



Cementing Service Report

9207969

Client Name Whiting Petroleum Corp.	Well Name Razor Federal 12F-0102B	Rig Unit Drilling Co. 409	Job Date October 28,2015	Call Sheet 1061977
Client Representative BJ	Surface Well Location SE NW Sec 12:T10N:R58W	Down Hole Well Location	Job Type Intermediate Casing	Lead Supervisor Klosterman, Austin (27698)

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										
	<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>				
	8.750	--	0.000	6,578.000	--	--				
Casing										
	<u>Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Collapse Pressure</u>	<u>Internal Yield Pressure</u>	<u>Capacity</u>	<u>I.D.</u>	<u>O.D.</u>	<u>Depth From</u>	<u>Depth To</u>
	<u>(in)</u>	<u>(lb/ft)</u>		<u>(psi)</u>	<u>(psi)</u>	<u>(bbl)</u>	<u>(in)</u>	<u>(in)</u>	<u>(ft)</u>	<u>(ft)</u>
	9.625	36.000		--	--	--	--	--	0.0	1,870.0
	7.000	32.000		--	--	--	--	--	0.0	6,563.0

Products	
Stage 1	
From Depth (ft):	4700
To Depth (ft):	0
Acids/Blends/Fluids :	
Lead 1: 470 Sacks of 1-2-6 PozG, Density = 12.5 lb/gal, Volume Pumped = 158 (bbl)	
Water Temperature(°F) = 50 , Bulk Temperature(°F) = 55 , Slurry Temperature(°F) = 75	
+ 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)	
Stage 2	
From Depth (ft):	6578
To Depth (ft):	4700
Acids/Blends/Fluids :	
Tail: 260 Sacks of 1-1-2 PozG, Density = 13.5 lb/gal, Volume Pumped = 70 (bbl)	
Water Temperature(°F) = 50 , Bulk Temperature(°F) = 55 , Slurry Temperature(°F) = 75	
+ 2 % of Gel (Preblend),	
+ 8 % of SilFume (Preblend),	
+ 0.1 % of CFR-5 (Preblend),	
+ 0.7 % of CFL-3 (Preblend),	
+ 0.2 % of LTR (Preblend),	
+ 0.25 lb/sack of Polyflake (Preblend)	

Fluid & Cement Data					
Expected Cement Top:		Surface			
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	--	8.340	--	--	Jul 07, 2015 14:19
Water Based Mud	--	10.000	--	--	Jul 11, 2015 17:09

**Attachment & Tools****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>
444002	TRAILER	Iron	201386	PICKUP	1 Ton	10/28/2015 02:30	10/28/2015 08:30
445070	TRAILER	SCM Twin	745070	TRACTOR	Tandem - Tractor	10/28/2015 02:30	10/28/2015 08:30
449102	TRAILER	1600 Porta Bulk				10/28/2015 02:30	10/28/2015 08:30

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 (27698)	10/28/2015 02:30	10/28/2015 08:30		
Decenick, Scott (30083)	10/28/2015 02:30	10/28/2015 08:30		
Cheal, Samuel (28315)	10/28/2015 02:30	10/28/2015 08:30		
Yates, William (29930)	10/28/2015 02:30	10/28/2015 08:30		
Decenick, Scott (30083)	10/28/2015 02:30	10/28/2015 08:30		

Treatment Reports & Remarks								
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 28,2015 02:30	Arrive On Location		0.00	0.0	0.0	0.00	0.00
2	Oct 28,2015 02:40	Crew Briefing (Rig in)		0.00	0.0	0.0	0.00	0.00
3	Oct 28,2015 04:30	Rig in Complete		0.00	0.0	0.0	0.00	0.00
4	Oct 28,2015 04:50	Crew Briefing (Pre Job)		0.00	0.0	0.0	0.00	0.00
5	Oct 28,2015 04:59	Pressure Test Start	Water	0.00	4,200.0	0.0	0.00	0.00
6	Oct 28,2015 05:00	Pressure Test Complete	Water	0.00	4,200.0	0.0	0.00	0.00
7	Oct 28,2015 05:02	Pump Preflush	Water	7.00	800.0	0.0	20.00	20.00
Remarks: Vissweep.								
8	Oct 28,2015 05:08	Pump	1-2-6 PozG	7.00	1,000.0	0.0	158.00	178.00
Remarks: Mix up and pump lead, 470sx @12.5#, Yield 1.89, WR 10.14.								
9	Oct 28,2015 05:31	Pump	1-1-2 PozG	7.00	800.0	0.0	70.00	70.00
Remarks: Mix up and pump tail, 260sx @13.5#, Yield 1.52, WR 7.12.								
10	Oct 28,2015 05:53	Drop Plug On The Fly	Water Based Mud	0.00	0.0	0.0	0.00	70.00
11	Oct 28,2015 05:54	Displace Fluid	Water Based Mud	8.00	400.0	0.0	220.00	290.00
12	Oct 28,2015 06:36	Decrease Pump Rate	Water Based Mud	2.80	1,200.0	0.0	15.00	305.00
13	Oct 28,2015 06:38	Pumping Pressure Before Bump	Water Based Mud	0.00	1,200.0	0.0	0.00	305.00
14	Oct 28,2015 06:39	Bump Plug	Water Based Mud	0.00	1,700.0	0.0	0.00	305.00
15	Oct 28,2015 06:41	Check Float		0.00	0.0	0.0	0.00	305.00
Remarks: 1.5 bbls. back.								
16	Oct 28,2015 06:42	Pressure Test	Water	0.00	1,600.0	0.0	0.00	305.00
Remarks: Casing test for 5 minutes.								
17	Oct 28,2015 07:00	Rig Out		0.00	0.0	0.0	0.00	305.00
18	Oct 28,2015 08:00	Job Complete		0.00	0.0	0.0	0.00	178.00
19	Oct 28,2015 08:30	Leave Location		0.00	0.0	0.0	0.00	178.00
Did Float Hold: Yes Fluid Returns : Yes Type : Cement Volume (bbl) : 25 Temperature (°F) : 75 FDAS Functioning Correctly : Yes Was the Program Followed As Per Design? : Yes								
Material Transfer Sheet Number <u>Material Transfer Sheet Number</u> 63609 63610 63611								