

 <small>_1-BCO_190729083151-JLPjob 1.xlsm]-1</small>	PDC ENERGY	YARD CALL	8/3/2019		DISTRICT		
	Red Cloud - 9N	RTS DATE	8/5/2019		Brighton		
		YARD RTN	8/6/2019				
Personnel/Equipment							
Driver	Assignment	5	Tractor	Trailer	Comments		
Francisco Flores	Supervisor	Primary Pump Unit:		0			
James Verhye	Operator	Secondary Pump Unit:					
Tyler Ingalls	Operator						
Justin Lacombe	Bulker						
Cabe Culbertson	Bulker						
BLEND INFO <small>_1-BCO_190729083151-JLPjob 1.xlsm]-Main-</small>							
Amount	Units	System/Additives			Density (ppg)	Yield (cuft/sk)	Water Req. (gal/sk)
0	SX	80 bbls water + 1600 lbs SAPP					
80.00	bbl	+20.0 PPB CJ890					
0.00	SX	100 bbl 12.5ppg Weighted Spacer - 100 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					
25	SX	C&J Non Latex Lead					
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	5.98
1125	SX	C&J Latex Lead					
273.61	bbl	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011+0.2 GPS CJ891			14	1.37	4.71
1835	SX	C&J Tail					
396.61	bbl	65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511			14.5	1.22	5.41
0	SX	Displacement					
369.38	bbl						
0	SX						
0	SX						
0	SX						
0.00							

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-49452
WELL NAME	RIG	JOB TYPE
Red Cloud - 9N	Ensign 152	Production Casing
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
40.34448 -104.49228	Francisco Flores	Brandon Young

EMPLOYEES		
James Verhey	Cabe Culbertson	
Tyler Ingalls		
Justin Lacombe		

WELL PROFILE			
Max Treating Pressure (psi):	3500	Bottom Hole Static Temperature (°F):	
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)
	8.5	16120	1680		
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	9.625	36		1680	0		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5.5	20		16120	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):		To Depth (ft):		
	Type: Non-Latex Lead				
	Volume (sacks):	25	Volume (bbls):	6	
Cement & Additives:			Density (ppg)	Yield (ft³/sk)	Water Req.
			14	1.37	5.98

Stage 2:	From Depth (ft):		To Depth (ft):		
	Type: Latex Lead				
	Volume (sacks):	1125	Volume (bbls):	274.5	
Cement & Additives:			Density (ppg)	Yield (ft³/sk)	Water Req.
			14	1.37	4.71

Stage 3:	From Depth (ft):		To Depth (ft):	
	Type: Tail Cement			
	Volume (sacks):	1835	Volume (bbls):	398.7
	Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req
		14.5	1.22	5.41

SUMMARY

Preflushes:	3 bbls of Fresh Water	Calculated Displacement (bbl):	357.1	Stage 1	Stage 2
	80 bbls of SAPP	Actual Displacement (bbl):	357.1		
	100 bbls of Weighted Spacer				
Total Preflush/Spacer Volume (bbl):	183	Plug Bump (Y/N):	Y	Bump Pressure (psi):	3059
Total Slurry Volume (bbl):	679.2	Lost Returns (Y/N):	N	(if Y, when)	
Total Fluid Pumped	1225.3				
Returns to Surface:	Preflush		80 bbls		

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

Fill lines with 3 bbls, shut down and pressure test to 5000psi. Hold for 5 mins after bleed off pressure drop plug. Mix/pump 1600 Lbs(SAPP) 80 bbls followed by 100 bbls weighted barite spacer@12.5ppg. Shut down dropped 2nd plug. Mix/pump 25sx@14ppg 1.37Y non latex lead, followed by 1125sx@14ppg 1.37Y Latex lead cement. Mix/pump 1835sx@14.5ppg 1.22Y Tail cement. ETOT@6856'. Shut down washed up SCM and drop top plug. Displaced 357.1 bbls of fresh treated water bumped plug@3059 Psi.Held for 5 mins. Burst wet shoe sub@3722 Psi. Pumped 5 bbls afterward shut down checked floats and they held, got back 2.5 bbl. Pumped job per customers request. Thank you!

Thank You For Using

CJES O-TEX Cementing

Customer Representative Signature: _____

Cement Job Log



Customer:	PDC ENERGY				Date:	8/5/2019		Serv. Supervisor:	Francisco Flores			
Cust. Rep.:	Brandon Young				Ticket #:	BCO-1908-0001		Serv. Center	Brighton - 3021			
Lease:	Red Cloud - 9N				API Well #:	05-123-49452		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)
80 bbls water + 1600 lbs SAPP		+20.0 PPB CJ890									80.00	
100 bbl 12.5ppg Weighted Spacer - 100 bbl		+213.21 PPB CJ300+1.0 PPB CJ209+0.5 PPB CJX157011+12.46 PPB CJ801									100.00	
C&J Non Latex Lead		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		50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011+0.2 GPS CJ891				1125	14		1.37	4.71	273.66	126
C&J Tail		65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511				1835	14.5		1.22	5.41	397.31	236
Displacement											369.38	
65 % CJ914+35 % CJ010-74+0.3 % CJ704												
Displacement Chemicals:												
OPEN HOLE DATA		TUBULAR DATA										
8.5 in. O.H. (1,680 to 16,120 ft)		5.5 in. 20#, (0 to 16,120 ft)		SIZE WEIGHT		THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)	
Mix Cemt. Temperature °F	Lead Tmp.	Middle Temp.	Tail Temp.									
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
9.625 in. 36# (0 to 1,680 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	10.4 ppg	368 bbl	H2O	8.3 ppg			3500			1000		

Cement Job Log



Customer:	PDC ENERGY					Date:	8/5/2019		Serv. Supervisor: Francisco Flores			
Cust. Rep.:	Brandon Young					Ticket #:	BCO-1908-0001		Serv. Center Brighton - 3021			
Lease:	Red Cloud - 9N					API Well #:	05-123-49452		County:	Weld	State:	CO
Well Type:	Oil					Rig:	Ensign 152		Type of Job:	Production 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
6:00 PM							1	ARRIVE ON LOCATION
6:15 PM							1	SPOT EQUIPMENT
6:30 PM							1	RIG UP IRON AND HOSES
8:30 PM							1	PRE JOB SAFETY MEETING
8:52 PM	2	500			3.0 bbl	3.0 bbl	1	LOAD LINES TO TEST
8:56 PM		5100					1	TEST PUMP & IRON TO 5000 PSI
9:01 PM							1	DROP PLUG
9:02 PM	4	500			80.0 bbl	83.0 bbl	1	MIX & PUMP 1600LBS SAPP
9:24 PM	7	976			100.0 bbl	183.0 bbl	1	MIX & PUMP WEIGHTED SPACER@12.5PPG
9:43 PM							1	SHUT DOWN/ DROP PLUG
9:47 PM	4	600			6.0 bbl	189.0 bbl	1	MIX & PUMP 25SX@14PPG 1.37Y NON-LATEX LEAD
9:48 PM	5.6	388			274.5 bbl	463.5 bbl	1	MIX & PUMP 1125SX@14PPG 1.37Y LATEX LEAD
10:35 PM	7.4	593			398.7 bbl	862.2 bbl	1	MIX & PUMP 1835SX@14.5PPG 1.22Y
11:47 PM							1	SHUT DOWN/ WASH UP SCM
12:01 AM							1	DROP PLUG
12:06 AM	5.7	2057			357.1 bbl	1219.3 bbl	1	DISPLACEMENT
1:09 AM	4	3059					1	BUMP PLUG
1:11 AM	2	3722			1.0 bbl	1220.3 bbl	1	BWSS
1:12 AM	4	2195			5.0 bbl	1225.3 bbl	1	FRESH WATER
1:15 AM							1	CHECK FLOATS
1:30 AM							1	RIG OUT
2:00 AM							1	LEAVE LOCATION

Left Yard	8/5/19 5:00 PM		Left Loc.	8/6/19 2:00 AM		Start Pump	8/5/19 8:52 PM		
Arrived Loc.	8/5/19 6:00 PM		Returned Yd.	8/6/19 4:00 AM		End Pump	8/6/19 1:45 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		Yes		0	1290	Yes	3500	N/A	0		0

									8/6/2019	
							Service Supervisor		Date	