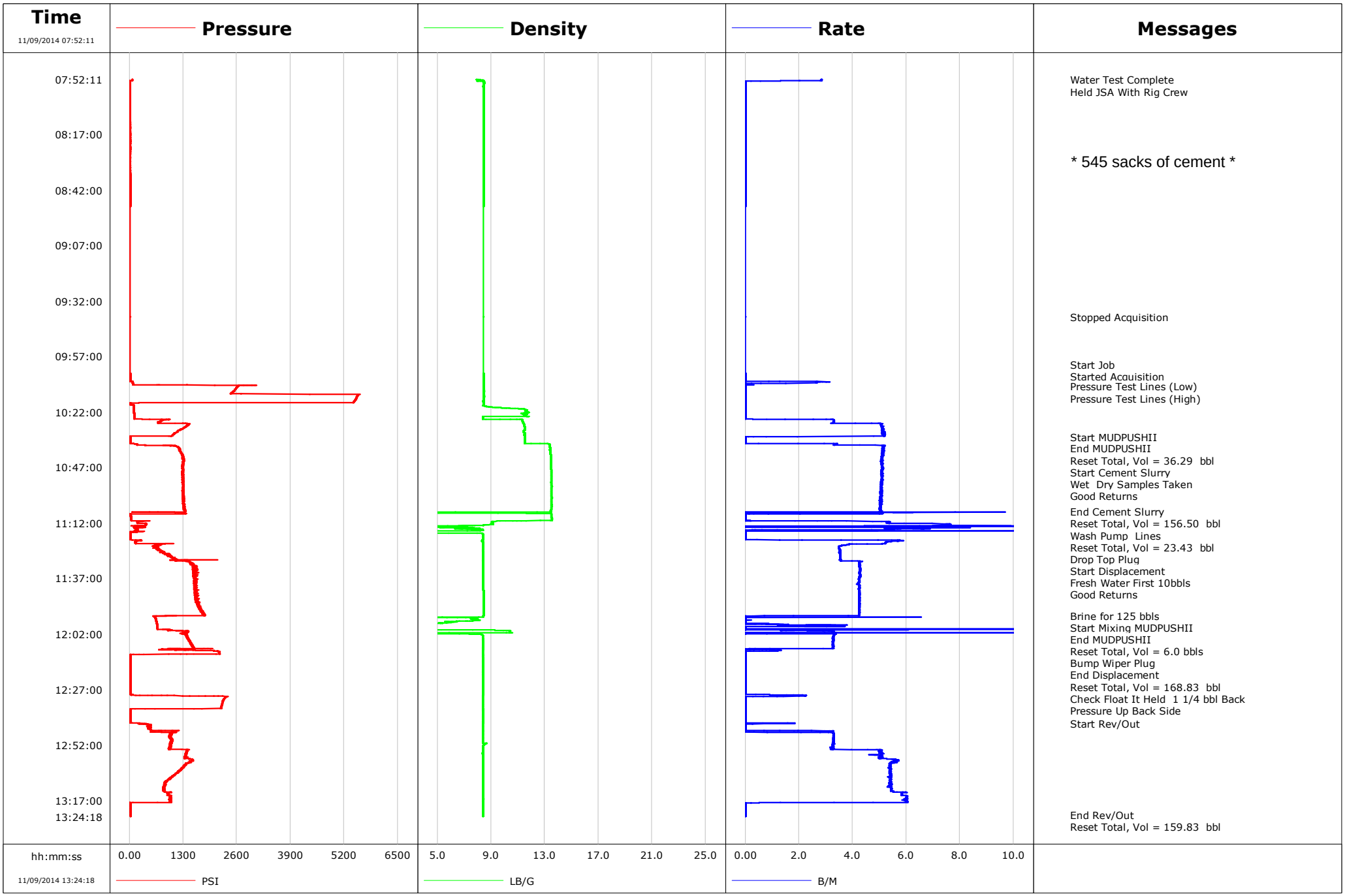
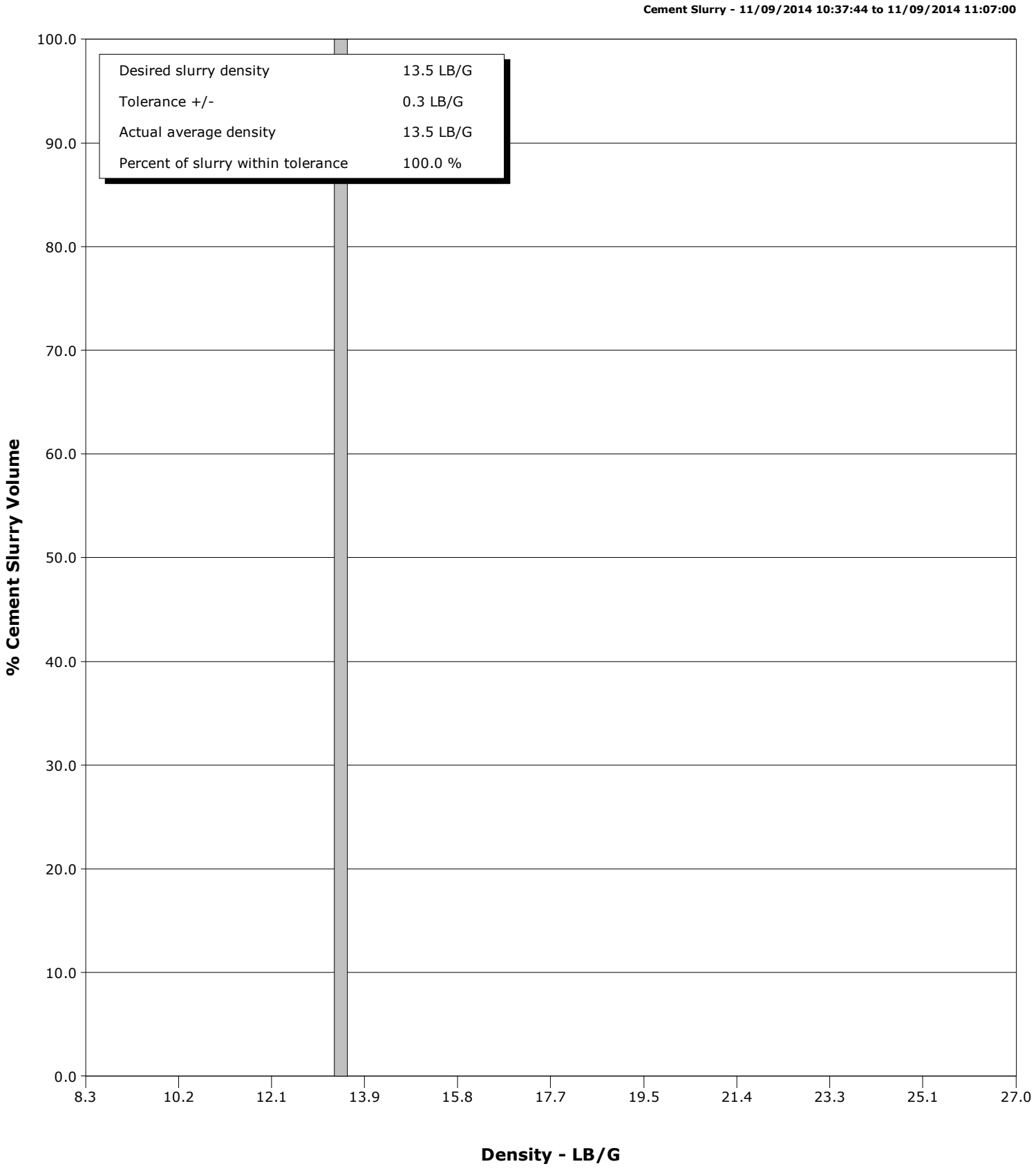
Schlumberger Cementing Job Report

Well	Horsetail 30F-1941	**Client**	Whiting
Field	Wildcat	**SIR No.**	D4RN-00134
Engineer	Wayne Silvester/Paul Kroeger	**Job Type**	Liner
Country	United States	**Job Date**	11-09-2014



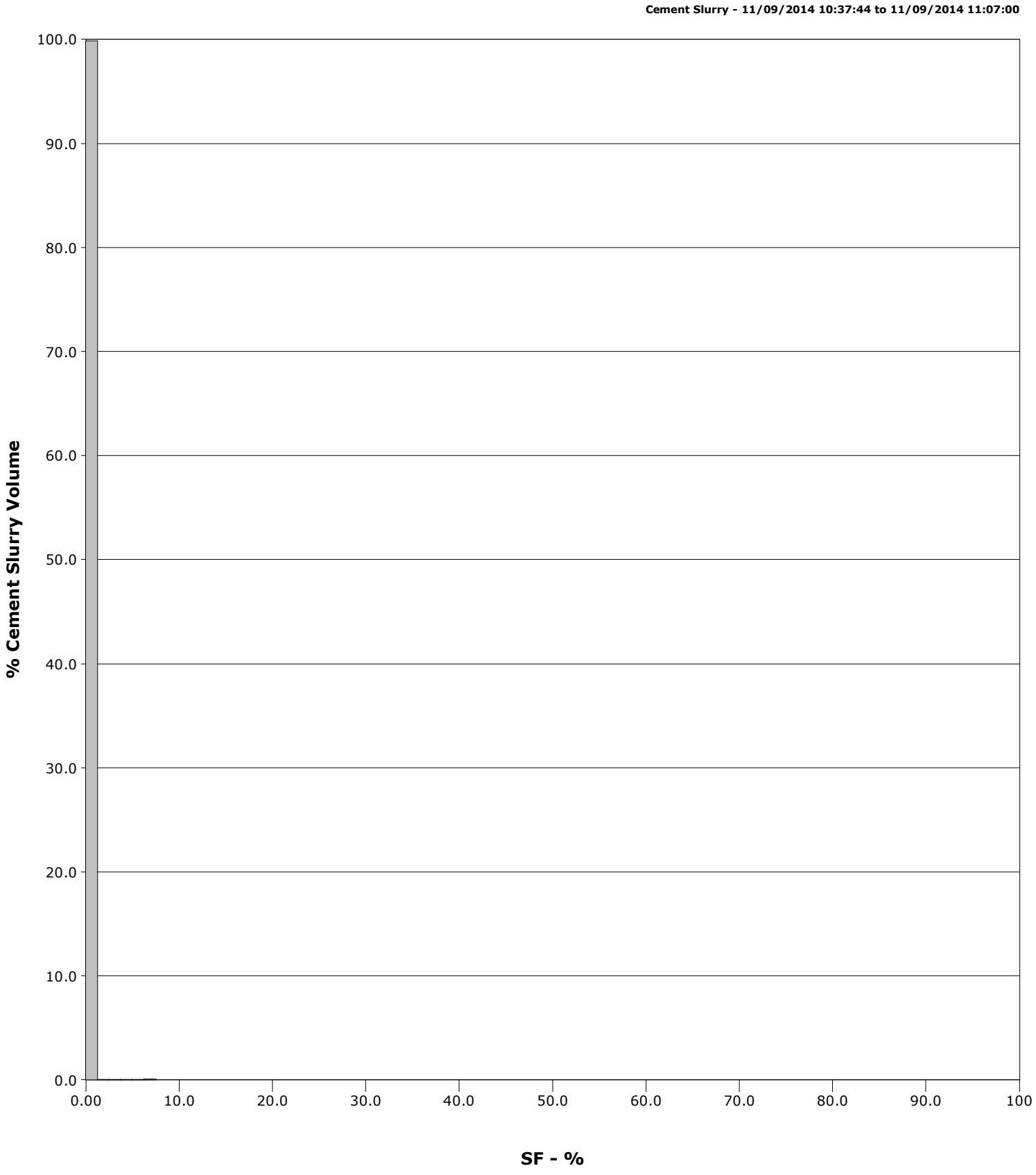
Schlumberger Cementing Qa/Qc Density Report

Well	Horsetail 30F-1941	**Client**	Whiting
Field	Wildcat	**SIR No.**	D4RN-00134
Engineer	Wayne Silvester/Paul Kroeger	**Job Type**	Liner
Country	United States	**Job Date**	11-09-2014



Schlumberger Cementing Qa/Qc SFM Report

Well	Horsetail 30F-1941	**Client**	Whiting
Field	Wildcat	**SIR No.**	D4RN-00134
Engineer	Wayne Silvester/Paul Kroeger	**Job Type**	Liner
Country	United States	**Job Date**	11-09-2014



Schlumberger

Cementing Service Report

Customer	Job Number
Whiting	D4RN-00134

Well	Location (legal)	Schlumberger Location	Job Start
Horsetail 30F-1941 30F-1941	SENW Sec 30 10N 57W	Cheyenne	Nov/09/2014

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Wildcat		deg	6.0 in	13884.7 ft	13928.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Weld	Colorado	3203 psi	200 degF	200 degF	lb/gal

Well Master	API/UWI
631523939	5123387420000

Rig Name	Drilled For	Service Via
Xtreme 18	Oil & Gas	Land

Offshore Zone	Well Class	Well Type
	New	Other

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

Service Line	Job Type
Cementing	Liner

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
psi	psi	4 1/2" XH DP pin

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
13928	4.5	11.6	P110	BUTT
0.0	0.0	0.0		

Tubing/Drill Pipe

T/D	Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
D	5204.0	4.0	28.0	N/A	N/A
	0.0	0.0	0.0		

Perforations/Open Hole

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

Service Instructions

1.MI (Move in) Schlumberger equipment.
2.Conduct Rig-up, Prime-up and pressure test safety meeting.
3.RU (Rig up) Schlumberger equipment and pressure test to master valve.
4.Conduct pre-job safety meeting.
5.Contact Line Management with any changes to design.
6.Hand calculate all volumes using onsite ID of Drill Pipe. Please note the possible use of Heavy Weight Drill Pipe. Verify all calculated volumes with company representitive as well as liner tool hand. Must slow down 2 BPM 5 bbls before dart picks up plug at liner hanger, as well as 10 bbls before bumping plug.
7.Pressure Test Lines to 5,000 psi.

Treat Down	Displacement	Packer Type	Packer Depth
Drill Pipe	169.0 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	169.6 bbl	151.0 bbl	122.0 bbl

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

Lift Pressure	Pipe Rotated	Pipe Reciprocated
1570 psi	☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type

Job Scheduled For	Arrived on Location	Leave Location
Nov/09/2014	Nov/09/2014	Nov/09/2014

Casing Tools

Shoe Type	Float
Shoe Depth	13928.0 ft
Stage Tool Type	
Stage Tool Depth	ft
Collar Type	Float
Collar Depth	13884.0 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	Casing Test PSI	Message
11/09/2014	07:52:11	63	2.8	7.97	0.0	-1	Started Acquisition
11/09/2014	07:52:19	63	2.8	7.98	0.4	-1	Water Test Complete
11/09/2014	07:57:12	8	0.0	8.46	1.9	-1	
11/09/2014	08:02:13	11	0.0	8.46	1.9	-1	
11/09/2014	08:07:14	11	0.0	8.45	1.9	-1	
11/09/2014	08:12:15	11	0.0	8.45	1.9	-1	
11/09/2014	08:17:16	12	0.0	8.45	1.9	-1	
11/09/2014	08:22:17	11	0.0	8.45	1.9	-1	
11/09/2014	08:27:18	11	0.0	8.45	1.9	-1	
11/09/2014	08:32:19	11	0.0	8.45	1.9	-1	
11/09/2014	08:37:20	12	0.0	8.45	1.9	-1	
11/09/2014	08:42:21	13	0.0	8.45	1.9	-1	
11/09/2014	08:47:22	13	0.0	8.45	1.9	-1	
11/09/2014	10:07:38	13	0.0	8.46	1.9	-1	
11/09/2014	10:10:25	2624	0.0	8.46	4.0	-1	Pressure Test Lines (Low)
11/09/2014	10:12:39	2526	0.0	8.46	4.0	-1	
11/09/2014	10:14:38	5522	0.0	8.46	4.0	-1	Pressure Test Lines (High)
11/09/2014	10:17:40	5426	0.0	8.45	4.0	-1	
11/09/2014	10:22:41	109	0.0	11.29	4.0	-1	
11/09/2014	10:27:42	1430	5.1	11.46	12.9	-1	
11/09/2014	10:32:43	1035	5.2	11.49	38.6	-1	

Well	Field	Job Start	Customer	Job Number
Horsetail 30F-1941 30F-1941	Wildcat	Nov/09/2014	Whiting	D4RN-00134

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Casing Test PSI	Message
11/09/2014	10:33:15	15	0.0	11.49	40.3	-1	End MUDPUSHII
11/09/2014	10:33:17	15	0.0	11.49	40.3	-1	Reset Total, Vol = 36.29 bbl
11/09/2014	10:37:44	1170	5.1	13.36	46.8	-1	Start Cement Slurry
11/09/2014	10:42:17	1282	5.1	13.47	70.1	-1	Wet Dry Samples Taken
11/09/2014	10:42:43	1306	5.1	13.45	72.3	-1	Good Returns
11/09/2014	10:42:45	1302	5.1	13.45	72.4	-1	
11/09/2014	10:47:46	1285	5.1	13.47	98.0	-1	
11/09/2014	10:52:47	1297	5.1	13.48	123.5	-1	
11/09/2014	10:57:48	1311	5.1	13.50	148.9	-1	
11/09/2014	11:02:49	1316	5.0	13.50	174.2	-1	
11/09/2014	11:07:00	1332	5.0	13.46	195.3	-1	End Cement Slurry
11/09/2014	11:07:32	1275	0.0	3.86	196.8	-1	Reset Total, Vol = 156.50 bbl
11/09/2014	11:07:50	1362	5.1	13.47	197.9	-1	
11/09/2014	11:11:18	253	5.2	9.16	199.3	-1	Wash Pump Lines
11/09/2014	11:12:51	398	7.6	8.71	208.8	-1	
11/09/2014	11:16:21	3	0.0	0.01	221.9	-1	Reset Total, Vol = 23.43 bbl
11/09/2014	11:17:52	24	0.0	8.39	221.9	-1	
11/09/2014	11:19:36	22	0.0	8.39	221.9	-1	Drop Top Plug
11/09/2014	11:19:39	27	0.4	8.39	221.9	-1	Start Displacement
11/09/2014	11:19:40	45	0.4	8.39	222.0	-1	Fresh Water First 10bbls
11/09/2014	11:22:53	620	3.5	8.39	236.5	-1	
11/09/2014	11:27:54	1041	3.5	8.40	254.2	-1	
11/09/2014	11:32:55	1646	4.3	8.41	274.7	-1	
11/09/2014	11:37:56	1578	4.2	8.41	296.0	-1	
11/09/2014	11:41:39	1627	4.2	8.41	311.8	-1	Good Returns
11/09/2014	11:42:57	1636	4.2	8.43	317.3	-1	
11/09/2014	11:47:58	1634	4.2	8.43	338.6	-1	
11/09/2014	11:52:59	1789	4.2	8.43	359.9	-1	
11/09/2014	11:53:51	1146	1.8	8.43	363.4	-1	Brine for 125 bbls
11/09/2014	11:54:26	618	0.0	5.36	363.5	-1	Start Mixing MUDPUSHII
11/09/2014	11:58:00	663	2.2	1.93	364.4	-1	
11/09/2014	12:01:31	1365	2.9	10.13	373.8	-1	End MUDPUSHII
11/09/2014	12:01:59	1385	0.0	0.01	374.3	-1	Reset Total, Vol = 6.0 bbls
11/09/2014	12:03:01	1373	3.3	8.38	377.5	-1	
11/09/2014	12:08:02	1554	3.3	8.39	393.9	-1	
11/09/2014	12:10:00	2176	0.0	8.39	396.8	-1	Bump Wiper Plug
11/09/2014	12:10:05	2180	0.0	8.39	396.8	-1	End Displacement
11/09/2014	12:10:27	2170	0.0	8.39	396.8	-1	Reset Total, Vol = 168.83 bbl
11/09/2014	12:11:52	22	0.0	8.39	396.8	-1	Check Float It Held 1 1/4 bbl Back
11/09/2014	12:13:03	23	0.0	8.39	396.8	-1	
11/09/2014	12:18:04	23	0.0	8.39	396.8	-1	
11/09/2014	12:23:05	21	0.0	8.39	396.8	-1	
11/09/2014	12:28:06	23	0.0	8.39	396.8	-1	
11/09/2014	12:30:22	2342	0.0	8.38	398.3	-1	Pressure Up Back Side
11/09/2014	12:33:07	2246	0.0	8.39	398.3	-1	
11/09/2014	12:38:08	25	0.0	8.39	398.3	-1	
11/09/2014	12:42:06	23	0.0	8.39	398.3	-1	Start Rev/Out
11/09/2014	12:43:09	479	0.0	8.39	398.7	-1	
11/09/2014	12:48:10	959	3.3	8.38	406.6	-1	
11/09/2014	12:53:11	984	3.3	8.39	423.0	-1	
11/09/2014	12:58:12	1341	5.1	8.39	446.6	-1	
11/09/2014	13:03:13	1257	5.4	8.39	474.0	-1	
11/09/2014	13:08:14	879	5.4	8.39	501.1	-1	
11/09/2014	13:13:15	881	5.5	8.39	528.3	-1	

Well	Field	Job Start	Customer	Job Number
Horsetail 30F-1941 30F-1941	Wildcat	Nov/09/2014	Whiting	D4RN-00134

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Casing Test PSI	Message
11/09/2014	13:23:17	32	0.0	8.39	556.6	-1	
11/09/2014	13:23:32	31	0.0	8.39	556.6	-1	End Rev/Out
11/09/2014	13:23:48	32	0.0	8.39	556.6	-1	Reset Total, Vol = 159.83 bbl

Post Job Summary

Average Pump Rates, bbl/min				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
4.5			25.0	156.6	0.0	42.8	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5588	32	662	2170			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
%	154.0 bbl	168.8 bbl	60 degF	[X]	15.0 bbl
				Washed Thru Perfs [ ]	To ft

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