

# Cement Post Job Report

**Client:** PDC Energy

**Well Name:** Drake 18N

**API #:** 05-123-51823

**Job Date:** January 21, 2024

**Job Type:** New Well - 5.5" Production String

**Cement Company & Contact:** EXERO Well Integrity -  
Cheve Meyer 720-239-3819

# EXERO

## TREATMENT REPORT

CLIENT	WELL	RIG	JOB TYPE	THREAD TYPE	WELLHEAD CONNECTION
PDC Energy	Drake 18N	Patterson 272	Production	Buttress	5 1/2" HP Cement Head

WELL MD (FT)	WELL TVD (FT)	DEVIATION (DEG)	NUMBER OF STAGES	BHST (DEG)	BHCT (DEG)
18747	6779	90	1	245	245

PACKER/RETAINER/CIBP/DV TOOL DEPTHS (FT)	TOOL TYPE	TOP OF PERFS (FT)	BOTTOM OF PERFS (FT)	NUMBER OF HOLES

CASING/TUBING/DP DETAILS								
STRING TYPE	GRADE	OD"	WT/FT	ID"	OH SIZE"	% EXCESS LEAD	% EXCESS TAIL	TOTAL DEPTH (FT)
Surface		9.625	36	8.921	13.50			1709
Production	P110	5.5	20	4.778	8.5	0	0	18737
MAXIMUM CASING/TUBING/DP PSI			9888			MAXIMUM ANNULAR PSI		4750

Mud Type	OBM	Rotate Y,N	No	Circulation Data				Water Requirements (bbls)		
Mud ppg	10.8	Rate (rpm)		Circulate Time (hrs)		2	Spacers		160	
Flow Temp	126	Torque Val.		Circulation Rate (bpm)		10.7	PSI	1290	Stage 1 Lead	112
Vis. Sec/qt	43	Time (hr)		Full Circulation ? (Y,N,P)		Yes			Stage 1 Tail	260
PV (cP)	13	Pipe Reciprocation		Gas Present (Y,N)		No	Units	0	Stage 2 Lead	
Yield Pt	8	Recip Y,N	No	Centralizers/Plugs				Stage 2 Tail		
10 sec gel	3	Stroke (ft)		Quantity & Type		Customer Provided			Displacement	415
10 min gel	5	Recip time		Top Plug/Type		Customer Provided			Wash up	20
30 min gel	6	Stuck ?		Bottom Plug/Type		Customer Provided			Total + 10% Safety	1064

Preflush & Spacers		Stage 1 Lead - Class G		Stage 1 Tail - Class G		Stage 2 Lead		Stage 2 Tail		Displacement	
Spacer 1	Spacer	Density	12.9	Density	13.7	Density		Density		Fluid Type	Water
Density	12	Sacks	1276	Sacks	1648	Sacks		Sacks		Dens. ppg	8.33
Volume	160	Vol/bbls	256.8	Vol/bbls	402.1	Vol/bbls	0.0	Vol/bbls	0.0	Vol. bbl	415.4
Rate	9.5	Rate	10	Rate	10.5	Rate		Rate		Rate bpm	11.5
Spacer 2		Yield	1.13	Yield	1.37	Yield		Yield		Clay Stay?	No
Density		Gal/Sk	3.68	Gal/Sk	6.63	Gal/Sk		Gal/Sk		Biocide ?	Yes
Volume		% Excess	0	% Excess	0	% Excess		% Excess		Slow @ bbl	395
Rate		TOL (ft)	2408	TOT (ft)	8702	TOL (ft)		TOT (ft)		Bump PSI	2900

Final Displacement (bbls)	415.4
Bump Plug?	Yes
Final Bump Pressure (psi)	3440
Full Returns throughout job?	Full
Vol. away/Time when returns lost	
Vol. away when returns were regained	
Spacer to Surface?	Yes
Spacer volume returned (bbls)	50
Cement to surface?	No
Cement volume to surface stage 1	0
Cement volume to surface stage 2	

Surface Top Out Details-Pumped		Job Summary & Chems Used	
Cement Type		MFC 47 (gal)	70
Dens. ppg		MFC 67 (gal)	168
Sacks qty		Defoamer (gal)	25
Gal/sk		Biocide (gal)	15
Yield		Corr. Inhib (gal)	
Lbs. of chloride used		Fiber (lbs)	290
Top out pipe used ?		Chloride (lbs)	
Feet of top out pipe		Retarder (lbs)	
Annulus holding?		Clay Stay (gal)	
Sodium Silicate Used		Other	

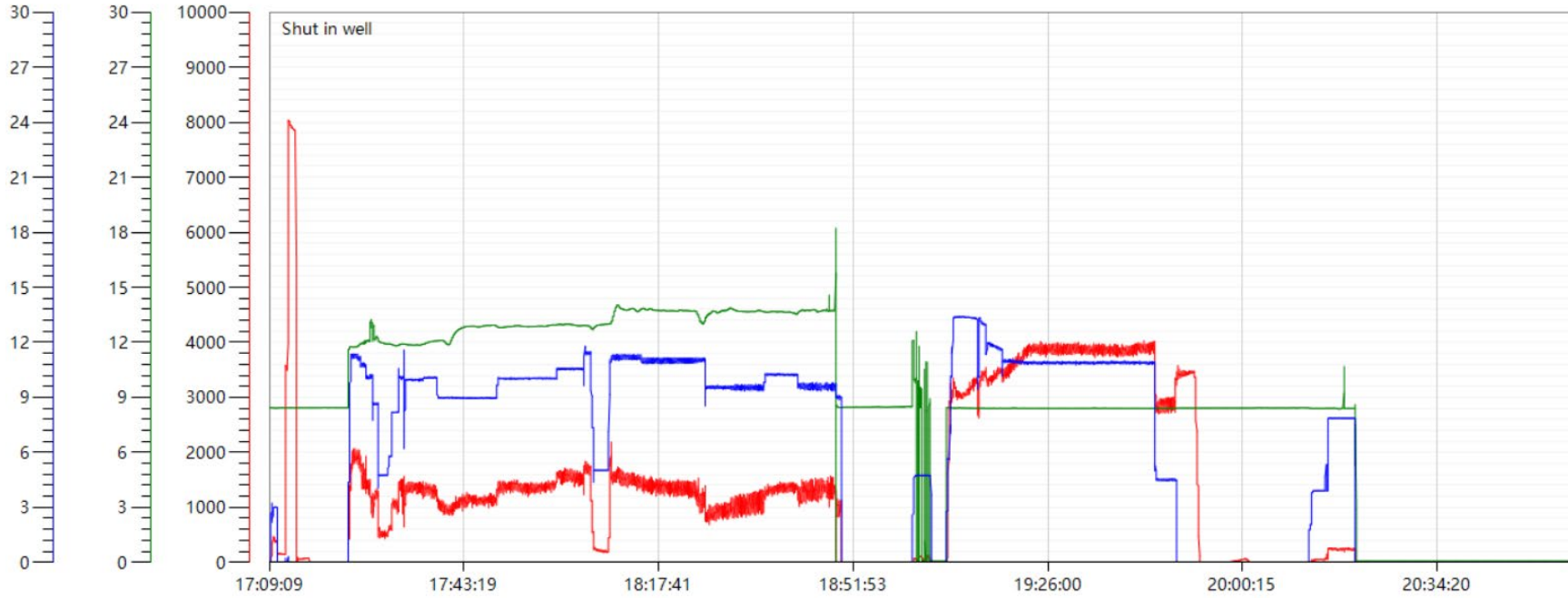
## JOB LOG

CLIENT	WELL	RIG	JOB TYPE	START DATE	SUPERVISOR		
PDC Energy	Drake 18N	Patterson 272	Production	1/21/2024	Temp / Hum / Air Press 40 Deg F / 63% / 24.77 in		
DATE (dd/mm)	TIME (hh:mm)	DENSITY (ppg)	RATE (bpm)	VOL. (bbl)	TOTAL VOL.	PRESSURE	TREATMENT COMMENTS
1/21/2024	12:05:00 AM						CREW CALLED OUT FOR ON LOCATION TIME OF 11:00 01/21/2024
1/21/2024	9:15:00 AM						CREW ARRIVES AT CUSTOMER LOCATION
1/21/2024	11:00:00 AM						WAITING ON RIG TO FINISH RUNNING CASING
1/21/2024	1:30:00 PM						RIG UP ALL IRON AND HOSES
1/21/2024	3:00:00 PM						RIG CIRCULATING
1/21/2024	4:30:00 PM						SAFETY MEETING WITH EXERO CREW, RIG CREW, AND CUSTOMER REP
1/21/2024	5:07:00 PM	8.34	3.0	3	3	700	FILL LINES WITH 3 BBLS FRESH WATER
1/21/2024	5:09:00 PM					8000	PRESSURE TEST PUMP AND LINES
1/21/2024	5:12:00 PM						LOAD BOTTOM PLUG
1/21/2024	5:20:00 PM	12	11.0	0	0	1900	BEGIN PUMPING 12 PPG SPACER + SURFACTANT + FIBER
1/21/2024	5:25:00 PM	12	5.0	50	50	800	PUMPING SPACER
1/21/2024	5:32:00 PM	12	10.0	50	100	1450	PUMPING SPACER
1/21/2024	5:39:00 PM	12	9.0	60	160	950	PUMPING SPACER
1/21/2024	5:39:00 PM	12.9	9.0	0	0	980	BEGIN PUMPING 12.9 PPG LEAD CEMENT, DENSITY VERIFIED WITH PRESSURIZED MUD SCALE
1/21/2024	5:44:00 PM	12.9	9.0	50	50	1200	PUMPING LEAD CEMENT
1/21/2024	5:50:00 PM	12.9	10.0	50	100	1180	PUMPING LEAD CEMENT
1/21/2024	5:55:00 PM	12.9	10.0	50	150	1200	PUMPING LEAD CEMENT
1/21/2024	6:00:00 PM	12.9	10.0	50	200	1350	PUMPING LEAD CEMENT
1/21/2024	6:07:00 PM	12.9	5.0	56.8	256.8	200	PUMPING LEAD CEMENT. SLOW AT 242 BBLS PUMPED TO LAND BOTTOM PLUG
1/21/2024	6:07:00 PM	13.7	11.0	0	0	1600	BEGIN PUMPING 13.7 PPG TAIL CEMENT, DENSITY VERIFIED WITH PRESSURIZED MUD SCALE
1/21/2024	6:12:00 PM	13.7	11.0	50	50	1500	PUMPING TAIL CEMENT
1/21/2024	6:16:00 PM	13.7	11.0	50	100	1400	PUMPING TAIL CEMENT
1/21/2024	6:20:00 PM	13.7	11.0	50	150	1300	PUMPING TAIL CEMENT
1/21/2024	6:26:00 PM	13.7	9.5	50	200	950	PUMPING TAIL CEMENT
1/21/2024	6:30:00 PM	13.7	9.5	50	250	1000	PUMPING TAIL CEMENT
1/21/2024	6:36:00 PM	13.7	10.5	50	300	1200	PUMPING TAIL CEMENT
1/21/2024	6:41:00 PM	13.7	10.0	50	350	1220	PUMPING TAIL CEMENT
1/21/2024	6:46:00 PM	13.7	9.0	52.1	402.1	1100	PUMPING TAIL CEMENT
1/21/2024	6:46:00 PM	8.34	9.0	8	8	900	PUMP 8 BBLS SUGAR WATER FOR WET SHOE
1/21/2024	6:47:00 PM						SHUT DOWN, WASH UP PUMP. STAND PIPE SLID DOWN. ADDED KELLY HOSE TO STANDPIPE
1/21/2024	7:06:00 PM	8.34	13.0	0	0	3300	DROP TOP PLUG, BEGIN WATER + BIOCIDE DISPLACEMENT. 2 BBLS SUGAR WATER BEHIND
1/21/2024	7:10:00 PM	8.34	13.5	50	50	3200	PUMPING DISPLACEMENT
1/21/2024	7:15:00 PM	8.34	12.0	50	100	3400	PUMPING DISPLACEMENT
1/21/2024	7:20:00 PM	8.34	11.0	50	150	3850	PUMPING DISPLACEMENT
1/21/2024	7:25:00 PM	8.34	11.0	50	200	4000	PUMPING DISPLACEMENT
1/21/2024	7:29:00 PM	8.34	11.0	50	250	4020	PUMPING DISPLACEMENT
1/21/2024	7:34:00 PM	8.34	11.0	50	300	3900	PUMPING DISPLACEMENT
1/21/2024	7:38:00 PM	8.34	11.0	50	350	3920	PUMPING DISPLACEMENT
1/21/2024	7:42:00 PM	8.34	11.0	41	395	3950	PUMPING DISPLACEMENT. SPACER TO SURFACE AT 366 BBLS PUMPED. 50 BBLS TO SURFACE
1/21/2024	7:46:00 PM	8.34	4.5	20.4	415.4	2900	PUMPING DISPLACEMENT
1/21/2024	7:46:00 PM					3440	LAND PLUG. FCP - 2900 PSI, BUMPED TO 3440 PSI
1/21/2024	7:51:00 PM						CHECK FLOATS. FLOATS HELD, 5 BBLS BACK
1/21/2024	8:09:00 PM	8.34					FLUSH STACK
1/21/2024	8:18:00 PM						RIG DOWN ALL IRON AND HOSES
1/21/2024	9:30:00 PM						DEPART CUSTOMER LOCATION

# Drake 18N Production Pump Chart – Pressure / Rate / Density

## Chart Report

— pressure1 psi    — density backup lbs/gal    — Combined Rate





# Centralizer Depths

Well Name: Drake 18N

Production, Set Depth: 18,737.0ftKB

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00		Original KB Elevation (ft) 4,764.50		KB-Ground Distance (ft) 28.50		Spud Date 1/17/2024 05:30		Rig Release Date 1/21/2024 23:30		On Production Date Abandon Date	

## Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwly	Connections	Top (ftKB)	Cum Len (ft)
7	1	Casing Joints	5 1/2	20.00	P-110	Yes	42.54	Yes			18,658.5	78.54
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	40.27	Yes			18,573.6	163.42
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	44.45	Yes			18,485.2	251.80
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			18,397.7	339.33
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	40.29	Yes			18,313.1	423.86
17		Marker Joint B	5 1/2	20.00	P-110	Yes	18.07	Yes			18,252.0	484.97
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	42.97	Yes			18,164.5	572.52
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			18,078.6	658.44
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	38.92	Yes			17,995.5	741.53
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	44.57	Yes			17,907.9	829.13
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	42.48	Yes			17,822.6	914.38
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			17,735.7	1,001.28
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	42.90	Yes			17,650.0	1,087.02
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	41.68	Yes			17,564.9	1,172.09
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			17,477.1	1,259.93
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	44.40	Yes			17,389.3	1,347.70
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			17,301.9	1,435.11
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	43.29	Yes			17,216.2	1,520.83
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			17,131.1	1,605.92
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	43.53	Yes			17,044.0	1,692.96
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	43.73	Yes			16,956.1	1,780.92
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	44.59	Yes			16,867.0	1,869.98
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	43.99	Yes			16,781.6	1,955.43
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	44.51	Yes			16,693.1	2,043.94
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			16,607.9	2,129.08
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			16,526.8	2,210.19
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	40.36	Yes			16,445.0	2,292.01
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	42.81	Yes			16,359.1	2,377.86
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	42.88	Yes			16,272.8	2,464.21
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	39.32	Yes			16,189.9	2,547.10
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	40.34	Yes			16,106.2	2,630.80



## Centralizer Depths

**Well Name: Drake 18N**

**Production, Set Depth: 18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
69	62	Casing Joints	5 1/2	20.00	P-110	Yes	37.12	Yes			16,028.1	2,708.95
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	43.42	Yes			15,941.1	2,795.95
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	42.26	Yes			15,854.8	2,882.22
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	43.60	Yes			15,767.5	2,969.46
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			15,680.9	3,056.11
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	39.33	Yes			15,598.1	3,138.91
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	40.27	Yes			15,518.1	3,218.86
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			15,431.1	3,305.91
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	39.07	Yes			15,348.6	3,388.39
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	37.05	Yes			15,268.1	3,468.92
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	39.57	Yes			15,185.0	3,552.02
91	84	Casing Joints	5 1/2	20.00	P-110	Yes	42.00	Yes			15,102.9	3,634.15
93	86	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			15,016.3	3,720.70
95	88	Casing Joints	5 1/2	20.00	P-110	Yes	42.14	Yes			14,930.6	3,806.42
97	90	Casing Joints	5 1/2	20.00	P-110	Yes	39.07	Yes			14,848.1	3,888.92
99	92	Casing Joints	5 1/2	20.00	P-110	Yes	38.18	Yes			14,767.3	3,969.73
101	94	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			14,681.2	4,055.78
103	96	Casing Joints	5 1/2	20.00	P-110	Yes	43.14	Yes			14,594.5	4,142.51
105	98	Casing Joints	5 1/2	20.00	P-110	Yes	40.65	Yes			14,511.4	4,225.64
107	100	Casing Joints	5 1/2	20.00	P-110	Yes	43.41	Yes			14,424.0	4,313.05
109	102	Casing Joints	5 1/2	20.00	P-110	Yes	42.05	Yes			14,341.3	4,395.72
111	104	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			14,254.7	4,482.28
113	106	Casing Joints	5 1/2	20.00	P-110	Yes	40.03	Yes			14,171.0	4,565.97
115	108	Casing Joints	5 1/2	20.00	P-110	Yes	43.57	Yes			14,084.5	4,652.55
117	110	Casing Joints	5 1/2	20.00	P-110	Yes	40.08	Yes			14,001.8	4,735.16
119	112	Casing Joints	5 1/2	20.00	P-110	Yes	39.87	Yes			13,925.1	4,811.92
121	114	Casing Joints	5 1/2	20.00	P-110	Yes	43.56	Yes			13,840.2	4,896.82
123	116	Casing Joints	5 1/2	20.00	P-110	Yes	41.24	Yes			13,755.0	4,982.00
125	118	Casing Joints	5 1/2	20.00	P-110	Yes	44.13	Yes			13,670.2	5,066.79
127	120	Casing Joints	5 1/2	20.00	P-110	Yes	43.00	Yes			13,584.4	5,152.62
129	122	Casing Joints	5 1/2	20.00	P-110	Yes	43.60	Yes			13,498.1	5,238.91



## Centralizer Depths

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**Production, Set Depth: 18,737.0ftKB**

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Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
131	124	Casing Joints	5 1/2	20.00	P-110	Yes	44.61	Yes			13,409.3	5,327.75
133		Marker Joint C	5 1/2	20.00	P-110	Yes	21.78	Yes			13,344.4	5,392.65
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			13,260.0	5,477.02
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			13,172.4	5,564.60
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	44.39	Yes			13,083.4	5,653.58
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	44.01	Yes			12,998.7	5,738.26
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	44.63	Yes			12,911.0	5,825.96
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	43.10	Yes			12,825.5	5,911.55
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	40.86	Yes			12,741.4	5,995.62
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			12,652.7	6,084.30
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			12,567.3	6,169.68
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	41.04	Yes			12,482.0	6,255.01
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	44.60	Yes			12,394.4	6,342.58
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	41.49	Yes			12,309.9	6,427.14
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	40.33	Yes			12,226.2	6,510.80
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	43.81	Yes			12,139.0	6,597.99
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	44.51	Yes			12,050.6	6,686.41
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	42.56	Yes			11,963.4	6,773.57
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	40.63	Yes			11,878.2	6,858.80
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	43.59	Yes			11,791.8	6,945.16
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	44.62	Yes			11,706.6	7,030.41
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			11,621.2	7,115.83
175	167	Casing Joints	5 1/2	20.00	P-110	Yes	41.39	Yes			11,538.5	7,198.55
177	169	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			11,452.0	7,284.97
179	171	Casing Joints	5 1/2	20.00	P-110	Yes	41.13	Yes			11,367.8	7,369.21
181	173	Casing Joints	5 1/2	20.00	P-110	Yes	43.63	Yes			11,283.0	7,454.01
183	175	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			11,193.9	7,543.07
185	177	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			11,106.9	7,630.12
187	179	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			11,023.4	7,713.60
189	181	Casing Joints	5 1/2	20.00	P-110	Yes	41.66	Yes			10,940.1	7,796.93
191	183	Casing Joints	5 1/2	20.00	P-110	Yes	40.56	Yes			10,859.6	7,877.42



## Centralizer Depths

**Well Name: Drake 18N**

**Production, Set Depth: 18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
193	185	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			10,778.8	7,958.24
195	187	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			10,698.7	8,038.30
197	189	Casing Joints	5 1/2	20.00	P-110	Yes	40.67	Yes			10,617.3	8,119.74
199	191	Casing Joints	5 1/2	20.00	P-110	Yes	41.28	Yes			10,532.4	8,204.60
201	193	Casing Joints	5 1/2	20.00	P-110	Yes	43.77	Yes			10,449.1	8,287.93
203	195	Casing Joints	5 1/2	20.00	P-110	Yes	43.67	Yes			10,365.4	8,371.61
205	197	Casing Joints	5 1/2	20.00	P-110	Yes	43.56	Yes			10,285.0	8,452.03
207	199	Casing Joints	5 1/2	20.00	P-110	Yes	43.65	Yes			10,200.4	8,536.65
209	201	Casing Joints	5 1/2	20.00	P-110	Yes	42.84	Yes			10,114.2	8,622.84
211	203	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			10,027.2	8,709.79
213	205	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			9,940.3	8,796.74
215	207	Casing Joints	5 1/2	20.00	P-110	Yes	44.02	Yes			9,854.9	8,882.14
217	209	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			9,766.9	8,970.15
219	211	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			9,681.9	9,055.07
221	213	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			9,594.9	9,142.12
223	215	Casing Joints	5 1/2	20.00	P-110	Yes	41.33	Yes			9,509.5	9,227.48
225	217	Casing Joints	5 1/2	20.00	P-110	Yes	42.26	Yes			9,426.7	9,310.27
227	219	Casing Joints	5 1/2	20.00	P-110	Yes	39.00	Yes			9,344.2	9,392.81
229	221	Casing Joints	5 1/2	20.00	P-110	Yes	44.41	Yes			9,255.8	9,481.25
231	223	Casing Joints	5 1/2	20.00	P-110	Yes	43.57	Yes			9,172.0	9,565.01
233	225	Casing Joints	5 1/2	20.00	P-110	Yes	40.39	Yes			9,090.5	9,646.50
235	227	Casing Joints	5 1/2	20.00	P-110	Yes	44.16	Yes			9,002.1	9,734.88
237	229	Casing Joints	5 1/2	20.00	P-110	Yes	44.60	Yes			8,915.7	9,821.27
239		Air Lock Sub	5 1/2	20.00	P-110	Yes	1.65	Yes			8,869.5	9,867.52
241	232	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			8,780.6	9,956.39
243	234	Casing Joints	5 1/2	20.00	P-110	Yes	44.60	Yes			8,692.4	10,044.57
245	236	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			8,603.6	10,133.40
247	238	Casing Joints	5 1/2	20.00	P-110	Yes	42.63	Yes			8,517.8	10,219.23
249	240	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			8,432.1	10,304.95
251	242	Casing Joints	5 1/2	20.00	P-110	Yes	42.03	Yes			8,345.8	10,391.22
253	244	Casing Joints	5 1/2	20.00	P-110	Yes	41.43	Yes			8,260.0	10,477.05



## Centralizer Depths

**Well Name: Drake 18N**

**Production, Set Depth: 18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
255	246	Casing Joints	5 1/2	20.00	P-110	Yes	42.37	Yes			8,173.4	10,563.64
257	248	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			8,088.4	10,648.58
259		Marker Joint D	5 1/2	20.00	P-110	Yes	20.69	Yes			8,023.1	10,713.87
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	34.80	Yes			7,988.3	10,748.67
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	34.24	Yes			7,954.1	10,782.91
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			7,910.0	10,827.02
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			7,865.8	10,871.25
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	44.32	Yes			7,821.4	10,915.57
265	255	Casing Joints	5 1/2	20.00	P-110	Yes	37.38	Yes			7,784.1	10,952.95
266	256	Casing Joints	5 1/2	20.00	P-110	Yes	40.03	Yes			7,744.0	10,992.98
267	257	Casing Joints	5 1/2	20.00	P-110	Yes	42.07	Yes			7,702.0	11,035.05
268	258	Casing Joints	5 1/2	20.00	P-110	Yes	39.73	Yes			7,662.2	11,074.78
269	259	Casing Joints	5 1/2	20.00	P-110	Yes	41.03	Yes			7,621.2	11,115.81
270	260	Casing Joints	5 1/2	20.00	P-110	Yes	44.47	Yes			7,576.7	11,160.28
271	261	Casing Joints	5 1/2	20.00	P-110	Yes	43.78	Yes			7,532.9	11,204.06
272	262	Casing Joints	5 1/2	20.00	P-110	Yes	42.13	Yes			7,490.8	11,246.19
273	263	Casing Joints	5 1/2	20.00	P-110	Yes	42.54	Yes			7,448.3	11,288.73
274	264	Casing Joints	5 1/2	20.00	P-110	Yes	44.47	Yes			7,403.8	11,333.20
275	265	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			7,359.4	11,377.62
276	266	Casing Joints	5 1/2	20.00	P-110	Yes	44.40	Yes			7,315.0	11,422.02
277	267	Casing Joints	5 1/2	20.00	P-110	Yes	43.27	Yes			7,271.7	11,465.29
278	268	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			7,227.3	11,509.72
279	269	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			7,182.9	11,554.15
280	270	Casing Joints	5 1/2	20.00	P-110	Yes	41.53	Yes			7,141.3	11,595.68
281	271	Casing Joints	5 1/2	20.00	P-110	Yes	44.60	Yes			7,096.7	11,640.28
282	272	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			7,053.1	11,683.86
283	273	Casing Joints	5 1/2	20.00	P-110	Yes	36.72	Yes			7,016.4	11,720.58
284	274	Casing Joints	5 1/2	20.00	P-110	Yes	43.83	Yes			6,972.6	11,764.41
285	275	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			6,928.2	11,808.84
286	276	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			6,884.7	11,852.28
287	277	Casing Joints	5 1/2	20.00	P-110	Yes	43.18	Yes			6,841.5	11,895.46



## Centralizer Depths

Well Name: **Drake 18N**

Production, Set Depth: **18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
288	278	Casing Joints	5 1/2	20.00	P-110	Yes	44.03	Yes			6,797.5	11,939.49
289	279	Casing Joints	5 1/2	20.00	P-110	Yes	42.13	Yes			6,755.4	11,981.62
290	280	Casing Joints	5 1/2	20.00	P-110	Yes	42.79	Yes			6,712.6	12,024.41
291	281	Casing Joints	5 1/2	20.00	P-110	Yes	44.01	Yes			6,668.6	12,068.42
292	282	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			6,624.3	12,112.70
293	283	Casing Joints	5 1/2	20.00	P-110	Yes	39.73	Yes			6,584.6	12,152.43
294	284	Casing Joints	5 1/2	20.00	P-110	Yes	44.14	Yes			6,540.4	12,196.57
295	285	Casing Joints	5 1/2	20.00	P-110	Yes	44.41	Yes			6,496.0	12,240.98
296		Marker Joint F	5 1/2	20.00	P-110	Yes	10.02	Yes			6,486.0	12,251.00
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	44.72	Yes			6,441.3	12,295.72
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	43.33	Yes			6,398.0	12,339.05
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	44.48	Yes			6,353.5	12,383.53
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			6,309.0	12,427.97
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	44.57	Yes			6,264.5	12,472.54
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	44.59	Yes			6,219.9	12,517.13
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	42.66	Yes			6,177.2	12,559.79
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			6,133.0	12,604.02
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	43.04	Yes			6,089.9	12,647.06
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			6,045.6	12,691.36
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	43.96	Yes			6,001.7	12,735.32
308	297	Casing Joints	5 1/2	20.00	P-110	Yes	41.09	Yes			5,960.6	12,776.41
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	43.30	Yes			5,917.3	12,819.71
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	41.27	Yes			5,876.0	12,860.98
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	44.04	Yes			5,832.0	12,905.02
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	43.86	Yes			5,788.1	12,948.88
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	42.63	Yes			5,745.5	12,991.51
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	42.25	Yes			5,703.2	13,033.76
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			5,660.8	13,076.16
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	44.58	Yes			5,616.3	13,120.74
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			5,572.0	13,164.99
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	42.20	Yes			5,529.8	13,207.19



## Centralizer Depths

**Well Name: Drake 18N**

**Production, Set Depth: 18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			5,485.6	13,251.42
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	42.75	Yes			5,442.8	13,294.17
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	44.33	Yes			5,398.5	13,338.50
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			5,355.1	13,381.93
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	43.89	Yes			5,311.2	13,425.82
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	41.76	Yes			5,269.4	13,467.58
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			5,226.0	13,511.05
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	42.97	Yes			5,183.0	13,554.02
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			5,138.8	13,598.24
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			5,094.5	13,642.53
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	44.50	Yes			5,050.0	13,687.03
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	41.08	Yes			5,008.9	13,728.11
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	44.60	Yes			4,964.3	13,772.71
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	44.33	Yes			4,920.0	13,817.04
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	41.59	Yes			4,878.4	13,858.63
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	42.87	Yes			4,835.5	13,901.50
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	43.42	Yes			4,792.1	13,944.92
336	325	Casing Joints	5 1/2	20.00	P-110	Yes	44.63	Yes			4,747.5	13,989.55
337	326	Casing Joints	5 1/2	20.00	P-110	Yes	35.19	Yes			4,712.3	14,024.74
338	327	Casing Joints	5 1/2	20.00	P-110	Yes	42.62	Yes			4,669.6	14,067.36
339	328	Casing Joints	5 1/2	20.00	P-110	Yes	43.72	Yes			4,625.9	14,111.08
340	329	Casing Joints	5 1/2	20.00	P-110	Yes	40.63	Yes			4,585.3	14,151.71
341	330	Casing Joints	5 1/2	20.00	P-110	Yes	39.53	Yes			4,545.8	14,191.24
342	331	Casing Joints	5 1/2	20.00	P-110	Yes	42.08	Yes			4,503.7	14,233.32
343	332	Casing Joints	5 1/2	20.00	P-110	Yes	42.59	Yes			4,461.1	14,275.91
344	333	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			4,418.2	14,318.76
345	334	Casing Joints	5 1/2	20.00	P-110	Yes	42.05	Yes			4,376.2	14,360.81
346	335	Casing Joints	5 1/2	20.00	P-110	Yes	39.32	Yes			4,336.9	14,400.13
347	336	Casing Joints	5 1/2	20.00	P-110	Yes	42.08	Yes			4,294.8	14,442.21
348	337	Casing Joints	5 1/2	20.00	P-110	Yes	42.39	Yes			4,252.4	14,484.60
349	338	Casing Joints	5 1/2	20.00	P-110	Yes	42.16	Yes			4,210.2	14,526.76



## Centralizer Depths

Well Name: **Drake 18N**

Production, Set Depth: **18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
350	339	Casing Joints	5 1/2	20.00	P-110	Yes	42.69	Yes			4,167.6	14,569.45
351	340	Casing Joints	5 1/2	20.00	P-110	Yes	40.27	Yes			4,127.3	14,609.72
352	341	Casing Joints	5 1/2	20.00	P-110	Yes	42.30	Yes			4,085.0	14,652.02
353	342	Casing Joints	5 1/2	20.00	P-110	Yes	40.22	Yes			4,044.8	14,692.24
354	343	Casing Joints	5 1/2	20.00	P-110	Yes	36.42	Yes			4,008.3	14,728.66
355	344	Casing Joints	5 1/2	20.00	P-110	Yes	43.08	Yes			3,965.3	14,771.74
356	345	Casing Joints	5 1/2	20.00	P-110	Yes	42.08	Yes			3,923.2	14,813.82
357	346	Casing Joints	5 1/2	20.00	P-110	Yes	43.94	Yes			3,879.2	14,857.76
358	347	Casing Joints	5 1/2	20.00	P-110	Yes	41.86	Yes			3,837.4	14,899.62
359	348	Casing Joints	5 1/2	20.00	P-110	Yes	41.93	Yes			3,795.5	14,941.55
360	349	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			3,752.9	14,984.08
361	350	Casing Joints	5 1/2	20.00	P-110	Yes	42.17	Yes			3,710.8	15,026.25
362	351	Casing Joints	5 1/2	20.00	P-110	Yes	42.13	Yes			3,668.6	15,068.38
363	352	Casing Joints	5 1/2	20.00	P-110	Yes	43.97	Yes			3,624.7	15,112.35
364	353	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			3,582.3	15,154.75
365	354	Casing Joints	5 1/2	20.00	P-110	Yes	43.80	Yes			3,538.5	15,198.55
366	355	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			3,495.9	15,241.08
367	356	Casing Joints	5 1/2	20.00	P-110	Yes	39.13	Yes			3,456.8	15,280.21
368	357	Casing Joints	5 1/2	20.00	P-110	Yes	43.14	Yes			3,413.7	15,323.35
369	358	Casing Joints	5 1/2	20.00	P-110	Yes	44.97	Yes			3,368.7	15,368.32
370	359	Casing Joints	5 1/2	20.00	P-110	Yes	37.77	Yes			3,330.9	15,406.09
371	360	Casing Joints	5 1/2	20.00	P-110	Yes	41.40	Yes			3,289.5	15,447.49
372	361	Casing Joints	5 1/2	20.00	P-110	Yes	39.74	Yes			3,249.8	15,487.23
373	362	Casing Joints	5 1/2	20.00	P-110	Yes	42.09	Yes			3,207.7	15,529.32
374	363	Casing Joints	5 1/2	20.00	P-110	Yes	42.18	Yes			3,165.5	15,571.50
375	364	Casing Joints	5 1/2	20.00	P-110	Yes	42.79	Yes			3,122.7	15,614.29
376	365	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			3,080.2	15,656.82
377	366	Casing Joints	5 1/2	20.00	P-110	Yes	38.24	Yes			3,041.9	15,695.06
378	367	Casing Joints	5 1/2	20.00	P-110	Yes	38.07	Yes			3,003.9	15,733.13
379	368	Casing Joints	5 1/2	20.00	P-110	Yes	42.37	Yes			2,961.5	15,775.50
380	369	Casing Joints	5 1/2	20.00	P-110	Yes	42.13	Yes			2,919.4	15,817.63



## Centralizer Depths

**Well Name: Drake 18N**

**Production, Set Depth: 18,737.0ftKB**

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
381	370	Casing Joints	5 1/2	20.00	P-110	Yes	42.86	Yes			2,876.5	15,860.49
382	371	Casing Joints	5 1/2	20.00	P-110	Yes	42.33	Yes			2,834.2	15,902.82
383	372	Casing Joints	5 1/2	20.00	P-110	Yes	42.45	Yes			2,791.7	15,945.27
384	373	Casing Joints	5 1/2	20.00	P-110	Yes	37.82	Yes			2,753.9	15,983.09
385	374	Casing Joints	5 1/2	20.00	P-110	Yes	40.36	Yes			2,713.6	16,023.45
386	375	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			2,671.2	16,065.85
387	376	Casing Joints	5 1/2	20.00	P-110	Yes	42.11	Yes			2,629.0	16,107.96
388	377	Casing Joints	5 1/2	20.00	P-110	Yes	42.50	Yes			2,586.5	16,150.46
389	378	Casing Joints	5 1/2	20.00	P-110	Yes	37.21	Yes			2,549.3	16,187.67
390	379	Casing Joints	5 1/2	20.00	P-110	Yes	42.35	Yes			2,507.0	16,230.02
391	380	Casing Joints	5 1/2	20.00	P-110	Yes	42.09	Yes			2,464.9	16,272.11
392	381	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			2,421.0	16,316.01
393	382	Casing Joints	5 1/2	20.00	P-110	Yes	43.80	Yes			2,377.2	16,359.81
394	383	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			2,333.8	16,403.21
395	384	Casing Joints	5 1/2	20.00	P-110	Yes	42.52	Yes			2,291.3	16,445.73
396	385	Casing Joints	5 1/2	20.00	P-110	Yes	40.52	Yes			2,250.8	16,486.25
397	386	Casing Joints	5 1/2	20.00	P-110	Yes	44.17	Yes			2,206.6	16,530.42
398	387	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			2,162.2	16,574.84
399	388	Casing Joints	5 1/2	20.00	P-110	Yes	44.62	Yes			2,117.5	16,619.46
400	389	Casing Joints	5 1/2	20.00	P-110	Yes	44.61	Yes			2,072.9	16,664.07
401	390	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			2,028.4	16,708.61
402	391	Casing Joints	5 1/2	20.00	P-110	Yes	37.61	Yes			1,990.8	16,746.22
403	392	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			1,946.4	16,790.65
404	393	Casing Joints	5 1/2	20.00	P-110	Yes	44.77	Yes			1,901.6	16,835.42
405	394	Casing Joints	5 1/2	20.00	P-110	Yes	42.04	Yes			1,859.5	16,877.46
406	395	Casing Joints	5 1/2	20.00	P-110	Yes	42.75	Yes			1,816.8	16,920.21
407	396	Casing Joints	5 1/2	20.00	P-110	Yes	42.03	Yes			1,774.8	16,962.24
408	397	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			1,730.3	17,006.66
409	398	Casing Joints	5 1/2	20.00	P-110	Yes	44.40	Yes			1,685.9	17,051.06
410	399	Casing Joints	5 1/2	20.00	P-110	Yes	44.96	Yes			1,641.0	17,096.02
411	400	Casing Joints	5 1/2	20.00	P-110	Yes	44.95	Yes			1,596.0	17,140.97



# Centralizer Depths

Well Name: Drake 18N

Production, Set Depth: 18,737.0ftKB

API 05123518230000		Surface Legal Location NWSW 17 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,736.00	Original KB Elevation (ft) 4,764.50	KB-Ground Distance (ft) 28.50	Spud Date 1/17/2024 05:30	Rig Release Date 1/21/2024 23:30	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
412	401	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			1,553.6	17,183.37
413	402	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			1,509.2	17,227.79
414	403	Casing Joints	5 1/2	20.00	P-110	Yes	42.83	Yes			1,466.4	17,270.62
415	404	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			1,422.0	17,315.05
416	405	Casing Joints	5 1/2	20.00	P-110	Yes	44.95	Yes			1,377.0	17,360.00
417	406	Casing Joints	5 1/2	20.00	P-110	Yes	39.42	Yes			1,337.6	17,399.42
418	407	Casing Joints	5 1/2	20.00	P-110	Yes	43.12	Yes			1,294.5	17,442.54
419	408	Casing Joints	5 1/2	20.00	P-110	Yes	44.45	Yes			1,250.0	17,486.99
420	409	Casing Joints	5 1/2	20.00	P-110	Yes	42.39	Yes			1,207.6	17,529.38
421	410	Casing Joints	5 1/2	20.00	P-110	Yes	43.25	Yes			1,164.4	17,572.63
422	411	Casing Joints	5 1/2	20.00	P-110	Yes	43.51	Yes			1,120.9	17,616.14
423	412	Casing Joints	5 1/2	20.00	P-110	Yes	44.76	Yes			1,076.1	17,660.90
424	413	Casing Joints	5 1/2	20.00	P-110	Yes	44.61	Yes			1,031.5	17,705.51
425	414	Casing Joints	5 1/2	20.00	P-110	Yes	42.17	Yes			989.3	17,747.68
426	415	Casing Joints	5 1/2	20.00	P-110	Yes	44.74	Yes			944.6	17,792.42
427	416	Casing Joints	5 1/2	20.00	P-110	Yes	43.07	Yes			901.5	17,835.49
428	417	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			857.1	17,879.92
429	418	Casing Joints	5 1/2	20.00	P-110	Yes	43.01	Yes			814.1	17,922.93
430	419	Casing Joints	5 1/2	20.00	P-110	Yes	42.93	Yes			771.1	17,965.86
431	420	Casing Joints	5 1/2	20.00	P-110	Yes	44.57	Yes			726.6	18,010.43
432	421	Casing Joints	5 1/2	20.00	P-110	Yes	44.38	Yes			682.2	18,054.81
433	422	Casing Joints	5 1/2	20.00	P-110	Yes	43.49	Yes			638.7	18,098.30
434	423	Casing Joints	5 1/2	20.00	P-110	Yes	42.18	Yes			596.5	18,140.48
435	424	Casing Joints	5 1/2	20.00	P-110	Yes	42.58	Yes			553.9	18,183.06
436	425	Casing Joints	5 1/2	20.00	P-110	Yes	44.59	Yes			509.4	18,227.65