



**Pumping
Service Report**

9200852

Client Name Whiting Petroleum Corp.	Well Name Horsetail 29G-2012B	Rig Pioneer Drilling 54	Job Date October 19, 2014	Call Sheet 1049081
Client Representative Dave	Surface Well Location Sec 29:T10N:R57W	Down Hole Well Location	Job Type Surface Casing	

Well Profile

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

Open Hole

Size (in)	Excess (%)	TMD From (ft)	TMD To (ft)	TVD From (ft)	TVD To (ft)
13.500	25.000	0.000	1,650.000	--	--

Casing

Size	Weight	Grade	Collapse Pressure	Internal Yield Pressure	Capacity	I.D.	O.D.	Depth From	Depth To
(in)	(lb/ft)		(psi)	(psi)	(bbl)	(in)	(in)	(ft)	(ft)
9.625	36.000	---	--	--	--	--	--	0.0	1,641.3

Products

Stage 1

From Depth (ft):	0
To Depth (ft):	1750

Acids/Blends/Fluids :

Tail: 700 Sacks of 0:1:0 Type III, Density = 14.2 lb/gal, Volume Pumped = 184 (bbl)
Water Temperature(°F) = 65 , Bulk Temperature(°F) = 65 , Slurry Temperature(°F) = 70
+ 1 % of CaCl₂ (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)

Fluid & Cement Data

Expected Cement Top: Surface

Wellbore Fluid

Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	8.330	--	--	Jul 14, 2014 20:27
Water Based Mud	--	9.000	--	--	Oct 20, 2014 03:05

Attachment & Tools

Down Hole Tools

Tool Type	Depth (ft)	Supplier
Guide Shoe	1,641.000	Third Party
Float Collar	1,598.000	Third Party

Tubular Plugs

Tubular Plug Type	Size (in)	Supplier
Rubber Top	9.625	Third Party



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Units & Personnel

Units

<u>Truck Unit No.</u>	<u>Main Type</u>	<u>Sub Type</u>	<u>Tractor Unit No.</u>	<u>Main Type</u>	<u>Sub Type</u>	<u>Time On Location</u>	<u>Time Off Location</u>
449087	TRAILER	Utility Trailer	201025	PICKUP	1 Ton	10/19/2014 21:00	10/20/2014 04:00
445051	TRAILER	SCM Twin	745051	TRACTOR	Tandem - Tractor	10/19/2014 21:00	10/20/2014 04:00
446047	TRAILER	Bulker	746047	TRACTOR	Tandem - Tractor	10/19/2014 21:00	10/20/2014 04:00
446172	TRAILER	Bulker	746172	TRACTOR	Tandem - Tractor	10/19/2014 21:00	10/20/2014 04:00

Crew and Bonuses

<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Lopez, Armando	10/19/2014 21:00	10/20/2014 04:00		
Hansen, Ted	10/19/2014 21:00	10/20/2014 04:00		
Teegerstrom, Ty	10/19/2014 21:00	10/20/2014 04:00		
Houghton, Guy	10/19/2014 21:00	10/20/2014 04:00		
Lampp III, Larry	10/19/2014 21:00	10/20/2014 04:00		

Treatment Reports & Remarks



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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	Oct 19,2014 21:00	Arrive On Location	---	--	--	--	--	0.00
2	Oct 19,2014 21:10	Tailgate Meeting	---	--	--	--	--	0.00
3	Oct 19,2014 23:00	Rig In	---	--	--	--	--	0.00
4	Oct 20,2014 00:01	STEACS Briefing	---	--	--	--	--	0.00
5	Oct 20,2014 00:30	Sign-off on Safety	---	--	--	--	--	0.00
6	Oct 20,2014 00:39	Start - Fluid	Water	2.00	50.0	--	2.00	2.00
		Remarks: Fill lines						
7	Oct 20,2014 00:40	Pressure Test	---	--	4,000.0	--	--	2.00
8	Oct 20,2014 00:43	Pump Spacer	Water	5.50	270.0	--	10.00	12.00
9	Oct 20,2014 00:48	Pump Spacer	Water	5.50	270.0	--	10.00	22.00
		Remarks: Water with red dye						
10	Oct 20,2014 00:52	Mix Cement	0:1:0 Type III	5.50	300.0	--	184.00	206.00
		Remarks: Pumped 700 sacks of type III cement Density 14.2 Yield 1.47 Water 7.36						
11	Oct 20,2014 02:00	Drop Plug	---	--	--	--	--	206.00
		Remarks: 3rd party plug						
12	Oct 20,2014 02:02	Displace Fluid	Water Based Mud	7.00	130.0	--	124.00	330.00
13	Oct 20,2014 02:27	Bump Plug	---	--	--	--	--	330.00
		Remarks: Before plug landed pressure was 600 psi. Landed plug with 1700 PSI						
14	Oct 20,2014 02:32	Check Float	---	--	--	--	--	330.00
		Remarks: Got 1 bbl back.						
15	Oct 20,2014 02:35	Stop	---	--	--	--	--	0.00
		Remarks: Got 39 bbls of cement back to surface						
16	Oct 20,2014 02:40	Wash	---	--	--	--	--	0.00
17	Oct 20,2014 03:10	Rig Out	---	--	--	--	--	0.00
18	Oct 20,2014 03:40	Job Complete	---	--	--	--	--	0.00
19	Oct 20,2014 03:45	Pre-Departure Meeting	---	--	--	--	--	0.00
20	Oct 20,2014 04:00	Leave Location	---	--	--	--	--	0.00

Did Float Hold: Yes

Fluid Returns : Yes

Type : Cement

Volume (bbl) : 39

Temperature (°F) : 70

FDAS Functioning Correctly : Yes

Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number

54634

54632



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Comments To Service Report

Pumped 700 sacks 184 bbls of type III cement. Density 14.2 Yield 1.47 Water 7.36
Got 39 bbls of cement to surface.