

<div><div>C&J ENERGY SERVICES</div><div>_1-BCO_190705081154-JLPjob 1.xlsm]-1</div></div>	PDC ENERGY		YARD CALL			DISTRICT
	Red Cloud - 5N		RTS DATE			Brighton
			YARD RTN			
Personnel/Equipment						
Driver		Assignment		Tractor	Trailer	Comments
BLEND INFO						
Amount		Units	System/Additives		Density (ppg)	Yield (cuft/sk)
0		SX	80 bbls water + 1600 lbs SAPP			
80.00		bbl	+20.0 PPB CJ890			
0.00		SX	100 bbls 12.5ppg Weighted Spacer - 80 bbls of 12.5 ppg Weighted Spacer: 85.3 bbl Fresh Water + 21321 lbs Barite + 100 lbs Citric Acid + 1246 lbs MS Spacer + 50 lbs X-Air			
100.00		bbl	+213.21 PPB CJ300+1.0 PPB CJ209+0.5 PPB CJX157011+12.46 PPB CJ801		12.5	
25		SX	C&J Non Latex Lead 1-1			
6.08		bbl	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011		14	1.37
1125		SX	C&J Latex Lead 1-1			
273.43		bbl	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011+0.2 % CJ891		14	1.37
1820		SX	C&J Tail 1-1			
393.67		bbl	65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511		14.5	1.22
0		SX	Displacement			
367.78		bbl				
0		SX				
0		SX				
0		SX				
0.00						

Job Summary

 Ticket Number
 TN# **BCO-1907-0028** Ticket Date
7/9/2019

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-49455
WELL NAME	RIG	JOB TYPE
Red Cloud - 5N	Ensign 152	CM-PROD. CASING
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
345 654	Tony Yates	Branden

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	16640	1670		
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		1670	0		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5 1/2	20		16640	0		
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):	1499	To Depth (ft):	8349
Type: Latex lead	Volume (sacks):	1150	Volume (bbls):	280
	Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
	Latex lead	14	1.37	5.58

Stage 2:	From Depth (ft):	8349	To Depth (ft):	16640
Type: Non latex tail	Volume (sacks):	1820	Volume (bbls):	395.4
	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: Top Off	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): 369	
80 bbls of Weighted Spacer	Actual Displacement (bbl): 369	
Total Preflush/Spacer Volume (bbl): 160	Plug Bump (Y/N):	Bump Pressure (psi):
Total Slurry Volume (bbl): 675.8	Lost Returns (Y/N):	(if Y, when)
Total Fluid Pumped 835.8		
Returns to Surface:		
Preflush 73 bbls		

Job Notes (fluids pumped / procedures / tools / etc.):
 Dropped bottom plug before SAPP. Pumped 80 bbls SAPP. Mixed and pumped 80 bbls weighted spacer. Mixed and pumped 280 bbls latex lead at 14 ppg. Mixed and pumped 395.4 bbls non latex tail at 14.5 ppg. Dropped top plug and displaced 369 bbls. Landed plug at 2662 psi. Got 2 bbls back checking floats. See job log for details.

Thank You For Using
CJES O-TEX Cementing

Customer Representative Signature: _____

Cement Job Log



Customer:	PDC ENERGY				Date:	7/9/2019		Serv. Supervisor:	Tony Yates			
Cust. Rep.:	Branden				Ticket #:	BCO-1907-0028		Serv. Center	Brighton - 3021			
Lease:	Red Cloud - 5N				API Well #:	05-123-49455		County:	Weld		State:	CO
Well Type:	Oil				Rig:	Ensign 152		Type of Job:	CM-PROD. 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)
80 bbls water + 1600 lbs SAPP		+20.0 PPB CJ890									80.00	
100 bbls 12.5ppg Weighted Spacer - 80 bbls		+213.21 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 % CJ891				1125	14		1.37	5.85	273.78	157
C&J Tail 1-1		65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511				1820	14.5		1.22	5.41	394.06	234
Displacement											367.78	
65 % CJ914+35 % CJ010-74+0.3 % CJ704												
Displacement Chemicals:												
OPEN HOLE DATA		TUBULAR DATA										
8.5 in. O.H. (1,655 to 16,626 ft)		5.5 in. 20#, (0 to 16,626 ft)				SIZE WEIGHT	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
Mix Cemt. Temperature °F	Lead Temp.	Middle Temp.	Tail Temp.									
45.0 °F	34.0 °F	34.0 °F	75.0 °F									
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
9.625 in. 36# (0 to 1,655 ft)				TOP		BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
WELL FLUID		DISPLACEMENT FLUID		DIFF PRESS (psi)		CSG LIFT (psi)	MAX PRESS (psi)	Total Number of Runs		WATER ON LOC (bbl)		
TYPE	DENSITY	VOLUME	TYPE	DENSITY								
mud	10.8 ppg	369 bbl	water	8.3 ppg	1918		3000				1300	

Cement Job Log



Customer:	PDC ENERGY					Date:	7/9/2019		Serv. Supervisor: Tony Yates			
Cust. Rep.:	Branden					Ticket #:	BCO-1907-0028		Serv. Center Brighton - 3021			
Lease:	Red Cloud - 5N					API Well #:	05-123-49455		County:	Weld	State:	CO
Well Type:	Oil					Rig:	Ensign 152		Type of Job:	CM-PROD. CASING		

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Num. Stage	Stage Details
9:00 PM						0	1	ARRIVE ON LOCATION
9:20 PM						0		SPOT EQUIPMENT
9:40 PM						0		RIG UP IRON AND HOSES
1:00 AM						0		PRE JOB SAFETY MEETING
1:35 AM	3		312			3		LOAD LINES TO TEST
1:38 AM						3		TEST PUMP AND LINES TO 5200 PSI
1:40 AM						3		DROP BOTTOM PLUG
1:43 AM	4		450			80		PUMP 80 BBLS SAPP
2:01 AM	7		1100			80		MIX AND PUMP 80 BBLS BARITE
2:12 AM	8		800			6		MIX AND PUMP 6 BBLS NON LATEX LEAD CEMENT AT 14 PPG
2:14 AM	8		800			274.4		MIX AND PUMP 274.4 BBLS LATEX LEAD CEMENT AT 14 PPG
3:01 AM	7.8		700			395.4		MIX AND PUMP 395.4 BBLS NON LATEX TAILCEMENT AT 14.5 PPG
3:58 AM						395.4		SHUT DOWN/ LOAD TOP PLUG / WASH PUMP
4:15 AM	8		2300			369		DISPLACE 369 BBLS WATER
5:05 AM						369		LAND PLUG
5:07 AM	2		4307			369		OPEN WSS
5:09 AM	4		2200			5		5 BBLS WATER
5:11 AM						5		SHUT DOWN
5:13 AM						5		CHECK FLOAT (2 BBLS BACK)
5:25 AM						5		RIG OUT
						5		
						5		
						5		
						5		
						5		

Left Yard	7/8/19 7:30 PM			Left Loc.	7/9/19 1:00 PM			Start Pump	7/9/19 1:35 AM		
Arrived Loc.	7/8/19 9:00 PM			Returned Yd.	7/9/19 2:30 PM			End Pump	7/9/19 5:11 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 Pressur	Casing Rotation	Standby Charged(hrs)	Casing Reciprocation	Wireline Co.
Yes	1918	Yes		0	1499	Yes	4307		1		Unknown

								Service Supervisor			