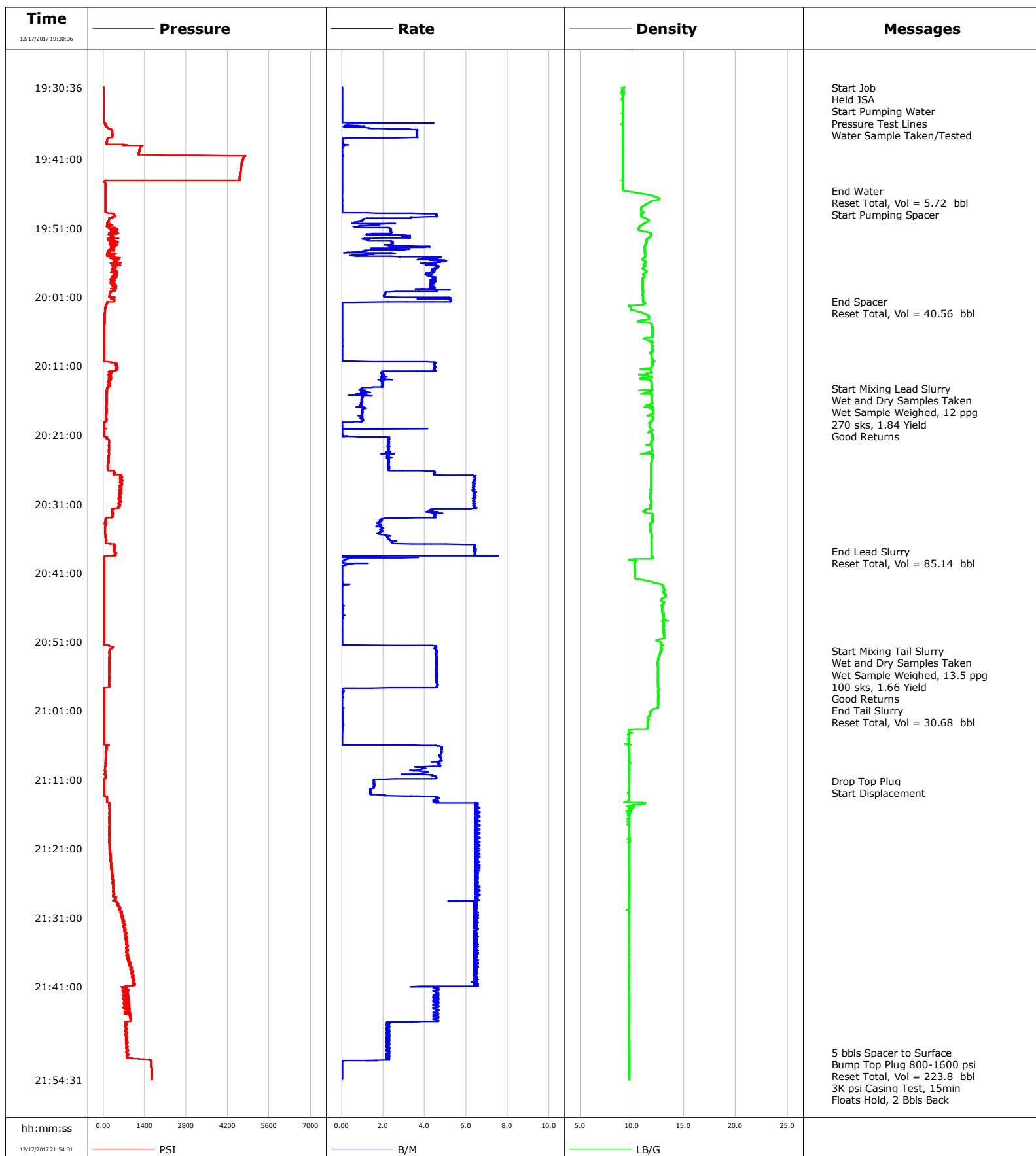


Well Yellowhammer 13N-17HZ
Field Wattenberg
Engineer Ryan Drilling/Ken Sovereign
Country United States

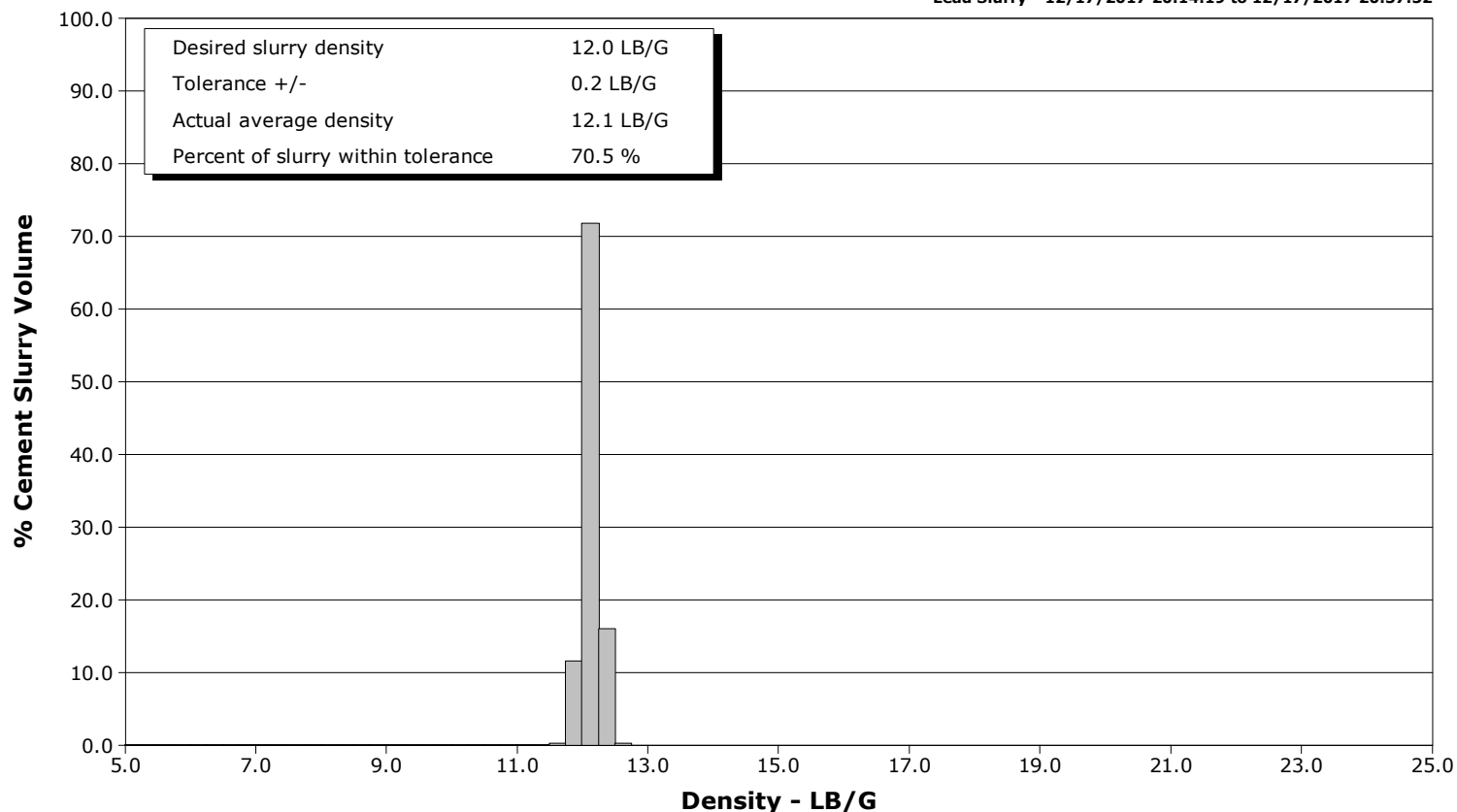
Client Anadarko
SIR No. CSS9-00912
Job Type 7" Intermediate
Job Date 12-17-2017



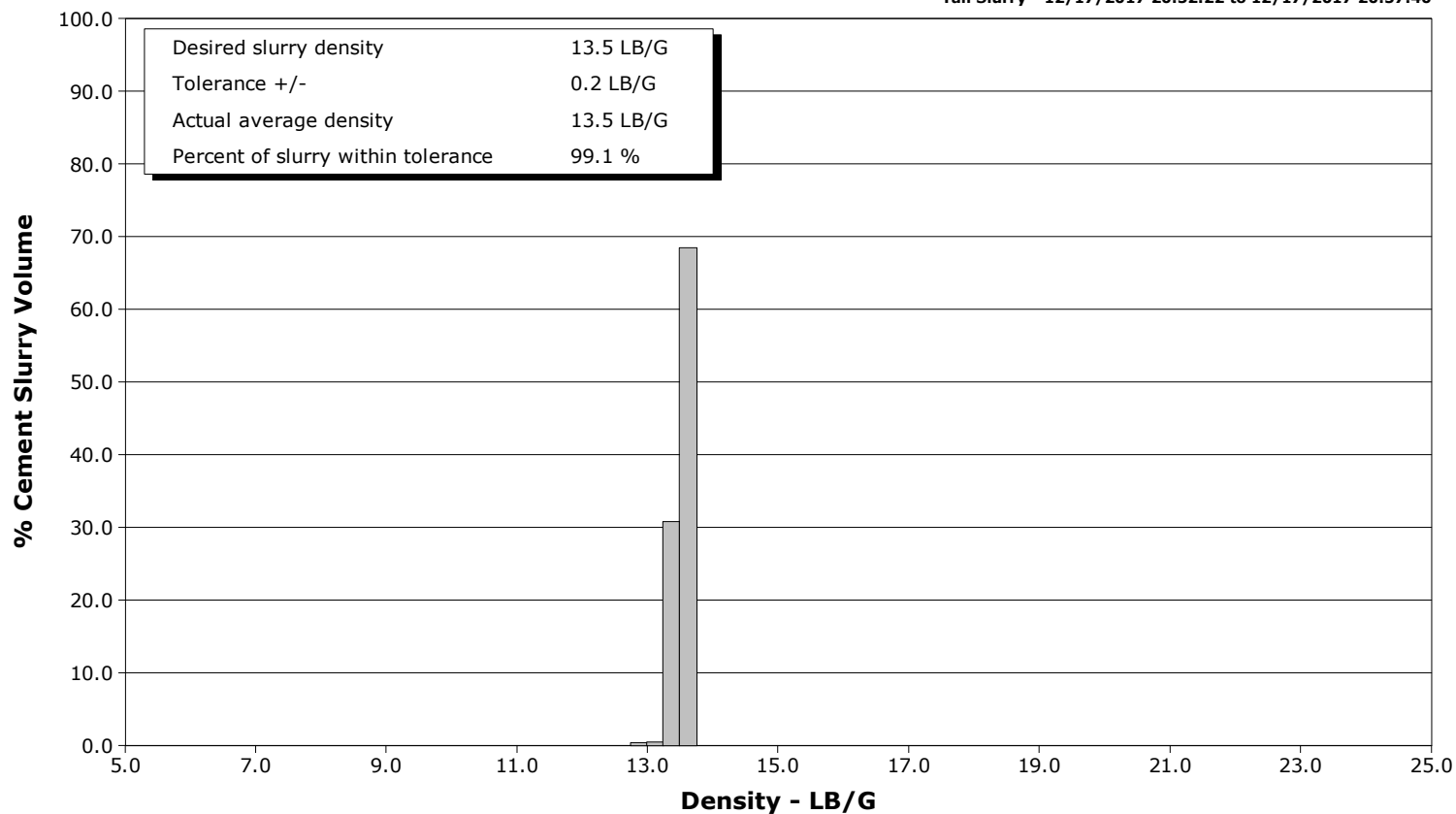
Well Yellowhammer 13N-17HZ
Field Wattenberg
Engineer Ryan Drilling/Ken Sovereign
Country United States

Client Anadarko
SIR No. CSS9-00912
Job Type 7" Intermediate
Job Date 12-17-2017

Lead Slurry - 12/17/2017 20:14:19 to 12/17/2017 20:37:52



Tail Slurry - 12/17/2017 20:52:22 to 12/17/2017 20:57:40



Cementing Service Report

				Customer Anadarko			Job Number CSS9-00912				
Well Yellowhammer 13N-17HZ			Location (legal) CWY			Schlumberger Location CWY			Job Start Dec/17/2017		
Field Wattenberg		Formation Name/Type		Deviation deg		Bit Size 8.5 in		Well MD 5893.0 ft		Well TVD 5763.0 ft	
County Weld		State/Province Colorado		BHP psi		BHST 192 degF		BHCT 141 degF		Pore Press. Gradient lb/gal	
Well Master 0631736255		API/UWI									
Rig Name Xtreme 24		Drilled For Oil & Gas		Service Via Land		Casing / Liner					
						Depth, ft		Size, in		Weight, lb/ft	
										Grade	
										Thread	
Offshore Zone		Well Class New		Well Type Development		1875.0		9.6		36.0	
						5893.0		7.0		26.0	
										j55	
										p110	
										lrc	
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 7" Intermediate									
Max. Allowed Tub. Press psi		Max. Allowed Ann. Press psi		WH Connection Double Cement head		Perforations / Open Hole					
						Top, ft		Bottom, ft		shot/ft	
										No. of Shots	
										Total Interval ft	
										Diameter in	
						Treat Down Casing		Displacement 223.8 bbl		Packer Type	
										Packer Depth ft	
						Tubing Vol. bbl		Casing Vol. bbl		Annular Vol. bbl	
										Openhole Vol. 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 800 psi						Shoe Type Float		Squeeze Type			
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>				Shoe Depth 5893.0 ft		Tool Type			
No. Centralizers		Top Plugs 1		Bottom Plugs 1		Stage Tool Type		Tool Depth ft			
Cement Head Type Double						Stage Tool Depth ft		Tail Pipe Size in			
Job Scheduled For Dec/17/2017 18:00		Arrived on Location Dec/17/2017 18:00		Leave Location Dec/17/2017 23:00		Collar Type Float		Tail Pipe Depth ft			
						Collar Depth 5848.0 ft		Sqz. Total Vol. bbl			
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message					
12/17/2017	19:30:36	4	0.0	8.37	10.6	Started Acquisition					
12/17/2017	19:30:37	3	0.0	8.37	10.6	Held JSA					
12/17/2017	19:30:41	4	0.0	8.37	10.6	Start Pumping Water					
12/17/2017	19:30:43	5	0.0	8.37	10.6	Pressure Test Lines					
12/17/2017	19:30:46	5	0.0	8.37	10.6	Water Sample Taken/Tested					
12/17/2017	19:31:36	4	0.0	8.37	10.6						
12/17/2017	19:32:36	4	0.0	8.37	10.6						
12/17/2017	19:33:36	5	0.0	8.37	10.6						
12/17/2017	19:34:36	2	0.0	8.37	10.6						
12/17/2017	19:35:36	3	0.0	8.37	0.0						
12/17/2017	19:36:36	191	1.9	8.35	0.8						
12/17/2017	19:37:36	308	3.6	8.36	4.3						
12/17/2017	19:38:36	114	0.1	8.36	5.6						
12/17/2017	19:39:36	1223	0.0	8.36	5.7						
12/17/2017	19:40:36	4775	0.0	8.36	5.7						
12/17/2017	19:41:36	4671	0.0	8.36	5.7						
12/17/2017	19:42:36	4633	0.0	8.36	5.7						
12/17/2017	19:43:36	4603	0.0	8.36	5.7						
12/17/2017	19:44:36	72	0.0	8.36	5.7						
12/17/2017	19:45:36	78	0.0	8.36	0.0						
12/17/2017	19:45:38	78	0.0	8.36	0.0	End Water					

Well Yellowhammer 13N-17HZ			Field Wattenberg	Job Start Dec/17/2017		Customer Anadarko	Job Number CSS9-00912
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
12/17/2017	19:46:36	79	0.0	8.36	0.0	Start Pumping Spacer	
12/17/2017	19:47:36	78	0.0	8.36	0.0		
12/17/2017	19:48:36	78	0.0	8.36	0.0		
12/17/2017	19:49:36	223	1.5	10.83	3.1		
12/17/2017	19:50:36	324	1.8	10.99	4.2		
12/17/2017	19:51:36	266	2.4	10.87	6.1		
12/17/2017	19:52:36	187	1.1	10.83	8.5		
12/17/2017	19:53:36	262	2.3	10.86	10.5		
12/17/2017	19:54:36	172	0.1	10.86	12.7		
12/17/2017	19:55:36	323	3.7	10.82	15.3		
12/17/2017	19:56:36	402	4.6	10.84	19.8		
12/17/2017	19:57:36	392	4.3	10.83	24.2		
12/17/2017	19:58:36	399	4.5	10.73	28.6		
12/17/2017	19:59:36	441	4.4	10.65	32.9		
12/17/2017	20:00:36	232	2.1	10.62	36.6		
12/17/2017	20:01:36	382	5.3	10.55	40.2		
12/17/2017	20:01:38	380	5.3	10.55	40.4	End Spacer	
12/17/2017	20:01:40	399	5.3	10.55	40.6	Reset Total, Vol = 40.56 bbl	
12/17/2017	20:02:36	72	0.0	10.97	0.0		
12/17/2017	20:03:36	46	0.0	10.94	0.0		
12/17/2017	20:04:36	37	0.0	10.93	0.0		
12/17/2017	20:05:36	31	0.0	10.92	0.0		
12/17/2017	20:06:36	30	0.0	10.91	0.0		
12/17/2017	20:07:36	30	0.0	10.56	0.0		
12/17/2017	20:08:36	30	0.0	10.54	0.0		
12/17/2017	20:09:36	32	0.0	10.55	0.0		
12/17/2017	20:10:36	434	4.4	11.85	0.8		
12/17/2017	20:11:36	473	4.5	11.97	5.3		
12/17/2017	20:12:36	258	2.2	12.11	7.7		
12/17/2017	20:13:36	216	2.0	12.23	9.7		
12/17/2017	20:14:19	126	1.0	12.19	11.0	Start Mixing Lead Slurry	
12/17/2017	20:14:21	125	1.0	12.20	11.0	Wet and Dry Samples Taken	
12/17/2017	20:14:22	123	1.0	12.21	11.0	270 sks, 1.84 Yield	
12/17/2017	20:14:36	129	1.1	12.20	11.2		
12/17/2017	20:15:36	117	1.0	12.19	12.3		
12/17/2017	20:16:36	102	0.9	12.18	13.2		
12/17/2017	20:17:36	115	1.0	12.23	14.2		
12/17/2017	20:18:36	103	1.0	12.41	15.2		
12/17/2017	20:19:36	29	0.0	12.20	15.8		
12/17/2017	20:20:36	26	0.0	12.21	15.9		
12/17/2017	20:21:36	122	2.3	12.17	16.5		
12/17/2017	20:22:36	192	2.2	12.17	18.8		
12/17/2017	20:23:36	190	2.3	12.27	21.0		
12/17/2017	20:24:36	184	2.3	12.22	23.3		
12/17/2017	20:25:36	147	2.3	12.02	25.5		
12/17/2017	20:26:36	356	4.4	12.03	28.6		
12/17/2017	20:27:36	621	6.4	12.06	34.5		
12/17/2017	20:28:36	618	6.4	12.02	40.9		
12/17/2017	20:29:36	565	6.4	11.99	47.3		
12/17/2017	20:30:36	603	6.3	12.00	53.7		
12/17/2017	20:31:36	515	6.5	12.02	60.0		
12/17/2017	20:32:36	310	4.5	12.34	64.7		
12/17/2017	20:33:36	70	1.9	12.35	67.9		
12/17/2017	20:34:36	63	2.0	11.99	69.7		

Well Yellowhammer 13N-17HZ			Field Wattenberg		Job Start Dec/17/2017		Customer Anadarko		Job Number CSS9-00912	
Date	Time 24-hr clock	Treating Pressure PSI		Flow Rate B/M	Density LB/G		Volume BBL		Message	
12/17/2017	20:36:36	89		2.4	12.12		73.9			
12/17/2017	20:37:36	375		6.5	12.10		79.3			
12/17/2017	20:37:52	367		6.4	12.09		81.0		End Lead Slurry	
12/17/2017	20:38:36	142		0.0	13.86		85.7			
12/17/2017	20:38:58	27		0.3	13.02		86.0		Reset Total, Vol = 85.14 bbl	
12/17/2017	20:39:36	26		0.1	12.75		0.0			
12/17/2017	20:40:36	25		0.0	12.30		0.2			
12/17/2017	20:41:36	26		0.0	12.21		0.2			
12/17/2017	20:42:36	25		0.0	12.21		0.2			
12/17/2017	20:43:36	25		0.0	11.92		0.2			
12/17/2017	20:44:36	24		0.0	11.90		0.2			
12/17/2017	20:45:36	25		0.0	11.90		0.2			
12/17/2017	20:46:36	25		0.0	11.92		0.2			
12/17/2017	20:47:36	25		0.0	11.91		0.3			
12/17/2017	20:48:36	25		0.0	11.93		0.3			
12/17/2017	20:49:36	25		0.0	11.93		0.3			
12/17/2017	20:50:36	25		0.0	11.93		0.3			
12/17/2017	20:51:36	196		4.4	14.62		0.5			
12/17/2017	20:52:22	208		4.6	13.49		4.0		Start Mixing Tail Slurry	
12/17/2017	20:52:25	207		4.6	13.48		4.2		Wet and Dry Samples Taken	
12/17/2017	20:52:26	207		4.6	13.48		4.3		Wet Sample Weighed, 13.5 ppg	
12/17/2017	20:52:36	208		4.6	13.52		5.0			
12/17/2017	20:53:36	206		4.6	13.50		9.6			
12/17/2017	20:54:36	206		4.6	13.51		14.2			
12/17/2017	20:55:36	205		4.6	13.53		18.7			
12/17/2017	20:56:36	197		4.6	13.50		23.3			
12/17/2017	20:57:36	193		4.6	13.39		27.9			
12/17/2017	20:57:40	99		4.4	12.92		28.2		End Tail Slurry	
12/17/2017	20:57:42	31		2.3	14.15		28.3		Reset Total, Vol = 30.68 bbl	
12/17/2017	20:58:36	29		0.1	12.84		28.4			
12/17/2017	20:59:36	28		0.0	12.83		28.4			
12/17/2017	21:00:36	28		0.1	12.85		28.4			
12/17/2017	21:01:36	29		0.0	12.87		28.4			
12/17/2017	21:02:36	29		0.1	12.88		28.5			
12/17/2017	21:03:36	28		0.0	12.90		28.5			
12/17/2017	21:04:36	28		0.0	12.88		28.5			
12/17/2017	21:05:36	28		0.0	12.89		28.5			
12/17/2017	21:06:36	106		4.8	9.53		2.7			
12/17/2017	21:07:36	89		4.7	8.78		7.5			
12/17/2017	21:08:36	80		4.7	8.52		12.3			
12/17/2017	21:09:36	57		3.8	8.42		16.6			
12/17/2017	21:10:36	75		4.5	8.37		20.5			
12/17/2017	21:11:12	25		1.6	8.67		22.4		Drop Top Plug	
12/17/2017	21:11:13	25		1.6	8.64		22.4		Start Displacement	
12/17/2017	21:11:36	26		1.6	8.49		23.0			
12/17/2017	21:12:36	25		1.4	8.47		24.5			
12/17/2017	21:13:36	111		4.7	9.19		26.7			
12/17/2017	21:14:36	200		6.4	8.62		31.6			
12/17/2017	21:15:36	210		6.5	9.60		38.2			
12/17/2017	21:16:36	201		6.4	9.81		44.7			
12/17/2017	21:17:36	210		6.5	9.57		51.2			
12/17/2017	21:18:36	200		6.4	9.40		57.7			
12/17/2017	21:19:36	203		6.5	9.35		64.2			
12/17/2017	21:20:36	219		6.5	9.28		70.7			

Well Yellowhammer 13N-17HZ			Field Wattenberg		Job Start Dec/17/2017		Customer Anadarko		Job Number CSS9-00912	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
12/17/2017	21:22:36	246	6.5	9.33	83.7					
12/17/2017	21:23:36	257	6.4	9.36	90.2					
12/17/2017	21:24:36	303	6.5	9.41	96.8					
12/17/2017	21:25:36	344	6.4	9.34	103.3					
12/17/2017	21:26:36	343	6.7	9.32	109.8					
12/17/2017	21:27:36	366	6.4	9.30	116.3					
12/17/2017	21:28:36	401	5.1	9.28	122.8					
12/17/2017	21:29:36	547	6.4	9.27	129.2					
12/17/2017	21:30:36	613	6.5	9.26	135.7					
12/17/2017	21:31:36	643	6.5	9.26	142.1					
12/17/2017	21:32:36	703	6.4	9.26	148.6					
12/17/2017	21:34:36	770	6.4	9.25	161.4					
12/17/2017	21:35:36	785	6.5	9.24	167.9					
12/17/2017	21:36:36	794	6.5	9.24	174.3					
12/17/2017	21:37:36	892	6.6	9.23	180.8					
12/17/2017	21:38:36	928	6.4	9.22	187.2					
12/17/2017	21:39:36	975	6.5	9.22	193.7					
12/17/2017	21:40:36	1062	6.4	9.22	200.1					
12/17/2017	21:41:36	841	4.7	9.21	205.4					
12/17/2017	21:42:36	817	4.4	9.20	209.9					
12/17/2017	21:43:36	760	4.5	9.20	214.5					
12/17/2017	21:44:36	876	4.5	9.20	219.0					
12/17/2017	21:45:36	933	4.5	8.34	223.6					
12/17/2017	21:46:36	743	2.2	8.36	227.0					
12/17/2017	21:47:36	752	2.3	8.36	229.2					
12/17/2017	21:48:36	764	2.3	8.36	231.5					
12/17/2017	21:49:36	815	2.2	8.36	233.7					
12/17/2017	21:50:31	810	2.3	8.36	235.8	5 bbls Spacer to Surface				
12/17/2017	21:50:36	789	2.3	8.36	236.0					
12/17/2017	21:51:36	1431	2.2	8.36	238.2					
12/17/2017	21:52:36	1623	0.0	8.36	238.5					
12/17/2017	21:53:17	1630	0.0	8.36	238.5	3K psi Casing Test, 15min				
12/17/2017	21:53:18	1631	0.0	8.36	238.5	Floats Hold, 2 Bbls Back				
12/17/2017	21:53:19	1630	0.0	8.36	238.5	End Job				
12/17/2017	21:53:31	1632	0.0	8.36	238.5	Started Acquisition				

Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl					
Slurry	N2		Mud	Maximum Rate 0.0	Total Slurry 115.0	Mud 0.0	Spacer 40.0		N2	
Treating Pressure Summary, psi					Breakdown Fluid					
Maximum 0	Final 1642	Average	Bump Plug to 1600	Breakdown	Type		Volume bbl		Density lb/gal	
Avg. N2 Percent %		Designed Slurry Volume 109.1 bbl		Displacement 223.8 bbl		Mix Water Temp 68 degF		Cement Circulated to Surface? <input type="checkbox"/>		Volume bbl
								Washed Thru Perfs <input type="checkbox"/>		To ft
Customer or Authorized Representative Sean Giddings				Schlumberger Supervisor Ryan Drilling/Ken Sovereign				Circulation Lost <input type="checkbox"/>		Job Completed <input checked="" type="checkbox"/>
								-		-