



**5.5" Production**  
**Cement Post Job Report**

Prepared For: Mr. Mike Schweizer  
Prepared Date: 9/11/2017  
Job Date: 9/9/2017

**PDC Energy, Inc.**

**Elbert 1N**

**Weld County, CO**

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# Job Summary

Ticket Number	Ticket Date
TN#	9/9/2017

COUNTY	COMPANY	API Number
Weld	PDC Energy, Inc.	05 - 123 - 44562
WELL NAME	RIG	JOB TYPE
Elbert 1N	Ensign 160	Production
SURFACE WELL LOCATION	O-TEX Field Supervisor	CUSTOMER REP
Sec 21 - 5 N - 65 W	Cheal, Sam	Red Benge

EMPLOYEES		
Payne, James		
Chapman Goodman, Donal	Melgarejo, Eduardo	
	Roark, Kenneth	

<b>WELL PROFILE</b>			
Max Treating Pressure (psi):	4500	Bottom Hole Static Temperature (°F):	210
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)
	8 1/2	1650	12081	1650	6941

### Casing/Tubing/Drill Pipe

Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Surface	9 5/8	36	J-55	0	1650	0	1650
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5 1/2	20	P-110	0	12081	0	6941

### CEMENT DATA

<b>Stage 1:</b>	From Depth (ft):	0	To Depth (ft):	12080
Type: <b>SingleSlurry</b>	Volume (sacks):	1845	Volume (bbls):	591.4

Cement & Additives:	Density (ppg)	Yield (ft <sup>3</sup> /sk)	Water Req.
100% 35:65:0(POZ:G:GEL)+0.4% ASM-3+0.3% CFR+0.6% C-17+25% Silica Flour	13.5	1.80	8.77

### SUMMARY

Preflushes:	10 bbls of Fresh Water	Calculated Displacement (bbl):	267.4
	50 bbls of SAPP	Actual Displacement (bbl):	269
	10 bbls of Dye		
Total Preflush/Spacer Volume (bbl):	70	Plug Bump (Y/N):	Yes Bump Pressure (psi): 2645
Total Slurry Volume (bbl):	591.4	Lost Returns (Y/N):	No (if Y, when)
Total Fluid Pumped	930.4		
Returns to Surface:	Cement 30 bbls		

Job Notes (fluids pumped / procedures / tools / etc.): **Cement production casing - Pumped 10bbls fresh water, Mixed / pumped 50bbls pre-flush (420lbs SAPP), Pumped 10bbls Red Dye, Mixed / pumped 591.4bbls Single Slurry Cement @13.5ppg, Displaced with treated fresh water to bump, Pressured up well to open WSS, Displaced another 5bbls. Job pumped through O-Tex 5 1/2" cement head. Returns pumped through rig choke line to minimize cement channeling. TVD @ 6,941ft / WSS @ 12,048ft / Shoe @ 12,080ft / TD @ 12,82ft. Job performed as per promgam / customer request.**

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

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



# CEMENTING JOB LOG

Project Number	Job Date
FL2283	9/9/2017
State	County
CO	Weld
Customer Representative	Phone
Red Benge	970-203-4850
API Number	
05 - 123 - 44562	

O-Tex Location	Customer
Brighton, Colorado 303-857-7948	PDC Energy, Inc.
Lease Name	Well No.
Elbert 1N	
O-Tex Field Supervisor	
Cheal, Sam	
Job Type	Man Hours
Production	100

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.	
9/9/2017	12:00					Arrive on location (requested 12:00)
	12:05					Tailgate meeting (talk about spotting trucks) / sign in
	12:10					Set spill containment / Spot SCM pump units & batch mix unit
	12:15					Rig in / Test cement mix water
	15:15					Safety meeting with O-Tex crew / rig crew / third party crew
	17:24	1 bbl	1.50		550	Fill line
	17:29				4950	Pressure test iron
	17:44	10 bbl	5.00		544	Pump pre-flush (fresh water)
	17:49	50 bbl	5.00		640	Pump pre-flush (420lbs SAPP)
	18:05	10 bbl	5.00		620	Pump fresh water spacer (Red Dye)
	18:10	591.4 bbl	8.00		1424	Mix / pump Single Slurry cement
	19:33				0	Shutdown / wash pump unit / clear line
	18:37				0	Drop plug
	19:39	269 bbl	8.00		1780	Displace with treated fresh water
	20:17				2010	Slow pump rate to bump plug
	20:21				2645	Bump plug
	20:22				2450	Hold pressure for 5 min.
	20:26	1 bbl	1.50		3250	Pressure up well to open WSS
	20:28	5 bbl	4.00		2075	Displace with treated fresh water
	20:32				0	Check float (2bbbls back)
	20:45					Rig out
	21:45					AAR / discuss leaving location
	22:00					Leave location

### JOB CALCULATIONS

Cement coverage 0 - 12,080ft  
 TVD @ 6,941ft / WSS @ 12,048ft / Shoe @ 12,080ft / TD @ 12,82ft  
 30bbbls cement back to surface  
 Total fresh water needed for job 750bbbls

### CASING DATA

Surface casing 9 5/8" 36# 0 - 1,650ft. (ann. 0.0479)  
 Production casing 5 1/2" 20# 0 - 12,080ft (cap. 0.0222)

### ANNULAR DATA

OH 8 1/2" 1,650 - 12,082ft. (ann. 0.0408)  
 20% excess for Single Slurry cement (only in open hole)

**PLEASE NOTE ANY CONTRACTOR ISSUES OR COMMENTS BELOW**