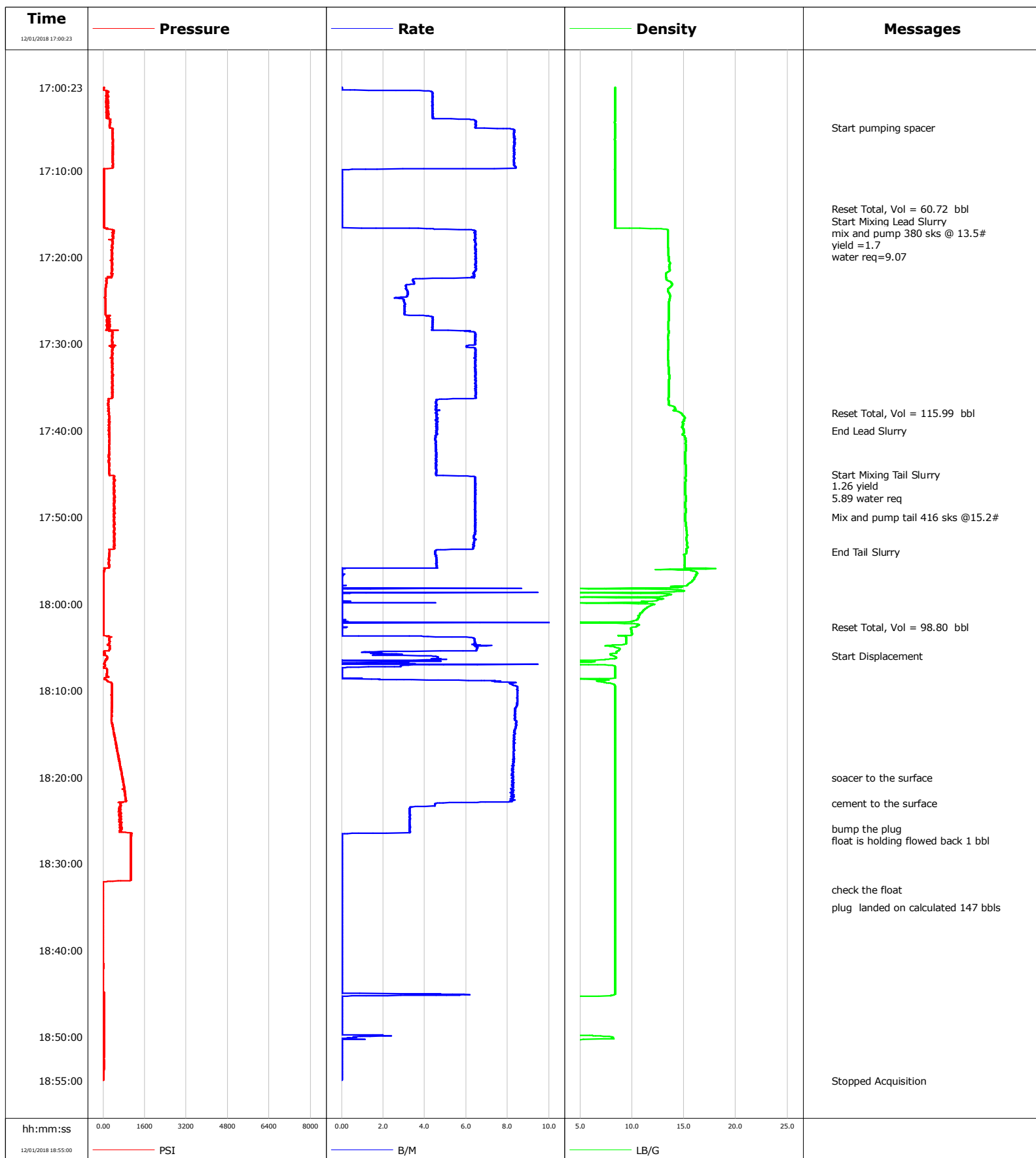


Well Herren
Field Wattenberg
Engineer Albert Snyder
Country United States

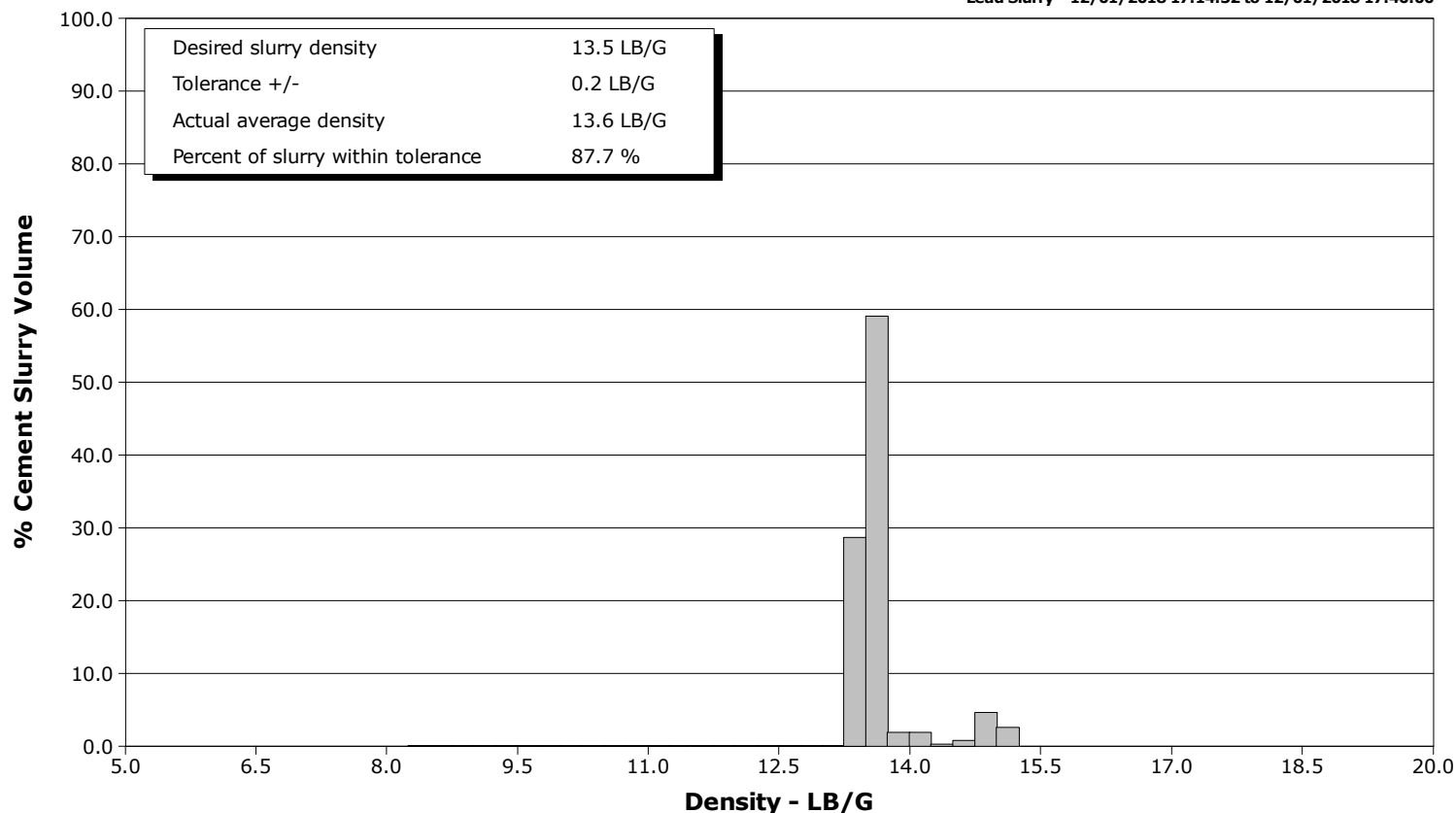
Client Crestone peak
SIR No. 2876923
Job Type Surface
Job Date 12-01-2018



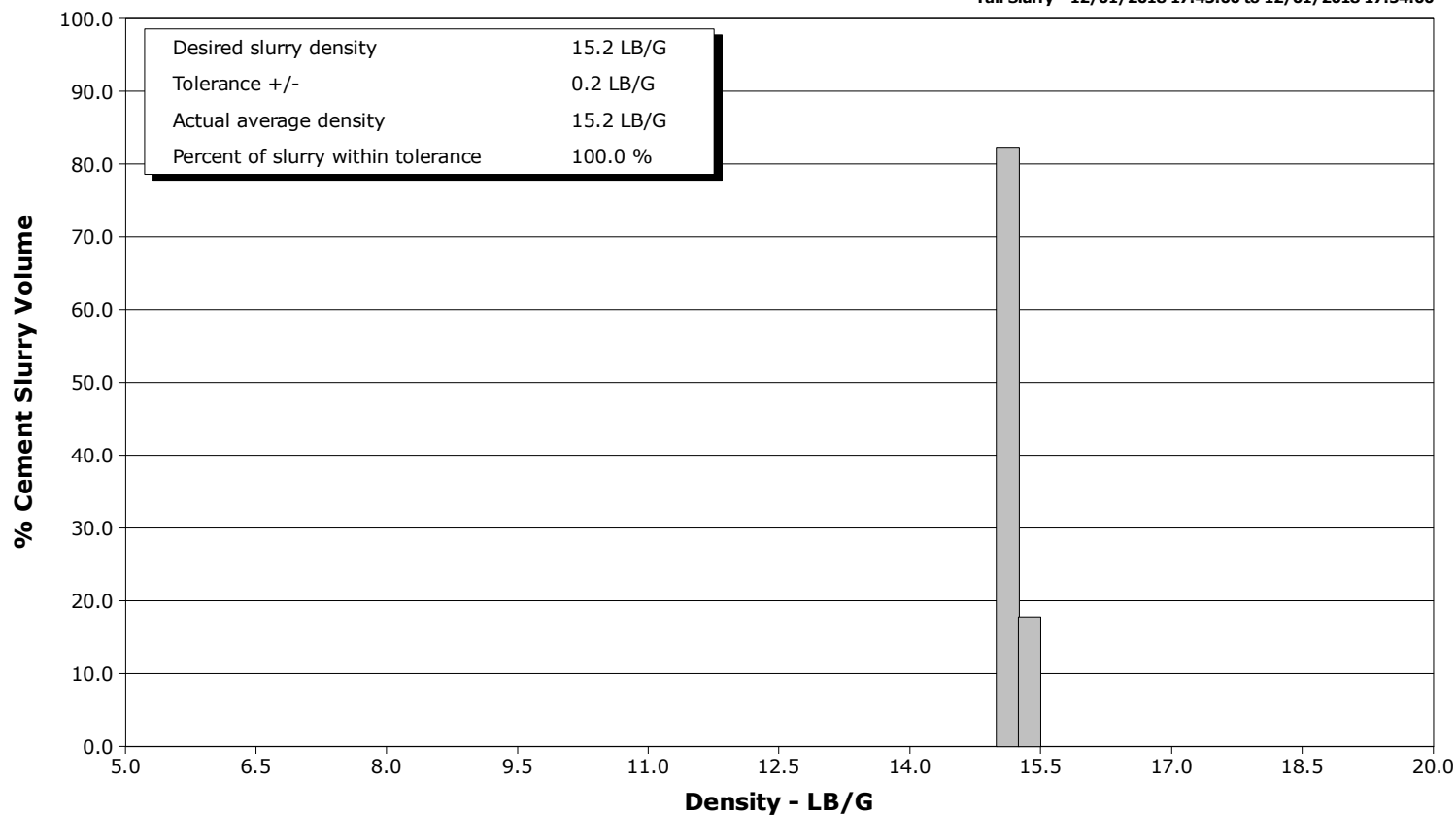
Well Herren
Field Wattenberg
Engineer Albert Snyder
Country United States

Client Crestone peak
SIR No. 2876923
Job Type Surface
Job Date 12-01-2018

Lead Slurry - 12/01/2018 17:14:32 to 12/01/2018 17:40:00



Tail Slurry - 12/01/2018 17:45:00 to 12/01/2018 17:54:00



Cementing Service Report

				Customer Crestone peak			Job Number 2876923	
Well Herren 1J-33h-h36-1J			Location (legal) 1J-33H-H36-1J			Schlumberger Location Cwy		Job Start Dec/01/2018
Field Wattenberg		Formation Name/Type		Deviation deg	Bit Size in	Well MD 1992.0 ft		Well TVD 1986.0 ft
County weld		State/Province Wyoming		BHP psi	BHST 104 degF	BHCT 80 degF	Pore Press. Gradient lb/gal	
Well Master 0631784114		API/UWI						
Rig Name 153	Drilled For Oil & Gas	Service Via Land		Casing/ Liner				
				Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
Offshore Zone n/a	Well Class New	Well Type Development		120.0	16.0	84.0	110	8RD
				1977.0	9.6	40.0	110	BUTT
Drilling Fluid Type		Max. Density lb/gal	Plastic Viscosity cP	Tubing/Drill Pipe				
				T/D	Depth, ft	Size, in	Weight, lb/ft	Grade Thread
Service Line Cementing		Job Type Surface						
Max. Allowed Tub. Press psi		Max. Allowed Ann. Press psi		WH Connection		Perforations/Open Hole		
						Top, ft	Bottom, ft	shot/ft
						ft	ft	
						ft	ft	
						ft	ft	
				Treat Down Casing		Displacement 147.0 bbl		Packer Type Packer Depth ft
				Tubing Vol. bbl		Casing Vol. 150.0 bbl		Annular Vol. 172.0 bbl
								Openhole Vol. bbl
Casing/Tubing Secured <input type="checkbox"/>		1 Hole Vol. Circulated prior to Cement <input type="checkbox"/>		Casing Tools			Squeeze Job	
Lift Pressure psi				Shoe Type Guide			Squeeze Type	
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth ft			Tool Type	
No. Centralizers		Top Plugs 1		Bottom Plugs 0		Stage Tool Type		Tool Depth ft
Cement Head Type Single				Stage Tool Depth ft			Tail Pipe Size in	
Job Scheduled For Dec/01/2018		Arrived on Location Dec/01/2018		Leave Location Dec/01/2018		Collar Type Float		Tail Pipe Depth ft
						Collar Depth 1933.0 ft		Sqz. Total Vol. bbl
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
12/01/2018	17:00:23	26	0.0	8.38	0.0	Started Acquisition		
12/01/2018	17:02:23	184	4.4	8.37	7.5			
12/01/2018	17:04:23	252	6.5	8.34	16.9			
12/01/2018	17:05:00	266	6.4	8.38	20.9	Start pumping spacer		
12/01/2018	17:06:23	372	8.3	8.34	32.1			
12/01/2018	17:08:23	374	8.3	8.37	48.7			
12/01/2018	17:10:23	26	0.0	8.37	60.7			
12/01/2018	17:12:23	21	0.0	8.37	60.7			
12/01/2018	17:14:23	25	0.0	8.36	60.7			
12/01/2018	17:14:24	25	0.0	8.36	60.7	Reset Total, Vol = 60.72 bbl		
12/01/2018	17:14:32	26	0.0	8.36	0.0	Start Mixing Lead Slurry		
12/01/2018	17:14:34	26	0.0	8.36	0.0	mix and pump 380 sks @ 13.5#		
12/01/2018	17:14:35	25	0.0	8.36	0.0	water req=9.07		
12/01/2018	17:16:23	28	0.0	8.36	0.0			
12/01/2018	17:18:23	373	6.5	13.44	10.7			
12/01/2018	17:20:23	327	6.5	13.53	23.6			
12/01/2018	17:22:23	295	6.4	13.29	36.4			
12/01/2018	17:24:23	92	3.2	13.65	43.2			
12/01/2018	17:26:23	84	3.0	13.55	49.2			
12/01/2018	17:28:23	164	4.4	13.50	57.5			
12/01/2018	17:30:23	336	6.0	13.50	70.0			

Well Herren 1J-33h-h36-1J			Field Wattenberg		Job Start Dec/01/2018	Customer Crestone peak	Job Number 2876923
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
12/01/2018	17:34:23	333	6.5	13.55	95.7		
12/01/2018	17:36:23	195	4.8	13.50	108.6		
12/01/2018	17:37:59	224	4.5	14.71	115.9	Reset Total, Vol = 115.99 bbl	
12/01/2018	17:38:23	229	4.6	15.01	1.8		
12/01/2018	17:40:00	244	4.6	15.01	9.2	End Lead Slurry	
12/01/2018	17:40:23	243	4.6	14.93	10.9		
12/01/2018	17:42:23	214	4.5	15.15	20.0		
12/01/2018	17:44:23	217	4.5	15.16	29.1		
12/01/2018	17:45:00	240	4.6	15.18	31.9	Start Mixing Tail Slurry	
12/01/2018	17:46:00	395	6.4	15.13	37.8	1.26 yield	
12/01/2018	17:46:23	424	6.4	15.12	40.3		
12/01/2018	17:47:00	423	6.4	15.10	44.3	5.89 water req	
12/01/2018	17:48:23	428	6.4	15.14	53.2		
12/01/2018	17:50:00	403	6.4	15.14	63.6	Mix and pump tail 416 sks @15.2#	
12/01/2018	17:50:23	415	6.4	15.13	66.0		
12/01/2018	17:52:23	436	6.4	15.23	78.9		
12/01/2018	17:54:00	245	4.5	15.24	88.7	End Tail Slurry	
12/01/2018	17:54:23	236	4.5	15.00	90.4		
12/01/2018	17:56:23	17	0.0	16.26	97.4		
12/01/2018	17:58:23	8	0.0	14.07	97.8		
12/01/2018	18:00:23	7	0.0	11.52	98.2		
12/01/2018	18:02:23	6	0.0	10.60	98.8		
12/01/2018	18:02:43	5	0.0	10.09	98.8	Reset Total, Vol = 98.80 bbl	
12/01/2018	18:04:23	239	6.4	9.44	3.8		
12/01/2018	18:06:00	105	3.7	8.18	12.0	Start Displacement	
12/01/2018	18:06:23	180	4.4	7.89	13.7		
12/01/2018	18:08:23	148	0.0	8.38	16.2		
12/01/2018	18:10:23	329	8.5	8.36	29.3		
12/01/2018	18:12:23	320	8.4	8.37	46.1		
12/01/2018	18:14:23	374	8.4	8.36	62.9		
12/01/2018	18:16:23	514	8.3	8.36	79.5		
12/01/2018	18:18:23	638	8.3	8.36	96.1		
12/01/2018	18:20:00	737	8.3	8.36	109.4	soacer to the surface	
12/01/2018	18:20:23	759	8.2	8.36	112.5		
12/01/2018	18:22:23	846	8.2	8.36	129.0		
12/01/2018	18:23:00	701	4.7	8.36	133.8	cement to the surface	
12/01/2018	18:24:23	662	3.3	8.36	138.9		
12/01/2018	18:26:00	656	3.3	8.36	144.2	bump the plug	
12/01/2018	18:26:23	768	3.3	8.36	145.4		
12/01/2018	18:27:00	1067	0.0	8.36	145.8	float is holding flowed back 1 bbl	
12/01/2018	18:28:23	1067	0.0	8.36	145.8		
12/01/2018	18:30:23	1065	0.0	8.36	145.8		
12/01/2018	18:32:23	-2	0.0	8.36	145.8		
12/01/2018	18:33:00	-2	0.0	8.36	145.8	check the float	
12/01/2018	18:34:23	-3	0.0	8.36	145.8		
12/01/2018	18:35:00	-4	0.0	8.36	145.8	plug landed on calculated 147 bbls	
12/01/2018	18:36:23	-4	0.0	8.36	145.8		
12/01/2018	18:38:23	-4	0.0	8.36	145.8		
12/01/2018	18:40:23	-4	0.0	8.37	145.8		
12/01/2018	18:42:23	-4	0.0	8.37	145.8		
12/01/2018	18:44:23	-7	0.0	8.37	145.8		
12/01/2018	18:46:23	23	0.0	0.01	147.0		
12/01/2018	18:48:23	20	0.0	0.01	147.0		
12/01/2018	18:50:23	21	0.0	1.23	147.5		

Well Herren 1J-33h-h36-1J			Field Wattenberg		Job Start Dec/01/2018		Customer Crestone peak		Job Number 2876923	
Date	Time 24-hr clock	Treating Pressure PSI		Flow Rate B/M	Density LB/G	Volume BBL	Message			
12/01/2018	18:54:23	18		0.0	0.01	147.5				

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl						
Slurry	N2	Mud	Maximum Rate		Total Slurry 416.0	Mud	Spacer 60.0	N2			
Treating Pressure Summary, psi					Breakdown Fluid						
Maximum 2000	Final 144	Average 120	Bump Plug to	Breakdown	Type	Volume bbl		Density lb/gal			
Avg. N2 Percent %	Designed Slurry Volume 416.0 bbl		Displacement 147.0 bbl	Mix Water Temp 61 degF	Cement Circulated to Surface? <input type="checkbox"/>		Volume bbl				
					Washed Thru Perfs <input type="checkbox"/>		To ft				
Customer or Authorized Representative Ryan Buford			Schlumberger Supervisor Albert Snyder			Circulation Lost <input type="checkbox"/>	Job Completed <input type="checkbox"/>				
						-	-				