

Cement Post Job Report

Client: PDC Energy

Well Name: Steamboat 3N

API #: 05-123-51303-00

Job Date: January 12, 2023

Job Type: New Well - 5.5" Production String

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



ROCK SOLID
WELL INTEGRITY
SOLUTIONS

JOB TREATMENT REPORT

Client	Well	Rig	Date	Job Type				
PDC	Steamboat 3N	Patterson 272	1/12/2023	Production				
Connection Type	Thread Type	Number of Stages	BHST Deg	BHCT Deg				
5 1/2" HP Cement Head	Buttress	1	230	230				
Well MD (ft)	Well TVD (ft)	Deg Dev.	Max-Cas/DP PSI	Max Ann. PSI				
15505'	7204'	90	4100	3000				
Packer/Retainer/CIBP/DV Tool Depths		Top of Perfs	Bottom of Perfs	Number of Holes				
PACKER @- 3517'		NA	NA	NA				
String - Surf, Int, Prod. Work etc	Grade	OD	Wt/ft	ID	OH Size	% XS Lead	% XS Tail	Total Depth (ft)
Production		5 1/2"	20		8.5	0	5%	15500'
Surface		9 5/8"	36					1652'

PRE-JOB MUD AND WELL CONDITIONS

Mud Type	OBM	Pipe Rotation				Circulation Data				Water Requirements (bbls)		
Mud wt. ppg	10.4	Rotate Y,N	NO	Circulate Time (hrs)		3		Spacers		140		
Flow Temp		Rate	NA	Circulation Rate (bpm)		10		Stage 1 Lead		119		
Vis. Sec/qt		Torque Val.	NA	Full Circ?		FULL		Stage 1 Tail		168		
PV (cP)		Time	NA	Gas Present (Y,N)		YES	Units	1000	Stage 2 Lead		0	
Yield Pt		Pipe Reciprocation		Centralizers/Plugs				Stage 2 Tail		0		
10 sec gel		Recip Y,N	NO	Quantity & Type		CUSTOMER PROVIDED				Displacement		344
10 min gel		Stroke (ft)	NA	Top Plug/Type		1-5.5" CUSTOMER PROVIDED				Wash up		20
30 min gel		Recip time	NA	Bottom Plug/Type		2-5.5" CUSTOMER PROVIDED				Total + 10% Safety		870

PRE-JOB CALCULATED MATERIALS, VOLUMES, & RATES

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	1143	Sacks		Sacks		Dens. ppg	8.33
Volume	140	Vol/bbls	256.8	Vol/bbls	278.9	Vol/bbls	0.0	Vol/bbls	0.0	Vol. bbl	344
Rate	10	Rate	10	Rate	10	Rate		Rate		Rate bpm	10
Spacer 2		Yield	1.13	Yield	1.37	Yield		Yield		Clay Stay?	NO
Density		Gal/Sk	3.90	Gal/Sk	6.63	Gal/Sk		Gal/Sk		Biocide ?	YES
Volume		% Excess	0	% Excess	0	% Excess		% Excess		Slow @ bbl	324
Rate		TOL (ft)	2400	TOT (ft)	8674	TOL (ft)		TOT (ft)		Bump PSI	2400

POST JOB DETAILS, FINAL VOLUMES & PRESSURES

Final Displacement (bbls)	344
Bump Plug?	YES
Final Bump Pressure (psi)	3000
Full Returns throughout job?	FULL
Vol away/Time when returns lost	NA
Vol away/Time When returns regained	NA

Top out cement type	NA
Density	NA
Sack Quantity	NA
Mix water requirement (gal/sk)	NA
Yield	NA

Summary of Additives Used on Job

Surfactants (gal)	238
Clay Stabilizer (gal)	0
Biocide (gal)	20
Corrosion Inhibitor (gal)	0
Defoamer (gal)	60
PhenoSeal (LCM lbs)	0
Fiber (LCM lbs)	290

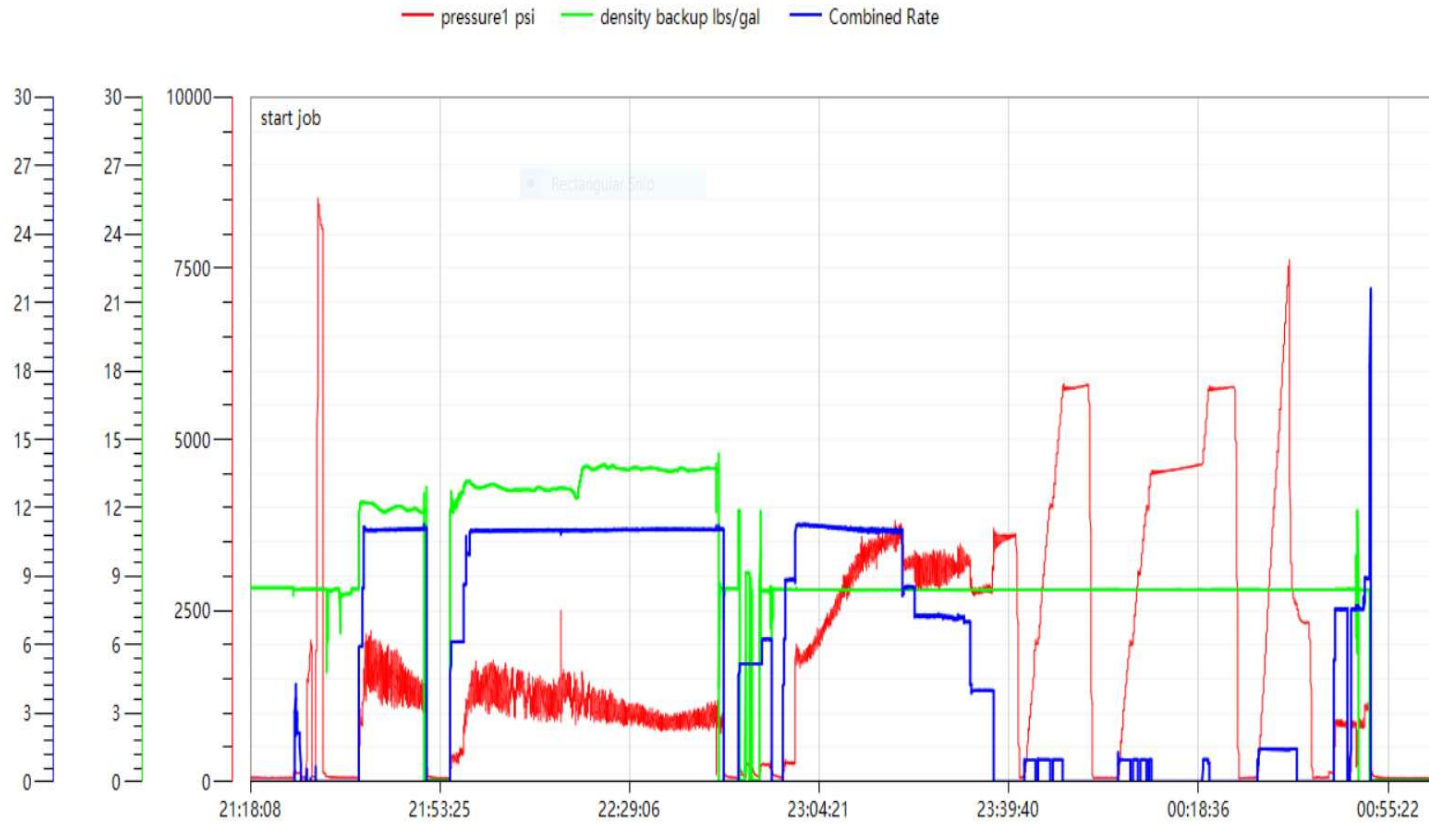
Spacer to Surface?	YES		
Spacer volume returned	19		
Cement to surface?	NO		
Cement volume to surface stage 1 (bbls)	0	Stg 2	0
Surface top out?	NO		
Top out volume pumped (bbls)	NA		

Job Treatment Log

Client				Well			Ambient Conditions (Temp / Humidity / Air Pressure)
PDC				Steamboat 3N			32 deg F / 92 % / 25.25 in
Date DD/MM	Time HH:MM	Density (ppg)	Rate (bpm)	Vol. (bbl)	Total Vol. (bbl)	Pressure (psi)	Treatment Comments
1/12/23	7:00 AM						CALL OUT FOR A REQUESTED ON LOCATION TIME OF 14:30
1/12/23	2:00 PM						CREW ARRIVED ON LOCATION, COULD NOT SPOT IN TILL CASING WAS FINISHED
1/12/23	4:30 PM						SPOT IN EQUIPMENT
1/12/23	5:00 PM						RIG UP
1/12/23	6:00 PM						SAFETY MEETING WITH RIG CREW
1/12/23	6:30 PM						WAITED FOR RIG TO MOVE OFF OF THE WELL FOR A OFF-LINE JOB
1/12/23	9:00 PM						RIG UP CEMENT HEAD TO CASING
1/12/23	9:25 PM	8.33	4.00	3.0	3.0	700	FILL LINES WITH 3 BBLS OF FRESH WATER
1/12/23	9:28 PM						PRESSURE TESTED CASING TO 8000 PSI, AND TESTED THE RETURN MANIFOLD TO 2000 PSI
1/12/23	9:32 PM						DROP BOTTOM PLUG #1
1/12/23	9:37 PM	12.00	11.00	140.0	140.0	2100	PUMP 140 BBLS OF FRESH WATER DISPLACEMENT WITH SURFACTANT AND FIBER SHUT DOWN
1/12/23	9:50 PM						DROP BOTTOM PLUG #2
1/12/23	9:54 PM	12.90	11.00	257.0	257.0	1400	PUMP 257 BBLS OF 12.9#, 1.13Y, 3.90 GAL/SK LEAD CEMENT
1/12/23	10:19 PM	13.70	11.50	280.0	280.0	1200	PUMP 280 BBLS OF 13.7#, 1.37Y, 6.63 GAL/SK TAIL CEMENT
1/12/23	10:45 PM	8.33	11.00	8.0	8.0	1200	PUMP 8 BBLS OF SUGAR WATER FOR WET SHOE
1/12/23	10:46 PM						SHUT DOWN
1/12/23	10:48 PM	8.33	5.00	20.0	20.0	0	WASH PUMPS AND LINES
1/12/23	10:55 PM						DROP TOP PLUG
1/12/23	10:58 PM	8.33	9.00	10.0	344.0	700	BEGAN FRESH WATER DISPLACEMENT WITH BIOCIDES, STRTDED TO SEE PRESSURE 20 BBLS
1/12/23	11:02 PM	8.33	11.00	50.0	344.0	2000	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:07 PM	8.33	11.00	100.0	344.0	2300	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:11 PM	8.33	11.00	150.0	344.0	3300	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:16 PM	8.33	11.00	200.0	344.0	3700	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:21 PM	8.33	8.00	250.0	344.0	3300	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:28 PM	8.33	7.00	300.0	344.0	3200	FRESH WATER DISPLACEMENT WITH BIOCIDES
1/12/23	11:32 PM	8.33	4.00	324.0	344.0	2800	SLOWED RATE TO LAND THE PLUG
1/12/23	11:36 PM	8.33	4.00	344.0	344.0	3000	BUMPED PLUG ON CALCULATED DISPLACEMENT, RECEIVED 19 BBLS OF SPACER TO SURFACE
1/12/23	11:40 PM						CHECKED FLOATS, FLOATS ARE HOLDING, RECEIVED 4 BBLS BACK
1/12/23	11:50 PM						STARTED WET SHOE/ PACKER SETTING PROCEDURE PER TOOL REPS INSTRUCTIONS
1/12/23	12:36 AM					7600	PRESSURED UP TO BURST WET SHOE, BURST @-7600 PSI
1/12/23	12:36 AM	8.33	1.50	2.0	2.0	3000	PUMPED 2 BBL WET SHOE (10 BBLS IN TOTAL)
1/12/23	12:39 AM						CHECKED FLOATS, FLOATS ARE HOLDING, RECEIVED 3 BBLS BACK
1/12/23	12:45 AM						RUN THROUGH STACK/ MANIFOLD TO WASH UP
1/12/23	12:50 AM						RIG DOWN
1/12/23	1:30 AM						CREW DEPARTED LOCATION
							PACKER DID NOT HOLD

Steamboat 3N Production Pump Chart – Pressure / Rate / Density

Chart Report



Date:1/12/23 wellname:PDC STEAMBOAT 03N Location:GREELEY, CO. PATTERSON 272 Country:USA Operators:JOE FANNING Supervisor:COOPER HONE Jobtype:5.5* PRODUCTION OFF-LINE Address: Comment:



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	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)
7	1	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			15,416.2	83.59
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			15,325.4	174.39
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			15,234.3	265.48
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			15,143.6	356.25
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			15,054.6	445.20
17		Marker Joint	5 1/2	20.00	P-110	Yes	11.85	Yes			14,997.2	502.58
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			14,906.4	593.37
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			14,815.4	684.41
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			14,724.7	775.15
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	43.76	Yes			14,635.4	864.37
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			14,544.8	955.03
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			14,370.5	1,129.31
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	44.98	Yes			14,280.1	1,219.67
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			14,189.2	1,310.57
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			14,098.2	1,401.60
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			14,007.0	1,492.82
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			13,916.2	1,583.61
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	41.41	Yes			13,829.4	1,670.42
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	43.13	Yes			13,740.9	1,758.89
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			13,649.6	1,850.19
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	43.27	Yes			13,560.9	1,938.86
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			13,471.9	2,027.86
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			13,381.0	2,118.81
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			13,289.9	2,209.91
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			13,199.2	2,300.57
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			13,108.3	2,391.53
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			13,017.4	2,482.40
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			12,926.4	2,573.37
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			12,835.1	2,664.74
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			12,743.7	2,756.07
69	62	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			12,652.8	2,846.98



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	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)
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			12,561.9	2,937.89
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			12,470.9	3,028.91
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			12,380.0	3,119.83
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			12,289.1	3,210.75
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			12,197.9	3,301.87
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			12,107.0	3,392.84
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			12,016.1	3,483.71
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			11,925.2	3,574.56
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			11,834.4	3,665.40
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	45.28	Yes			11,743.6	3,756.16
91	84	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			11,652.7	3,847.10
93	86	Casing Joints	5 1/2	20.00	P-110	Yes	44.38	Yes			11,562.8	3,936.99
95	87	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			11,505.6	3,994.25
97	89	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			11,414.5	4,085.32
99	91	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			11,323.7	4,176.11
101	93	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			11,232.6	4,267.17
103	95	Casing Joints	5 1/2	20.00	P-110	Yes	44.86	Yes			11,142.2	4,357.56
105	97	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			11,051.3	4,448.49
107	99	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			10,960.5	4,539.29
109	101	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			10,869.6	4,630.22
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	43.99	Yes			10,780.0	4,719.79
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			10,689.2	4,810.59
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			10,600.4	4,899.36
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			10,511.5	4,988.27
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			10,420.4	5,079.37
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			10,329.8	5,169.99
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			10,238.7	5,261.06
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	43.46	Yes			10,150.0	5,349.80
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			10,059.2	5,440.56
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			9,968.4	5,531.42
131	123	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			9,877.5	5,622.29



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jw/ry	Connections	Top (ftKB)	Cum Len (ft)
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			9,787.0	5,712.82
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			9,695.9	5,803.91
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	45.47	Yes			9,605.0	5,894.84
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			9,513.9	5,985.92
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			9,422.8	6,076.98
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			9,331.8	6,168.02
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	43.66	Yes			9,242.8	6,256.96
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			9,151.9	6,347.93
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			9,061.0	6,438.80
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			8,969.5	6,530.29
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	43.13	Yes			8,880.8	6,618.96
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	45.78	Yes			8,789.2	6,710.55
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			8,698.1	6,801.74
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	45.79	Yes			8,608.5	6,891.29
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			8,517.1	6,982.72
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			8,425.6	7,074.16
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	45.79	Yes			8,334.2	7,165.58
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			8,242.9	7,256.87
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	45.84	Yes			8,151.2	7,348.56
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			8,060.0	7,439.85
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			7,968.7	7,531.14
175	167	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			7,877.2	7,622.58
177	169	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			7,786.4	7,713.45
179	171	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			7,699.6	7,800.18
181	173	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			7,608.2	7,891.62
182		Marker Joint	5 1/2	20.00	P-110	Yes	11.83	Yes			7,596.3	7,903.45
183	174	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			7,550.7	7,949.10
184	175	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			7,505.0	7,994.76
185	176	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			7,459.7	8,040.13
186	177	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			7,414.1	8,085.65
187	178	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			7,368.6	8,131.22



Centralizer Depths

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Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00		Original KB Elevation (ft) 4,831.50		KB-Ground Distance (ft) 28.50		Spud Date 1/10/2023 04:00		Rig Release Date 1/12/2023 21:00		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)
188	179	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			7,323.0	8,176.75
189	180	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			7,277.7	8,222.12
190	181	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			7,232.4	8,267.37
191	182	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			7,186.9	8,312.91
192	183	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			7,141.4	8,358.42
193	184	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			7,097.9	8,401.86
194	185	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			7,052.7	8,447.10
195	186	Casing Joints	5 1/2	20.00	P-110	Yes	44.32	Yes			7,008.4	8,491.42
196	187	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			6,963.1	8,536.66
197	188	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			6,917.6	8,582.20
198	189	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			6,872.4	8,627.42
199	190	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			6,827.1	8,672.68
200	191	Casing Joints	5 1/2	20.00	P-110	Yes	43.46	Yes			6,783.7	8,716.14
201	192	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			6,738.1	8,761.71
202	193	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			6,692.5	8,807.28
203	194	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			6,646.9	8,852.91
204	195	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			6,601.6	8,898.21
205	196	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			6,556.3	8,943.50
206	197	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			6,510.8	8,989.03
207	198	Casing Joints	5 1/2	20.00	P-110	Yes	45.50	Yes			6,465.3	9,034.53
208		Marker Joint	5 1/2	20.00	P-110	Yes	11.53	Yes			6,453.7	9,046.06
209	199	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			6,408.5	9,091.32
210	200	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			6,362.9	9,136.90
211	201	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			6,317.4	9,182.43
212	202	Casing Joints	5 1/2	20.00	P-110	Yes	43.61	Yes			6,273.8	9,226.04
213	203	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			6,228.4	9,271.38
214	204	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			6,182.9	9,316.89
215	205	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			6,137.5	9,362.27
216	206	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			6,091.9	9,407.86
217	207	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			6,046.4	9,453.38
218	208	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			6,000.9	9,498.92



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	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)
219	209	Casing Joints	5 1/2	20.00	P-110	Yes	42.95	Yes			5,957.9	9,541.87
220	210	Casing Joints	5 1/2	20.00	P-110	Yes	45.28	Yes			5,912.6	9,587.15
221	211	Casing Joints	5 1/2	20.00	P-110	Yes	45.23	Yes			5,867.4	9,632.38
222	212	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			5,821.8	9,677.95
223	213	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			5,776.3	9,723.50
224	214	Casing Joints	5 1/2	20.00	P-110	Yes	43.75	Yes			5,732.5	9,767.25
225	215	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			5,687.3	9,812.49
226	216	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			5,641.7	9,858.06
227	217	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			5,596.2	9,903.62
228	218	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			5,550.9	9,948.93
229	219	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			5,505.3	9,994.53
230	220	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			5,459.7	10,040.11
231	221	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			5,413.8	10,085.96
232	222	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			5,368.2	10,131.59
233	223	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			5,322.4	10,177.40
234	224	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			5,276.8	10,222.96
235	225	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			5,231.4	10,268.44
236	226	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			5,185.8	10,313.98
237	227	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			5,140.2	10,359.55
238	228	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			5,094.9	10,404.94
239	229	Casing Joints	5 1/2	20.00	P-110	Yes	34.99	Yes			5,059.9	10,439.93
240	230	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			5,014.2	10,485.56
241	231	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			4,969.0	10,530.83
242	232	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			4,923.7	10,576.10
243	233	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			4,878.1	10,621.67
244	234	Casing Joints	5 1/2	20.00	P-110	Yes	45.45	Yes			4,832.7	10,667.12
245	235	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			4,787.4	10,712.44
246	236	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			4,741.8	10,757.98
247	237	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			4,696.5	10,803.28
248	238	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			4,651.0	10,848.79
249	239	Casing Joints	5 1/2	20.00	P-110	Yes	45.23	Yes			4,605.8	10,894.02



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jw/ry	Connections	Top (ftKB)	Cum Len (ft)
250	240	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			4,560.3	10,939.54
251	241	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			4,514.7	10,985.07
252	242	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			4,469.3	11,030.48
253	243	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			4,424.0	11,075.84
254	244	Casing Joints	5 1/2	20.00	P-110	Yes	43.83	Yes			4,380.1	11,119.67
255	245	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			4,336.3	11,163.52
256	246	Casing Joints	5 1/2	20.00	P-110	Yes	43.91	Yes			4,292.4	11,207.43
257	247	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			4,247.1	11,252.74
258	248	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			4,201.5	11,298.27
259	249	Casing Joints	5 1/2	20.00	P-110	Yes	42.89	Yes			4,158.6	11,341.16
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	45.77	Yes			4,112.9	11,386.93
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			4,067.1	11,432.73
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			4,021.5	11,478.31
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			3,975.9	11,523.88
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			3,932.4	11,567.35
265	255	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			3,887.2	11,612.61
266	256	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			3,841.8	11,657.98
267	257	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			3,796.3	11,703.54
268	258	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			3,750.7	11,749.09
269	259	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			3,705.2	11,794.61
270	260	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			3,659.9	11,839.86
271	261	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			3,614.4	11,885.41
272	262	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			3,569.1	11,930.66
273	263	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			3,523.3	11,976.51
275	264	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			3,464.6	12,035.22
276	265	Casing Joints	5 1/2	20.00	P-110	Yes	39.35	Yes			3,425.2	12,074.57
277	266	Casing Joints	5 1/2	20.00	P-110	Yes	43.98	Yes			3,381.2	12,118.55
278	267	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			3,335.7	12,164.08
279	268	Casing Joints	5 1/2	20.00	P-110	Yes	42.60	Yes			3,293.1	12,206.68
280	269	Casing Joints	5 1/2	20.00	P-110	Yes	45.61	Yes			3,247.5	12,252.29
281	270	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			3,202.1	12,297.68



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	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)
282	271	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			3,156.6	12,343.19
283	272	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			3,111.0	12,388.81
284	273	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			3,065.6	12,434.15
285	274	Casing Joints	5 1/2	20.00	P-110	Yes	45.42	Yes			3,020.2	12,479.57
286	275	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			2,974.7	12,525.13
287	276	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			2,929.2	12,570.64
288	277	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			2,883.5	12,616.27
289	278	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			2,838.0	12,661.80
290	279	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			2,792.5	12,707.34
291	280	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			2,747.6	12,752.24
292	281	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			2,702.3	12,797.53
293	282	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			2,656.7	12,843.11
294	283	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			2,611.1	12,888.68
295	284	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			2,565.6	12,934.20
296	285	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			2,520.0	12,979.75
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	45.75	Yes			2,474.3	13,025.50
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			2,428.7	13,071.07
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			2,383.4	13,116.43
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			2,337.8	13,161.96
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			2,292.5	13,207.32
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			2,247.0	13,252.83
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			2,201.4	13,298.35
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			2,156.2	13,343.57
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			2,112.0	13,387.78
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	43.73	Yes			2,068.3	13,431.51
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			2,022.9	13,476.88
308	297	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			1,977.3	13,522.45
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			1,932.0	13,567.84
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			1,886.6	13,613.17
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			1,841.4	13,658.39
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	43.16	Yes			1,798.2	13,701.55



Centralizer Depths

Well Name: Steamboat 3N

Production, Set Depth: 15,499.8ftKB

API 05123513030000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,803.00	Original KB Elevation (ft) 4,831.50	KB-Ground Distance (ft) 28.50	Spud Date 1/10/2023 04:00	Rig Release Date 1/12/2023 21:00	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)
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			1,752.7	13,747.12
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			1,707.3	13,792.50
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	43.80	Yes			1,663.5	13,836.30
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			1,617.9	13,881.88
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			1,572.4	13,927.41
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			1,527.1	13,972.68
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			1,481.5	14,018.32
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	45.35	Yes			1,436.1	14,063.67
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			1,390.8	14,109.04
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			1,345.2	14,154.55
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	43.25	Yes			1,302.0	14,197.80
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			1,256.4	14,243.37
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			1,211.1	14,288.73
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	41.60	Yes			1,169.5	14,330.33
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			1,124.2	14,375.59
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			1,079.0	14,420.83
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			1,033.6	14,466.24
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	42.24	Yes			991.3	14,508.48
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			945.8	14,554.00
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			900.2	14,599.59
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	45.43	Yes			854.8	14,645.02
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			809.2	14,690.59
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			763.9	14,735.93
336	325	Casing Joints	5 1/2	20.00	P-110	Yes	43.59	Yes			720.3	14,779.52
337	326	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			675.0	14,824.78
338	327	Casing Joints	5 1/2	20.00	P-110	Yes	45.45	Yes			629.6	14,870.23
339	328	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			584.0	14,915.79
340	329	Casing Joints	5 1/2	20.00	P-110	Yes	43.22	Yes			540.8	14,959.01
341	330	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			495.4	15,004.39
342	331	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			449.8	15,049.97