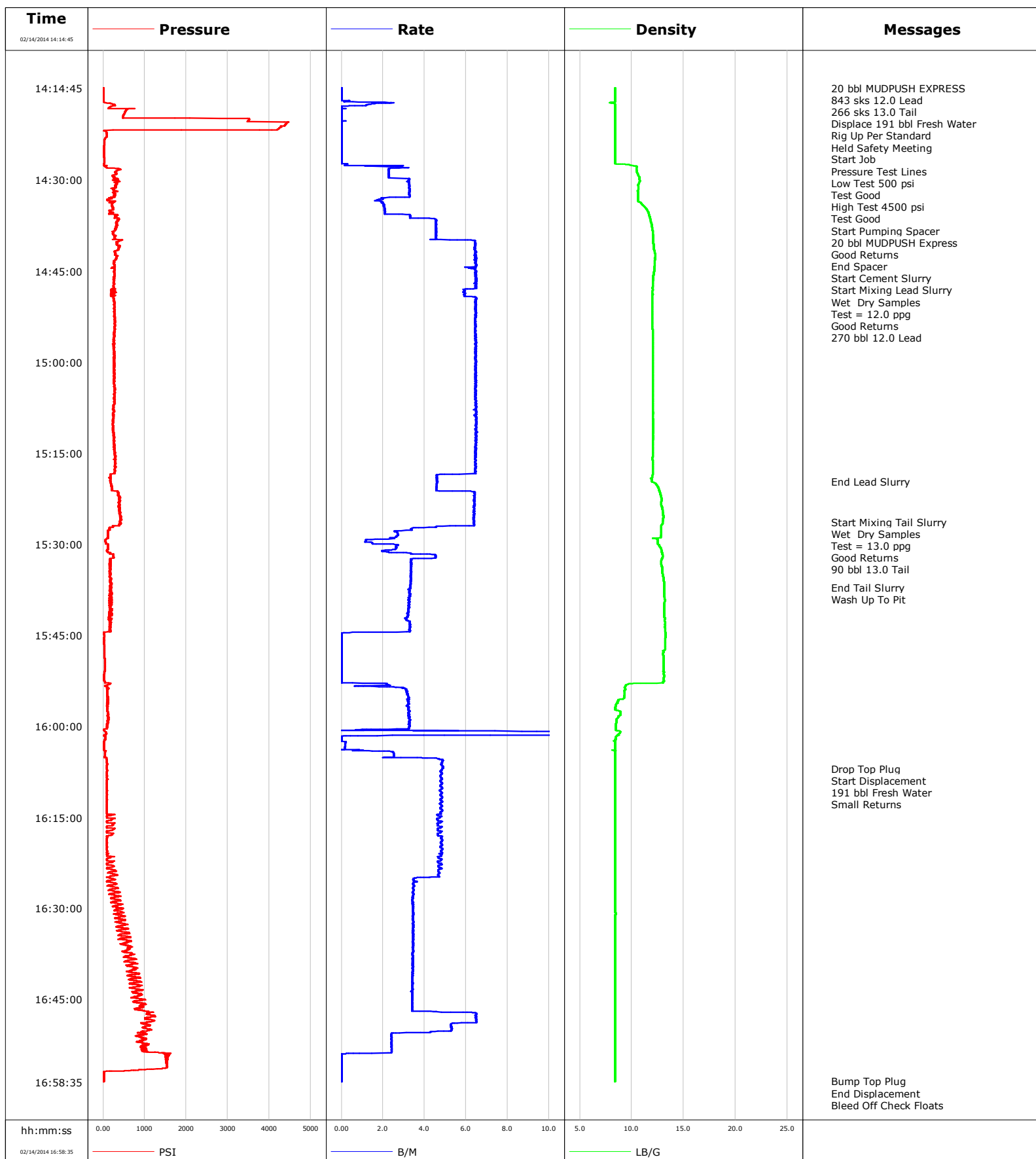


**Well** Big Sky 5-11  
**Field** Arikaree Creek  
**Engineer** Jordan Moreland / Stacy Terry  
**Country** United States

**Client** Nighthawk Production  
**SIR No.** COU5-00382  
**Job Type** 5 1/2 Production  
**Job Date** 02-14-2014





# Cementing Service Report

				Customer Nighthawk Production		Job Number COU5-00382	
Well Big Sky 5-11			Location (legal)		Schlumberger Location CWY		Job Start Feb/14/2014
Field Arikaree Creek		Formation Name/Type		Deviation	Bit Size 7.9 in	Well MD	Well TVD
County Lincoln		State/Province Colorado		BHP	BHST 183 degF	BHCT 136 degF	Pore Press. Gradient
Well Master 0631472961		API/UWI 05073065520000					
Rig Name Extreme 11		Drilled For Oil	Service Via Land	Casing/Liner			
				Depth, ft	Size, in	Weight, lb/ft	Grade
Offshore Zone		Well Class New	Well Type Development	350.0	8.630	24.0	K55
				8282.0	5.500	17.0	n80
Drilling Fluid Type		Max. Density	Plastic Viscosity	Tubing/Drill Pipe			
				Depth,	Size,	Weight,	Grade
Service Line Cementing		Job Type 5 1/2 Production					
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
							Diameter
				Treat Down Casing	Displacement 192.0 bbl	Packer Type	Packer Depth
				Tubing Vol.	Casing Vol. 193.0 bbl	Annular Vol. 257.0 bbl	Openhole Vol. 451.0 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 5926 psi				Shoe Type Guide		Squeeze Type	
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input checked="" type="checkbox"/>		Shoe Depth 8282.0 ft		Tool Type	
No. Centralizers		Top Plugs 1	Bottom Plugs	Stage Tool Type		Tool Depth	
Cement Head Type Single				Stage Tool Depth		Tail Pipe Size	
Job Scheduled For Feb/14/2014		Arrived on Location Feb/14/2014	Leave Location Feb/14/2014	Collar Type Float		Tail Pipe Depth	
				Collar Depth 8236.0 ft		Sqz. Total Vol.	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
02/14/2014	13:35:38					Started Acquisition	
02/14/2014	14:14:45	9	0.0	8.39	0.0		
02/14/2014	14:14:47					20 bbl MUDPUSH EXPRESS	
02/14/2014	14:14:47					843 sks 12.0 Lead	
02/14/2014	14:14:47					266 sks 13.0 Tail	
02/14/2014	14:14:47					Displace 191 bbl Fresh Water	
02/14/2014	14:14:47					Rig Up Per Standard	
02/14/2014	14:14:47					Held Safety Meeting	
02/14/2014	14:14:47	9	0.0	8.39	0.0		
02/14/2014	14:14:50	9	0.0	8.39	0.0	Start Job	
02/14/2014	14:14:51					Pressure Test Lines	
02/14/2014	14:14:51	9	0.0	8.39	0.0		
02/14/2014	14:14:52					Low Test 500 psi	
02/14/2014	14:14:52	9	0.0	8.39	0.0		
02/14/2014	14:14:53					Test Good	
02/14/2014	14:14:53					High Test 4500 psi	
02/14/2014	14:14:53					Test Good	
02/14/2014	14:14:53	9	0.0	8.39	0.0		
02/14/2014	14:15:38	9	0.0	8.39	0.0		
02/14/2014	14:17:38	288	1.2	8.39	0.9		

Well			Field		Job Start		Customer		Job Number	
Big Sky 5-11			Arikaree Creek		Feb/14/2014		Nighthawk Production		COU5-00382	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
02/14/2014	14:21:38	4213	0.0	8.39	1.1					
02/14/2014	14:23:38	29	0.0	8.39	1.1					
02/14/2014	14:25:38	21	0.0	8.39	1.1					
02/14/2014	14:27:38	74	3.0	10.17	1.2					
02/14/2014	14:29:38	254	2.3	10.76	5.9					
02/14/2014	14:31:38	259	3.3	10.62	12.4					
02/14/2014	14:33:38	217	2.0	10.79	17.8					
02/14/2014	14:35:38	252	2.9	11.66	22.0					
02/14/2014	14:37:38	302	4.5	11.94	30.3					
02/14/2014	14:37:55					Start Pumping Spacer				
02/14/2014	14:37:55	318	4.6	11.97	31.5					
02/14/2014	14:37:56					20 bbl MUDPUSH Express				
02/14/2014	14:37:56	296	4.6	11.97	31.6					
02/14/2014	14:37:57					Good Returns				
02/14/2014	14:37:57					End Spacer				
02/14/2014	14:37:57	276	4.6	11.97	31.7					
02/14/2014	14:38:01					Start Cement Slurry				
02/14/2014	14:38:01	276	4.5	11.98	32.0					
02/14/2014	14:38:02					Start Mixing Lead Slurry				
02/14/2014	14:38:02	288	4.5	11.98	32.1					
02/14/2014	14:38:03					Wet Dry Samples				
02/14/2014	14:38:03					Test = 12.0 ppg				
02/14/2014	14:38:03					Good Returns				
02/14/2014	14:38:03	288	4.5	11.98	32.1					
02/14/2014	14:38:04					270 bbl 12.0 Lead				
02/14/2014	14:38:04	305	4.6	11.98	32.2					
02/14/2014	14:39:38	285	4.5	12.07	39.3					
02/14/2014	14:41:38	311	6.5	12.18	51.8					
02/14/2014	14:43:38	253	6.5	12.22	64.7					
02/14/2014	14:45:38	273	6.5	12.10	77.6					
02/14/2014	14:47:38	264	6.5	12.01	90.6					
02/14/2014	14:49:38	254	6.5	11.99	102.8					
02/14/2014	14:51:38	273	6.5	11.99	115.8					
02/14/2014	14:53:38	284	6.4	11.99	128.7					
02/14/2014	14:55:38	265	6.5	12.02	141.6					
02/14/2014	14:57:38	256	6.5	12.02	154.5					
02/14/2014	14:59:38	260	6.5	12.02	167.4					
02/14/2014	15:01:38	271	6.5	12.03	180.4					
02/14/2014	15:03:38	272	6.5	12.03	193.3					
02/14/2014	15:05:38	270	6.4	12.02	206.2					
02/14/2014	15:07:38	253	6.5	12.04	219.1					
02/14/2014	15:09:38	244	6.5	12.05	232.1					
02/14/2014	15:11:38	257	6.5	12.06	245.1					
02/14/2014	15:13:38	272	6.5	12.03	258.0					
02/14/2014	15:15:38	284	6.4	12.00	270.9					
02/14/2014	15:17:38	280	6.4	12.02	283.8					
02/14/2014	15:19:38	183	4.6	11.94	294.5					
02/14/2014	15:19:40					End Lead Slurry				
02/14/2014	15:19:40	180	4.6	11.94	294.7					
02/14/2014	15:21:38	361	6.4	12.74	304.4					
02/14/2014	15:23:38	404	6.4	12.86	317.2					
02/14/2014	15:25:38	410	6.4	13.05	330.0					
02/14/2014	15:26:19					Start Mixing Tail Slurry				
02/14/2014	15:26:19	401	6.4	12.99	334.4					

Well			Field		Job Start		Customer		Job Number	
Big Sky 5-11			Arikaree Creek		Feb/14/2014		Nighthawk Production		COU5-00382	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
02/14/2014	15:26:20	409	6.4	12.99	334.5					
02/14/2014	15:26:21					Test = 13.0 ppg				
02/14/2014	15:26:21					Good Returns				
02/14/2014	15:26:21					90 bbl 13.0 Tail				
02/14/2014	15:26:21	409	6.4	12.99	334.6					
02/14/2014	15:27:38	174	3.4	12.82	341.1					
02/14/2014	15:29:38	71	1.2	12.49	345.8					
02/14/2014	15:31:38	241	4.3	12.95	350.6					
02/14/2014	15:33:38	182	3.3	12.90	358.2					
02/14/2014	15:35:38	193	3.3	13.07	364.8					
02/14/2014	15:37:06					End Tail Slurry				
02/14/2014	15:37:06	178	3.3	13.11	369.7					
02/14/2014	15:37:07					Wash Up To Pit				
02/14/2014	15:37:07	167	3.3	13.11	369.8					
02/14/2014	15:37:38	175	3.3	13.12	371.5					
02/14/2014	15:39:38	183	3.2	13.15	378.0					
02/14/2014	15:41:38	229	3.2	13.13	384.5					
02/14/2014	15:43:38	177	3.3	13.19	391.0					
02/14/2014	15:45:38	18	0.0	13.22	393.8					
02/14/2014	15:47:38	25	0.0	13.05	393.8					
02/14/2014	15:49:38	39	0.0	13.06	393.8					
02/14/2014	15:51:38	20	0.0	13.10	393.8					
02/14/2014	15:53:38	97	3.0	9.30	395.3					
02/14/2014	15:55:38	109	3.3	8.70	401.6					
02/14/2014	15:57:38	114	3.3	8.93	408.1					
02/14/2014	15:59:38	116	3.3	8.45	414.6					
02/14/2014	16:01:38	51	0.0	8.53	429.8					
02/14/2014	16:03:38	15	0.2	8.40	430.0					
02/14/2014	16:05:38	86	4.9	8.41	435.1					
02/14/2014	16:06:59					Drop Top Plug				
02/14/2014	16:06:59	92	4.9	8.41	441.6					
02/14/2014	16:07:00					Start Displacement				
02/14/2014	16:07:00	93	4.9	8.41	441.7					
02/14/2014	16:07:01					191 bbl Fresh Water				
02/14/2014	16:07:01					Small Returns				
02/14/2014	16:07:01	94	4.8	8.42	441.8					
02/14/2014	16:07:38	93	4.8	8.40	444.7					
02/14/2014	16:09:38	93	4.8	8.40	454.3					
02/14/2014	16:11:38	88	4.8	8.41	463.9					
02/14/2014	16:13:38	92	4.8	8.40	473.5					
02/14/2014	16:15:38	92	4.8	8.40	483.0					
02/14/2014	16:17:38	250	4.6	8.40	492.4					
02/14/2014	16:19:38	91	4.8	8.40	502.0					
02/14/2014	16:21:38	170	4.7	8.41	511.6					
02/14/2014	16:23:38	245	4.7	8.40	521.0					
02/14/2014	16:25:38	144	3.6	8.41	529.5					
02/14/2014	16:27:38	159	3.5	8.41	536.5					
02/14/2014	16:29:38	247	3.4	8.41	543.3					
02/14/2014	16:31:38	286	3.4	8.41	550.2					
02/14/2014	16:33:38	373	3.5	8.41	557.1					
02/14/2014	16:35:38	536	3.4	8.42	564.0					
02/14/2014	16:37:38	703	3.4	8.41	570.9					
02/14/2014	16:39:38	709	3.5	8.42	577.8					
02/14/2014	16:41:38	697	3.4	8.42	584.6					

Well			Field		Job Start		Customer		Job Number	
Big Sky 5-11			Arikaree Creek		Feb/14/2014		Nighthawk Production		COU5-00382	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
02/14/2014	16:45:38	926	3.4	8.42	598.3					
02/14/2014	16:47:38	1212	6.5	8.42	606.9					
02/14/2014	16:49:38	982	5.3	8.42	618.9					
02/14/2014	16:51:38	1047	2.4	8.41	626.0					
02/14/2014	16:53:38	1062	2.4	8.41	630.8					
02/14/2014	16:55:38	1528	0.0	8.42	631.4					
02/14/2014	16:57:38	21	0.0	8.42	631.4					
02/14/2014	16:58:30					Bump Top Plug				
02/14/2014	16:58:30	22	0.0	8.42	631.4					
02/14/2014	16:58:31					End Displacement				
02/14/2014	16:58:31	21	0.0	8.42	631.4					
02/14/2014	16:58:32					Bleed Off Check Floats				
02/14/2014	16:58:32					Floats Held				
02/14/2014	16:58:32					2 bbl Back				
02/14/2014	16:58:32					No Cement To Surface				
02/14/2014	16:58:32	21	0.0	8.42	631.4					
02/14/2014	16:58:33					Rig Down				
02/14/2014	16:58:33					End Job				
02/14/2014	16:58:33	22	0.0	8.42	631.4					

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?		Volume
					61 degF	<input checked="" type="checkbox"/>		
						<input type="checkbox"/>		To
Customer or Authorized Representative			Schlumberger Supervisor			Circulation Lost		Job Completed
Jim Weir			Jordan Moreland / Stacy Terry			<input type="checkbox"/>		<input checked="" type="checkbox"/>
						-		-