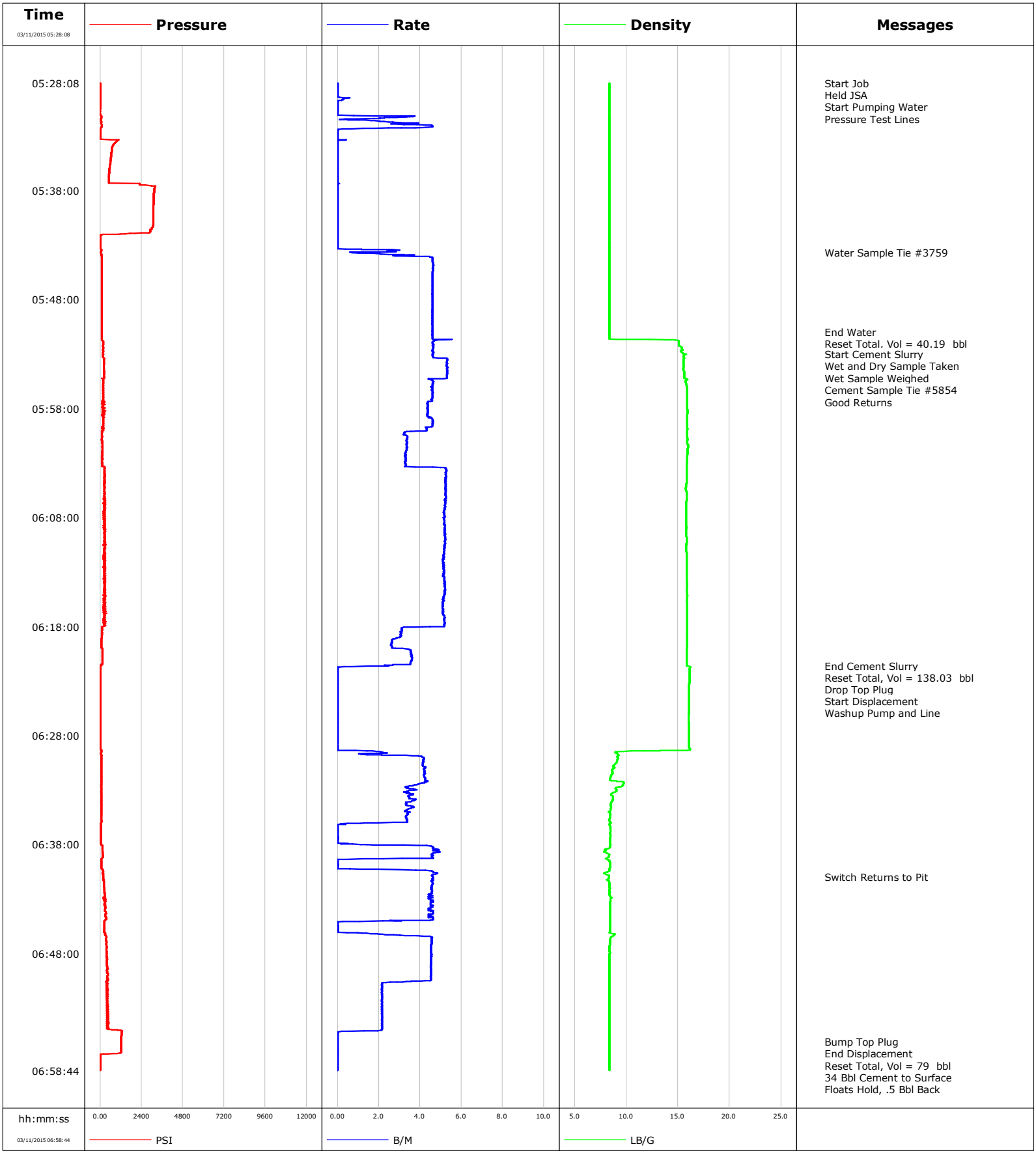
Schlumberger

Cementing Job Report

CemCAT v1.5

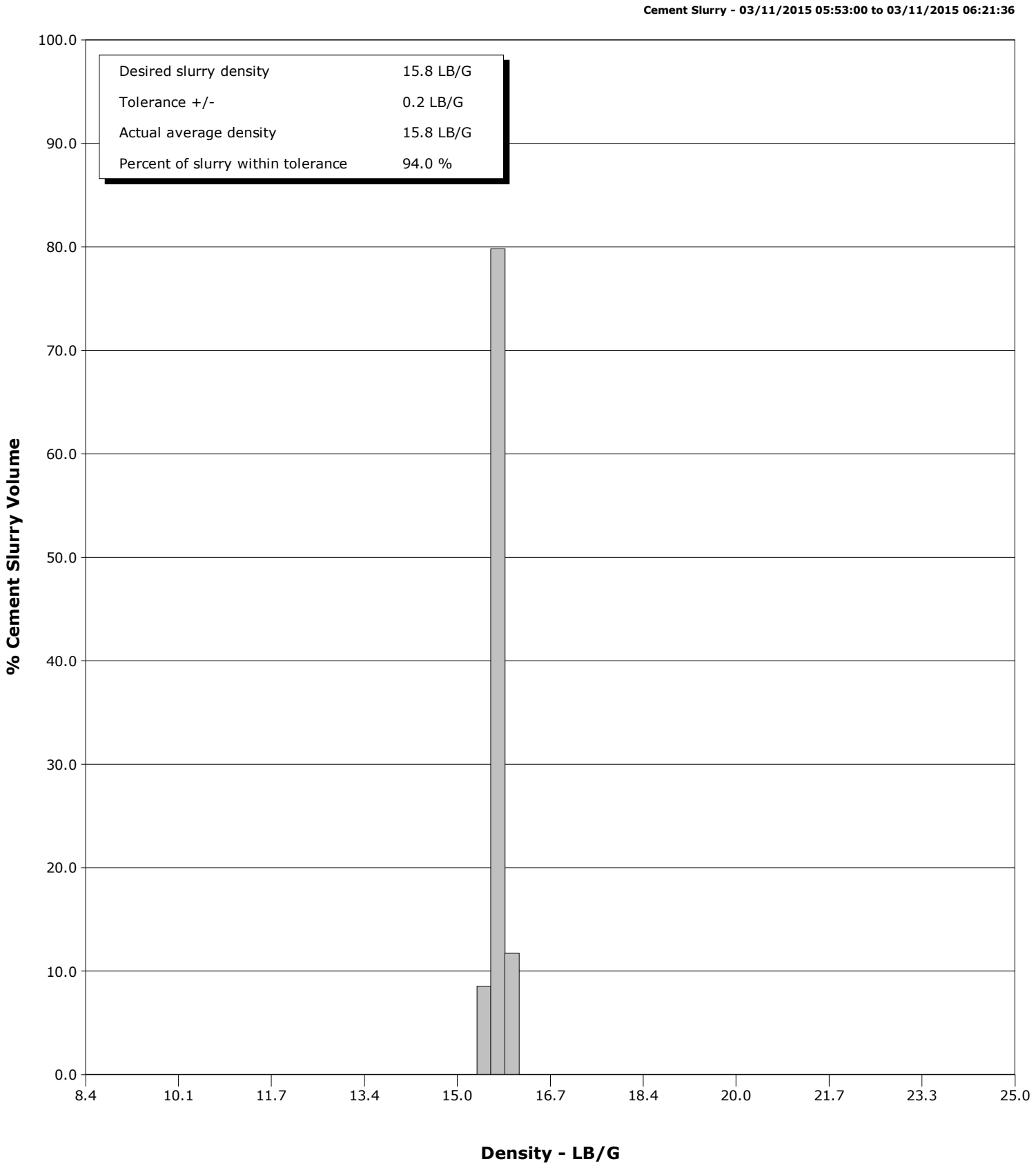
Well	MartineznC5-5-6	**Client**	Extraction
Field	Wattenberg	**SIR No.**	D8FO-00108
Engineer	Ryan Drilling	**Job Type**	9 5/8" Surface
Country	United States	**Job Date**	03-11-2015



Schlumberger

Cementing Qa/Qc Density Report

Well	MartineznC5-5-6	**Client**	Extraction
Field	Wattenberg	**SIR No.**	D8FO-00108
Engineer	Ryan Drilling	**Job Type**	9 5/8" Surface
Country	United States	**Job Date**	03-11-2015



Schlumberger Cementing Service Report

Customer	Job Number
Extraction	D8FO-00108

Well	Location (legal)	Schlumberger Location	Job Start
MartineznC5-5-6 C5-5-6	Cheyenne	Cheyenne	Mar/11/2015

Field	Formation Name/Type	Deviation	Bit Size	Well MD	Well TVD
Wattenberg	Dirty-Sandstone	0 deg	13.5 in	1052.0 ft	1052.0 ft

County	State/Province	BHP	BHST	BHCT	Pore Press. Gradient
Weld	Colorado	psi	94 degF	82 degF	lb/gal

Well Master	API/UWI
0631619615	

Rig Name	Drilled For	Service Via
Savanna 802	Oil	Land

Offshore Zone	Well Class	Well Type
	New	Development

Drilling Fluid Type	Max. Density	Plastic Viscosity
Bentonite	8.40 lb/gal	cP

Service Line	Job Type
Cementing	9 5/8" Surface

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

Service Instructions

Set 9 5/8" surface casing in a 13.5" hole to 1100 feet using Class G cement plus additives thank you.

Casing/Liner

Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
1052.0	9.6	36.0	J55	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	78.0 bbl		ft

Tubing Vol.	Casing Vol.	Annular Vol.	Openhole Vol.
bbl	78.0 bbl	bbl	92.0 bbl

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

Lift Pressure	550 psi

Pipe Rotated	Pipe Reciprocated
☐	☐

No. Centralizers	Top Plugs	Bottom Plugs
	1	

Cement Head Type

Job Scheduled For	Arrived on Location	Leave Location
Mar/11/2015 01:00	Mar/11/2015 01:00	Mar/11/2015 08:00

Casing Tools		Squeeze Job	
Shoe Type	Guide	Squeeze Type	
Shoe Depth	1052.0 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	1008.0 ft	Sqz. Total Vol.	bbl

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Solid Fraction NULL	Message
03/11/2015	05:28:08	3	0.0	8.39	13.3	0	Started Acquisition
03/11/2015	05:28:10	3	0.0	8.39	13.3	0	Held JSA
03/11/2015	05:28:16	2	0.0	8.39	13.3	0	Start Pumping Water
03/11/2015	05:28:18	3	0.0	8.39	13.3	0	Pressure Test Lines
03/11/2015	05:29:08	3	0.0	8.39	0.0	0	
03/11/2015	05:30:08	3	0.0	8.39	0.1	0	
03/11/2015	05:31:08	41	0.8	8.39	0.0	0	
03/11/2015	05:32:08	100	4.6	8.39	2.7	0	
03/11/2015	05:33:08	17	0.0	8.39	3.4	0	
03/11/2015	05:34:08	688	0.0	8.39	3.5	0	
03/11/2015	05:35:08	618	0.0	8.39	3.5	0	
03/11/2015	05:36:08	534	0.0	8.39	3.5	0	
03/11/2015	05:37:08	493	0.0	8.39	3.5	0	
03/11/2015	05:38:08	3137	0.0	8.39	3.5	0	
03/11/2015	05:39:08	3105	0.0	8.39	3.5	0	
03/11/2015	05:40:08	3087	0.0	8.39	3.5	0	
03/11/2015	05:41:08	3073	0.0	8.39	3.5	0	
03/11/2015	05:42:08	7	0.0	8.39	3.5	0	
03/11/2015	05:43:08	16	0.0	8.39	3.5	0	
03/11/2015	05:43:42	31	0.7	8.39	4.2	0	Water Sample Tie #3759
03/11/2015	05:44:08	106	4.6	8.39	5.4	0	

Well	Field	Job Start	Customer	Job Number
MartineznC5-5-6 C5-5-6	Wattenberg	Mar/11/2015	Extraction	D8FO-00108

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Solid Fraction NULL	Message
03/11/2015	05:46:08	96	4.6	8.39	14.6	0	
03/11/2015	05:47:08	96	4.6	8.39	19.2	0	
03/11/2015	05:48:08	97	4.6	8.39	23.8	0	
03/11/2015	05:49:08	98	4.6	8.39	28.4	0	
03/11/2015	05:50:08	96	4.6	8.39	33.0	0	
03/11/2015	05:51:00	103	4.6	8.39	37.0	0	End Water
03/11/2015	05:51:01	103	4.6	8.39	37.1	0	Reset Total, Vol = 40.19 bbl
03/11/2015	05:51:08	103	4.6	8.39	37.6	0	
03/11/2015	05:52:08	183	4.6	15.09	42.3	23	
03/11/2015	05:53:00	173	4.6	15.80	46.3	31	Start Cement Slurry
03/11/2015	05:53:03	177	4.6	15.77	46.5	31	Wet and Dry Sample Taken
03/11/2015	05:53:08	174	4.6	15.54	46.9	31	
03/11/2015	05:53:22	221	4.9	15.58	48.0	31	Cement Sample Tie #5854
03/11/2015	05:54:08	252	5.3	15.53	52.1	31	
03/11/2015	05:55:08	216	5.3	15.60	57.4	32	
03/11/2015	05:56:08	177	4.6	15.89	62.1	32	
03/11/2015	05:57:08	170	4.6	15.90	66.7	33	
03/11/2015	05:57:26	275	4.4	15.89	68.0	33	Good Returns
03/11/2015	05:58:08	149	4.4	15.91	71.1	36	
03/11/2015	05:59:08	193	4.6	15.88	75.5	38	
03/11/2015	06:00:08	95	3.4	15.89	80.0	35	
03/11/2015	06:01:08	120	3.4	15.90	83.3	38	
03/11/2015	06:02:08	116	3.3	15.93	86.6	40	
03/11/2015	06:03:08	121	3.3	15.84	89.9	40	
03/11/2015	06:04:08	288	5.2	15.84	94.7	41	
03/11/2015	06:05:08	304	5.2	15.78	99.9	41	
03/11/2015	06:06:08	255	5.3	15.84	105.2	42	
03/11/2015	06:07:08	307	5.2	15.80	110.4	42	
03/11/2015	06:08:08	284	5.2	15.78	115.6	42	
03/11/2015	06:09:08	303	5.2	15.81	120.8	42	
03/11/2015	06:10:08	257	5.2	15.82	126.0	42	
03/11/2015	06:11:08	213	5.1	15.81	131.2	42	
03/11/2015	06:12:08	271	5.1	15.82	136.3	42	
03/11/2015	06:13:08	302	5.1	15.86	141.4	42	
03/11/2015	06:14:08	259	5.2	15.88	146.6	42	
03/11/2015	06:15:08	199	5.2	15.91	151.8	42	
03/11/2015	06:16:08	263	5.1	15.87	156.9	42	
03/11/2015	06:17:08	279	5.2	15.89	162.1	42	
03/11/2015	06:18:08	103	3.1	15.88	167.1	42	
03/11/2015	06:19:08	86	2.8	15.87	170.1	31	
03/11/2015	06:20:08	124	3.5	15.84	172.8	39	
03/11/2015	06:21:08	125	3.6	15.85	176.4	61	
03/11/2015	06:21:36	69	2.5	15.82	178.0	76	End Cement Slurry
03/11/2015	06:21:52	21	0.0	16.13	178.1	0	Reset Total, Vol = 138.03 bbl
03/11/2015	06:21:57	21	0.0	16.13	178.1	0	Drop Top Plug
03/11/2015	06:21:58	21	0.0	16.13	178.1	0	Start Displacement
03/11/2015	06:21:59	21	0.0	16.13	178.1	0	Washup Pump and Line
03/11/2015	06:22:08	21	0.0	16.14	178.1	0	
03/11/2015	06:23:08	21	0.0	16.10	178.1	0	
03/11/2015	06:24:08	21	0.0	16.08	178.1	0	
03/11/2015	06:25:08	21	0.0	16.06	178.1	0	
03/11/2015	06:26:08	21	0.0	16.05	178.1	0	
03/11/2015	06:27:08	21	0.0	16.05	178.1	0	
03/11/2015	06:28:08	28	0.0	16.06	0.0	0	

Well	Field	Job Start	Customer	Job Number
MartineznC5-5-6 C5-5-6	Wattenberg	Mar/11/2015	Extraction	D8FO-00108

Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Solid Fraction NULL	Message
03/11/2015	06:30:08	82	4.2	9.20	2.1	77	
03/11/2015	06:31:08	74	4.2	8.66	6.2	77	
03/11/2015	06:32:08	70	4.3	8.42	10.4	77	
03/11/2015	06:33:08	62	3.4	9.01	14.2	0	
03/11/2015	06:34:08	62	3.3	8.54	17.7	0	
03/11/2015	06:35:08	76	3.4	8.43	21.2	28	
03/11/2015	06:36:08	46	0.4	8.35	24.2	0	
03/11/2015	06:37:08	38	0.0	8.45	24.2	0	
03/11/2015	06:38:08	138	4.5	8.44	24.7	17	
03/11/2015	06:39:08	167	4.6	8.31	29.4	0	
03/11/2015	06:40:08	77	0.0	8.40	30.2	28	
03/11/2015	06:40:58	195	4.6	8.34	33.3	13	Switch Returns to Pit
03/11/2015	06:41:08	195	4.6	8.30	34.1	0	
03/11/2015	06:42:08	243	4.6	8.38	38.7	25	
03/11/2015	06:43:08	316	4.6	8.45	43.2	0	
03/11/2015	06:44:08	279	4.5	8.42	47.7	0	
03/11/2015	06:45:08	244	0.0	8.41	51.8	0	
03/11/2015	06:46:08	313	1.2	8.43	51.8	0	
03/11/2015	06:47:08	346	4.6	8.40	55.8	0	
03/11/2015	06:48:08	373	4.5	8.39	60.4	0	
03/11/2015	06:49:08	396	4.5	8.39	64.9	0	
03/11/2015	06:50:08	423	4.5	8.38	69.4	0	
03/11/2015	06:51:08	428	2.2	8.38	72.6	0	
03/11/2015	06:52:08	375	2.2	8.38	74.8	0	
03/11/2015	06:53:08	405	2.2	8.38	77.0	0	
03/11/2015	06:54:08	439	2.2	8.38	79.1	0	
03/11/2015	06:55:08	1261	0.5	8.38	81.2	0	
03/11/2015	06:56:05	1227	0.0	8.38	81.2	0	Bump Top Plug
03/11/2015	06:56:06	1227	0.0	8.38	81.2	0	End Displacement
03/11/2015	06:56:08	1226	0.0	8.38	81.2	0	
03/11/2015	06:56:10	1226	0.0	8.38	81.2	0	Reset Total, Vol = 79 bbl
03/11/2015	06:56:30	1223	0.0	8.38	81.2	0	34 Bbl Cement to Surface
03/11/2015	06:57:08	1156	0.0	8.38	81.2	0	
03/11/2015	06:58:08	22	0.0	8.38	81.2	0	
03/11/2015	06:58:24	22	0.0	8.39	81.2	0	Floats Hold, .5 Bbl Back

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			5.5	138.0	0.0	0.0	

Treating Pressure Summary, psi					Breakdown Fluid		
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume	Density
3205	22	360	1200			bbl	lb/gal

Avg. N2 Percent	Designed Slurry Volume	Displacement	Mix Water Temp	Cement Circulated to Surface?	Volume
%	137.4 bbl	79.0 bbl	65 degF	X	34.0 bbl
				Washed Thru Perfs ☐	To ft

Customer or Authorized Representative	Schlumberger Supervisor	Circulation Lost	Job Completed
Sean McIntyre	Ryan Drilling	-	X -