



Cementing Service Report

9207902

Client Name PDC Energy, Inc.	Well Name State Peterson 11 - 16	Rig Ensign Drilling Inc. 356	Job Date August 13, 2015	Call Sheet 1059936
Client Representative Mr. Eloy Cossio	Surface Well Location SW SW Sec 16:T5N:R63W	Down Hole Well Location	Job Type Bradenhead Squeeze	Lead Supervisor Schneider, Patrick (24093)

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)
	7.250	10.000	410.000	3,350.000	--	--

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	J-55	1,370.0	2,950.0	26.11	8.097	9.625	0.0	410.0
	4.500	11.600	J-55	4,960.0	5,350.0	52.07	4.000	5.000	0.0	3,350.0

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	2.330	J-55	8,490.000	6.200	1.380	1.880	0.000	3,350.000

Products

Stage 1
From Depth (ft): 0
To Depth (ft): 3350
Acids/Blends/Fluids :
Tall: 635 Sacks of 0-1-0 G, Density = 15.8 lb/gal, Volume Pumped = 130 (bbl)
Water Temperature(°F) = 75 , Bulk Temperature(°F) = 75 , Slurry Temperature(°F) = 83
+ 0.2 % of CFR-2 (Preblend),
+ 0.2 % of LTR (Prehydrate)

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				—	Jul 20, 2015 15:46



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Units & Personnel							
Units							
Truck Unit No.	Main Type	Sub Type	Tractor Unit No.	Main Type	Sub Type	Time On Location	Time Off Location
449086	TRAILER	Utility Trailer	201025	PICKUP	1 Ton	08/13/2015 06:30	08/13/2015 11:00
445070	TRAILER	SCM Twin	745070	TRACTOR	Tandem - Tractor	08/13/2015 06:30	08/13/2015 11:00
446152	TRAILER	Bulker	746152	TRACTOR	Tandem - Tractor	08/13/2015 06:30	08/13/2015 11:00
446145	TRAILER	Bulker	746145	TRACTOR	Tandem - Tractor	08/13/2015 06:30	08/13/2015 11:00
Crew and Bonuses							
Employee	Start Shift		End Shift		Second Start Shift		Second End Shift
Schneider, Patrick (24093)	08/13/2015 06:30		08/13/2015 11:00				
Cheal, Samuel (28315)	08/13/2015 06:30		08/13/2015 11:00				
Hansen, Kevin (27592)	08/13/2015 06:30		08/13/2015 11:00				
Cheal, Samuel (28315)	08/13/2015 06:30		08/13/2015 11:00				



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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 13, 2015 06:30	Arrive On Location		--	--	--	--	0.00
2	Aug 13, 2015 06:35	Crew Briefing (Rig In)		--	--	--	--	0.00
		Remarks: discussed lease hazards and rig in procedures						
3	Aug 13, 2015 07:00	Rig In		--	--	--	--	0.00
4	Aug 13, 2015 07:15	Rig in Complete		--	--	--	--	0.00
5	Aug 13, 2015 07:30	Crew Briefing (Pre Job)		--	--	--	--	0.00
		Remarks: discussed job scope and everyones dutys						
6	Aug 13, 2015 08:04	Start - Fluid	Water	1.00	--	--	1.00	1.00
		Remarks: filled lines						
7	Aug 13, 2015 08:10	Pressure Test Start	Water	--	3,000.0	--	--	1.00
8	Aug 13, 2015 08:12	Pressure Test Complete	Water	--	0.0	--	--	1.00
		Remarks: good pressure test						
9	Aug 13, 2015 08:17	Pump Preflush	Water	1.50	1,600.0	--	10.00	11.00
		Remarks: fresh water preflush						
10	Aug 13, 2015 08:23	Mix Cement	0-1-0 G	1.60	2,300.0	--	130.00	141.00
		Remarks: 635 ska plug cement @ 15.8 ppg yield = 1.15 h2o req = 4.98						
11	Aug 13, 2015 09:45	Displace Fluid	Water	1.50	2,300.0	--	1.50	142.50
		Remarks: displaced to balance						
12	Aug 13, 2015 09:46	Balance Plug	Water	--	0.0	--	--	142.50
13	Aug 13, 2015 09:50	Tailgate Meeting		--	--	--	--	142.50
		Remarks: revisited JSA						
14	Aug 13, 2015 09:55	Rig Out		--	--	--	--	142.50
15	Aug 13, 2015 10:10	Wash	Water	--	--	--	--	142.50
		Remarks: washed pumps and lines						
16	Aug 13, 2015 10:40	Job Complete		--	--	--	--	142.50
17	Aug 13, 2015 10:45	Pre-Departure Meeting		--	--	--	--	142.50
18	Aug 13, 2015 11:00	Leave Location		--	--	--	--	142.50

Did Float Hold: Not Applicable

Fluid Returns : Yes

Type : Cement

Volume (bbl) : 15

Temperature (°F) : 85

FDAS Functioning Correctly : Yes

Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number

65407

65408

65413

65414



Client	PDC Energy	Client Rep	Mr. Eloy Cossio	Supervisor	Pat Schneider
Ticket No.	9207902	Well Name	State Peterson 11-16	Unit No.	745070
Location	SW SW Sec. 16-T5N-R63W	Job Type	Bradenhead Squeeze	Service District	Ft. Lupton
Comments	Plug #1: 930 sks 0:1:0 'G' + 2% CFR-2 + 2% LTR Plug #2: 385 sks 0:1:0 'G' + 2% CFR-2				
				Job Date	08/13/2015

