



Pumping Service Report

9188121

Client Name Whiting Petroleum Corp.	Well Name Razor 26K-2307A	Job Date April 12, 2014	Call Sheet 1041115
Client Representative Kenny Wilkerson	Location Sec 26:T10N:R58W	Job Type Intermediate Casing	Rig Frontier Drilling 26

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						
	<u>Size (in)</u>	<u>Excess (%)</u>	<u>TMD From (ft)</u>	<u>TMD To (ft)</u>	<u>TVD From (ft)</u>	<u>TVD To (ft)</u>
	7.000	30.000	0.000	6,000.000	--	--

Casing										
	<u>Size (in)</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Collapse Pressure (psi)</u>	<u>Internal Yield Pressure (psi)</u>	<u>Capacity (bbl)</u>	<u>I.D. (in)</u>	<u>O.D. (in)</u>	<u>Depth From (ft)</u>	<u>Depth To (ft)</u>
	7.000	29.000	L-80	7,030.0	8,160.0	222.89	6.184	7.656	0.0	6,000.0

Products

Stage 1

From Depth (ft): 0
 To Depth (ft): 6000
 Acids/Blends/Fluids :

Lead 1: 445 Sacks of 1-1-6 G, Density = 12.5 lb/gal, Volume Pumped = 149.8 (bbl)
 Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
 + 6 % of Gel (Preblend),
 + 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 G, Density = 13.5 lb/gal, Volume Pumped = 56.9 (bbl)
 Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
 + 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 lb/sack of Polyflake (Preblend)

Fluid & Cement Data

Expected Cement Top:	--				
Wellbore Fluid					
<u>Fluid Type</u>	<u>Viscosity (cP)</u>	<u>Density (lbs/gal)</u>	<u>Yield Point (psi)</u>	<u>Temperature (°F)</u>	<u>Recorded@</u>
Water	--	--	--	--	Apr 07, 2014 05:07
Water Based Mud	--	--	--	--	Apr 12, 2014 11:22



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Attachment & Tools

Down Hole Tools

<u>Tool Type</u>	<u>Depth (ft)</u>	<u>Supplier</u>
Guide Shoe	6,040.000	Client
Float Collar	5,997.000	Client

Tubular Plugs

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

Units & Personnel

<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>
449039	TRAILER	Utility Trailer	201025	PICKUP	1 Ton	04/12/2014 13:00	04/12/2014 23:00
445020	TRAILER	Twin Pumper	745020	TRACTOR	Tandem - Tractor	04/12/2014 13:00	04/12/2014 23:00
749100	TRACTOR	Tandem - Tractor				04/12/2014 13:00	04/12/2014 23:00

Crew and Bonuses

<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Hardwick, Waco	04/12/2014 13:00	04/12/2014 23:00		
Williams, Colt	04/12/2014 13:00	04/12/2014 23:00		
Laeger, Kacey	04/12/2014 13:00	04/12/2014 23:00		
Lindsay, Kevin	04/12/2014 13:00	04/12/2014 23:00		
Young, Craig	04/12/2014 13:00	04/12/2014 23:00		

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	Apr 12,2014 12:30	Arrive On Location	---	--	--	--	--	0.00
2	Apr 12,2014 12:40	Tailgate Meeting	---	--	--	--	--	0.00
3	Apr 12,2014 13:30	Rig In	---	--	--	--	--	0.00
4	Apr 12,2014 17:35	Safety Meeting	---	--	--	--	--	0.00
5	Apr 12,2014 17:55	Sign-off on Safety	---	--	--	--	--	0.00
6	Apr 12,2014 18:10	Pressure Test	Water	0.30	3,000.0	0.0	0.50	0.50
7	Apr 12,2014 18:13	Pump Preflush	Water	4.00	400.0	0.0	20.00	20.50
Remarks: WG - 1L, Barite Visweep preflush.								
8	Apr 12,2014 18:13	Pump Spacer	Water	4.00	550.0	0.0	10.00	30.50
Remarks: Fresh water spacer between visweep & cement.								
9	Apr 12,2014 18:54	Pump	1-1-6 G	5.00	750.0	0.0	146.00	176.50
Remarks: Lead cement								
10	Apr 12,2014 19:19	Pump	1-1-0 G	5.80	700.0	0.0	56.00	232.50
Remarks: Tail cement								
11	Apr 12,2014 19:33	Displace Fluid	Water Based Mud	4.00	400.0	0.0	216.00	448.50
12	Apr 12,2014 20:48	Bump Plug	Water Based Mud	--	1,700.0	0.0	--	448.50
13	Apr 12,2014 20:48	Check Float	---	--	--	--	--	448.50
Remarks: Float held great								
14	Apr 12,2014 20:48	Pressure Test	Water Based Mud	0.70	1,550.0	0.0	3.00	451.50
Remarks: Casing pressure test, 1500 psi. for 15 minits, Held Good.								
15	Apr 12,2014 21:30	Rig Out	---	--	--	--	--	0.00
Remarks: Rig off floor and rig out standing iron.								
16	Apr 12,2014 22:05	Wash	Water	--	--	--	--	0.00
17	Apr 12,2014 22:30	Rig Out	---	--	--	--	--	0.00
Remarks: Rig out the balance of the ground iron.								
18	Apr 12,2014 22:50	Job Complete	---	--	--	--	--	0.00
19	Apr 12,2014 22:55	Pre-Departure Meeting	---	--	--	--	--	0.00
20	Apr 12,2014 22:00	Leave Location	---	--	--	--	--	0.00

Did Float Hold: Yes
 Fluid Returns : Yes
 Type : Cement
 Volume (bbl) : 57
 Temperature (°F) : 65
 FDAS Functioning Correctly : Yes
 Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number
 9277
 9276



Client	Whiting Petroleum Corp.	Client Rep	Mr. Kenny Wilkerson	Supervisor	Waco Hardwick
Ticket No.	9188121	Well Name	Razor 26K - 2307A	Unit No.	445020
Location	Sec.26:T10N:R58W	Job Type	Intermediate Casing	Service District	Fort Lupton, Co.
Comments	Lead - 445 sx 1-1-6 G Cement, 149.8 bbls. slurry @ 12.5 Density. Tail - 210 sx 1-1-0 G Cement, 56.9 bbls. slurry @ 13.5 Density. Displacement total is 222.5 bbls.			Job Date	04/12/2014

