



# Cementing Service Report

9206146

Client Name PDC Energy, Inc.	Well Name National Hog Farm 31 - 17	Rlg Ensign Drilling Inc. 354	Job Date August 20, 2015	Call Sheet 1060126
Client Representative Mr. Eloy Cossio	Surface Well Location SE NE Sec 17:T5N:R63W	Down Hole Well Location	Job Type Bradenhead Squeeze	Lead Supervisor Douglass, Brian (23898)

## 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)	
9.000	10.000	0.000	3,036.000	--	--	

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)	
8.625	24.000	--	--	--	--	--	--	0.0	370.0	
4.500	11.700	--	--	--	--	--	--	0.0	3,036.0	

Tubing										
Size (in)	Weight (lb/ft)	Grade	Collapse Pressure (psi)	Capacity (bbl)	I.D. (in)	O.D. (in)	Depth From (ft)	Depth To (ft)		
1.660	2.300	--	--	--	--	--	0.000	3,036.000		

## Products

<b>Stage 1</b>	
From Depth (ft):	3036
To Depth (ft):	2100
Acids/Blends/Fluids :	
Tail: 360 Sacks of 0-1-0 G, Density = 15.8 lb/gal, Volume Pumped = 74 (bbl)	
Water Temperature(°F) = 55 , Bulk Temperature(°F) = 75 , Slurry Temperature(°F) = 78 + 0.25 % of LTR (Prehydrate)	
<b>Stage 2</b>	
From Depth (ft):	2100
To Depth (ft):	0
Acids/Blends/Fluids :	
Plug: 290 Sacks of 1-2-4 G, Density = 13.5 lb/gal, Volume Pumped = 88 (bbl)	
Water Temperature(°F) = 55 , Bulk Temperature(°F) = 75 , Slurry Temperature(°F) = 80 + 0.25 % of LTR (Prehydrate)	
<b>Stage 3</b>	
From Depth (ft):	
To Depth (ft):	
Acids/Blends/Fluids :	



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Fluid & Cement Data					
Expected Cement Top:		Surface			
Wellbore Fluid					
Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	--	--	--	Jul 20, 2015 15:46

Units & Personnel							
Units							
Truck Unit No.	Main Type	Sub Type	Tractor Unit No.	Main Type	Sub Type	Time On Location	Time Off Location
449087	TRAILER	Utility Trailer	201191	PICKUP	1 Ton	08/20/2015 06:30	08/20/2015 11:45
445024	TRAILER	SCM Twin	745024	TRACTOR	Tandem - Tractor	08/20/2015 06:30	08/20/2015 11:45
446152	TRAILER	Bulker	746152	TRACTOR	Tandem - Tractor	08/20/2015 06:30	08/20/2015 11:45
446153	TRAILER	Bulker	746153	TRACTOR	Tandem - Tractor	08/20/2015 06:30	08/20/2015 11:45
201346	PICKUP	1/2 Ton				08/20/2015 06:30	08/20/2015 11:45

Crew and Bonuses				
Employee	Start Shift	End Shift	Second Start Shift	Second End Shift
Douglass, Brian (23898)	08/20/2015 06:30	08/20/2015 11:45		
Dunsbergen, Scott (29737)	08/20/2015 06:30	08/20/2015 11:45		
Pyfer, Kevin (29802)	08/20/2015 06:30	08/20/2015 11:45		
Jimenez Jr, Allan (24289)	08/20/2015 06:30	08/20/2015 11:45		
Joyner, Barlen (28603)	08/20/2015 06:30	08/20/2015 11:45		



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	Aug 20,2015 06:30	Arrive On Location		--	--	--	--	0.00
2	Aug 20,2015 06:40	Crew Briefing (Rig in)		--	--	--	--	0.00
3	Aug 20,2015 08:15	Rig in Complete		--	--	--	--	0.00
4	Aug 20,2015 08:20	Crew Briefing (Pre Job)		--	--	--	--	0.00
5	Aug 20,2015 08:35	Pressure Test Start		--	3,000.0	--	--	0.00
6	Aug 20,2015 08:36	Pressure Test Complete		--	--	--	--	0.00
7	Aug 20,2015 08:38	Pump	Water	1.50	125.0	--	5.00	0.00
8	Aug 20,2015 08:44	Pump	0-1-0 G	1.75	1,000.0	--	74.00	0.00
9	Aug 20,2015 09:18	Displace Fluid	Water	1.00	10.0	--	0.50	0.00
10	Aug 20,2015 09:20	Stop		--	--	--	--	0.00
		Remarks: wait for rig to pull up						
11	Aug 20,2015 09:35	Pump	Water	1.50	50.0	--	5.00	0.00
12	Aug 20,2015 09:40	Pump	1-2-4 G	1.75	1,400.0	--	88.00	0.00
13	Aug 20,2015 10:38	Displace Fluid	Water	1.00	10.0	--	1.00	0.00
14	Aug 20,2015 10:45	Rig Out		--	--	--	--	0.00
15	Aug 20,2015 11:30	Job Complete		--	--	--	--	0.00
16	Aug 20,2015 11:40	Pre-Departure Meeting		--	--	--	--	0.00
17	Aug 20,2015 11:45	Leave Location		--	--	--	--	0.00
Did Float Hold:		Not Applicable						
Fluid Returns :		Yes						
Type :		Cement						
Volume (bbl) :		1						
Temperature (°F) :		80						
FDAS Functioning Correctly :		Yes						
Was the Program Followed As Per Design? :		Yes						
Material Transfer Sheet Number								
<u>Material Transfer Sheet Number</u>								
65490								