



# Cementing Service Report

9209314

Client Name Whiting Petroleum Corp.	Well Name Horsetail Federal 07H-1814	Rig Unit Drilling Co. 409	Job Date June 10,2016	Call Sheet 1066354
Client Representative Mr Chris	Surface Well Location SW NE Sec 12:T10N:R58W	Down Hole Well Location	Job Type Production Casing	Lead Supervisor Hall, Andrew J (25267)

## 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)	
8.500	15.000	0.000	13,945.000	--	--	

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)
5.500	20.000	P-110	11,080.0	12,640.0	309.05	4.778	6.050	0.0	13,936.0

#### Products

##### Stage 1

From Depth (ft):

To Depth (ft):

Acids/Blends/Fluids :

Scavenger: 105 Sacks of 50 % Type III / 50 % Poz, Density = 11 lb/gal, Volume Pumped = 50 (bbl)

Water Temperature(°F) = 70 , Bulk Temperature(°F) = 80 , Slurry Temperature(°F) = 90

+ 0.3 % of ASM-3 (Preblend),

+ 0.5 % of CFL-10 (Preblend),

+ 2 % of FWC-2 (Preblend),

+ 0.1 % of LTR (Preblend),

+ 0.25 lb/sack of Polyflake (Preblend),

+ 0.01 gal/bbl of CDF-3L (Add On The Fly)

##### Stage 2

From Depth (ft): 0

To Depth (ft): 2000

Acids/Blends/Fluids :

Lead 1: 275 Sacks of 50 % Type III / 50 % Poz, Density = 12 lb/gal, Volume Pumped = 96 (bbl)

Water Temperature(°F) = 70 , Bulk Temperature(°F) = 80 , Slurry Temperature(°F) = 90

+ 0.3 % of ASM-3 (Preblend),

+ 0.5 % of CFL-10 (Preblend),

+ 2 % of FWC-2 (Preblend),

+ 0.1 % of LTR (Preblend),

+ 0.25 lb/sack of Polyflake (Preblend),

+ 0.01 gal/bbl of CDF-3L (Add On The Fly)

##### Stage 3

From Depth (ft): 2000

To Depth (ft): 5000

Acids/Blends/Fluids :

Lead 2: 405 Sacks of 50 % Type III / 50 % Poz, Density = 12 lb/gal, Volume Pumped = 141 (bbl)

Water Temperature(°F) = 70 , Bulk Temperature(°F) = 80 , Slurry Temperature(°F) = 90

+ 0.3 % of ASM-3 (Preblend),

+ 0.5 % of CFL-10 (Preblend),

+ 2 % of FWC-2 (Preblend),

+ 0.1 % of LTR (Preblend),

+ 0.25 lb/sack of Polyflake (Preblend),

+ 0.2 % of SPC-2 (Preblend),

+ 0.01 gal/bbl of CDF-3L (Add On The Fly)

##### Stage 4

From Depth (ft): 5000

To Depth (ft): 13888

Acids/Blends/Fluids :

Tail: 1580 Sacks of 65% Class G / 35% Poz (1-2-0 G), Density = 13.5 lb/gal, Volume Pumped = 422.4 (bbl)

Water Temperature(°F) = 70 , Bulk Temperature(°F) = 80 , Slurry Temperature(°F) = 90

+ 0.3 % of ASM-3 (Preblend),

+ 0.5 % of CFL-10 (Preblend),

+ 0.2 % of SPC-2 (Preblend),

+ 0.25 lb/sack of Polyflake (Preblend),

+ 0.01 gal/bbl of CDF-3L (Add On The Fly)



# Cementing Service Report

9209314

## Fluid & Cement Data

Expected Cement Top: --					
<b>Wellbore Fluid</b>					
<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	--	--	--	--	Aug 24, 2015 15:49

## Units & Personnel

<b>Units</b>							
<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>
201191	PICKUP	1 Ton	449088	TRAILER	Utility Trailer	06/10/2016 08:00	06/10/2016 16:00
445070	TRAILER	SCM Twin	745070	TRACTOR	Tandem - Tractor	06/10/2016 08:00	06/10/2016 16:00
445047	TRAILER	SCM Twin	745047	TRACTOR	Tandem - Tractor	06/10/2016 08:00	06/10/2016 16:00
746089			746089	TRACTOR	Tandem - Tractor	06/10/2016 08:00	06/10/2016 16:00
449200	TRAILER	Utility Trailer	200596	PICKUP	1/2 Ton	06/10/2016 08:00	06/10/2016 16:00

<b>Crew and Bonuses</b>					
<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>	
Hall, Andrew J (25267)	06/10/2016 08:00	06/10/2016 16:00			
Scott, Derek (29603)					
Barden, Sean (27711)					
Phillips, James (23627)					
Bushnell, Cody (21127)	06/10/2016 08:00	06/10/2016 16:00			

## Treatment Reports & Remarks



**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	Jun 10,2016 08:00	Arrive On Location		--	--	--	--	0.00
2	Jun 10,2016 08:15	Crew Briefing (Rig in)		--	--	--	--	0.00
3	Jun 10,2016 09:00	Rig in Complete		--	--	--	--	0.00
4	Jun 10,2016 11:00	Crew Briefing (Pre Job)		--	--	--	--	0.00
5	Jun 10,2016 11:35	Pressure Test Start	Water	1.00	5,000.0	--	3.00	3.00
6	Jun 10,2016 11:37	Pressure Test Complete		--	--	--	--	3.00
7	Jun 10,2016 11:38	Pump Preflush Remarks: Mud flush	Water	6.00	1,000.0	--	30.00	33.00
8	Jun 10,2016 11:42	Pump Preflush Remarks: Visweep	Water	6.00	1,000.0	--	30.00	63.00
9	Jun 10,2016 11:45	Pump Spacer	Water	6.00	1,000.0	--	10.00	73.00
10	Jun 10,2016 12:25	Pump Scavenger	50 % Type III / 50 % Poz	10.00	1,000.0	--	50.00	123.00
11	Jun 10,2016 12:37	Pump	50 % Type III / 50 % Poz	10.00	800.0	--	96.00	219.00
12	Jun 10,2016 12:47	Pump	50 % Type III / 50 % Poz	10.00	700.0	--	141.40	360.40
13	Jun 10,2016 13:05	Pump	65% Class G / 35% Poz (1-2-0 G)	10.00	500.0	--	422.00	782.40
14	Jun 10,2016 14:10	Wash Remarks: Wash lines	Water	2.00	100.0	--	10.00	792.40
15	Jun 10,2016 14:15	Drop Plug		--	--	--	--	792.40
16	Jun 10,2016 14:20	Displace Fluid	Water	11.00	1,400.0	--	308.31	1,100.71
17	Jun 10,2016 15:00	Bump Plug		--	2,300.0	--	--	1,100.71
18	Jun 10,2016 15:02	Check Float		--	--	--	--	1,100.71
19	Jun 10,2016 15:05	Rig Out		--	--	--	--	1,100.71
20	Jun 10,2016 15:30	Job Complete Remarks: AAR		--	--	--	--	1,100.71
21	Jun 10,2016 16:00	Leave Location		--	--	--	--	1,100.71

Did Float Hold: Yes  
 Fluid Returns : Yes  
 Type : Cement  
 Volume (bbl) : 50  
 Temperature (°F) : 90  
 FDAS Functioning Correctly : Yes  
 Was the Program Followed As Per Design? : Yes

### Treatment Reports & Remarks

#### Material Transfer Sheet Number

Material Transfer Sheet Number

56489

56490

56491

56492

56494



Client Whiting  
Ticket No. 9209314  
Location SW NE Sec 12:T10N:R58W  
Comments

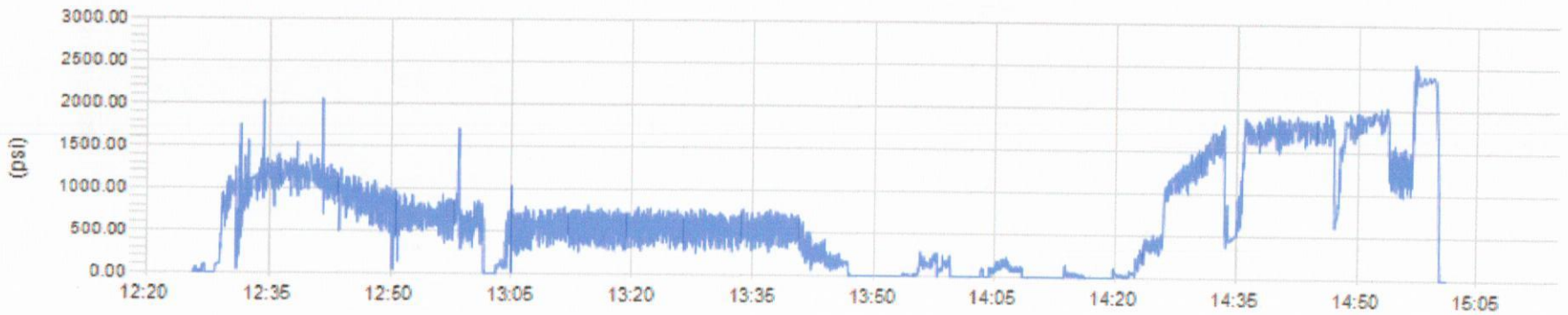
Client Rep Chris  
Well Name Horsetail Federal 07H-1814  
Job Type Production Casing

Supervisor Andy Hall  
Unit No. 445047  
Service District 505 Fort Lupton  
Job Date 06/10/2016

Unit 445047 Rate Total



Unit 445047 Pump Pressure



Unit 445047 Density





Client Whiting  
Ticket No. 9209314  
Location SW NE Sec12:T10N:R58W  
Comments

Client Rep Chris  
Well Name Horsetail Federal 07H-1814  
Job Type Production Casing

Supervisor Andy Hall  
Unit No. 445070  
Service District 505 Fort Lupton  
Job Date 06/10/2016

