



CUSTOMER	PDC ENERGY
DISTRICT	Brighton
ADDRESS	, P.O. Box 26, Bridgeport , WV
PHONE	

AFE #		PO:	
LEASE NAME / NUMBER		API WELL NUMBER	
Anderson - 21-34		05-123-24428	
SECTION	TOWNSHIP	RANGE	COUNTY, STATE
	NENW 34 7		Weld, CO
WELL PERMIT NUMBER			
JOB TYPE		CM-P2A-PERM.	
Vehicle Type		Single	

TICKET	BCO-1909-0086		
DATE	9/19/2019		
CREW INFORMATION			
SUPERVISOR	Derek Scott		
PUMP UNIT	44-5070		
NUMBERS			
ARRIVAL (D&T)	9/19/19 11:45		
DEPARTURE (D&T)	9/19/19 15:05		

Service & Equipment Charges

[illegible]

Materials & Products 13

[illegible]

Customer Stamp

Customer Name Printed

Customer Signature

Date Signed



Job Summary

Ticket Number
TN# **BCO-1909-0086**

Ticket Date
9/19/2019

COUNTY	COMPANY	API Number
Weld	PDC ENERGY	05-123-24428
WELL NAME	RIG	JOB TYPE
Anderson - 21-34	Ranger 3	CM-P2A-PERM.
SURFACE WELL LOCATION	CJES Field Supervisor	CUSTOMER REP
40.53656 -104.76667	Derek Scott	Ryan Beam
EMPLOYEES		

WELL PROFILE			
Max Treating Pressure (psi):	1000	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)
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	8.625	24		0	899		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Production	4.5	10.5		0	1852		
Type	Size (in)	Weight (lb/ft)	Grade	TMD From (ft)	TMD to (ft)	TVD From (Ft)	TVD to (Ft)
Tubing	2.375	4.7		0	1852		

CEMENT DATA

Stage 1: From Depth (ft): **1258** To Depth (ft): **1852**
Type: **Balanced Plug**
Volume (sacks): **40** Volume (bbls): **9.4**

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
Type 3 Neat	14.8	1.33	6.32

Stage 2: From Depth (ft): **0** To Depth (ft): **1118**
Type: **Surface Plug**
Volume (sacks): **72** Volume (bbls): **17**

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
Type 3 Neat	14.8	1.33	6.32

Stage 3: From Depth (ft): **0** To Depth (ft): **360**
Type: **Surface Squeeze**
Volume (sacks): **80** Volume (bbls): **19**

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.
Type 3 Neat	14.8	1.33	6.32

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

Cement & Additives:	Density (ppg)	Yield (ft³/sk)	Water Req.

SUMMARY

Preflushes:	10 bbls of Fresh Water	Calculated Displacement (bbl):	Stage 1 4.8	Stage 2
		Actual Displacement (bbl):	4.8	
Total Preflush/Spacer Volume (bbl):	10	Plug Bump (Y/N):	N/A	Bump Pressure (psi): N/A
Total Slurry Volume (bbl):	45.4	Lost Returns (Y/N):	N	(if Y, when)
Total Fluid Pumped	60.2			
Returns to Surface:	Cement 2 bbls			

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

Squeeze holes were at 360'. Job went well.

Customer Representative Signature:

Thank You For Using
CJES O-TEX Cementing

Field Cementing Water Analysis

Company: PDC Energy
Well: Anderson 21-34

Test Date: 9/19/2019
Ticket Number: BCO-1909-0086


Ion	Sample Volume	Titer	Factor	Concentration	Units	Limit
pH				7		6 - 8
Calcium	50		0.801	235	mg/l	<300
Total Hardness				425	mg/l	<600
Chlorides				215	mg/l	<500
Alkalinity				240	mg/l CaCO ³	<600
Water Temperature					°F	50-80°F

Water Analysis Limits		
	Limits	Potential Impact of Excess
pH	6 - 8	Accelerate or Retard Set Time, Short & Long Term Stability Issues
Calcium	<300	Accelerate Set Times and Higher Mixing Viscosities
Total Hardness	<600	Accelerate or Retard Set Time and Higher Mixing Viscosities
Chlorides	<500	Accelerate Set Time, Higher Mixing Visc, Interfere with fluid loss chemical
Alkalinity	<600	Accelerate or Retard Set Time, Lower Compressive Strength, Higher Visc
Slurry Temperature	50-80°F	Blend will not perform as designed

O-Tex Supervisor Signature: _____



Company Supervisor Signature: _____

	PDC ENERGY		YARD CALL	9/19/2019	8:00	DISTRICT				
	Anderson - 21-34		RTS DATE	9/19/2019	12:00 PM	Brighton				
			YARD RTN	9/19/2019	4:05 PM					
CUSTOMER INFORMATION			2.50a							
Customer Name	PDC ENERGY		WELL INFORMATION		WELL DATA		TUBULAR DATA			
Customer #:	1000700		API #:	05-123-24428	Casing Size	4.5	Size	Grade	Weight	Depth
AFE #:			Field Name:	Wattenberg	Depth	1,852	2 3/8		4.7	1852'
Cust Rep on Loc:	Ryan Beam		Well Name:	Anderson - 21-34	TVD		Casing			
Cust Phone #:	970-405-8585		Well Type:	Old	MD		CEMENTING PLUG			
Order Placed By:	Ryan Beam		Formation:	Surface	OH	#N/A	Qty	Size	Type	Material
Phone #:			Rig Contractor:	Ranger	OH Depth	#N/A				
Proposed Job Amt:	\$7,602.79		Rig Name/Num.:	Ranger 3	BHST	60°F				
JOB INFORMATION			Rig Phone:		BHCT	0°F	Est. BHST/BHCT 60°F / 0°F (API) (0.00°F/100ft)			
Ticket #:	BCO-1909-0086		County:	Weld	MD / TVD	000 ft	TOP CONNECTION			
PO #:			State:	CO	Mud Weight & Type		Size	Type	Thread	
Order Taken By:	Laeger		Latitude:	40.53656	Open Hole		2 3/8	Swage		
Order Date:	9/18/2019		Longitude:	-105	JOB TYPE					
Head Count:	3		CJES Rep.	Cody Michel	Previous Casing	4.5 in. 10.5# (0 to 1,852 ft)	CM-P2A-PERM.			
CJES Acct. Manager:	Cody Michel		Township:	NENW 34 7N66W						
CJES Engineer	Cody Michel		Quote Number:	1-BCO_190918140655						
COMMENTS										
SPECIAL JOB INSTRUCTIONS										
100# Sugar										
DIRECTIONS TO WELL										
Directions to well with program										
Emergency Contacts										
Nearest Hospital:			Greeley, CO			Phone Number:		911		
Police Department:			Greeley, CO			Phone Number:		91		
Fire Department:			Greeley, CO			Phone Number:		911		
Designated Emergency Vehicle:				131151		Vehicle Location: On location				
MSDS on Dash of Emergency Vehicle? (y/n):				Yes, on computer						
Muster Area #1	Lease Entrance									
Muster Area #2	Wind depending									
Cell Phone Service on location? (y/n)				Yes						
If not, nearest working phone										
Iron Tracking										
	Taken Out				Returned					
Iron Type	Taken By	Date Out	Time Out	Returned By	Date In	Time In				

Cement Job Log



Customer: PDC ENERGY				Date: 9/19/2019				Serv. Supervisor: Derek Scott				
Cust. Rep.: Ryan Beam				Ticket #: BCO-1909-0086				Serv. Center Brighton - 3021				
Lease: Anderson - 21-34				API Well #: 05-123-24428				County: Weld		State: CO		
Well Type: Oil				Rig: Ranger 3				Type of Job: CM-P2A-PERM.				
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												
5 bbl Water											5.00	
Balance Plug		100 % CJ922				40	14.8		1.33	6.32	9.44	6
Surface Plug		100 % CJ922				72	14.8		1.33	6.32	17.00	11
Annular Fill		100 % CJ922				80	14.8		1.33	6.32	18.88	12
100 % CJ922												
Displacement Chemicals:												
OPEN HOLE DATA				TUBULAR DATA								
				SIZE WEIGHT		THREAD	DEPTH (ft)	GRADE	ID (in)	BURST (psi)	COLLAPSE (psi)	
Mix Cem. Temperature °F	Lead Temp.	Middle Temp.	Tail Temp.	2.375			1852					
PREVIOUS CASING DATA				PERFORATED INTERVAL DATA				CASING EQUIPMENT DEPTHS				
4.5 in. 10.5# (0 to 1,852 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								
		4.8 bbl	Water	8.3 ppg			1000			110		

C&J ENERGY SERVICES

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9/19/2019



Client
Ticket No. 19090086
Location NENW 34-7N-66W
Comments See job log

Client Rep
Well Name Anderson 21-34
Job Type Abandonment Plugs

Supervisor
Unit No. 745070
Service District Brighton, CO
Job Date 09/19/2019

Supervisor
Unit No. 745070
Service District Brighton, CO
Job Date 09/19/2019



RANGER ENERGY SERVICES, LLC

WIRELINE DIVISION

3333 Center Dr.
Milliken, CO.
80543



Company Name: PDC ENERGY, INC.	Company Address: 1775 SHERMAN STREET SUITE 3000 DENVER, CO 80203			Field Ticket Number: 10001285
Well Name: ANDERSON 21-34	Field: WATTENBERG - 90750	County: WELD	State: COLORADO	Rig Name & Number: RANGER ENERGY SERVICES RIG# 5003
API #: 05-123-24428	AFE #:		Date: 9/19/2019	Wireline Unit # 222
SERVICE NOTES: (1) 3.625" Gauge Ring to 7355' (4) Set STS 10K CIBP in 4-1/2" CSG @ 7017' (7) Perf SQ Holes w/ 6spf from 360' - 361' (2) Set STS 10K CIBP in 4-1/2" Csg @ 7329' (5) Cement Dump Bail 2sx @ 7017' (3) Cement Dump Bail 2sx @ 7329' (6) Radial Bond Log 6850' - Surface				Engineer: A. REAGAN
				Operator: T.VANNEST
				Operator:

RUN	CODE	DESCRIPTIONS	QTY	UNIT PRICE	DISCOUNT	AMOUNT
	1000-001	Set Up Charge Cased Hole Unit	1			
	3000-001	Packoff Operation Charge0#-1000#	1			
1	8000-009	Junk Catcher / Gauge Ring Depth Charge	7355			
	8000-010	Junk Catcher / Gauge Ring Operation Charge	1			
2	8000-001	Bridge Plug Depth Charge	7329			
	8000-015	Setting Tool Rental, per tool	1			
	8000-002	Bridge Plug Operation Charge	1			
	8000-014	Standard Set Power Charge	1			
3	7000-006	Dump Bailer Depth Charge	7329			
	7000-007	Dump Bailer Operation Charge	1			
4	8000-001	Bridge Plug Depth Charge	7017			
	8000-015	Setting Tool Rental, per tool	1			
	8000-002	Bridge Plug Operation Charge	1			
	8000-014	Standard Set Power Charge	1			
5	7000-006	Dump Bailer Depth Charge	7017			
	7000-007	Dump Bailer Operation Charge	1			
7	6400-000	Scalloped Gun Carrier, 3-1/8" x 1' w/ 6SPF	1			

Customer Signature:	Customer Name Printed:	Ranger Energy Services Representative Signature	Ranger Energy Services Representative:
	MR. RYAN BEAM		ANDREW REAGAN