

RIG/UNIT #: 356  
TOUR: Day Shift

### DAILY WORK RECORD

Ticket No: 4289410-SO1

DATE: 10-Jan-18, 10:00

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<b>COMPANY</b>		
PDC ENERGY, INC	LOCATION: MELLON 28-1 (CO, Station: Lasalle)	PO:
ATTENTION: ACCOUNTS PAYABLE		AFE:
BRIDGEPORT, West Virginia, USA 26330		

CHARGES & EXPENDABLES			
NAME	QTY	UNIT PRICE	EXT. PRICE
Rig Hours	7.00	406.50	2,845.50
Rig Up	2.00	290.00	580.00
Crew Travel	2.00	220.00	440.00
Labor - Floor	11.00	55.00	605.00
Bird Bath Rental	1.00	35.00	35.00
Tubing Wiper Rubber	1.00	48.00	48.00
<b>CHARGES &amp; EXPENDABLES SUB-TOTAL</b>			<b>4,553.50</b>
<b>FIELD ESTIMATE (TAX NOT INCLUDED)</b>			<b>\$ 4,553.50</b>

ROD & TUBING DETAILS					
PULLED	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
RAN	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
NOTES:					
TUBING DETAILS					
PULLED	SIZE:	JOINTS:	TALLY:		
RAN	SIZE:	JOINTS:	TALLY:		
LANDED AT:			NIPPLE AT:		
NOTES:					

<b>CUSTOMER STAMP</b>
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PUMP DETAILS						
SIZE:	TYPE:	SERIAL #:				
PRESSURE TESTS						
FUNCTION BOP	TIME TO OPERATE (s)	LOW (psi)	TIME (min)	HIGH (psi)	TIME (min)	TEST DATE & TIME
INITIAL ACCUM. PRESSURE:		FINAL ACCUM. PRESSURE:		RECHARGE TIME:		
DAILY WALK AROUND: Not run		RAM SAVER: NO		EMERGENCY HORN TEST: Not run		
LEL TEST: Not run		CROWN SAVER: Not run		EMERGENCY ENGINE KILLS: Not run		
DETAILED INSPECTION DATE:				SCBA DRILL DATE:		
MAN DOWN DRILL DATE:				RIG RESCUE DRILL DATE:		
BOP DRILL DATE:				BOP DRILL DURATION:		
IADC DETAILED INSPECTION DATE:						
WEATHER: Cloudy		WIND: Calm		TEMP: 0 °F		H2S (%): 0.0

DETAILS OF OPERATIONS				
FROM	TO	DURATION (hrs)	ACTIVITY	DETAILS
10-Jan-18, 10:00	10-Jan-18, 21:00	11.00	Rig - RU,RD Work Floor Tbg Equip.	ROAD RIG TO LOC. HELD SAFETY MEETING .SPOT IN EQUIP .RIG UP .R/U PUMP/TANK .FUCTION TESTED BOP .CHECKED PRESS 500/250 .BLEED OFF PRESS .KILL WELL .N/D WELL TREE MASTER VALVE AND 3K WELL HEAD TOP FLANGE .N/U BOP .R/U W/FLOOR TBG EQUIP .UNSEAT TBG .RELEASE PACKER .STOOD BACK 140 JTS .L/D 91 JTS S/N N/C 8' SUB AND PACKER 79 JTS BELOW PACKER .TOTAL 231 JTS .R/U WIRE LINE .RIH W/GAUGE RING .RIH WITH A CIBP .SET BP AT 6664' .DUMP BAIL 2 SKS OF CEMENT .RIH W/PERF GUN .SHUT HOLES AT 4546' AND 4350' .RIH W/ CICR .SET CICR AT 4365' .R/D WIRE LINE .SHUT WELL .DRAIN PUMP/LINES .CLEANED LOC .CREW TRAVELED HOME .
<b>TOTAL TIME: 11.00 hours</b>				

CREW DETAILS									
ROLE	NAME	START TIME	DURATION (hrs)	TRAVEL TIME (hrs)	PERS. VEH.	TRAVEL DIST (mi)	SUB.	DIST FROM RES (mi)	INJURY FREE
Relief Operator	Eric Rudd	10-Jan-18, 10:00	11.00	0.00	No	0.00		0.00	Yes
Relief Operator	Gervan Hernandez Morales	10-Jan-18, 10:00	11.00	0.00	No	0.00		0.00	Yes
Service Rig Manager	Omar Munoz	10-Jan-18, 10:00	11.00	0.00	No	0.00		0.00	Yes
Operator	George Quinones	10-Jan-18, 10:00	11.00	0.00	No	0.00		0.00	Yes
Derrickhand	Oscar Arce	10-Jan-18, 10:00	11.00	0.00	No	0.00		0.00	Yes

SIGNATURES	
RIG MANAGER/SUPERVISOR'S SIGNATURE:  	The customer agrees that the contractor ("Ensign") will perform the work and supply the materials ("the work") as described within and in accordance with the conditions set out in the IADC contract and in accordance with all exhibits, specifications, schedules and/or parts (if any) attached hereto.  OPERATOR'S REP. SIGNATURE:    BUD HOLMAN 970-301 3897



# ENSIGN WELL SERVICES

020 Weld County Road 46, LaSalle, Colorado 80645  
Telephone (970) 284-6006



RIG/UNIT #: 356  
TOUR: Day Shift

## DAILY WORK RECORD

Ticket No: 4289410-SO2

DATE: 11-Jan-18, 06:00

Page: 1 of 1

<b>COMPANY</b>		
<b>PDC ENERGY, INC</b>	LOCATION: MELLON 28-1 (CO, Station: Lasalle)	PO: AFE:
ATTENTION: ACCOUNTS PAYABLE		
BRIDGEPORT, West Virginia, USA 26330		

CHARGES & EXPENDABLES			
NAME	QTY	UNIT PRICE	EXT. PRICE
Rig Hours	11.50	406.50	4,674.75
Crew Travel	2.00	220.00	440.00
Labor - Floor	13.50	55.00	742.50
Bird Bath Rental	1.00	35.00	35.00
Washington Circulating Head	1.00	120.00	120.00
Tubing Wiper Rubber	1.00	48.00	48.00
Thread Dope	1.00	40.00	40.00
<b>CHARGES &amp; EXPENDABLES SUB-TOTAL</b>			<b>6,100.25</b>
<b>FIELD ESTIMATE (TAX NOT INCLUDED)</b>			<b>\$ 6,100.25</b>

<b>CUSTOMER STAMP</b>
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ROD & TUBING DETAILS					
<b>PULLED</b>	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
<b>RAN</b>	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
NOTES:					
<b>TUBING DETAILS</b>					
<b>PULLED</b>	SIZE:	JOINTS:	TALLY:		
<b>RAN</b>	SIZE:	JOINTS:	TALLY:		
LANDED AT: NIPPLE AT:					
NOTES:					
<b>PUMP DETAILS</b>					
SIZE:		TYPE:		SERIAL #:	

PRESSURE TESTS						
FUNCTION BOP	TIME TO OPERATE (s)	LOW (psi)	TIME (min)	HIGH (psi)	TIME (min)	TEST DATE & TIME
INITIAL ACCUM. PRESSURE:		FINAL ACCUM. PRESSURE:		RECHARGE TIME:		
DAILY WALK AROUND: Not run		RAM SAVER: NO		EMERGENCY HORN TEST: Not run		
LEL TEST: Not run		CROWN SAVER: Not run		EMERGENCY ENGINE KILLS: Not run		
DETAILED INSPECTION DATE:				SCBA DRILL DATE:		
MAN DOWN DRILL DATE:				RIG RESCUE DRILL DATE:		
BOP DRILL DATE:				BOP DRILL DURATION:		
IADC DETAILED INSPECTION DATE:						
WEATHER: Sunny		WIND: Calm		TEMP: 0 °F		H2S (%): 0.0

DETAILS OF OPERATIONS				
FROM	TO	DURATION (hrs)	ACTIVITY	DETAILS
11-Jan-18, 06:00	11-Jan-18, 19:30	13.50	WO - Cementing	CREW TRAVELED TO LOC .HELD SAFETY MEETING .CHECKED PRESS .0 /CNG .TH W/143 JTS 10' 8' SUBS AND STINGER .R/U CEMENTERS .MIX AND PUMPED 140 SKS OF CLASS G 15.8# CEMENT DOWN TBG INSIDE 4 1/2 CNG THRU A CIRC SET AT 4365' WITH SQUEEZE HOLES AT 4350' AND 4546' .R/D CEMENTERS .STOOD BACK 52 JTS .L/D 91 JTS .R/U WIRE LINE .RIH W/CNG CUTTER .CUT CNG AT 1500' .R/D WIRE LINE .R/D W/FLOOR TBG EQUIP .N/D BOP AND 3K WELL HEAD .UNLAND CNG .N/U SPOOL ON SURF CNG .AND BOP .R/U W/FLOOR .CHANGE TBG EQUIP TO 4 1/2 .L/D 37 JTS OF 4 1/2 CNG .CHANGE TBG EQUIP TO 2 3/8 .SHUT WELL .DRAIN PUMP/LINES .CLEANED LOC .CREW TRAVELED HOME .
<b>TOTAL TIME: 13.50 hours</b>				

CREW DETAILS									
ROLE	NAME	START TIME	DURATION (hrs)	TRAVEL TIME (hrs)	PERS. VEH.	TRAVEL DIST (mi)	SUB.	DIST FROM RES (mi)	INJURY FREE
Relief Operator	Eric Rudd	11-Jan-18, 06:00	13.50	0.00	No	0.00		0.00	Yes
Relief Operator	Gervan Hernandez Morales	11-Jan-18, 06:00	13.50	0.00	No	0.00		0.00	Yes
Service Rig Manager	Omar Munoz	11-Jan-18, 06:00	13.50	0.00	No	0.00		0.00	Yes
Operator	George Quinones	11-Jan-18, 06:00	13.50	0.00	No	0.00		0.00	Yes
Derrickhand	Oscar Arce	11-Jan-18, 06:00	13.50	0.00	No	0.00		0.00	Yes

SIGNATURES	
RIG MANAGER/SUPERVISOR'S SIGNATURE:  	The customer agrees that the contractor ("Ensign") will perform the work and supply the materials ("the work") as described within and in accordance with the conditions set out in the IADC contract and in accordance with all exhibits, specifications, schedules and/or parts (if any) attached hereto.  OPERATOR'S REP. SIGNATURE:    BUD HOLMAN 970-301 3897



# ENSIGN WELL SERVICES

220 Weld County Road 46, LaSalle, Colorado 80645  
Telephone (970) 284-6006



RIG/UNIT #: 356  
TOUR: Day Shift

## DAILY WORK RECORD

Ticket No: 4289410-SO3

DATE: 12-Jan-18, 06:00

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<b>COMPANY</b>		
<b>PDC ENERGY, INC</b>	LOCATION: MELLON 28-1 (CO, Station: Lasalle)	PO:
ATTENTION: ACCOUNTS PAYABLE		AFE:
BRIDGEPORT, West Virginia, USA 26330		

CHARGES & EXPENDABLES			
NAME	QTY	UNIT PRICE	EXT. PRICE
Rig Hours	10.00	406.50	4,065.00
Rig Up	1.00	290.00	290.00
Crew Travel	2.00	220.00	440.00
Labor - Floor	13.00	55.00	715.00
Bird Bath Rental	1.00	35.00	35.00
Washington Circulating Head	1.00	120.00	120.00
Tubing Wiper Rubber	1.00	48.00	48.00
Thread Dope	1.00	40.00	40.00
<b>CHARGES &amp; EXPENDABLES SUB-TOTAL</b>			<b>5,753.00</b>
<b>FIELD ESTIMATE (TAX NOT INCLUDED)</b>			<b>\$ 5,753.00</b>

ROD & TUBING DETAILS					
<b>PULLED</b>	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
<b>RAN</b>	SIZE:	PLAIN:	SCRAPERS:	PONY'S:	
NOTES:					
<b>TUBING DETAILS</b>					
<b>PULLED</b>	SIZE:	JOINTS:	TALLY:		
<b>RAN</b>	SIZE:	JOINTS:	TALLY:		
LANDED AT:			NIPPLE AT:		
NOTES:					
<b>PUMP DETAILS</b>					
SIZE:		TYPE:		SERIAL #:	

<b>CUSTOMER STAMP</b>
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PRESSURE TESTS						
FUNCTION BOP	TIME TO OPERATE (s)	LOW (psi)	TIME (min)	HIGH (psi)	TIME (min)	TEST DATE & TIME
INITIAL ACCUM. PRESSURE:		FINAL ACCUM. PRESSURE:		RECHARGE TIME:		
DAILY WALK AROUND: Not run		RAM SAVER: NO		EMERGENCY HORN TEST: Not run		
LEL TEST: Not run		CROWN SAVER: Not run		EMERGENCY ENGINE KILLS: Not run		
DETAILED INSPECTION DATE:				SCBA DRILL DATE:		
MAN DOWN DRILL DATE:				RIG RESCUE DRILL DATE:		
BOP DRILL DATE:				BOP DRILL DURATION:		
IADC DETAILED INSPECTION DATE:						
WEATHER: Partly Cloudy		WIND: Calm		TEMP: 0 °F		H2S (%): 0.0

DETAILS OF OPERATIONS				
FROM	TO	DURATION (hrs)	ACTIVITY	DETAILS
12-Jan-18, 06:00	12-Jan-18, 19:00	13.00	WO - Cementing	CREW TRAVELED TO LOC. HELD SAFETY MEETING. CHECKED PRESS O/SURF CNG. TH W/52 JTS S/N AND MULE SHOE 100' INSIDE 4 1/4 CNG. CIRC. SURF CNG DOWN TBG W/MUD. R/U CEMENTERS. MIX AND PUMP 100 SKS OF CLASS G 15.8# CEMENT WITH 2% CACL2 DOWN TBG AT 1600'. R/D CEMENTERS. L/D 25 JTS. CIRC. DOWN TBG. WAIT 4 HRS. L/D 7 MORE JTS. 20 JTS IN HOLE. R/U CEMENTERS. MIX AND PUMP 275 SKS OF CEMENT DOWN TBG. CEMENT CIRCULATE TO SURF. R/D CEMENTERS. L/D 20 JTS AND MULE SHOE. R/D W/FLOOR TBG EQUIP. N/D BOP AND SPOOL. TOP OFF SURF CNG WITH 25 SKS OF CEMENT. WASH EQUIP. PUT CAP ON SURF CNG. R/D. RACKED PUMP/TANK. CLEANED LOC. CREW TRAVELED HOME.
<b>TOTAL TIME: 13.00 hours</b>				

CREW DETAILS									
ROLE	NAME	START TIME	DURATION (hrs)	TRAVEL TIME (hrs)	PERS. VEH.	TRAVEL DIST (mi)	SUB.	DIST FROM RES (mi)	INJURY FREE
Relief Operator	Eric Rudd	12-Jan-18, 06:00	13.00	0.00	No	0.00		0.00	Yes
Service Rig Manager	Omar Munoz	12-Jan-18, 06:00	13.00	0.00	No	0.00		0.00	Yes
Operator	George Quinones	12-Jan-18, 06:00	13.00	0.00	No	0.00		0.00	Yes
Floorhand	Joshua Overstreet	12-Jan-18, 06:00	13.00	0.00	No	0.00		0.00	Yes
Derrickhand	Oscar Arce	12-Jan-18, 06:00	13.00	0.00	No	0.00		0.00	Yes

SIGNATURES	
RIG MANAGER/SUPERVISOR'S SIGNATURE:  <i>Omar Munoz</i>	The customer agrees that the contractor ("Ensign") will perform the work and supply the materials ("the work") as described within and in accordance with the conditions set out in the IADC contract and in accordance with all exhibits, specifications, schedules and/or parts (if any) attached hereto.  OPERATOR'S REP. SIGNATURE:  <i>X</i>  BUD HOLMAN 970-301 3897



# CEMENTING JOB LOG

Project Number	FL2913	Job Date	1/12/2018
State	CO	County	Weld
Customer	PDC Energy, Inc.	Customer Representative	Bud Holman
O-TEX Field Supervisor	Cheal, Sam	Phone	970-301-3897
Man Hours	27	API Number	05-123-11133

O-TEX Location	Brighton, Colorado 303-857-7948
Lease Name	Mellon 28-1
Well No.	
Job Type	Stub Plug / Top Off

USE THIS FORM TO NOTE ANY ISSUES ENCOUNTERED WITH THE PERFORMANCE OF THIS JOB.  
THIS MAY INCLUDE TIME AT THE SHOP, ON THE ROAD OR DELAYS WITH DRILLING CONTRACTOR.

DATE	TIME	VOLUME	RATE	PRESS		JOB PROCEDURES
				CSG	Tbg.	
1/12/2018	8:00					Leave Yard
	9:00					Arrive at location (requested @9:00)
	9:05					Tailgate meeting (talk about spotting trucks) / sign in
	9:10					Spot pump unit & bulk truck
	9:15					Rig in / test cement mix water
	9:30					Safety meeting with O-TEX crew / rig crew / third party crew
	9:41	1	bbl	1.00	420	Fill line with fresh water
	9:43				3600	Pressure test iron
	9:45	5	bbl	3.00	300	Pump fresh water to establish circulation
	9:49	20.6	bbl	3.00	320	Mix / Pump cement @15.8ppg
	10:00	3.5	bbl	3.00	120	Displace with fresh water to balance
	10:05				-9	Shutdown / Wash pump unit
	10:10					Wait on location for second stage
	14:00				2500	Rig back onto well head / Pressure test iron again
	14:05	5	bbl	3.00	200	Pump fresh water to establish circulation
	14:08	56.9	bbl	3.00	250	Mix / Pump cement @15.8ppg
	14:45				300	Cement to surface
	14:50					Pull 2 3/8" tubing / Remove BOP
	15:20	5	bbl	1.00	20	Top off well with cement
	16:30				0	Shutdown / Wash pump unit
	16:45					Rig out
	16:55					AAR / Discuss leaving location
	17:00					Leave location

### JOB CALCULATIONS

Lead Plug - Estimated cement coverage - 1,400 - 1,600ft.

Stub Plug - Estimated cement coverage - 0 - 619ft.

8 5/8" Surface casing 24# - (cap. 0.0637)

4 1/2" Production casing 11.6# - (cap. 0.0155)

14" (estimated) OH (ann.0.1904)

2 3/8" Tubing 4.7# - (cap. 0.0038662)

### Lead Plug - CASING / TUBING DATA

8 5/8" Surface casing 24# 0 - 363ft.

14" (estimated) OH 363 - 1,600ft.

4 1/2" Production casing 11.6# 1,500 - 1,600ft.

2 3/8" Tubing 4.7# 0 - 1,600ft.

### Stub Plug - CASING / TUBING DATA

8 5/8" Surface casing 24# 0 - 363ft.

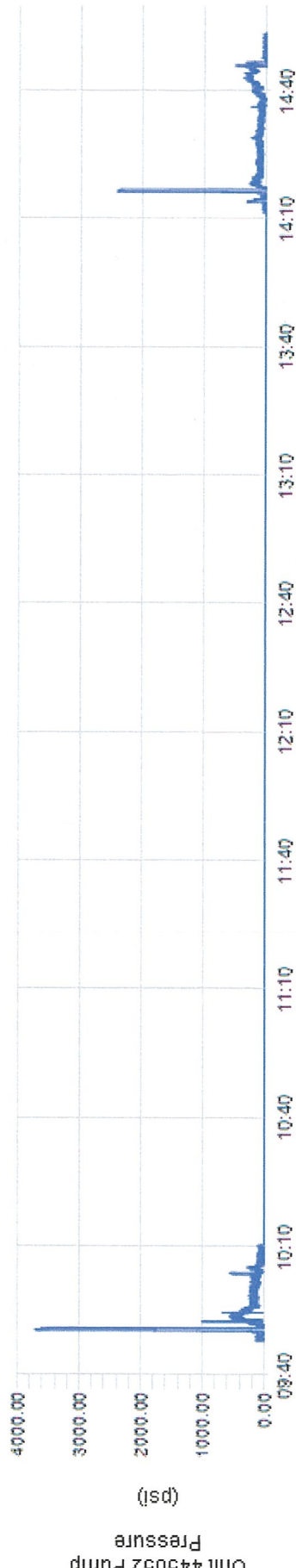
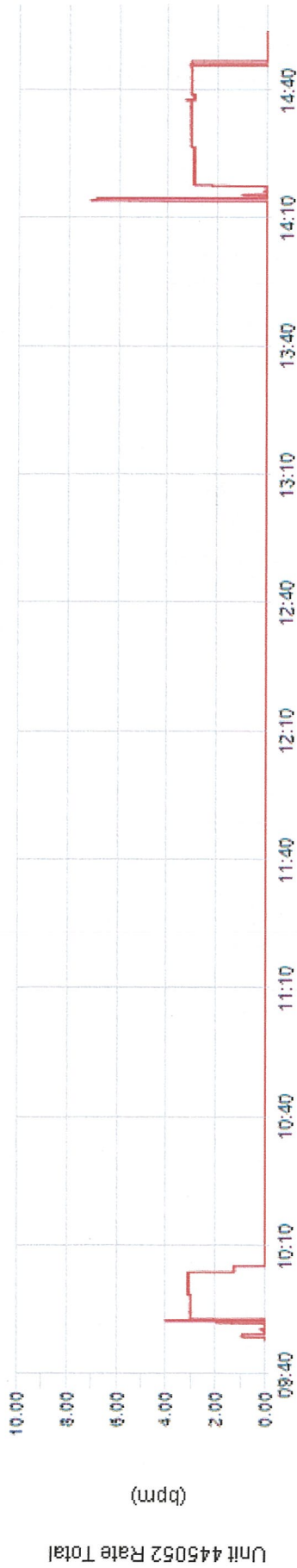
14" (estimated) OH 363 - 619ft.

2 3/8" Tubing 4.7# 0 - 619ft.

PLEASE NOTE ANY CONTRACTOR ISSUES OR COMMENTS BELOW



**Client** PDC Energy, Inc.  
**Ticket No.** FL2913  
**Location** NE SW Sec 28:T5N:R67W  
**Comments** See job log for details  
**Client Rep** Bud Holman  
**Well Name** Mellon 28-1  
**Job Type** Stub Plug / Top Off  
**Supervisor** Sam Cheal  
**Unit No.** 740018  
**Service District** Brighton, CO  
**Job Date** 1/12/2018





## Field Cementing Water Analysis

Company: PDC Energy, Inc.  
 Well: Mellon 28-1

Test Date: 1/12/2018  
 Ticket Number: FL2913

Ion	Sample Volume	Titer	Factor	Concentration	Units	Limit
pH				7		6 - 8
Calcium	50	188	0.801	150.58	mg/l	<300
Total Hardness				250	mg/l	<600
Chlorides				92	mg/l	<500
Alkalinity				350	mg/l CaCO <sup>3</sup>	<600
Slurry Temperature				88	°F	50-80°F

Water Analysis Limits		
	Limits	Potential Impact of Excess
pH	6 - 8	Accelerate or Retard Set Time, Short & Long Term Stability Issues
Calcium	<300	Accelerate Set Times and Higher Mixing Viscosities
Total Hardness	<600	Accelerate or Retard Set Time and Higher Mixing Viscosities
Chlorides	<500	Accelerate Set Time, Higher Mixing Visc, Interfere with fluid loss chemical
Alkalinity	<600	Accelerate or Retard Set Time, Lower Compressive Strength, Higher Visc
Slurry Temperature	50-80°F	Blend will not perform as designed

O-Tex Supervisor Signature: 

Company Supervisor Signature: \_\_\_\_\_



Service Location: Brighton, Colorado 303-857-7948  
 Service Address: 821 County Road 27, Brighton, CO 80603

FIELD RECEIPT

TN # FL2913

Service Date: 1/12/2018  
 Customer: PDC Energy, Inc.  
 Address: PO Box 26  
 Attn: Accounts Payable  
 City: Bridgeport  
 St: WV 26330  
 Customer Rep: Bud Holman

Well Name: Mellon 28-1  
 County: Weld  
 State: CO  
 API #: 05-123-11133  
 AFE #

Job Type: Stub Plug / Top Off  
 Service Supervisor: Cheal, Sam  
 Pump #1: 740018  
 Pump #2: N/A

REF #	Description	unit of measure	quan	gross	disc	net
CM006	O-Tex Ultra Premium Cement (94lbs/ft3)	94SACK	400			
CP018	Calcium Chloride	LBS	621			
CT002	Pump Charge 0-2000'	4-HRS	1			
JM001	Data Acquisition System	JOB	1			
AE014	Environmental Fee*	JOB	1			
ML001	Pickup Mileage	UNTMIL	35			
ML002	Pump Truck/Heavy Vehicle Mileage	UNTMIL	35			
ML003	Bulk Cement Delivery/Return	MILE	708			
MX001	Bulk Material Mixing Service Charge	SCF	508			
CP009	CF-41 (Foam Preventer)	GAL	4			
CC015	Pump Charge Additional Hours	UNTHRS	4			
AE012	Bulk Unit Additional Hours	UNTHRS	4			

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: \_\_\_\_\_

DISCLAIMER OF LIABILITY: With respect to this report, neither C&J Energy Services nor any of their employees, makes any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.



# Job Summary

Ticket Number	Ticket Date
TN# FL2913	1/12/2018

COUNTY	COMPANY	API Number
Weld	PDC Energy, Inc.	05-123-11133
WELL NAME	RIG	JOB TYPE
Mellon 28-1	Ensign 356	Stub Plug / Top Off
SURFACE WELL LOCATION	O-TEX Field Supervisor	CUSTOMER REP
NE SW Sec 28:T5N:R67W	Sam Cheal	Bud Holman

EMPLOYEES		
Field, Tony		
Phillips, Sam		

<b>WELL PROFILE</b>			
Max Treating Pressure (psi):	1500	Bottom Hole Static Temperature (°F):	0
Bottom Hole Circulating Temperature (°F):		Well Type:	Oil

### Open Hole

1	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
	14	363	1500	363	1500

### Casing/Tubing/Drill Pipe

Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Surface	8 5/8	24	J-55	0	363	0	363
Production	4 1/2	11.6	P-110	1500	1600	1500	1600
Tubing	2 3/8	4.7		0	1600	0	1600

### CEMENT DATA

<b>Stage 1:</b>	From Depth (ft):	1400	To Depth (ft):	1600
Type: <b>Lead Plug</b>	Volume (sacks):	100	Volume (bbls):	20.6
Cement & Additives:				
100% Class G + 2% CaCl2				
	Density (ppg)	15.8	Yield (ft³/sk)	1.16
	Water Req.	5.00		

<b>Stage 2:</b>	From Depth (ft):	0	To Depth (ft):	619
Type: <b>Stub Plug</b>	Volume (sacks):	300	Volume (bbls):	61.9
Cement & Additives:				
100% Class G + 2% CaCl2				
	Density (ppg)	15.8	Yield (ft³/sk)	1.16
	Water Req.	5.00		

### SUMMARY

Preflushes:	5 bbls of Fresh Water	Calculated Displacement (bbl):	5.3	Stage 1	Stage 2
	5 bbls of Fresh Water	Actual Displacement (bbl):	3.5		
Total Preflush/Spacer Volume (bbl):	10	Plug Bump (Y/N):	N/A	Bump Pressure (psi):	N/A
Total Slurry Volume (bbl):	28.6	Lost Returns (Y/N):	No (if Y, when)		
Total Fluid Pumped	42.1				
Returns to Surface:	Cement	2 bbls			

Job Notes (fluids pumped / procedures / tools / etc.):

**Lead Plug** - Pumped 5bbls fresh water to establish circulation, Mixed / pumped 20.6bbls of cement @15.8ppg, Displaced with fresh water to balance. Estimated cement coverage - **1,400 - 1,600ft**. 4 1/2" production casing cut @ **1,500ft**. **Stub Plug** - Pumped 5bbls fresh water to establish circulation, Mixed / pumped 56.9bbls of cement @15.8ppg, Cement to surface. Wait for rig to pull 2 3/8" tubing out / remove BOP. Topped of well with cement. Estimated cement coverage - **0 - 619ft**. Pumped job as per program / customers request. Detailed discription of events in Job Log.

Customer Representative Signature: \_\_\_\_\_

**Thank You For Using**  
**O-TEX Cementing**

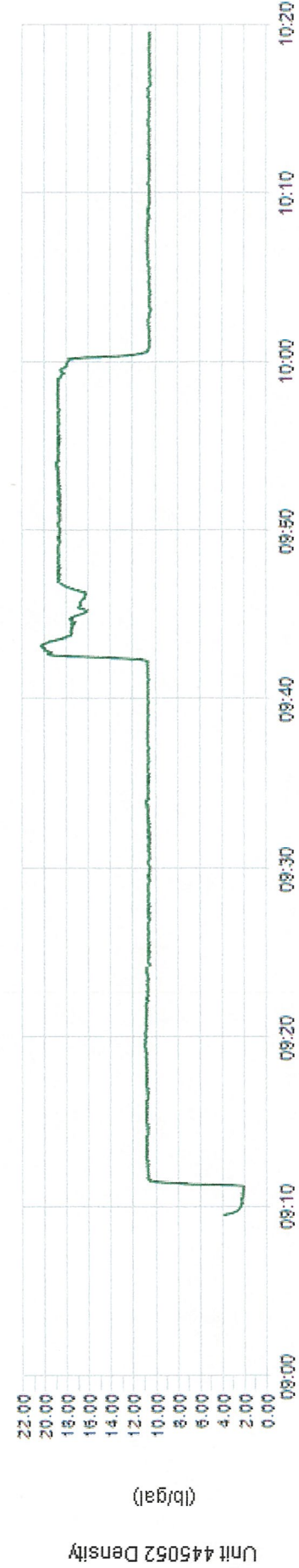
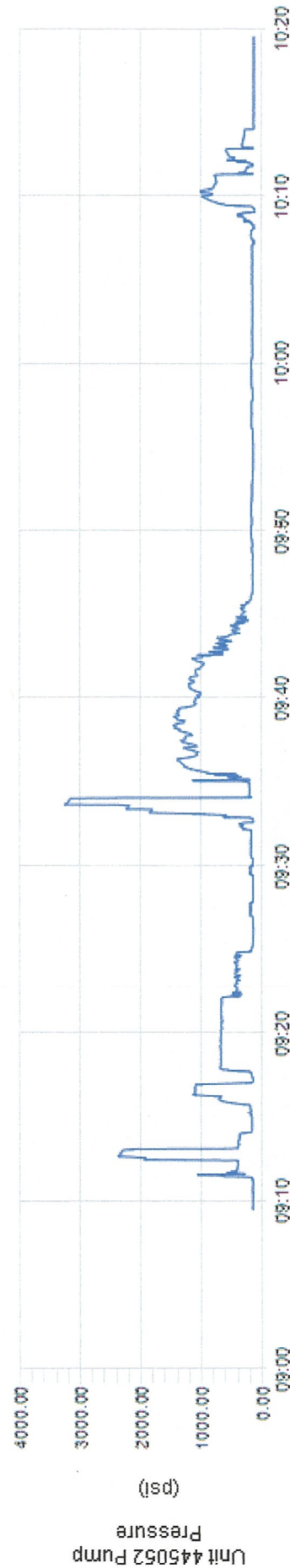
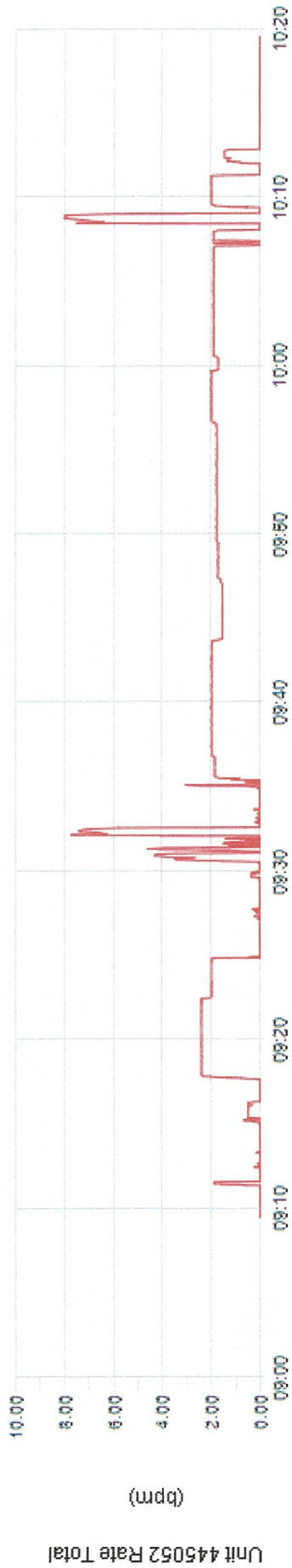




**Client:** PDC Energy, Inc.  
**Ticket No.:** FL2912  
**Location:** NE SW Sec 28:T5N:R67W  
**Comments:** See job log for details

**Client Rep:** Bud Holman  
**Well Name:** Mellon 28-1  
**Job Type:** Cement Squeeze

**Supervisor:** Sam Cheal  
**Unit No.:** 740018  
**Service District:** Brighton, CO  
**Job Date:** 1/11/2018



## Field Cementing Water Analysis

Company: PDC Energy, Inc.  
 Well: Mellon 28-1

Test Date: 1/11/2018  
 Ticket Number: FL2912

Ion	Sample Volume	Titer	Factor	Concentration	Units	Limit
pH				7		6 - 8
Calcium	50	140	0.801	112	mg/l	<300
Total Hardness				250	mg/l	<600
Chlorides				92	mg/l	<500
Alkalinity				350	mg/l CaCO <sup>3</sup>	<600
Slurry Temperature				83	°F	50-80°F

Water Analysis Limits		
	Limits	Potential Impact of Excess
pH	6 - 8	Accelerate or Retard Set Time, Short & Long Term Stability Issues
Calcium	<300	Accelerate Set Times and Higher Mixing Viscosities
Total Hardness	<600	Accelerate or Retard Set Time and Higher Mixing Viscosities
Chlorides	<500	Accelerate Set Time, Higher Mixing Visc, Interfere with fluid loss chemical
Alkalinity	<600	Accelerate or Retard Set Time, Lower Compressive Strength, Higher Visc
Slurry Temperature	50-80°F	Blend will not perform as designed

O-Tex Supervisor Signature:  \_\_\_\_\_

Company Supervisor Signature: \_\_\_\_\_



Service Location: Brighton, Colorado 303-857-7948  
 Service Address: 821 County Road 27, Brighton, CO 80603

FIELD RECEIPT

TN # FL2912

Service Date: 1/11/2018  
 Customer: PDC Energy, Inc.  
 Address: PO Box 26  
 Attn: Accounts Payable  
 City: Bridgeport  
 St: WV 26330  
 Customer Rep: Bud Holman

Well Name: Mellon 28-1  
 County: Weld  
 State: CO  
 API #: 05-123-11133  
 AFE #

Job Type: Squeeze  
 Service Supervisor: Cheal, Sam  
 Pump #1: 740018  
 Pump #2: N/A

REF #	Description	unit of measure	quan
CM006	O-Tex Ultra Premium Cement (94lbs/ft3)	94SACK	140
CP022	SAPP ( MFC35 )	LBS	100
CT005	Pump Charge 4001-5000'	4-HRS	1
JM001	Data Acquisition System	JOB	1
AE014	Environmental Fee*	JOB	1
ML001	Pickup Mileage	UNTMIL	35
ML002	Pump Truck/Heavy Vehicle Mileage	UNTMIL	35
MX001	Bulk Material Mixing Service Charge	SCF	140
ML004	Minimum Cement Delivery	EACH	1
CP009	CF-41 (Foam Preventer)	GAL	3
CP018	Calcium Chloride	LBS	150

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: \_\_\_\_\_

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# Job Summary

Ticket Number	Ticket Date
TN# FL2912	1/11/2018

COUNTY	COMPANY	API Number
Weld	PDC Energy, Inc.	05-123-11133
WELL NAME	RIG	JOB TYPE
Mellon 28-1	Ensign 356	Squeeze
SURFACE WELL LOCATION	O-TEX Field Supervisor	CUSTOMER REP
NE SW Sec 28:T5N:R67W		Bud Holman

EMPLOYEES		
Field, Tony		
Peterson, Ryan		

WELL PROFILE			
Max Treating Pressure (psi):	1500	Bottom Hole Static Temperature (°F):	0
Bottom Hole Circulating Temperature (°F):		Well Type:	Oil

### Open Hole

1	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
	10	4350	4546	4350	4546

### Casing/Tubing/Drill Pipe

Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	4 1/2	11.6	P-110	0	4546	0	4546
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Tubing	2 3/8	4.7		0	4365	0	4365
Type	Size (in)	Weight (lb/ft)					

### CEMENT DATA

Stage 1:	From Depth (ft):	4350	To Depth (ft):	4546
Type: Squeeze	Volume (sacks):	140	Volume (bbls):	28.6

Cement & Additives:	Density (ppg)	Yield (ft <sup>3</sup> /sk)	Water Req.
100% Class G + 2% CaCl <sub>2</sub>	15.8	1.16	5.00

### SUMMARY

Preflushes:	5 bbls of Fresh Water	Calculated Displacement (bbl):	16.8	
	10 bbls of SAPP		Actual Displacement (bbl):	15.8
	10 bbls of Fresh Water			
Total Preflush/Spacer Volume (bbl):	25	Plug Bump (Y/N):	N/A	
Total Slurry Volume (bbl):	28.6	Lost Returns (Y/N):	No (if Y, when)	
Total Fluid Pumped	69.4	Bump Pressure (psi):	N/A	
Returns to Surface:	Mud			

Job Notes (fluids pumped / procedures / tools / etc.): **Cement squeeze** - Pumped 5bbls fresh water, 10bbls of pre-flush (100lbs SAPP), Pumped 10bbls fresh water spacer, Mix / pumped 28.6bbls of cement @15.8ppg, (added 2% CaCl<sub>2</sub> to cement mix water). Displaced with fresh water to CICR (cut displacement back 2bbls as requested by customer). Estimated cement coverage - 2.8bbls below CICR. **4,350 - 4,546ft.** in 10" (reestimated) OH (15.2bbls). Top perf holes @ **4,350ft.** CICR set @ **4,565ft.** Botom perf holes @ **4,546ft.** Pumped job as per program / customers request. Detailed discription of events in Job Log.

**Thank You For Using**  
**O-TEX Cementing**

Customer Representative Signature: \_\_\_\_\_

