

Cement Post Job Report

Client: PDC Energy

Well Name: Steamboat 2N

API #: 05-123-51305-00

Job Date: January 9, 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 2N	Patterson 272	1/9/2023	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				
15118	7107	90	4100	3000				
Packer/Retainer/CIBP/DV Tool Depths		Top of Perfs	Bottom of Perfs	Number of Holes				
Packer-3511		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%	15,110
Surface		9 5/8"	36					1697

PRE-JOB MUD AND WELL CONDITIONS

Mud Type	OBM	Pipe Rotation				Circulation Data				Water Requirements (bbls)		
Mud wt. ppg	10.4	Rotate Y,N		Circulate Time (hrs)		2		Spacers		140		
Flow Temp		Rate		Circulation Rate (bpm)		10		Stage 1 Lead		119		
Vis. Sec/qt		Torque Val.		Full Circ?		Full		Stage 1 Tail		168		
PV (cP)		Time		Gas Present (Y,N)		YES	Units	300	Stage 2 Lead		0	
Yield Pt		Pipe Reciprocation		Centralizers/Plugs				Stage 2 Tail		0		
10 sec gel		Recip Y,N		Quantity & Type		CUSTOMER PROVIDED				Displacement		335
10 min gel		Stroke (ft)		Top Plug/Type		1-5.5" CUSTOMER PROVIDED				Wash up		20
30 min gel		Recip time		Bottom Plug/Type		2-5.5" CUSTOMER PROVIDED				Total + 10% Safety		860

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	1131	Sacks		Sacks		Dens. ppg	8.33
Volume	140	Vol/bbls	256.8	Vol/bbls	276.0	Vol/bbls	0.0	Vol/bbls	0.0	Vol. bbl	335
Rate	10	Rate	10	Rate	10	Rate		Rate		Rate bpm	10.6
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 ?	No
Volume		% Excess	0	% Excess	0	% Excess		% Excess		Slow @ bbl	315
Rate		TOL (ft)	1902	TOT (ft)	8177	TOL (ft)		TOT (ft)		Bump PSI	3150

POST JOB DETAILS, FINAL VOLUMES & PRESSURES

Final Displacement (bbls)	335
Bump Plug?	Yes
Final Bump Pressure (psi)	3150
Full Returns throughout job?	Full
Vol away/Time when returns lost	
Vol away/Time When returns regained	

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

Summary of Additives Used on Job

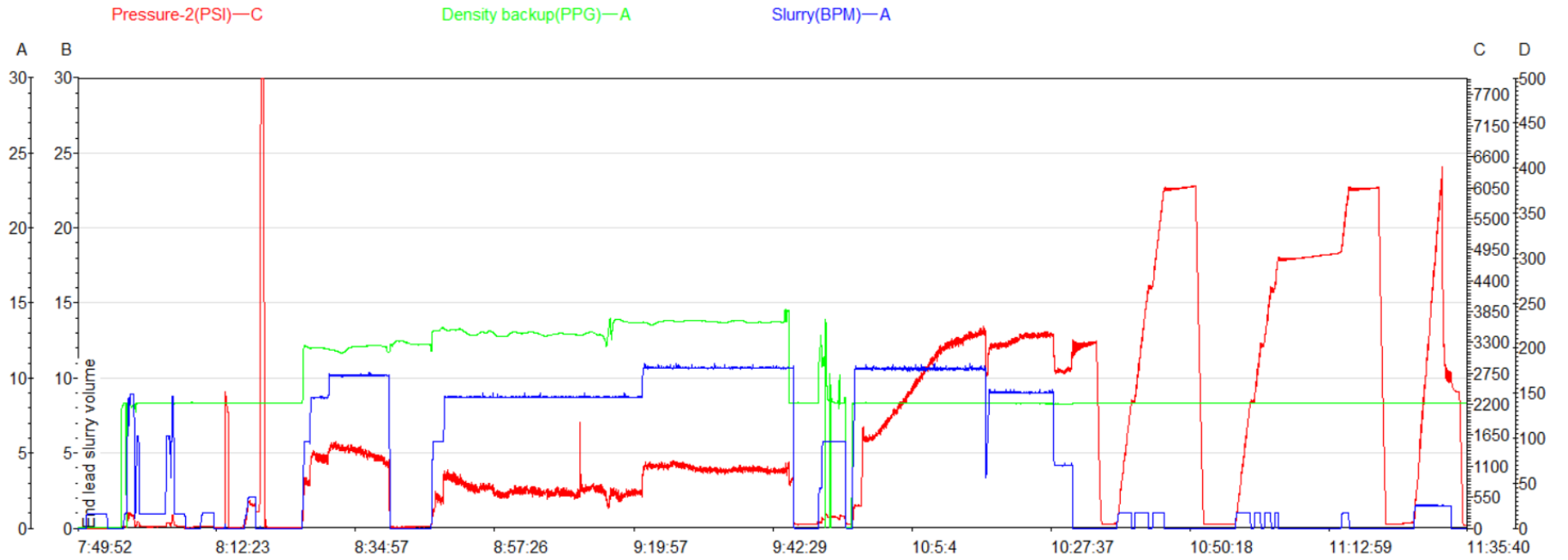
Spacer to Surface?	Yes
Spacer volume returned	55
Cement to surface?	No
Cement volume to surface stage 1 (bbls)	Stg 2
Surface top out?	
Top out volume pumped (bbls)	

Surfactants (gal)	
Clay Stabilizer (gal)	
Biocide (gal)	
Corrosion Inhibitor (gal)	
Defoamer (gal)	
PhenoSeal (LCM lbs)	
Fiber (LCM lbs)	

Job Treatment Log

Client				Well		Ambient Conditions (Temp / Humidity / Air Pressure)	
PDC				Steamboat 2N		30 Deg F / 59 % / 24.99 in	
Date DD/MM	Time HH:MM	Density (ppg)	Rate (bpm)	Vol. (bbl)	Total Vol. (bbl)	Pressure (psi)	Treatment Comments
1/8/23	3:00 PM						Crew called out, requested on location by 01/09/23, by 02:00.
1/8/23	8:00 PM						Crew arrived on location.
1/9/23	2:00 AM						Safety Meeting with rig crew, rig began to cut casing.
1/9/23	6:15 AM						Safety meeting for cement.
1/9/23	7:01 AM	8.33	2.00	5.0	5.0	50	Filled manifold lines for pressure test.
1/9/23	7:06 AM					2000	Pressure tested all backside hard lines.
1/9/23	7:07 AM	8.33	2.00	2.0	2.0	450	Filled lines for pressure test.
1/9/23	7:11 AM					8300	Pressure tested all lines to casing.
1/9/23	7:16 AM						Dropped bottom plug 1.
1/9/23	7:19 AM	12.00	10.00	140.0	140.0	1450	Mixed and pumped spacer with fiber and surfactant.
1/9/23	7:33 AM						Shutdown, dropped bottom plug 2.
1/9/23	7:39 AM	12.90	8.70	256.0	256.0	900	Mixed and pumped lead cmt @ 12.9ppg. (1276sks, 1.13yld, 3.90gl/sk) TOL 1902'.
1/9/23	8:09 AM	13.70	10.60	275.0	275.0	1000	Mixed and pumped tail cmt @ 13.7ppg. (1131sks, 1.37yld, 6.67gl/sk) TOT 8177'.
1/9/23	8:37 AM	8.33	10.60	8.0	8.0	1000	Pumped sugar water for wet shoe.
1/9/23	8:38 AM						Shutdown washed pumps and lines.
1/9/23	8:46 AM						Dropped top plug, verified by company man.
1/9/23	8:48 AM	8.33	10.60	10.0	335.0	400	Fresh water displacement with biocide.
1/9/23	8:53 AM	8.33	10.60	50.0	335.0	1700	Fresh water displacement with biocide.
1/9/23	8:58 AM	8.33	10.60	100.0	335.0	2400	Fresh water displacement with biocide.
1/9/23	9:03 AM	8.33	10.60	150.0	335.0	3100	Fresh water displacement with biocide.
1/9/23	9:07 AM	8.33	10.60	200.0	335.0	3200	Fresh water displacement with biocide.
1/9/23	9:14 AM	8.33	9.00	250.0	335.0	3100	Fresh water displacement with biocide.
1/9/23	9:19 AM	8.33	9.00	300.0	335.0	3250	Fresh water displacement with biocide.
1/9/23	9:24 AM			350.0	350.0	3150	Landed plug @ calculated displacement. Received 55bbl spacer to surface. FCP 2650.
1/9/23	9:27 AM						Checked floats, 4bbl back.
1/9/23	9:31 AM						Turned over to Welltec toolhand for packer procedure.
1/9/23	10:24 AM					6150	shifted toe sleeve.
1/9/23	10:24 AM	8.33	1.50	2.0	2.0	2600	Pumped 2bbl wet shoe, Full returns, PACKER FAILED.
1/9/23	10:28 AM						Bled pressure.
1/9/23	10:40 AM						Flushed stack
1/9/23	11:30 AM						Rigged down.
1/9/23	12:00 PM						Crew departs location.

Steamboat 2N Production Pump Chart – Pressure / Rate / Density



Chart



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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	45.56	Yes			15,026.2	83.56
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	39.72	Yes			14,941.1	168.67
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			14,850.2	259.61
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			14,758.9	350.91
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			14,668.0	441.78
17		Marker Joint	5 1/2	20.00	P-110	Yes	11.48	Yes			14,610.9	498.92
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	45.23	Yes			14,519.9	589.95
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			14,429.2	680.61
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			14,339.5	770.28
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			14,248.1	861.67
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	45.78	Yes			14,156.9	952.86
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			14,066.3	1,043.51
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			13,975.1	1,134.68
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			13,884.5	1,225.28
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	45.35	Yes			13,793.4	1,316.45
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	45.78	Yes			13,702.0	1,407.80
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			13,611.0	1,498.77
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			13,520.2	1,589.65
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			13,431.0	1,678.85
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			13,339.7	1,770.06
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			13,248.6	1,861.23
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			13,157.8	1,952.05
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			13,066.9	2,042.93
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			12,976.0	2,133.82
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			12,885.0	2,224.83
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			12,793.9	2,315.90
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			12,703.0	2,406.76
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			12,612.2	2,497.63
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			12,521.5	2,588.35
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			12,430.6	2,679.18
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			12,340.1	2,769.75



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 0512351305000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00		Original KB Elevation (ft) 4,833.50		KB-Ground Distance (ft) 28.50		Spud Date 1/4/2023 08:30		Rig Release Date 1/9/2023 06:00		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)
69	62	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			12,249.4	2,860.45
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			12,158.6	2,951.24
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			12,067.9	3,041.92
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	42.56	Yes			11,980.1	3,129.73
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			11,889.2	3,220.63
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	45.44	Yes			11,798.2	3,311.58
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			11,707.3	3,402.49
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			11,616.4	3,493.43
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			11,525.2	3,584.56
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	45.10	Yes			11,434.3	3,675.47
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			11,343.2	3,766.63
91	83	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			11,285.5	3,824.26
93	85	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			11,196.2	3,913.56
95	87	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			11,105.1	4,004.67
97	89	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			11,014.3	4,095.51
99	91	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			10,922.9	4,186.89
101	93	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			10,832.1	4,277.67
103	95	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			10,741.2	4,368.63
105	97	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			10,650.1	4,459.75
107	99	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			10,563.4	4,546.42
109	101	Casing Joints	5 1/2	20.00	P-110	Yes	45.78	Yes			10,471.8	4,637.98
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	38.88	Yes			10,394.7	4,715.12
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			10,303.5	4,806.30
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			10,212.7	4,897.15
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			10,121.5	4,988.28
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			10,030.4	5,079.44
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	43.26	Yes			9,941.7	5,168.10
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			9,852.3	5,257.49
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			9,760.9	5,348.95
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			9,669.5	5,440.28
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			9,577.9	5,531.89



Centralizer Depths

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Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
131	123	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			9,486.6	5,623.20
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			9,395.3	5,714.49
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			9,303.9	5,805.95
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			9,212.6	5,897.22
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			9,121.2	5,988.65
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			9,029.9	6,079.95
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			8,938.5	6,171.27
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			8,847.4	6,262.36
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	43.63	Yes			8,760.4	6,349.44
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			8,669.7	6,440.13
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			8,578.3	6,531.54
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			8,487.5	6,622.27
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	40.78	Yes			8,401.3	6,708.52
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			8,310.2	6,799.56
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	45.44	Yes			8,219.3	6,890.51
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			8,128.1	6,981.68
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			8,037.5	7,072.34
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			7,946.9	7,162.91
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			7,855.8	7,254.05
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			7,764.8	7,344.96
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			7,676.2	7,433.58
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			7,585.4	7,524.39
174		Marker Joint	5 1/2	20.00	P-110	Yes	22.90	Yes			7,562.5	7,547.29
175	166	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			7,517.2	7,592.61
176	167	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			7,471.6	7,638.17
177	168	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			7,426.0	7,683.77
178	169	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			7,380.6	7,729.16
179	170	Casing Joints	5 1/2	20.00	P-110	Yes	43.76	Yes			7,336.9	7,772.92
180	171	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			7,291.3	7,818.48
181	172	Casing Joints	5 1/2	20.00	P-110	Yes	42.52	Yes			7,248.8	7,861.00
182	173	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			7,203.4	7,906.41



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
183	174	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			7,158.1	7,951.68
184	175	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			7,112.6	7,997.16
185	176	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			7,067.3	8,042.55
186	177	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			7,021.7	8,088.13
187	178	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			6,976.1	8,133.67
188	179	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			6,930.7	8,179.07
189	180	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			6,885.4	8,224.38
190	181	Casing Joints	5 1/2	20.00	P-110	Yes	41.42	Yes			6,844.0	8,265.80
191	182	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			6,798.7	8,311.13
192	183	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			6,753.1	8,356.71
193	184	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			6,707.7	8,402.12
194	185	Casing Joints	5 1/2	20.00	P-110	Yes	45.42	Yes			6,662.3	8,447.54
195	186	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			6,616.7	8,493.06
196	187	Casing Joints	5 1/2	20.00	P-110	Yes	45.49	Yes			6,571.3	8,538.55
197	188	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			6,525.7	8,584.12
198	189	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			6,480.4	8,629.42
199	190	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			6,434.6	8,675.24
200	191	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			6,388.7	8,721.06
201		Marker Joint	5 1/2	20.00	P-110	Yes	22.37	Yes			6,366.4	8,743.43
202	192	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			6,320.8	8,789.00
203	193	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			6,275.1	8,834.66
204	194	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			6,229.6	8,880.20
205	195	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			6,184.0	8,925.76
206	196	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			6,138.7	8,971.12
207	197	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			6,093.0	9,016.77
208	198	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			6,047.5	9,062.29
209	199	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			6,002.1	9,107.67
210	200	Casing Joints	5 1/2	20.00	P-110	Yes	42.17	Yes			5,960.0	9,149.84
211	201	Casing Joints	5 1/2	20.00	P-110	Yes	43.96	Yes			5,916.0	9,193.80
212	202	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			5,870.2	9,239.61
213	203	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			5,824.5	9,285.27



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
214	204	Casing Joints	5 1/2	20.00	P-110	Yes	45.42	Yes			5,779.1	9,330.69
215	205	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			5,733.8	9,375.98
216	206	Casing Joints	5 1/2	20.00	P-110	Yes	45.84	Yes			5,688.0	9,421.82
217	207	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			5,642.4	9,467.36
218	208	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			5,596.9	9,512.89
219	209	Casing Joints	5 1/2	20.00	P-110	Yes	42.22	Yes			5,554.7	9,555.11
220	210	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			5,509.2	9,600.63
221	211	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			5,463.9	9,645.87
222	212	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			5,418.1	9,691.69
223	213	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			5,372.7	9,737.10
224	214	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			5,327.3	9,782.50
225	215	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			5,281.8	9,828.01
226	216	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			5,236.2	9,873.57
227	217	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,190.6	9,919.22
228	218	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			5,144.9	9,964.86
229	219	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			5,099.4	10,010.39
230	220	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			5,054.0	10,055.78
231	221	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			5,008.2	10,101.59
232	222	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			4,962.7	10,147.15
233	223	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			4,917.1	10,192.68
234	224	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			4,871.7	10,238.06
235	225	Casing Joints	5 1/2	20.00	P-110	Yes	45.37	Yes			4,826.4	10,283.43
236	226	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			4,780.9	10,328.94
237	227	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			4,735.3	10,374.46
238	228	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			4,689.9	10,419.94
239	229	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			4,644.3	10,465.48
240	230	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			4,598.8	10,511.01
241	231	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			4,553.4	10,556.40
242	232	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			4,507.9	10,601.92
243	233	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			4,462.3	10,647.49
244	234	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			4,417.0	10,692.85



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 0512351305000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
245	235	Casing Joints	5 1/2	20.00	P-110	Yes	45.23	Yes			4,371.7	10,738.08
246	236	Casing Joints	5 1/2	20.00	P-110	Yes	43.12	Yes			4,328.6	10,781.20
247	237	Casing Joints	5 1/2	20.00	P-110	Yes	45.29	Yes			4,283.3	10,826.49
248	238	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			4,238.0	10,871.80
249	239	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			4,192.4	10,917.38
250	240	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			4,146.8	10,962.96
251	241	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			4,103.3	11,006.54
252	242	Casing Joints	5 1/2	20.00	P-110	Yes	42.59	Yes			4,060.7	11,049.13
253	243	Casing Joints	5 1/2	20.00	P-110	Yes	40.82	Yes			4,019.9	11,089.95
254	244	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			3,974.6	11,135.25
255	245	Casing Joints	5 1/2	20.00	P-110	Yes	45.28	Yes			3,929.3	11,180.53
256	246	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			3,884.0	11,225.78
257	247	Casing Joints	5 1/2	20.00	P-110	Yes	42.95	Yes			3,841.1	11,268.73
258	248	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			3,795.5	11,314.32
259	249	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			3,750.0	11,359.85
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			3,704.4	11,405.41
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	45.46	Yes			3,658.9	11,450.87
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			3,615.5	11,494.27
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			3,570.3	11,539.54
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			3,524.9	11,584.94
266	255	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			3,466.1	11,643.70
267	256	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			3,420.3	11,689.50
268	257	Casing Joints	5 1/2	20.00	P-110	Yes	43.55	Yes			3,376.8	11,733.05
269	258	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			3,331.4	11,778.45
270	259	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			3,285.8	11,824.02
271	260	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			3,240.4	11,869.42
272	261	Casing Joints	5 1/2	20.00	P-110	Yes	45.58	Yes			3,194.8	11,915.00
273	262	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			3,149.5	11,960.30
274	263	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			3,103.9	12,005.90
275	264	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			3,058.5	12,051.28
276	265	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			3,013.1	12,096.68



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
277	266	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			2,967.7	12,142.07
278	267	Casing Joints	5 1/2	20.00	P-110	Yes	36.94	Yes			2,930.8	12,179.01
279	268	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			2,885.4	12,224.41
280	269	Casing Joints	5 1/2	20.00	P-110	Yes	38.58	Yes			2,846.8	12,262.99
281	270	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			2,801.4	12,308.37
282	271	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			2,755.9	12,353.93
283	272	Casing Joints	5 1/2	20.00	P-110	Yes	43.52	Yes			2,712.4	12,397.45
284	273	Casing Joints	5 1/2	20.00	P-110	Yes	39.38	Yes			2,673.0	12,436.83
285	274	Casing Joints	5 1/2	20.00	P-110	Yes	41.36	Yes			2,631.6	12,478.19
286	275	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			2,586.4	12,523.45
287	276	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			2,541.0	12,568.78
288	277	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			2,495.6	12,614.16
289	278	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			2,450.3	12,659.49
290	279	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			2,404.7	12,705.06
291	280	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			2,359.4	12,750.45
292	281	Casing Joints	5 1/2	20.00	P-110	Yes	45.50	Yes			2,313.9	12,795.95
293	282	Casing Joints	5 1/2	20.00	P-110	Yes	45.33	Yes			2,268.5	12,841.28
294	283	Casing Joints	5 1/2	20.00	P-110	Yes	37.47	Yes			2,231.1	12,878.75
295	284	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			2,185.7	12,924.15
296	285	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			2,140.4	12,969.45
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			2,094.8	13,014.98
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			2,049.4	13,060.38
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			2,003.9	13,105.94
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	43.36	Yes			1,960.5	13,149.30
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			1,914.9	13,194.87
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	45.28	Yes			1,869.7	13,240.15
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	41.35	Yes			1,828.3	13,281.50
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	45.50	Yes			1,782.8	13,327.00
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			1,737.3	13,372.52
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			1,691.7	13,418.12
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	45.79	Yes			1,645.9	13,463.91



Centralizer Depths

Well Name: Steamboat 2N

Production, Set Depth: 15,109.8ftKB

API 05123513050000		Surface Legal Location NWSE 34 4N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,805.00	Original KB Elevation (ft) 4,833.50	KB-Ground Distance (ft) 28.50	Spud Date 1/4/2023 08:30	Rig Release Date 1/9/2023 06:00	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)
308	297	Casing Joints	5 1/2	20.00	P-110	Yes	45.50	Yes			1,600.4	13,509.41
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	43.26	Yes			1,557.1	13,552.67
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			1,511.6	13,598.19
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	44.88	Yes			1,466.7	13,643.07
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			1,421.2	13,688.61
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	41.10	Yes			1,380.1	13,729.71
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			1,334.8	13,775.01
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	41.58	Yes			1,293.2	13,816.59
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			1,247.9	13,861.90
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	43.30	Yes			1,204.6	13,905.20
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	43.35	Yes			1,161.3	13,948.55
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			1,115.6	13,994.19
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	43.91	Yes			1,071.7	14,038.10
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	45.59	Yes			1,026.1	14,083.69
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	43.68	Yes			982.4	14,127.37
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			936.8	14,172.99
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	45.53	Yes			891.3	14,218.52
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			845.9	14,263.91
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			800.3	14,309.45
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			755.1	14,354.72
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	43.11	Yes			712.0	14,397.83
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			666.4	14,443.40
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			621.1	14,488.70
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	43.31	Yes			577.8	14,532.01
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	43.68	Yes			534.1	14,575.69
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	42.76	Yes			491.3	14,618.45
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			445.8	14,663.99