



Cementing Service Report

9206681

Client Name PDC Energy, Inc.	Well Name State Peterson 13 - 16	Rig Ensign Drilling Inc. 356	Job Date August 14, 2015	Call Sheet 1059980
Client Representative Mr. Eloy Cossio	Surface Well Location SW NW Sec 16:T5N:R63W	Down Hole Well Location	Job Type Bradenhead Squeeze	Lead Supervisor Lopez, Armando (29064)

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	--	379.000	3,380.000	--	--

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	24.14	8.097	9.625	0.0	379.0
4.500	11.600	P-110	7,560.0	10,690.0	52.53	4.000	5.000	0.0	3,380.0

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	0.000	---	---	---	---	---	0.000	3,370.000	

Products

Stage 1	
From Depth (ft):	0
To Depth (ft):	3370
Acids/Blends/Fluids :	
Tail: 947 Sacks of 0-1-0 G, Density = 15.8 lb/gal, Volume Pumped = 177 (bbl)	
Water Temperature(°F) = 0.8 , Bulk Temperature(°F) = 80 , Slurry Temperature(°F) = 98	
+ 0.2 % of CFR-2 (Preblend),	
+ 0.2 % of LTR (Prehydrate)	
Stage 2	
From Depth (ft):	
To Depth (ft):	
Acids/Blends/Fluids :	
Tail: 1 Sacks of 0-1-0 G, Density = 15.8 lb/gal, Volume Pumped = 1 (bbl)	
Water Temperature(°F) = 1 , Bulk Temperature(°F) = 1 , Slurry Temperature(°F) = 1	
+ 0.2 % of CFR-2 (Preblend)	

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



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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>
200925	PICKUP	1 Ton	449083	TRAILER	Utility Trailer	08/14/2015 10:00	08/14/2015 17:00
445046	TRAILER	SCM Twin	745046	TRACTOR	Tandem - Tractor	08/14/2015 10:00	08/14/2015 17:00
446145	TRAILER	Bulker	746145	TRACTOR	Tandem - Tractor	08/14/2015 10:00	08/14/2015 17:00
446152	TRAILER	Bulker	746152	TRACTOR	Tandem - Tractor	08/14/2015 10:00	08/14/2015 17:00
446167	TRAILER	Bulker	746167	TRACTOR	Tandem - Tractor	08/14/2015 10:00	08/14/2015 17:00

Crew and Bonuses				
<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Lopez, Armando (29064)	08/14/2015 10:00	08/14/2015 17:00		
Dunsbergen, Scott (29737)	08/14/2015 10:00	08/14/2015 17:00		
Meisner, Jeremy (27681)	08/14/2015 10:00	08/14/2015 17:00		
Devine, Richard (29733)	08/14/2015 10:00	08/14/2015 17:00		
Pyfer, Kevin (29802)	08/14/2015 10:00	08/14/2015 17:00		



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 14,2015 10:00	Arrive On Location		--	--	--	--	0.00
Remarks: Company man requested cement crew on location at 0930 08-14-2015								
2	Aug 14,2015 10:10	Crew Briefing (Rig In)		--	--	--	--	0.00
3	Aug 14,2015 11:00	Rig In Complete		--	--	--	--	0.00
4	Aug 14,2015 11:10	Crew Briefing (Pre Job)		--	--	--	--	0.00
5	Aug 14,2015 11:40	Start - Fluid	Water	1.00	500.0	--	1.00	1.00
Remarks: Fill lines								
6	Aug 14,2015 11:42	Pressure Test Start		--	2,500.0	--	--	0.00
7	Aug 14,2015 11:43	Pressure Test Complete		--	--	--	--	0.00
8	Aug 14,2015 11:44	Pump Spacer	Water	1.00	1,300.0	--	4.00	5.00
9	Aug 14,2015 11:51	Mix Cement		1.30	1,500.0	--	177.00	182.00
Remarks: Pumped 947 sacks Density 15.8 Yield 1.15 Water 4.98. Saw cement to surface at 171 bbls cement								
10	Aug 14,2015 14:58	Displace Fluid	Water	1.30	1,400.0	--	0.50	182.50
11	Aug 14,2015 15:00	Stop		--	--	--	--	0.00
12	Aug 14,2015 15:10	Wash		--	--	--	--	0.00
13	Aug 14,2015 15:45	Rig Out		--	--	--	--	0.00
14	Aug 14,2015 16:15	Job Complete		--	--	--	--	0.00
15	Aug 14,2015 16:50	Pre-Departure Meeting		--	--	--	--	0.00
16	Aug 14,2015 17:00	Leave Location		--	--	--	--	0.00

Did Float Hold: Not Applicable
 Fluid Returns : Yes
 Type : Cement
 Volume (bbl) : 8
 Temperature (°F) : 90
 FDAS Functioning Correctly : Yes
 Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number
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 65443
 65442
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