

Cement Post Job Report

Client: PDC Energy

Well Name: Rio 16N

API #: 05-001-10525

Job Date: June 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	Rio 16N	True 41	Production	Buttress	5 1/2" HP Cement Head

WELL MD (FT)	WELL TVD (FT)	DEVIATION (DEG)	NUMBER OF STAGES	BHST (DEG)	BHCT (DEG)
19738	7700	90	1	230	230

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

CASING/TUBING/DP DETAILS								
STRING TYPE	GRADE	OD"	WT/FT	ID"	OH SIZE"	% EXCESS LEAD	% EXCESS TAIL	TOTAL DEPTH (FT)
Surface		9.625	36	8.921		0	0	2438
Production	P-110	5.5	20	4.78	8.5	0	35	19730
MAXIMUM CASING/TUBING/DP PSI			9888			MAXIMUM ANNULAR PSI		4500

Mud Type	OBM	Rotate Y,N	No	Circulation Data				Water Requirements (bbls)	
Mud ppg	10	Rate (rpm)		Circulate Time (hrs)		3		Spacers	160
Flow Temp		Torque Val.		Circulation Rate (bpm)		10		Stage 1 Lead	121
Vis. Sec/qt		Time (hr)		Full Circulation ? (Y,N,P)		Yes		Stage 1 Tail	396
PV (cP)		Pipe Reciprocation		Gas Present (Y,N)		No	Units	Stage 2 Lead	
Yield Pt		Recip Y,N		Centralizers/Plugs					
10 sec gel		Stroke (ft)		Quantity & Type		customer provided			
10 min gel		Recip time		Top Plug/Type		customer provided			
30 min gel		Stuck ?		Bottom Plug/Type		customer provided			
								Stage 2 Tail	
								Displacement	428
								Wash up	20
								Total + 10% Safety	1238

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	2510	Sacks		Sacks		Dens. ppg	8.34
Volume	160	Vol/bbbls	236.3	Vol/bbbls	612.4	Vol/bbbls	0.0	Vol/bbbls	0.0	Vol. bbl	428
Rate	12	Rate	11	Rate	11.5	Rate		Rate		Rate bpm	6.5
Spacer 2		Yield	1.04	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	25	% Excess		% Excess		Slow @ bbl	417
Rate		TOL (ft)	0	TOT (ft)	4730	TOL (ft)		TOT (ft)		Bump PSI	3500

Final Displacement (bbbls)	437
Bump Plug?	Yes
Final Bump Pressure (psi)	3300
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)	160
Cement to surface?	Yes
Cement volume to surface stage 1	46
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)	40
Gal/sk	NA	Biocide (gal)	20
Yield	NA	Corr. Inhib (gal)	0
Calcium Chlor. Used?	NA	Fiber (lbs)	310
Top out pipe used ?	NA	Chloride (lbs)	0
Annulus holding?	NA	Retarder (lbs)	0
		Clay Stabilizer (gal)	0
		Other	

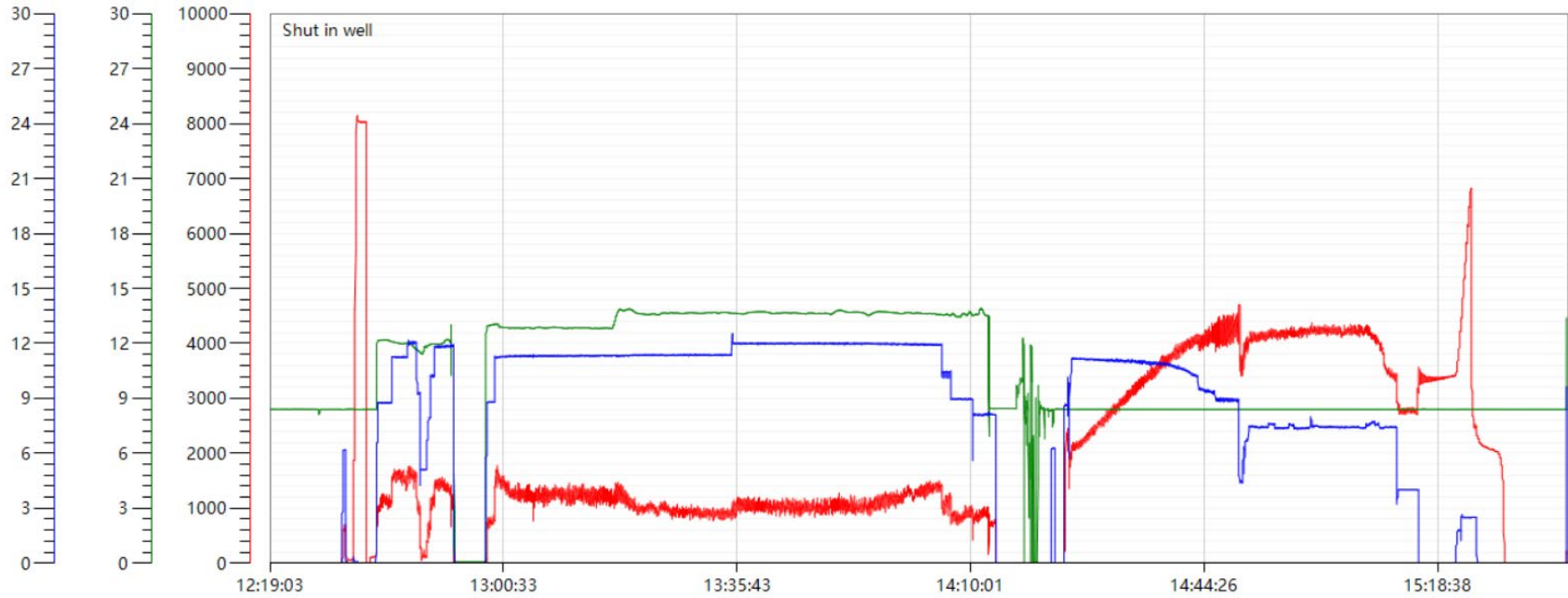
JOB LOG

CLIENT	WELL	RIG	JOB TYPE	START DATE	Ambient Conditions		
PDC Energy	Rio 16N	True 41	Production	6/26/2023	Temp / Hum / Air Press 80 Deg F / 47 % / 24.97 in		
DATE (dd/mm)	TIME (hh:mm)	DENSITY (ppg)	RATE (bpm)	VOL. (bbl)	TOTAL VOL.	PRESSURE	TREATMENT COMMENTS
26-Jun	9:15:00 AM						arrived on location with a location time of 0900.
	9:30:00 AM						spotted in and rigged up.
	10:30:00 AM						Waited for rig to finish circulating.
	12:15:00 PM						Held a safety meeting with company rep and rig crew.
	12:29:00 PM	8.34	6.2	3		700	loaded lines for pressure test.
	12:30:00 PM					8000	pressure tested.
	12:33:00 PM	12	8.8	160		1100	pumped spacer.
	12:49:00 PM						shutdown to drop bottom plug.
	12:54:00 PM	12.9	11.3	236		1600	pumped 1276 sks of lead; yield 1.04;gps 3.68.
	1:18:00 PM	13.7	11.3	612		1100	pumped 2510 sks of tail ;yield 1.37;gps:6.63.
	2:12:00 PM	8.34	8.0	8		1000	pumped 8 bbls sugar water.
	2:17:00 PM						shutdown to wash pumps and lines and drop top plug.
	2:23:00 PM	8.34	11.2	50		2300	pumped water displacement with biocide. Good returns.
	2:28:00 PM	8.34	11.1	50	50	2500	pumped water displacement with biocide. Good returns.
	2:32:00 PM	8.34	11.1	50	100	3100	pumped water displacement with biocide. Good returns.
	2:38:00 PM	8.34	10.8	50	150	3700	pumped water displacement with biocide. Good returns.
	2:43:00 PM	8.34	10.3	50	200	4000	pumped water displacement with biocide. Good returns.
	2:48:00 PM	8.34	8.9	50	250	4400	pumped water displacement with biocide. Good returns.
	2:56:00 PM	8.34	7.4	50	300	4200	pumped water displacement with biocide. Good returns.
	3:02:00 PM	8.34	7.4	50	350	4300	pumped water displacement with biocide. Good returns.
	3:09:00 PM	8.34	7.5	17	400	4000	pumped water displacement with biocide. Good returns.
	3:13:00 PM	8.34	14	20	417	2900	slowed rate to land plug.
	3:16:00 PM				437		plug landed, final circulation was 2800psi took to 3300psi.
	3:21:00 PM	8.34	2.5	4.8/2			shifted and pumped wet shoe, shifted- 6800 @ psi pumped 2800@psi
	3:26:00 PM						checked floats, floats held 3.5 bbls back
	3:32:00 PM	8.34					rigged up to and flushed stack.
6/26/2023	3:40:00 PM						rigged down.

Rio 16N Production Pump Chart – Pressure / Rate / Density

Chart Report

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





Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00		Original KB Elevation (ft) 5,092.00		KB-Ground Distance (ft) 25.00		Spud Date 6/23/2023 02:30		Rig Release Date 6/26/2023 18:00		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	46.12	Yes			19,649.2	80.82
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			19,559.5	170.47
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	43.72	Yes			19,470.3	259.66
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	43.84	Yes			19,380.3	349.75
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	45.03	Yes			19,293.1	436.95
17		Marker Joint A	5 1/2	20.00	P-110	Yes	23.15	Yes			19,229.0	501.02
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	45.16	Yes			19,139.9	590.13
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	37.15	Yes			19,056.5	673.48
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	46.05	Yes			18,971.4	758.63
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	46.00	Yes			18,881.6	848.38
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	46.05	Yes			18,789.5	940.55
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	46.00	Yes			18,700.3	1,029.75
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	38.00	Yes			18,616.1	1,113.93
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	38.05	Yes			18,534.0	1,196.00
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	46.27	Yes			18,447.6	1,282.45
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			18,357.5	1,372.47
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	40.48	Yes			18,271.4	1,458.57
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	42.84	Yes			18,183.6	1,546.43
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			18,091.5	1,638.47
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	45.90	Yes			18,002.0	1,728.01
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	41.68	Yes			17,916.9	1,813.14
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	46.15	Yes			17,830.1	1,899.93
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			17,740.7	1,989.34
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	46.01	Yes			17,649.8	2,080.23
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	44.95	Yes			17,558.7	2,171.28
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	43.36	Yes			17,469.3	2,260.72
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	46.08	Yes			17,380.0	2,350.05
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	36.15	Yes			17,299.8	2,430.23
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	45.98	Yes			17,207.6	2,522.44
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	36.42	Yes			17,127.8	2,602.16
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	45.50	Yes			17,038.2	2,691.80



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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	45.86	Yes			16,952.2	2,777.81
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	43.55	Yes			16,865.0	2,865.00
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	44.58	Yes			16,777.1	2,952.88
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	45.84	Yes			16,685.5	3,044.52
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	46.10	Yes			16,595.0	3,134.98
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			16,503.1	3,226.92
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	46.03	Yes			16,413.9	3,316.08
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			16,321.8	3,408.24
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	43.29	Yes			16,232.4	3,497.61
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	37.48	Yes			16,151.8	3,578.16
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	40.03	Yes			16,066.5	3,663.49
91	84	Casing Joints	5 1/2	20.00	P-110	Yes	46.29	Yes			15,974.2	3,755.81
93	86	Casing Joints	5 1/2	20.00	P-110	Yes	43.94	Yes			15,884.2	3,845.77
95	88	Casing Joints	5 1/2	20.00	P-110	Yes	46.13	Yes			15,792.1	3,937.92
97	90	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			15,703.1	4,026.93
99	92	Casing Joints	5 1/2	20.00	P-110	Yes	36.10	Yes			15,622.1	4,107.88
101	94	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			15,530.5	4,199.54
103	96	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			15,439.1	4,290.89
105	98	Casing Joints	5 1/2	20.00	P-110	Yes	45.92	Yes			15,347.6	4,382.38
107	100	Casing Joints	5 1/2	20.00	P-110	Yes	43.54	Yes			15,258.7	4,471.31
109		Marker Joint E	5 1/2	20.00	P-110	Yes	11.79	Yes			15,201.2	4,528.80
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	46.13	Yes			15,109.0	4,621.03
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	46.00	Yes			15,017.5	4,712.51
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	46.03	Yes			14,928.3	4,801.74
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	45.61	Yes			14,837.8	4,892.17
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	46.00	Yes			14,748.1	4,981.94
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			14,659.3	5,070.68
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			14,568.2	5,161.81
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	46.01	Yes			14,480.5	5,249.49
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	45.42	Yes			14,389.0	5,340.97
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	38.23	Yes			14,304.9	5,425.13



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
131	123	Casing Joints	5 1/2	20.00	P-110	Yes	44.73	Yes			14,213.9	5,516.13
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			14,122.3	5,607.69
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	46.01	Yes			14,029.3	5,700.70
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	47.19	Yes			13,938.9	5,791.15
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	47.29	Yes			13,844.3	5,885.69
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	42.63	Yes			13,755.3	5,974.70
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	47.25	Yes			13,660.8	6,069.16
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	36.84	Yes			13,578.1	6,151.92
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	43.21	Yes			13,487.7	6,242.32
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	47.03	Yes			13,399.8	6,330.20
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			13,308.5	6,421.52
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	47.23	Yes			13,218.7	6,511.33
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	46.70	Yes			13,124.8	6,605.25
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	46.31	Yes			13,031.8	6,698.21
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	46.42	Yes			12,942.5	6,787.53
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	46.41	Yes			12,849.0	6,881.03
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	44.82	Yes			12,757.1	6,972.93
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	41.47	Yes			12,670.6	7,059.38
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	47.41	Yes			12,576.7	7,153.35
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	35.96	Yes			12,499.6	7,230.43
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	42.91	Yes			12,414.4	7,315.64
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	43.22	Yes			12,330.9	7,399.11
175	167	Casing Joints	5 1/2	20.00	P-110	Yes	43.20	Yes			12,250.1	7,479.95
177	169	Casing Joints	5 1/2	20.00	P-110	Yes	40.64	Yes			12,165.0	7,565.05
179	171	Casing Joints	5 1/2	20.00	P-110	Yes	46.22	Yes			12,081.8	7,648.17
181	173	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			11,995.8	7,734.22
183	175	Casing Joints	5 1/2	20.00	P-110	Yes	43.32	Yes			11,907.0	7,823.02
185	177	Casing Joints	5 1/2	20.00	P-110	Yes	46.22	Yes			11,815.9	7,914.15
187	179	Casing Joints	5 1/2	20.00	P-110	Yes	45.98	Yes			11,725.1	8,004.88
189	181	Casing Joints	5 1/2	20.00	P-110	Yes	46.19	Yes			11,632.8	8,097.17
191	183	Casing Joints	5 1/2	20.00	P-110	Yes	46.24	Yes			11,541.4	8,188.58



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
193	185	Casing Joints	5 1/2	20.00	P-110	Yes	43.93	Yes			11,453.2	8,276.79
195	187	Casing Joints	5 1/2	20.00	P-110	Yes	45.12	Yes			11,362.2	8,367.81
197	189	Casing Joints	5 1/2	20.00	P-110	Yes	37.09	Yes			11,281.8	8,448.22
199	191	Casing Joints	5 1/2	20.00	P-110	Yes	45.20	Yes			11,190.3	8,539.71
201	193	Casing Joints	5 1/2	20.00	P-110	Yes	43.77	Yes			11,101.9	8,628.13
203	195	Casing Joints	5 1/2	20.00	P-110	Yes	41.91	Yes			11,016.6	8,713.39
205	197	Casing Joints	5 1/2	20.00	P-110	Yes	46.03	Yes			10,926.1	8,803.94
207	199	Casing Joints	5 1/2	20.00	P-110	Yes	45.30	Yes			10,834.7	8,895.32
209	201	Casing Joints	5 1/2	20.00	P-110	Yes	46.05	Yes			10,743.9	8,986.11
210	202	Casing Joints	5 1/2	20.00	P-110	Yes	43.60	Yes			10,700.3	9,029.71
211		Marker Joint F	5 1/2	20.00	P-110	Yes	11.69	Yes			10,688.6	9,041.40
212	203	Casing Joints	5 1/2	20.00	P-110	Yes	44.77	Yes			10,643.8	9,086.17
213	204	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			10,600.4	9,129.65
214	205	Casing Joints	5 1/2	20.00	P-110	Yes	46.16	Yes			10,554.2	9,175.81
215	206	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			10,510.1	9,219.91
216	207	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			10,464.0	9,266.03
217	208	Casing Joints	5 1/2	20.00	P-110	Yes	43.95	Yes			10,420.0	9,309.98
218	209	Casing Joints	5 1/2	20.00	P-110	Yes	44.85	Yes			10,375.2	9,354.83
219	210	Casing Joints	5 1/2	20.00	P-110	Yes	43.91	Yes			10,331.3	9,398.74
220	211	Casing Joints	5 1/2	20.00	P-110	Yes	47.23	Yes			10,284.0	9,445.97
221	212	Casing Joints	5 1/2	20.00	P-110	Yes	46.06	Yes			10,238.0	9,492.03
222	213	Casing Joints	5 1/2	20.00	P-110	Yes	47.32	Yes			10,190.7	9,539.35
223	214	Casing Joints	5 1/2	20.00	P-110	Yes	46.15	Yes			10,144.5	9,585.50
224	215	Casing Joints	5 1/2	20.00	P-110	Yes	36.52	Yes			10,108.0	9,622.02
225	216	Casing Joints	5 1/2	20.00	P-110	Yes	47.25	Yes			10,060.7	9,669.27
226	217	Casing Joints	5 1/2	20.00	P-110	Yes	47.18	Yes			10,013.6	9,716.45
227	218	Casing Joints	5 1/2	20.00	P-110	Yes	46.39	Yes			9,967.2	9,762.84
228	219	Casing Joints	5 1/2	20.00	P-110	Yes	47.08	Yes			9,920.1	9,809.92
229	220	Casing Joints	5 1/2	20.00	P-110	Yes	44.72	Yes			9,875.4	9,854.64
230	221	Casing Joints	5 1/2	20.00	P-110	Yes	47.23	Yes			9,828.1	9,901.87
231	222	Casing Joints	5 1/2	20.00	P-110	Yes	46.35	Yes			9,781.8	9,948.22



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
232	223	Casing Joints	5 1/2	20.00	P-110	Yes	47.08	Yes			9,734.7	9,995.30
233	224	Casing Joints	5 1/2	20.00	P-110	Yes	47.09	Yes			9,687.6	10,042.39
234	225	Casing Joints	5 1/2	20.00	P-110	Yes	47.40	Yes			9,640.2	10,089.79
235	226	Casing Joints	5 1/2	20.00	P-110	Yes	46.07	Yes			9,594.1	10,135.86
236	227	Casing Joints	5 1/2	20.00	P-110	Yes	43.82	Yes			9,550.3	10,179.68
238	228	Casing Joints	5 1/2	20.00	P-110	Yes	42.26	Yes			9,506.4	10,223.64
239		Marker Joint G	5 1/2	20.00	P-110	Yes	10.08	Yes			9,496.3	10,233.72
240	229	Casing Joints	5 1/2	20.00	P-110	Yes	44.42	Yes			9,451.9	10,278.14
241	230	Casing Joints	5 1/2	20.00	P-110	Yes	46.73	Yes			9,405.1	10,324.87
242	231	Casing Joints	5 1/2	20.00	P-110	Yes	46.11	Yes			9,359.0	10,370.98
243	232	Casing Joints	5 1/2	20.00	P-110	Yes	35.41	Yes			9,323.6	10,406.39
244	233	Casing Joints	5 1/2	20.00	P-110	Yes	43.55	Yes			9,280.1	10,449.94
245	234	Casing Joints	5 1/2	20.00	P-110	Yes	45.26	Yes			9,234.8	10,495.20
246	235	Casing Joints	5 1/2	20.00	P-110	Yes	44.19	Yes			9,190.6	10,539.39
247	236	Casing Joints	5 1/2	20.00	P-110	Yes	43.07	Yes			9,147.5	10,582.46
248	237	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			9,101.3	10,628.66
249	238	Casing Joints	5 1/2	20.00	P-110	Yes	43.75	Yes			9,057.6	10,672.41
250	239	Casing Joints	5 1/2	20.00	P-110	Yes	43.35	Yes			9,014.2	10,715.76
251	240	Casing Joints	5 1/2	20.00	P-110	Yes	46.10	Yes			8,968.1	10,761.86
252	241	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			8,921.9	10,808.06
253	242	Casing Joints	5 1/2	20.00	P-110	Yes	45.46	Yes			8,876.5	10,853.52
254	243	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			8,832.2	10,897.76
255	244	Casing Joints	5 1/2	20.00	P-110	Yes	43.85	Yes			8,788.4	10,941.61
256	245	Casing Joints	5 1/2	20.00	P-110	Yes	46.02	Yes			8,742.4	10,987.63
257	246	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			8,697.0	11,033.03
258	247	Casing Joints	5 1/2	20.00	P-110	Yes	45.10	Yes			8,651.9	11,078.13
259	248	Casing Joints	5 1/2	20.00	P-110	Yes	42.81	Yes			8,609.1	11,120.94
260	249	Casing Joints	5 1/2	20.00	P-110	Yes	46.02	Yes			8,563.0	11,166.96
261	250	Casing Joints	5 1/2	20.00	P-110	Yes	45.70	Yes			8,517.3	11,212.66
262	251	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			8,471.5	11,258.48
263	252	Casing Joints	5 1/2	20.00	P-110	Yes	45.52	Yes			8,426.0	11,304.00



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00		Original KB Elevation (ft) 5,092.00		KB-Ground Distance (ft) 25.00		Spud Date 6/23/2023 02:30		Rig Release Date 6/26/2023 18:00		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)
264	253	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			8,380.4	11,349.56
265	254	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			8,334.8	11,395.22
266	255	Casing Joints	5 1/2	20.00	P-110	Yes	45.17	Yes			8,289.6	11,440.39
267	256	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			8,243.4	11,486.59
268	257	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			8,197.3	11,532.71
269	258	Casing Joints	5 1/2	20.00	P-110	Yes	46.01	Yes			8,151.3	11,578.72
270	259	Casing Joints	5 1/2	20.00	P-110	Yes	46.02	Yes			8,105.3	11,624.74
271	260	Casing Joints	5 1/2	20.00	P-110	Yes	46.10	Yes			8,059.2	11,670.84
272	261	Casing Joints	5 1/2	20.00	P-110	Yes	46.19	Yes			8,013.0	11,717.03
273	262	Casing Joints	5 1/2	20.00	P-110	Yes	46.21	Yes			7,966.8	11,763.24
274	263	Casing Joints	5 1/2	20.00	P-110	Yes	43.44	Yes			7,923.3	11,806.68
275	264	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			7,879.8	11,850.16
276	265	Casing Joints	5 1/2	20.00	P-110	Yes	44.45	Yes			7,835.4	11,894.61
277	266	Casing Joints	5 1/2	20.00	P-110	Yes	43.48	Yes			7,791.9	11,938.09
278	267	Casing Joints	5 1/2	20.00	P-110	Yes	44.85	Yes			7,747.1	11,982.94
279	268	Casing Joints	5 1/2	20.00	P-110	Yes	46.03	Yes			7,701.0	12,028.97
280	269	Casing Joints	5 1/2	20.00	P-110	Yes	46.04	Yes			7,655.0	12,075.01
281	270	Casing Joints	5 1/2	20.00	P-110	Yes	46.25	Yes			7,608.7	12,121.26
282	271	Casing Joints	5 1/2	20.00	P-110	Yes	43.16	Yes			7,565.6	12,164.42
283	272	Casing Joints	5 1/2	20.00	P-110	Yes	44.71	Yes			7,520.9	12,209.13
284	273	Casing Joints	5 1/2	20.00	P-110	Yes	40.11	Yes			7,480.8	12,249.24
285	274	Casing Joints	5 1/2	20.00	P-110	Yes	42.32	Yes			7,438.4	12,291.56
286	275	Casing Joints	5 1/2	20.00	P-110	Yes	45.18	Yes			7,393.3	12,336.74
287	276	Casing Joints	5 1/2	20.00	P-110	Yes	43.46	Yes			7,349.8	12,380.20
288	277	Casing Joints	5 1/2	20.00	P-110	Yes	41.23	Yes			7,308.6	12,421.43
289	278	Casing Joints	5 1/2	20.00	P-110	Yes	39.46	Yes			7,269.1	12,460.89
290	279	Casing Joints	5 1/2	20.00	P-110	Yes	40.05	Yes			7,229.1	12,500.94
291	280	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			7,182.9	12,547.06
292	281	Casing Joints	5 1/2	20.00	P-110	Yes	45.20	Yes			7,137.7	12,592.26
293	282	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			7,091.6	12,638.38
294	283	Casing Joints	5 1/2	20.00	P-110	Yes	46.26	Yes			7,045.4	12,684.64



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
295	284	Casing Joints	5 1/2	20.00	P-110	Yes	46.28	Yes			6,999.1	12,730.92
296	285	Casing Joints	5 1/2	20.00	P-110	Yes	46.25	Yes			6,952.8	12,777.17
297	286	Casing Joints	5 1/2	20.00	P-110	Yes	46.15	Yes			6,906.7	12,823.32
298	287	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			6,862.5	12,867.52
299	288	Casing Joints	5 1/2	20.00	P-110	Yes	46.08	Yes			6,816.4	12,913.60
300	289	Casing Joints	5 1/2	20.00	P-110	Yes	46.05	Yes			6,770.4	12,959.65
301	290	Casing Joints	5 1/2	20.00	P-110	Yes	46.26	Yes			6,724.1	13,005.91
302	291	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			6,678.8	13,051.22
303	292	Casing Joints	5 1/2	20.00	P-110	Yes	46.18	Yes			6,632.6	13,097.40
304	293	Casing Joints	5 1/2	20.00	P-110	Yes	44.43	Yes			6,588.2	13,141.83
305	294	Casing Joints	5 1/2	20.00	P-110	Yes	44.20	Yes			6,544.0	13,186.03
306	295	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			6,498.1	13,231.88
307	296	Casing Joints	5 1/2	20.00	P-110	Yes	46.16	Yes			6,452.0	13,278.04
308	297	Casing Joints	5 1/2	20.00	P-110	Yes	45.75	Yes			6,406.2	13,323.79
309	298	Casing Joints	5 1/2	20.00	P-110	Yes	46.23	Yes			6,360.0	13,370.02
310	299	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			6,314.1	13,415.88
311	300	Casing Joints	5 1/2	20.00	P-110	Yes	45.79	Yes			6,268.3	13,461.67
312	301	Casing Joints	5 1/2	20.00	P-110	Yes	40.23	Yes			6,228.1	13,501.90
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	46.00	Yes			6,182.1	13,547.90
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			6,136.0	13,594.02
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	45.32	Yes			6,090.7	13,639.34
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	42.88	Yes			6,047.8	13,682.22
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	46.08	Yes			6,001.7	13,728.30
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	43.89	Yes			5,957.8	13,772.19
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	45.94	Yes			5,911.9	13,818.13
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	45.19	Yes			5,866.7	13,863.32
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	46.25	Yes			5,820.4	13,909.57
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	46.15	Yes			5,774.3	13,955.72
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	41.85	Yes			5,732.4	13,997.57
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	44.80	Yes			5,687.6	14,042.37
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	46.23	Yes			5,641.4	14,088.60



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00		Original KB Elevation (ft) 5,092.00		KB-Ground Distance (ft) 25.00		Spud Date 6/23/2023 02:30		Rig Release Date 6/26/2023 18:00		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)
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			5,595.2	14,134.80
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	42.98	Yes			5,552.2	14,177.78
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	46.19	Yes			5,506.0	14,223.97
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			5,459.8	14,270.17
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	43.84	Yes			5,416.0	14,314.01
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	45.93	Yes			5,370.1	14,359.94
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	44.06	Yes			5,326.0	14,404.00
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			5,283.2	14,446.85
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	45.19	Yes			5,238.0	14,492.04
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	45.35	Yes			5,192.6	14,537.39
336	325	Casing Joints	5 1/2	20.00	P-110	Yes	43.38	Yes			5,149.2	14,580.77
337	326	Casing Joints	5 1/2	20.00	P-110	Yes	46.10	Yes			5,103.1	14,626.87
338	327	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			5,057.6	14,672.42
339	328	Casing Joints	5 1/2	20.00	P-110	Yes	44.00	Yes			5,013.6	14,716.42
340	329	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			4,967.5	14,762.54
341	330	Casing Joints	5 1/2	20.00	P-110	Yes	46.19	Yes			4,921.3	14,808.73
342	331	Casing Joints	5 1/2	20.00	P-110	Yes	40.88	Yes			4,880.4	14,849.61
343	332	Casing Joints	5 1/2	20.00	P-110	Yes	45.98	Yes			4,834.4	14,895.59
344	333	Casing Joints	5 1/2	20.00	P-110	Yes	46.21	Yes			4,788.2	14,941.80
345	334	Casing Joints	5 1/2	20.00	P-110	Yes	45.92	Yes			4,742.3	14,987.72
346	335	Casing Joints	5 1/2	20.00	P-110	Yes	45.27	Yes			4,697.0	15,032.99
347	336	Casing Joints	5 1/2	20.00	P-110	Yes	43.26	Yes			4,653.8	15,076.25
348	337	Casing Joints	5 1/2	20.00	P-110	Yes	45.96	Yes			4,607.8	15,122.21
349	338	Casing Joints	5 1/2	20.00	P-110	Yes	42.95	Yes			4,564.8	15,165.16
350	339	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			4,521.4	15,208.56
351	340	Casing Joints	5 1/2	20.00	P-110	Yes	45.35	Yes			4,476.1	15,253.91
352	341	Casing Joints	5 1/2	20.00	P-110	Yes	39.19	Yes			4,436.9	15,293.10
353	342	Casing Joints	5 1/2	20.00	P-110	Yes	45.70	Yes			4,391.2	15,338.80
354	343	Casing Joints	5 1/2	20.00	P-110	Yes	45.92	Yes			4,345.3	15,384.72
355	344	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			4,299.2	15,430.84
356	345	Casing Joints	5 1/2	20.00	P-110	Yes	45.18	Yes			4,254.0	15,476.02



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00		Original KB Elevation (ft) 5,092.00		KB-Ground Distance (ft) 25.00		Spud Date 6/23/2023 02:30		Rig Release Date 6/26/2023 18:00		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)
357	346	Casing Joints	5 1/2	20.00	P-110	Yes	47.22	Yes			4,206.8	15,523.24
358	347	Casing Joints	5 1/2	20.00	P-110	Yes	44.83	Yes			4,161.9	15,568.07
359	348	Casing Joints	5 1/2	20.00	P-110	Yes	47.10	Yes			4,114.8	15,615.17
360	349	Casing Joints	5 1/2	20.00	P-110	Yes	43.30	Yes			4,071.5	15,658.47
361	350	Casing Joints	5 1/2	20.00	P-110	Yes	42.96	Yes			4,028.6	15,701.43
362	351	Casing Joints	5 1/2	20.00	P-110	Yes	45.51	Yes			3,983.1	15,746.94
363	352	Casing Joints	5 1/2	20.00	P-110	Yes	45.08	Yes			3,938.0	15,792.02
364	353	Casing Joints	5 1/2	20.00	P-110	Yes	46.23	Yes			3,891.8	15,838.25
365	354	Casing Joints	5 1/2	20.00	P-110	Yes	45.13	Yes			3,846.6	15,883.38
366	355	Casing Joints	5 1/2	20.00	P-110	Yes	47.08	Yes			3,799.5	15,930.46
367	356	Casing Joints	5 1/2	20.00	P-110	Yes	46.03	Yes			3,753.5	15,976.49
368	357	Casing Joints	5 1/2	20.00	P-110	Yes	44.92	Yes			3,708.6	16,021.41
369	358	Casing Joints	5 1/2	20.00	P-110	Yes	45.20	Yes			3,663.4	16,066.61
370	359	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			3,617.3	16,112.73
371	360	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			3,571.6	16,158.41
372	361	Casing Joints	5 1/2	20.00	P-110	Yes	45.98	Yes			3,525.6	16,204.39
373	362	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			3,479.8	16,250.25
374	363	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			3,434.1	16,295.89
375	364	Casing Joints	5 1/2	20.00	P-110	Yes	36.54	Yes			3,397.6	16,332.43
376	365	Casing Joints	5 1/2	20.00	P-110	Yes	45.54	Yes			3,352.0	16,377.97
377	366	Casing Joints	5 1/2	20.00	P-110	Yes	45.71	Yes			3,306.3	16,423.68
378	367	Casing Joints	5 1/2	20.00	P-110	Yes	46.12	Yes			3,260.2	16,469.80
379	368	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			3,214.7	16,515.28
380	369	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			3,169.2	16,560.83
381	370	Casing Joints	5 1/2	20.00	P-110	Yes	44.95	Yes			3,124.2	16,605.78
382	371	Casing Joints	5 1/2	20.00	P-110	Yes	46.10	Yes			3,078.1	16,651.88
383	372	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			3,032.9	16,697.13
384	373	Casing Joints	5 1/2	20.00	P-110	Yes	43.02	Yes			2,989.9	16,740.15
385	374	Casing Joints	5 1/2	20.00	P-110	Yes	46.02	Yes			2,943.8	16,786.17
386	375	Casing Joints	5 1/2	20.00	P-110	Yes	45.92	Yes			2,897.9	16,832.09
387	376	Casing Joints	5 1/2	20.00	P-110	Yes	45.75	Yes			2,852.2	16,877.84



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
388	377	Casing Joints	5 1/2	20.00	P-110	Yes	46.13	Yes			2,806.0	16,923.97
389	378	Casing Joints	5 1/2	20.00	P-110	Yes	46.02	Yes			2,760.0	16,969.99
390	379	Casing Joints	5 1/2	20.00	P-110	Yes	45.22	Yes			2,714.8	17,015.21
391	380	Casing Joints	5 1/2	20.00	P-110	Yes	46.13	Yes			2,668.7	17,061.34
392	381	Casing Joints	5 1/2	20.00	P-110	Yes	42.38	Yes			2,626.3	17,103.72
393	382	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			2,580.8	17,149.20
394	383	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			2,535.2	17,194.82
395	384	Casing Joints	5 1/2	20.00	P-110	Yes	45.99	Yes			2,489.2	17,240.81
396	385	Casing Joints	5 1/2	20.00	P-110	Yes	42.72	Yes			2,446.5	17,283.53
397	386	Casing Joints	5 1/2	20.00	P-110	Yes	45.08	Yes			2,401.4	17,328.61
398	387	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,355.5	17,374.49
399	388	Casing Joints	5 1/2	20.00	P-110	Yes	46.09	Yes			2,309.4	17,420.58
400	389	Casing Joints	5 1/2	20.00	P-110	Yes	43.60	Yes			2,265.8	17,464.18
401	390	Casing Joints	5 1/2	20.00	P-110	Yes	43.68	Yes			2,222.1	17,507.86
402	391	Casing Joints	5 1/2	20.00	P-110	Yes	46.22	Yes			2,175.9	17,554.08
403	392	Casing Joints	5 1/2	20.00	P-110	Yes	45.39	Yes			2,130.5	17,599.47
404	393	Casing Joints	5 1/2	20.00	P-110	Yes	44.56	Yes			2,086.0	17,644.03
405	394	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			2,040.3	17,689.67
406	395	Casing Joints	5 1/2	20.00	P-110	Yes	44.83	Yes			1,995.5	17,734.50
407	396	Casing Joints	5 1/2	20.00	P-110	Yes	46.17	Yes			1,949.3	17,780.67
408	397	Casing Joints	5 1/2	20.00	P-110	Yes	45.17	Yes			1,904.2	17,825.84
409	398	Casing Joints	5 1/2	20.00	P-110	Yes	45.40	Yes			1,858.8	17,871.24
410	399	Casing Joints	5 1/2	20.00	P-110	Yes	45.84	Yes			1,812.9	17,917.08
411	400	Casing Joints	5 1/2	20.00	P-110	Yes	43.60	Yes			1,769.3	17,960.68
412	401	Casing Joints	5 1/2	20.00	P-110	Yes	43.62	Yes			1,725.7	18,004.30
413	402	Casing Joints	5 1/2	20.00	P-110	Yes	45.96	Yes			1,679.7	18,050.26
414	403	Casing Joints	5 1/2	20.00	P-110	Yes	46.19	Yes			1,633.6	18,096.45
415	404	Casing Joints	5 1/2	20.00	P-110	Yes	41.61	Yes			1,591.9	18,138.06
416	405	Casing Joints	5 1/2	20.00	P-110	Yes	44.33	Yes			1,547.6	18,182.39
417	406	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			1,502.2	18,227.77
418	407	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			1,459.7	18,270.30



Centralizer Depths

Well Name: RIO 16N

Production, Set Depth: 19,730.0ftKB

API 05001105250000		Surface Legal Location NWNW 6 1S 67W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 5,067.00	Original KB Elevation (ft) 5,092.00	KB-Ground Distance (ft) 25.00	Spud Date 6/23/2023 02:30	Rig Release Date 6/26/2023 18:00	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)
419	408	Casing Joints	5 1/2	20.00	P-110	Yes	43.93	Yes			1,415.8	18,314.23
420	409	Casing Joints	5 1/2	20.00	P-110	Yes	46.11	Yes			1,369.7	18,360.34
421	410	Casing Joints	5 1/2	20.00	P-110	Yes	45.98	Yes			1,323.7	18,406.32
422	411	Casing Joints	5 1/2	20.00	P-110	Yes	46.28	Yes			1,277.4	18,452.60
423	412	Casing Joints	5 1/2	20.00	P-110	Yes	46.62	Yes			1,230.8	18,499.22
424	413	Casing Joints	5 1/2	20.00	P-110	Yes	39.45	Yes			1,191.3	18,538.67
425	414	Casing Joints	5 1/2	20.00	P-110	Yes	45.96	Yes			1,145.4	18,584.63
426	415	Casing Joints	5 1/2	20.00	P-110	Yes	43.14	Yes			1,102.2	18,627.77
427	416	Casing Joints	5 1/2	20.00	P-110	Yes	46.17	Yes			1,056.1	18,673.94
428	417	Casing Joints	5 1/2	20.00	P-110	Yes	40.65	Yes			1,015.4	18,714.59
429	418	Casing Joints	5 1/2	20.00	P-110	Yes	42.10	Yes			973.3	18,756.69
430	419	Casing Joints	5 1/2	20.00	P-110	Yes	43.43	Yes			929.9	18,800.12
431	420	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			884.1	18,845.93
432	421	Casing Joints	5 1/2	20.00	P-110	Yes	45.97	Yes			838.1	18,891.90
433	422	Casing Joints	5 1/2	20.00	P-110	Yes	46.20	Yes			791.9	18,938.10
434	423	Casing Joints	5 1/2	20.00	P-110	Yes	43.92	Yes			748.0	18,982.02
435	424	Casing Joints	5 1/2	20.00	P-110	Yes	38.15	Yes			709.8	19,020.17
436	425	Casing Joints	5 1/2	20.00	P-110	Yes	43.03	Yes			666.8	19,063.20
437	426	Casing Joints	5 1/2	20.00	P-110	Yes	44.32	Yes			622.5	19,107.52
438	427	Casing Joints	5 1/2	20.00	P-110	Yes	46.16	Yes			576.3	19,153.68
439	428	Casing Joints	5 1/2	20.00	P-110	Yes	46.13	Yes			530.2	19,199.81
440	429	Casing Joints	5 1/2	20.00	P-110	Yes	42.67	Yes			487.5	19,242.48