

**Well** Pronghorn 11-14-18HNB

**Field** Wattenberg

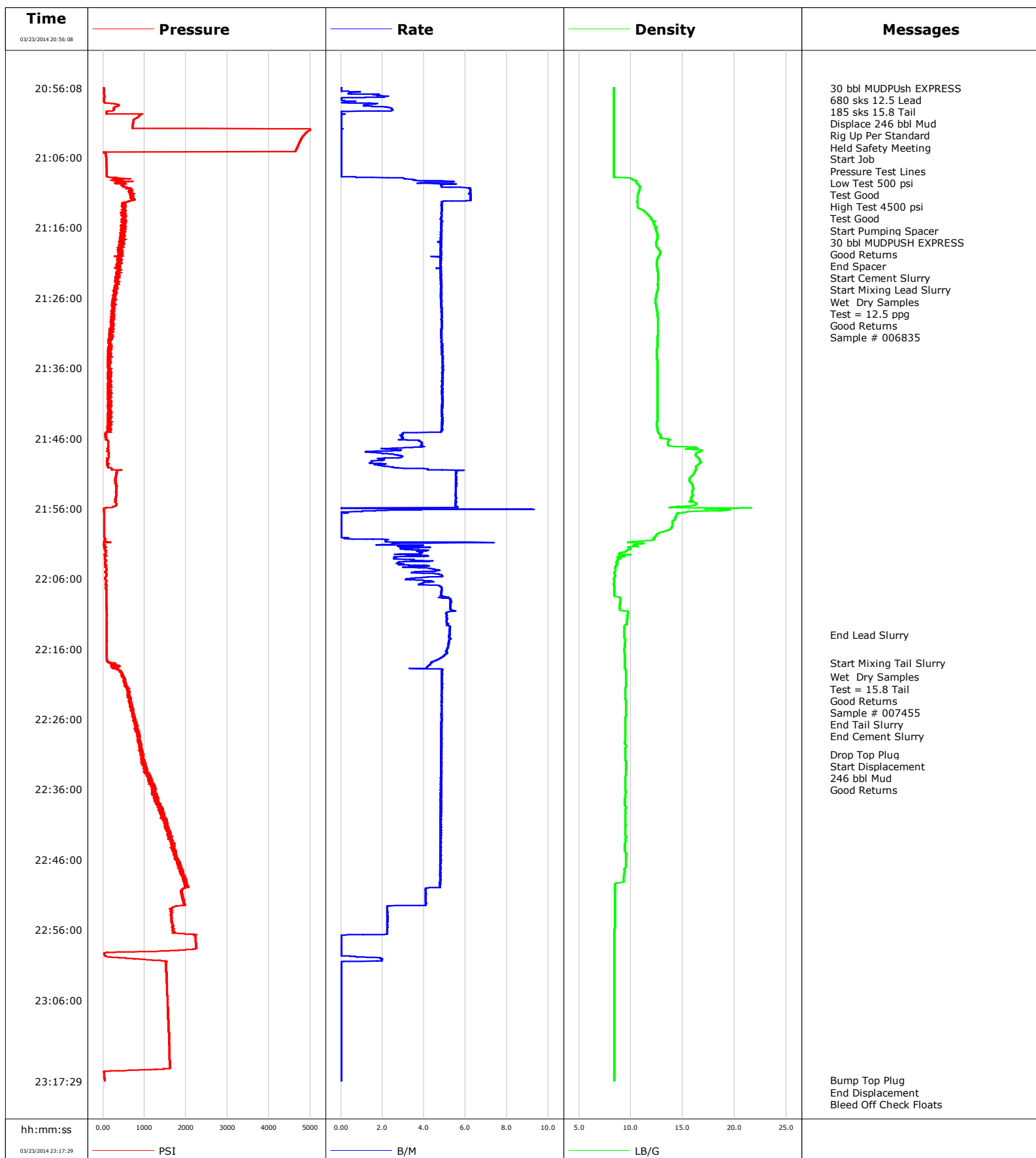
**Engineer** Jordan Moreland/ Stacy Terry

**Country** United States

**Client** Bonanza Creek

**SIR No.** C459-02493

**Job Type** 7" intermediate

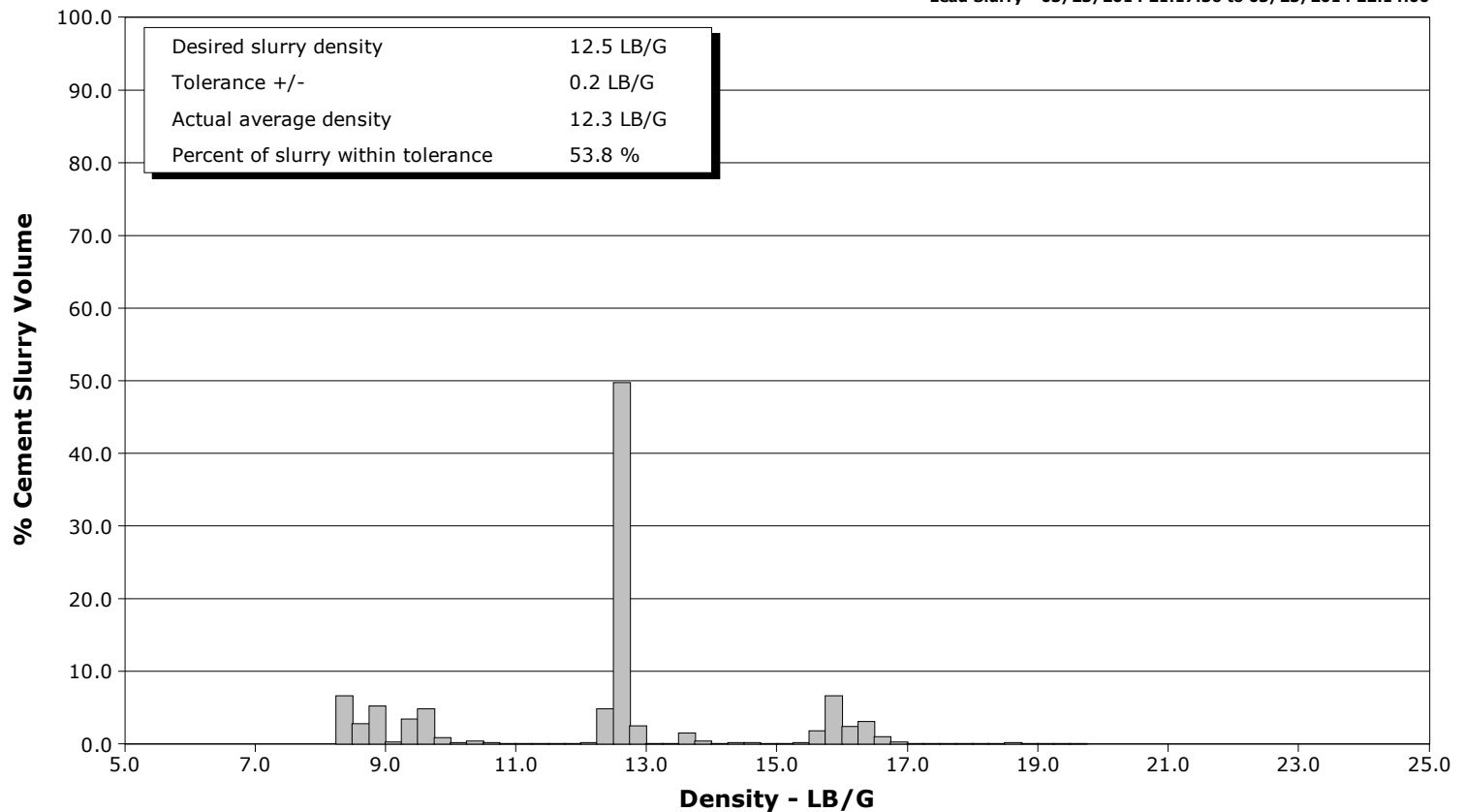
**Job Date** 03-23-2014


# Schlumberger Cementing Qa/Qc Density Report

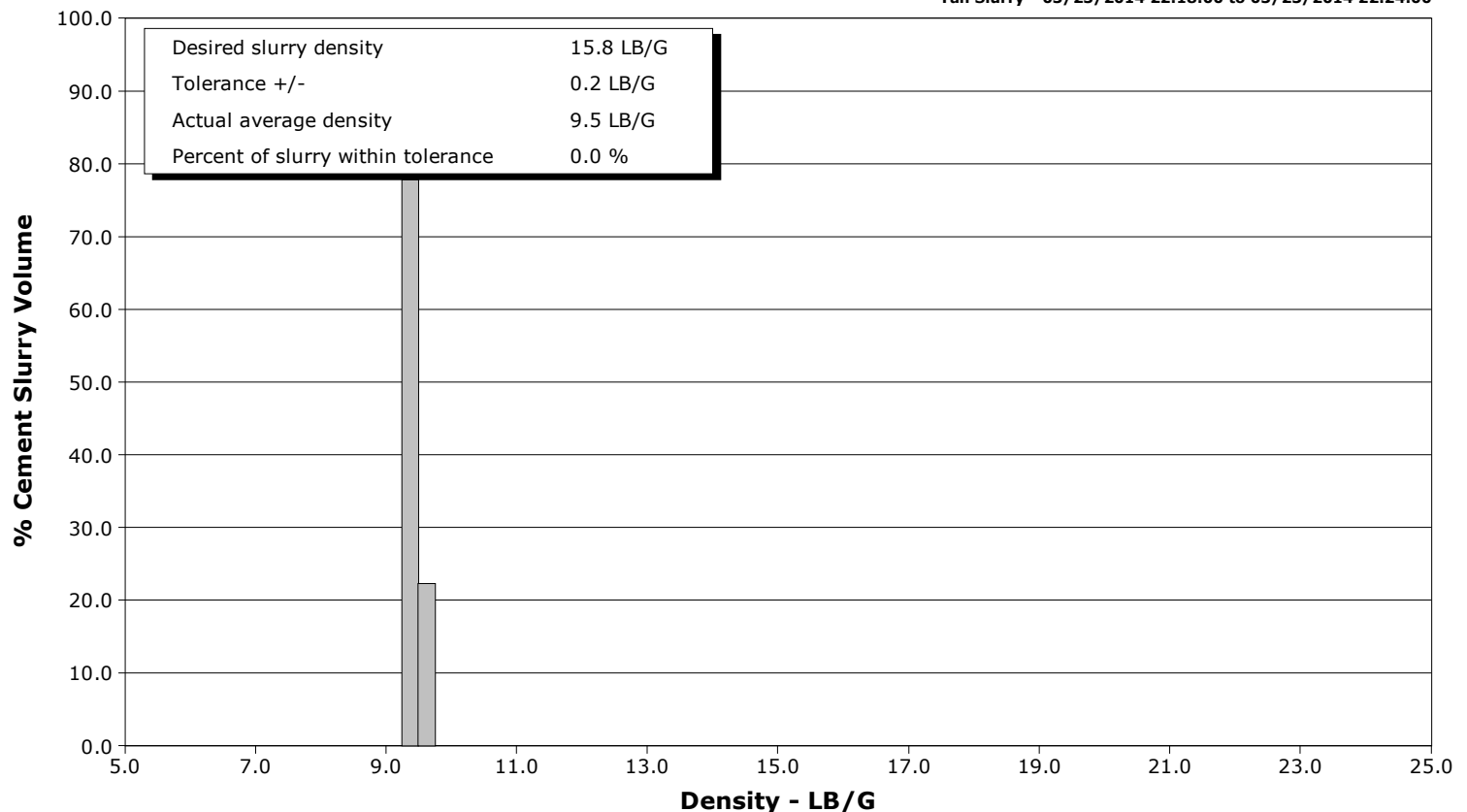
**Well** Pronghorn 11-14-18HNB  
**Field** Wattenberg  
**Engineer** Jordan Moreland/ Stacy Terry  
**Country** United States

**Client** Bonanza Creek  
**SIR No.** C459-02493  
**Job Type** 7" intermediate  
**Job Date** 03-23-2014

**Lead Slurry - 03/23/2014 21:17:36 to 03/23/2014 22:14:00**



**Tail Slurry - 03/23/2014 22:18:00 to 03/23/2014 22:24:00**





# Cementing Service Report

				Customer Bonanza Creek		Job Number C459-02493			
Well Pronghorn 11-14-18HNB			Location (legal)		Schlumberger Location CWY		Job Start Mar/23/2014		
Field Wattenberg		Formation Name/Type		Deviation	Bit Size 8.8 in	Well MD		Well TVD	
County Weld		State/Province Colorado		BHP	BHST 210 degF	BHCT 174 degF	Pore Press. Gradient		
Well Master 0631536415		API/UWI							
Rig Name Cade 25	Drilled For Gas	Service Via Land	Casing/Liner						
			Depth, ft	Size, in	Weight, lb/ft	Grade	Thread		
Offshore Zone	Well Class New	Well Type Development	410.0	9.630	36.0	J55	8RD		
			6468.0	7.000	26.0	P110	8RD		
Drilling Fluid Type		Max. Density	Plastic Viscosity	Tubing/Drill Pipe					
				Depth,	Size,	Weight,	Grade	Thread	
Service Line Cementing	Job Type 7" intermediate								
Max. Allowed Tub. Press 4500 psi	Max. Allowed Ann. Press	WH Connection Single Cement head	Perforations/Open Hole						
			Top,	Bottom,			No. of Shots	Total Interval	
Service Instructions Rate And Density Checked 30 bbl MUDPUSH EXPRESS 680 sks 12.5 Lead 185 sks 15.8 Tail Displace 246 bbl Mud									
			Treat Down Casing	Displacement 246.0 bbl		Packer Type		Packer Depth	
			Tubing Vol.	Casing Vol. 248.0 bbl		Annular Vol. 174.0 bbl		Openhole Vol. 423.0 bbl	
Casing/Tubing Secured <input checked="" type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input checked="" type="checkbox"/>		Casing Tools			Squeeze Job		
Lift Pressure 4370 psi			Shoe Type Guide			Squeeze Type			
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 6468.0 ft			Tool Type		
No. Centralizers		Top Plugs 1	Bottom Plugs	Stage Tool Type			Tool Depth		
Cement Head Type				Stage Tool Depth			Tail Pipe Size		
Job Scheduled For Mar/23/2014		Arrived on Location Mar/23/2014		Leave Location Mar/23/2014		Collar Type Float		Tail Pipe Depth	
						Collar Depth 6424.0 ft		Sqz. Total Vol.	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
03/23/2014	20:17:49					Started Acquisition			
03/23/2014	20:56:08					30 bbl MUDPUsh EXPRESS			
03/23/2014	20:56:08					680 sks 12.5 Lead			
03/23/2014	20:56:08					185 sks 15.8 Tail			
03/23/2014	20:56:08					Displace 246 bbl Mud			
03/23/2014	20:56:08					Rig Up Per Standard			
03/23/2014	20:56:08	13	0.0	8.36	0.0				
03/23/2014	20:56:09					Held Safety Meeting			
03/23/2014	20:56:09	13	0.0	8.36	0.0				
03/23/2014	20:56:11					Start Job			
03/23/2014	20:56:11	12	0.0	8.36	0.0				
03/23/2014	20:56:13					Pressure Test Lines			
03/23/2014	20:56:13	13	0.0	8.36	0.0				
03/23/2014	20:56:14					Low Test 500 psi			
03/23/2014	20:56:14					Test Good			
03/23/2014	20:56:14					High Test 4500 psi			
03/23/2014	20:56:14					Test Good			
03/23/2014	20:56:14	13	0.0	8.36	0.0				
03/23/2014	20:57:49	15	0.0	8.37	1.1				
03/23/2014	20:59:49	77	0.0	8.37	3.5				
03/23/2014	21:01:49	710	0.0	8.37	3.5				

Well Pronghorn 11-14-18HNB			Field Wattenberg		Job Start Mar/23/2014	Customer Bonanza Creek	Job Number C459-02493
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
03/23/2014	21:05:49	70	0.0	8.36	3.5		
03/23/2014	21:07:49	86	0.0	8.36	3.5		
03/23/2014	21:09:49	412	5.1	10.63	7.0		
03/23/2014	21:11:32					Start Pumping Spacer	
03/23/2014	21:11:32	686	6.2	10.63	17.0		
03/23/2014	21:11:33					30 bbl MUDPUSH EXPRESS	
03/23/2014	21:11:33	664	6.2	10.63	17.1		
03/23/2014	21:11:34					Good Returns	
03/23/2014	21:11:34	664	6.2	10.63	17.2		
03/23/2014	21:11:49	731	6.2	10.65	18.8		
03/23/2014	21:13:49	510	4.8	11.34	29.1		
03/23/2014	21:15:49	514	4.8	12.29	38.8		
03/23/2014	21:17:33					End Spacer	
03/23/2014	21:17:33	492	4.8	12.56	47.2		
03/23/2014	21:17:35					Start Cement Slurry	
03/23/2014	21:17:35	490	4.8	12.55	47.3		
03/23/2014	21:17:36					Start Mixing Lead Slurry	
03/23/2014	21:17:36	395	4.8	12.55	47.4		
03/23/2014	21:17:38					Wet Dry Samples	
03/23/2014	21:17:38					Test = 12.5 ppg	
03/23/2014	21:17:38					Good Returns	
03/23/2014	21:17:38					Sample # 006835	
03/23/2014	21:17:38	523	4.8	12.55	47.6		
03/23/2014	21:17:49	412	4.8	12.52	48.5		
03/23/2014	21:19:49	485	4.8	12.80	58.1		
03/23/2014	21:21:49	409	4.8	12.53	67.7		
03/23/2014	21:23:49	300	4.8	12.57	77.3		
03/23/2014	21:25:49	285	4.8	12.43	86.9		
03/23/2014	21:27:49	237	4.8	12.51	96.6		
03/23/2014	21:29:49	256	4.9	12.61	106.3		
03/23/2014	21:31:49	199	4.8	12.56	116.0		
03/23/2014	21:33:49	173	4.9	12.49	125.7		
03/23/2014	21:35:49	118	4.9	12.54	135.5		
03/23/2014	21:37:49	148	4.9	12.56	145.3		
03/23/2014	21:39:49	110	4.9	12.55	155.1		
03/23/2014	21:41:49	157	4.9	12.55	164.8		
03/23/2014	21:43:49	114	4.9	12.50	174.6		
03/23/2014	21:45:49	79	3.0	12.89	183.2		
03/23/2014	21:47:49	132	2.6	16.84	189.9		
03/23/2014	21:49:49	118	1.7	16.49	194.0		
03/23/2014	21:51:49	307	5.6	15.63	203.1		
03/23/2014	21:53:49	320	5.5	15.93	214.2		
03/23/2014	21:55:49	238	5.6	14.11	225.3		
03/23/2014	21:57:49	28	0.0	14.03	227.4		
03/23/2014	21:59:49	29	0.0	12.46	227.4		
03/23/2014	22:01:49	35	2.9	10.03	231.9		
03/23/2014	22:03:49	46	2.7	8.66	238.7		
03/23/2014	22:05:49	64	4.2	8.41	246.8		
03/23/2014	22:07:49	75	4.8	8.40	255.3		
03/23/2014	22:09:49	83	5.3	8.95	265.4		
03/23/2014	22:11:49	95	5.1	9.63	275.8		
03/23/2014	22:13:49	91	5.2	9.36	286.2		
03/23/2014	22:14:00					End Lead Slurry	
03/23/2014	22:14:00	91	5.2	9.35	287.1		

Well			Field		Job Start		Customer		Job Number	
Pronghorn 11-14-18HNB			Wattenberg		Mar/23/2014		Bonanza Creek		C459-02493	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
03/23/2014	22:17:49	107	4.4	9.41	306.5					
03/23/2014	22:18:00					Start Mixing Tail Slurry				
03/23/2014	22:18:00	138	4.4	9.41	307.3					
03/23/2014	22:19:49	495	4.9	9.50	315.5					
03/23/2014	22:20:00					Wet Dry Samples				
03/23/2014	22:20:00					Test = 15.8 Tail				
03/23/2014	22:20:00					Good Returns				
03/23/2014	22:20:00					Sample # 007455				
03/23/2014	22:20:00	509	4.9	9.49	316.4					
03/23/2014	22:21:49	628	4.8	9.47	325.3					
03/23/2014	22:23:49	676	4.8	9.50	335.0					
03/23/2014	22:24:00					End Tail Slurry				
03/23/2014	22:24:00	665	4.8	9.49	335.9					
03/23/2014	22:25:00					End Cement Slurry				
03/23/2014	22:25:00	692	4.8	9.49	340.7					
03/23/2014	22:25:49	769	4.9	9.46	344.7					
03/23/2014	22:27:49	863	4.8	9.46	354.4					
03/23/2014	22:29:49	905	4.8	9.50	364.0					
03/23/2014	22:31:00					Drop Top Plug				
03/23/2014	22:31:00					Start Displacement				
03/23/2014	22:31:00					246 bbl Mud				
03/23/2014	22:31:00					Good Returns				
03/23/2014	22:31:00	897	4.8	9.44	369.8					
03/23/2014	22:31:49	958	4.8	9.44	373.7					
03/23/2014	22:33:49	1109	4.8	9.51	383.4					
03/23/2014	22:35:49	1244	4.8	9.45	393.0					
03/23/2014	22:37:49	1327	4.8	9.40	402.6					
03/23/2014	22:39:49	1490	4.8	9.45	412.3					
03/23/2014	22:41:49	1603	4.8	9.46	421.9					
03/23/2014	22:43:49	1689	4.8	9.42	431.5					
03/23/2014	22:45:49	1795	4.8	9.52	441.1					
03/23/2014	22:47:49	1847	4.8	9.38	450.6					
03/23/2014	22:49:49	2022	4.7	8.46	460.2					
03/23/2014	22:51:49	1944	4.1	8.46	468.5					
03/23/2014	22:53:49	1631	2.2	8.47	474.3					
03/23/2014	22:55:49	1708	2.2	8.43	478.8					
03/23/2014	22:57:49	2239	0.0	8.39	480.7					
03/23/2014	22:59:49	119	0.7	8.39	480.7					
03/23/2014	23:01:49	1523	0.0	8.42	481.9					
03/23/2014	23:03:49	1538	0.0	8.40	481.9					
03/23/2014	23:05:49	1552	0.0	8.40	481.9					
03/23/2014	23:07:49	1566	0.0	8.40	482.0					
03/23/2014	23:09:49	1579	0.0	8.39	482.0					
03/23/2014	23:11:49	1592	0.0	8.39	482.0					
03/23/2014	23:13:49	1604	0.0	8.39	482.0					
03/23/2014	23:15:49	1282	0.0	8.39	482.1					
03/23/2014	23:17:21					Bump Top Plug				
03/23/2014	23:17:21	37	0.0	8.38	482.1					
03/23/2014	23:17:22					End Displacement				
03/23/2014	23:17:22	37	0.0	8.38	482.1					
03/23/2014	23:17:24					Bleed Off Check Floats				
03/23/2014	23:17:24					Floats Held				
03/23/2014	23:17:24					2 bbl Back				
03/23/2014	23:17:24					46 bbl Cement To Surface				

Well			Field		Job Start	Customer	Job Number
Pronghorn 11-14-18HNB			Wattenberg		Mar/23/2014	Bonanza Creek	C459-02493
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
03/23/2014	23:17:24					For 15 min	
03/23/2014	23:17:24					Test Good	
03/23/2014	23:17:24					Bleed Off	
03/23/2014	23:17:24					Rig Down	
03/23/2014	23:17:24	37	0.0	8.38	482.1		
03/23/2014	23:17:26					End Job	
03/23/2014	23:17:26	37	0.0	8.38	482.1		

Post Job Summary

Average Pump Rates,					Volume of Fluid Injected,			
Slurry	N2	Mud	Maximum Rate		Total Slurry	Mud	Spacer	N2
Treating Pressure Summary,					Breakdown Fluid			
Maximum	Final	Average	Bump Plug to	Breakdown	Type	Volume		Density
Avg. N2 Percent	Designed Slurry Volume		Displacement	Mix Water Temp	Cement Circulated to Surface?		<input checked="" type="checkbox"/>	Volume
				62 degF	Washed Thru Perfs		<input type="checkbox"/>	To
Customer or Authorized Representative			Schlumberger Supervisor			Circulation Lost		Job Completed
			Jordan Moreland/ Stacy Terry			-		<input checked="" type="checkbox"/>