Job Summary

Ticket Number	Ticket Date
TN# BCO-1809-0067	9/15/2018

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-45738
WELL NAME	**RIG**	**JOB TYPE**
Judy 6S-302	Ensign 158	Production Casing
SURFACE WELL LOCATION	**CJES Field Supervisor**	**CUSTOMER REP**
40.34065 -104.58711	Derek Scott	Jeremy Stolz

EMPLOYEES

WELL PROFILE

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

Open Hole

	Size (in)	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
1	8.5	1673'	17604'		
2					

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'	1673'		
Production	5.5	20		0'	17601'		

CEMENT DATA

Stage 1: Type: **Lead cement**
From Depth (ft): 2355' To Depth (ft): 7012'
Volume (sacks): 780 Volume (bbls): 190

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

Stage 2: Type: **Tail cement**
From Depth (ft): 7012' To Depth (ft): 17601'
Volume (sacks): 2005 Volume (bbls): 432

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

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

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

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

Cement & Additives:	Density (ppg)	Yield (ft^3/sk)	Water Req.

SUMMARY

			Stage 1	Stage 2
Preflushes:	100 bbls of	Weighted Spacer	Calculated Displacement (bbl):	389.9	
	bbls of		Actual Displacement (bbl):	389.9	
	bbls of				
TotalPreflush/Spacer Volume (bbl):		100	Plug Bump (Y/N):	Y	Bump Pressure (psi): 3000
Total Slurry Volume (bbl):		522	Lost Returns (Y/N):	N	(if Y, when)
Total Fluid Pumped		1011.9			
Returns to Surface:		Cement 0 bbls			

Job Notes (fluids pumped / procedures / tools / etc.): Job notes go here!

Customer Representative Signature:

Thank You For Using
CJES O-TEX Cementing

Cement Job Log

C&J ENERGY SERVICES

Customer: PDC ENERGY	**Date:** 9/15/2018	**Serv. Supervisor:** Derek Scott	
Cust. Rep.: Jeremy Stolz	**Ticket #:** BCO-1809-0067	**Serv. Center** Brighton - 3021	
Lease: Judy 6S-302	**API Well #:** 05-123-45738	**County:** Weld	**State:** CO
Well Type: Oil	**Rig:** Ensign 158	**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)	Yield (cuft/sk)	Mix Water (gal/sk)	Fluid Volume (bbls)	Mix Water (bbls)
0							
20 bbls diesel							
Weighted Spacer - 100 bbls of 12.5 ppg Weight	+2 GPB CJ885+0.5 GPB CJFCPC25+221.03 PPB CJ300+1 PPB CJ209+0.5 PPB CJ776		12.5				
Non Latex Lead	+50% CJ914 +50% CJ010-74 +2.% CJ020+.4% CJ548+.3% CJ240+10.% CJ041+.3% CJX157011	25	14	1.37	5.98	6.08	4
Latex Lead	+50% CJ914 +50% CJ010-74 +2.% CJ020+.4% CJ548+.3% CJ240+10.% CJ041+.3% CJX157011	755	14	1.37	4.79	183.83	86
Tail	+65% CJ914 +35% CJ010-74 +.3% CJ704+.15% CJFCP013+.5% CJ511	2005	14.5	1.21	5.40	433.84	258
Displacement			8.34				
+50% CJ914 +50% CJ010-74+2.% CJ020+.4%							
Displacement Chemicals:							

OPEN HOLE DATA	TUBULAR DATA							
		SIZE WEIGHT	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)
8.5" OH (1673' to 17604')	5.5" 20# (0' to 17601')	5.5" 20#		17601				

PREVIOUS CASING DATA	PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS			
	TOP	BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP
9.625" 36# (0' to 1673')					17601	17563		

WELL FLUID		DISPLACEMENT FLUID			DIFF PRESS	CSG LIFT	MAX PRESS		WATER ON LOC (bbl)
TYPE	DENSITY	VOLUME	TYPE	DENSITY	(psi)	(psi)	(psi)		
Oil based	10#		Water	8.3 ppg			3000		1000

Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details
6:00 PM						0	Arrive on location
6:05 PM						0	Tailgate meeting
6:15 PM						0	Batch up latex
10:00 PM						0	Rig in
11:00 PM						0	Wait for rig to finish circulating
12:45 AM						0	Saftey meeting
1:17 AM	4		310		3	3	Fill lines
1:18 AM			5000			3	Pressure test
1:20 AM						3	Start pumping barite - could not get rate from batch mixer
2;13	6		150		100	103	Got batch mixer working - finished pumping barite
2:30 AM	4.3		170		190	293	Pump 780sx Lead @ 14.0ppg
3:15 AM	7.75		500		432	725	Pump 2005sx Tail @ 14.5ppg
4:23 AM						725	Stop/Wash lines/Drop plug
4:33 AM	7		2400		370	1095	Displace with fresh water
5:23 AM	5.2		2500		19.9	1114.9	Slow down
5:27 AM			3000			1114.9	Bump plug/Casing test
5:31 AM	4		4000		6	1120.9	Open shoe
5:34 AM	4		2400		5	1125.9	Pump wet shoe
5:36 AM						1125.9	Stop/Check floats - 1.5bbls back
5:40 AM						1125.9	Rig down
6:00 AM						1125.9	Pre-departure meeting
6:05 AM						1125.9	Leave location
						1125.9	
						1125.9	

Left Yard	9/14/18 5:00 PM	Left Loc.	9/15/18 6:05 AM	Start Pump	9/15/18 1:17 AM
Arrived Loc.	9/14/18 6:00 PM	Returned Yd.	9/15/18 7:00 AM	End Pump	9/15/18 5:34 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)
Yes	2400	Yes	0	0	2355'	Yes	3000	No	0

Derek Scott — Service Supervisor

9/15/2018 — Date