

Cement Post Job Report

Client: PDC Energy

Well Name: Stugart 19N

API #: 05-123-51267-00

Job Date: February 13, 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	Stugart 19N	Ensign 769	Production	Buttress	CRT Connection

WELL MD (FT)	WELL TVD (FT)	DEVIATION (DEG)	NUMBER OF STAGES	BHST (DEG)	BHCT (DEG)
15179	7282	90	1	230	230

PACKER/RETAINER/CIBP/DV TOOL DEPTHS	TOOL TYPE	TOP OF PERFS (FT)	BOTTOM OF PERFS (FT)	NUMBER OF HOLES
3703	PACKER			

CASING/TUBING/DP DETAILS								
STRING TYPE	GRADE	OD"	WT/FT	ID"	OH SIZE"	% EXCESS LEAD	% EXCESS TAIL	TOTAL DEPTH (FT)
Surface		9.625	36					1689
Production		5.5	20		8.5	0	0	15174
MAXIMUM CASING/TUBING/DP PSI					MAXIMUM ANNULAR PSI			

Mud Type	OBM	Rotate Y,N	No	Circulation Data				Water Requirements (bbls)	
Mud ppg	10.8	Rate (rpm)		Circulate Time (hrs)		3		Spacers	140
Flow Temp		Torque Val.		Circulation Rate (bpm)		10		Stage 1 Lead	119
Vis. Sec/qt		Time (hr)		Full Circulation ? (Y,N,P)		Yes		Stage 1 Tail	171
PV (cP)		Pipe Reciprocation		Gas Present (Y,N)		Yes	Units	700	Stage 2 Lead
Yield Pt		Recip Y,N	No	Centralizers/Plugs					Stage 2 Tail
10 sec gel		Stroke (ft)		Quantity & Type					Displacement
10 min gel		Recip time		Top Plug/Type					Wash up
30 min gel		Stuck ?		Bottom Plug/Type					Total + 10% Safety
								336	20
								865	

Prelflush & 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	1085	Sacks		Sacks	Dens. ppg	8.33	
	Volume	140	Vol/bbls	256.8	Vol/bbls	264.7	Vol/bbls	0.0	Vol/bbls	0.0	Vol. bbl	336
	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	316
	Rate		TOL (ft)	2383	TOT (ft)	8682	TOL (ft)		TOT (ft)		Bump PSI	2900

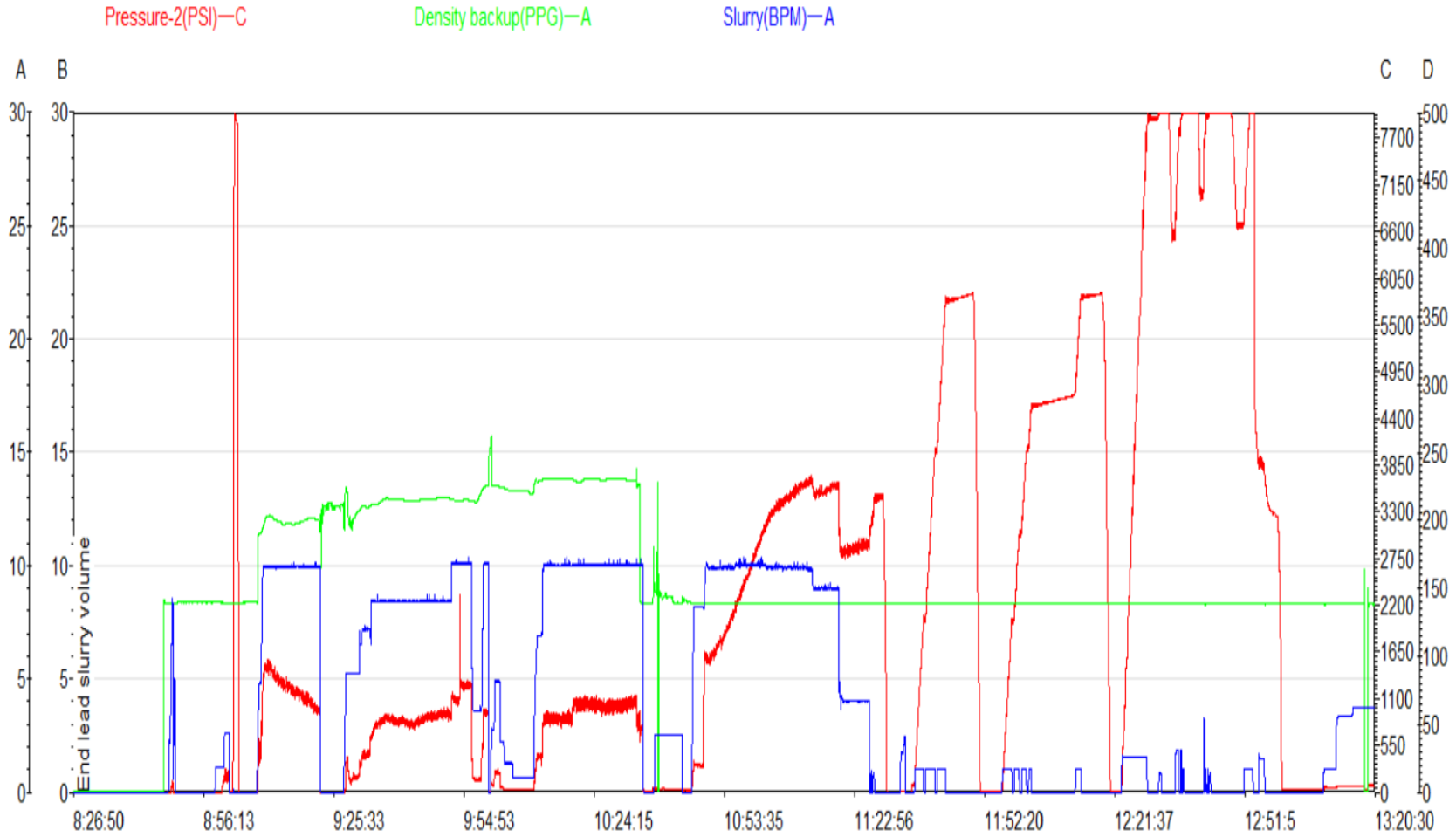
Final Displacement (bbls)	336
Bump Plug?	Yes
Final Bump Pressure (psi)	3400
Full Returns throughout job?	Full
Vol away/Time when returns lost	NA
Vol away when returns were regained	NA
Spacer to Surface?	Yes
Spacer volume returned (bbls)	31
Cement to surface?	No
Cement volume to surface stage 1	NA
Cement volume to surface stage 2	NA

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)	55
Gal/sk	NA	Biocide (gal)	20
Yield	NA	Corr. Inhib (gal)	0
Calcium Chlor. Used?	NA	Fiber (lbs)	290
Top out pipe used ?	NA	Chloride (lbs)	0
Annulus holding?	NA	Retarder (lbs)	0
		Clay Stabilizer (gal)	0
		Other	0

JOB LOG

CLIENT	WELL	RIG	JOB TYPE	START DATE	Ambient Conditions		
PDC Energy	Stugart 19N	Ensign 769	Production	2/13/2023	Temp / Hum / Air Press 24 Deg F / 88 % / 24.83		
DATE (dd/mm)	TIME (hh:mm)	DENSITY (ppg)	RATE (bpm)	VOL. (bbl)	TOTAL VOL.	PRESSURE	TREATMENT COMMENTS
2/12/2023	9:00:00 PM						CREW CALLED OUT FOR ON LOCATION TIME OF 0500 02/13/23
2/13/2023	4:30:00 AM						CREW ARRIVES ON LOCATION/CHECK IN WITH CO REP/CALCULATE JOB/FILL TRANSPORT WITH 90 DEGREE WATER
	6:00:00 AM						LANDED AT 15177'/CIRCULATE WELL
	6:15:00 AM						SPOT IN AND RIG UP EQUIPMENT
	7:30:00 AM						SAFETY MEETING
	7:45:00 AM						PRIME UP PUMP
	7:50:00 AM	8.33	2.5	5	5	350	FILL LINES
	7:55:00 AM	8.33	1.0	1	1	8600	PRESSURE TEST
	7:57:00 AM						DROP 1ST BOTTOM PLUG
	7:59:00 AM	12	10.0	140	140	1500	PUMP 140 BBLS OF SPACER AT 12#
	8:15:00 AM						SHUT DOWN
	8:16:00 AM						DROP 2ND BOTTOM PLUG
	8:19:00 AM	12.9	8.5	257	257	760	PUMP 257 BBLS OF LEAD AT 12.9# (1276 SKS, 1.13 YLD, 3.90 GAL/SK)
	9:00:00 AM	13.7	10.0	265	265	1000	PUMP 265 BBLS OF TAIL AT 13.7# (1085 SKS, 1.97 YLD, 6.63 GAL/SK)
	9:27:00 AM	8.33	10.0	8	8	650	PUMP 8 BBLS OF SUGAR WATER
	9:30:00 AM						SHUT DOWN
	9:31:00 AM						WASH UP PUMPS AND LINES
	9:34:00 AM						DROP TOP PLUG
	9:39:00 AM	8.33	8.0	20	20	370	BEGIN DISPLACEMENT OF 336 BBLS WITH FRESHWATER/CAUGHT PLUG AT 20 AWAY
	9:45:00 AM	8.33	10.0	30	50	1600	FRESHWATER DISPLACEMENT
	9:50:00 AM	8.33	10.0	50	100	2360	FRESHWATER DISPLACEMENT
	9:55:00 AM	8.33	10.0	50	150	3100	FRESHWATER DISPLACEMENT
	10:01:00 AM	8.33	9.0	50	200	3400	FRESHWATER DISPLACEMENT
	10:07:00 AM	8.33	9.0	50	250	3500	FRESHWATER DISPLACEMENT
	10:10:00 AM	8.33	9.0	42	292	3500	SPACER VISIBLE AT THE SHAKERS/SWAPPED OVER TO 4 SIDED
	10:12:00 AM	8.33	4.0	8	300	2800	SLOWED RATE TO LAND PLUG
	10:20:00 AM	8.33	4.0	36	336	3400	LANDED PLUG AT CALCULATED DISPLACEMENT/WENT 500 OVER FCP
	10:25:00 AM						CHECK FLOATS/FLOATS HELD/RECEIVED 4.5 BBLS BACK
	10:30:00 AM	8.33	1.5	16	16	5800	SET PACKER PER TOOL REP
	11:15:00 AM	8.33	1.5	8	8	8100	PRESSURE UP TO SHIFT TOE SLEEVE
	11:20:00 AM	8.33	1.5	2	2	8100	PRESSURED OUT TO 8100/HELD 5 MINS
	11:25:00 AM	8.33					bled pressure off to 6500
	11:26:00 AM	8.33	2.0	2	2	8300	PRESSURED BACK UP TO 8300/UNABLE TO SHIFT SLEEVE/HELD 5 MINS
	11:31:00 AM	8.33					bled pressure off to 6500
	11:32:00 AM	8.33	3.0	2	2	8300	PRESSURED BACK UP TO 8300/UNABLE TO SHIFT SLEEVE/HELD 5 MINS
	11:37:00 AM	8.33					bled pressure off to 6500
	11:42:00 AM	8.33	1.0	3	3	8600	PRESSURED UP TO 8600/HELD FOR 1 MIN/TOE SLEEVE SHIFTED AT 8600/HOOK LOAD DROPPED 50,000LBS WHILE SHEARING
	11:45:00 AM	8.33	1.5	2	2	3300	PUMPED 2 BBL WET SHOE/PACKER FAILED DURING WET SHOE PROCEDURE/FLOW PRESENT
	11:50:00 AM	8.33					CHECK FLOATS/FLOATS HELD/RECEIVED 3.5 BBLS BACK
	11:52:00 AM						RIG UP TO FLUSH STACK
	11:55:00 AM	8.33	5.0	40	40	500	FLUSH STACK
	12:25:00 PM						RIG DOWN EQUIPMENT AND APPARATUS
	12:26:00 PM						FINISH PAPERWORK
	1:00:00 PM						DEPART LOCATION

Stugart 19N Production Pump Chart – Pressure / Rate / Density



Chart



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00		Original KB Elevation (ft) 4,913.00		KB-Ground Distance (ft) 28.00		Spud Date 2/10/2023 13:30		Rig Release Date 2/13/2023 14:30		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)
7	1	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			15,095.4	78.58
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	44.17	Yes			15,007.7	166.28
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			14,919.2	254.78
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			14,830.8	343.25
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			14,742.7	431.35
17		Marker Joint	5 1/2	20.00	P-110	Yes	10.00	Yes			14,688.4	485.64
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			14,599.9	574.11
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			14,511.4	662.60
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			14,423.4	750.65
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			14,335.7	838.33
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			14,247.3	926.74
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			14,159.2	1,014.81
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	43.91	Yes			14,071.4	1,102.58
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			13,982.9	1,191.07
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			13,894.4	1,279.60
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			13,805.9	1,368.09
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	43.88	Yes			13,717.8	1,456.20
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	42.68	Yes			13,630.9	1,543.12
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			13,542.5	1,631.51
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			13,454.4	1,719.61
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			13,366.0	1,808.04
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			13,277.4	1,896.57
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			13,189.0	1,985.00
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			13,100.9	2,073.10
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			13,012.4	2,161.58
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			12,924.3	2,249.66
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	44.18	Yes			12,836.0	2,338.04
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			12,747.8	2,426.22
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			12,659.3	2,514.70
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			12,570.8	2,603.20
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			12,482.3	2,691.69



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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	42.51	Yes			12,396.7	2,777.32
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			12,308.2	2,865.77
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			12,220.4	2,953.59
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			12,132.0	3,042.04
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			12,044.4	3,129.65
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			11,956.2	3,217.78
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			11,869.3	3,304.67
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	43.94	Yes			11,781.2	3,392.83
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			11,693.1	3,480.95
87		Marker Joint	5 1/2	20.00	P-110	Yes	9.98	Yes			11,639.2	3,534.81
89	81	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			11,550.8	3,623.23
91	83	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			11,462.2	3,711.80
93	85	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			11,373.8	3,800.25
95	87	Casing Joints	5 1/2	20.00	P-110	Yes	44.18	Yes			11,285.7	3,888.26
97	89	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			11,197.3	3,976.72
99	91	Casing Joints	5 1/2	20.00	P-110	Yes	43.86	Yes			11,109.9	4,064.06
101	93	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			11,024.0	4,150.01
103	95	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			10,936.9	4,237.09
105	97	Casing Joints	5 1/2	20.00	P-110	Yes	43.84	Yes			10,848.9	4,325.14
107	99	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			10,760.4	4,413.60
109	101	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			10,673.9	4,500.13
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			10,586.7	4,587.28
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			10,499.0	4,674.96
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	43.36	Yes			10,411.7	4,762.26
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			10,323.2	4,850.78
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			10,234.6	4,939.38
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			10,146.1	5,027.95
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			10,058.6	5,115.43
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			9,970.1	5,203.92
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			9,881.9	5,292.15
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			9,793.7	5,380.34



Centralizer Depths

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Production, Set Depth: 15,174.0ftKB

API 05123512670000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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	123	Casing Joints	5 1/2	20.00	P-110	Yes	44.31	Yes			9,705.1	5,468.95
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	43.94	Yes			9,616.9	5,557.13
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			9,528.4	5,645.60
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			9,440.7	5,733.35
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			9,353.3	5,820.67
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			9,264.9	5,909.14
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			9,176.3	5,997.67
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			9,087.8	6,086.18
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			8,999.4	6,174.65
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			8,910.8	6,263.21
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			8,822.3	6,351.69
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			8,733.8	6,440.22
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			8,645.2	6,528.80
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			8,556.7	6,617.33
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	44.19	Yes			8,468.2	6,705.79
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			8,379.7	6,794.29
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			8,291.2	6,882.78
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	44.19	Yes			8,203.3	6,970.67
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	43.45	Yes			8,115.7	7,058.35
169		Marker Joint	5 1/2	20.00	P-110	Yes	10.00	Yes			8,061.4	7,112.59
170	161	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			8,017.2	7,156.80
171	162	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			7,972.9	7,201.07
172	163	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			7,928.7	7,245.30
173	164	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			7,884.5	7,289.50
174	165	Casing Joints	5 1/2	20.00	P-110	Yes	44.18	Yes			7,840.3	7,333.68
175	166	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			7,796.8	7,377.18
176	167	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			7,752.6	7,421.41
177	168	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			7,708.4	7,465.65
178	169	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			7,664.1	7,509.88
179	170	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			7,619.9	7,554.09
180	171	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			7,575.7	7,598.35



Centralizer Depths

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Production, Set Depth: 15,174.0ftKB

API 05123512670000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
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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)
181	172	Casing Joints	5 1/2	20.00	P-110	Yes	43.89	Yes			7,531.8	7,642.24
182	173	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			7,487.5	7,686.49
183	174	Casing Joints	5 1/2	20.00	P-110	Yes	43.88	Yes			7,443.6	7,730.37
184	175	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			7,399.4	7,774.62
185	176	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			7,355.2	7,818.84
186	177	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			7,311.7	7,862.28
187	178	Casing Joints	5 1/2	20.00	P-110	Yes	43.65	Yes			7,268.1	7,905.93
188	179	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			7,223.8	7,950.22
189	180	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			7,180.3	7,993.69
190	181	Casing Joints	5 1/2	20.00	P-110	Yes	44.21	Yes			7,136.1	8,037.90
191	182	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			7,092.7	8,081.33
192	183	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			7,048.5	8,125.53
193	184	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			7,004.2	8,169.78
194	185	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			6,960.0	8,214.02
195		Marker Joint	5 1/2	20.00	P-110	Yes	21.89	Yes			6,938.1	8,235.91
196	186	Casing Joints	5 1/2	20.00	P-110	Yes	42.56	Yes			6,895.5	8,278.47
197	187	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			6,851.3	8,322.69
198	188	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			6,807.0	8,366.97
199	189	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			6,762.7	8,411.26
200	190	Casing Joints	5 1/2	20.00	P-110	Yes	43.02	Yes			6,719.7	8,454.28
201	191	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			6,676.2	8,497.76
202	192	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			6,632.3	8,541.68
203	193	Casing Joints	5 1/2	20.00	P-110	Yes	43.86	Yes			6,588.5	8,585.54
204	194	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			6,544.2	8,629.78
205	195	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			6,500.0	8,674.03
206	196	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			6,455.7	8,718.28
207	197	Casing Joints	5 1/2	20.00	P-110	Yes	43.58	Yes			6,412.1	8,761.86
208	198	Casing Joints	5 1/2	20.00	P-110	Yes	43.81	Yes			6,368.3	8,805.67
209	199	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			6,324.1	8,849.92
210	200	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			6,279.9	8,894.14
211	201	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			6,235.6	8,938.43



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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)
212	202	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			6,191.3	8,982.66
213	203	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			6,147.1	9,026.90
214	204	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			6,102.9	9,071.12
215	205	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			6,058.6	9,115.36
216	206	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			6,014.4	9,159.61
217	207	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			5,970.1	9,203.88
218	208	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			5,926.1	9,247.88
219	209	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			5,881.9	9,292.11
220	210	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,837.7	9,336.35
221	211	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			5,793.4	9,380.60
222	212	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			5,749.9	9,424.07
223	213	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,705.7	9,468.31
224	214	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			5,661.5	9,512.54
225	215	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			5,617.2	9,556.81
226	216	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			5,573.0	9,601.04
227	217	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,528.7	9,645.28
228	218	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			5,484.9	9,689.13
229	219	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			5,440.6	9,733.38
230	220	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			5,396.4	9,777.65
231	221	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			5,352.1	9,821.95
232	222	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			5,307.8	9,866.23
233	223	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,263.5	9,910.47
234	224	Casing Joints	5 1/2	20.00	P-110	Yes	43.81	Yes			5,219.7	9,954.28
235	225	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			5,175.5	9,998.52
236	226	Casing Joints	5 1/2	20.00	P-110	Yes	43.87	Yes			5,131.6	10,042.39
237	227	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			5,087.4	10,086.61
238	228	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			5,043.2	10,130.81
239	229	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			4,999.0	10,175.04
240	230	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			4,954.7	10,219.32
241	231	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			4,911.3	10,262.72
242	232	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			4,867.0	10,307.00



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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)
243	233	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			4,822.8	10,351.25
244	234	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			4,778.5	10,395.49
245	235	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			4,734.3	10,439.72
246	236	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			4,690.8	10,483.22
247	237	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			4,646.6	10,527.45
248	238	Casing Joints	5 1/2	20.00	P-110	Yes	42.91	Yes			4,603.6	10,570.36
249	239	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			4,559.4	10,614.60
250	240	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			4,515.1	10,658.88
251	241	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			4,470.9	10,703.08
252	242	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			4,426.7	10,747.32
253	243	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			4,382.4	10,791.57
254	244	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			4,338.2	10,835.85
255	245	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			4,293.9	10,880.15
256	246	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			4,250.0	10,924.00
257	247	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			4,205.7	10,968.28
258	248	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			4,161.5	11,012.51
259	249	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			4,117.3	11,056.75
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			4,073.0	11,101.00
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			4,028.8	11,145.24
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			3,984.5	11,189.53
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			3,940.2	11,233.81
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			3,895.9	11,278.07
265	255	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			3,851.7	11,322.31
266	256	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			3,807.5	11,366.53
267	257	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			3,763.2	11,410.76
268	258	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			3,719.0	11,455.00
270	259	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			3,659.5	11,514.50
271	260	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			3,615.3	11,558.73
272	261	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			3,571.0	11,602.99
273	262	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			3,526.8	11,647.24
274	263	Casing Joints	5 1/2	20.00	P-110	Yes	43.15	Yes			3,483.6	11,690.39



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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)
275	264	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			3,439.3	11,734.67
276	265	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			3,395.1	11,778.90
277	266	Casing Joints	5 1/2	20.00	P-110	Yes	42.78	Yes			3,352.3	11,821.68
278	267	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			3,308.1	11,865.91
279	268	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			3,263.8	11,910.18
280	269	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			3,219.6	11,954.41
281	270	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			3,175.3	11,998.67
282	271	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			3,131.1	12,042.89
283	272	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			3,086.9	12,087.13
284	273	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			3,042.6	12,131.38
285	274	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			2,999.2	12,174.81
286	275	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			2,954.9	12,219.10
287	276	Casing Joints	5 1/2	20.00	P-110	Yes	43.45	Yes			2,911.5	12,262.55
288	277	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			2,867.2	12,306.85
289	278	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			2,822.9	12,351.09
290	279	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			2,778.7	12,395.34
291	280	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			2,734.4	12,439.58
292	281	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			2,690.2	12,483.82
293	282	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			2,646.0	12,528.05
294	283	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			2,601.7	12,572.30
295	284	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			2,557.5	12,616.55
296	285	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			2,513.2	12,660.79
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			2,468.9	12,705.09
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			2,424.7	12,749.32
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			2,380.4	12,793.61
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			2,336.1	12,837.89
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			2,292.7	12,881.33
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	44.29	Yes			2,248.4	12,925.62
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			2,204.1	12,969.90
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			2,159.9	13,014.13
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			2,115.6	13,058.39



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 0512351267000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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)
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			2,071.3	13,102.67
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			2,027.9	13,146.07
308	297	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			1,983.7	13,190.35
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			1,939.4	13,234.62
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			1,895.1	13,278.87
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			1,850.9	13,323.15
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			1,806.6	13,367.38
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			1,762.4	13,411.60
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			1,718.2	13,455.83
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			1,673.9	13,500.08
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	44.22	Yes			1,629.7	13,544.30
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	44.23	Yes			1,585.5	13,588.53
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			1,541.2	13,632.80
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			1,496.9	13,677.08
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			1,452.7	13,721.33
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			1,408.5	13,765.53
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	43.63	Yes			1,364.8	13,809.16
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			1,320.6	13,853.44
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			1,276.3	13,897.74
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			1,232.0	13,942.02
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			1,187.7	13,986.29
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			1,143.5	14,030.53
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			1,099.2	14,074.78
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	43.52	Yes			1,055.7	14,118.30
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			1,011.5	14,162.54
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			967.2	14,206.80
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			922.9	14,251.08
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	44.27	Yes			878.7	14,295.35
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	42.69	Yes			836.0	14,338.04
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			791.7	14,382.34
336	325	Casing Joints	5 1/2	20.00	P-110	Yes	44.26	Yes			747.4	14,426.60



Centralizer Depths

Well Name: STUGART 19N

Production, Set Depth: 15,174.0ftKB

API 05123512670000		Surface Legal Location SENW 20 5N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,885.00	Original KB Elevation (ft) 4,913.00	KB-Ground Distance (ft) 28.00	Spud Date 2/10/2023 13:30	Rig Release Date 2/13/2023 14:30	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)
337	326	Casing Joints	5 1/2	20.00	P-110	Yes	44.28	Yes			703.1	14,470.88
338	327	Casing Joints	5 1/2	20.00	P-110	Yes	44.30	Yes			658.8	14,515.18
339	328	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			614.6	14,559.43
340	329	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			570.7	14,603.33
341	330	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			526.8	14,647.25
342	331	Casing Joints	5 1/2	20.00	P-110	Yes	44.25	Yes			482.5	14,691.50