


<div><div><div>C&J ENERGY SERVICES</div><div>0N_1-8CO_190411104430-ILP[job 1.xlsm]</div></div></div>	PDC ENERGY		YARD CALL	4/15/2019		DISTRICT	
	Popham 10N		RTS DATE	4/15/2019		Brighton	
			YARD RTN	4/16/2019			
Personnel/Equipment							
Driver		Assignment		Tractor	Trailer	Comments	
Israel Davila		Supervisor		131155			
Tony Field		Operator			445047		
Tony Nelson		Operator			445051		
Eddie Melgarejo		Bulk		201400	444002		
Austin Bennet		Driver		201400	444002		
BLEND INFO							
0N_1-8CO_190411104430-ILP[job 1.xlsm]Main							
Amount	Units	System/Additives			Density (ppg)	Yield (cuft/sk)	Water Req. (gal/sk)
0	SX	0					
0.00							
0.00	SX	80 bbls water + 1600 lbs SAPP					
80.00	bbl	+20.0 PPB CJ890					
0	Pumped 80 bbls SAPP, 80	80 bbls ppg Weighted Spacer - 80 bbls of 12.5 ppg Weighted Spacer: 66.3 bbl Fresh Water + 17570 lbs Barite + 80 lbs Citric Acid + 997 lbs MS Spacer + 40 lbs X-Air					
80.00	bbl	+219.63 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					
0.00		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
755	SX	C&J Latex Lead 1-1					
183.60	bbl	50 % CJ914+50 % CJ010-74 +2.0 % CJ020+0.4 % CJ548+0.3 % CJ240+10.0 % CJ041+0.3 % CJX157011+1.0 GPS CJ550L+0.2 GPS CJ891			14	1.37	4.71
965	SX	C&J Tail 1-1					
208.60	bbl	65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511			14.5	1.22	5.41
0	SX	Displacement					
0	SX						
0	SX						
267.19	bbl						

		<h1>Job Summary</h1>		Ticket Number TN# BCO-1904-0054		Ticket Date 4/16/2019	
COUNTY		COMPANY		API Number			
Weld		PDC ENERGY		05-123-47821			
WELL NAME		RIG		JOB TYPE			
Popham 10N		Ensign 161		Production Casing			
SURFACE WELL LOCATION		CJES Field Supervisor		CUSTOMER REP			
40.33696 -104.53805		Israel Davila		Chris McMullen			
EMPLOYEES							
Tony Field		Eduardo Melgarejo					
Tony Nelson							
		Austin Bennet					
WELL PROFILE							
Max Treating Pressure (psi):		4500		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	1632	12085	1632	6623	
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		0	1632	0	1632
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5.5	20		0	12085	0	6623
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: Latex lead		Volume (sacks):		780	Volume (bbls):		190
Cement & Additives:				Density (ppg)	Yield (ft³/sk)	Water Req.	
Latex lead				14	1.37	5.98	
Stage 2:		From Depth (ft):		7000	To Depth (ft):		12085
Type: Tail Cement		Volume (sacks):		965	Volume (bbls):		210
Cement & Additives:				Density (ppg)	Yield (ft³/sk)	Water Req.	
Tail Cemen				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):		267	Stage 1
		80 bbls of	Weighted Spacer	Actual Displacement (bbl):		267	Stage 2
Total Preflush/Spacer Volume (bbl):		160		Plug Bump (Y/N):		Y	Bump Pressure (psi):
Total Slurry Volume (bbl):		400		Lost Returns (Y/N):		N	(if Y, when)
Total Fluid Pumped		837					
Returns to Surface:		Preflush	55 bbls				
Job Notes (fluids pumped / procedures / tools / etc.): <div> Pumped 80 bbls SAPP, 80 bbls Weighted spacer. Dropped bottom plug. Pumped 780 sks lead cement @ 14, 1.37 yield from 2500' to 7000'. Pumped 965 sks @ 14.5, 1.22 yield from 7000' to 12085'. Displaced top plug to 12053' caught cement @ 58 bbls away. Landed plug @ 2500psi. 267 bbls. Opened wet shoe sub @ 3507psi. floats held, 2 bbls back. </div>							

Customer Representative Signature: _____		Thank You For Using CJES O-TEX Cementing	
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Cement Job Log



Customer:	PDC ENERGY		Date:	4/15/2019		Serv. Supervisor:	Israel Davila	
Cust. Rep.:	Chris McMullen		Ticket #:	BCO-1904-0054		Serv. Center	Brighton - 3021	
Lease:	Popham 10N		API Well #:	05-123-47821		County:	Weld	State: CO
Well Type:	Oil		Rig:	Ensign 161		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
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+1.0 GPS CJ550L+0.2 GPS CJ891		755	14		1.37	4.71
C&J Tail 1-1		65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511		965	14.5		1.22	5.41
Displacement								267.19
50 % CJ914+50 % CJ010-74+2.0 % CJ020								
Displacement Chemicals:								

Cement Job Log



Customer: PDC ENERGY		Date: 4/15/2019		Serv. Supervisor: Israel Davila	
Cust. Rep.: Chris McMullen		Ticket #: BCO-1904-0054		Serv. Center Brighton - 3021	
Lease: Popham 10N		API Well #: 05-123-47821		County: Weld	State: CO
Well Type: Oil		Rig: Ensign 161		Type of Job: Production Casing	
OPEN HOLE DATA			TUBULAR DATA		
8.5" O.H. (1655' to 12086')		5.5" 20# (0' - 12085')		SIZE WEIGHT	THREAD
				DEPTH (ft)	GRADE
				ID (in)	BURST (psi)
					COLLAPSE (psi)
PREVIOUS CASING DATA			PERFORATED INTERVAL DATA		CASING EQUIPMENT DEPTHS
9.625" 36# (0' to 1632')			TOP	BTM	SPF
					SIZE
					SHOE
					12053
					FLOAT
					STAGE
					ACP
WELL FLUID		DISPLACEMENT FLUID		DIFF PRESS (psi)	CSG LIFT (psi)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	MAX PRESS (psi)
mud	10.8 ppg	267 bbl	H2O	8.3 ppg	
					WATER ON LOC (bbl)
					1000
Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)
					Cum. Vol. (bbl)
Stage Details					
4:30 PM					0 Arrive on location
4:45 PM					0 Tailgate meeting
5:30 PM					0 Mix Latex mix H2O
7:00 AM					0 Spot Equipment
7:30 AM					0 Rig in
11:30 AM					0 JSA/Safety meeting
12:02 AM	4	600			4 Fill lines with fresh ahead
12:05 PM					4 Pressure test iron to 5000psi
12:13 AM	6	700			80 Pump 1600# SAPP
12:30 AM	6	750			80 Pump Weighted spacer @ 12.5ppg
12:45 AM					164 Shut down/Swap valves to drop bottom plug
12:45 AM	6	400			190 Pump Latex lead @ 14ppg, from 2500' to 7000'(1st 6 bbls nonlatex
1:23 AM	6.5	500			210 Pump tail @ 14.5, from 7000' to 12085'
2:00 AM					564 Shut down/Wash pump/lines/Load plug
2:18 AM	8	2000			267 Displace plug, 5bbls/min till caught cement/5bbls/min last 20
2:58 AM		2500			831 Land plug @ 2500 psi
3:01 AM	2	3507			1 832 Open wet shoe sub @ 3507 psi
3:02 AM	4	2000			5 837 Displace
3:03 AM		1590			
3:04 AM		0			
3:10 AM					
4:30 AM					
Left Yard 4/15/19 3:20 PM Left Loc. 4/16/19 4:30 AM Start Pump 4/15/19 11:50 PM					
Arrived Loc. 4/15/19 4:30 PM Returned Yd. 4/16/19 5:30 AM End Pump 4/16/19 3:10					
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)
Yes		Yes			2500
					Yes
					5000
Casing Rotation					
Standby Charged(hrs)					
Casing Reciprocation					
Israel Davila 4/16/2019					
Service Supervisor Date					