

Cement Post Job Report

Client: PDC Energy

Well Name: Hen 7N

API #: 05-123-51796

Job Date: August 26, 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

TREATMENT REPORT

CLIENT	WELL	RIG	JOB TYPE	THREAD TYPE	WELLHEAD CONNECTION
PDC Energy	Hen 07N	Patterson 272	Production	Buttress	5 1/2" Cement Head

WELL MD (FT)	WELL TVD (FT)	DEVIATION (DEG)	NUMBER OF STAGES	BHST (DEG)	BHCT (DEG)
14756	6789	90	1	225	200

PACKER/RETAINER/CIBP/DV TOOL DEPTHS	TOOL TYPE	TOP OF PERFS (FT)	BOTTOM OF PERFS (FT)	NUMBER OF HOLES
Packer @ 3318' , Wet Shoe Sub @ 14717'	PACKER			

CASING/TUBING/DP DETAILS								
STRING TYPE	GRADE	OD"	WT/FT	ID"	OH SIZE"	% EXCESS LEAD	% EXCESS TAIL	TOTAL DEPTH (FT)
Surface		9.625			13.50			1704
Production	P-110	5.5	20	4.778	20	0	0	14747
MAXIMUM CASING/TUBING/DP PSI				MAXIMUM ANNULAR PSI				

Mud Type	OBM	Rotate Y,N	No	Circulation Data				Water Requirements (bbls)	
Mud ppg	10.4	Rate (rpm)		Circulate Time (hrs)		2		Spacers	140
Flow Temp		Torque Val.		Circulation Rate (bpm)		10		Stage 1 Lead	112
Vis. Sec/qt		Time (hr)		Full Circulation ? (Y,N,P)		Yes		Stage 1 Tail	173
PV (cP)		Pipe Reciprocation		Gas Present (Y,N)		No	Units	Stage 2 Lead	
Yield Pt		Recip Y,N	No	Centralizers/Plugs				Stage 2 Tail	
10 sec gel		Stroke (ft)		Quantity & Type		Customer Provided		Displacement	327
10 min gel		Recip time		Top Plug/Type		Customer Provided		Wash up	20
30 min gel		Stuck ?		Bottom Plug/Type		Customer Provided		Total + 10% Safety	849

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	1016	Sacks		Sacks		Dens. ppg	8.34
Volume	140	Vol/bbbls	256.8	Vol/bbbls	247.9	Vol/bbbls	0.0	Vol/bbbls	0.0	Vol. bbl	327
Rate	12	Rate	11	Rate	11	Rate		Rate		Rate bpm	11
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	307
Rate		TOL (ft)	2013'	TOT (ft)	8312'	TOL (ft)		TOT (ft)		Bump PSI	2500

Final Displacement (bbbls)	327
Bump Plug?	Yes
Final Bump Pressure (psi)	3000
Full Returns throughout job?	Full
Vol. away/Time when returns lost	
Vol. away when returns were regained	
Spacer to Surface?	Yes
Spacer volume returned (bbbls)	46
Cement to surface?	No
Cement volume to surface stage 1	
Cement volume to surface stage 2	

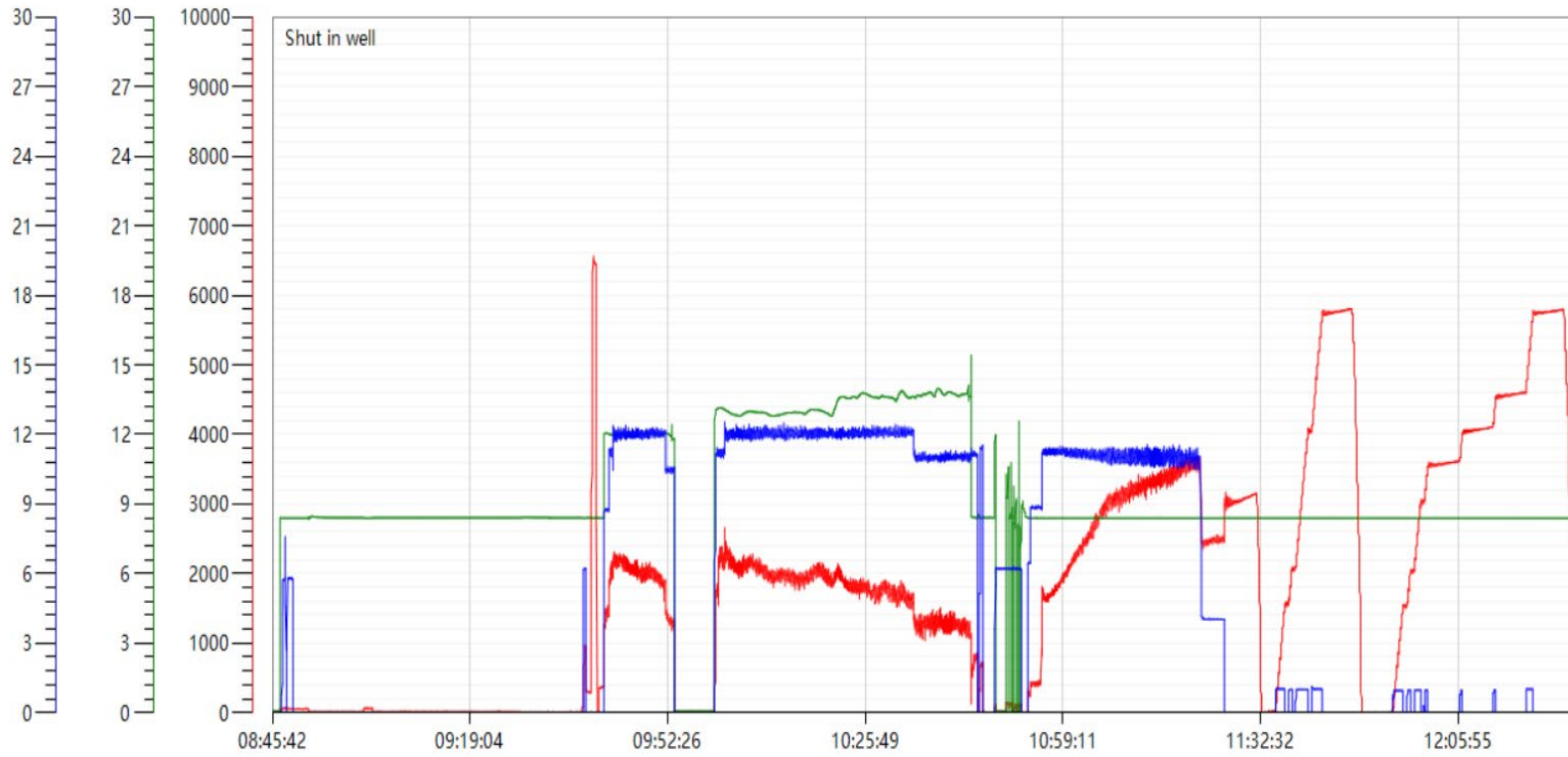
Surface Top Out Details-Pumped	Job Summary Additional Chems Used	
Cement Type	MFC 47 (gal)	70
Dens. ppg	NA	MFC 67 (gal) 168
Sacks qty	NA	Defoamer (gal) 20
Gal/sk	NA	Biocide (gal) 15
Yield	NA	Corr. Inhib (gal) 0
Lbs. of chloride used	NA	Fiber (lbs) 290
Top out pipe used ?	NA	Chloride (lbs) 0
Feet of top out pipe	NA	Retarder (lbs) 0
Annulus holding?		Clay Stabilizer (gal) 0
Sodium Silicate Used	Other	0

JOB LOG

CLIENT	WELL	RIG	JOB TYPE	START DATE	Ambient Conditions		
PDC Energy	Hen 07N	Patterson 272	Production	8/26/2023	Temp / Hum / Air Press 70 Deg F / 81% / 25.08 in		
DATE (dd/mm)	TIME (hh:mm)	DENSITY (ppg)	RATE (bpm)	VOL. (bbl)	TOTAL VOL.	PRESSURE	TREATMENT COMMENTS
8/26/2023	6:00:00 AM						Arrived on location
8/26/2023	8:00:00 AM						Spot equipment
8/26/2023	8:15:00 AM						Rig up/ Wait for rig to finish circulating
8/26/2023	9:20:00 AM						Safety meeting
8/26/2023	9:40:00 AM						Rig up floor
8/26/2023	9:42:00 AM	8.33	6.2	3	3	1000	Fill surface lines
8/26/2023	9:43:00 AM	8.33				6500	Pressure test
8/26/2023	9:45:00 AM	12	12.0	140	140	2100	Pump 140bbl SPACER @ 12# with surfactant and fiber
8/26/2023	9:58:00 AM						Shutdown/ Drop BOTTOM plug
8/26/2023	10:04:00 AM	12.9	12.0	257	257	2100	Pump 257bbl (1276sks) LEAD cement @ 12.9#, 1.13Y, 3.68gal/sk- TOL-2013'
8/26/2023	10:25:00 AM	13.7	11.5	248	248	1700	Pump 248bbl (1016sks) TAIL cement @ 13.7#, 1.37Y, 6.63gal/sk- TOT- 8312'
8/26/2023	10:47:00 AM	8.33	11.1	15	15	600	Pump 15bbl SUGAR water-TOSW- 14390'
8/26/2023	10:48:00 AM						Shutdown/ Wash pumps and lines/ Drop TOP plug
8/26/2023	10:56:00 AM	8.33					Pump 327 bbl FRESHWATER Displacement with biocide in all
8/26/2023	10:57:00 AM	8.33	8.8	10	10	400	Pump Freshwater Displacement
8/26/2023	11:02:00 AM	8.33	11.2	50	50	1900	Pump Freshwater Displacement
8/26/2023	11:06:00 AM	8.33	11.2	100	100	2500	Pump Freshwater Displacement
8/26/2023	11:11:00 AM	8.33	11.0	150	150	3200	Pump Freshwater Displacement
8/26/2023	11:16:00 AM	8.33	11.0	200	200	3300	Pump Freshwater Displacement
8/26/2023	11:20:00 AM	8.33	11.0	250	250	3400	Pump Freshwater Displacement, Spacer to surf. at 281 away, circulate 46bbl spacer to surface
8/26/2023	11:25:00 AM	8.33	11.0	300	300	3600	Pump Freshwater Displacement
8/26/2023	11:26:00 AM	8.33	4.0	307	307	2400	Pump Freshwater Displacement, Slow rate to 4bbl/min to bump plug
8/26/2023	11:30:00 AM	8.33		327	327	2500-3000	Bump plug/ shutdown, FCP-2500psi, bumped to 3000psi
8/26/2023	11:35:00 AM	8.33					Check floats, floats held, 3.5 bbl back to truck
8/26/2023	11:38:00 AM	8.33				5700	Set Packer per tool hand
8/26/2023	12:28:00 PM	8.33					Check floats, floats held, 6 bbl back to truck
8/26/2023	12:33:00 PM	8.33	10.0	30	30	350	Rig up and flush stack clean
8/26/2023	12:40:00 PM						Rig down
8/26/2023	1:30:00 AM						Depart location

Hen 7N Production Pump Chart – Pressure / Rate / Density

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





Centralizer Depths

Well Name: Hen 07N

Production, Set Depth: 14,747.0ftKB

API 0512351796000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	45.00	Yes			14,667.5	79.54
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			14,578.3	168.72
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	43.18	Yes			14,490.7	256.35
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			14,401.4	345.63
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	44.48	Yes			14,312.0	435.01
17		Marker Joint	5 1/2	20.00	P-110	Yes	10.32	Yes			14,256.7	490.34
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			14,167.5	579.54
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	44.80	Yes			14,078.2	668.77
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	43.98	Yes			13,997.1	749.87
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	44.89	Yes			13,907.6	839.42
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			13,818.1	928.86
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	44.12	Yes			13,729.4	1,017.64
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			13,642.4	1,104.60
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	44.53	Yes			13,555.9	1,191.07
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	44.66	Yes			13,466.5	1,280.55
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	44.67	Yes			13,377.2	1,369.76
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	44.66	Yes			13,288.6	1,458.42
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	44.55	Yes			13,199.7	1,547.34
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			13,110.2	1,636.78
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			13,021.6	1,725.41
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	40.92	Yes			12,937.1	1,809.89
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	38.50	Yes			12,854.1	1,892.93
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	44.13	Yes			12,765.6	1,981.41
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			12,676.4	2,070.61
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	44.55	Yes			12,586.9	2,160.06
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			12,497.5	2,249.50
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	44.53	Yes			12,408.9	2,338.13
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	44.81	Yes			12,326.5	2,420.49
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	43.69	Yes			12,238.3	2,508.71
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	42.04	Yes			12,152.3	2,594.75
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			12,065.1	2,681.95



Centralizer Depths

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Production, Set Depth: 14,747.0ftKB

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Ground Elevation (ft) 4,779.00	Original KB Elevation (ft) 4,807.50	KB-Ground Distance (ft) 28.50	Spud Date 8/22/2023 17:30	Rig Release Date 8/26/2023 15:00	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	43.77	Yes			11,982.1	2,764.88
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			11,894.4	2,852.63
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			11,806.7	2,940.35
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			11,717.9	3,029.15
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	41.80	Yes			11,633.0	3,114.04
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			11,544.9	3,202.14
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	40.36	Yes			11,460.4	3,286.60
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			11,372.7	3,374.31
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	41.00	Yes			11,287.3	3,459.68
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	42.61	Yes			11,199.4	3,547.62
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	43.16	Yes			11,111.9	3,635.13
91	84	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			11,023.5	3,723.48
93	86	Casing Joints	5 1/2	20.00	P-110	Yes	43.88	Yes			10,938.2	3,808.80
95	88	Casing Joints	5 1/2	20.00	P-110	Yes	43.78	Yes			10,850.1	3,896.94
97		Marker Joint	5 1/2	20.00	P-110	Yes	11.28	Yes			10,798.5	3,948.52
99	91	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			10,710.6	4,036.38
101	93	Casing Joints	5 1/2	20.00	P-110	Yes	43.65	Yes			10,624.8	4,122.21
103	95	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			10,535.8	4,211.20
105	97	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			10,447.3	4,299.66
107	99	Casing Joints	5 1/2	20.00	P-110	Yes	44.66	Yes			10,358.9	4,388.12
109	101	Casing Joints	5 1/2	20.00	P-110	Yes	39.93	Yes			10,273.8	4,473.18
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	44.46	Yes			10,189.2	4,557.82
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	42.49	Yes			10,101.7	4,645.31
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	43.65	Yes			10,013.7	4,733.32
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	43.76	Yes			9,929.7	4,817.28
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	44.01	Yes			9,844.9	4,902.11
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	44.13	Yes			9,756.8	4,990.24
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	43.77	Yes			9,668.5	5,078.47
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			9,580.4	5,166.57
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			9,492.3	5,254.71
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	40.91	Yes			9,407.7	5,339.27



Centralizer Depths

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Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	43.16	Yes			9,319.8	5,427.23
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	44.15	Yes			9,231.5	5,515.48
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	43.30	Yes			9,143.9	5,603.08
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	43.72	Yes			9,055.9	5,691.15
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			8,967.8	5,779.25
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	43.83	Yes			8,879.6	5,867.37
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			8,791.6	5,955.43
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	43.46	Yes			8,704.5	6,042.49
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	43.66	Yes			8,616.5	6,130.52
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	44.02	Yes			8,528.4	6,218.59
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	44.01	Yes			8,440.4	6,306.60
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			8,352.4	6,394.60
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			8,264.0	6,483.05
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	41.60	Yes			8,178.6	6,568.43
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	45.00	Yes			8,090.2	6,656.83
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			8,002.7	6,744.33
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	41.96	Yes			7,916.7	6,830.29
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	44.49	Yes			7,828.1	6,918.88
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			7,740.3	7,006.75
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	43.82	Yes			7,652.3	7,094.67
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			7,564.3	7,182.67
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	42.00	Yes			7,478.6	7,268.43
174		Marker Joint	5 1/2	20.00	P-110	Yes	22.70	Yes			7,455.9	7,291.13
175	166	Casing Joints	5 1/2	20.00	P-110	Yes	45.36	Yes			7,410.5	7,336.49
176	167	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			7,366.4	7,380.60
177	168	Casing Joints	5 1/2	20.00	P-110	Yes	42.22	Yes			7,324.2	7,422.82
178	169	Casing Joints	5 1/2	20.00	P-110	Yes	43.63	Yes			7,280.6	7,466.45
179	170	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			7,237.2	7,509.85
180	171	Casing Joints	5 1/2	20.00	P-110	Yes	42.30	Yes			7,194.9	7,552.15
181	172	Casing Joints	5 1/2	20.00	P-110	Yes	43.84	Yes			7,151.0	7,595.99
182	173	Casing Joints	5 1/2	20.00	P-110	Yes	42.69	Yes			7,108.3	7,638.68



Centralizer Depths

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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	45.00	Yes			7,063.3	7,683.68
184	175	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			7,019.2	7,727.78
185	176	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			6,975.1	7,771.88
186	177	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			6,930.8	7,816.24
187	178	Casing Joints	5 1/2	20.00	P-110	Yes	42.48	Yes			6,888.3	7,858.72
188	179	Casing Joints	5 1/2	20.00	P-110	Yes	44.46	Yes			6,843.8	7,903.18
189	180	Casing Joints	5 1/2	20.00	P-110	Yes	43.93	Yes			6,799.9	7,947.11
190	181	Casing Joints	5 1/2	20.00	P-110	Yes	43.30	Yes			6,756.6	7,990.41
191	182	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			6,712.6	8,034.41
192	183	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			6,668.2	8,078.83
193	184	Casing Joints	5 1/2	20.00	P-110	Yes	42.79	Yes			6,625.4	8,121.62
194	185	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			6,581.3	8,165.73
195	186	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			6,537.0	8,210.03
196	187	Casing Joints	5 1/2	20.00	P-110	Yes	44.91	Yes			6,492.1	8,254.94
197	188	Casing Joints	5 1/2	20.00	P-110	Yes	44.46	Yes			6,447.6	8,299.40
198	189	Casing Joints	5 1/2	20.00	P-110	Yes	45.00	Yes			6,402.6	8,344.40
199	190	Casing Joints	5 1/2	20.00	P-110	Yes	43.93	Yes			6,358.7	8,388.33
200	191	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			6,314.3	8,432.69
201	192	Casing Joints	5 1/2	20.00	P-110	Yes	43.66	Yes			6,270.7	8,476.35
202		Marker Joint	5 1/2	20.00	P-110	Yes	20.19	Yes			6,250.5	8,496.54
203	193	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			6,206.5	8,540.46
204	194	Casing Joints	5 1/2	20.00	P-110	Yes	44.44	Yes			6,162.1	8,584.90
205	195	Casing Joints	5 1/2	20.00	P-110	Yes	44.18	Yes			6,117.9	8,629.08
206	196	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			6,074.0	8,673.00
207	197	Casing Joints	5 1/2	20.00	P-110	Yes	39.75	Yes			6,034.3	8,712.75
208	198	Casing Joints	5 1/2	20.00	P-110	Yes	43.75	Yes			5,990.5	8,756.50
209	199	Casing Joints	5 1/2	20.00	P-110	Yes	43.98	Yes			5,946.5	8,800.48
210	200	Casing Joints	5 1/2	20.00	P-110	Yes	44.91	Yes			5,901.6	8,845.39
211	201	Casing Joints	5 1/2	20.00	P-110	Yes	42.80	Yes			5,858.8	8,888.19
212	202	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			5,815.4	8,931.59
213	203	Casing Joints	5 1/2	20.00	P-110	Yes	44.98	Yes			5,770.4	8,976.57



Centralizer Depths

Well Name: Hen 07N

Production, Set Depth: 14,747.0ftKB

API 0512351796000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	43.26	Yes			5,727.2	9,019.83
215	205	Casing Joints	5 1/2	20.00	P-110	Yes	40.60	Yes			5,686.6	9,060.43
216	206	Casing Joints	5 1/2	20.00	P-110	Yes	44.62	Yes			5,642.0	9,105.05
217	207	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			5,598.0	9,149.05
218	208	Casing Joints	5 1/2	20.00	P-110	Yes	44.32	Yes			5,553.6	9,193.37
219	209	Casing Joints	5 1/2	20.00	P-110	Yes	41.80	Yes			5,511.8	9,235.17
220	210	Casing Joints	5 1/2	20.00	P-110	Yes	44.53	Yes			5,467.3	9,279.70
221	211	Casing Joints	5 1/2	20.00	P-110	Yes	44.46	Yes			5,422.8	9,324.16
222	212	Casing Joints	5 1/2	20.00	P-110	Yes	43.88	Yes			5,379.0	9,368.04
223	213	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,334.7	9,412.28
224	214	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			5,290.5	9,456.49
225	215	Casing Joints	5 1/2	20.00	P-110	Yes	36.34	Yes			5,254.2	9,492.83
226	216	Casing Joints	5 1/2	20.00	P-110	Yes	43.88	Yes			5,210.3	9,536.71
227	217	Casing Joints	5 1/2	20.00	P-110	Yes	44.91	Yes			5,165.4	9,581.62
228	218	Casing Joints	5 1/2	20.00	P-110	Yes	43.95	Yes			5,121.4	9,625.57
229	219	Casing Joints	5 1/2	20.00	P-110	Yes	41.26	Yes			5,080.2	9,666.83
230	220	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			5,036.2	9,710.83
231	221	Casing Joints	5 1/2	20.00	P-110	Yes	42.80	Yes			4,993.4	9,753.63
232	222	Casing Joints	5 1/2	20.00	P-110	Yes	43.12	Yes			4,950.3	9,796.75
233	223	Casing Joints	5 1/2	20.00	P-110	Yes	44.80	Yes			4,905.5	9,841.55
234	224	Casing Joints	5 1/2	20.00	P-110	Yes	44.65	Yes			4,860.8	9,886.20
235	225	Casing Joints	5 1/2	20.00	P-110	Yes	44.92	Yes			4,815.9	9,931.12
236	226	Casing Joints	5 1/2	20.00	P-110	Yes	44.03	Yes			4,771.9	9,975.15
237	227	Casing Joints	5 1/2	20.00	P-110	Yes	45.24	Yes			4,726.6	10,020.39
238	228	Casing Joints	5 1/2	20.00	P-110	Yes	44.02	Yes			4,682.6	10,064.41
239	229	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			4,638.4	10,108.64
240	230	Casing Joints	5 1/2	20.00	P-110	Yes	44.75	Yes			4,593.6	10,153.39
241	231	Casing Joints	5 1/2	20.00	P-110	Yes	44.16	Yes			4,549.5	10,197.55
242	232	Casing Joints	5 1/2	20.00	P-110	Yes	43.78	Yes			4,505.7	10,241.33
243	233	Casing Joints	5 1/2	20.00	P-110	Yes	44.88	Yes			4,460.8	10,286.21
244	234	Casing Joints	5 1/2	20.00	P-110	Yes	43.68	Yes			4,417.1	10,329.89



Centralizer Depths

Well Name: Hen 07N

Production, Set Depth: 14,747.0ftKB

API 0512351796000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	40.63	Yes			4,376.5	10,370.52
246	236	Casing Joints	5 1/2	20.00	P-110	Yes	44.98	Yes			4,331.5	10,415.50
247	237	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			4,287.1	10,459.86
248	238	Casing Joints	5 1/2	20.00	P-110	Yes	38.30	Yes			4,248.8	10,498.16
249	239	Casing Joints	5 1/2	20.00	P-110	Yes	45.28	Yes			4,203.6	10,543.44
250	240	Casing Joints	5 1/2	20.00	P-110	Yes	43.10	Yes			4,160.5	10,586.54
251	241	Casing Joints	5 1/2	20.00	P-110	Yes	44.88	Yes			4,115.6	10,631.42
252	242	Casing Joints	5 1/2	20.00	P-110	Yes	43.76	Yes			4,071.8	10,675.18
253	243	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			4,027.7	10,719.28
254	244	Casing Joints	5 1/2	20.00	P-110	Yes	44.64	Yes			3,983.1	10,763.92
255	245	Casing Joints	5 1/2	20.00	P-110	Yes	44.87	Yes			3,938.2	10,808.79
256	246	Casing Joints	5 1/2	20.00	P-110	Yes	45.00	Yes			3,893.2	10,853.79
257	247	Casing Joints	5 1/2	20.00	P-110	Yes	42.46	Yes			3,850.8	10,896.25
258	248	Casing Joints	5 1/2	20.00	P-110	Yes	40.84	Yes			3,809.9	10,937.09
259	249	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			3,765.0	10,981.99
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			3,721.5	11,025.49
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	44.48	Yes			3,677.0	11,069.97
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	42.25	Yes			3,634.8	11,112.22
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	41.62	Yes			3,593.2	11,153.84
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	44.73	Yes			3,548.4	11,198.57
265	255	Casing Joints	5 1/2	20.00	P-110	Yes	44.16	Yes			3,504.3	11,242.73
266	256	Casing Joints	5 1/2	20.00	P-110	Yes	43.74	Yes			3,460.5	11,286.47
267	257	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			3,415.3	11,331.69
268	258	Casing Joints	5 1/2	20.00	P-110	Yes	45.00	Yes			3,370.3	11,376.69
269	259	Casing Joints	5 1/2	20.00	P-110	Yes	44.36	Yes			3,326.0	11,421.05
271	260	Casing Joints	5 1/2	20.00	P-110	Yes	44.62	Yes			3,266.7	11,480.34
272	261	Casing Joints	5 1/2	20.00	P-110	Yes	42.18	Yes			3,224.5	11,522.52
273	262	Casing Joints	5 1/2	20.00	P-110	Yes	42.92	Yes			3,181.6	11,565.44
274	263	Casing Joints	5 1/2	20.00	P-110	Yes	43.84	Yes			3,137.7	11,609.28
275	264	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			3,092.4	11,654.59
276	265	Casing Joints	5 1/2	20.00	P-110	Yes	39.25	Yes			3,053.2	11,693.84



Centralizer Depths

Well Name: Hen 07N

Production, Set Depth: 14,747.0ftKB

API 0512351796000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	44.54	Yes			3,008.6	11,738.38
278	267	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			2,965.2	11,781.78
279	268	Casing Joints	5 1/2	20.00	P-110	Yes	44.11	Yes			2,921.1	11,825.89
280	269	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			2,876.2	11,870.79
281	270	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			2,831.3	11,915.69
282	271	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			2,786.0	11,961.01
283	272	Casing Joints	5 1/2	20.00	P-110	Yes	44.86	Yes			2,741.1	12,005.87
284	273	Casing Joints	5 1/2	20.00	P-110	Yes	40.23	Yes			2,700.9	12,046.10
285	274	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			2,656.8	12,090.20
286	275	Casing Joints	5 1/2	20.00	P-110	Yes	42.36	Yes			2,614.4	12,132.56
287	276	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			2,570.4	12,176.56
288	277	Casing Joints	5 1/2	20.00	P-110	Yes	43.22	Yes			2,527.2	12,219.78
289	278	Casing Joints	5 1/2	20.00	P-110	Yes	44.34	Yes			2,482.9	12,264.12
290	279	Casing Joints	5 1/2	20.00	P-110	Yes	44.55	Yes			2,438.3	12,308.67
291	280	Casing Joints	5 1/2	20.00	P-110	Yes	41.90	Yes			2,396.4	12,350.57
292	281	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			2,352.3	12,394.67
293	282	Casing Joints	5 1/2	20.00	P-110	Yes	44.78	Yes			2,307.6	12,439.45
294	283	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			2,262.7	12,484.35
295	284	Casing Joints	5 1/2	20.00	P-110	Yes	44.65	Yes			2,218.0	12,529.00
296	285	Casing Joints	5 1/2	20.00	P-110	Yes	44.64	Yes			2,173.4	12,573.64
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	44.53	Yes			2,128.8	12,618.17
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			2,084.3	12,662.71
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			2,039.4	12,707.61
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	42.40	Yes			1,997.0	12,750.01
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	39.40	Yes			1,957.6	12,789.41
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	44.52	Yes			1,913.1	12,833.93
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	44.53	Yes			1,868.5	12,878.46
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	42.02	Yes			1,826.5	12,920.48
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			1,781.6	12,965.38
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	42.44	Yes			1,739.2	13,007.82
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	36.33	Yes			1,702.9	13,044.15



Centralizer Depths

Well Name: Hen 07N

Production, Set Depth: 14,747.0ftKB

API 0512351796000		Surface Legal Location SWNE 8 4N 64W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,779.00		Original KB Elevation (ft) 4,807.50		KB-Ground Distance (ft) 28.50		Spud Date 8/22/2023 17:30		Rig Release Date 8/26/2023 15:00		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	42.63	Yes			1,660.2	13,086.78
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	44.64	Yes			1,615.6	13,131.42
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			1,571.4	13,175.62
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			1,527.4	13,219.62
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			1,483.4	13,263.62
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	43.94	Yes			1,439.4	13,307.56
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			1,394.9	13,352.10
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	44.65	Yes			1,350.3	13,396.75
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			1,306.3	13,440.75
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	43.18	Yes			1,263.1	13,483.93
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	44.88	Yes			1,218.2	13,528.81
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	42.78	Yes			1,175.4	13,571.59
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	42.17	Yes			1,133.2	13,613.76
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	44.64	Yes			1,088.6	13,658.40
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			1,045.1	13,701.90
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	43.13	Yes			1,002.0	13,745.03
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	43.35	Yes			958.6	13,788.38
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	44.18	Yes			914.4	13,832.56
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	41.32	Yes			873.1	13,873.88
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	40.10	Yes			833.0	13,913.98
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	41.42	Yes			791.6	13,955.40
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	40.69	Yes			750.9	13,996.09
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	44.54	Yes			706.4	14,040.63
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	43.93	Yes			662.4	14,084.56
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			617.5	14,129.46
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	43.54	Yes			574.0	14,173.00
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	43.20	Yes			530.8	14,216.20
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	38.36	Yes			492.4	14,254.56