

	PDC ENERGY	YARD CALL	1/22/2019		DISTRICT		
	Harold 6X-234	RTS DATE	1/23/2019		Brighton		
		YARD RTN					
CUSTOMER INFORMATION		1.08c					
Customer Name	PDC ENERGY	WELL INFORMATION		WELL DATA		TUBULAR DATA	
Customer #:	1000700	API #:	05-123-45751	Casing Size	9.625	Size	Grade
AFE #:	DR002975	Field Name:	Wattenberg	Depth		5.5	Weight
Cust Rep on Loc:	Brady Sharp	Well Name:	Harold 6X-234	TVD	6,700 ft	20#	Depth
Cust Phone #:	970-396-9376			MD	11,798 ft	5.5 in. 20#, (0 to 11,798 ft)	
Order Placed By:	PDC ENERGY	Well Type:	Oil	OH		CEMENTING PLUG	
Phone #:		Formation:		OH Depth		Qty	Size
Proposed Job Amt:	\$116,733.74	Rig Contractor:		BHST	200°F	Type	Material
JOB INFORMATION		Rig Name/Num.:	Ensign 161	BHCT	180°F		
Ticket #:	BCO-1901-0128	Rig Phone:		Est. BHST/BHCT		200°F / 180°F (0) (2.99°F/100ft)	
PO #:		County:	Weld	MD / TVD	11,798 ft / 6,700 ft	TOP CONNECTION	
Order Taken By:	Laeger	State:	CO	Mud Weight & Type	10#, Water Based	Size	Type
Order Date:	1/22/2019	Latitude:	40.33554	Open Hole	8.5 in. O.H. (2,558 to 11,798 ft)		Thread
CJES Acct. Manager:	Adam DeSaules	Longitude:	104.58549			JOB TYPE	
CJES Engineer	Cody Michel	Township:	SESE 6 4N64W	Previous Casing	9.625 in. 36# (0 to 2,558 ft)	Production Casing	
		Quote Number:	1-BCO_190119110120				
COMMENTS							
SPECIAL JOB INSTRUCTIONS							
5 1/2 head bowl and swedge plug , Latex , 150# Sugar ,							
DIRECTIONS TO WELL							
Cr 49 and Cr 48, E 1 mile, N into							
Emergency Contacts							
Nearest Hospital					Phone Number:		
Police Department					Phone Number:		
Fire Department					Phone Number:		
Designated Emergency Vehicle				Vehicle Location:			
MSDS on Dash of Emergency Vehicle? (y/n)							
Muster Area #1							
Muster Area #2							
Cell Phone Service on location? (y/n)							
If not, nearest working phone							
Iron Tracking							
	Taken Out			Returned			
Iron Type	Taken By	Date Out	Time Out	Returned By	Date In	Time In	

[illegible]

Job Summary

Ticket Number	Ticket Date
TN# BCO-1901-0128	1/23/2019

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-45751
WELL NAME	RIG	JOB TYPE
Harold 6X-234	Ensign 161	Production Casing
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
40.33554 104.58549	Justin Collin	Brady Sharp

EMPLOYEES
<i>Barlen Joyner</i>
<i>Garrick Williamson</i>
<i>Cory Williams</i>

Max Treating Pressure (psi):	3500	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	2557	11780		
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	J-55	0	2557		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	5 1/2	20	P-110	0	11771		
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):	0	To Depth (ft):	6947
Type: Latex Lead	Volume (sacks):	1315	Volume (bbls):	322
Cement & Additives:				
	1:1:2 G + ads	Density (ppg)	Yield (ft³/sk)	Water Req.
		14	1.37	4.71

Stage 2:	From Depth (ft):	6947	To Depth (ft):	11771
Type: Tail	Volume (sacks):	910	Volume (bbls):	199
Cement & Additives:				
	1:2:0 G + ads	Density (ppg)	Yield (ft³/sk)	Water Req.
		14.5	1.22	5.41

SUMMARY

	Stage 1	Stage 2
Preflushes:		
150 bbls of Weighted Spacer	Calculated Displacement (bbl): 261	
bbls of	Actual Displacement (bbl): 261	
bbls of		
Total Preflush/Spacer Volume (bbl): 150	Plug Bump (Y/N): Y	Bump Pressure (psi): 1700
Total Slurry Volume (bbl): 521	Lost Returns (Y/N): N	(if Y, when) N/A
Total Fluid Pumped: 939		
Returns to Surface:	Cement	10 bbls

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

See job log.

Thank You For Using

CJES O-TEX Cementing

Customer Representative Signature: _____

Cement Job Log

C&J ENERGY SERVICES												
Customer: PDC ENERGY				Date: 1/23/2019				Serv. Supervisor: Justin Collin				
Cust. Rep.: Brady Sharp				Ticket #: BCO-1901-0128				Serv. Center Brighton - 3021				
Lease: Harold 6X-234				API Well #: 05-123-45751				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												
0												
150 bbls ppg Weighted Spacer - 150 bbls of 12.5		+10.0 PPB CJ890+222.16 PPB CJ300+1.0 PPB CJ209+0.5 PPB CJX157011+8.1 PPB CJ801					12.5				150.00	
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+1.0 GPS CJ550L+0.2 GPS CJ891				1290	14		1.37	4.71	313.80	145
C&J Tail 1-1		65 % CJ914+35 % CJ010-74 +0.3 % CJ704+0.15 % CJ210K+0.5 % CJ511				910	14.5		1.22	5.41	197.03	117
Displacement											260.71	
50 % CJ914+50 % CJ010-74+2.0 % CJ020+0.4												
Displacement Chemicals:												
OPEN HOLE DATA		TUBULAR DATA										
8 1/2 from 2557' to 11780'		TVD- 6855'		SIZE WEIGHT	THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)		
				5 1/2 20#	BTC	11771	P-110	4.778	12640	11080		
PREVIOUS CASING DATA		PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS						
9 5/8 36# J-55 from 0' to 2557'		TOP		BTM	SPF	SIZE	SHOE	FLOAT	STAGE	ACP		
				N/A			11771	11732				
WELL FLUID		DISPLACEMENT FLUID		DIFF PRESS (psi)	CSG LIFT (psi)	MAX PRESS (psi)	WATER ON LOC (bbl)					
TYPE	DENSITY	VOLUME	TYPE	DENSITY								
Mud	10.0 ppg	261 bbl	Water	8.3 ppg	2018	Securing not required	3500	800				
Time	Rate (bbl/min)	Csg. Press. (psi)	Tbg. Press. (psi)	Ann. Press. (psi)	Stg. Vol. (bbl)	Cum. Vol. (bbl)	Stage Details					
10:20 AM							0 Arrive on location / sign in					
10:45 AM							0 Spot equipment / start pre-mixing latex					
10:45 AM							0 Rig in					
11:50 AM							0 Safety meeting					
12:20 PM							0 Finish pre-mixing latex					
12:55 PM		5075					0 Pressure test					
1:05 PM	5	350			150	150	Weighted spacer @ 12.5ppg					
1:37 PM						150	Stop / Drop bottom plug					
1:39 PM	6	266			322	472	Mix, weigh & pump 1315sx Latex Lead @ 14ppg - Latex Lead from 0' to 6947'					
2:43 PM	8	450			199	671	Mix, weigh & pump 910sx Tail @ 14.5ppg - Tail from 6947' to 11771'					
3:15 PM						671	Stop / Drop top plug / Wash up pumps & lines					
3:34 PM	8	168			110	781	Start displacement					
3:50 PM	8	1550			130	911	Catch cement					
4:05 PM	5.2	1834			21	932	Drop rate					
4:09 PM	5.2	1700				932	Bump plug					
4:09 PM		2170				932	Plug down @ 261 bbls					
4:10 PM	2	2300			2	934	Rupture shoe disc					
4:10 PM	4	1574			5	939	Fresh water					
4:12 PM							Shut down & check floats - 1.5 bbls back					
4:15 PM							Rig out					
5:00 PM							Leave location					
Left Yard		1/23/19 9:40 AM		Left Loc.	1/23/19 5:00 PM		Start Pump		1/23/19 1:05 PM			
Arrived Loc.		1/23/19 10:20 AM		Returned Yd.	1/23/19 6:00 PM		End Pump		1/23/19 4:12 PM			
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	1700	Yes	0	10	0	Yes	450	No	0	No		
							Justin Collin		1/23/2019			
							Service Supervisor		Date			