



**Pumping
Service Report**

9193499

Client Name Whiting Petroleum Corp.	Well Name Horsetail 33M-2804	Rig Pioneer Drilling 54	Job Date July 19,2014	Call Sheet 1044357
Client Representative Chris	Surface Well Location Sec 33:T10N:R57W	Down Hole Well Location	Job Type Intermediate Casing	

Well Profile

Well Type:	Oil			
Maximum Treating Pressure (psi):	---			
Predicted Bottom Hole Static Temperature (°F):	200.00	@	--	
Bottom Hole Circulating Temperature (°F):	160.00	@	--	
Bottom Hole Logged Temperature (°F):	---	@	--	

Open Hole	Size (in)	Excess (%)	TMD From (ft)	TMD To (ft)	TVD From (ft)	TVD To (ft)
	8.750	35.000	0.000	5,804.000	--	--

Casing	Size (in)	Weight (lb/ft)	Grade	Collapse Pressure (psi)	Internal Yield Pressure (psi)	Capacity (bbl)	I.D. (in)	O.D. (in)	Depth From (ft)	Depth To (ft)
	7.000	29.000		--	--	--	--	--	0.0	5,804.0

Products

Stage 1

From Depth (ft): 0
To Depth (ft): 5804
Acids/Blends/Fluids :
Lead 1: 425 Sacks of 1:2:6 Poz G: Gel, Density = 12.5 lb/gal, Volume Pumped = 143 (bbl)
Water Temperature(°F) = 55 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 89
+ 0.2 % of CFR (Preblend),
+ 0.5 % of CFL-4 (Preblend),
+ 0.15 % of LTR (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)
Tail: 210 Sacks of 1:1:0 Poz:G:Gel, Density = 13.5 lb/gal, Volume Pumped = 57 (bbl)
Water Temperature(°F) = 55 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 89
+ 8 % of Fume (Preblend),
+ 2 % of Gel (Preblend),
+ 0.1 % of CFR-5 (Preblend),
+ 0.7 % of CFL-3 (Preblend),
+ 0.3 % of LTR (Preblend),
+ 0.25 % of Polyflake (Preblend)

Fluid & Cement Data

Expected Cement Top: --					
Wellbore Fluid					
Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	8.400	--	--	Jul 14, 2014 20:27
Water Based Mud	--	--	--	--	Jul 19, 2014 02:04



**Pumping
Service Report**

9193499

Attachment & Tools

Down Hole Tools

Tool Type	Depth (ft)	Supplier
Guide Shoe	--	Third Party
Float Collar	--	Third Party

Tubular Plugs

Tubular Plug Type	Size (in)	Supplier
Rubber Top	7.000	Sanjel

Units & Personnel

Units

Truck Unit No.	Main Type	Sub Type	Tractor Unit No.	Main Type	Sub Type	Time On Location	Time Off Location
449095	TRAILER	Utility Trailer	200868	PICKUP	3/4 Ton	07/19/2014 06:00	07/19/2014 18:00
445052	TRAILER	SCM Twin	745052	TRACTOR	Tandem - Tractor	07/19/2014 06:00	07/19/2014 18:00

Crew and Bonuses

Employee	Start Shift	End Shift	Second Start Shift	Second End Shift
Contreras, Bennie	07/19/2014 06:00	07/19/2014 18:00		
Cox, Brandon	07/19/2014 06:00	07/19/2014 18:00		
Lindsay, Kevin	07/19/2014 06:00	07/19/2014 18:00		
Hansen, Ted	07/19/2014 06:00	07/19/2014 18:00		
Barden, Sean	07/19/2014 06:00	07/19/2014 18:00		

Treatment Reports & Remarks



Pumping Service Report

9193499

Treatment Report

Event #	Event Time	Event Description	Fluid Type	Rate (bbl/min)	Tubular Pressure (psi)	Annular Pressure (psi)	Stage Volume (bbl)	Total Volume (bbl)
1	Jul 19, 2014 06:00	Arrive On Location		--	--	--	--	0.00
		Remarks: Arrive						
2	Jul 19, 2014 06:30	Tailgate Meeting		--	--	--	--	0.00
		Remarks: Talked about spotting trucks and rigging in.						
3	Jul 19, 2014 12:00	Rig In		--	--	--	--	0.00
		Remarks: Rigged in.						
4	Jul 19, 2014 12:30	Safety Meeting		--	--	--	--	0.00
		Remarks: Muster, 911 caller, nearest med., ambul. driver, job scope, location safety equipt..						
5	Jul 19, 2014 13:05	Sign-off on Safety		--	--	--	--	0.00
		Remarks: Sign all JSAs..						
6	Jul 19, 2014 13:30	Pressure Test	Water	--	3,000.0	--	--	0.00
		Remarks: Pressure test 3000 psi..						
7	Jul 19, 2014 13:37	Pump Spacer	Water	3.00	0.0	--	10.00	10.00
		Remarks: Pump 10 BBL spacer.						
8	Jul 19, 2014 13:46	Pump Preflush	Water	4.00	0.0	--	20.00	30.00
		Remarks: Pump 20 BBLs Visweep.						
9	Jul 19, 2014 13:58	Mix Cement	1:2:6 Poz G: Gel	7.00	1,000.0	--	143.00	173.00
		Remarks: Mix and pump 425 Sacks cement 12.5 lb/gal..						
10	Jul 19, 2014 14:22	Mix Cement	1:1:0 Poz:G:Gel	5.00	1,100.0	--	57.00	230.00
		Remarks: Mix and pump 210 Sacks cement @ 13.5 lb/gal..						
11	Jul 19, 2014 14:38	Displace Fluid	Water	4.00	100.0	--	2.00	232.00
		Remarks: Displace 2 BBLs to clean lines.						
12	Jul 19, 2014 14:40	Stop		--	--	--	--	232.00
		Remarks: Stopped and dropped plug.						
13	Jul 19, 2014 14:40	Displace Fluid	Water	5.00	1,150.0	--	218.00	450.00
		Remarks: Displaced total of 218 BBLs of water did not bump.						
14	Jul 19, 2014 15:57	Stop		--	1,150.0	--	--	450.00
		Remarks: Stopped and held pressure at 1150 psi, then bled back got 3/4 BBL back.						
15	Jul 19, 2014 16:05	Wash	Water	2.00	170.0	--	20.00	470.00
		Remarks: Wash mix system and runbacks on triplexes.						
16	Jul 19, 2014 17:00	Rig Out		--	--	--	--	470.00
		Remarks: Rig down iron.						
17	Jul 19, 2014 17:30	Job Complete		--	--	--	--	470.00
		Remarks: Job complete.						
18	Jul 19, 2014 17:31	Pre-Departure Meeting		--	--	--	--	470.00
		Remarks: Journey management.						
19	Jul 19, 2014 18:00	Leave Location		--	--	--	--	470.00
		Remarks: Leave.						



**Pumping
Service Report**

9193499

Treatment Reports & Remarks

Did Float Hold: Yes
Fluid Returns : Yes
Type : Cement
Volume (bbl) : 52
Temperature (°F) : 89
FDAS Functioning Correctly : Yes
Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number
46272
46275