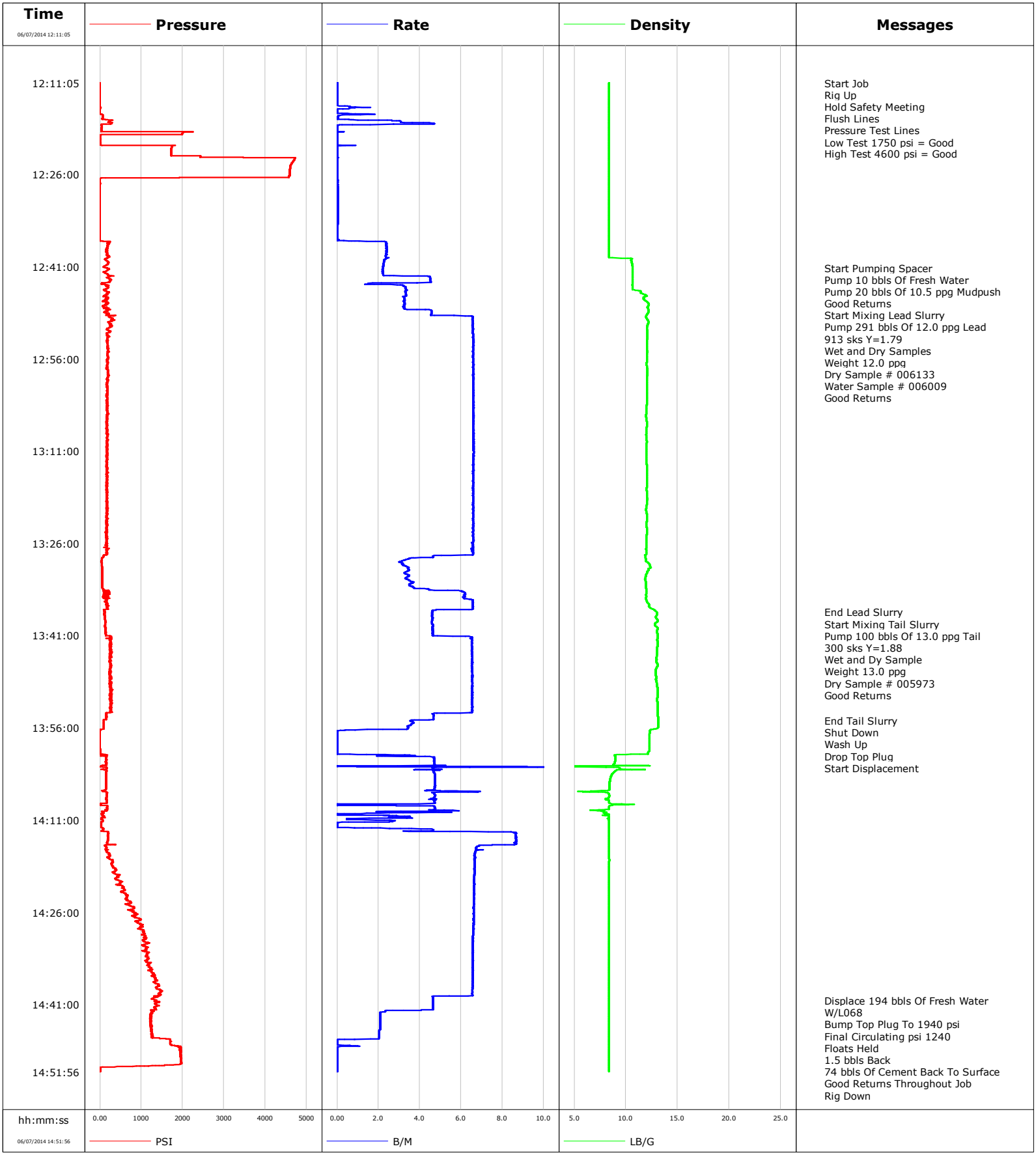
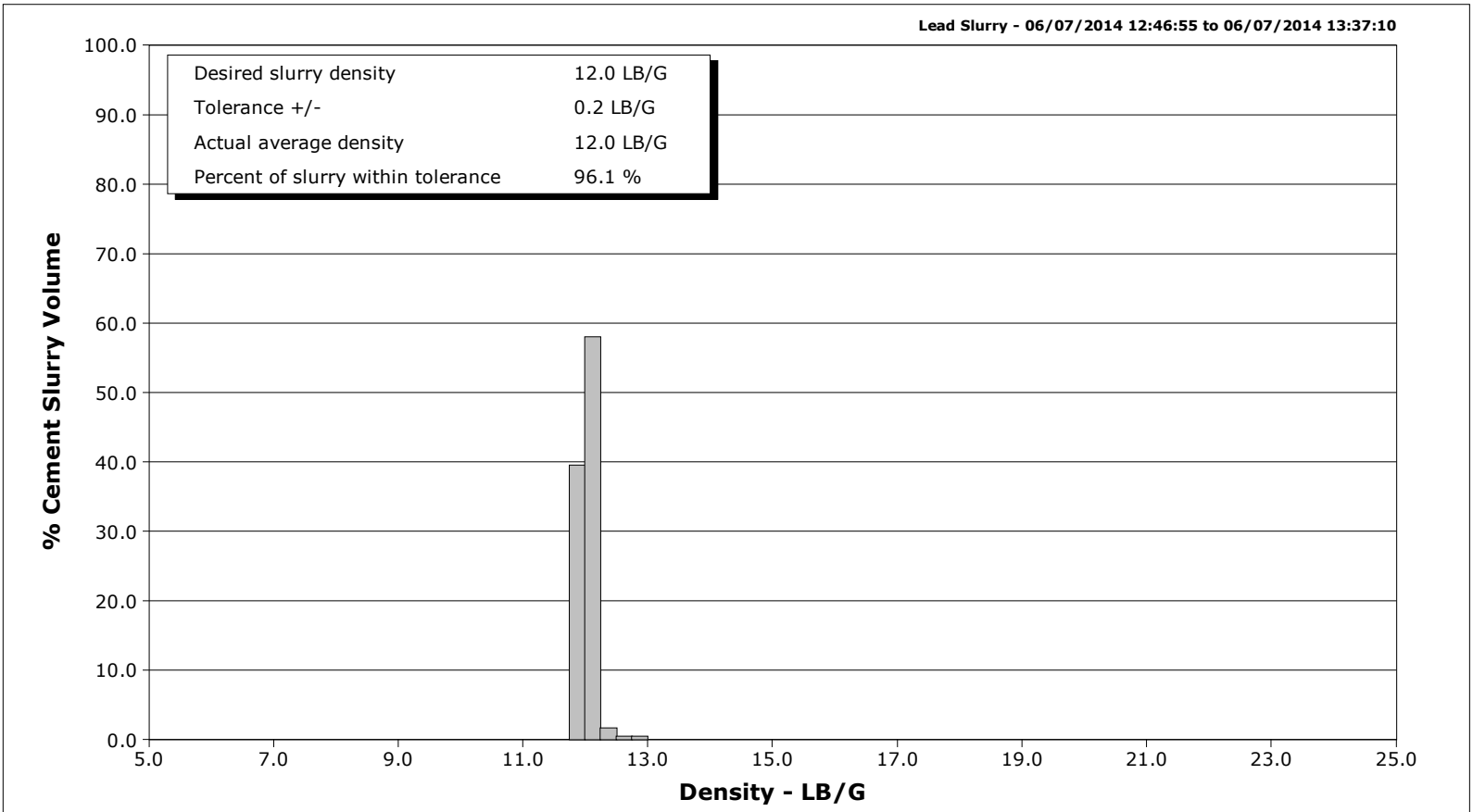
Schlumberger Cementing Job Report

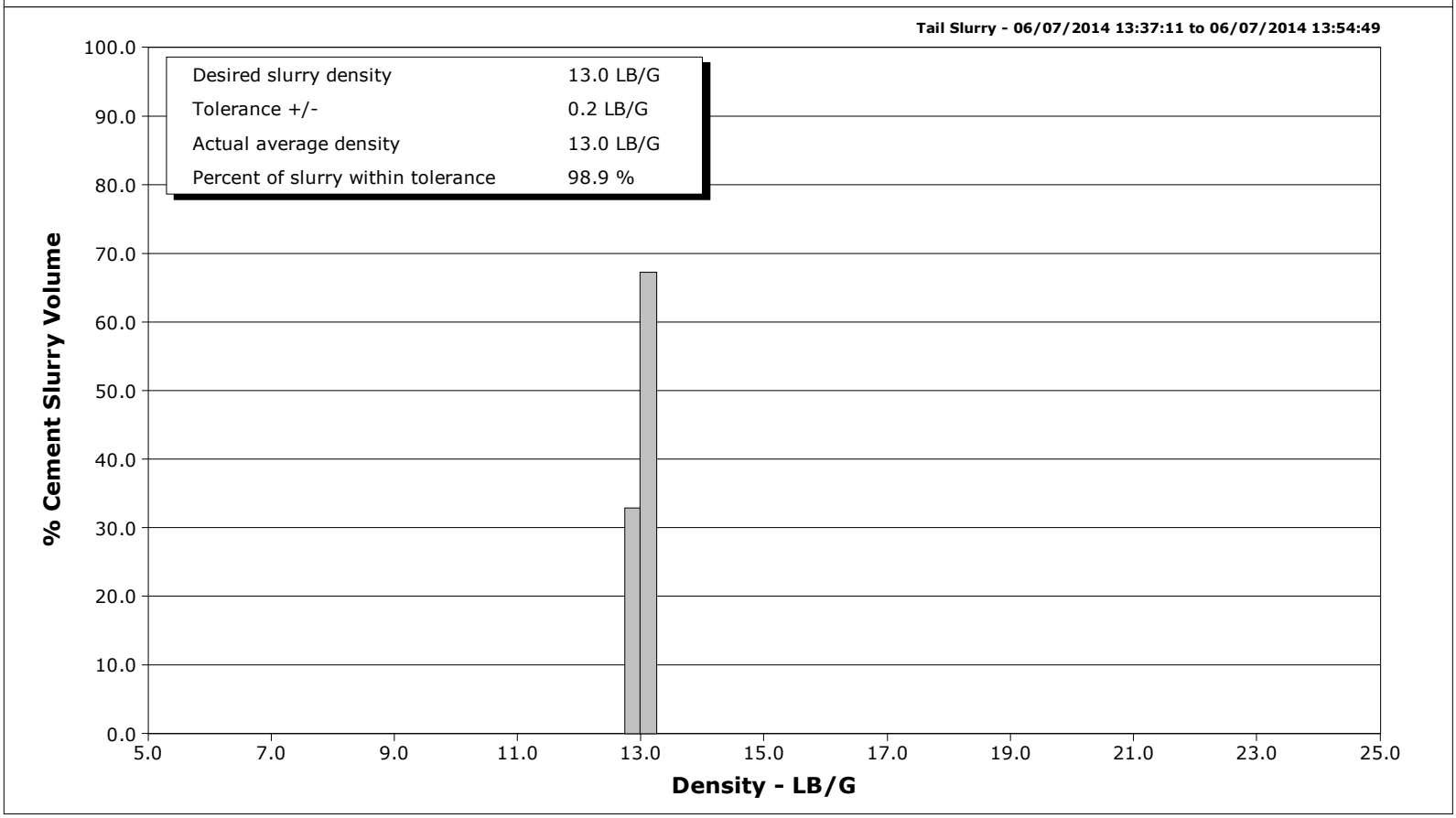
Well	John Craig 4-2	**Client**	Nighthawk
Field	Wildcat	**SIR No.**	
Engineer	Justin Zika/Leiker	**Job Type**	Production
Country	United States	**Job Date**	06-07-2014



Schlumberger Cementing Qa/Qc Density Report

Well	John Craig 4-2	**Client**	Nighthawk
Field	Wildcat	**SIR No.**	
Engineer	Justin Zika/Leiker	**Job Type**	Production
Country	United States	**Job Date**	06-07-2014





Cementing Service Report

Customer	Job Number
Nighthawk	1971578

Well	Location (legal)	Schlumberger Location	Job Start
John Craig 4-2 4-2	Cheyenne,WY	Cheyenne, WY	Jun/07/2014

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Wildcat	Shale		7.9 in	8432.0 ft	8432.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Lincoln	Colorado		185 degF	158 degF	

Well Master	API/UWI
	631505912

Rig Name	Drilled For	Service Via
Xtreme 11	Oil	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity

Service Line	Job Type
Cementing	Production

Max. Allowed Tub. Press	Max. Allowed Ann. Press	WH Connection
5000 psi		Single Cement head

Service Instructions

Rig Up
Hold Safety Meeting
Flush Lines
Pressure Test
Pump 10 bbls Of Fresh Water/20 bbls 10.5 Mudpush
Pump 291 bbls Of 12.0 ppg Lead
Pump 100 bbls Of 13.0 ppg Tail
Shut Down/Wash Up
Displace

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
8430.0	5.500	17.0	N80	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	194.0 bbl		

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
	196.0 bbl	281.0 bbl	477.0 bbl

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

Lift Pressure	Pipe Rotated	Pipe Reciprocated
6032 psi	☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type
Single

Job Scheduled For	Arrived on Location	Leave Location
Jun/07/2014 10:00	Jun/07/2014 10:00	Jun/07/2014 16:00

Casing Tools		Squeeze Job	
Shoe Type	Float	Squeeze Type	
Shoe Depth	8430.0 ft	Tool Type	
Stage Tool Type		Tool Depth	
Stage Tool Depth		Tail Pipe Size	
Collar Type	Float	Tail Pipe Depth	
Collar Depth	8336.0 ft	Sqz. Total Vol.	

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/07/2014	10:54:42					Started Acquisition
06/07/2014	12:11:05	-3	0.0	8.37	0.0	
06/07/2014	12:11:07					Start Job
06/07/2014	12:11:07	-3	0.0	8.37	0.0	
06/07/2014	12:11:08					Rig Up
06/07/2014	12:11:08	-3	0.0	8.37	0.0	
06/07/2014	12:11:09					Hold Safety Meeting
06/07/2014	12:11:09					Flush Lines
06/07/2014	12:11:09	-3	0.0	8.37	0.0	
06/07/2014	12:11:15					Pressure Test Lines
06/07/2014	12:11:15	-3	0.0	8.37	0.0	
06/07/2014	12:11:16					Low Test 1750 psi = Good
06/07/2014	12:11:16	-3	0.0	8.37	0.0	
06/07/2014	12:11:17					High Test 4600 psi = Good
06/07/2014	12:11:17	-3	0.0	8.37	0.0	
06/07/2014	12:11:22	-3	0.0	8.37	0.0	
06/07/2014	12:13:02	-3	0.0	8.36	0.0	
06/07/2014	12:14:42	-3	0.0	8.37	0.0	
06/07/2014	12:16:22	67	0.3	8.36	0.6	
06/07/2014	12:18:02	35	0.0	8.36	3.3	
06/07/2014	12:19:42	1	0.0	8.36	3.3	

Well	Field	Job Start	Customer	Job Number
John Craig 4-2 4-2	Wildcat	Jun/07/2014	Nighthawk	1971578

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/07/2014	12:23:02	2432	0.0	8.36	3.3	
06/07/2014	12:24:42	4599	0.0	8.36	3.4	
06/07/2014	12:26:22	4568	0.0	8.36	3.4	
06/07/2014	12:28:02	-2	0.0	8.36	3.4	
06/07/2014	12:29:42	-3	0.0	8.36	3.4	
06/07/2014	12:31:22	-3	0.0	8.36	3.5	
06/07/2014	12:33:02	-3	0.0	8.36	3.5	
06/07/2014	12:34:42	0	0.0	8.36	3.5	
06/07/2014	12:36:22	-5	0.0	8.36	3.6	
06/07/2014	12:38:02	171	2.4	8.36	6.3	
06/07/2014	12:39:42	142	2.4	10.57	10.3	
06/07/2014	12:41:12					Start Pumping Spacer
06/07/2014	12:41:12	161	2.2	10.66	13.7	
06/07/2014	12:41:15					Pump 10 bbls Of Fresh Water
06/07/2014	12:41:15	177	2.2	10.66	13.8	
06/07/2014	12:41:16					Pump 20 bbls Of 10.5 ppg Mudpush
06/07/2014	12:41:16	166	2.2	10.66	13.8	
06/07/2014	12:41:17					Good Returns
06/07/2014	12:41:17	180	2.2	10.66	13.9	
06/07/2014	12:41:22	233	2.2	10.66	14.1	
06/07/2014	12:43:02	244	4.5	10.65	18.9	
06/07/2014	12:44:42	132	3.3	10.63	24.7	
06/07/2014	12:46:22	173	3.2	11.76	30.2	
06/07/2014	12:46:55					Start Mixing Lead Slurry
06/07/2014	12:46:55	218	3.3	12.14	32.0	
06/07/2014	12:46:57					Pump 291 bbls Of 12.0 ppg Lead
06/07/2014	12:46:57					913 sks Y=1.79
06/07/2014	12:46:57					Wet and Dry Samples
06/07/2014	12:46:57					Weight 12.0 ppg
06/07/2014	12:46:57					Dry Sample # 006133
06/07/2014	12:46:57					Water Sample # 006009
06/07/2014	12:46:57	133	3.3	12.16	32.1	
06/07/2014	12:46:58					Good Returns
06/07/2014	12:46:58	187	3.3	12.17	32.2	
06/07/2014	12:48:02	223	4.5	12.17	35.7	
06/07/2014	12:49:42	331	6.5	12.11	44.7	
06/07/2014	12:51:22	203	6.6	12.05	55.7	
06/07/2014	12:53:02	191	6.6	12.02	66.6	
06/07/2014	12:54:42	191	6.6	12.05	77.6	
06/07/2014	12:56:22	190	6.6	12.01	88.6	
06/07/2014	12:58:02	201	6.6	12.07	99.5	
06/07/2014	12:59:42	177	6.6	12.02	110.5	
06/07/2014	13:01:22	174	6.6	12.01	121.5	
06/07/2014	13:03:02	166	6.6	12.03	132.5	
06/07/2014	13:04:42	172	6.6	11.98	143.5	
06/07/2014	13:06:22	152	6.6	12.02	154.4	
06/07/2014	13:08:02	159	6.6	11.96	165.4	
06/07/2014	13:09:42	173	6.6	12.00	176.4	
06/07/2014	13:11:22	178	6.6	11.98	187.4	
06/07/2014	13:13:02	175	6.6	11.99	198.4	
06/07/2014	13:14:42	161	6.6	12.03	209.4	
06/07/2014	13:16:22	180	6.6	12.02	220.4	
06/07/2014	13:18:02	164	6.6	12.03	231.3	
06/07/2014	13:19:42	166	6.6	12.00	242.3	

Well	Field	Job Start	Customer	Job Number
John Craig 4-2 4-2	Wildcat	Jun/07/2014	Nighthawk	1971578

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/07/2014	13:23:02	165	6.6	11.99	264.2	
06/07/2014	13:24:42	158	6.6	12.00	275.2	
06/07/2014	13:26:22	175	6.6	11.99	286.2	
06/07/2014	13:28:02	93	4.7	11.88	297.0	
06/07/2014	13:29:42	46	3.3	12.32	302.8	
06/07/2014	13:31:22	49	3.5	11.92	308.5	
06/07/2014	13:33:02	55	3.7	11.91	314.3	
06/07/2014	13:34:42	70	6.2	11.95	323.2	
06/07/2014	13:36:22	179	6.6	12.26	334.0	
06/07/2014	13:37:10					End Lead Slurry
06/07/2014	13:37:10	117	4.6	12.97	338.5	
06/07/2014	13:37:11					Start Mixing Tail Slurry
06/07/2014	13:37:11	113	4.6	12.99	338.6	
06/07/2014	13:38:02	109	4.6	12.89	342.5	
06/07/2014	13:38:48					Pump 100 bbls Of 13.0 ppg Tail
06/07/2014	13:38:48					300 sks Y=1.88
06/07/2014	13:38:48	136	4.6	13.01	346.0	
06/07/2014	13:38:49					Wet and Dy Sample
06/07/2014	13:38:49					Weight 13.0 ppg
06/07/2014	13:38:49					Dry Sample # 005973
06/07/2014	13:38:49					Good Returns
06/07/2014	13:38:49	127	4.6	13.00	346.1	
06/07/2014	13:39:42	120	4.6	13.03	350.2	
06/07/2014	13:41:22	253	6.5	13.08	358.4	
06/07/2014	13:43:02	251	6.5	13.04	369.3	
06/07/2014	13:44:42	238	6.5	12.95	380.1	
06/07/2014	13:46:22	245	6.5	12.92	391.0	
06/07/2014	13:48:02	231	6.5	12.91	401.9	
06/07/2014	13:49:42	248	6.5	13.06	412.8	
06/07/2014	13:51:22	295	6.5	13.04	423.7	
06/07/2014	13:53:02	257	6.5	13.05	434.6	
06/07/2014	13:54:42	91	4.7	13.11	443.4	
06/07/2014	13:54:49					End Tail Slurry
06/07/2014	13:54:49	92	3.6	13.11	443.9	
06/07/2014	13:54:53					Shut Down
06/07/2014	13:54:53					Wash Up
06/07/2014	13:54:53	88	3.5	13.11	444.1	
06/07/2014	13:54:55					Drop Top Plug
06/07/2014	13:54:55	89	3.6	13.11	444.2	
06/07/2014	13:54:57					Start Displacement
06/07/2014	13:54:57	95	3.6	13.11	444.4	
06/07/2014	13:56:22	3	0.5	12.36	449.1	
06/07/2014	13:58:02	-2	0.0	12.28	449.2	
06/07/2014	13:59:42	6	0.0	12.27	449.2	
06/07/2014	14:01:22	138	4.7	8.96	453.4	
06/07/2014	14:03:02	157	4.7	8.97	461.0	
06/07/2014	14:04:42	148	4.7	8.44	468.9	
06/07/2014	14:06:22	83	6.9	5.45	476.8	
06/07/2014	14:08:02	158	4.7	8.37	484.9	
06/07/2014	14:09:42	57	5.1	7.89	491.1	
06/07/2014	14:11:22	28	0.2	8.36	494.6	
06/07/2014	14:13:02	209	8.5	8.37	498.2	
06/07/2014	14:14:42	174	8.6	8.36	512.6	
06/07/2014	14:16:22	204	6.7	8.36	524.6	

Well	Field	Job Start	Customer	Job Number
John Craig 4-2 4-2	Wildcat	Jun/07/2014	Nighthawk	1971578

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
06/07/2014	14:19:42	358	6.6	8.38	546.8	
06/07/2014	14:21:22	481	6.6	8.37	557.8	
06/07/2014	14:23:02	623	6.6	8.37	568.9	
06/07/2014	14:24:42	624	6.6	8.37	579.9	
06/07/2014	14:26:22	896	6.6	8.37	590.9	
06/07/2014	14:28:02	1014	6.6	8.37	601.9	
06/07/2014	14:29:42	1032	6.6	8.37	612.9	
06/07/2014	14:31:22	1021	6.6	8.37	623.8	
06/07/2014	14:33:02	1136	6.6	8.37	634.8	
06/07/2014	14:34:42	1195	6.6	8.37	645.7	
06/07/2014	14:36:22	1245	6.6	8.37	656.6	
06/07/2014	14:38:02	1408	6.5	8.37	667.5	
06/07/2014	14:39:42	1419	4.6	8.36	678.3	
06/07/2014	14:40:21					Displace 194 bbls Of Fresh Water
06/07/2014	14:40:21					W/L068
06/07/2014	14:40:21	1363	4.6	8.36	681.3	
06/07/2014	14:40:49					Bump Top Plug To 1940 psi
06/07/2014	14:40:49					Final Circulating psi 1240
06/07/2014	14:40:49					Floats Held
06/07/2014	14:40:49					1.5 bbls Back
06/07/2014	14:40:49					74 bbls Of Cement Back To Surface
06/07/2014	14:40:49					Good Returns Throughout Job
06/07/2014	14:40:49					Rig Down
06/07/2014	14:40:49					End Job
06/07/2014	14:40:49	1325	4.6	8.36	683.5	
06/07/2014	14:41:22	1331	4.6	8.36	686.0	
06/07/2014	14:43:02	1218	2.1	8.36	691.0	
06/07/2014	14:44:42	1227	2.1	8.36	694.5	
06/07/2014	14:46:22	1255	2.0	8.36	697.9	
06/07/2014	14:48:02	1952	0.0	8.37	698.7	
06/07/2014	14:49:42	1966	0.0	8.36	698.7	
06/07/2014	14:51:22	1	0.0	8.36	698.7	

Post Job Summary

Average Pump Rates,				Volume of Fluid Injected, bbl			
Slurry	N2	Mud	Maximum Rate	Total Slurry	Mud	Spacer	N2
				391.0		30.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
5000	1240		1940				

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp		
	391.0 bbl	194.0 bbl	65 degF	Cement Circulated to Surface? [X]	Volume 74.0 bbl
				Washed Thru Perfs [ ]	To

Customer or Authorized Representative	Schlumberger Supervisor		
Jim Weir	Justin Zika	Circulation Lost [ ]	Job Completed [X]
		-	-