



**Pumping
Service Report**

9193348

Client Name Whiting Petroleum Corp.	Well Name Horsetail 19N - 1924M	Rig Pioneer Drilling 54	Job Date August 20,2014	Call Sheet 1045882
Client Representative BJ	Surface Well Location Sec 18:T10N:R57W	Down Hole Well Location	Job Type Production Casing	

Well Profile

Well Type:	Oil			
Maximum Treating Pressure (psi):	---			
Predicted Bottom Hole Static Temperature (°F):	100.00	@	--	
Bottom Hole Circulating Temperature (°F):	80.00	@	--	
Bottom Hole Logged Temperature (°F):	---	@	--	

Open Hole					
Size (in)	Excess (%)	TMD From (ft)	TMD To (ft)	TVD From (ft)	TVD To (ft)
8.750	15.000	0.000	9,370.000	--	--

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)
7.000	29.000	P-110	8,510.0	9,520.0	346.52	6.184	7.656	0.0	9,328.0

Products

Stage 1

From Depth (ft): 0
To Depth (ft): 9370

Acids/Blends/Fluids :

Lead 1: 820 Sacks of 1-1-6 G, Density = 12.5 lb/gal, Volume Pumped = 276 (bbl)
Water Temperature(°F) = 65 , Bulk Temperature(°F) = 70 , Slurry Temperature(°F) = 75
+ 0.2 % of CFR (Preblend),
+ 0.7 % of CFL-4 (Preblend),
+ 0.3 % of LTR (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)

Tail: 570 Sacks of 1-1-0 G, Density = 13.5 lb/gal, Volume Pumped = 179 (bbl)
Water Temperature(°F) = 65 , Bulk Temperature(°F) = 70 , Slurry Temperature(°F) = 75
+ 8 % of SilFume (Preblend),
+ 1.5 % of Gel (Preblend),
+ 0.8 % of CFR-4 (Preblend),
+ 0.1 % of LTR (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend),
+ 20 % of Silica Flour (Preblend),
+ 0.3 % of CFR (Preblend)

Fluid & Cement Data

Expected Cement Top: Surface

Wellbore Fluid

Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	--	--	--	Jul 26, 2014 15:47
Water Based Mud	--	--	--	--	Jul 30, 2014 17:28



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Attachment & Tools

Down Hole Tools

<u>Tool Type</u>	<u>Depth (ft)</u>	<u>Supplier</u>
Float Collar	9,286.000	Third Party

Tubular Plugs

<u>Tubular Plug Type</u>	<u>Size (in)</u>	<u>Supplier</u>
Rubber Top	7.000	Sanjel

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>
449086	TRAILER	Utility Trailer	201168	PICKUP	1 Ton	08/20/2014 18:00	08/21/2014 08:00
445024	TRAILER	SCM Twin	745024	TRACTOR	Tandem - Tractor	08/20/2014 18:00	08/21/2014 08:00
446171	TRAILER	Bulker	746171	TRACTOR	Tandem - Tractor	08/20/2014 18:00	08/21/2014 08:00
446172	TRAILER	Bulker	746172	TRACTOR	Tandem - Tractor	08/20/2014 18:00	08/21/2014 08:00
446145	TRAILER	Bulker	746145	TRACTOR	Tandem - Tractor	08/20/2014 18:00	08/21/2014 08:00
201273	PICKUP	3/4 Ton				08/20/2014 18:00	08/21/2014 08:00

Crew and Bonuses

<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Klosterman, Austin	08/20/2014 18:00	08/21/2014 08:00		
Morris, Theodore	08/20/2014 18:00	08/21/2014 08:00		
Leue, David	08/20/2014 18:00	08/21/2014 08:00		
Svoboda, Miloslav	08/20/2014 18:00	08/21/2014 08:00		
Meisner, Jeremy	08/20/2014 18:00	08/21/2014 08:00		
Byczynski, Michael	08/20/2014 18:00	08/21/2014 08:00		

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	Aug 20,2014 18:00	Arrive On Location		0.00	0.0	0.0	0.00	0.00
2	Aug 20,2014 18:20	Tailgate Meeting		0.00	0.0	0.0	0.00	0.00
3	Aug 20,2014 23:00	Rig In		0.00	0.0	0.0	0.00	0.00
4	Aug 21,2014 00:00	Wait On Instructions		0.00	0.0	0.0	0.00	0.00
Remarks: Rig was running casing.								
5	Aug 21,2014 02:00	Safety Meeting		0.00	0.0	0.0	0.00	0.00
6	Aug 21,2014 02:10	Sign-off on Safety		0.00	0.0	0.0	0.00	0.00
7	Aug 21,2014 02:41	Establish Circulation	Water	4.00	61.0	0.0	3.00	3.00
Remarks: Filling lines.								
8	Aug 21,2014 02:44	Pressure Test Lines	Water	0.00	5,000.0	0.0	0.00	3.00
9	Aug 21,2014 02:46	Pump Preflush	Water	4.50	300.0	0.0	20.00	23.00
Remarks: Vissweep								
10	Aug 21,2014 02:52	Pump	1-1-6 G	6.80	300.0	0.0	276.00	299.00
Remarks: Mix up and pump 820 sacks @12.5#, Yield 1.89, WR 10.14								
11	Aug 21,2014 03:42	Pump	1-1-0 G	5.50	200.0	0.0	179.00	478.00
Remarks: Mix up and pump 570 sacks @13.5#, Yield 1.76, WR 8.19								
12	Aug 21,2014 04:20	Wash	Water	1.50	0.0	0.0	3.00	481.00
Remarks: Cleaned out pumps and lines.								
13	Aug 21,2014 04:27	Drop Plug On The Fly	Water	0.00	0.0	0.0	0.00	481.00
14	Aug 21,2014 04:27	Displace Fluid	Water	6.70	60.0	0.0	334.00	815.00
Remarks: Water with KCl.								
15	Aug 21,2014 05:35	Decrease Pump Rate	Water	2.00	1,100.0	0.0	10.00	825.00
Remarks: Water with KCl								
16	Aug 21,2014 05:42	Pumping Pressure Before Bump	Water	--	1,500.0	0.0	344.00	825.00
17	Aug 21,2014 05:42	Bump Plug	Water	0.00	2,100.0	0.0	0.00	825.00
18	Aug 21,2014 05:44	Check Float		0.00	0.0	0.0	0.00	825.00
19	Aug 21,2014 06:30	Rig Out		0.00	0.0	0.0	0.00	0.00
20	Aug 21,2014 07:30	Job Complete		0.00	0.0	0.0	0.00	0.00
21	Aug 21,2014 07:45	Pre-Departure Meeting		0.00	0.0	0.0	0.00	0.00
22	Aug 21,2014 08:00	Leave Location		0.00	0.0	0.0	0.00	0.00

Did Float Hold: Yes

Fluid Returns : No

Type :

Volume (bbl) :

Temperature (°F) : --

FDAS Functioning Correctly : Yes

Was the Program Followed As Per Design? : Yes



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Treatment Reports & Remarks

Material Transfer Sheet Number

Material Transfer Sheet Number

46866

46876

9510

46875

46869

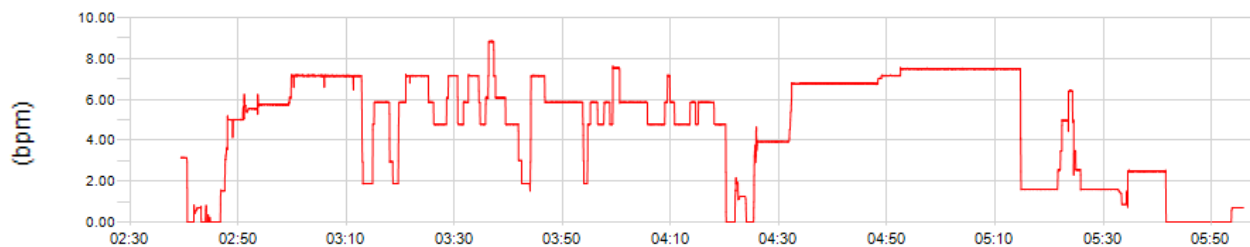
Comments To Service Report

Job went according to prog and customer's request. Job went good. While pumping tail cement, half way through we lost all returns. After pumping 20 bbls more we then got returns back, up until washing pumps and lines. We then washed pumps and lines, and dropped the plug to displace. There were no returns throughout the entire 344.5 bbl displacement. Customer was notified and per customer there was nothing else for us to do besides pumping the rest of displacement and bumping the plug like normal.

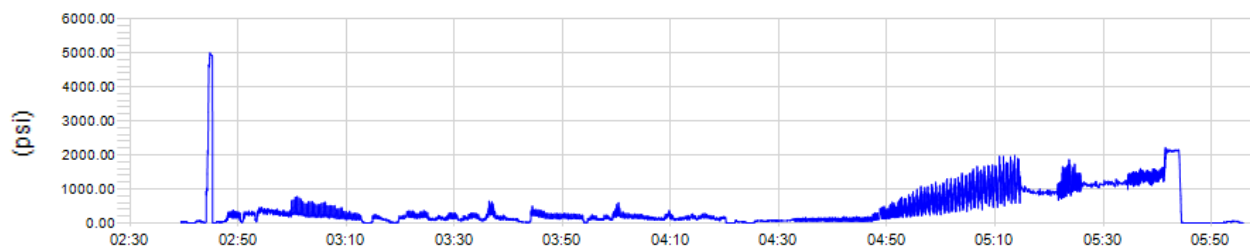


Client	Whiting	Client Rep	Eric	Supervisor	A Klosterman
Ticket No.	9193348	Well Name	Horsetail 19N-1924M	Unit No.	745024
Location	Sec18:T10N:R57W	Job Type	Production Casing	Service District	505
Comments	Mix up and pump 820 sacks @ 12.5# Lead Mix up and pump 570 sacks @ 13.5# Tail			Job Date	08/21/2014

Unit 745024 Rate Total



Unit 745024 Pump Pressure



Unit 745024 Density

