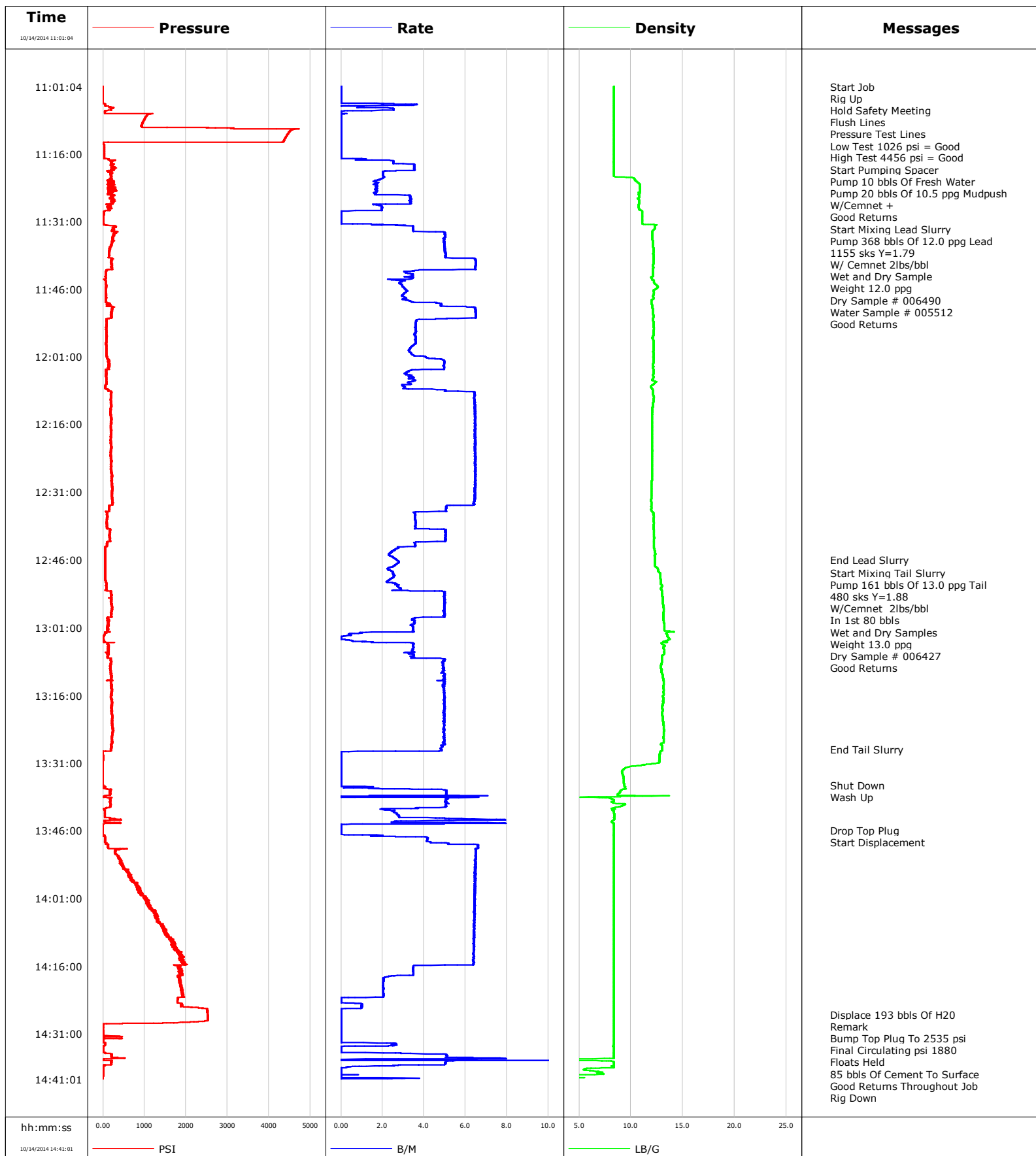


Well Snowbird 16-15- 631472962
Field Arikaree Creek
Engineer Justin Zika/Baird
Country United States

Client Nighthawk
SIR No.
Job Type Production
Job Date 10-14-2014

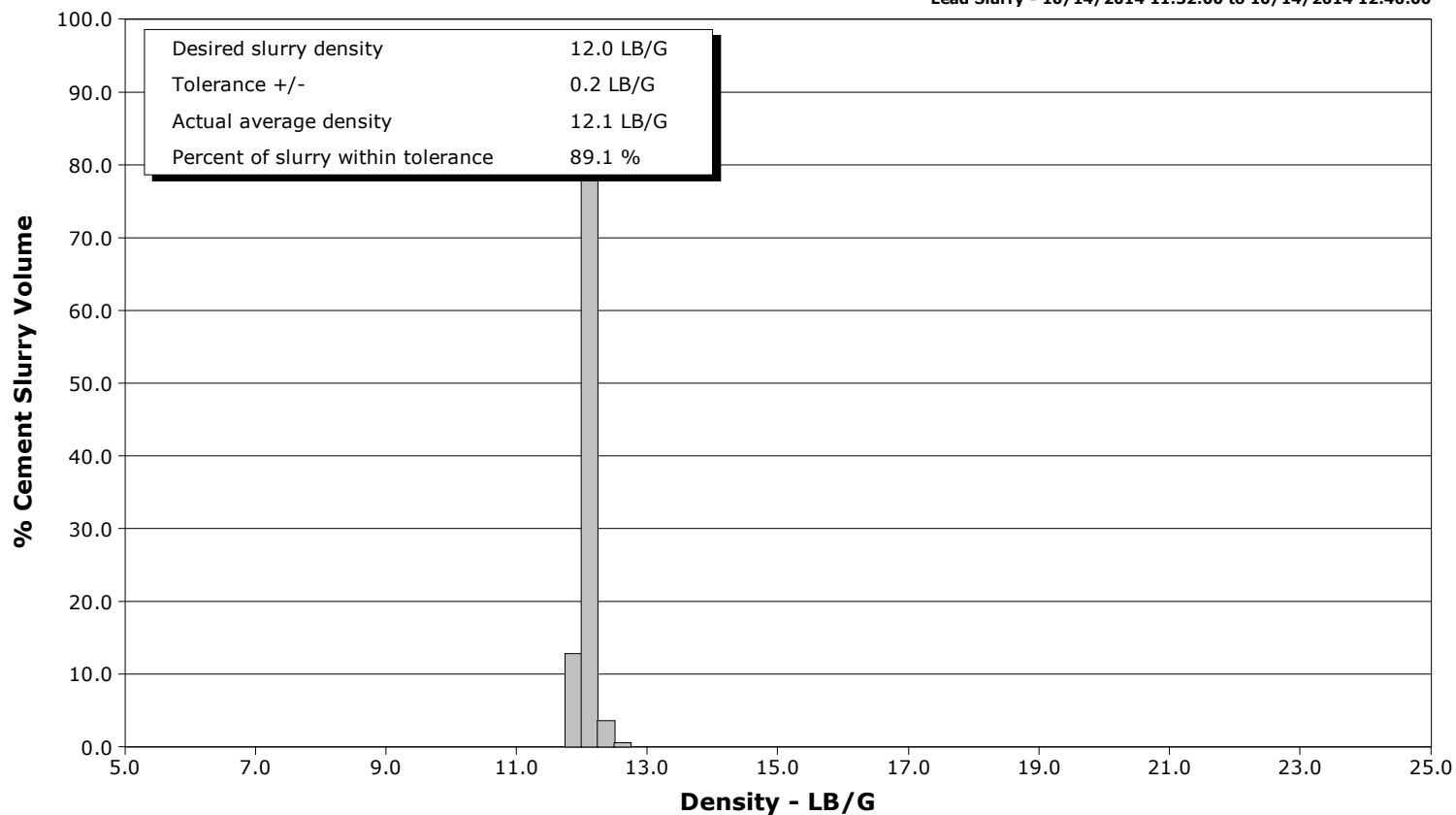


Schlumberger Cementing Qa/Qc Density Report

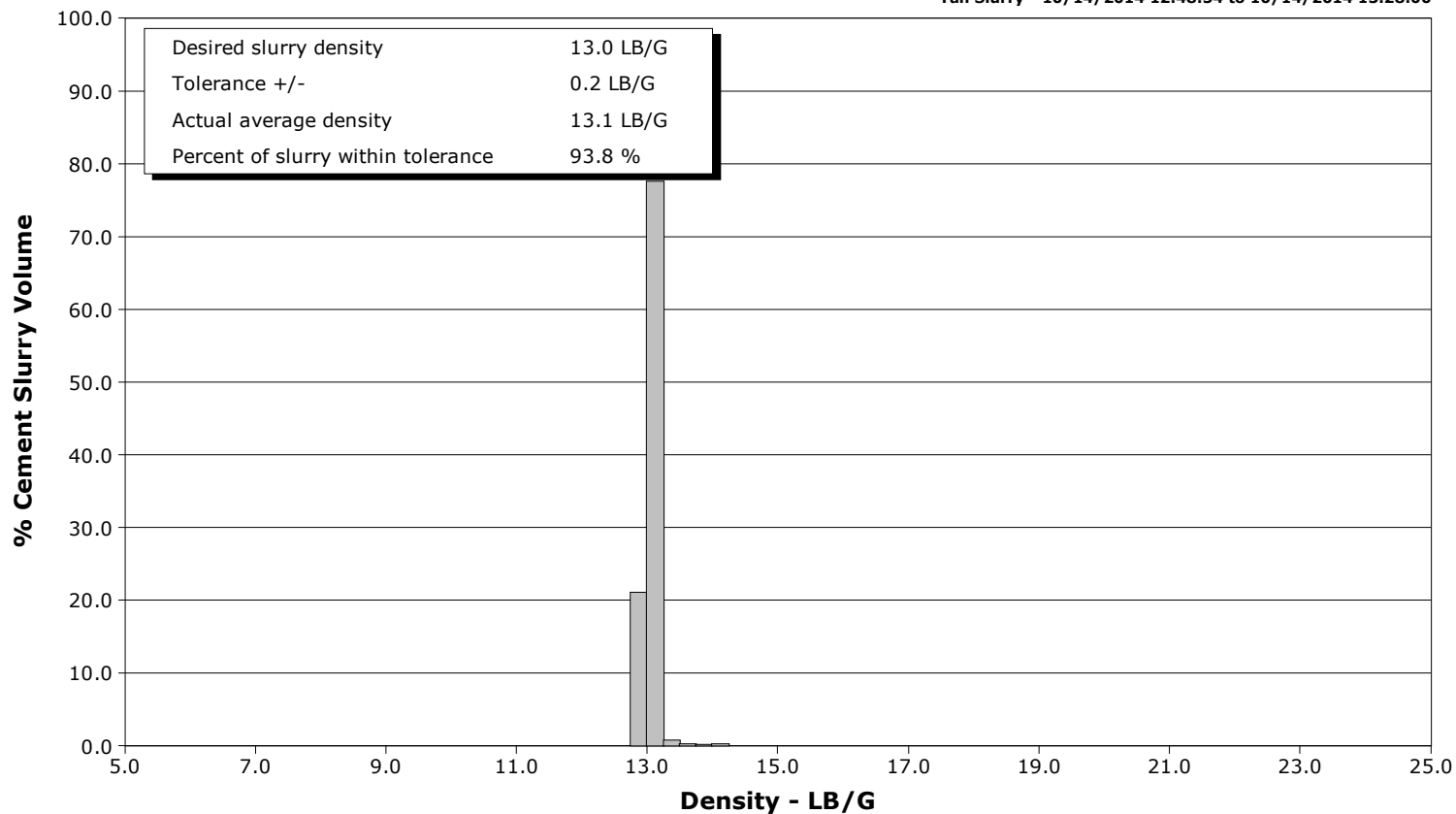
Well Snowbird 16-15- 631472962
Field Arikaree Creek
Engineer Justin Zika/Baird
Country United States

Client Nighthawk
SIR No.
Job Type Production
Job Date 10-14-2014

Lead Slurry - 10/14/2014 11:32:00 to 10/14/2014 12:46:00



Tail Slurry - 10/14/2014 12:48:54 to 10/14/2014 13:28:00





Cementing Service Report

				Customer Nighthawk		Job Number 2035120				
Well Snowbird 16-15- 15-16			Location (legal) Sec 15-T6s-R54W		Schlumberger Location Cheyenne, WY		Job Start Oct/14/2014			
Field Arikaree Creek		Formation Name/Type Shale		Deviation	Bit Size 8.8 in	Well MD 8400.0 ft		Well TVD		
County Lincoln		State/Province Colorado		BHP	BHST 202 degF	BHCT 167 degF	Pore Press. Gradient			
Well Master 6314722962		API/UWI 05-073-06561								
Rig Name Xtreme 11	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	8400.0	5.500	17.0	N80	8RD			
			0.0	0.000	0.0					
Drilling Fluid Type		Max. Density	Plastic Viscosity	Tubing/Drill Pipe						
				Depth,	Size,	Weight,	Grade	Thread		
Service Line Cementing	Job Type 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			
Service Instructions Rig Up Hold Safety Meeting Flush Lines Pressure Test Lines Pump 10 bbls of Water Pump 20 bbls of Mud Push Pump 368 bbls of 12 lb TXI Pump 161 bbls of 13 lb TXI Drop Top Plug/Displace							Diameter			
			Treat Down Casing		Displacement 193.0 bbl		Packer Type		Packer Depth	
			Tubing Vol.		Casing Vol. 195.0 bbl		Annular Vol. 374.0 bbl		Openhole Vol. 566.0 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 6011 psi			Shoe Type Float			Squeeze Type				
Pipe Rotated <input type="checkbox"/>		Pipe Reciprocated <input checked="" type="checkbox"/>		Shoe Depth 8400.0 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 Oct/14/2014 08:00		Arrived on Location Oct/14/2014 08:00	Leave Location Oct/14/2014 16:00	Collar Type Float			Tail Pipe Depth			
				Collar Depth 8307.0 ft			Sqz. Total Vol.			
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
10/14/2014	09:51:09					Started Acquisition				
10/14/2014	11:01:04	-10	0.0	8.34	0.0					
10/14/2014	11:01:06					Start Job				
10/14/2014	11:01:06	-10	0.0	8.35	0.0					
10/14/2014	11:01:09	-10	0.0	8.34	0.0					
10/14/2014	11:01:10					Rig Up				
10/14/2014	11:01:10					Hold Safety Meeting				
10/14/2014	11:01:10					Flush Lines				
10/14/2014	11:01:10	-10	0.0	8.34	0.0					
10/14/2014	11:01:16					Pressure Test Lines				
10/14/2014	11:01:16	-9	0.0	8.34	0.0					
10/14/2014	11:01:17					Low Test 1026 psi = Good				
10/14/2014	11:01:17					High Test 4456 psi = Good				
10/14/2014	11:01:17	-10	0.0	8.34	0.0					
10/14/2014	11:02:49	-10	0.0	8.34	0.0					
10/14/2014	11:04:29	-10	0.0	8.35	0.0					
10/14/2014	11:06:09	196	2.5	8.34	2.5					
10/14/2014	11:07:49	1036	0.0	8.34	3.3					
10/14/2014	11:09:29	942	0.0	8.35	3.3					
10/14/2014	11:11:09	4496	0.0	8.35	3.3					
10/14/2014	11:12:49	4379	0.0	8.35	3.3					

Well			Field		Job Start		Customer		Job Number	
Snowbird 16-15- 15-16			Arikaree Creek		Oct/14/2014		Nighthawk		2035120	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
10/14/2014	11:16:09	32	0.0	8.34	3.3					
10/14/2014	11:17:01					Start Pumping Spacer				
10/14/2014	11:17:01					Pump 10 bbls Of Fresh Water				
10/14/2014	11:17:01					Pump 20 bbls Of 10.5 ppg Mudpush				
10/14/2014	11:17:01					W/Cemnet +				
10/14/2014	11:17:01					Good Returns				
10/14/2014	11:17:01	33	0.0	8.34	3.3					
10/14/2014	11:17:49	212	2.5	8.33	4.5					
10/14/2014	11:19:29	262	3.5	8.34	10.0					
10/14/2014	11:21:09	206	2.1	8.65	13.9					
10/14/2014	11:22:49	120	1.6	10.85	16.9					
10/14/2014	11:24:29	170	1.7	10.87	19.7					
10/14/2014	11:26:09	219	3.4	10.74	24.1					
10/14/2014	11:27:49	178	2.0	10.76	28.7					
10/14/2014	11:29:29	13	0.0	11.07	30.4					
10/14/2014	11:31:09	4	0.0	11.07	30.4					
10/14/2014	11:32:00					Start Mixing Lead Slurry				
10/14/2014	11:32:00					Pump 368 bbls Of 12.0 ppg Lead				
10/14/2014	11:32:00					1155 sks Y=1.79				
10/14/2014	11:32:00					W/ Cemnet 2lbs/bbl				
10/14/2014	11:32:00	270	3.5	12.30	31.3					
10/14/2014	11:32:01					Wet and Dry Sample				
10/14/2014	11:32:01					Weight 12.0 ppg				
10/14/2014	11:32:01					Dry Sample # 006490				
10/14/2014	11:32:01					Water Sample # 005512				
10/14/2014	11:32:01					Good Returns				
10/14/2014	11:32:01	305	3.5	12.30	31.4					
10/14/2014	11:32:49	249	3.5	12.22	34.2					
10/14/2014	11:34:29	257	5.0	12.07	41.8					
10/14/2014	11:36:09	213	5.0	12.12	50.0					
10/14/2014	11:37:49	157	5.0	12.15	58.4					
10/14/2014	11:39:29	213	6.5	12.16	67.3					
10/14/2014	11:41:09	214	6.5	12.14	78.1					
10/14/2014	11:42:49	67	3.5	12.12	85.5					
10/14/2014	11:44:29	68	2.9	12.21	90.8					
10/14/2014	11:46:09	70	3.1	12.29	95.7					
10/14/2014	11:47:49	72	3.1	12.14	100.8					
10/14/2014	11:49:29	124	4.8	12.02	106.9					
10/14/2014	11:51:09	187	6.5	12.14	117.0					
10/14/2014	11:52:49	76	3.7	12.13	127.1					
10/14/2014	11:54:29	83	3.6	12.19	133.2					
10/14/2014	11:56:09	79	3.5	12.16	139.1					
10/14/2014	11:57:49	79	3.6	12.15	145.1					
10/14/2014	11:59:29	78	3.3	12.15	150.9					
10/14/2014	12:01:09	89	4.1	12.14	156.7					
10/14/2014	12:02:49	167	5.0	12.14	164.7					
10/14/2014	12:04:29	77	3.2	12.18	171.9					
10/14/2014	12:06:09	80	3.5	12.02	177.4					
10/14/2014	12:07:49	62	3.1	11.95	182.8					
10/14/2014	12:09:29	191	6.5	12.13	191.5					
10/14/2014	12:11:09	189	6.5	12.14	202.3					
10/14/2014	12:12:49	198	6.5	12.06	213.0					
10/14/2014	12:14:29	196	6.5	12.04	223.8					
10/14/2014	12:16:09	193	6.5	12.02	234.6					

Well			Field		Job Start		Customer		Job Number	
Snowbird 16-15- 15-16			Arikaree Creek		Oct/14/2014		Nighthawk		2035120	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
10/14/2014	12:19:29	195	6.5	12.02	256.1					
10/14/2014	12:21:09	200	6.5	12.03	266.9					
10/14/2014	12:22:49	187	6.5	12.04	277.7					
10/14/2014	12:24:29	201	6.5	12.03	288.4					
10/14/2014	12:26:09	192	6.5	12.01	299.2					
10/14/2014	12:27:49	214	6.5	12.01	310.0					
10/14/2014	12:29:29	215	6.5	11.99	320.8					
10/14/2014	12:31:09	224	6.5	11.99	331.6					
10/14/2014	12:32:49	225	6.4	11.95	342.3					
10/14/2014	12:34:29	157	5.1	11.99	352.3					
10/14/2014	12:36:09	96	3.6	12.18	359.4					
10/14/2014	12:37:49	90	3.6	12.21	365.4					
10/14/2014	12:39:29	176	5.0	12.20	371.8					
10/14/2014	12:41:09	172	5.0	12.25	380.2					
10/14/2014	12:42:49	91	3.6	12.21	387.4					
10/14/2014	12:44:29	56	2.4	12.33	392.0					
10/14/2014	12:46:00					End Lead Slurry				
10/14/2014	12:46:00	58	2.7	12.30	395.7					
10/14/2014	12:46:09	57	2.7	12.30	396.1					
10/14/2014	12:47:49	56	2.3	12.53	400.5					
10/14/2014	12:48:54					Start Mixing Tail Slurry				
10/14/2014	12:48:54					Pump 161 bbls Of 13.0 ppg Tail				
10/14/2014	12:48:54					480 sks Y=1.88				
10/14/2014	12:48:54					W/Cemnet 2lbs/bbl				
10/14/2014	12:48:54					In 1st 80 bbls				
10/14/2014	12:48:54					Wet and Dry Samples				
10/14/2014	12:48:54					Weight 13.0 ppg				
10/14/2014	12:48:54					Dry Sample # 006427				
10/14/2014	12:48:54					Good Returns				
10/14/2014	12:48:54	56	2.5	12.78	403.1					
10/14/2014	12:49:29	57	2.6	12.82	404.6					
10/14/2014	12:51:09	76	2.5	12.89	408.5					
10/14/2014	12:52:49	119	3.2	12.97	413.1					
10/14/2014	12:54:29	140	5.0	13.07	421.3					
10/14/2014	12:56:09	208	5.0	13.11	429.6					
10/14/2014	12:57:49	194	5.0	13.13	437.9					
10/14/2014	12:59:29	115	3.5	13.17	445.2					
10/14/2014	13:01:09	102	3.5	13.20	451.0					
10/14/2014	13:02:49	21	0.3	13.50	454.5					
10/14/2014	13:04:29	118	3.5	12.93	455.6					
10/14/2014	13:06:09	118	3.4	13.22	461.4					
10/14/2014	13:07:49	185	4.1	12.98	467.2					
10/14/2014	13:09:29	173	4.9	12.89	475.4					
10/14/2014	13:11:09	193	5.0	12.98	483.6					
10/14/2014	13:12:49	195	4.9	13.15	491.9					
10/14/2014	13:14:29	199	5.0	13.13	500.1					
10/14/2014	13:16:09	194	5.0	13.08	508.4					
10/14/2014	13:17:49	224	5.0	13.09	516.7					
10/14/2014	13:19:29	218	4.9	13.06	525.0					
10/14/2014	13:21:09	225	5.0	13.08	533.3					
10/14/2014	13:22:49	224	5.0	13.16	541.6					
10/14/2014	13:24:29	231	5.0	13.17	549.8					
10/14/2014	13:26:09	218	5.0	13.15	558.1					
10/14/2014	13:27:49	189	4.8	13.02	566.3					

Well			Field		Job Start		Customer		Job Number	
Snowbird 16-15- 15-16			Arikaree Creek		Oct/14/2014		Nighthawk		2035120	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
10/14/2014	13:28:00	214	4.8	13.03	567.2					
10/14/2014	13:29:29	2	0.0	12.74	569.3					
10/14/2014	13:31:09	-4	0.0	12.17	569.3					
10/14/2014	13:32:49	-3	0.0	9.14	569.3					
10/14/2014	13:34:29	-3	0.0	9.29	569.3					
10/14/2014	13:36:00					Shut Down				
10/14/2014	13:36:00					Wash Up				
10/14/2014	13:36:00	4	0.0	9.34	569.3					
10/14/2014	13:36:09	5	0.0	9.35	569.3					
10/14/2014	13:37:49	171	5.1	8.80	575.2					
10/14/2014	13:39:29	171	5.0	8.36	582.4					
10/14/2014	13:41:09	27	2.4	8.29	590.4					
10/14/2014	13:42:49	47	2.8	8.39	594.7					
10/14/2014	13:44:29	31	5.0	8.35	602.8					
10/14/2014	13:46:00					Drop Top Plug				
10/14/2014	13:46:00					Start Displacement				
10/14/2014	13:46:00	-8	0.0	8.36	603.0					
10/14/2014	13:46:09	-8	0.0	8.36	603.0					
10/14/2014	13:47:49	49	4.2	8.35	605.7					
10/14/2014	13:49:29	122	6.6	8.35	614.2					
10/14/2014	13:51:09	304	6.5	8.35	625.0					
10/14/2014	13:52:49	421	6.5	8.35	635.8					
10/14/2014	13:54:29	501	6.5	8.35	646.6					
10/14/2014	13:56:09	646	6.5	8.35	657.4					
10/14/2014	13:57:49	818	6.5	8.35	668.2					
10/14/2014	13:59:29	908	6.5	8.35	678.9					
10/14/2014	14:01:09	1043	6.5	8.35	689.7					
10/14/2014	14:02:49	1094	6.4	8.34	700.4					
10/14/2014	14:04:29	1266	6.5	8.35	711.1					
10/14/2014	14:06:09	1333	6.4	8.35	721.8					
10/14/2014	14:07:49	1524	6.4	8.35	732.5					
10/14/2014	14:09:29	1562	6.4	8.35	743.2					
10/14/2014	14:11:09	1715	6.4	8.35	753.9					
10/14/2014	14:12:49	1819	6.4	8.35	764.6					
10/14/2014	14:14:29	1840	6.4	8.34	775.2					
10/14/2014	14:16:09	1822	3.5	8.35	784.8					
10/14/2014	14:17:49	1904	3.5	8.34	790.6					
10/14/2014	14:19:29	1879	2.0	8.34	794.5					
10/14/2014	14:21:09	1921	2.0	8.34	797.9					
10/14/2014	14:22:49	1912	2.0	8.34	801.3					
10/14/2014	14:24:29	1911	1.0	8.34	801.9					
10/14/2014	14:26:09	2517	0.0	8.34	802.8					
10/14/2014	14:26:40					Displace 193 bbls Of H2O				
10/14/2014	14:26:40	2523	0.0	8.34	802.8					
10/14/2014	14:27:03					Remark				
10/14/2014	14:27:03	2522	0.0	8.35	802.8					
10/14/2014	14:27:10					Bump Top Plug To 2535 psi				
10/14/2014	14:27:10	2525	0.0	8.35	802.8					
10/14/2014	14:27:15					Final Circulating psi 1880				
10/14/2014	14:27:15	2526	0.0	8.35	802.8					
10/14/2014	14:27:16					Floats Held				
10/14/2014	14:27:16	2527	0.0	8.34	802.8					
10/14/2014	14:27:18					85 bbls Of Cement To Surface				
10/14/2014	14:27:18					Good Returns Throughout Job				

Well			Field		Job Start	Customer	Job Number
Snowbird 16-15- 15-16			Arikaree Creek		Oct/14/2014	Nighthawk	2035120
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
10/14/2014	14:27:19					Rig Down	
10/14/2014	14:27:19					End Job	
10/14/2014	14:27:19	2529	0.0	8.34	802.8		
10/14/2014	14:27:49	2529	0.0	8.35	802.8		
10/14/2014	14:29:29	-0	0.0	8.35	802.8		
10/14/2014	14:31:09	0	0.0	8.35	802.8		
10/14/2014	14:32:49	3	0.0	8.35	802.8		
10/14/2014	14:34:29	4	0.0	8.35	804.6		
10/14/2014	14:36:09	214	5.1	8.34	808.9		
10/14/2014	14:37:49	199	5.0	8.35	817.3		
10/14/2014	14:39:29	1	0.0	6.87	818.5		

Post Job Summary

Average Pump Rates,					Volume of Fluid Injected, bbl				
Slurry	N2	Mud	Maximum Rate		Total Slurry 529.0	Mud	Spacer 30.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid				
Maximum 4500	Final 1880	Average	Bump Plug to 2535	Breakdown	Type		Volume		Density
Avg. N2 Percent		Designed Slurry Volume 529.0 bbl		Displacement 193.0 bbl		Mix Water Temp 68 degF		Cement Circulated to Surface? <input checked="" type="checkbox"/>	
						Washed Thru Perfs <input type="checkbox"/>		Volume 85.0 bbl	
								To	
Customer or Authorized Representative				Schlumberger Supervisor				Circulation Lost <input type="checkbox"/>	
Lynn Gibbs				Justin Zika/Baird				Job Completed <input checked="" type="checkbox"/>	
								-	