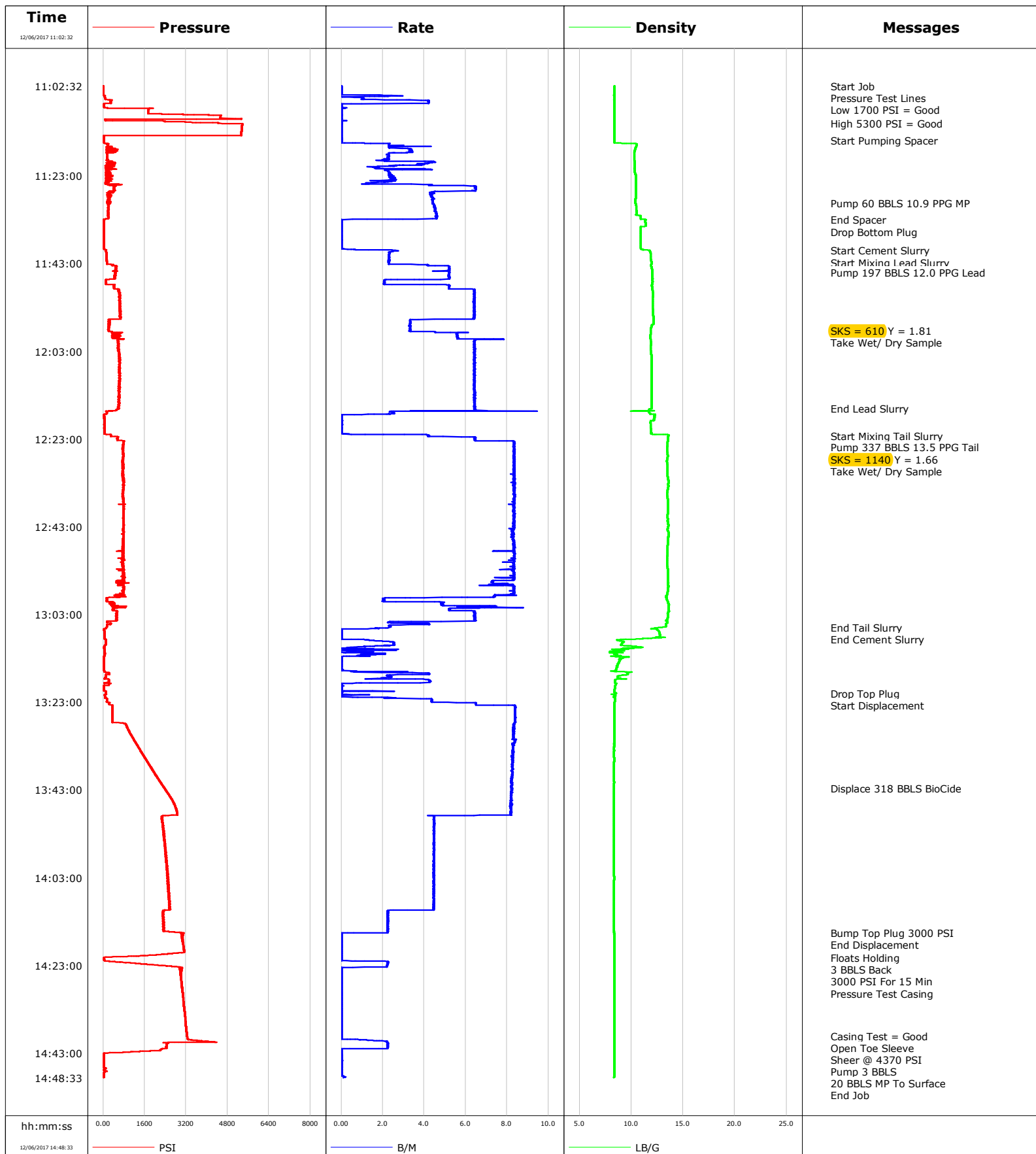


Well Yellowhammer 4C-8HZ
Field Wattenberg
Engineer Conley Jensen/ Chad Perry
Country United States

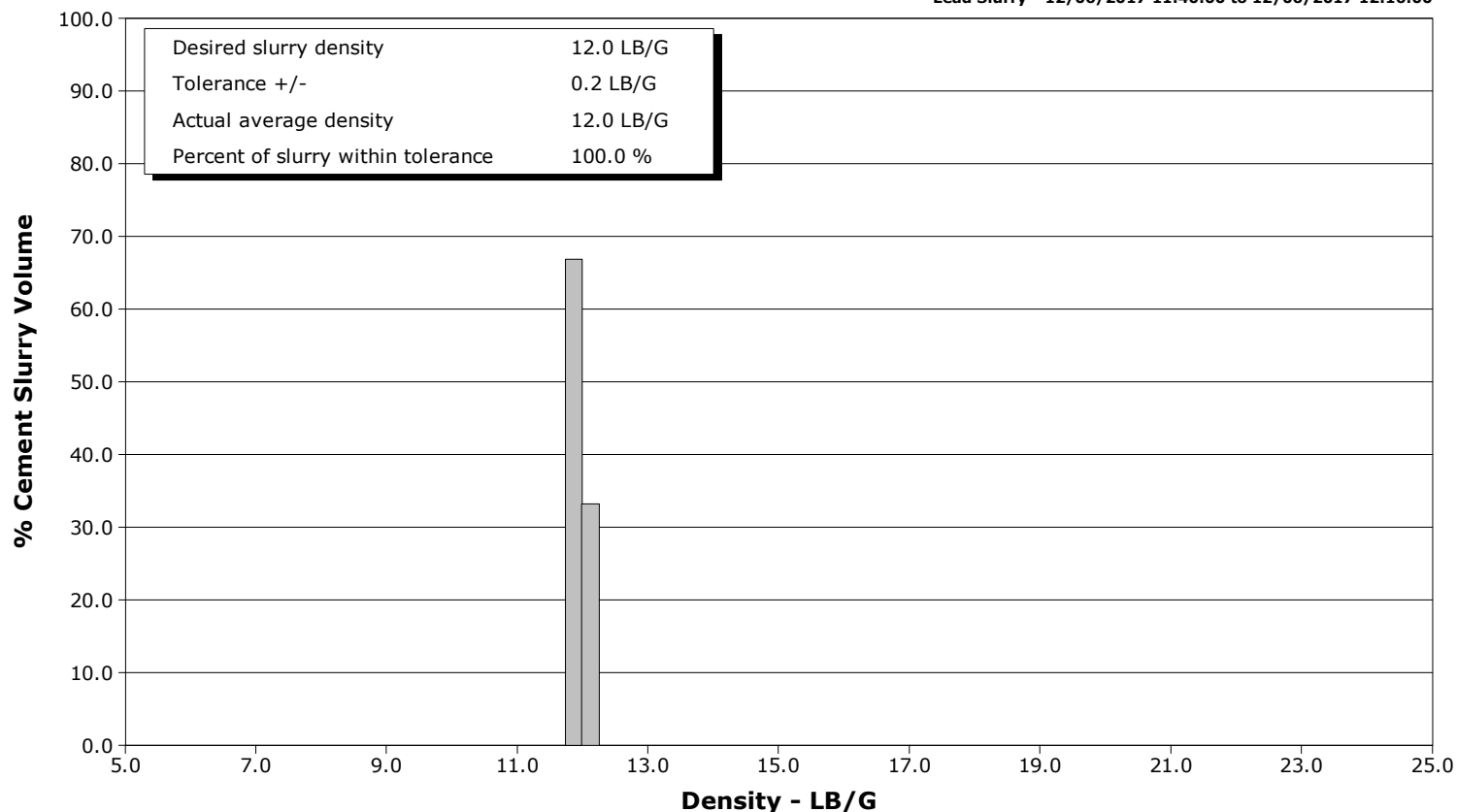
Client Anadarko
SIR No. 2618990
Job Type 5.5" Monobore
Job Date 12-06-2017



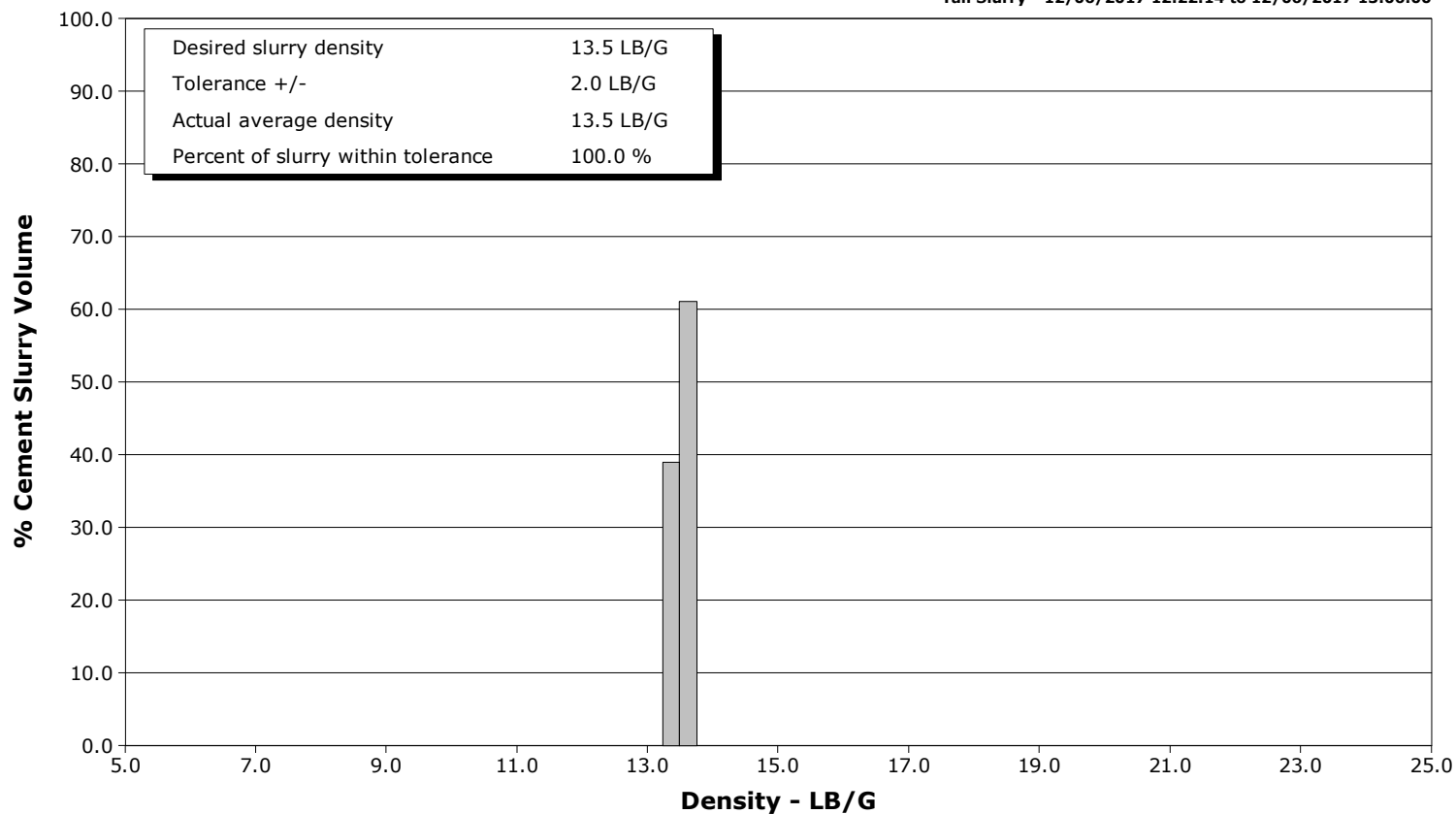
Well Yellowhammer
Field Wattenberg
Engineer Conley Jensen/ Chad Perry
Country United States

Client Anadarko
SIR No. 2618990
Job Type 5.5" Monobore
Job Date 12-06-2017

Lead Slurry - 12/06/2017 11:40:00 to 12/06/2017 12:16:00



Tail Slurry - 12/06/2017 12:22:14 to 12/06/2017 13:06:00



Cementing Service Report

				Customer Anadarko			Job Number 2618990		
Well Yellowhammer 4C-8HZ			Location (legal)		Schlumberger Location CWY			Job Start Dec/06/2017	
Field Wattenberg		Formation Name/Type Shale		Deviation deg	Bit Size 8.5 in		Well MD 13696.0 ft		Well TVD 7813.0 ft
County		State/Province Colorado		BHP psi	BHST 232 degF		BHCT 215 degF		Pore Press. Gradient lb/gal
Well Master 0631737097		API/UWI 05123454940000							
Rig Name Xtreme 24	Drilled For Oil		Service Via Land		Casing/ Liner				
					Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
Offshore Zone	Well Class New		Well Type Development		1882.0	9.6	36.0	J55	8RD
					13696.0	5.5	17.0	P110	8RD
Drilling Fluid Type		Max. Density lb/gal	Plastic Viscosity cP		Tubing/Drill Pipe				
					T/D	Depth, ft	Size, in	Weight, lb/ft	Grade
Service Line Cementing	Job Type 5.5" Monobore								
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	ft			ft
					ft	ft			Diameter
					ft	ft			in
	Treat Down Casing	Displacement 318.0 bbl		Packer Type		Packer Depth ft			
	Tubing Vol. bbl	Casing Vol. 318.0 bbl		Annular Vol. 572.0 bbl		Openhole Vol. 904.0 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 psi				Shoe Type Float			Squeeze Type		
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input type="checkbox"/>		Shoe Depth 13696.0 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/06/2017 01:30		Arrived on Location Dec/06/2017 01:30		Leave Location Dec/06/2017 16:00		Collar Type Float			Tail Pipe Depth ft
						Collar Depth 13687.0 ft			Sqz. Total Vol. bbl
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
12/06/2017	11:02:32	10	0.0	8.35	0.0	Started Acquisition			
12/06/2017	11:02:34	10	0.0	8.35	0.0	Start Job			
12/06/2017	11:04:00	10	0.0	8.35	0.0	Pressure Test Lines			
12/06/2017	11:04:02	10	0.0	8.35	0.0				
12/06/2017	11:05:32	86	1.1	8.35	1.3				
12/06/2017	11:07:02	33	0.0	8.35	5.1				
12/06/2017	11:08:00	1746	0.0	8.35	5.1	Low 1700 PSI = Good			
12/06/2017	11:08:32	1729	0.0	8.35	5.1				
12/06/2017	11:10:02	5330	0.0	8.36	5.2				
12/06/2017	11:11:00	4424	0.0	8.35	5.2	High 5300 PSI = Good			
12/06/2017	11:11:32	5360	0.0	8.35	5.2				
12/06/2017	11:13:02	5338	0.0	8.35	5.2				
12/06/2017	11:14:32	29	0.0	8.35	5.2				
12/06/2017	11:15:00	31	0.0	8.35	5.2	Start Pumping Spacer			
12/06/2017	11:16:02	184	2.3	10.52	6.2				
12/06/2017	11:17:32	388	3.4	10.31	10.6				
12/06/2017	11:19:02	163	2.3	10.31	14.3				
12/06/2017	11:20:32	286	3.8	10.34	19.1				
12/06/2017	11:22:02	228	2.3	10.33	22.8				
12/06/2017	11:23:32	311	2.5	10.43	26.4				
12/06/2017	11:25:02	661	4.3	10.43	29.6				

Well			Field	Job Start		Customer	Job Number	
Yellowhammer 4C-8HZ			Wattenberg		Dec/06/2017		Anadarko	2618990
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message		
12/06/2017	11:28:02	259	4.4	10.43	45.3			
12/06/2017	11:29:18	246	4.4	10.40	50.9	Pump 60 BBLs 10.9 PPG MP		
12/06/2017	11:29:32	209	4.5	10.43	52.0			
12/06/2017	11:31:02	181	4.6	10.50	58.7			
12/06/2017	11:32:32	209	4.6	10.91	65.6			
12/06/2017	11:33:00	30	0.1	11.39	67.5	End Spacer		
12/06/2017	11:34:02	28	0.0	11.38	67.5			
12/06/2017	11:35:00	29	0.0	10.89	67.5	Drop Bottom Plug		
12/06/2017	11:35:32	29	0.0	10.89	67.5			
12/06/2017	11:37:02	30	0.0	10.89	67.5			
12/06/2017	11:38:32	31	0.0	10.89	67.5			
12/06/2017	11:40:00	110	2.5	11.74	67.8	Start Cement Slurry		
12/06/2017	11:40:02	105	2.5	11.76	67.9			
12/06/2017	11:41:32	127	2.3	11.87	71.5			
12/06/2017	11:43:02	145	2.3	11.95	74.9			
12/06/2017	11:44:32	465	5.2	12.02	81.8			
12/06/2017	11:45:00	468	5.2	11.99	84.2	Pump 197 BBLs 12.0 PPG Lead		
12/06/2017	11:46:02	455	5.2	12.03	89.6			
12/06/2017	11:47:32	110	2.1	12.02	94.7			
12/06/2017	11:49:02	597	6.4	12.03	101.8			
12/06/2017	11:50:32	631	6.4	12.09	111.4			
12/06/2017	11:52:02	625	6.4	12.04	121.0			
12/06/2017	11:53:32	652	6.4	12.09	130.7			
12/06/2017	11:55:02	645	6.4	12.13	140.3			
12/06/2017	11:56:32	213	3.3	12.16	147.5			
12/06/2017	11:58:02	189	3.3	11.87	152.5			
12/06/2017	11:58:18	232	3.3	11.86	153.4	SKS = 610 Y = 1.81		
12/06/2017	11:58:31	334	3.3	11.86	154.1	Take Wet/ Dry Sample		
12/06/2017	11:59:32	666	5.6	11.84	159.5			
12/06/2017	12:01:02	573	6.4	11.91	168.8			
12/06/2017	12:02:32	602	6.4	11.87	178.5			
12/06/2017	12:04:02	624	6.4	11.95	188.1			
12/06/2017	12:05:32	650	6.4	11.98	197.7			
12/06/2017	12:07:02	637	6.4	11.96	207.4			
12/06/2017	12:08:32	665	6.4	11.98	217.0			
12/06/2017	12:10:02	640	6.4	11.98	226.7			
12/06/2017	12:11:32	628	6.4	11.95	236.3			
12/06/2017	12:13:02	629	6.4	11.95	245.9			
12/06/2017	12:14:32	608	6.4	11.96	255.6			
12/06/2017	12:16:00	575	6.4	11.95	265.0	End Lead Slurry		
12/06/2017	12:16:02	617	6.4	11.95	265.2			
12/06/2017	12:17:32	37	0.0	12.30	271.3			
12/06/2017	12:19:02	39	0.0	11.86	271.3			
12/06/2017	12:20:32	39	0.0	11.87	271.3			
12/06/2017	12:22:02	279	4.1	13.52	271.6			
12/06/2017	12:22:14	298	4.2	13.58	272.4	Start Mixing Tail Slurry		
12/06/2017	12:23:32	796	8.3	13.53	280.4			
12/06/2017	12:24:56	772	8.3	13.46	292.1	Pump 337 BBLs 13.5 PPG Tail		
12/06/2017	12:25:02	746	8.4	13.45	292.9			
12/06/2017	12:25:09	757	8.3	13.45	293.9	SKS = 1140 Y = 1.66		
12/06/2017	12:25:18	781	8.3	13.45	295.2	Take Wet/ Dry Sample		
12/06/2017	12:26:32	783	8.3	13.51	305.4			
12/06/2017	12:28:02	775	8.4	13.41	318.0			
12/06/2017	12:29:32	791	8.3	13.49	330.5			

Well			Field	Job Start		Customer		Job Number	
Yellowhammer 4C-8HZ			Wattenberg		Dec/06/2017		Anadarko		2618990
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
12/06/2017	12:32:32	805	8.4	13.57	355.5				
12/06/2017	12:34:02	788	8.3	13.55	368.0				
12/06/2017	12:35:32	764	8.3	13.45	380.5				
12/06/2017	12:37:02	782	8.4	13.54	393.0				
12/06/2017	12:38:32	781	8.4	13.55	405.5				
12/06/2017	12:40:02	801	8.4	13.52	418.0				
12/06/2017	12:41:32	796	8.3	13.51	430.4				
12/06/2017	12:43:02	788	8.3	13.53	443.0				
12/06/2017	12:44:32	783	8.2	13.60	455.4				
12/06/2017	12:46:02	787	8.3	13.55	467.8				
12/06/2017	12:47:32	784	8.3	13.51	480.3				
12/06/2017	12:49:02	774	8.4	13.49	492.7				
12/06/2017	12:50:32	784	8.3	13.44	505.3				
12/06/2017	12:52:02	791	8.3	13.47	517.7				
12/06/2017	12:53:32	794	8.3	13.55	530.1				
12/06/2017	12:55:02	785	8.3	13.56	542.6				
12/06/2017	12:56:32	772	8.4	13.57	554.1				
12/06/2017	12:58:02	782	8.3	13.49	566.6				
12/06/2017	12:59:32	144	2.1	13.38	576.1				
12/06/2017	13:01:02	542	6.7	13.59	581.9				
12/06/2017	13:02:32	538	6.4	13.54	591.1				
12/06/2017	13:04:02	517	6.5	13.51	600.8				
12/06/2017	13:05:32	136	2.3	13.34	607.3				
12/06/2017	13:06:00	132	2.3	12.73	608.4	End Tail Slurry			
12/06/2017	13:07:02	43	0.0	12.70	608.9				
12/06/2017	13:08:32	45	0.0	11.12	608.9				
12/06/2017	13:10:02	75	2.4	9.04	611.8				
12/06/2017	13:11:32	40	1.6	8.48	613.3				
12/06/2017	13:13:02	38	0.0	9.03	614.4				
12/06/2017	13:14:32	37	0.0	8.66	614.4				
12/06/2017	13:16:02	73	3.2	8.93	614.6				
12/06/2017	13:17:32	80	2.0	8.96	618.8				
12/06/2017	13:19:02	226	0.0	8.48	622.8				
12/06/2017	13:20:32	102	0.1	8.38	623.0				
12/06/2017	13:21:00	98	0.0	8.56	623.0	Drop Top Plug			
12/06/2017	13:22:02	75	2.5	8.44	623.5				
12/06/2017	13:23:32	234	6.5	8.39	630.8				
12/06/2017	13:25:02	365	8.4	8.36	643.2				
12/06/2017	13:26:32	358	8.4	8.36	655.7				
12/06/2017	13:28:02	885	8.3	8.36	668.3				
12/06/2017	13:29:32	992	8.3	8.35	680.8				
12/06/2017	13:31:02	1142	8.3	8.35	693.2				
12/06/2017	13:32:32	1289	8.3	8.35	705.7				
12/06/2017	13:34:02	1436	8.3	8.35	718.2				
12/06/2017	13:35:32	1589	8.3	8.35	730.6				
12/06/2017	13:38:32	1915	8.2	8.34	755.3				
12/06/2017	13:40:02	2074	8.2	8.34	767.7				
12/06/2017	13:41:32	2242	8.2	8.35	780.0				
12/06/2017	13:42:35	2372	8.2	8.34	788.7	Displace 318 BBLs BioCide			
12/06/2017	13:43:02	2409	8.2	8.34	792.4				
12/06/2017	13:44:32	2575	8.2	8.34	804.7				
12/06/2017	13:46:02	2729	8.2	8.34	816.9				
12/06/2017	13:47:32	2830	8.2	8.34	829.2				
12/06/2017	13:49:02	2263	4.5	8.34	840.5				

Well			Field	Job Start		Customer	Job Number
Yellowhammer 4C-8HZ			Wattenberg	Dec/06/2017		Anadarko	2618990
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
12/06/2017	13:52:02	2310	4.5	8.34	854.0		
12/06/2017	13:53:32	2348	4.5	8.34	860.7		
12/06/2017	13:55:02	2363	4.5	8.34	867.4		
12/06/2017	13:56:32	2411	4.5	8.34	874.1		
12/06/2017	13:58:02	2425	4.5	8.34	880.8		
12/06/2017	13:59:32	2428	4.5	8.34	887.5		
12/06/2017	14:01:02	2477	4.4	8.34	894.2		
12/06/2017	14:02:32	2478	4.5	8.35	900.9		
12/06/2017	14:04:02	2521	4.4	8.34	907.6		
12/06/2017	14:05:32	2527	4.5	8.35	914.3		
12/06/2017	14:07:02	2555	4.4	8.35	921.0		
12/06/2017	14:08:32	2567	4.5	8.35	927.7		
12/06/2017	14:10:02	2580	4.5	8.35	934.4		
12/06/2017	14:11:32	2321	2.2	8.35	938.5		
12/06/2017	14:13:02	2343	2.2	8.35	941.9		
12/06/2017	14:14:32	2359	2.2	8.35	945.2		
12/06/2017	14:15:31	3008	2.2	8.35	947.4	Bump Top Plug 3000 PSI	
12/06/2017	14:16:02	3029	0.0	8.35	947.5		
12/06/2017	14:17:32	3078	0.0	8.35	947.5		
12/06/2017	14:19:02	3112	0.0	8.35	947.5		
12/06/2017	14:20:32	2114	0.0	8.36	947.5		
12/06/2017	14:21:10	49	0.0	8.36	947.5	Floats Holding	
12/06/2017	14:22:02	235	2.1	8.35	947.6		
12/06/2017	14:23:32	3056	0.0	8.35	950.6		
12/06/2017	14:24:00	3051	0.0	8.36	950.6	3000 PSI For 15 Min	
12/06/2017	14:25:02	3002	0.0	8.36	950.6		
12/06/2017	14:26:32	3013	0.0	8.36	950.6		
12/06/2017	14:28:02	3047	0.0	8.36	950.6		
12/06/2017	14:29:32	3071	0.0	8.36	950.6		
12/06/2017	14:31:02	3097	0.0	8.36	950.6		
12/06/2017	14:32:32	3123	0.0	8.36	950.6		
12/06/2017	14:34:02	3149	0.0	8.36	950.6		
12/06/2017	14:35:32	3174	0.0	8.36	950.6		
12/06/2017	14:37:02	3198	0.0	8.36	950.6		
12/06/2017	14:38:32	3223	0.0	8.36	950.6		
12/06/2017	14:39:02	3232	0.0	8.36	950.6	Casing Test = Good	
12/06/2017	14:40:02	3498	1.3	8.36	950.9		
12/06/2017	14:40:13	3851	2.1	8.36	951.2	Open Toe Sleeve	
12/06/2017	14:40:31	2765	2.2	8.36	951.8	Sheer @ 4370 PSI	
12/06/2017	14:40:32	2522	2.2	8.36	951.9	Pump 3 BBLS	
12/06/2017	14:41:32	2436	2.2	8.35	954.1		
12/06/2017	14:43:02	35	0.0	8.35	955.0		
12/06/2017	14:43:17	29	0.0	8.35	955.0	20 BBLS MP To Surface	
12/06/2017	14:44:32	29	0.0	8.35	955.1		
12/06/2017	14:46:02	29	0.0	8.36	955.1		
12/06/2017	14:47:32	26	0.0	8.35	955.1		

Well Yellowhammer 4C-8HZ	Field Wattenberg	Job Start Dec/06/2017	Customer Anadarko	Job Number 2618990
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Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 5.3	N2	Mud	Maximum Rate 9.5	Total Slurry 534.0	Mud 0.0	Spacer 60.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 5376	Final 25	Average 1165	Bump Plug to 3000	Breakdown	Type	Volume bbl	Density lb/gal	
Avg. N2 Percent %	Designed Slurry Volume 534.0 bbl	Displacement 318.0 bbl	Mix Water Temp 65 degF	Cement Circulated to Surface? <input type="checkbox"/>		Volume bbl		
				Washed Thru Perfs <input type="checkbox"/>		To ft		
Customer or Authorized Representative Travis Krukenberg			Schlumberger Supervisor Conley Jensen/ Chad Perry			Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>	
						-	-	