

<div>C&J ENERGY SERVICES</div> <div>1N_1-BCO_190605144137-JLPjob 1.xlsm]</div>	PDC ENERGY	YARD CALL	6/11/2019		DISTRICT
	Red Cloud 1N	RTS DATE	6/11/2019		Brighton
		YARD RTN	6/11/2019		
Personnel/Equipment					
Driver	Assignment		Tractor	Trailer	Comments
Jeff K			131152	449088	
Francisco F			pickup		
Ryan A				445052	
Vernon F			transport		
Justin L				445046	

Job Summary

Ticket Number	Ticket Date
TN# BCO-1906-0038	6/11/2019

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-49450
WELL NAME	RIG	JOB TYPE
Red Cloud 1N	Ensign 152	Production Casing
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
40.34448 -104.49185	Jeff Kopp	Tony Barrientos

EMPLOYEES

WELL PROFILE			
Max Treating Pressure (psi):	4500	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)
	8.5	1668	16789		
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		0	1668		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5.5	20		0	16789		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)

CEMENT DATA

Stage 1:	From Depth (ft):	2500	To Depth (ft):	7000
Type: Lead	Volume (sacks):	780	Volume (bbls):	190
	Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
		14	1.37	6.00

Stage 2:	From Depth (ft):	7000	To Depth (ft):	16789
Type: Tail	Volume (sacks):	1855	Volume (bbls):	403
	Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
		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

				Stage 1	Stage 2	
Preflushes:	80	bbls of	SAPP	Calculated Displacement (bbl):	372	
	80	bbls of	Weighted Spacer	Actual Displacement (bbl):	372	
		bbls of				
Total Preflush/Spacer Volume (bbl):			160	Plug Bump (Y/N):	Y	Bump Pressure (psi): 2034
Total Slurry Volume (bbl):			593	Lost Returns (Y/N):	N	(if Y, when) _____
Total Fluid Pumped			753			
Returns to Surface:		Spacer	0	bbls		

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

Job pumped per customers request. Job went well.

Thank You For Using
CJES O-TEX Cementing

Customer Representative Signature: _____

Cement Job Log



Customer:	PDC ENERGY	Date:	6/11/2019	Serv. Supervisor:	Jeff Kopp			
Cust. Rep.:	Tony Barrientos	Ticket #:	BCO-1906-0038	Serv. Center	Brighton - 3021			
Lease:	Red Cloud 1N	API Well #:	05-123-49450	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 (bbls)	Mix Water (bbls)
0								
80 bbls water + 1600 lbs SAPP	+20.0 PPB CJ890						80.00	
80 bbls ppg Weighted Spacer - 80 bbls of	+219.63 PPB CJ300+1.0 PPB CJ209+0.5 PPB CJX157011+12.46 PPB CJ801		12.5				80.00	
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	1855	14.5		1.22	5.41	401.64	239
Displacement							371.95	
50 % CJ914+50 % CJ010-74+2.0 % CJ020								
Displacement Chemicals:								

Cement Job Log



Customer: PDC ENERGY		Date: 6/11/2019		Serv. Supervisor: Jeff Kopp	
Cust. Rep.: Tony Barrientos		Ticket #: BCO-1906-0038		Serv. Center Brighton - 3021	
Lease: Red Cloud 1N		API Well #: 05-123-49450		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 (1663 to 16789ft)	5.5 in 20# (0 to 16789ft)	SIZE WEIGHT	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)	

PREVIOUS CASING DATA		PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
9 5/8in 36# (0 to 1663ft)		TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
						16775			

WELL FLUID		DISPLACEMENT FLUID		DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)	WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	DENSITY				
						4500	1000

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details
7:53 AM						0	ARRIVE ON LOCATION
7:55 AM						0	PRE JOB SAFETY MEETING
8:10 AM						0	SPOT EQUIPMENT
8:20 AM						0	RIG UP IRON AND HOSES
9:30 AM						0	WAIT ON RIG TO CIRCULATE
1:30 PM						0	SAFETY MEETING
1:46 PM	4	436			3	3	FILL LINES
1:48 PM		5169				3	PRESSURE TEST
1:53 PM	5	752			80	83	SAPP
2:12 PM	7	1100			80	163	WEIGHTED SPACER
2:23 PM						163	SHUT DOWN
2:27 PM						163	DROP PLUG
2:28 PM	6	831			190	353	MIX AND PUMP 780SXS @14PPH 1.37Y 6.0WR
3:08 PM	8	514			403	756	PUMP 1855SXS @14.5PPG 1.22Y 5.41WR
4:05 PM						756	SHUT DOWN
4:08 PM						756	WASH UP PUMPS AND LINES
4:20 PM						756	DROP PLUG
4:21 PM	8	2100			372	1128	DISPLACE
5:15 PM		2034				1128	BUMP PLUG
5:17 PM	2	3591			2	1130	BURST DISK
5:18 PM	5	1691			5	1135	FRESH
5:20 PM							CHECK FLOATS
5:30 PM							RIG OUT
6:15 PM							LEAVE LOCATION

Left Yard		Left Loc.		Start Pump	
Arrived Loc.		Returned Yd.		End Pump	

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	0	0	2500	Yes	4500					

Jeff Kopp

Service Supervisor

Date