

## Cementing Service Report

Customer Whiting Oil & Gas				Job Number 2007769			
Well Horsetail 30F-1943 30F-1943		Location (legal) CWY		Schlumberger Location CWY		Job Start Oct/11/2014	
Field Wildcat		Formation Name/Type Shale		Deviation deg		Well MD 13702.0 ft	
County Weld		State/Province Colorado		Bit Size in		Well TVD 5534.0 ft	
Well Master 631523936		API/UWI 5123387390000		BHP psi		BHST 200 degF	
Rig Name Xtreme 18		Drilled For Oil		Service Via Land		BHCT 200 degF	
Offshore Zone		Well Class New		Well Type Development		Pore Press. Gradient lb/gal	
Drilling Fluid Type		Max. Density lb/gal		Plastic Viscosity cP			
Service Line Cementing		Job Type 4.5 Liner					
Max. Allowed Tub. Press psi		Max. Allowed Ann. Press psi		WH Connection			
Service Instructions Rig Up Hold Safety Meeting Flush Lines Pressure Test Lines Pump 30 BBLs 11.5 MudPush Pump 156 BBLs 13.5 Slurry Displace 166 BBLs H2O Pressure Test Back Side Roll Hole		Casing/Liner					
		Depth, ft		Size, in		Weight, lb/ft	
		7732.0		4.5		11.6	
		0.0		0.0		0.0	
		Tubing/Drill Pipe					
		T/D		Depth, ft		Size, in	
D		4943.0		4.0		0.0	
		0.0		0.0		0.0	
		Perforations/Open Hole					
		Top, ft		Bottom, ft		Shot/ft	
		ft		ft			
		ft		ft			
		ft		ft			
		Treat Down Casing		Displacement 166.0 bbl		Packer Type	
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	
Lift Pressure psi		Shoe Type Guide		Squeeze Job		Squeeze Type	
Pipe Rotated		<input checked="" type="checkbox"/> Pipe Reciprocated		Shoe Depth 13692.0 ft		Tool Type	
No. Centralizers		Top Plugs		Bottom Plugs		Tool Depth ft	
Cement Head Type		Stage Tool Type		Stage Tool Depth ft		Tail Pipe Size in	
Job Scheduled For Oct/11/2014 19:00		Arrived on Location Oct/11/2014 19:00		Leave Location Oct/11/2014		Collar Type Float	
						Tail Pipe Depth ft	
						Collar Depth 13646.0 ft	
						Sqz. Total Vol. bbl	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message	
10/12/2014	07:33:58	4	0.1	8.37	0.0	Started Acquisition	
10/12/2014	07:33:59	4	0.1	8.37	0.0	Start Job	
10/12/2014	07:34:00	4	0.1	8.37	0.0	Rig Up	
10/12/2014	07:34:01	4	0.1	8.37	0.0	Flush Lines	
10/12/2014	07:34:05	5	0.1	8.37	0.0	Pressure Test Lines	
10/12/2014	07:34:08	5	0.1	8.37	0.1	Low 400 PSI = Good	
10/12/2014	07:35:28	2	0.0	8.35	0.1		
10/12/2014	07:36:58	5	0.0	8.35	0.1		
10/12/2014	07:38:28	5	0.0	8.35	0.0		
10/12/2014	07:39:58	5	0.0	8.35	0.0		
10/12/2014	07:41:28	5	0.0	8.35	0.0		
10/12/2014	07:42:58	5	0.0	8.35	0.1		
10/12/2014	07:44:28	5	0.0	8.35	0.0		
10/12/2014	07:45:58	13	0.0	8.35	0.0		
10/12/2014	07:47:28	617	0.5	8.35	0.6		
10/12/2014	07:48:58	613	0.5	8.36	1.4		
10/12/2014	07:50:28	427	0.0	8.36	2.0		
10/12/2014	07:51:58	387	0.0	8.36	2.0		
10/12/2014	07:53:28	4685	0.0	8.36	2.0		
10/12/2014	07:54:58	4657	0.0	8.36	2.0		
10/12/2014	07:56:28	354	0.0	8.36	2.0		



Well		Field		Job Start		Customer		Job Number	
Horsetail 30F-1943 30F-1943		Wildcat		Oct/11/2014		Whiting Oil & Gas		2007769	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message			
10/12/2014	07:59:28	358	0.0	8.36	2.0				
10/12/2014	08:00:00	363	0.0	8.36	0.0	Start Pumping Spacer			
10/12/2014	08:00:58	976	1.1	11.26	0.3				
10/12/2014	08:02:28	941	2.1	11.32	3.4				
10/12/2014	08:03:58	891	2.1	11.34	6.5				
10/12/2014	08:05:28	814	2.1	11.38	9.6				
10/12/2014	08:06:58	1194	3.3	11.43	13.9				
10/12/2014	08:08:28	1059	3.3	11.44	18.9				
10/12/2014	08:09:58	1005	3.3	11.54	23.8				
10/12/2014	08:11:28	942	3.3	11.48	28.8				
10/12/2014	08:12:25	130	0.0	11.52	0.0	End Spacer			
10/12/2014	08:12:58	134	0.0	11.52	0.0				
10/12/2014	08:14:28	147	0.0	11.51	0.0				
10/12/2014	08:15:58	165	0.0	11.50	0.0				
10/12/2014	08:17:14	583	1.1	13.27	0.3	Start Cement Slurry			
10/12/2014	08:17:28	741	1.8	13.19	0.6				
10/12/2014	08:18:36	1170	2.9	13.24	3.0	Start Mixing Lead Slurry			
10/12/2014	08:18:41	1068	3.3	13.24	3.2	Pump 156 BBLS 13.5 PPG Slurry			
10/12/2014	08:18:58	1461	4.5	13.27	4.2				
10/12/2014	08:19:34	1518	4.5	13.31	6.9	Take H2O Sample = 009517			
10/12/2014	08:20:28	1678	4.5	13.35	11.0				
10/12/2014	08:21:58	1792	4.5	13.41	17.7				
10/12/2014	08:23:28	1033	3.3	13.44	23.8				
10/12/2014	08:24:24	1036	3.3	13.44	26.9	Good Returns			
10/12/2014	08:24:58	993	3.3	13.44	28.7				
10/12/2014	08:26:28	827	3.3	13.45	33.7				
10/12/2014	08:27:58	1531	4.5	13.47	39.2				
10/12/2014	08:29:28	1731	4.5	13.49	45.9				
10/12/2014	08:30:58	1573	4.5	13.48	52.7				
10/12/2014	08:32:28	1540	4.5	13.48	59.5				
10/12/2014	08:33:58	1651	4.5	13.50	66.2				
10/12/2014	08:35:28	1655	4.5	13.48	73.0				
10/12/2014	08:36:58	1683	4.5	13.46	79.7				
10/12/2014	08:38:28	1603	4.5	13.47	86.5				
10/12/2014	08:39:58	1555	4.5	13.47	93.3				
10/12/2014	08:41:28	1622	4.5	13.47	100.1				
10/12/2014	08:42:58	1585	4.5	13.50	106.8				
10/12/2014	08:44:28	1610	4.5	13.51	113.6				
10/12/2014	08:45:58	1579	4.5	13.50	120.4				
10/12/2014	08:47:28	1610	4.5	13.51	127.1				
10/12/2014	08:48:58	1588	4.5	13.52	133.9				
10/12/2014	08:50:28	1594	4.5	13.55	140.6				
10/12/2014	08:51:58	1644	4.5	13.53	147.4				
10/12/2014	08:53:28	1634	4.5	13.47	154.1				
10/12/2014	08:53:54	1619	4.5	13.47	156.1	End Lead Slurry			
10/12/2014	08:53:55	1619	4.5	13.47	156.2	Start Mixing Tail Slurry			
10/12/2014	08:54:40	188	4.5	13.47	159.5	End Tail Slurry			
10/12/2014	08:54:41	188	2.7	13.47	159.6	End Cement Slurry			
10/12/2014	08:54:42	49	1.1	13.48	159.7	Wash Pump To Pit			
10/12/2014	08:54:58	17	0.0	13.55	159.7				
10/12/2014	08:56:28	14	0.0	13.53	159.7				
10/12/2014	08:57:58	15	0.0	13.52	0.0				
10/12/2014	08:59:28	16	0.0	13.47	0.0				
10/12/2014	09:00:58	167	1.8	9.03	0.3				



Well		Field		Job Start	Customer	Job Number
Horsetail 30F-1943 30F-1943		Wildcat		Oct/11/2014	Whiting Oil & Gas	2007769
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
10/12/2014	09:03:58	79	2.4	8.46	7.1	
10/12/2014	09:05:28	60	2.0	9.17	10.2	
10/12/2014	09:06:58	65	2.2	8.72	13.3	
10/12/2014	09:08:28	65	1.7	8.40	16.5	
10/12/2014	09:09:58	61	2.1	8.02	18.6	
10/12/2014	09:11:28	10	0.0	8.36	19.5	
10/12/2014	09:12:58	9	0.0	8.36	19.5	
10/12/2014	09:14:28	10	0.0	8.36	19.6	
10/12/2014	09:15:49	9	0.0	8.37	0.0	Drop Top Plug
10/12/2014	09:15:50	9	0.0	8.37	0.0	Displace 166 BBLS KCL H2O
10/12/2014	09:15:58	10	0.0	8.37	0.0	
10/12/2014	09:17:28	136	3.7	9.97	0.4	
10/12/2014	09:18:58	1722	4.5	8.41	7.2	
10/12/2014	09:19:12	1814	4.5	8.41	8.2	Good Returns
10/12/2014	09:20:28	1824	4.5	8.37	13.9	
10/12/2014	09:21:58	1956	4.5	8.37	20.6	
10/12/2014	09:23:28	937	2.1	8.37	24.0	
10/12/2014	09:24:58	1053	2.1	8.37	27.1	
10/12/2014	09:26:28	1115	2.1	8.37	30.2	
10/12/2014	09:27:58	2005	2.1	8.36	33.3	
10/12/2014	09:28:07	734	0.1	8.36	33.5	Sheer Pins At 2600 PSI
10/12/2014	09:28:08	969	0.0	8.36	33.5	Pick Up Wiper Plug
10/12/2014	09:29:28	1238	2.1	8.36	35.3	
10/12/2014	09:30:58	1421	1.9	8.36	38.4	
10/12/2014	09:32:28	2145	4.0	8.37	43.4	
10/12/2014	09:33:58	2253	4.0	8.37	49.4	
10/12/2014	09:35:28	2183	4.0	8.37	55.4	
10/12/2014	09:36:58	2196	4.0	8.37	61.4	
10/12/2014	09:38:28	2233	4.0	8.37	67.3	
10/12/2014	09:39:58	2239	4.0	8.37	73.3	
10/12/2014	09:41:28	2180	4.0	8.37	79.3	
10/12/2014	09:42:58	2202	4.0	8.37	85.3	
10/12/2014	09:44:28	2232	4.0	8.37	91.3	
10/12/2014	09:45:58	2253	4.0	8.37	97.2	
10/12/2014	09:47:28	2220	4.0	8.37	103.2	
10/12/2014	09:48:58	2294	4.0	8.37	109.2	
10/12/2014	09:50:28	2283	4.0	8.36	115.2	
10/12/2014	09:51:58	2316	4.0	8.36	121.2	
10/12/2014	09:53:28	2295	4.0	8.36	127.1	
10/12/2014	09:54:58	2362	4.0	8.36	133.1	
10/12/2014	09:56:28	1725	1.4	8.36	139.1	
10/12/2014	09:57:58	1005	0.0	8.36	139.1	
10/12/2014	09:59:20	2275	4.0	9.98	141.4	Pump 10 BBLS 11.5 MudPush
10/12/2014	09:59:28	2278	4.0	9.95	142.0	
10/12/2014	10:00:58	2292	4.0	9.79	148.0	
10/12/2014	10:02:28	2248	4.0	8.40	154.1	
10/12/2014	10:03:58	2270	4.0	8.40	160.1	
10/12/2014	10:05:28	1548	2.0	8.44	164.8	
10/12/2014	10:06:58	2007	1.8	8.43	167.7	
10/12/2014	10:07:23	1965	0.0	8.43	167.8	Bump Top Plug 2000 PSI
10/12/2014	10:07:25	1975	0.0	8.43	167.8	End Displacement
10/12/2014	10:08:28	1981	0.0	8.42	167.8	
10/12/2014	10:09:58	2017	0.0	8.42	167.9	
10/12/2014	10:11:28	2	0.0	8.42	167.9	



Well		Field		Job Start	Customer	Job Number
Horsetail 30F-1943 30F-1943		Wildcat		Oct/11/2014	Whiting Oil & Gas	2007769
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message
10/12/2014	10:14:28	1	0.0	8.41	168.0	
10/12/2014	10:15:58	-1	0.0	8.41	168.1	
10/12/2014	10:17:28	1	0.0	8.41	168.1	
10/12/2014	10:18:58	-2	0.0	8.40	0.0	
10/12/2014	10:20:28	429	1.6	8.48	0.3	
10/12/2014	10:21:58	2316	0.8	8.42	1.1	
10/12/2014	10:23:28	2419	0.0	8.42	1.3	
10/12/2014	10:24:58	2570	0.0	8.41	1.3	
10/12/2014	10:25:00	2570	0.0	8.41	1.3	Pressure Test Backside
10/12/2014	10:26:28	2565	0.0	8.41	1.4	
10/12/2014	10:27:58	2562	0.0	8.40	1.4	
10/12/2014	10:29:28	2559	0.0	8.40	1.4	
10/12/2014	10:30:00	2560	0.0	8.40	1.4	Pressure Test = Good
10/12/2014	10:30:58	0	0.0	8.40	1.4	
10/12/2014	10:32:28	3	0.0	8.40	1.5	
10/12/2014	10:33:58	2	0.0	8.39	1.5	
10/12/2014	10:35:28	511	0.0	8.39	0.0	
10/12/2014	10:36:58	1104	2.1	8.45	1.1	
10/12/2014	10:37:29	1051	2.1	8.45	2.2	Roll The Hole
10/12/2014	10:38:28	1278	3.3	8.40	4.4	
10/12/2014	10:39:58	1478	4.5	8.37	10.5	
10/12/2014	10:41:28	1832	4.7	8.37	17.2	
10/12/2014	10:42:58	1645	5.1	8.36	24.9	
10/12/2014	10:44:28	1612	5.1	8.37	32.6	
10/12/2014	10:45:58	1418	4.8	8.36	39.8	
10/12/2014	10:47:28	1463	4.8	8.36	47.0	
10/12/2014	10:48:58	1393	4.9	8.36	54.2	
10/12/2014	10:50:28	1343	5.2	8.37	61.4	
10/12/2014	10:51:58	1242	5.2	8.36	69.3	
10/12/2014	10:53:28	1141	5.2	8.36	77.0	
10/12/2014	10:54:58	352	0.0	8.36	84.2	
10/12/2014	10:56:28	846	4.5	8.36	86.7	
10/12/2014	10:57:58	742	4.5	8.36	93.5	
10/12/2014	10:59:28	669	4.5	8.36	100.3	
10/12/2014	11:00:58	633	4.5	8.36	107.1	
10/12/2014	11:02:28	596	4.5	8.36	113.8	
10/12/2014	11:03:58	11	0.0	8.36	118.5	
10/12/2014	11:05:28	577	4.5	8.36	123.2	
10/12/2014	11:06:58	601	4.5	8.36	130.0	
10/12/2014	11:08:28	1	0.0	8.36	131.8	
10/12/2014	11:09:58	1	0.0	8.36	131.8	
10/12/2014	11:10:00	1	0.0	8.36	131.8	End Job
10/12/2014	11:11:28	1	0.0	8.36	131.8	
10/12/2014	11:12:58	1	0.0	8.36	131.8	
10/12/2014	11:14:28	1	0.0	8.36	131.8	
10/12/2014	11:15:58	1	0.0	8.36	131.9	
10/12/2014	11:17:28	11	0.7	8.40	131.9	
10/12/2014	11:18:58	58	3.4	8.67	135.3	
10/12/2014	11:20:28	21	2.0	8.17	138.0	
10/12/2014	11:21:58	2	1.5	8.38	142.9	
10/12/2014	11:23:28	55	3.3	8.43	145.2	
10/12/2014	11:24:58	29	2.5	8.27	147.2	
10/12/2014	11:26:28	6	8.6	7.58	168.2	
10/12/2014	11:27:58	0	0.0	8.38	171.6	



Well Horsetail 30F-1943 30F-1943			Field Wildcat		Job Start Oct/11/2014		Customer Whiting Oil & Gas		Job Number 2007769	
Date	Time 24-hr clock	Treating Pressure PSI	Flow Rate B/M	Density LB/G	Volume BBL	Message				
10/12/2014	11:30:58	-1	0.0	8.36	171.6					
10/12/2014	11:32:28	-1	0.0	8.36	171.6					

### Post Job Summary

Average Pump Rates, bbl/min					Volume of Fluid Injected, bbl			
Slurry 2.6	N2	Mud	Maximum Rate 20.8	Total Slurry 146.0	Mud 0.0	Spacer 30.0	N2	
Treating Pressure Summary, psi					Breakdown Fluid			
Maximum 5219	Final 2000	Average 1065	Bump Plug to 2000	Breakdown	Type	Volume bbl	Density lb/gal	
Avg. N2 Percent %	Designed Slurry Volume 156.0 bbl	Displacement 164.0 bbl	Mix Water Temp 55 degF	Cement Circulated to Surface? <input checked="" type="checkbox"/>	Volume 40.0 bbl			
				Washed Thru Perfs <input type="checkbox"/>	To ft			
Customer or Authorized Representative Brady Sharpe			Schlumberger Supervisor Conley Jense/Lyle Hartsfield		Circulation Lost <input type="checkbox"/>	Job Completed <input checked="" type="checkbox"/>		
					-	-		

# Schlumberger

## Cementing Job Report

**Well** Horsetail 30F-1943  
**Field** Wildcat  
**Engineer** Conley Jense/Lyle Hartsfield  
**Country** United States

**Client** Whiting Oil Gas  
**SIR No.** 2007769  
**Job Type** 4.5 Liner  
**Job Date** 10-11-2014

