



Cementing Service Report

9211048

Client Name PDC Energy, Inc.	Well Name Spaur 10T-241	Rig Ensign Drilling Inc. 152	Job Date March 24, 2016	Call Sheet 1065754
Client Representative Mr. Brady Sharp	Surface Well Location SE SW Sec 10:T4N:R67W	Down Hole Well Location	Job Type Production Casing	Lead Supervisor Svoboda, Miloslav (28226)

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										
	<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>				
	8.500	15.000	1,334.000	11,545.000	--	7,021.000				
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>
	(in)	(lb/ft)		(psi)	(psi)	(bbl)	(in)	(in)	(ft)	(ft)
	9.625	36.000	J-55	2,020.0	3,520.0	103.13	8.921	10.625	0.0	1,334.0
	5.500	20.000	P-110	11,080.0	12,640.0	255.23	4.778	6.050	0.0	11,509.0

Products	
Stage 1	
From Depth (ft):	0
To Depth (ft):	4377
Acids/Blends/Fluids :	
Lead 1: 880 Sacks of 1:1:0 Poz:Type III, Density = 12.5 lb/gal, Volume Pumped = 271 (bbl)	
Water Temperature(°F) = 40 , Bulk Temperature(°F) = 40 , Slurry Temperature(°F) = 55	
+ 0.5 % of CFL-10 (Preblend),	
+ 0.3 % of ASM-3 (Preblend),	
+ 0.2 % of LTR (Preblend),	
+ 2 % of FWC-2 (Preblend),	
+ 0.15 % of CDF-4P (Preblend)	
Stage 2	
From Depth (ft):	4377
To Depth (ft):	11509
Acids/Blends/Fluids :	
Tail: 875 Sacks of 1:2:0 Poz:G, Density = 13.5 lb/gal, Volume Pumped = 291 (bbl)	
Water Temperature(°F) = 40 , Bulk Temperature(°F) = 40 , Slurry Temperature(°F) = 55	
+ 25 % of Silica Flour (Preblend),	
+ 0.5 % of CFL-10 (Preblend),	
+ 0.4 % of ASM-3 (Preblend),	
+ 0.2 % of SPC-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					Oct 10, 2015 17:03



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Attachment & Tools

Down Hole Tools

<u>Tool Type</u>	<u>Depth (ft)</u>	<u>Supplier</u>
Guide Shoe	11,509.000	Client
Float Insert	11,480.000	Client

Tubular Plugs

<u>Tubular Plug Type</u>	<u>Size (in)</u>	<u>Supplier</u>
Rubber Top	5.500	Client

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>
449095	TRAILER	Utility Trailer	201168	PICKUP	1 Ton	03/24/2016 13:00	03/24/2016 19:30
445046	TRAILER	SCM Twin	745046	TRACTOR	Tandem - Tractor	03/24/2016 13:00	03/24/2016 19:30
445052	TRAILER	SCM Twin	745052	TRACTOR	Tandem - Tractor	03/24/2016 13:00	03/24/2016 19:30
446171	TRAILER	Bulker	746171	TRACTOR	Tandem - Tractor	03/24/2016 13:00	03/24/2016 19:30
201520	PICKUP	1/2 Ton				03/24/2016 13:00	03/24/2016 19:30

Crew and Bonuses

<u>Employee</u>	<u>Start Shift</u>	<u>End Shift</u>	<u>Second Start Shift</u>	<u>Second End Shift</u>
Svoboda, Miloslav (28226)	03/24/2016 11:00	03/24/2016 23:00		
Ripka, Robert (23825)	03/24/2016 11:00	03/24/2016 23:00		
Barden, Sean (27711)	03/24/2016 11:00	03/24/2016 23:00		
DeGraffenried, Daniel (30718)	03/24/2016 11:00	03/24/2016 23:00		
Schroeder, Stephen (25442)	03/24/2016 11:00	03/24/2016 23:00		

Treatment Reports & Remarks



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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	Mar 24,2016 13:00	Arrive On Location		---	---	---	---	0.00
		Remarks: sing in						
2	Mar 24,2016 13:10	Crew Briefing (Rig In)		---	---	---	---	0.00
		Remarks: tailgate meeting						
3	Mar 24,2016 13:55	Rig In Complete		---	---	---	---	0.00
4	Mar 24,2016 14:30	Crew Briefing (Pre Job)		---	---	---	---	0.00
		Remarks: JSA						
5	Mar 24,2016 15:22	Pressure Test Start	Water	2.00	6,000.0	---	3.00	3.00
6	Mar 24,2016 15:24	Pressure Test Complete		---	---	---	---	3.00
7	Mar 24,2016 15:25	Pump Preflush	Water	5.00	500.0	---	20.00	23.00
		Remarks: SAPP + WWS30 + red dye						
8	Mar 24,2016 15:29	Pump Preflush	Water	5.50	700.0	---	20.00	43.00
		Remarks: Visweep						
9	Mar 24,2016 15:33	Pump Spacer	Water	7.50	900.0	---	10.00	53.00
		Remarks: fresh						
10	Mar 24,2016 15:35	Mix Cement	1:1:0 Poz:Type III	8.00	8.0	---	271.00	324.00
		Remarks: lead						
11	Mar 24,2016 16:04	Mix Cement	1:2:0 Poz:G	8.00	400.0	---	291.00	615.00
		Remarks: tail						
12	Mar 24,2016 16:40	Drop Plug		---	0.0	---	---	615.00
13	Mar 24,2016 16:47	Displace Plug		8.00	1,800.0	---	250.00	865.00
		Remarks: last 10 bbls @ 3 bpm						
14	Mar 24,2016 17:21	Bump Plug		---	2,500.0	---	---	865.00
		Remarks: hold pressure for 15 min						
15	Mar 24,2016 17:36	Check Float		---	---	---	---	865.00
		Remarks: got 2.5 bbls back						
16	Mar 24,2016 17:40	Stop		---	---	---	---	865.00
17	Mar 24,2016 18:00	Wash		---	---	---	---	865.00
		Remarks: wash pump						
18	Mar 24,2016 18:20	Rig Out		---	---	---	---	865.00
19	Mar 24,2016 18:35	Job Complete		---	---	---	---	865.00
20	Mar 24,2016 19:00	Pre-Departure Meeting		---	---	---	---	865.00
		Remarks: AAR						
21	Mar 24,2016 19:20	Leave Location		---	---	---	---	865.00
Did Float Hold: Yes Fluid Returns : Yes Type : Cement Volume (bbl) : 10 Temperature (°F) : 55 FDAS Functioning Correctly : Yes Was the Program Followed As Per Design? : Yes								



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Treatment Reports & Remarks

Material Transfer Sheet Number

Material Transfer Sheet Number

67068

67069

67070

67071