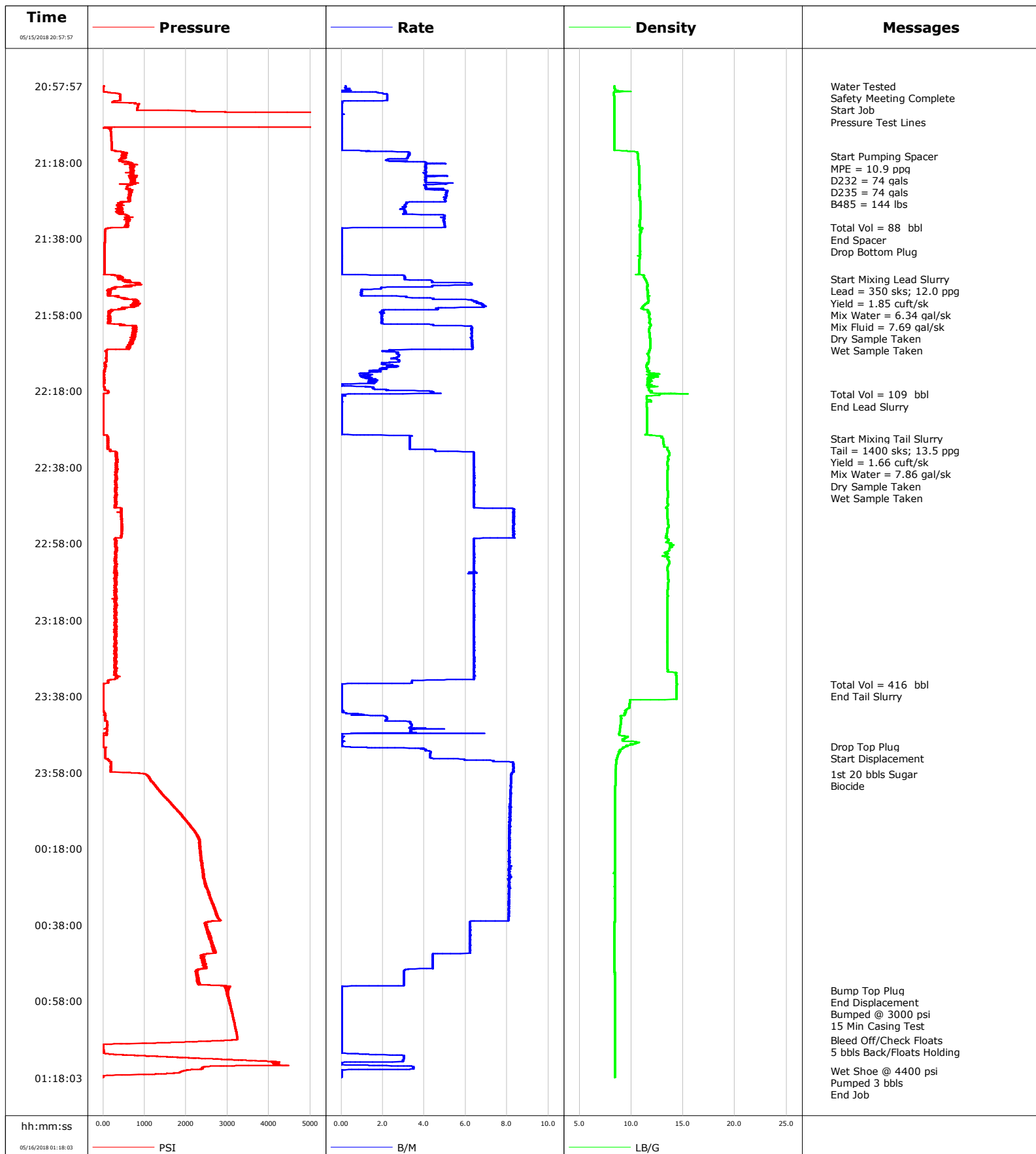


**Well** Verde 13-10HZ  
**Field** Wattenberg  
**Engineer** Michael Lopez  
**Country** United States

**Client** ANADARKO PETROLEUM COMPANY (ED)  
**SIR No.** E0ZP-00167  
**Job Type** 5.5 Production  
**Job Date** 05-15-2018



# Cementing Service Report

				Customer ANADARKO PETROLEUM COMPANY (ED)				Job Number E0ZP-00167			
Well Verde 13-10HZ 0631753796			Location (legal)			Schlumberger Location CWY			Job Start May/15/2018		
Field Wattenberg		Formation Name/Type		Deviation deg		Bit Size 7.9 in		Well MD 18789.0 ft		Well TVD 7531.0 ft	
County		State/Province Colorado		BHP psi		BHST 233 degF		BHCT 230 degF		Pore Press. Gradient lb/gal	
Well Master 0631753796		API/UWI 05123462540000									
Rig Name Precision 461		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 Exploration		1887.0		9.6		36.0	
						18777.0		5.5		17.0	
Drilling Fluid Type OBM		Max. Density 9.50 lb/gal		Plastic Viscosity cP		Tubing/Drill Pipe					
						T/D		Depth, ft		Size, in	
										Weight, lb/ft	
										Grade	
										Thread	
Service Line Cementing		Job Type 5.5 Production									
Max. Allowed Tub. Press psi		Max. Allowed Ann. Press psi		WH Connection 5.5 8 RND		Perforations/Open Hole					
						Top, ft		Bottom, ft		shot/ft	
						ft		ft		No. of Shots	
						ft		ft		Total Interval ft	
						ft		ft		Diameter in	
						Treat Down Casing		Displacement 435.0 bbl		Packer Type	
										Packer Depth ft	
						Tubing Vol. bbl		Casing Vol. 435.0 bbl		Annular Vol. 612.0 bbl	
										Openhole Vol. 522.0 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 18777.0 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 May/15/2018 14:00		Arrived on Location May/15/2018 15:00		Leave Location May/16/2018 02:20		Collar Type Float				Tail Pipe Depth ft	
						Collar Depth 18768.0 ft				Sqz. Total Vol. bbl	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message					
05/15/2018	20:57:57	14	0.2	8.38	0.0	Started Acquisition					
05/15/2018	20:58:03	14	0.2	8.38	0.0	Water Tested					
05/15/2018	20:58:05	14	0.2	8.38	0.0	Start Job					
05/15/2018	20:58:11	6	0.2	8.38	0.1	Pressure Test Lines					
05/15/2018	21:16:29	502	3.2	10.61	9.9	Start Pumping Spacer					
05/15/2018	21:16:37	517	3.2	10.61	10.3	MPE = 10.9 ppg					
05/15/2018	21:16:39	452	3.2	10.61	10.5	D232 = 74 gals					
05/15/2018	21:16:40	547	3.2	10.61	10.5	D235 = 74 gals					
05/15/2018	21:16:41	528	3.2	10.61	10.6	B485 = 144 lbs					
05/15/2018	21:35:09	211	2.0	11.03	87.7	Total Vol = 88 bbl					
05/15/2018	21:35:12	174	0.6	11.05	87.7	End Spacer					
05/15/2018	21:35:17	118	0.1	11.04	87.8	Drop Bottom Plug					
05/15/2018	21:48:39	475	3.1	11.33	91.2	Start Mixing Lead Slurry					
05/15/2018	21:48:42	456	3.1	11.35	91.4	Lead = 350 sks; 12.0 ppg					
05/15/2018	21:48:44	446	3.1	11.35	91.5	Yield = 1.85 cuft/sk					
05/15/2018	21:48:46	360	3.1	11.37	91.6	Mix Fluid = 7.69 gal/sk					
05/15/2018	21:48:47	457	3.1	11.37	91.6	Dry Sample Taken					
05/15/2018	22:04:08	710	6.3	11.80	154.0	Wet Sample Taken					
05/15/2018	22:18:49	8	0.3	12.82	196.7	Total Vol = 109 bbl					
05/15/2018	22:19:59	3	0.0	11.48	196.7	End Lead Slurry					
05/15/2018	22:30:27	124	3.3	13.08	199.7	Start Mixing Tail Slurry					

Well			Field		Job Start		Customer		Job Number	
Verde 13-10HZ 0631753796			Wattenberg		May/15/2018		ANADARKO PETROLEUM COMPANY (ED		E0ZP-00167	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
05/15/2018	22:30:31	110	3.3	13.07	199.9	Mix Water = 7.86 gal/sk				
05/15/2018	22:30:32	119	3.3	13.07	199.9	Dry Sample Taken				
05/15/2018	22:35:15	324	6.4	13.53	220.5	Wet Sample Taken				
05/15/2018	23:34:59	11	0.0	14.41	613.0	Total Vol = 416 bbl				
05/15/2018	23:35:02	11	0.0	14.41	613.0	End Tail Slurry				
05/15/2018	23:51:08	1	0.1	9.63	628.2	Drop Top Plug				
05/15/2018	23:51:10	2	0.1	9.58	628.2	Start Displacement				
05/15/2018	23:58:26	1015	8.2	8.47	672.3	1st 20 bbls Sugar				
05/15/2018	23:58:38	1073	8.2	8.47	673.9	Biocide				
05/16/2018	00:55:12	2964	0.0	8.41	1069.5	Bump Top Plug				
05/16/2018	00:55:13	2984	0.0	8.41	1069.5	End Displacement				
05/16/2018	00:55:38	3013	0.0	8.41	1069.5	Bumped @ 3000 psi				
05/16/2018	00:55:50	2980	0.0	8.41	1069.5	15 Min Casing Test				
05/16/2018	01:08:05	3229	0.0	8.41	1069.6	Bleed Off/Check Floats				
05/16/2018	01:09:32	-3	0.0	8.41	1069.6	5 bbls Back/Floats Holding				
05/16/2018	01:16:09	1985	0.0	8.41	1079.4	Wet Shoe @ 4400 psi				
05/16/2018	01:16:33	1870	0.0	8.41	1079.4	Pumped 3 bbls				

### Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl							
Slurry 4.6	N2	Mud	Maximum Rate 8.4		Total Slurry 525.0	Mud 0.0	Spacer 88.0	N2				
Treating Pressure Summary, psi					Breakdown Fluid							
Maximum 6044	Final -0	Average 992	Bump Plug to 3000	Breakdown	Type	Volume bbl	Density lb/gal					
Avg. N2 Percent %	Designed Slurry Volume 523.4 bbl	Displacement 435.0 bbl	Mix Water Temp 65 degF	Cement Circulated to Surface?		Volume bbl						
				Washed Thru Perfs		To ft						
Customer or Authorized Representative Keith Conatser			Schlumberger Supervisor Michael Lopez			Circulation Lost	Job Completed					
						-	-					