

# Cement Post Job Report

**Client:** PDC Energy

**Well Name:** California 11C

**API #:** 05-123-51105-00

**Job Date:** November 5, 2022

**Job Type:** New Well - 5.5" Production String

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



ROCK SOLID  
WELL INTEGRITY  
SOLUTIONS

### JOB TREATMENT REPORT

Client	Well	Rig	Date	Job Type				
PDC	California 11C	Patterson 272	11/5/2022	Production				
Connection Type	Thread Type	Number of Stages	BHST Deg	BHCT Deg				
5 1/2" HP Cement Head	Buttress	1	255	195				
Well MD (ft)	Well TVD (ft)	Deg Dev.	Max-Cas/DP PSI	Max Ann. PSI				
17353	7406	90	2500	3000				
Packer/Retainer/CIBP/DV Tool Depths		Top of Perfs	Bottom of Perfs	Number of Holes				
Pkr @ 3634, wet shoe sub @ 17314								
String - Surf, Int, Prod. Work etc	Grade	OD	Wt/ft	ID	OH Size	% XS Lead	% XS Tail	Total Depth (ft)
Production		5.5	20		8.5	0	0	17341

#### PRE-JOB MUD AND WELL CONDITIONS

Mud Type	OBM	Pipe Rotation		Circulation Data				Water Requirements (bbbls)	
Mud wt. ppg	10.4	Rotate Y,N	No	Circulate Time (hrs)	3			Spacers	140
Flow Temp		Rate		Circulation Rate (bpm)	12			Stage 1 Lead	118
Vis. Sec/qt		Torque Val.		Full Circ?	Full			Stage 1 Tail	229
PV (cP)		Time		Gas Present (Y,N)	Yes	Units		Stage 2 Lead	0
Yield Pt		Pipe Reciprocation		Centralizers/Plugs				Stage 2 Tail	0
10 sec gel		Recip Y,N	No	Quantity & Type	customer provided			Displacement	385
10 min gel		Stroke (ft)		Top Plug/Type	1-5.5 customer provided			Wash up	20
30 min gel		Recip time		Bottom Plug/Type	2-5.5 customer provided			Total + 10% Safety	981

#### PRE-JOB CALCULATED MATERIALS, VOLUMES, & RATES

Preflush & Spacers		Stage 1 Lead: Class G		Stage 1 Tail: Class G		Stage 2 Lead		Stage 2 Tail		Displacement	
Spacer 1	Spacer	Density	12.9	Density	13.7	Density		Density		Fluid Type	Water
Density	12	Sacks	1276	Sacks	1450	Sacks		Sacks		Dens. ppg	8.33
Volume	140	Vol/bbbls	256.8	Vol/bbbls	353.8	Vol/bbbls	0.0	Vol/bbbls	0.0	Vol. bbl	385
Rate	10	Rate	10	Rate	10	Rate		Rate		Rate bpm	
Spacer 2		Yield	1.13	Yield	1.37	Yield		Yield		Clay Stay?	No
Density		Gal/Sk	3.90	Gal/Sk	6.62	Gal/Sk		Gal/Sk		Biocide ?	Yes
Volume		% Excess	0	% Excess	0	% Excess		% Excess		Slow @ bbl	360
Rate		TOL (ft)	2387	TOL (ft)	8677	TOL (ft)		TOL (ft)		Bump PSI	3500

#### POST JOB DETAILS, FINAL VOLUMES & PRESSURES

Final Displacement (bbbls)	385
Bump Plug?	Yes
Final Bump Pressure (psi)	3500
Full Returns throughout job?	Full
Vol away/Time when returns lost	
Vol away/Time When returns regained	

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

#### Summary of Additives Used on Job

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

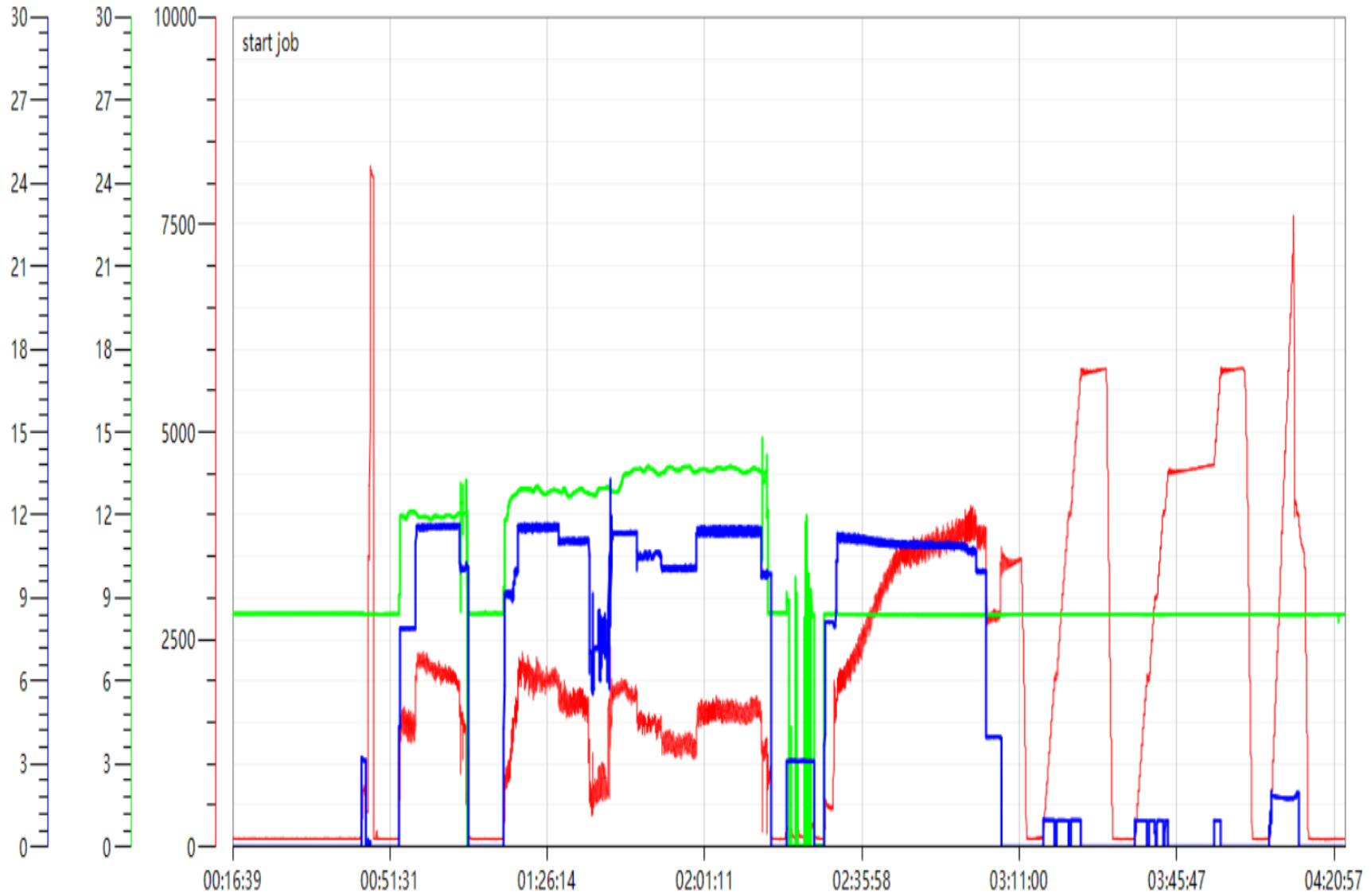
Spacer to Surface?	Yes
Spacer volume returned	31
Cement to surface?	No
Cement volume to surface stage 1 (bbbls)	Stg 2
Surface top out?	
Top out volume pumped (bbbls)	

## Job Treatment Log

Client		Well				Ambient Conditions ( Temp / Humidity / Air Pressure )	
PDC		California 11C				27 Deg F / 89 % / 24.72 in	
Date DD/MM	Time HH:MM	Density (ppg)	Rate (bpm)	Vol. (bbl)	Total Vol. (bbl)	Pressure (psi)	Treatment Comments
11/4/22	4:30 PM						Arrive on Location, time requested 18:00. WOR running casing
	7:00 PM						Spot Equipment and Rig up
11/5/22	12:07 AM						Safety meeting with rig crew
	12:30 AM						rig up floor
	12:45 AM	8.33	3.00	3.0	3.0	400	fill lines
	12:47 AM	8.33				8200	pressure test
	12:50 AM						drop bottom plug #1
	12:53 AM	12.00	11.50	140.0	140.0	2700	pump 140bbls @ 12# spacer
	1:14 AM						drop bottom plug #2
	1:16 AM	12.90	11.50	257.0	257.0	2100	pump 257 bbls 12.9#, 1.13 ft3/sk 3.9 gal/sk 1276 sks, TOL @ 2370'
	1:42 AM	13.70	11.50	354.0	354.0	1900	pump 354 bbls 13.7#, 1.37 ft3/sk 6.62 gal/sk 1450 sks, TOT @ 8669'
	2:14 AM	8.33	11.00	8.0	8.0	1100	pump 8 bbls sugar water
	2:20 AM						shut down and wash pumps and lines, drop top plug
	2:26 AM	8.33	8.00	10.0	10.0	500	pump displacement
	2:33 AM	8.33	11.00	50.0	50.0	2200	pump displacement
	2:37 AM	8.33	11.00	100.0	100.0	2800	pump displacement
	2:42 AM	8.33	11.00	150.0	150.0	3300	pump displacement
	2:47 AM	8.33	11.00	200.0	200.0	3500	pump displacement
	2:52 AM	8.33	11.00	250.0	250.0	3700	pump displacement
	2:57 AM	8.33	11.00	300.0	300.0	3700	pump displacement
	3:00 AM	8.33	10.00	350.0	350.0	3840	pump displacement, Slow rate to 4.5bbl/min @ 360 bbl away
	3:06 AM	8.33	4.00	385.0	385.0	2800	pump displacement final circulating pressure 2800
	3:06 AM	8.33				3500	bump plug
	3:11 AM						check floats, floats held 4.5bbl back to truck
	3:15 AM	8.33				5700	set packer per well tech tool hand
	4:10 AM	8.33	1.80	2.0	2.0	7634	shift wet shoe sub opened @ 7634 psi, pump 2 bbl wet shoe @ 4000 psi
	4:13 AM						check floats, floats held 4 bbls back to truck, packer held
	4:22 AM	8.33					flush bop stack
	4:30 AM						rig down
	5:00 AM						depart location

# California Fed 11C Production Pump Chart – Pressure / Rate / Density

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





## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00		Original KB Elevation (ft) 4,928.00		KB-Ground Distance (ft) 28.00		Spud Date 10/30/2022 03:30		Rig Release Date 11/5/2022 06:00		On Production Date Abandon Date	

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
7	1	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			17,257.5	83.48
8	2	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			17,211.7	129.35
9	3	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			17,166.0	175.00
11	5	Casing Joints	5 1/2	20.00	P-110	Yes	42.08	Yes			17,078.3	262.72
13	7	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			16,986.6	354.45
15	9	Casing Joints	5 1/2	20.00	P-110	Yes	43.90	Yes			16,897.0	443.99
17		Marker Joint	5 1/2	20.00	P-110	Yes	11.73	Yes			16,839.7	501.27
19	12	Casing Joints	5 1/2	20.00	P-110	Yes	42.73	Yes			16,752.8	588.20
21	14	Casing Joints	5 1/2	20.00	P-110	Yes	45.83	Yes			16,661.4	679.65
23	16	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			16,569.6	771.38
25	18	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			16,478.1	862.90
27	20	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			16,386.6	954.38
29	22	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			16,295.1	1,045.92
31	24	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			16,203.5	1,137.47
33	26	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			16,111.8	1,229.16
35	28	Casing Joints	5 1/2	20.00	P-110	Yes	41.74	Yes			16,024.4	1,316.60
37	30	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			15,932.9	1,408.14
39	32	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			15,843.3	1,497.73
41	34	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			15,752.0	1,588.98
43	36	Casing Joints	5 1/2	20.00	P-110	Yes	41.64	Yes			15,665.0	1,675.98
45	38	Casing Joints	5 1/2	20.00	P-110	Yes	43.50	Yes			15,575.9	1,765.12
47	40	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			15,484.3	1,856.70
49	42	Casing Joints	5 1/2	20.00	P-110	Yes	45.90	Yes			15,392.7	1,948.27
51	44	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			15,301.0	2,039.99
53	46	Casing Joints	5 1/2	20.00	P-110	Yes	45.83	Yes			15,209.5	2,131.52
55	48	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			15,118.1	2,222.90
57	50	Casing Joints	5 1/2	20.00	P-110	Yes	45.81	Yes			15,026.4	2,314.58
59	52	Casing Joints	5 1/2	20.00	P-110	Yes	45.90	Yes			14,934.6	2,406.36
61	54	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			14,843.2	2,497.83
63	56	Casing Joints	5 1/2	20.00	P-110	Yes	37.45	Yes			14,760.1	2,580.93
65	58	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			14,668.7	2,672.30



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
67	60	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			14,577.2	2,763.83
69	62	Casing Joints	5 1/2	20.00	P-110	Yes	45.61	Yes			14,485.7	2,855.29
71	64	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			14,394.2	2,946.83
73	66	Casing Joints	5 1/2	20.00	P-110	Yes	44.24	Yes			14,304.1	3,036.95
75	68	Casing Joints	5 1/2	20.00	P-110	Yes	44.33	Yes			14,215.3	3,125.70
77	70	Casing Joints	5 1/2	20.00	P-110	Yes	45.73	Yes			14,123.9	3,217.09
79	72	Casing Joints	5 1/2	20.00	P-110	Yes	35.72	Yes			14,042.6	3,298.41
81	74	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			13,951.1	3,389.90
83	76	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			13,859.6	3,481.43
85	78	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			13,768.3	3,572.67
87	80	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			13,676.8	3,664.17
89	82	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			13,585.3	3,755.72
91	84	Casing Joints	5 1/2	20.00	P-110	Yes	41.60	Yes			13,498.0	3,843.05
93	86	Casing Joints	5 1/2	20.00	P-110	Yes	43.80	Yes			13,408.4	3,932.65
95	88	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			13,316.7	4,024.35
97	90	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			13,225.2	4,115.80
99	92	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			13,133.7	4,207.26
101	94	Casing Joints	5 1/2	20.00	P-110	Yes	44.13	Yes			13,044.0	4,297.04
103	96	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			12,952.7	4,388.31
105	98	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			12,861.2	4,479.79
107	100	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			12,775.1	4,565.92
109		Marker Joint	5 1/2	20.00	P-110	Yes	11.80	Yes			12,717.7	4,623.34
111	103	Casing Joints	5 1/2	20.00	P-110	Yes	45.83	Yes			12,626.0	4,715.02
113	105	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			12,534.7	4,806.31
115	107	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			12,443.4	4,897.57
117	109	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			12,352.0	4,989.02
119	111	Casing Joints	5 1/2	20.00	P-110	Yes	43.33	Yes			12,263.4	5,077.65
121	113	Casing Joints	5 1/2	20.00	P-110	Yes	41.56	Yes			12,175.9	5,165.06
123	115	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			12,084.7	5,256.33
125	117	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			11,993.2	5,347.79
127	119	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			11,901.8	5,439.22



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jw/ry	Connections	Top (ftKB)	Cum Len (ft)
129	121	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			11,810.2	5,530.76
131	123	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			11,718.8	5,622.24
133	125	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			11,627.3	5,713.71
135	127	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			11,535.6	5,805.40
137	129	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			11,444.1	5,896.88
139	131	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			11,352.8	5,988.20
141	133	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			11,261.1	6,079.86
143	135	Casing Joints	5 1/2	20.00	P-110	Yes	45.38	Yes			11,169.9	6,171.11
145	137	Casing Joints	5 1/2	20.00	P-110	Yes	44.84	Yes			11,079.2	6,261.85
147	139	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			10,987.9	6,353.12
149	141	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			10,898.1	6,442.91
151	143	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			10,806.6	6,534.36
153	145	Casing Joints	5 1/2	20.00	P-110	Yes	44.90	Yes			10,715.9	6,625.09
155	147	Casing Joints	5 1/2	20.00	P-110	Yes	45.83	Yes			10,624.4	6,716.56
157	149	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			10,533.2	6,807.84
159	151	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			10,451.0	6,889.98
161	153	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			10,359.7	6,981.29
163	155	Casing Joints	5 1/2	20.00	P-110	Yes	43.74	Yes			10,270.3	7,070.69
165	157	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			10,178.8	7,162.23
167	159	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			10,087.5	7,253.51
169	161	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			9,996.0	7,345.01
171	163	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			9,904.5	7,436.49
173	165	Casing Joints	5 1/2	20.00	P-110	Yes	45.05	Yes			9,818.4	7,522.63
175	167	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			9,727.1	7,613.91
177	169	Casing Joints	5 1/2	20.00	P-110	Yes	45.34	Yes			9,635.9	7,705.12
179	171	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			9,544.2	7,796.84
181	173	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			9,457.1	7,883.87
183	175	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			9,365.9	7,975.15
185	177	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			9,274.9	8,066.08
187	179	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			9,183.7	8,157.34
189	181	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			9,096.4	8,244.60



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
191	183	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			9,004.7	8,336.30
193	185	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			8,913.0	8,428.04
195	187	Casing Joints	5 1/2	20.00	P-110	Yes	43.73	Yes			8,823.6	8,517.41
197	189	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			8,732.1	8,608.88
199	191	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			8,641.2	8,699.85
201	193	Casing Joints	5 1/2	20.00	P-110	Yes	43.77	Yes			8,551.7	8,789.26
203	195	Casing Joints	5 1/2	20.00	P-110	Yes	43.23	Yes			8,462.8	8,878.17
205	197	Casing Joints	5 1/2	20.00	P-110	Yes	45.31	Yes			8,371.7	8,969.35
207	199	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			8,279.9	9,061.06
209	201	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			8,188.2	9,152.81
211	203	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			8,096.5	9,244.51
212		Marker Joint	5 1/2	20.00	P-110	Yes	11.78	Yes			8,084.7	9,256.29
213	204	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			8,039.1	9,301.94
214	205	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			7,993.2	9,347.76
215	206	Casing Joints	5 1/2	20.00	P-110	Yes	45.70	Yes			7,947.5	9,393.46
216	207	Casing Joints	5 1/2	20.00	P-110	Yes	38.80	Yes			7,908.7	9,432.26
217	208	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			7,863.1	9,477.89
218	209	Casing Joints	5 1/2	20.00	P-110	Yes	45.48	Yes			7,817.6	9,523.37
219	210	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			7,772.0	9,569.03
220	211	Casing Joints	5 1/2	20.00	P-110	Yes	44.79	Yes			7,727.2	9,613.82
221	212	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			7,681.5	9,659.48
222	213	Casing Joints	5 1/2	20.00	P-110	Yes	45.69	Yes			7,635.8	9,705.17
223	214	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			7,590.0	9,751.02
224	215	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			7,544.3	9,796.67
225	216	Casing Joints	5 1/2	20.00	P-110	Yes	43.40	Yes			7,500.9	9,840.07
226	217	Casing Joints	5 1/2	20.00	P-110	Yes	45.10	Yes			7,455.8	9,885.17
227	218	Casing Joints	5 1/2	20.00	P-110	Yes	45.86	Yes			7,410.0	9,931.03
228	219	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			7,364.3	9,976.68
229	220	Casing Joints	5 1/2	20.00	P-110	Yes	41.06	Yes			7,323.3	10,017.74
230	221	Casing Joints	5 1/2	20.00	P-110	Yes	45.57	Yes			7,277.7	10,063.31
231	222	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			7,232.0	10,108.97



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal				
Ground Elevation (ft) 4,900.00		Original KB Elevation (ft) 4,928.00		KB-Ground Distance (ft) 28.00		Spud Date 10/30/2022 03:30		Rig Release Date 11/5/2022 06:00		On Production Date		Abandon Date

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
232	223	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			7,186.2	10,154.85
233	224	Casing Joints	5 1/2	20.00	P-110	Yes	45.69	Yes			7,140.5	10,200.54
234	225	Casing Joints	5 1/2	20.00	P-110	Yes	45.69	Yes			7,094.8	10,246.23
235	226	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			7,048.9	10,292.08
236	227	Casing Joints	5 1/2	20.00	P-110	Yes	42.80	Yes			7,006.1	10,334.88
237	228	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			6,960.2	10,380.76
238	229	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			6,914.6	10,426.41
239		Marker Joint	5 1/2	20.00	P-110	Yes	11.78	Yes			6,902.8	10,438.19
240	230	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			6,857.2	10,483.84
241	231	Casing Joints	5 1/2	20.00	P-110	Yes	42.00	Yes			6,815.2	10,525.84
242	232	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			6,769.3	10,571.72
243	233	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			6,723.6	10,617.39
244	234	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			6,677.8	10,663.24
245	235	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			6,631.9	10,709.09
246	236	Casing Joints	5 1/2	20.00	P-110	Yes	43.78	Yes			6,588.1	10,752.87
247	237	Casing Joints	5 1/2	20.00	P-110	Yes	44.49	Yes			6,543.6	10,797.36
248	238	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			6,497.8	10,843.21
249	239	Casing Joints	5 1/2	20.00	P-110	Yes	45.69	Yes			6,452.1	10,888.90
250	240	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			6,406.2	10,934.78
251	241	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			6,360.6	10,980.45
252	242	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			6,314.9	11,026.12
253	243	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			6,269.0	11,072.00
254	244	Casing Joints	5 1/2	20.00	P-110	Yes	40.67	Yes			6,228.3	11,112.67
255	245	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			6,182.7	11,158.35
256	246	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			6,136.8	11,204.23
257	247	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			6,090.9	11,250.08
258	248	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			6,045.3	11,295.73
259	249	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			5,999.4	11,341.61
260	250	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,953.7	11,387.26
261	251	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			5,907.9	11,433.11
262	252	Casing Joints	5 1/2	20.00	P-110	Yes	45.70	Yes			5,862.2	11,478.81



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
263	253	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,816.5	11,524.46
264	254	Casing Joints	5 1/2	20.00	P-110	Yes	43.61	Yes			5,772.9	11,568.07
265	255	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			5,727.3	11,613.71
266	256	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			5,681.4	11,659.59
267	257	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			5,635.5	11,705.46
268	258	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			5,589.9	11,751.08
269	259	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			5,544.0	11,796.96
270	260	Casing Joints	5 1/2	20.00	P-110	Yes	44.66	Yes			5,499.4	11,841.62
271	261	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			5,455.3	11,885.72
272	262	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,409.6	11,931.37
273	263	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			5,363.8	11,977.25
274	264	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,318.1	12,022.90
275	265	Casing Joints	5 1/2	20.00	P-110	Yes	41.43	Yes			5,276.7	12,064.33
276	266	Casing Joints	5 1/2	20.00	P-110	Yes	45.55	Yes			5,231.1	12,109.88
277	267	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			5,185.3	12,155.73
278	268	Casing Joints	5 1/2	20.00	P-110	Yes	44.02	Yes			5,141.3	12,199.75
279	269	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			5,095.7	12,245.35
280	270	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			5,050.0	12,291.00
281	271	Casing Joints	5 1/2	20.00	P-110	Yes	43.64	Yes			5,006.4	12,334.64
282	272	Casing Joints	5 1/2	20.00	P-110	Yes	45.75	Yes			4,960.6	12,380.39
283	273	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,914.7	12,426.27
284	274	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			4,869.1	12,471.92
285	275	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,823.2	12,517.80
286	276	Casing Joints	5 1/2	20.00	P-110	Yes	45.68	Yes			4,777.5	12,563.48
287	277	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			4,731.9	12,609.13
288	278	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			4,686.2	12,654.77
289	279	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			4,640.6	12,700.44
290	280	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			4,594.9	12,746.09
291	281	Casing Joints	5 1/2	20.00	P-110	Yes	45.63	Yes			4,549.3	12,791.72
292	282	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,503.4	12,837.60
293	283	Casing Joints	5 1/2	20.00	P-110	Yes	43.65	Yes			4,459.8	12,881.25



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
294	284	Casing Joints	5 1/2	20.00	P-110	Yes	44.07	Yes			4,415.7	12,925.32
295	285	Casing Joints	5 1/2	20.00	P-110	Yes	43.34	Yes			4,372.3	12,968.66
296	286	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			4,326.7	13,014.33
297	287	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,280.8	13,060.21
298	288	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,234.9	13,106.09
299	289	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,189.0	13,151.97
300	290	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			4,143.2	13,197.85
301	291	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			4,097.3	13,243.70
302	292	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			4,051.7	13,289.32
303	293	Casing Joints	5 1/2	20.00	P-110	Yes	45.61	Yes			4,006.1	13,334.93
304	294	Casing Joints	5 1/2	20.00	P-110	Yes	45.56	Yes			3,960.5	13,380.49
305	295	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			3,914.9	13,426.09
306	296	Casing Joints	5 1/2	20.00	P-110	Yes	45.45	Yes			3,869.5	13,471.54
307	297	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			3,823.6	13,517.42
308	298	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			3,777.9	13,563.07
309	299	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			3,732.1	13,608.95
310	300	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			3,686.2	13,654.83
311	301	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			3,640.3	13,700.68
313	302	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			3,579.7	13,761.35
314	303	Casing Joints	5 1/2	20.00	P-110	Yes	44.93	Yes			3,534.7	13,806.28
315	304	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			3,488.8	13,852.16
316	305	Casing Joints	5 1/2	20.00	P-110	Yes	43.47	Yes			3,445.4	13,895.63
317	306	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			3,399.7	13,941.28
318	307	Casing Joints	5 1/2	20.00	P-110	Yes	43.54	Yes			3,356.2	13,984.82
319	308	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			3,310.5	14,030.49
320	309	Casing Joints	5 1/2	20.00	P-110	Yes	45.89	Yes			3,264.6	14,076.38
321	310	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			3,219.0	14,122.03
322	311	Casing Joints	5 1/2	20.00	P-110	Yes	43.28	Yes			3,175.7	14,165.31
323	312	Casing Joints	5 1/2	20.00	P-110	Yes	43.41	Yes			3,132.3	14,208.72
324	313	Casing Joints	5 1/2	20.00	P-110	Yes	45.90	Yes			3,086.4	14,254.62
325	314	Casing Joints	5 1/2	20.00	P-110	Yes	43.73	Yes			3,042.7	14,298.35



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

### Casing Run Tally

Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
326	315	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			2,997.0	14,343.99
327	316	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			2,951.1	14,389.86
328	317	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,905.3	14,435.74
329	318	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,859.4	14,481.62
330	319	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,813.5	14,527.50
331	320	Casing Joints	5 1/2	20.00	P-110	Yes	45.17	Yes			2,768.3	14,572.67
332	321	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			2,722.7	14,618.32
333	322	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,676.8	14,664.20
334	323	Casing Joints	5 1/2	20.00	P-110	Yes	45.60	Yes			2,631.2	14,709.80
335	324	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			2,585.3	14,755.67
336	325	Casing Joints	5 1/2	20.00	P-110	Yes	45.87	Yes			2,539.5	14,801.54
337	326	Casing Joints	5 1/2	20.00	P-110	Yes	45.61	Yes			2,493.9	14,847.15
338	327	Casing Joints	5 1/2	20.00	P-110	Yes	44.17	Yes			2,449.7	14,891.32
339	328	Casing Joints	5 1/2	20.00	P-110	Yes	45.82	Yes			2,403.9	14,937.14
340	329	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,358.0	14,983.02
341	330	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			2,312.3	15,028.67
342	331	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			2,266.7	15,074.32
343	332	Casing Joints	5 1/2	20.00	P-110	Yes	43.69	Yes			2,223.0	15,118.01
344	333	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,177.1	15,163.89
345	334	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			2,131.4	15,209.56
346	335	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			2,085.6	15,255.44
347	336	Casing Joints	5 1/2	20.00	P-110	Yes	42.85	Yes			2,042.7	15,298.29
348	337	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			1,996.9	15,344.14
349	338	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			1,951.2	15,389.79
350	339	Casing Joints	5 1/2	20.00	P-110	Yes	44.73	Yes			1,906.5	15,434.52
351	340	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			1,860.6	15,480.37
352	341	Casing Joints	5 1/2	20.00	P-110	Yes	45.15	Yes			1,815.5	15,525.52
353	342	Casing Joints	5 1/2	20.00	P-110	Yes	45.05	Yes			1,770.4	15,570.57
354	343	Casing Joints	5 1/2	20.00	P-110	Yes	42.53	Yes			1,727.9	15,613.10
355	344	Casing Joints	5 1/2	20.00	P-110	Yes	45.90	Yes			1,682.0	15,659.00
356	345	Casing Joints	5 1/2	20.00	P-110	Yes	45.64	Yes			1,636.4	15,704.64



## Centralizer Depths

**Well Name: California Federal 11C**

**Production, Set Depth: 17,341.0ftKB**

API 05123511050000		Surface Legal Location SWSE 14 7N 66W		Field Name Wattenberg		State CO		Well Configuration Type Horizontal			
Ground Elevation (ft) 4,900.00	Original KB Elevation (ft) 4,928.00	KB-Ground Distance (ft) 28.00	Spud Date 10/30/2022 03:30	Rig Release Date 11/5/2022 06:00	On Production Date	Abandon Date					

Casing Run Tally												
Run #	Ref #	Item Des	OD (in)	Wt (lb/ft)	Grade	Run?	Len (ft)	Centralized?	Ext Jwry	Connections	Top (ftKB)	Cum Len (ft)
357	346	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			1,590.7	15,750.29
358	347	Casing Joints	5 1/2	20.00	P-110	Yes	45.80	Yes			1,544.9	15,796.09
359	348	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			1,499.3	15,841.74
360	349	Casing Joints	5 1/2	20.00	P-110	Yes	45.69	Yes			1,453.6	15,887.43
361	350	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			1,407.9	15,933.08
362	351	Casing Joints	5 1/2	20.00	P-110	Yes	45.66	Yes			1,362.3	15,978.74
363	352	Casing Joints	5 1/2	20.00	P-110	Yes	43.15	Yes			1,319.1	16,021.89
364	353	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			1,273.2	16,067.77
365	354	Casing Joints	5 1/2	20.00	P-110	Yes	45.25	Yes			1,228.0	16,113.02
366	355	Casing Joints	5 1/2	20.00	P-110	Yes	45.41	Yes			1,182.6	16,158.43
367	356	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			1,136.9	16,204.10
368	357	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			1,091.1	16,249.95
369	358	Casing Joints	5 1/2	20.00	P-110	Yes	44.10	Yes			1,047.0	16,294.05
370	359	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			1,001.3	16,339.70
371	360	Casing Joints	5 1/2	20.00	P-110	Yes	45.83	Yes			955.5	16,385.53
372	361	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			909.8	16,431.18
373	362	Casing Joints	5 1/2	20.00	P-110	Yes	45.62	Yes			864.2	16,476.80
374	363	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			818.3	16,522.65
375	364	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			772.5	16,568.50
376	365	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			726.6	16,614.35
377	366	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			681.0	16,660.00
378	367	Casing Joints	5 1/2	20.00	P-110	Yes	45.65	Yes			635.3	16,705.65
379	368	Casing Joints	5 1/2	20.00	P-110	Yes	45.88	Yes			589.5	16,751.53
380	369	Casing Joints	5 1/2	20.00	P-110	Yes	45.85	Yes			543.6	16,797.38
381	370	Casing Joints	5 1/2	20.00	P-110	Yes	45.67	Yes			497.9	16,843.05