

Job Summary

Ticket Number: **BCO-1906-0101** Ticket Date: **6/26/2019**

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-49446
WELL NAME	RIG	JOB TYPE
Red Cloud 3N	Ensign 152	Production Casing
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
40.34448 -104.49195	Tony Yates	Chric McMullin

EMPLOYEES

WELL PROFILE

Max Treating Pressure (psi):	Bottom Hole Static Temperature (°F):
Bottom Hole Circulating Temperature (°F):	Well Type:

Open Hole

1	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
	8 1/2	16,665	1,664	6,610	0
2	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)

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				1664	0
Production	5 1/2	20		16,657	0	6,610	0

CEMENT DATA

Stage 1: From Depth (ft): **6,932** To Depth (ft): **2270**
 Type: **Latex lead**
 Volume (sacks): **780** Volume (bbls): **190.2**

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
latex lead	14	1.37	4.71

From Depth (ft): **16,657** To Depth (ft): **6932**
 Type: **Non latex lead**
 Volume (sacks): **1830** Volume (bbls): **397.6**

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
Non latex tail	14.5	1.22	5.41

Stage 3: From Depth (ft): To Depth (ft):
 Type:
 Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.

Stage 4: From Depth (ft): To Depth (ft):
 Type:
 Volume (sacks): Volume (bbls):

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.

SUMMARY

Preflushes:	80 bbls of SAPP	Calculated Displacement (bbl):	369	Stage 1	Stage 2
	100 bbls of Weighted Spacer	Actual Displacement (bbl):	369		
Total Preflush/Spacer Volume (bbl):	180	Plug Bump (Y/N):	Y	Bump Pressure (psi):	2580
Total Slurry Volume (bbl):	587.8	Lost Returns (Y/N):	 	(if Y, when)	
Total Fluid Pumped	767.8				
Returns to Surface:	Preflush	30 bbls			

Job Notes (fluids pumped / procedures / tools / etc.): **Dropped bottom plug. Loaded lines with 6 bbls water. Pumped 80 bbls SAPP. Mixed and pumped 100 bbls Barite at 12.5 ppg. Mixed and pumped 190.2 bbls latex lead cement at 14 ppg. Mixed and pumped 397.6 bbls tail cement at 14.5 ppg. Dropped top plug. Displaced 369 bbls water. Landed plug at 2580 psi. Held pressure for 2 min. Opened WSS at 3928 psi. Pumped 5 bbl water. Checked floats, got 2 bbls back. Got 30 bbls SAPP to surface See job log for details.**

Customer Representative Signature: **Thank You For Using CJES O-TEX Cementing**

Cement Job Log



Customer:	PDC ENERGY	Date:	6/26/2019	Serv. Supervisor:	Tony Yates
Cust. Rep.:	Chric McMullin	Ticket #:	BCO-1906-0101	Serv. Center:	Brighton - 3021
Lease:	Red Cloud 3N	API Well #:	05-123-49446	County:	Weld State: CO
Well Type:	Oil	Rig:	Ensign 152	Type of Job:	Production Casing

Materials Furnished by C&J ENERGY SERVICES

Plugs	Casing Hardware	Physical Slurry Properties						
		Sacks of Cement	Fluid Dens (lb/gal)	Excess	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbbls)	Mix Water (bbbls)
0								
80 bbbls water + 1600 lbs SAPP	+20.0 PPB CJ890						80.00	
100 bbbls ppg Weighted Spacer - 100 bbbls	+213.21 PPB CJ300+1.0 PPB CJ209+0.5 PPB CJX157011+12.46 PPB CJ801		12.5				100.00	
C&J Non Latex Lead 1-1	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011	25	14		1.37	5.98	6.08	4
C&J Latex Lead 1-1	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011+0.2 GPS CJ891	755	14		1.37	4.71	183.66	85
C&J Tail 1-1	65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511	1830	14.5		1.22	5.41	396.23	236
Displacement							369.07	
50 % CJ914+50 % CJ010-74+2.0 % CJ020								
Displacement Chemicals:								

Cement Job Log



Customer: PDC ENERGY	Date: 6/26/2019	Serv. Supervisor: Tony Yates
Cust. Rep.: Chric McMullin	Ticket #: BCO-1906-0101	Serv. Center Brighton - 3021
Lease: Red Cloud 3N	API Well #: 05-123-49446	County: Weld State: CO
Well Type: Oil	Rig: Ensign 152	Type of Job: Production Casing

OPEN HOLE DATA		TUBULAR DATA						
8.5 in. O.H. (1,664 to 16,684 ft)	5.5 in. 20#, (0 to 16,684 ft)	SIZE WEIGHT	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
9.625 in. 36# (0 to 1,664 ft)	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
					16629			

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY				
MUD	10.9 ppg	369 bbl	WATER	8.3 ppg	1750		4500	1400

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details
5:30 PM						0	ARRIVE ON LOCATION
5:45 PM						0	SPOT EQUIPMENT
6:00 PM						0	RIG UP IRON AND HOSES
10:00 PM						0	PRE JOB SAFETY MEETING
10:25 PM	4		600		6	6	DROP BOTTOM PLUG / FILL LINES
10:28 PM			5250			6	TEST PUMP AND LINES TO 5250 PSI
						6	
10:38 PM	5.5		850		80	86	PUMP 80 BBLS SAPP
10:47 PM	7		1200		100	186	MIX AND PUMP 100 BBLS BARITE AT 12.5 PPG
11:00 PM					6	192	BATCH UP 6 BBLS NON LATEX LEAD CEMENT AT 14 PPG
11:04 PM	6.2		1000		184.2	376.2	MIX AND PUMP 184.2 BBLS LATEX LEAD AT 14 PPG
11:48 PM	8.2		1000		397.6	773.8	MIX AND PUMP 397.6 BBLS TAIL CEMENT AT 14.5 PPG
12:42 AM						773.8	SHUT DOWN / WASH PUMP
12:48 AM						773.8	DROP TOP PLUG
12:53 AM	9.6		2500		369	1142.8	DISPLACE 369 BBLS WATER
1:34 AM	5		2580			1142.8	LAND PLUG 500 PSI OVER WORKING PRESSURE
1:36 AM						1142.8	HOLD 2 MINUATES
1:38 AM			3928			1142.8	OPEN WSS AT 3928 PSI
1:40 AM	4		2000		5	1147.8	PUMP 5 BBLS WATER
1:42 AM							SHUT DOWN
1:43 AM							CHECK FLOATS. GOT 2 BBLS BACK
1:50 AM							RIG OUT

Left Yard	6/26/19 4:00 PM	Left Loc.		Start Pump	6/26/19 10:25 PM						
Arrived Loc.	6/26/19 5:30 PM	Returned Yd.		End Pump	6/27/19 1:42 AM						
Bumped Plug (psi)	Final Differential (psi)	Floats Held (Y/N)	PSI Left on Casing	Cement to Surface (bbl)	Top of Cement (ft)	Full Circ. During Job (Y/N)	Max Pump Pressure (psi)	Casing Rotation	Standby Charged (hrs)	Casing Reciprocation	
Yes	2080	Yes			2,270	Yes	3928		0		

Service Supervisor	Date