HR Vertilog

Magnetic Flux Leakage Inspection

Advanced Analysis

Company	Southern California Gas Company
Well	Porter 69D
Field	Aliso Canyon
County	Los Angeles
State	California
Location:	

Section 28	Township 3N	Range 16W	

Date	May. 21, 2016
Service Order	107468
Recorded by	Mark Yoder
Witnessed by	Jason Fike
API Serial No.	037-24130

Permanent Datum:	G.L.	Elevation:	2366.000 ft.	Depth	8120.000
Log Measured From:	K.B.	23.500	ft. above Perm. Datum	Btm. Log Interval	7614.080
Drilling Measured From:	K.B.	23.500	ft. above Perm. Datum	Top Log Interval	16.560
				Fluid Type	KCL

Casing Data

Size	Weight	Grade	From	To	Length
9 5/8 inch	47.0 lb/ft	N-80	0	7801	7801.0
13 3/8"	54.5 lb/ft	K-55	0	1938	1938.0
5 1/2 inch	17.0 lb/ft	J-55	7711	8107	396.0

Software Version 6.0.0.0

Equipment Data

Run	Trip	Tool Type	Tool Series	Serial Number	Position
1	1	HRVRT MFL	4997	PA10409819	LOWER
1	1	HRVRT MFL	4997	QA10409827	UPPER
1	1	HRVRT TELEM	4993		

Calibration Data

Calibration File Name	4997-9-001-PA10409819-U.CAL
Date of Calibration	05/04/2015 14:03
Calibration Identifier	B067D5B8-C234-468C-82A0-CD1751E099F9

Tool Number	4997-00
Calibrator Number	4997-9-001
Calibrator Size	(9-5/8 In - 238 mm)
Calibration Source File	20150504_072254_MEM.MVL
Calibration Software Rev	Microvision 32-bit 7.3.2.2
Comment	RMA1200

Calibration Data

Calibration File Name	4997-9-001-QA10409827-L.CAL
Date of Calibration	05/04/2015 14:03
Calibration Identifier	B067D5B8-C234-468C-82A0-CD1751E099F9
Tool Number	4997-00
Calibrator Number	4997-9-001
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In making interpretations of logs our employees will give customer the benefit of their best judgment. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Remarks

2 7/8" tubing was pulled prior to logging
Packer is in place at 7642'
12ft of 3 1/8" OD sinker bar below tool

GR/NEU/CCL Reference log was used for depth correlation.

Interpretation

HRVRT analysis was depth correlated to B.H. HCAL logged 21 May 2016

The top joint and joints JT-13, JT-179 are short joints.

17.72 ft	Hardware - External Wellhead Response
1029.20 ft	Hardware - Bottom of 13 3/8" External Casing.
1447.20 ft	Hardware - Multiple Centralizers can be seen throughout the logged interval, see the Feature List for a complete listing

Joint Interpretation Summary

Joint	From	To	Length	Class	Max Depth	Position	Type	ID/OD
1	16.56	22.50	5.94	Class 2	21.0%	21.80	ISO	OD
2	22.50	65.33	42.83	Class 1	-	-	-	-
3	65.33	108.75	43.42	Class 1	-	-	-	-
4	108.75	153.89	45.14	Class 1	-	-	-	-
5	153.89	197.34	43.45	Class 1	-	-	-	-

6	197.34	241.22	43.88	Class	1	-	-	-	-
7	241.22	282.42	41.20	Class	1	-	-	-	-
8	282.42	325.74	43.32	Class	1	-	-	-	-
9	325.74	367.62	41.88	Class	1	-	-	-	-
10	367.62	409.55	41.93	Class	1	-	-	-	-
11	409.55	451.53	41.98	Class	1	-	-	-	-
12	451.53	492.49	40.96	Class	1	-	-	-	-
13	492.49	535.46	42.97	Class	1	-	-	-	-
14	535.46	574.15	38.69	Class	1	-	-	-	-
15	574.15	616.27	42.12	Class	1	-	-	-	-
16	616.27	659.41	43.14	Class	1	-	-	-	-
17	659.41	700.33	40.92	Class	1	-	-	-	-
18	700.33	743.70	43.37	Class	1	-	-	-	-
19	743.70	786.76	43.06	Class	1	-	-	-	-
20	786.76	826.83	40.07	Class	1	-	-	-	-
21	826.83	865.73	38.90	Class	1	-	-	-	-
22	865.73	908.94	43.21	Class	1	-	-	-	-
23	908.94	948.34	39.40	Class	1	-	-	-	-
24	948.34	989.80	41.46	Class	1	-	-	-	-
25	989.80	1028.25	38.45	Class	1	-	-	-	-
26	1028.25	1071.53	43.28	Class	1	-	-	-	-
27	1071.53	1114.96	43.43	Class	1	-	-	-	-
28	1114.96	1149.87	34.91	Class	1	-	-	-	-
29	1149.87	1193.48	43.61	Class	1	-	-	-	-
30	1193.48	1235.28	41.80	Class	1	-	-	-	-
31	1235.28	1277.28	42.00	Class	1	-	-	-	-
32	1277.28	1319.45	42.17	Class	1	-	-	-	-
33	1319.45	1361.91	42.46	Class	1	-	-	-	-
34	1361.91	1405.29	43.38	Class	1	-	-	-	-
35	1405.29	1447.56	42.27	Class	1	-	-	-	-
36	1447.56	1489.88	42.32	Class	2	21.0%	1482.85	ISO	OD
37	1489.88	1532.25	42.37	Class	1	-	-	-	-
38	1532.25	1574.67	42.42	Class	1	-	-	-	-
39	1574.67	1618.06	43.39	Class	1	-	-	-	-
40	1618.06	1661.54	43.48	Class	1	-	-	-	-
41	1661.54	1703.10	41.56	Class	2	25.0%	1684.02	ISO	OD
42	1703.10	1746.20	43.10	Class	1	-	-	-	-
43	1746.20	1788.94	42.74	Class	1	-	-	-	-
44	1788.94	1829.76	40.82	Class	1	-	-	-	-
45	1829.76	1872.13	42.37	Class	1	-	-	-	-
46	1872.13	1914.82	42.69	Class	1	-	-	-	-
47	1914.82	1957.97	43.15	Class	1	-	-	-	-
48	1957.97	2002.00	44.03	Class	1	-	-	-	-
49	2002.00	2045.54	43.54	Class	1	-	-	-	-
50	2045.54	2086.04	40.50	Class	1	-	-	-	-
51	2086.04	2128.49	42.45	Class	1	-	-	-	-
52	2128.49	2171.55	43.06	Class	1	-	-	-	-
53	2171.55	2214.77	43.22	Class	1	-	-	-	-
54	2214.77	2254.95	40.18	Class	1	-	-	-	-
55	2254.95	2296.86	41.91	Class	1	-	-	-	-
56	2296.86	2338.86	42.00	Class	1	-	-	-	-
57	2338.86	2380.89	42.03	Class	1	-	-	-	-
58	2380.89	2422.49	41.60	Class	1	-	-	-	-
59	2422.49	2463.61	41.12	Class	1	-	-	-	-
60	2463.61	2504.80	41.19	Class	2	28.0%	2500.19	ISO	OD
61	2504.80	2545.91	41.11	Class	1	20.0%	2512.85	ISO	OD
62	2545.91	2589.14	43.23	Class	1	-	-	-	-
63	2589.14	2631.24	42.10	Class	1	-	-	-	-
64	2631.24	2673.31	42.07	Class	1	-	-	-	-
65	2673.31	2716.39	43.08	Class	1	-	-	-	-
66	2716.39	2757.00	40.61	Class	1	-	-	-	-
67	2757.00	2800.34	43.34	Class	1	-	-	-	-
68	2800.34	2836.99	36.65	Class	1	-	-	-	-
69	2836.99	2877.69	40.70	Class	1				

69	2836.99	2877.69	40.70	Class	1	-	-	-	-
70	2877.69	2913.25	35.56	Class	1	-	-	-	-
71	2913.25	2953.66	40.41	Class	1	20.0%	2950.40	ISO	OD
72	2953.66	2994.25	40.59	Class	1	-	-	-	-
73	2994.25	3009.35	15.10	Class	1	-	-	-	-
74	3009.35	3051.60	42.25	Class	1	-	-	-	-
75	3051.60	3094.81	43.21	Class	1	-	-	-	-
76	3094.81	3133.26	38.45	Class	2	23.0%	3111.26	ISO	OD
77	3133.26	3175.97	42.71	Class	1	-	-	-	-
78	3175.97	3216.16	40.19	Class	1	-	-	-	-
79	3216.16	3252.89	36.73	Class	1	-	-	-	-
80	3252.89	3294.35	41.46	Class	1	-	-	-	-
81	3294.35	3334.82	40.47	Class	1	-	-	-	-
82	3334.82	3373.10	38.28	Class	1	-	-	-	-
83	3373.10	3414.96	41.86	Class	1	-	-	-	-
84	3414.96	3457.52	42.56	Class	1	-	-	-	-
85	3457.52	3497.86	40.34	Class	1	-	-	-	-
86	3497.86	3541.22	43.36	Class	1	-	-	-	-
87	3541.22	3582.94	41.72	Class	1	-	-	-	-
88	3582.94	3619.72	36.78	Class	1	-	-	-	-
89	3619.72	3661.71	41.99	Class	1	-	-	-	-
90	3661.71	3706.04	44.33	Class	1	-	-	-	-
91	3706.04	3746.72	40.68	Class	1	-	-	-	-
92	3746.72	3789.25	42.53	Class	1	-	-	-	-
93	3789.25	3829.43	40.18	Class	1	-	-	-	-
94	3829.43	3871.74	42.31	Class	1	-	-	-	-
95	3871.74	3910.12	38.38	Class	1	-	-	-	-
96	3910.12	3951.19	41.07	Class	1	-	-	-	-
97	3951.19	3994.71	43.52	Class	1	-	-	-	-
98	3994.71	4034.33	39.62	Class	1	-	-	-	-
99	4034.33	4077.76	43.43	Class	1	-	-	-	-
100	4077.76	4121.75	43.99	Class	1	-	-	-	-
101	4121.75	4163.29	41.54	Class	1	15.0%	4134.60	ISO	OD
102	4163.29	4204.88	41.59	Class	1	-	-	-	-
103	4204.88	4248.28	43.40	Class	1	-	-	-	-
104	4248.28	4289.78	41.50	Class	1	-	-	-	-
105	4289.78	4329.95	40.17	Class	1	-	-	-	-
106	4329.95	4370.92	40.97	Class	1	-	-	-	-
107	4370.92	4412.57	41.65	Class	1	-	-	-	-
108	4412.57	4453.93	41.36	Class	1	-	-	-	-
109	4453.93	4498.67	44.74	Class	1	-	-	-	-
110	4498.67	4540.85	42.18	Class	1	-	-	-	-
111	4540.85	4583.23	42.38	Class	1	-	-	-	-
112	4583.23	4624.56	41.33	Class	1	-	-	-	-
113	4624.56	4666.85	42.29	Class	1	-	-	-	-
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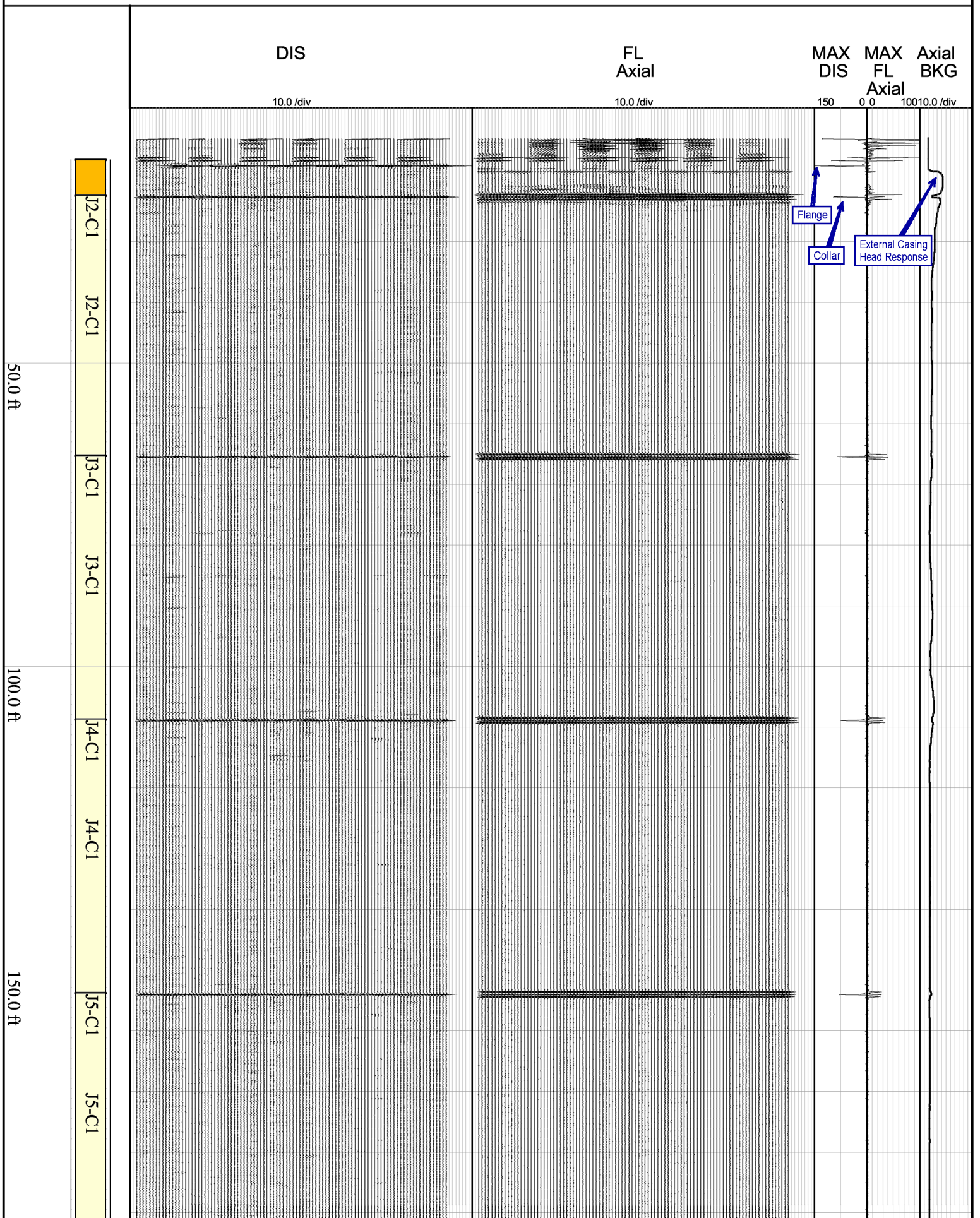
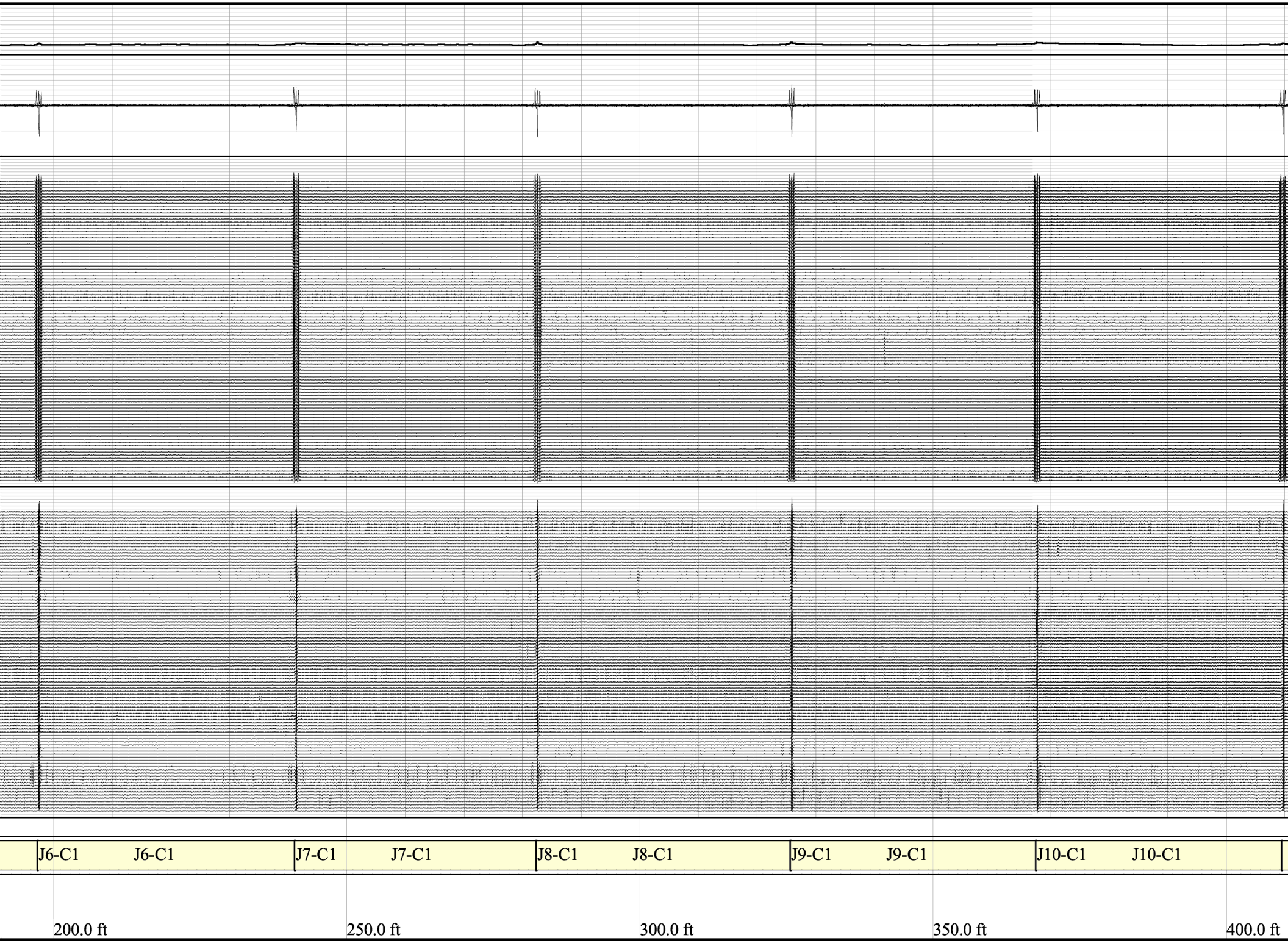
118	4833.23	4876.24	43.01	Class	1	-	-	-	-
119	4876.24	4916.61	40.37	Class	1	-	-	-	-
120	4916.61	4958.27	41.66	Class	2	26.0%	4943.65	ISO	OD
121	4958.27	4999.78	41.51	Class	1	-	-	-	-
122	4999.78	5040.14	40.36	Class	1	-	-	-	-
123	5040.14	5081.98	41.84	Class	1	-	-	-	-
124	5081.98	5121.18	39.20	Class	1	-	-	-	-
125	5121.18	5165.15	43.97	Class	2	32.0%	5164.15	ISO	OD
126	5165.15	5207.36	42.21	Class	1	20.0%	5180.33	ISO	OD
127	5207.36	5250.84	43.48	Class	1	-	-	-	-
128	5250.84	5293.66	42.82	Class	2	20.0%	5271.82	ISO	OD
129	5293.66	5332.99	39.33	Class	1	-	-	-	-
130	5332.99	5375.63	42.64	Class	1	-	-	-	-
131	5375.63	5418.85	43.22	Class	1	-	-	-	-
132	5418.85	5460.49	41.64	Class	1	20.0%	5432.58	ISO	OD

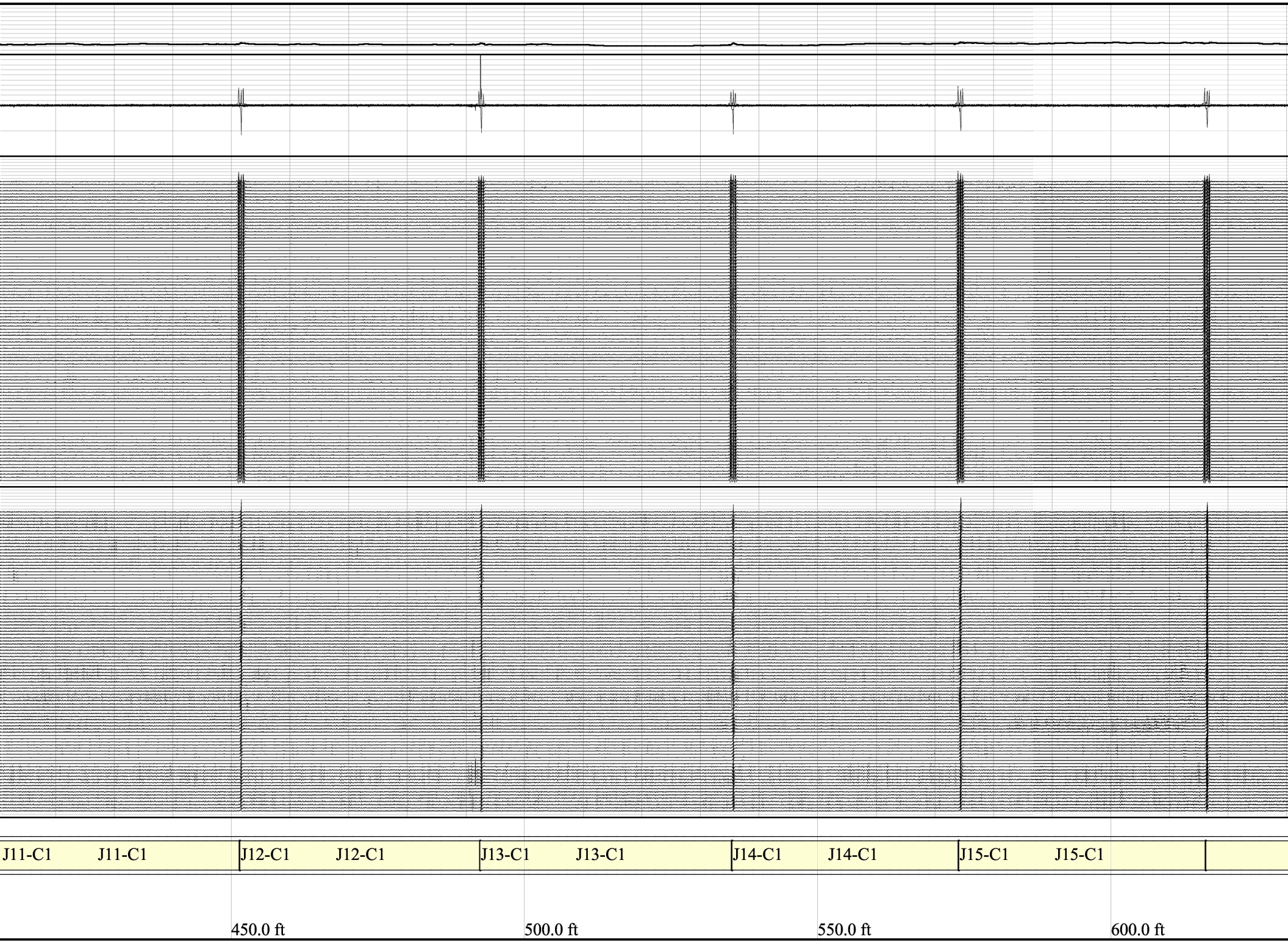
133	5460.49	5504.97	44.48	Class	2	31.0%	5469.93	ISO	OD
134	5504.97	5543.50	38.53	Class	1	-	-	-	-
135	5543.50	5585.96	42.46	Class	1	19.0%	5555.28	ISO	OD
136	5585.96	5629.32	43.36	Class	2	24.0%	5613.24	ISO	OD
137	5629.32	5673.61	44.29	Class	1	-	-	-	-
138	5673.61	5717.87	44.26	Class	2	20.0%	5692.40	ISO	OD
139	5717.87	5759.96	42.09	Class	1	19.0%	5741.34	ISO	OD
140	5759.96	5801.27	41.31	Class	1	-	-	-	-
141	5801.27	5843.18	41.91	Class	1	-	-	-	-
142	5843.18	5886.91	43.73	Class	1	-	-	-	-
143	5886.91	5931.07	44.16	Class	1	-	-	-	-
144	5931.07	5973.56	42.49	Class	1	-	-	-	-
145	5973.56	6014.99	41.43	Class	1	-	-	-	-
146	6014.99	6058.41	43.42	Class	1	-	-	-	-
147	6058.41	6101.67	43.26	Class	1	-	-	-	-
148	6101.67	6145.05	43.38	Class	1	-	-	-	-
149	6145.05	6187.78	42.73	Class	1	-	-	-	-
150	6187.78	6231.32	43.54	Class	1	-	-	-	-
151	6231.32	6270.70	39.38	Class	1	-	-	-	-
152	6270.70	6316.41	45.71	Class	1	-	-	-	-
153	6316.41	6359.14	42.73	Class	1	-	-	-	-
154	6359.14	6402.80	43.66	Class	1	-	-	-	-
155	6402.80	6445.81	43.01	Class	1	-	-	-	-
156	6445.81	6489.20	43.39	Class	1	-	-	-	-
157	6489.20	6532.36	43.16	Class	1	-	-	-	-
158	6532.36	6578.71	46.35	Class	1	-	-	-	-
159	6578.71	6622.06	43.35	Class	1	-	-	-	-
160	6622.06	6667.56	45.50	Class	1	-	-	-	-
161	6667.56	6710.82	43.26	Class	1	-	-	-	-
162	6710.82	6753.44	42.62	Class	1	-	-	-	-
163	6753.44	6796.59	43.15	Class	1	-	-	-	-
164	6796.59	6840.03	43.44	Class	1	-	-	-	-
165	6840.03	6882.08	42.05	Class	1	-	-	-	-
166	6882.08	6925.12	43.04	Class	1	-	-	-	-
167	6925.12	6967.12	42.00	Class	1	-	-	-	-
168	6967.12	7009.52	42.40	Class	1	-	-	-	-
169	7009.52	7052.42	42.90	Class	1	-	-	-	-
170	7052.42	7095.43	43.01	Class	1	-	-	-	-
171	7095.43	7139.52	44.09	Class	1	-	-	-	-
172	7139.52	7181.90	42.38	Class	1	-	-	-	-
173	7181.90	7221.44	39.54	Class	1	-	-	-	-
174	7221.44	7263.99	42.55	Class	1	-	-	-	-
175	7263.99	7307.60	43.61	Class	1	-	-	-	-
176	7307.60	7343.35	35.75	Class	1	-	-	-	-
177	7343.35	7385.98	42.63	Class	1	-	-	-	-
178	7385.98	7429.47	43.49	Class	1	-	-	-	-
179	7429.47	7445.00	15.53	Class	1	-	-	-	-
180	7445.00	7488.11	43.11	Class	1	-	-	-	-
181	7488.11	7532.09	43.98	Class	1	15.0%	7520.59	ISO	ID
182	7532.09	7573.05	40.96	Class	1	-	-	-	-
183	7573.05	7614.08	41.03	Class	1	19.0%	7584.77	ISO	ID

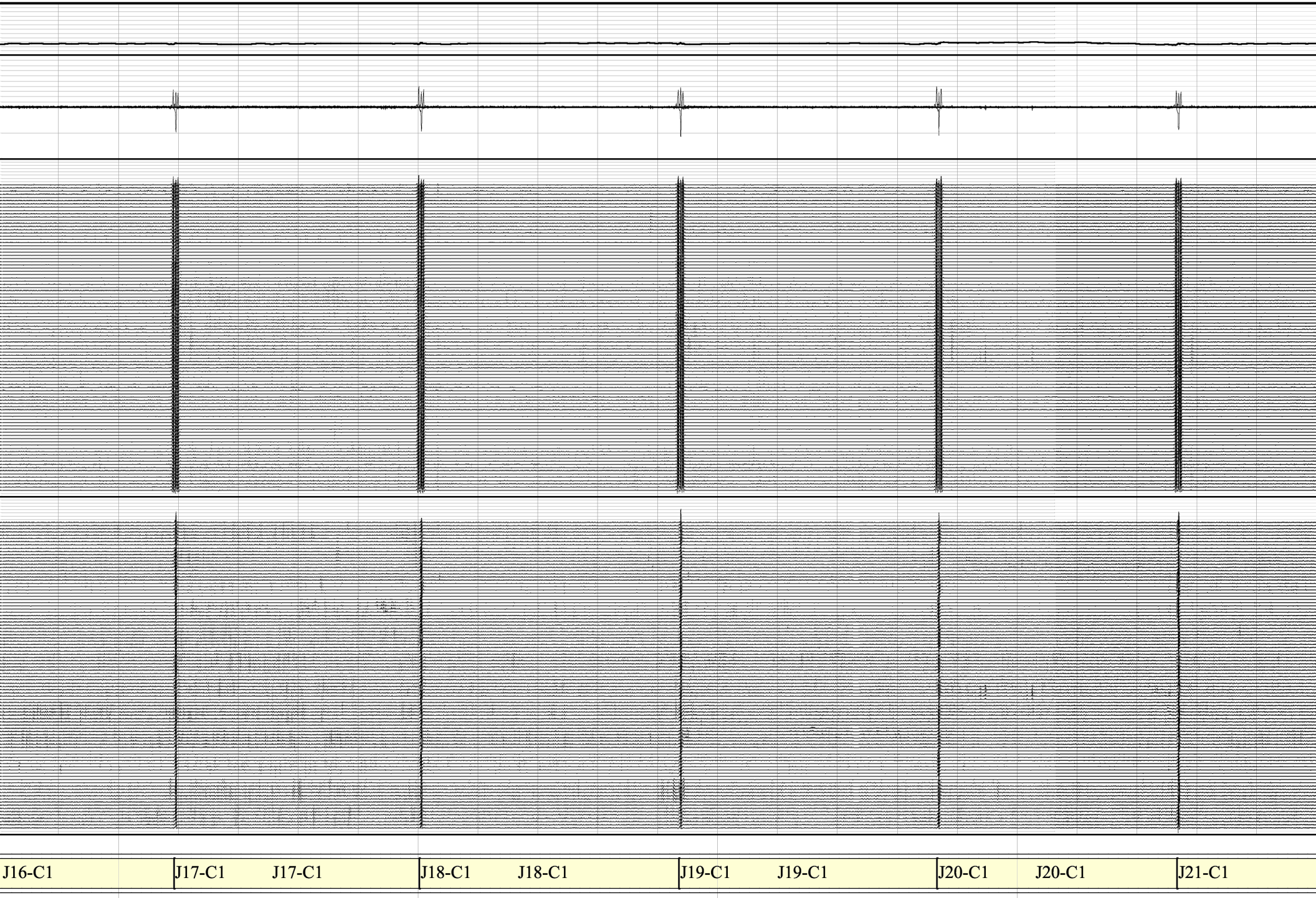
Main Log
5" / 100'

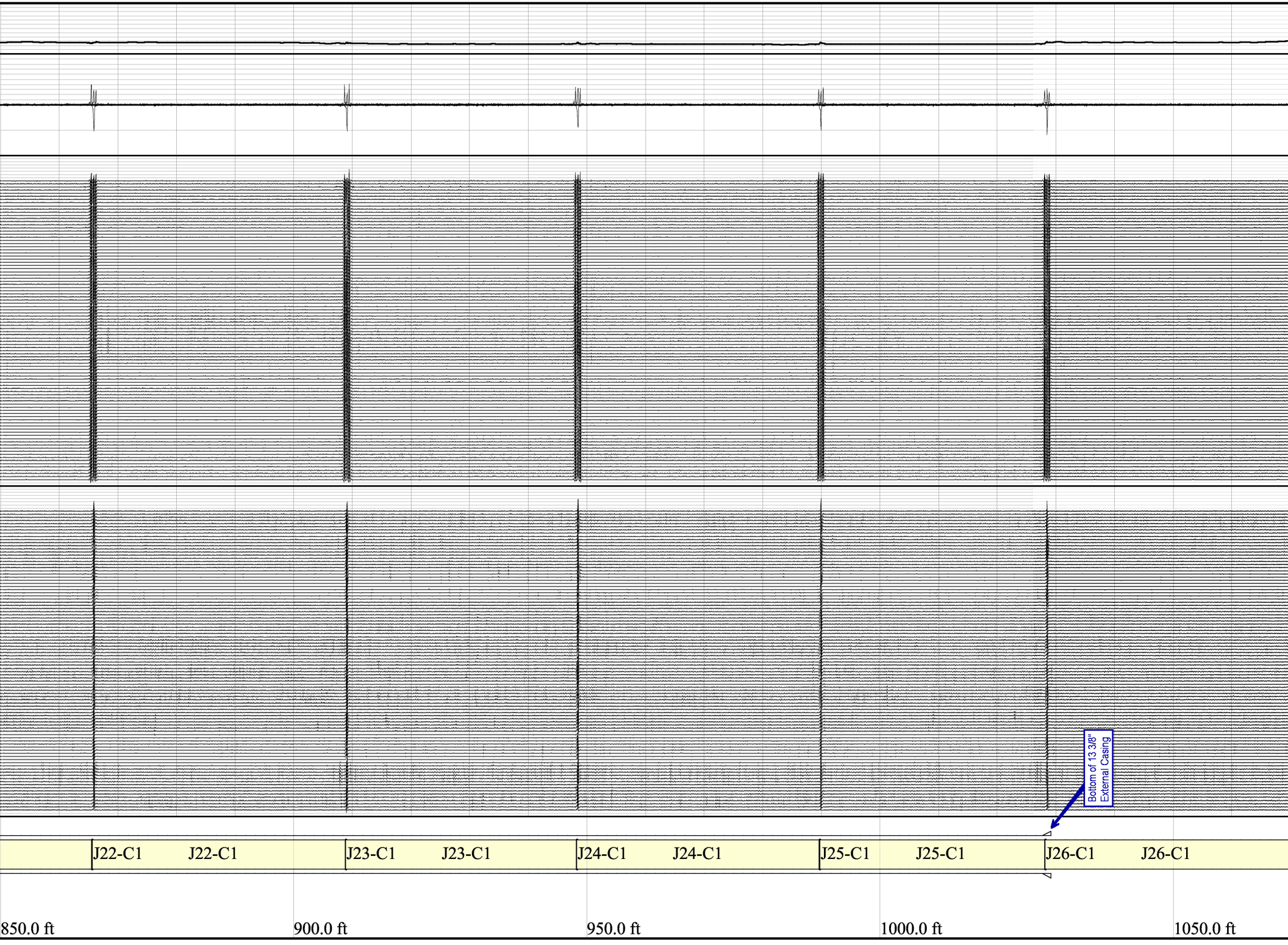
Class 1	Class 2	Class 3	Class 4
0 - 20%	20 - 40%	40 - 60%	60 - 100%

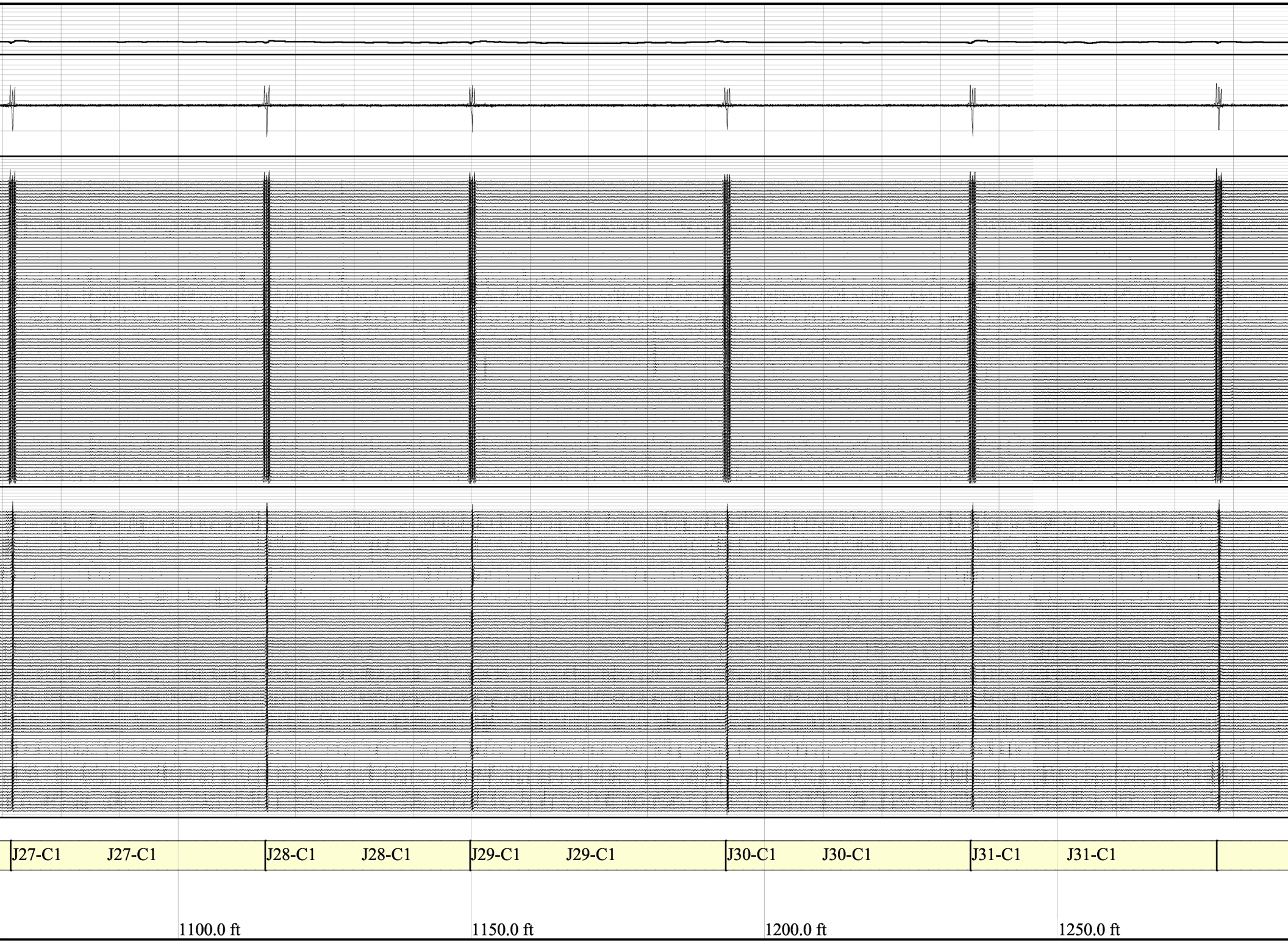


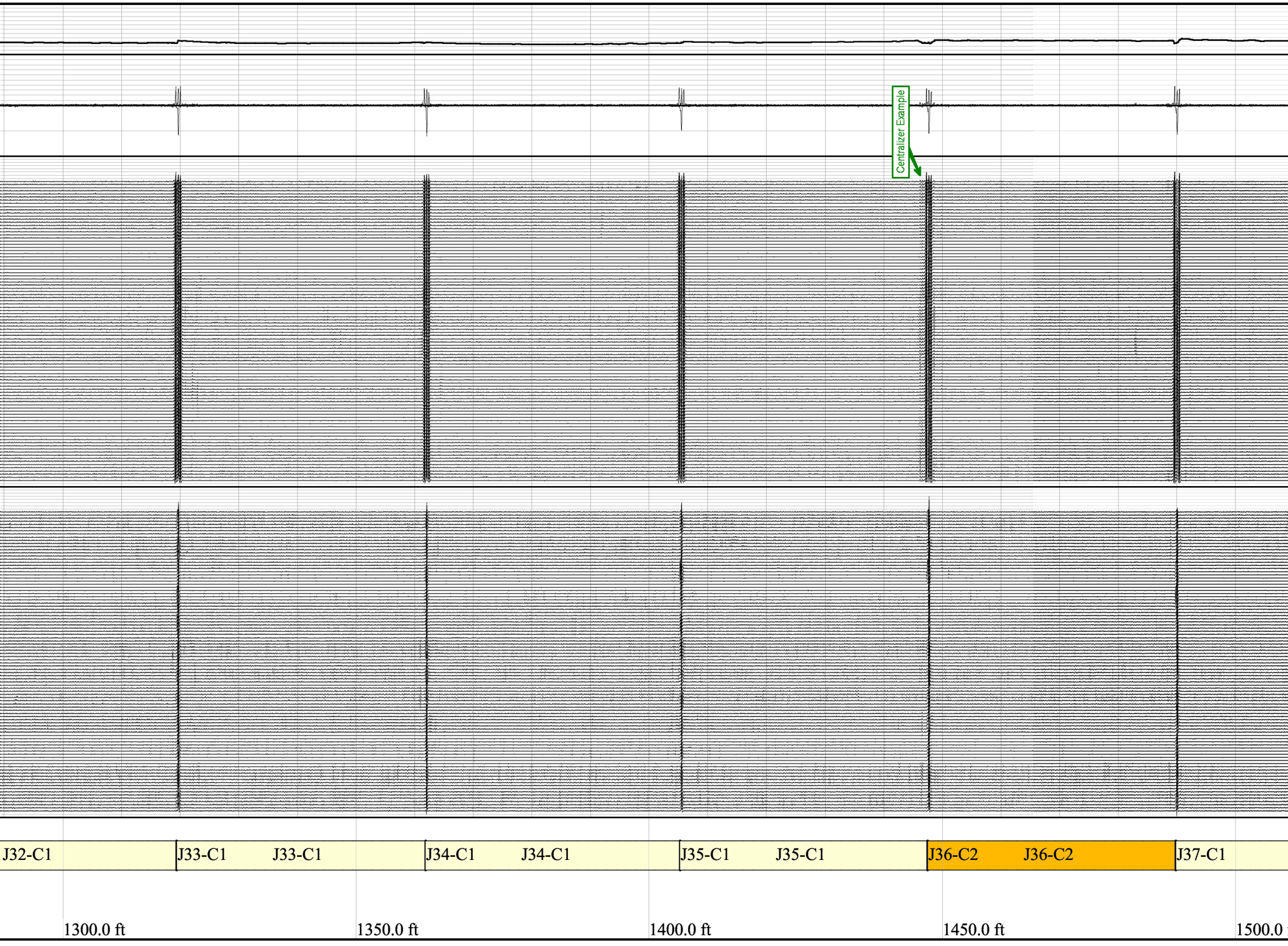

J6-C1
J6-C1
J7-C1
J7-C1
J8-C1
J8-C1
J9-C1
J9-C1
J10-C1
J10-C1
200.0 ft
250.0 ft
300.0 ft
350.0 ft
400.0 ft

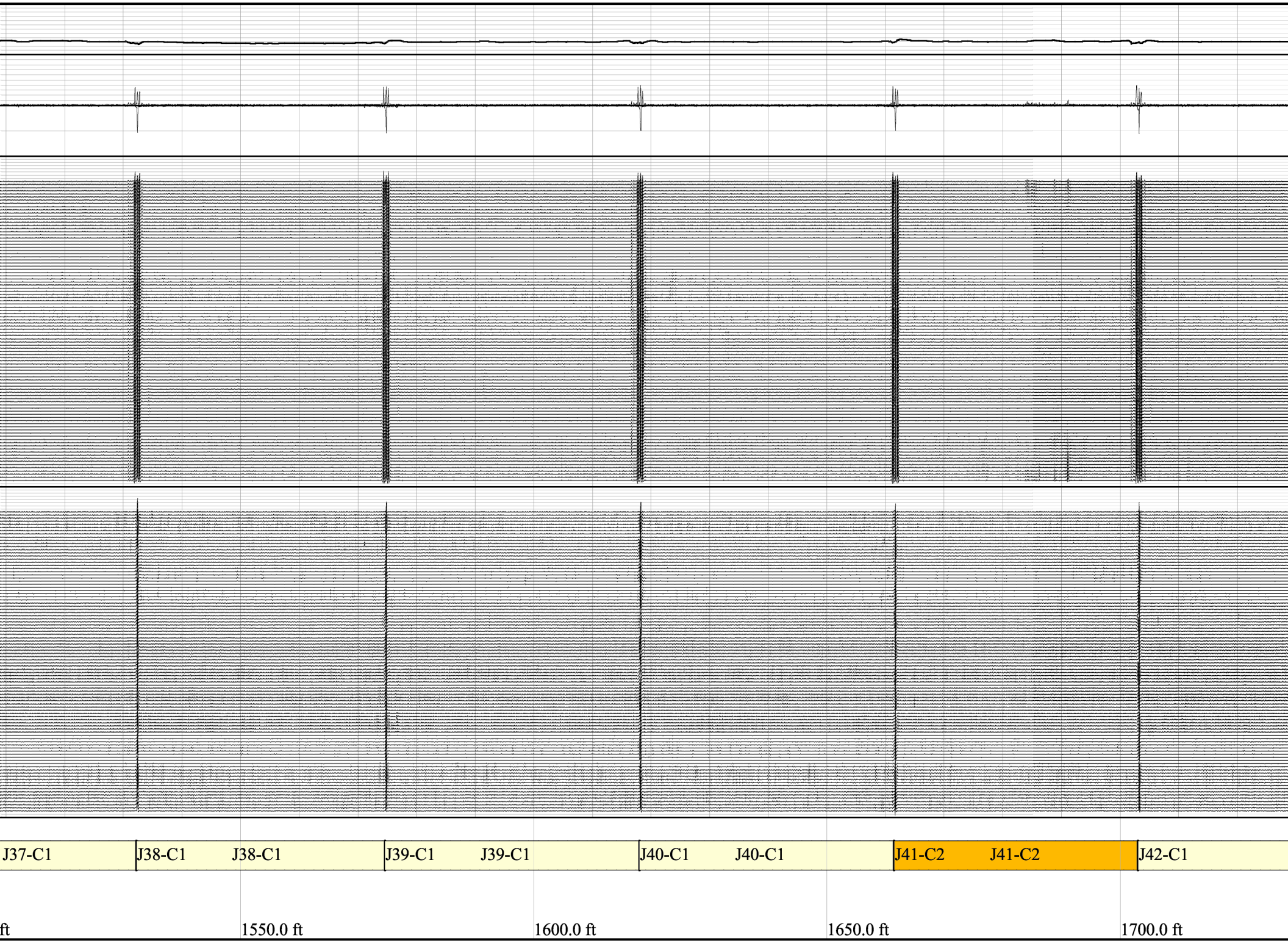

J11-C1
J11-C1
J12-C1
J12-C1
J13-C1
J13-C1
J14-C1
J14-C1
J15-C1
J15-C1
450.0 ft
500.0 ft
550.0 ft
600.0 ft

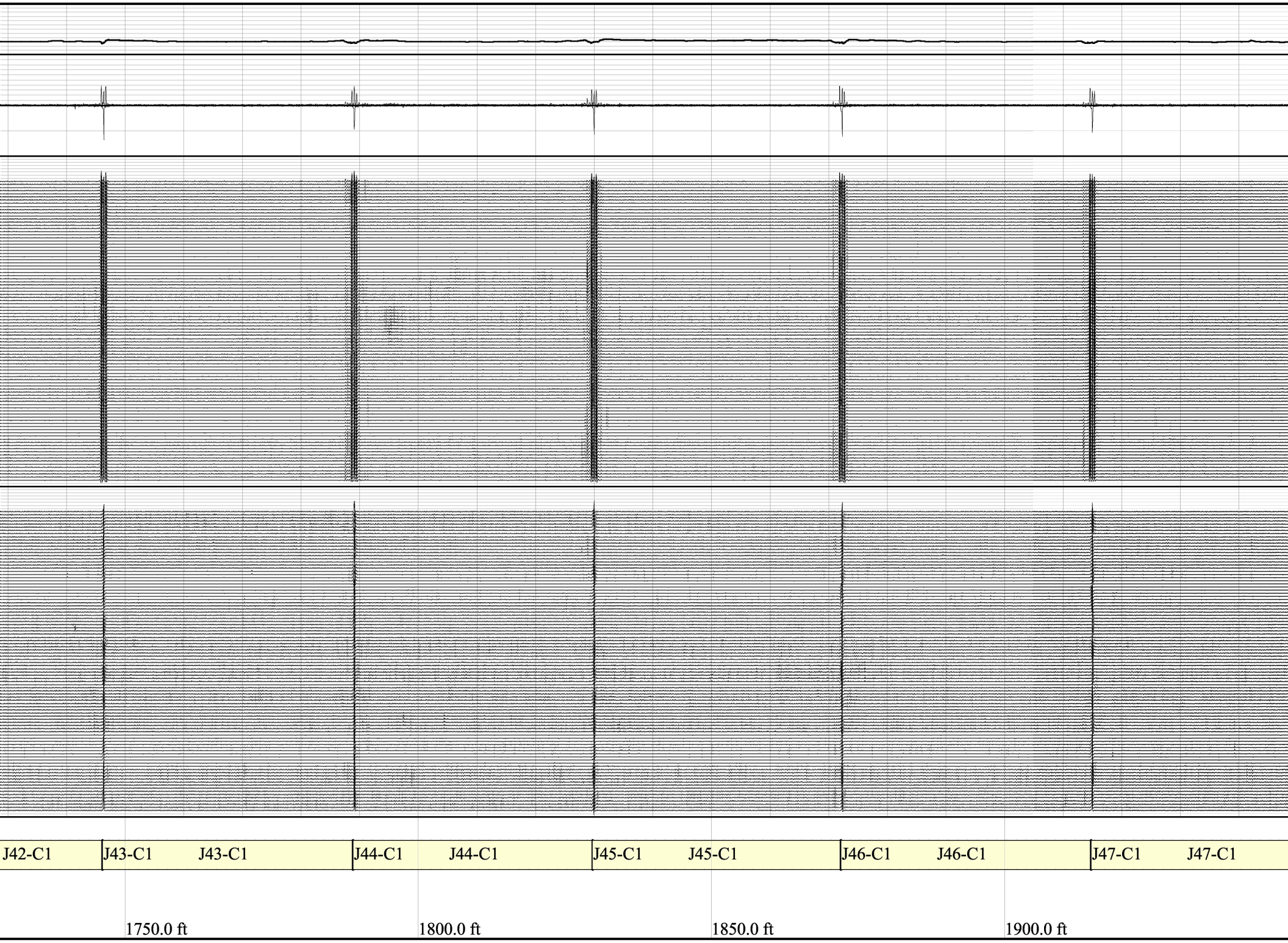

J16-C1
J17-C1
J17-C1
J18-C1
J18-C1
J19-C1
J19-C1
J20-C1
J20-C1
J21-C1
650.0 ft
700.0 ft
750.0 ft
800.0 ft

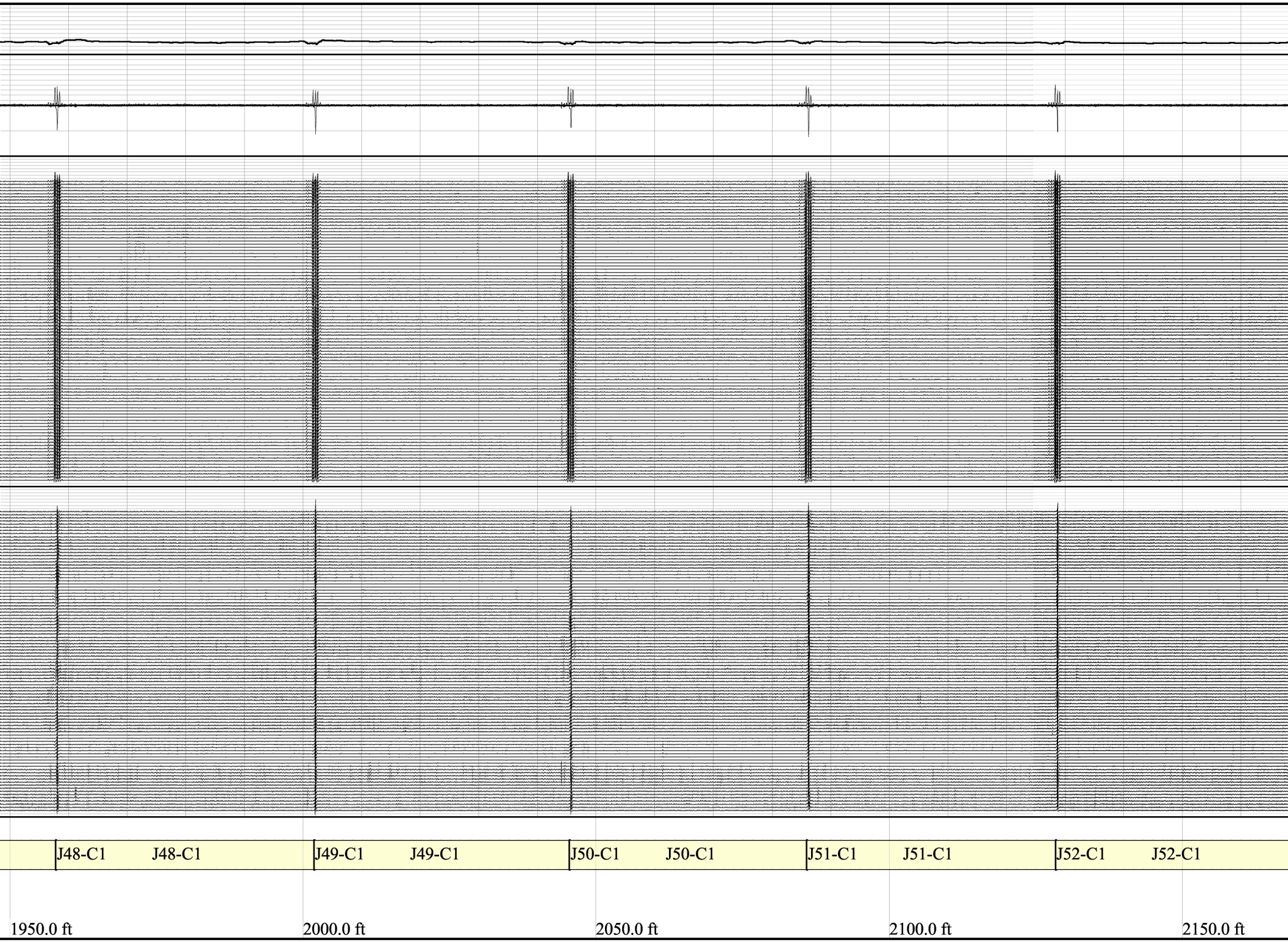

Bottom of 13 3/8" External Casing
J22-C1
J22-C1
J23-C1
J23-C1
J24-C1
J24-C1
J25-C1
J25-C1
J26-C1
J26-C1
850.0 ft
900.0 ft
950.0 ft
1000.0 ft
1050.0 ft

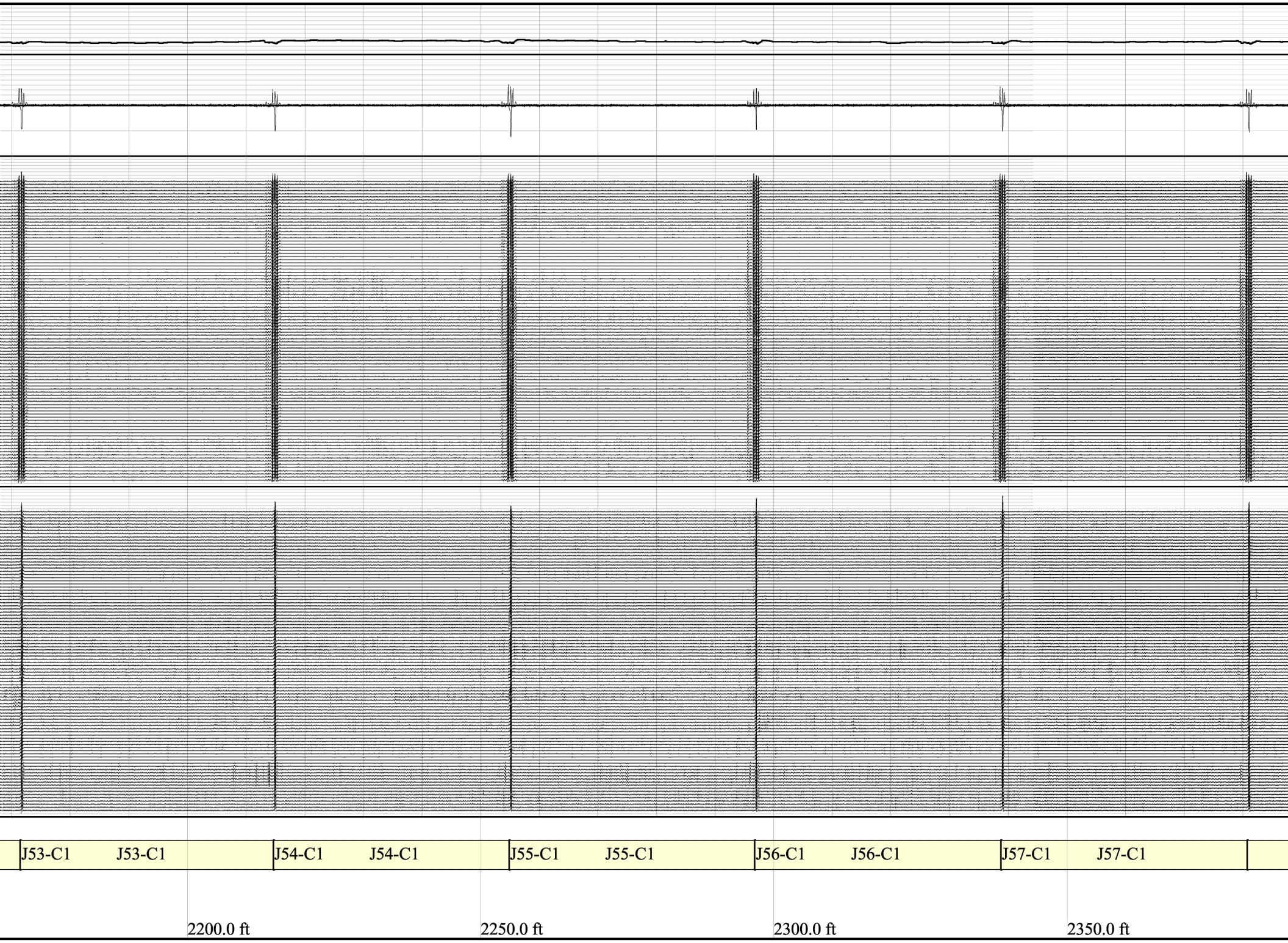

J27-C1
J27-C1
J28-C1
J28-C1
J29-C1
J29-C1
J30-C1
J30-C1
J31-C1
J31-C1
1100.0 ft
1150.0 ft
1200.0 ft
1250.0 ft

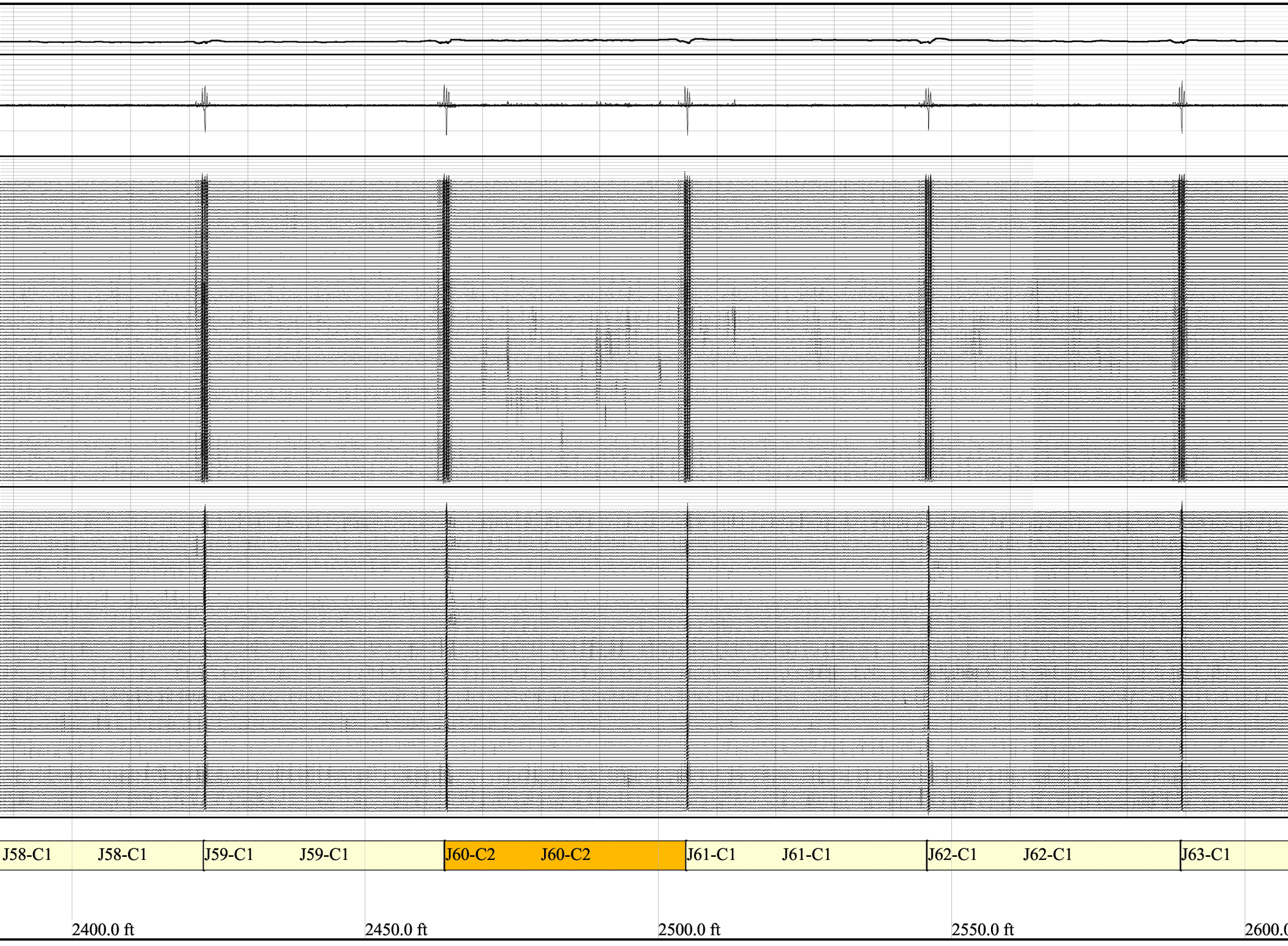

Centralizer Example
J32-C1
J33-C1
J33-C1
J34-C1
J34-C1
J35-C1
J35-C1
J36-C2
J36-C2
J37-C1
1300.0 ft
1350.0 ft
1400.0 ft
1450.0 ft
1500.0

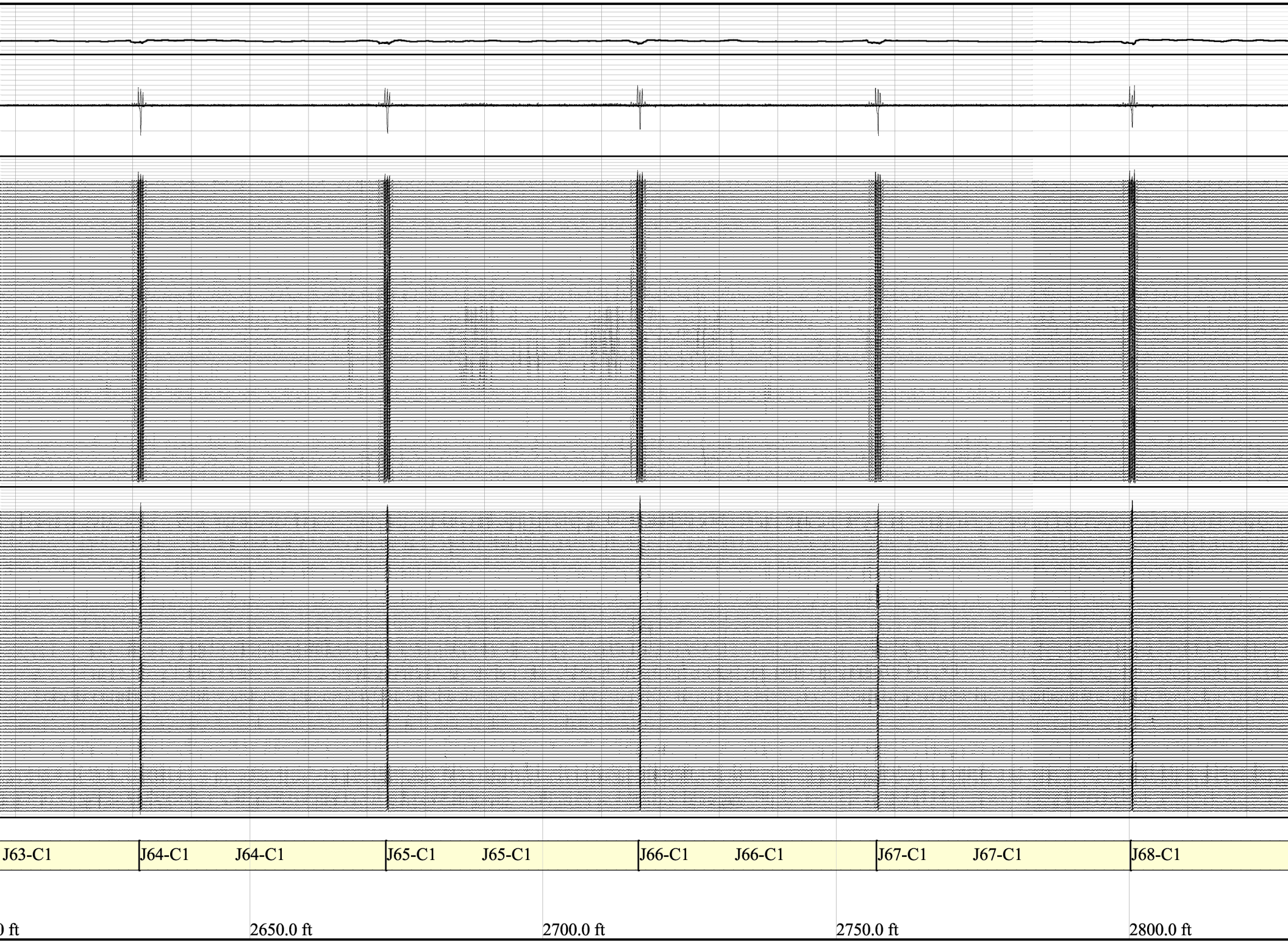

J37-C1
J38-C1
J38-C1
J39-C1
J39-C1
J40-C1
J40-C1
J41-C2
J41-C2
J42-C1
ft
1550.0 ft
1600.0 ft
1650.0 ft
1700.0 ft

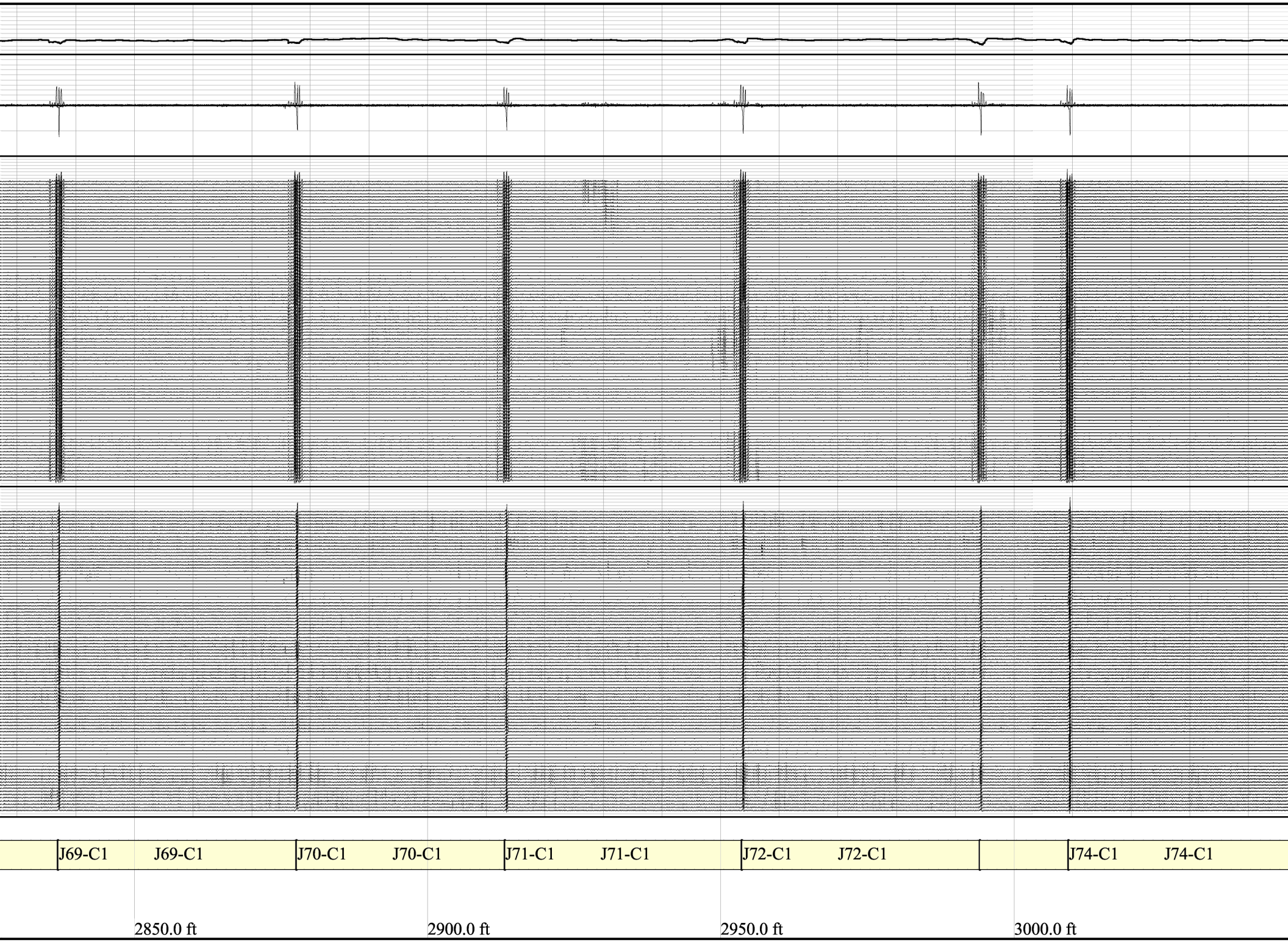

J42-C1
J43-C1
J43-C1
J44-C1
J44-C1
J45-C1
J45-C1
J46-C1
J46-C1
J47-C1
J47-C1
1750.0 ft
1800.0 ft
1850.0 ft
1900.0 ft

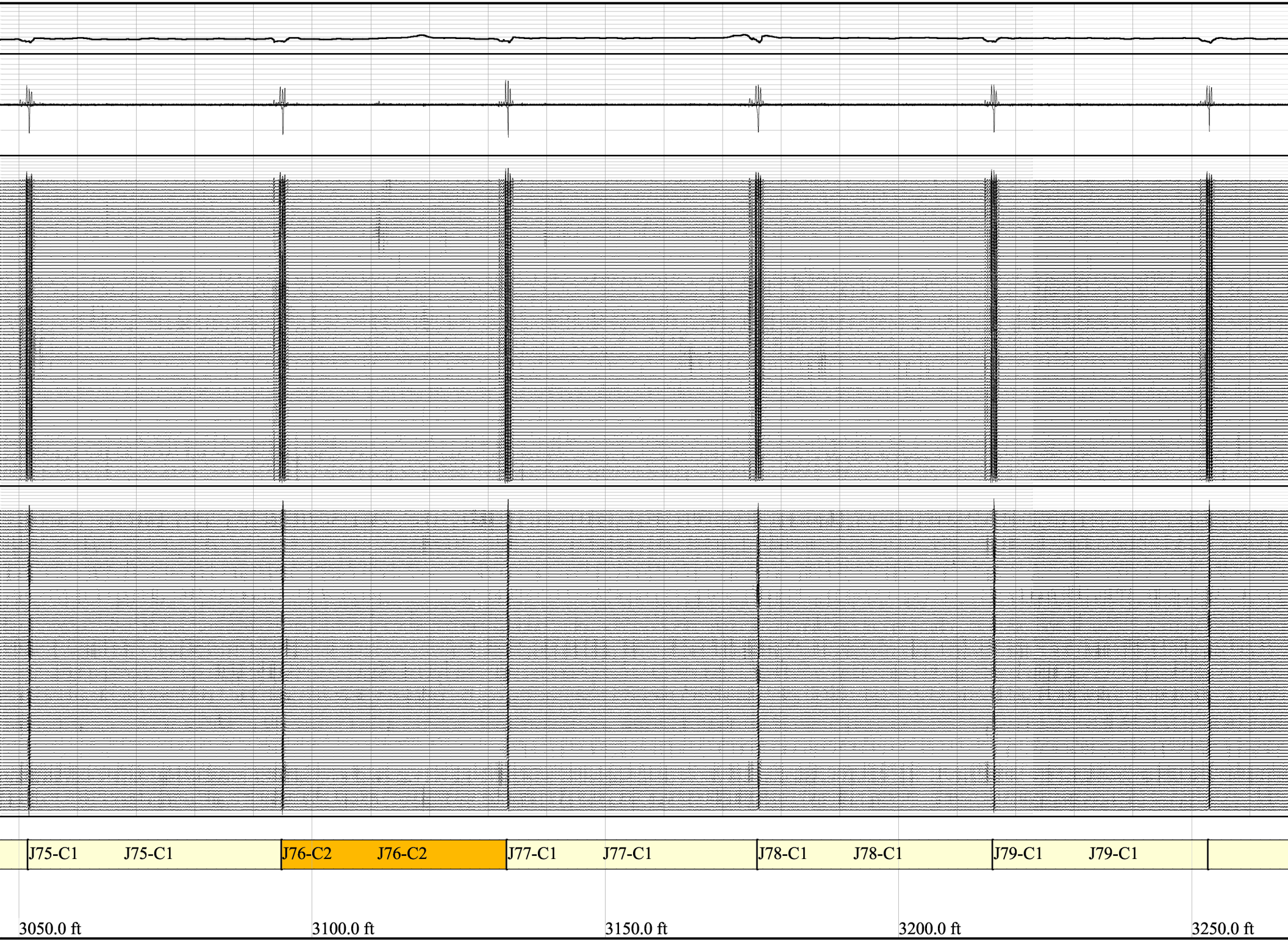

J48-C1
J48-C1
J49-C1
J49-C1
J50-C1
J50-C1
J51-C1
J51-C1
J52-C1
J52-C1
1950.0 ft
2000.0 ft
2050.0 ft
2100.0 ft
2150.0 ft

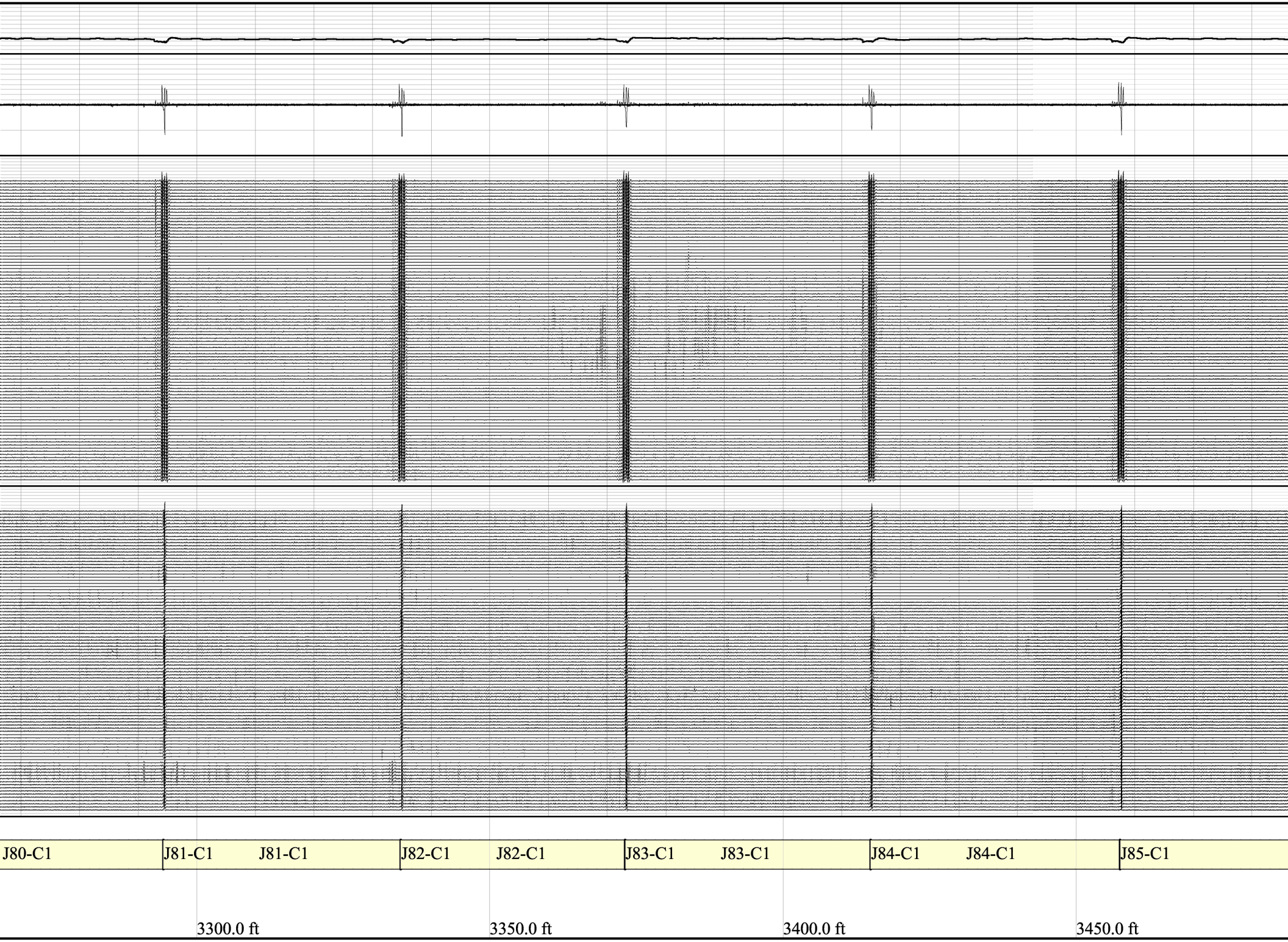

J53-C1
J53-C1
J54-C1
J54-C1
J55-C1
J55-C1
J56-C1
J56-C1
J57-C1
J57-C1
2200.0 ft
2250.0 ft
2300.0 ft
2350.0 ft

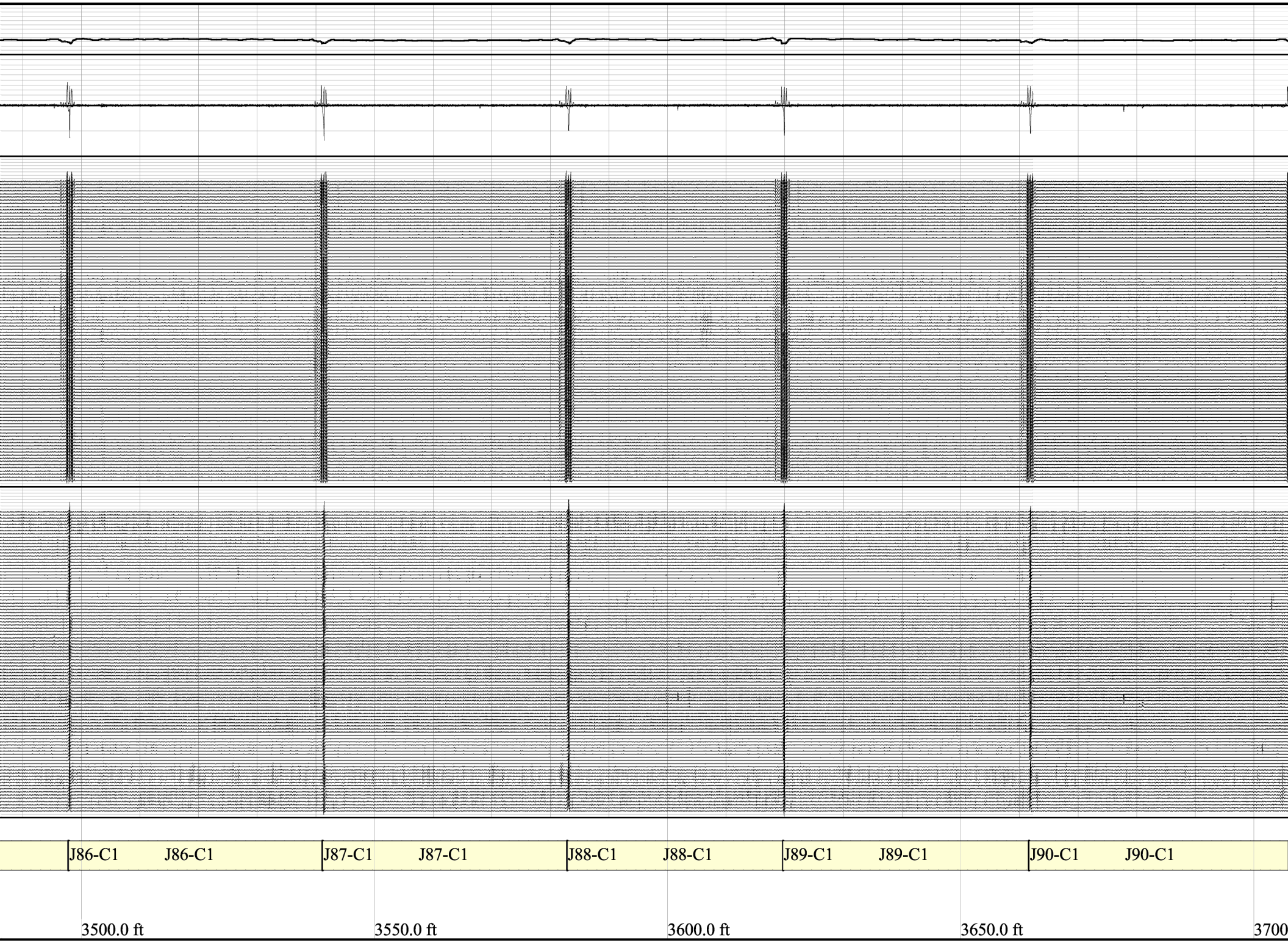

J58-C1
J58-C1
J59-C1
J59-C1
J60-C2
J60-C2
J61-C1
J61-C1
J62-C1
J62-C1
J63-C1
2400.0 ft
2450.0 ft
2500.0 ft
2550.0 ft

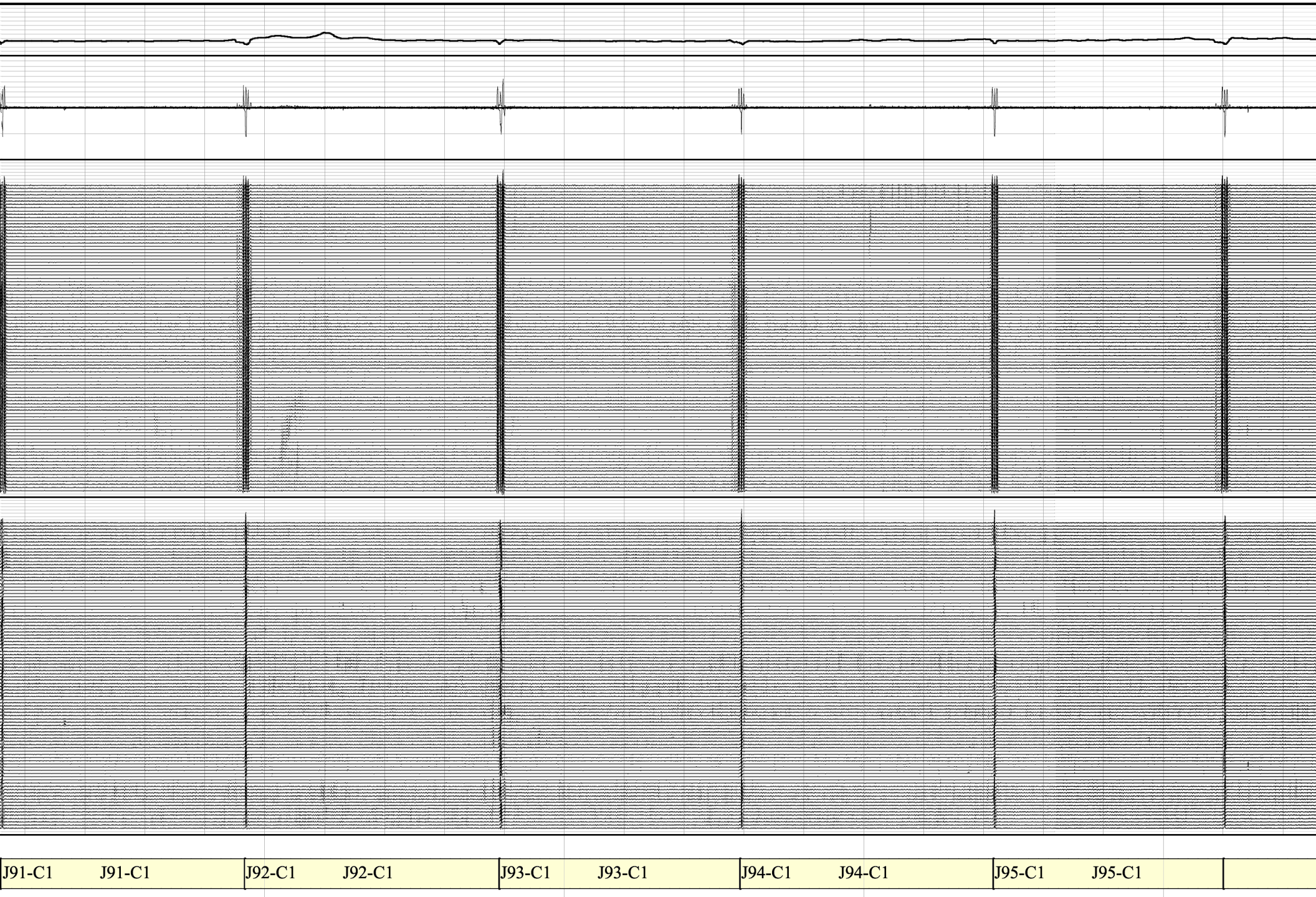

J63-C1
J64-C1
J64-C1
J65-C1
J65-C1
J66-C1
J66-C1
J67-C1
J67-C1
J68-C1
0 ft
2650.0 ft
2700.0 ft
2750.0 ft
2800.0 ft

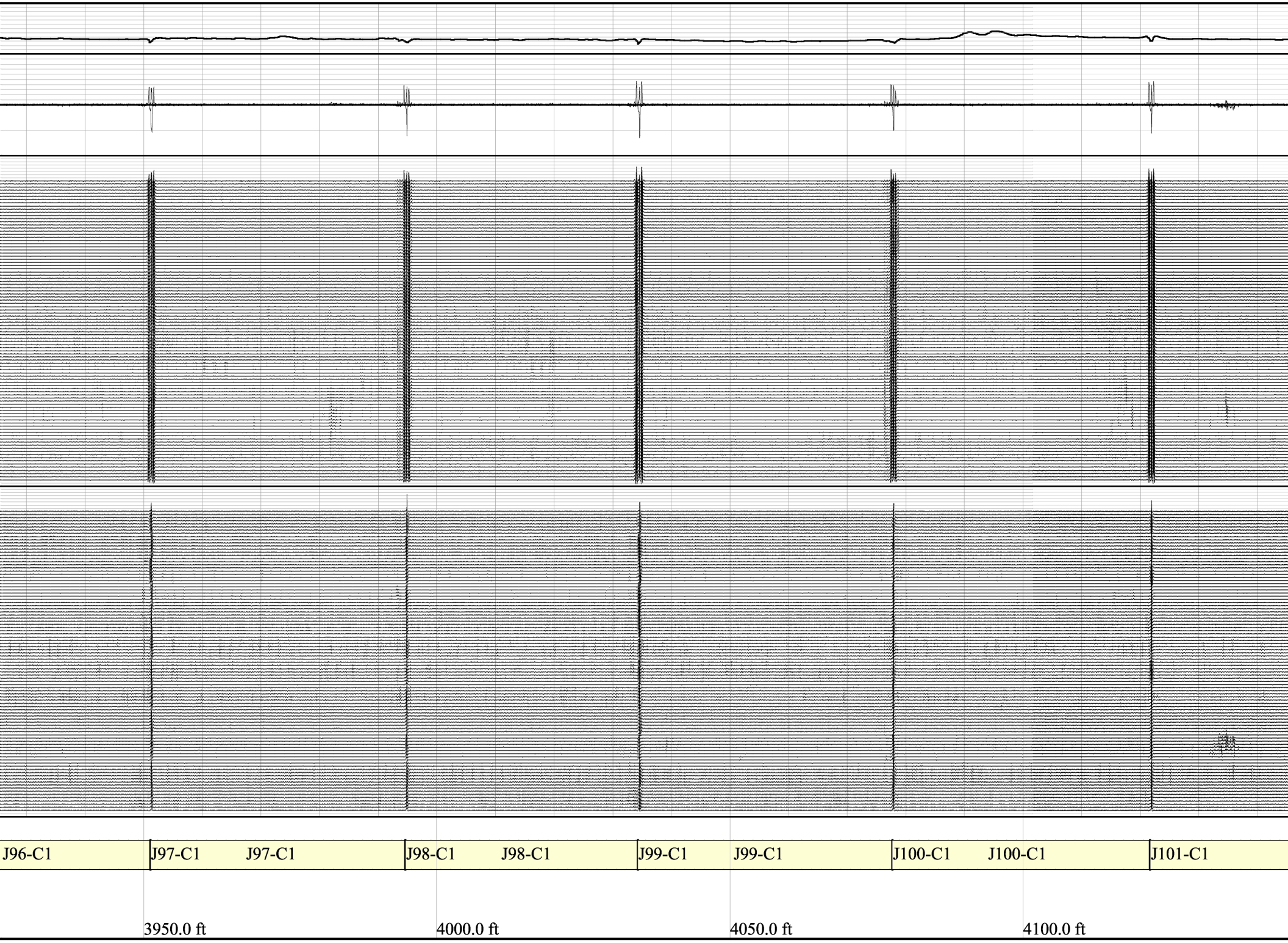

J69-C1
J69-C1
J70-C1
J70-C1
J71-C1
J71-C1
J72-C1
J72-C1
J74-C1
J74-C1
2850.0 ft
2900.0 ft
2950.0 ft
3000.0 ft

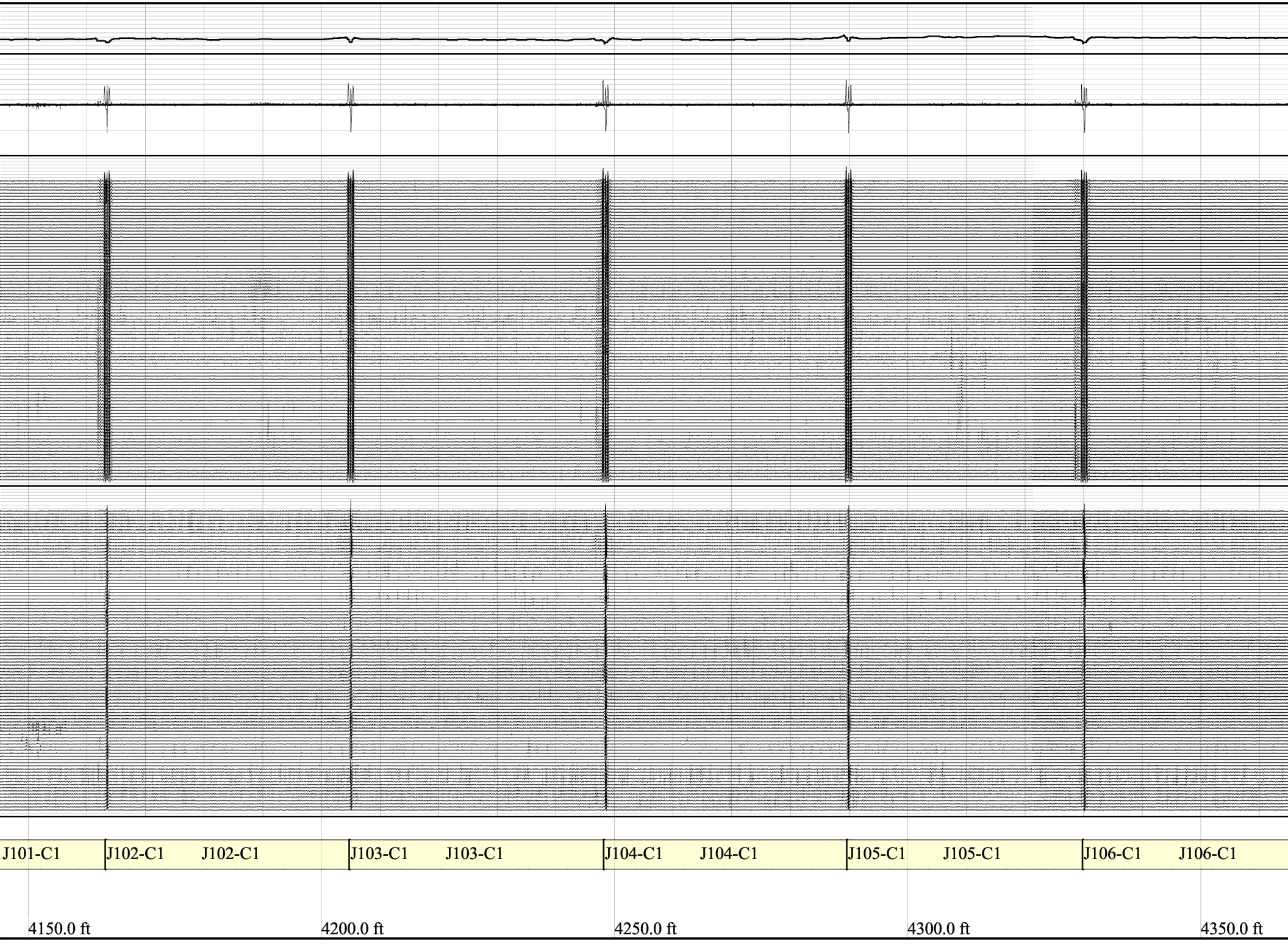

J75-C1
J75-C1
J76-C2
J76-C2
J77-C1
J77-C1
J78-C1
J78-C1
J79-C1
J79-C1
3050.0 ft
3100.0 ft
3150.0 ft
3200.0 ft
3250.0 ft

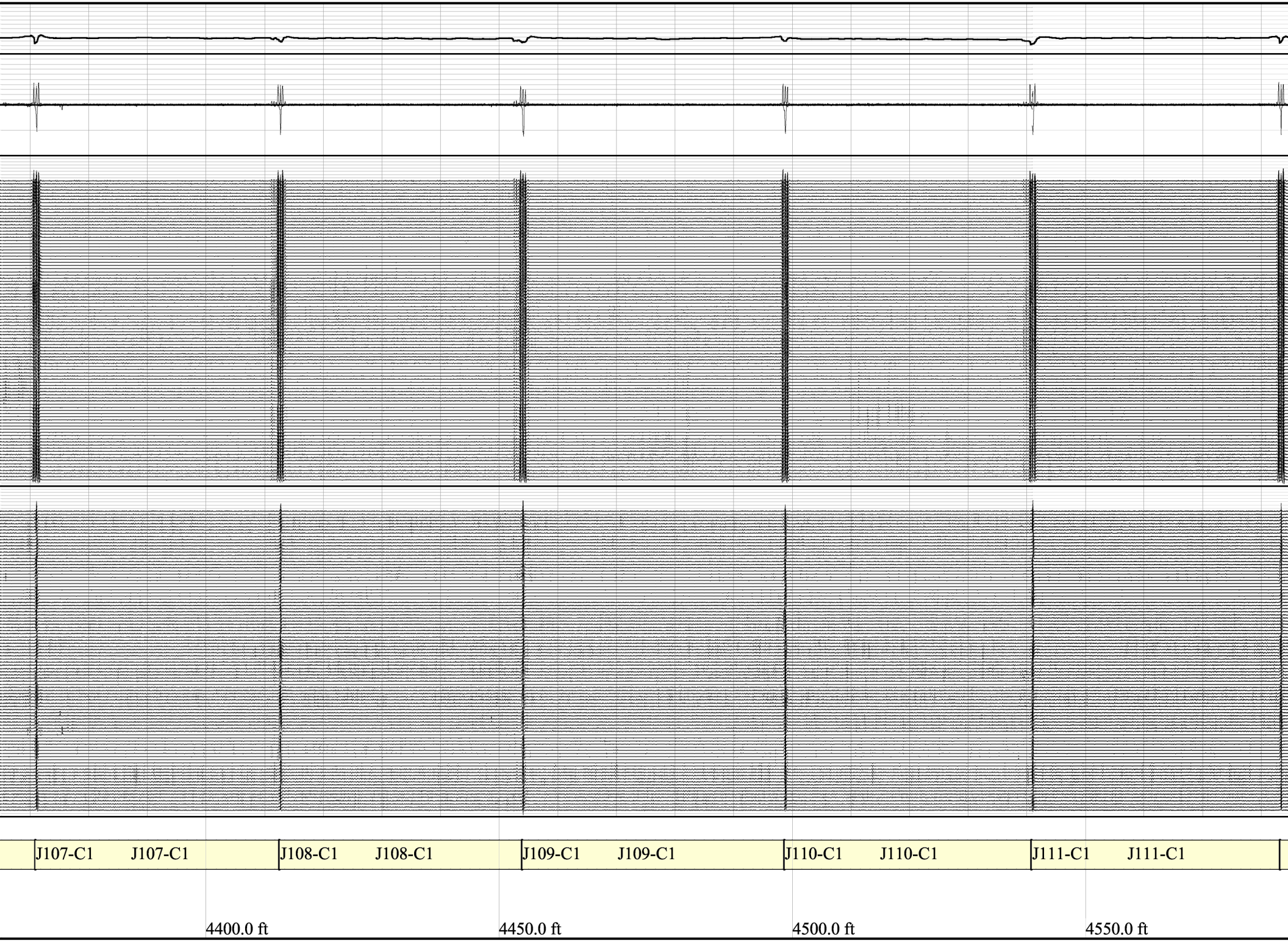

J80-C1
J81-C1
J81-C1
J82-C1
J82-C1
J83-C1
J83-C1
J84-C1
J84-C1
J85-C1
3300.0 ft
3350.0 ft
3400.0 ft
3450.0 ft

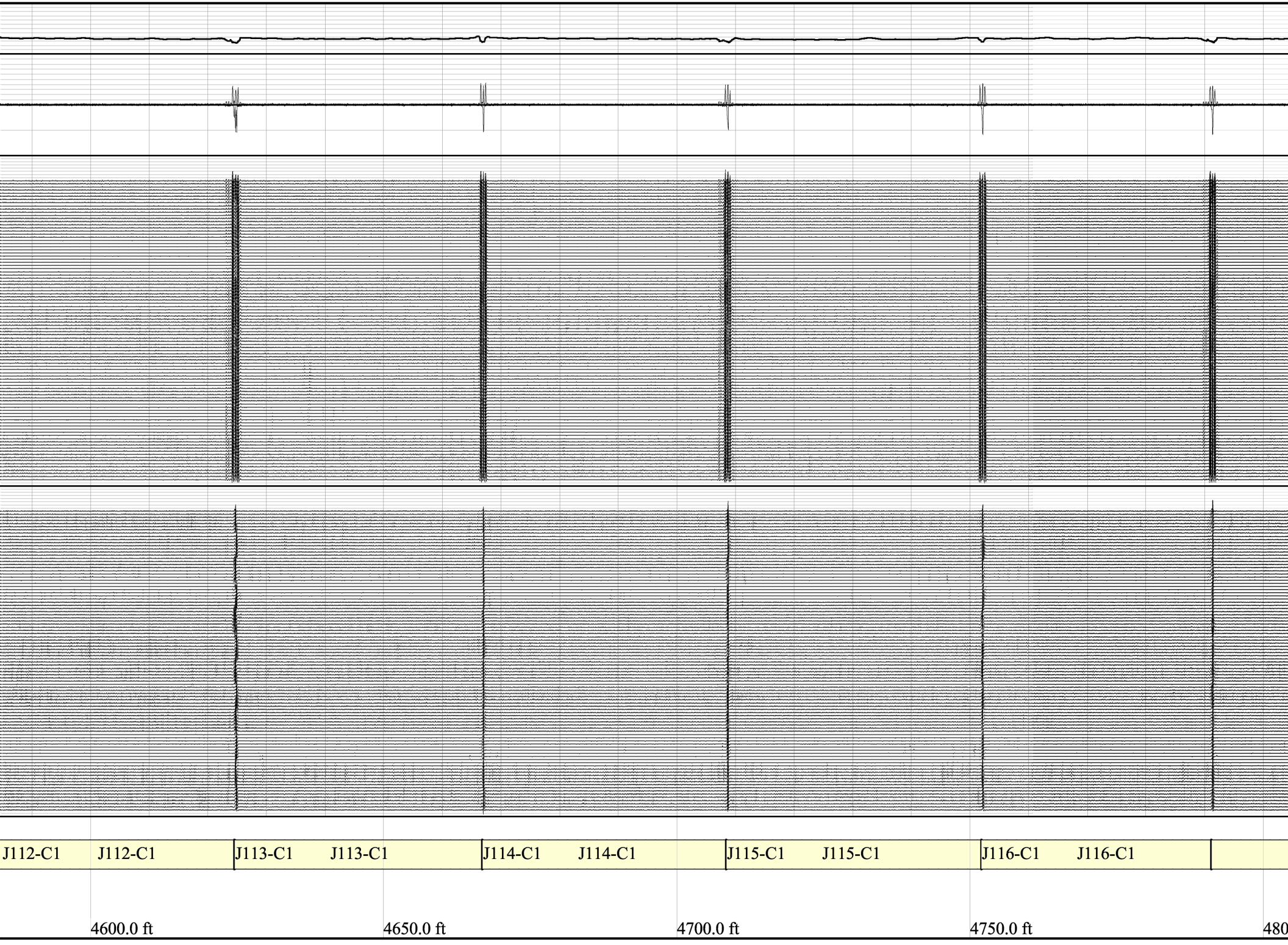

J86-C1
J86-C1
J87-C1
J87-C1
J88-C1
J88-C1
J89-C1
J89-C1
J90-C1
J90-C1
3500.0 ft
3550.0 ft
3600.0 ft
3650.0 ft
3700

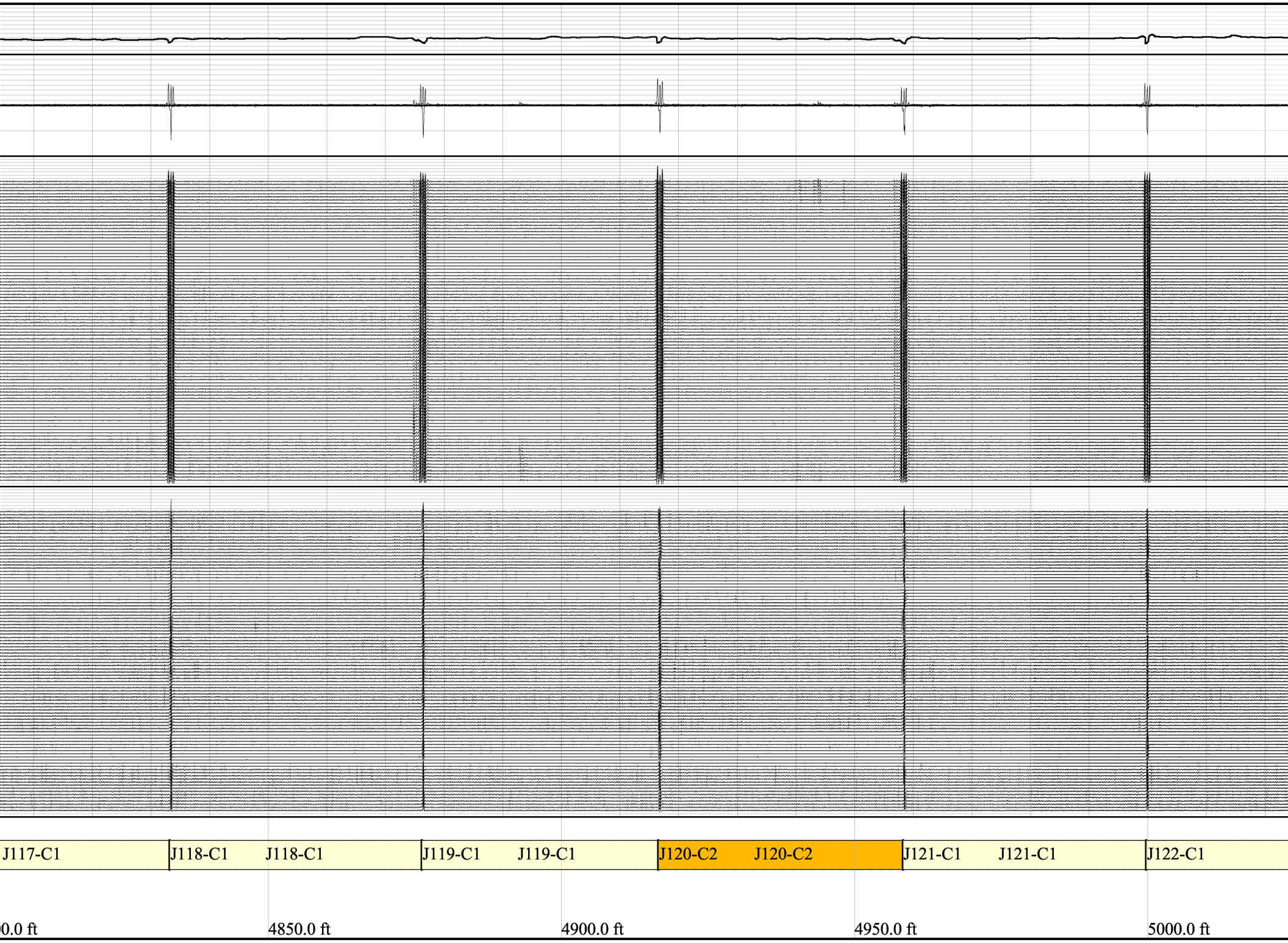

J91-C1
J91-C1
J92-C1
J92-C1
J93-C1
J93-C1
J94-C1
J94-C1
J95-C1
J95-C1
.0 ft
3750.0 ft
3800.0 ft
3850.0 ft
3900.0 ft

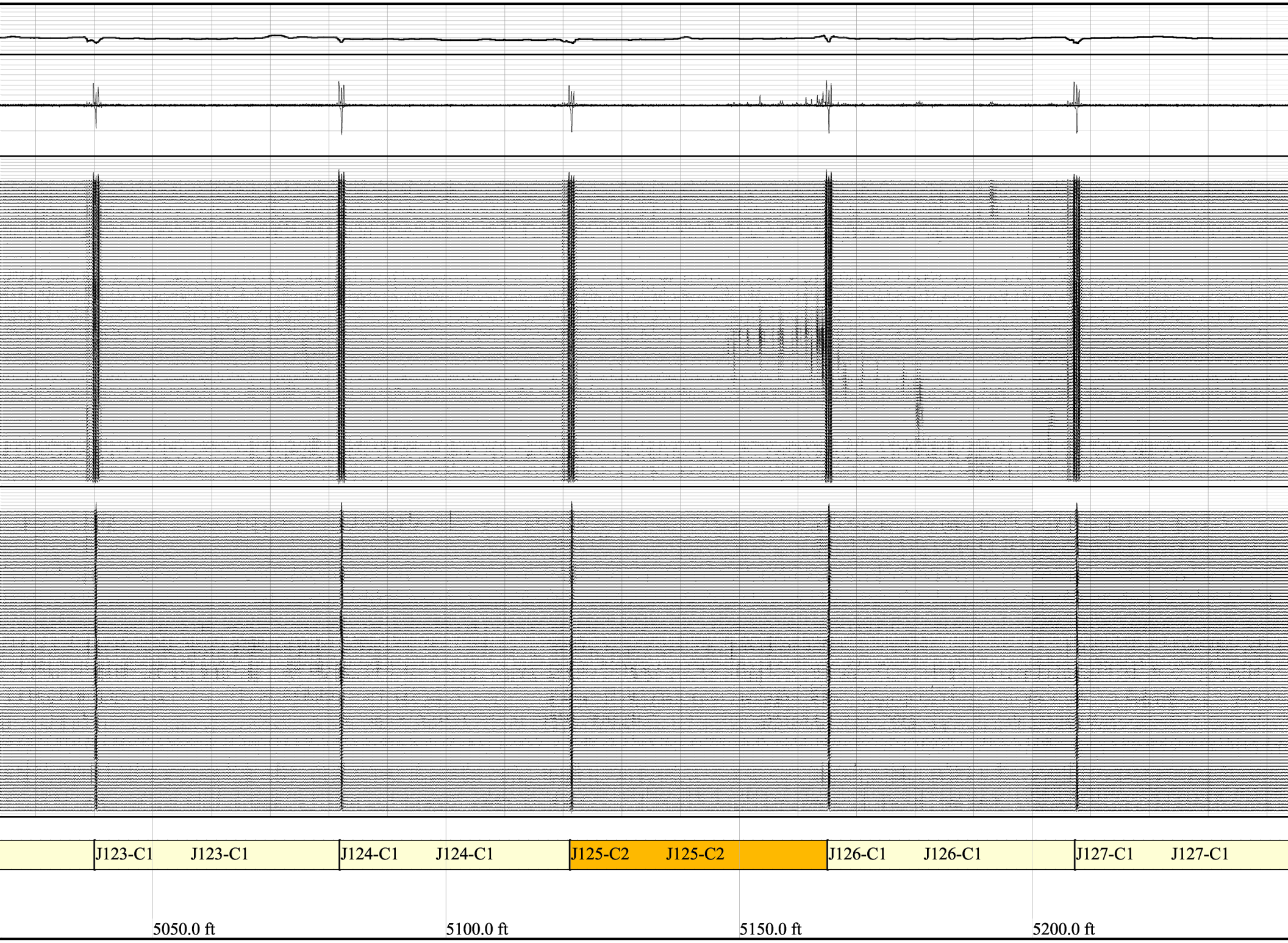

J96-C1
J97-C1
J97-C1
J98-C1
J98-C1
J99-C1
J99-C1
J100-C1
J100-C1
J101-C1
3950.0 ft
4000.0 ft
4050.0 ft
4100.0 ft

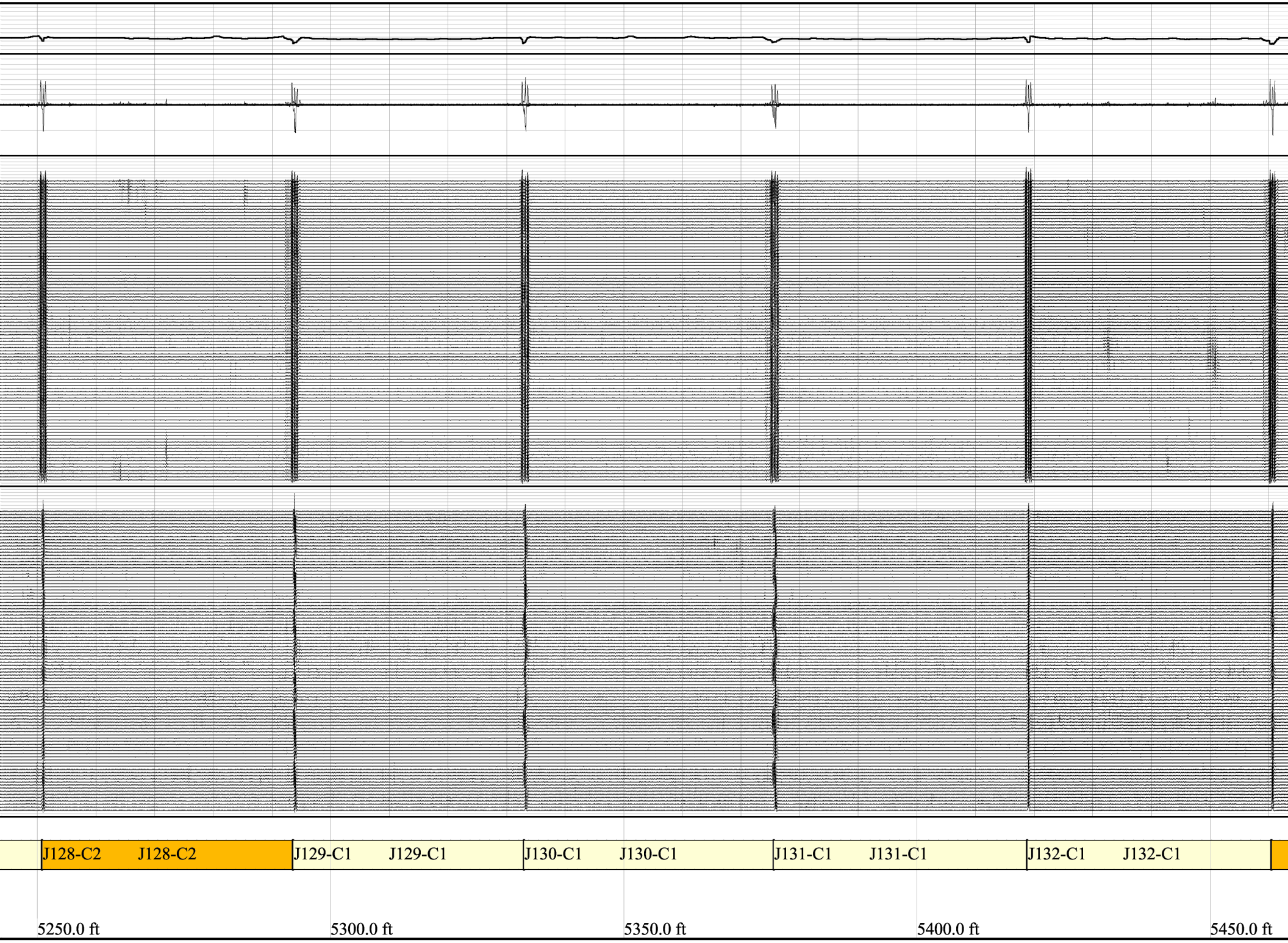

J101-C1
J102-C1
J102-C1
J103-C1
J103-C1
J104-C1
J104-C1
J105-C1
J105-C1
J106-C1
J106-C1
4150.0 ft
4200.0 ft
4250.0 ft
4300.0 ft
4350.0 ft

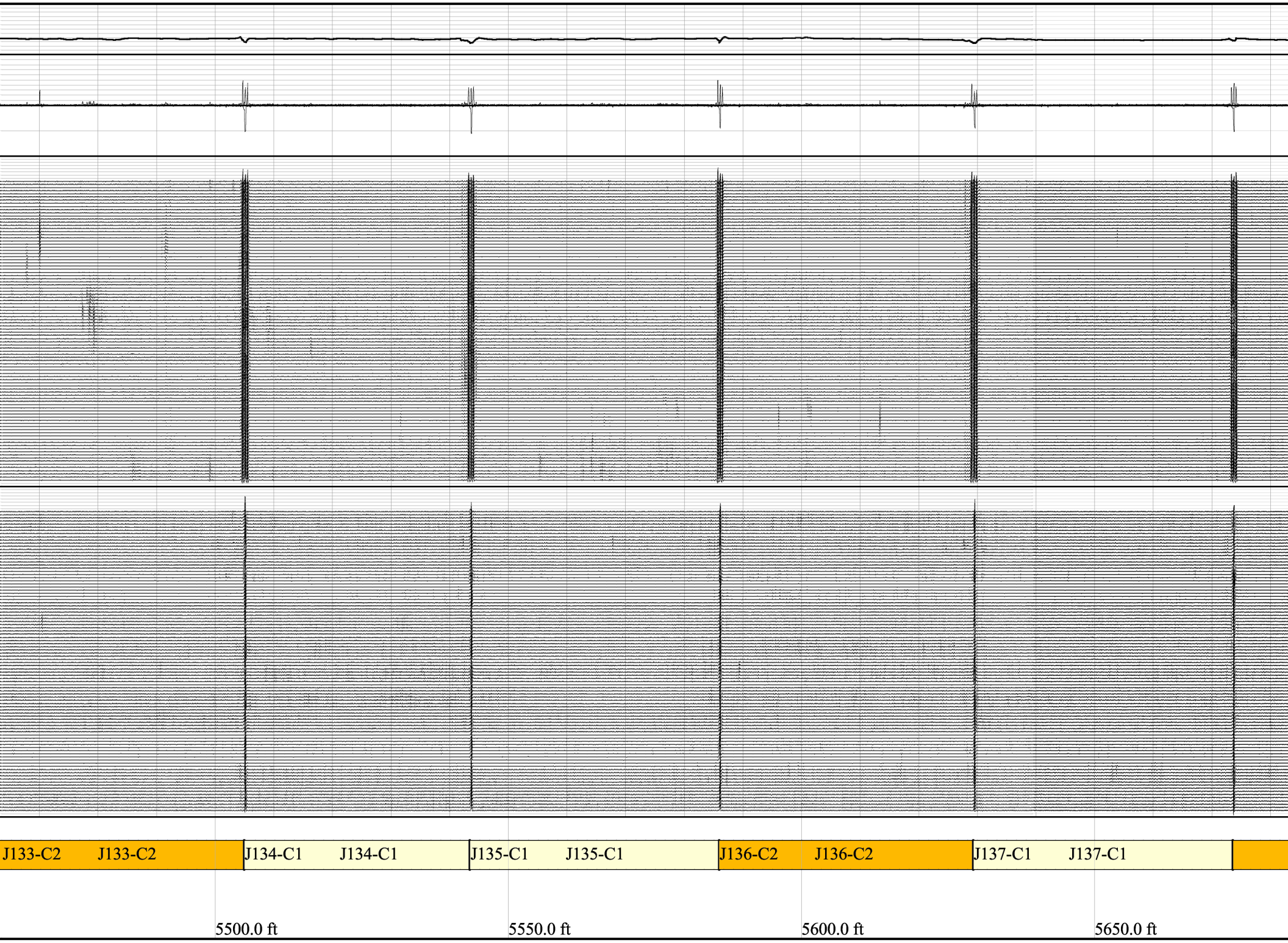

J107-C1 J107-C1
J108-C1 J108-C1
J109-C1 J109-C1
J110-C1 J110-C1
J111-C1 J111-C1
4400.0 ft
4450.0 ft
4500.0 ft
4550.0 ft

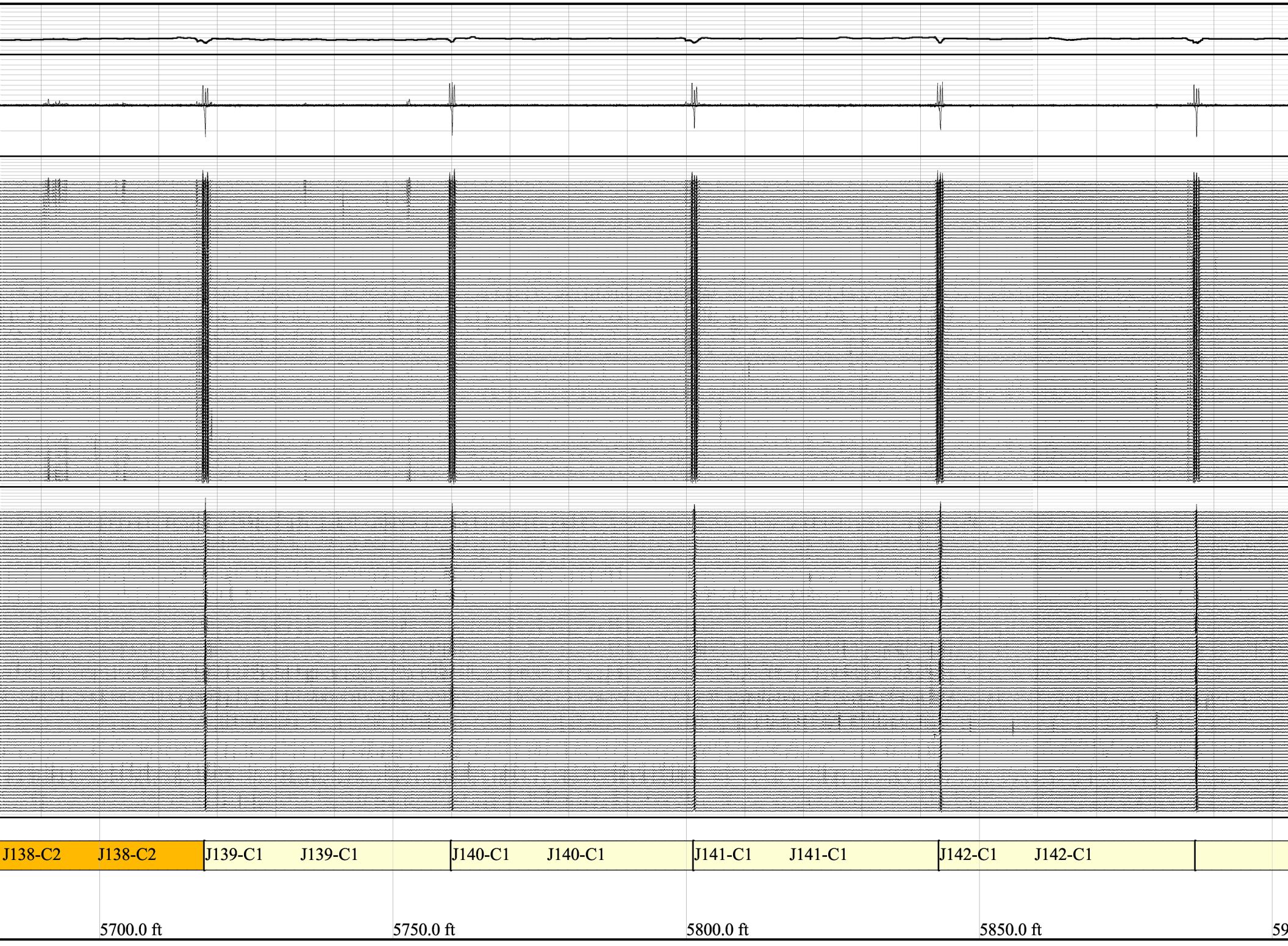

J112-C1
J112-C1
J113-C1
J113-C1
J114-C1
J114-C1
J115-C1
J115-C1
J116-C1
J116-C1
4600.0 ft
4650.0 ft
4700.0 ft
4750.0 ft
480

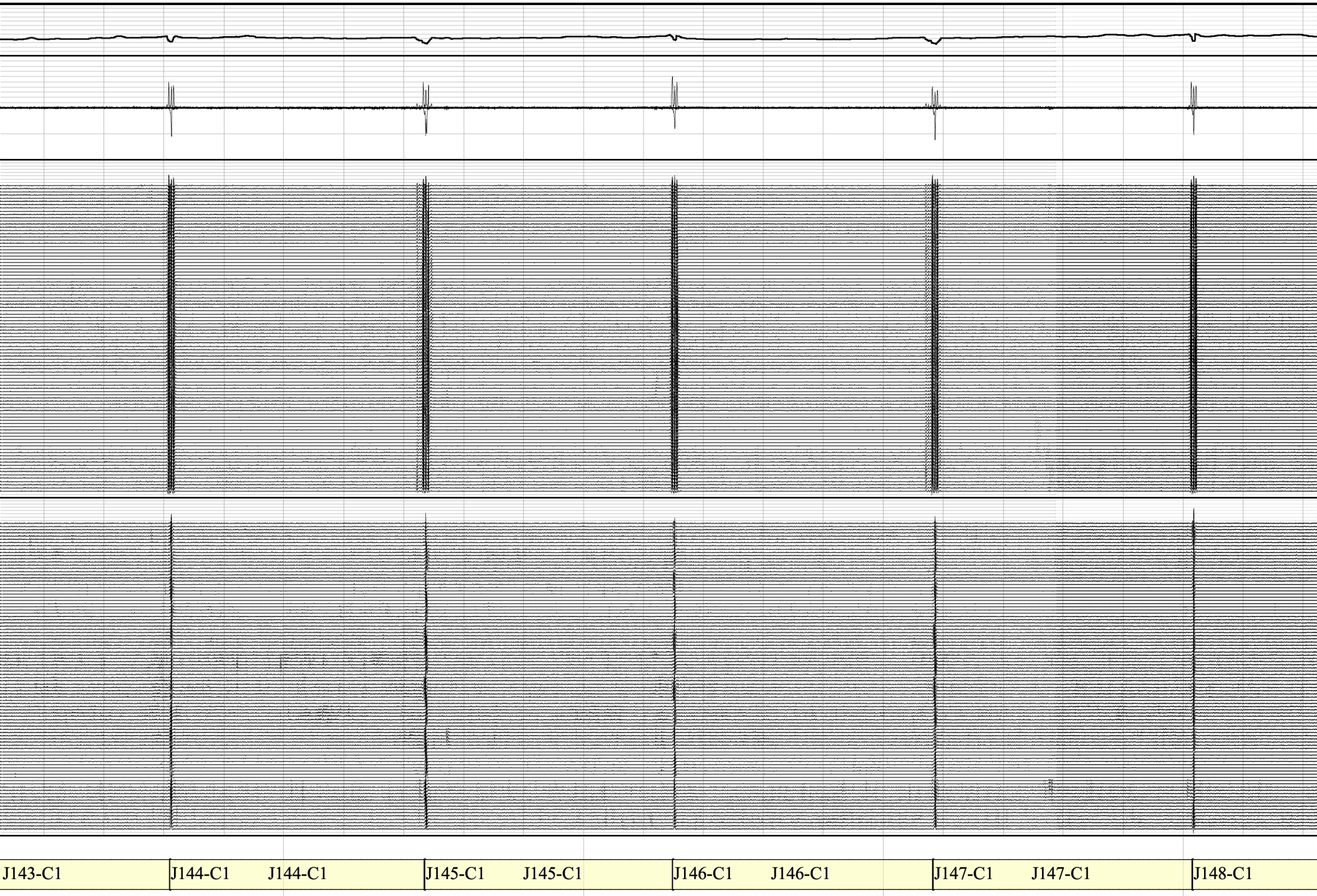

J117-C1
J118-C1
J118-C1
J119-C1
J119-C1
J120-C2
J120-C2
J121-C1
J121-C1
J122-C1
0.0 ft
4850.0 ft
4900.0 ft
4950.0 ft
5000.0 ft

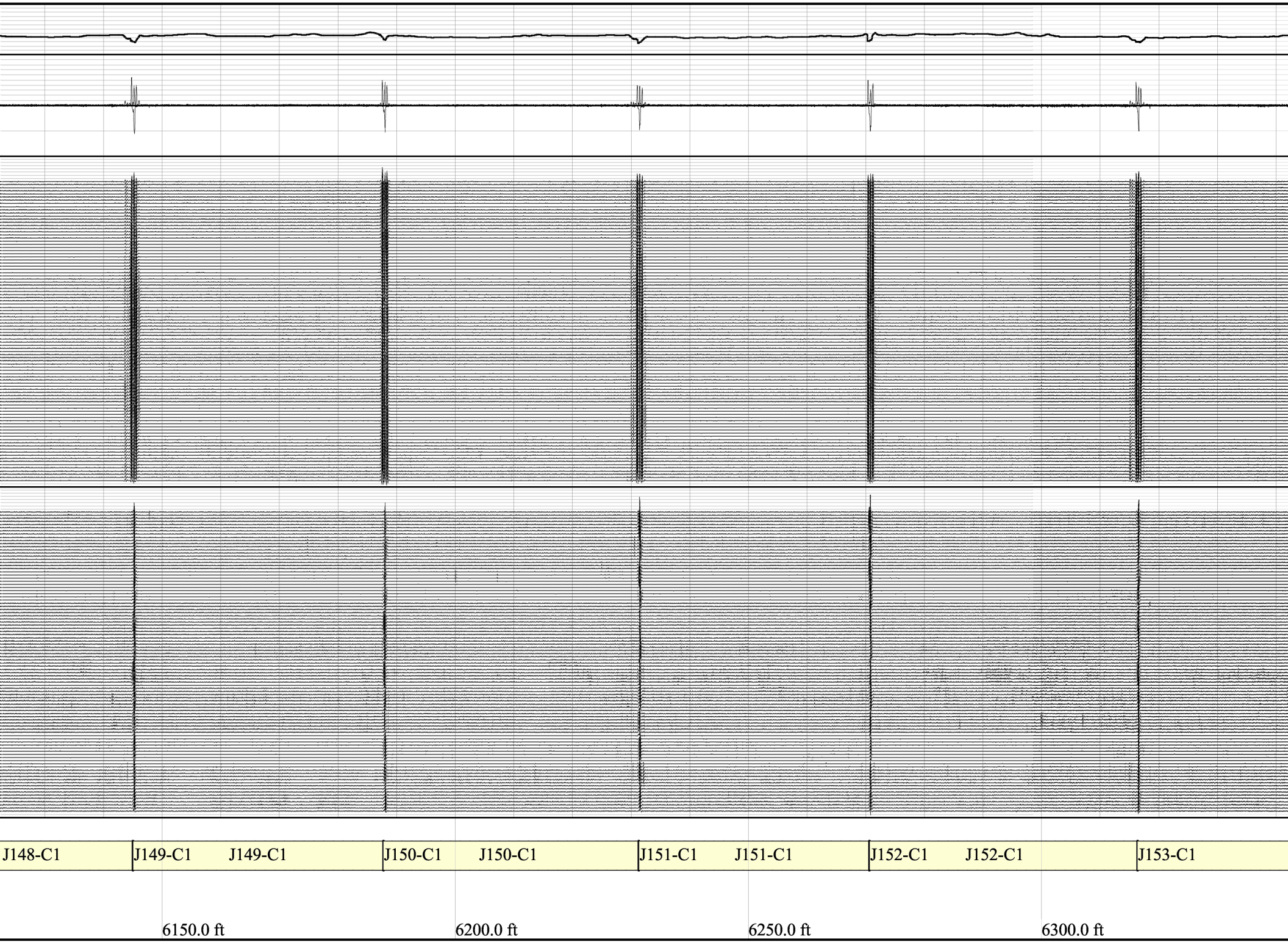

J123-C1
J123-C1
J124-C1
J124-C1
J125-C2
J125-C2
J126-C1
J126-C1
J127-C1
J127-C1
5050.0 ft
5100.0 ft
5150.0 ft
5200.0 ft

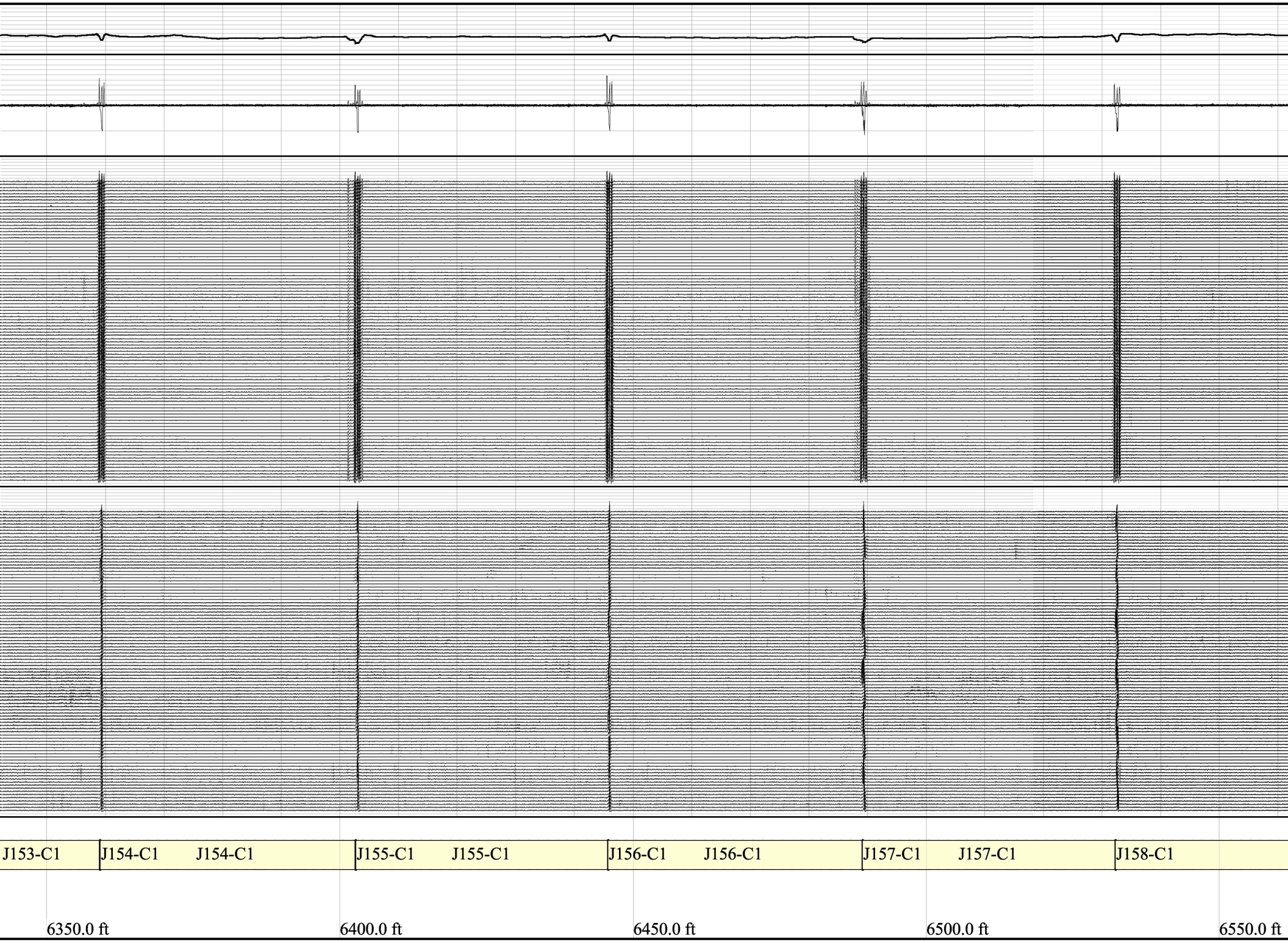

J128-C2
J128-C2
J129-C1
J129-C1
J130-C1
J130-C1
J131-C1
J131-C1
J132-C1
J132-C1
5250.0 ft
5300.0 ft
5350.0 ft
5400.0 ft
5450.0 ft

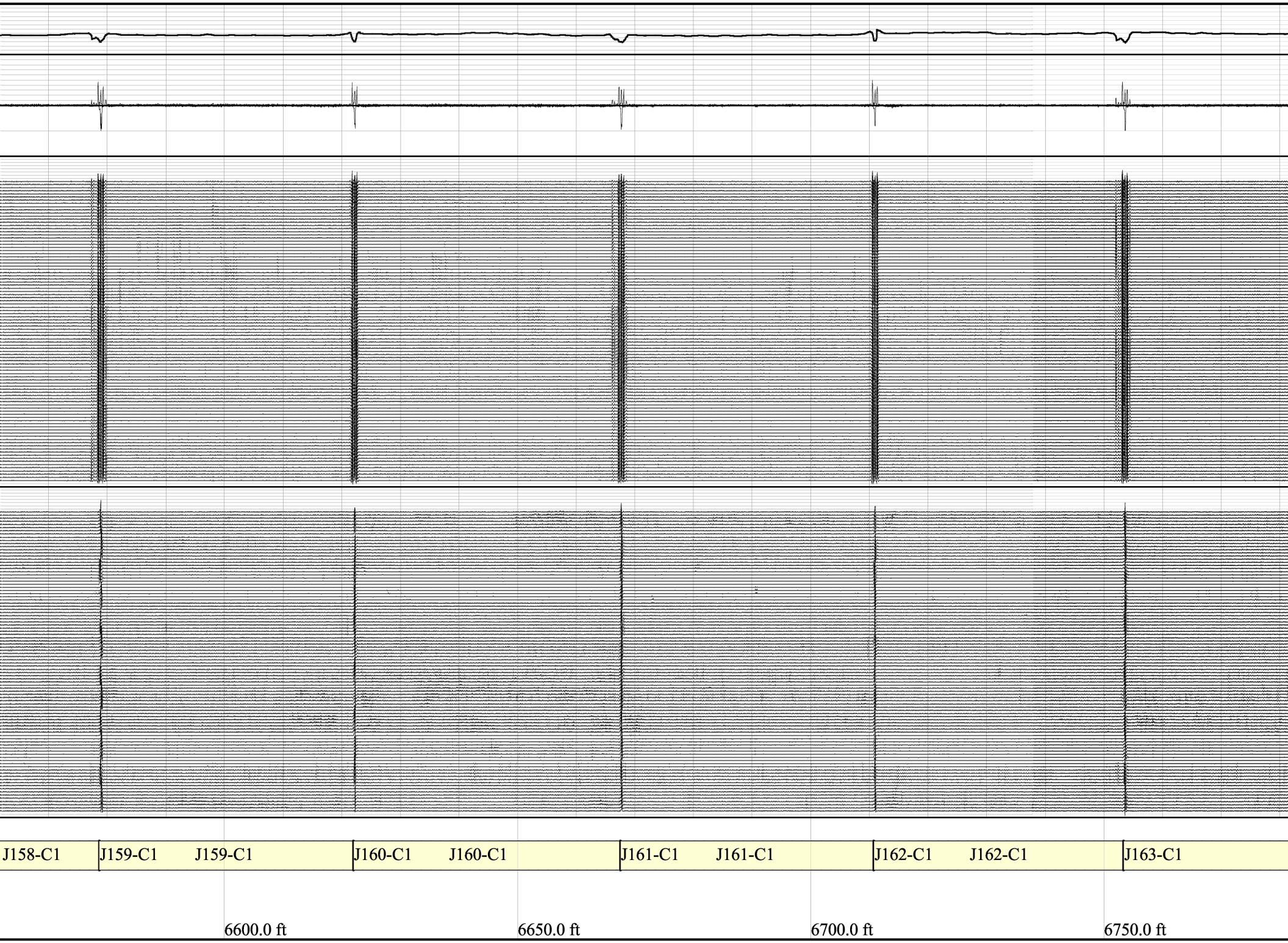

J133-C2
J133-C2
J134-C1
J134-C1
J135-C1
J135-C1
J136-C2
J136-C2
J137-C1
J137-C1
5500.0 ft
5550.0 ft
5600.0 ft
5650.0 ft


J138-C2
J138-C2
J139-C1
J139-C1
J140-C1
J140-C1
J141-C1
J141-C1
J142-C1
J142-C1
5700.0 ft
5750.0 ft
5800.0 ft
5850.0 ft
59


J143-C1
J144-C1
J144-C1
J145-C1
J145-C1
J146-C1
J146-C1
J147-C1
J147-C1
J148-C1
900.0 ft
5950.0 ft
6000.0 ft
6050.0 ft
6100.0 ft


J148-C1
J149-C1
J149-C1
J150-C1
J150-C1
J151-C1
J151-C1
J152-C1
J152-C1
J153-C1
6150.0 ft
6200.0 ft
6250.0 ft
6300.0 ft


J153-C1
J154-C1
J154-C1
J155-C1
J155-C1
J156-C1
J156-C1
J157-C1
J157-C1
J158-C1
6350.0 ft
6400.0 ft
6450.0 ft
6500.0 ft
6550.0 ft


J158-C1
J159-C1
J159-C1
J160-C1
J160-C1
J161-C1
J161-C1
J162-C1
J162-C1
J163-C1
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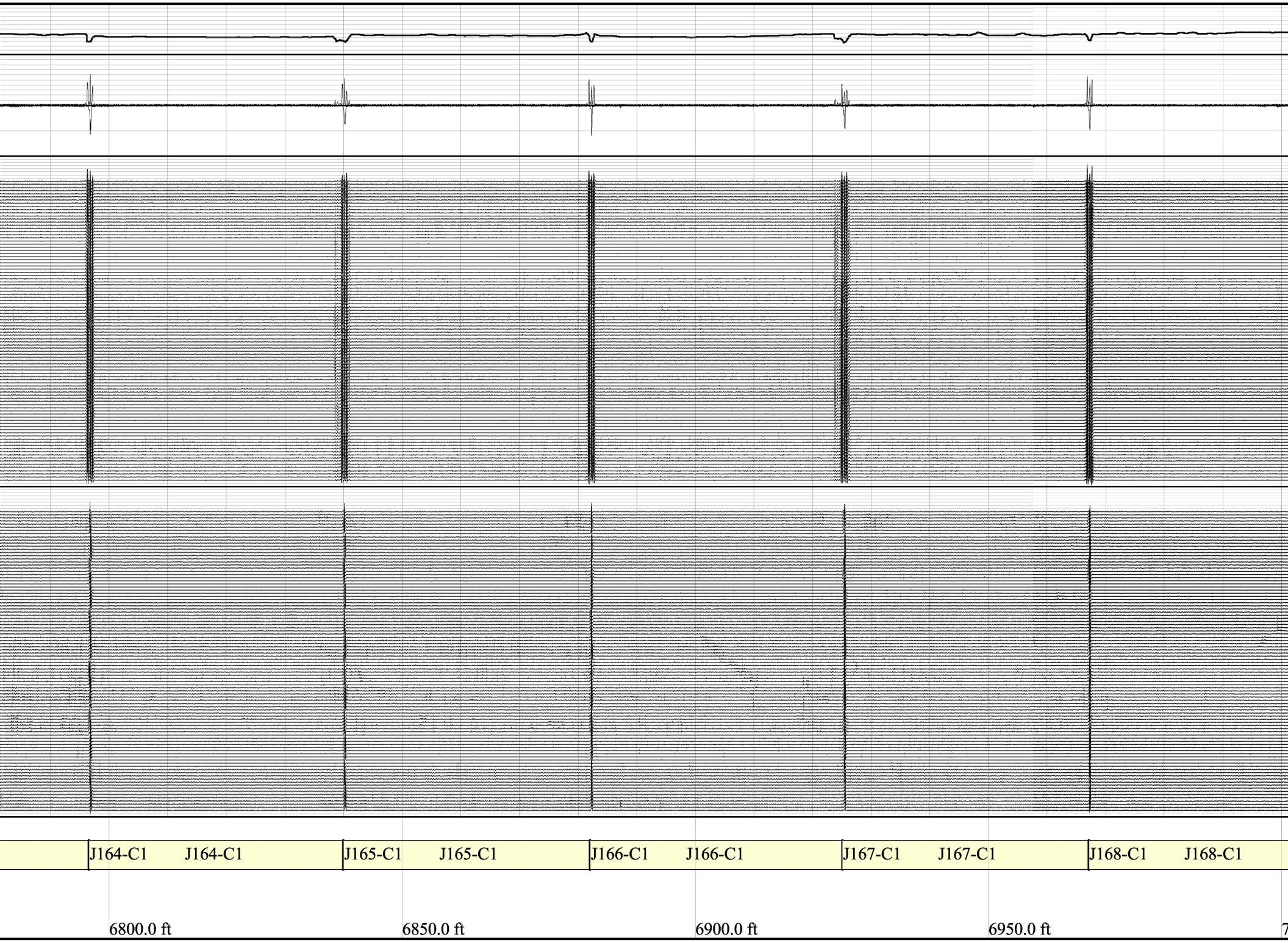
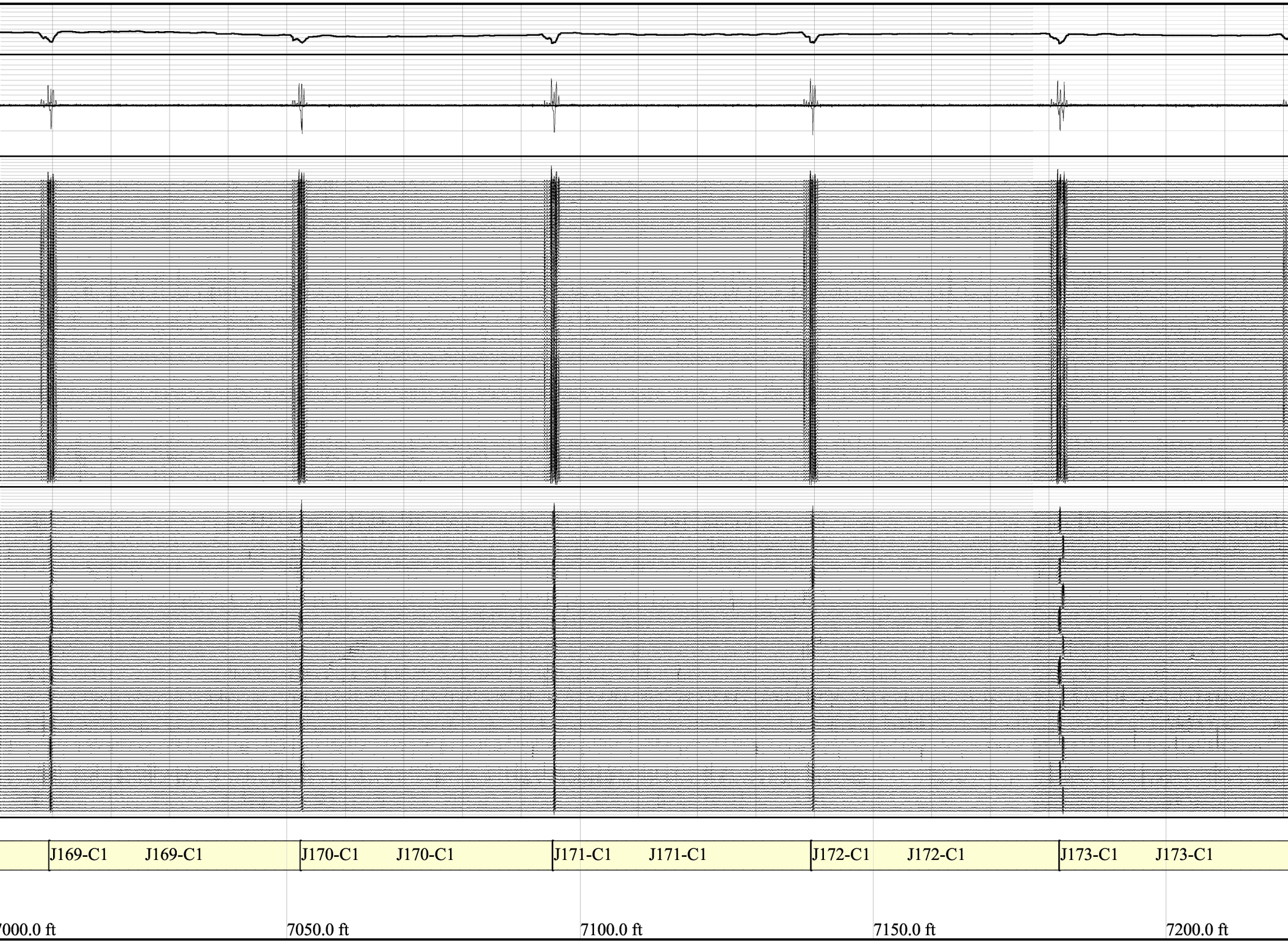
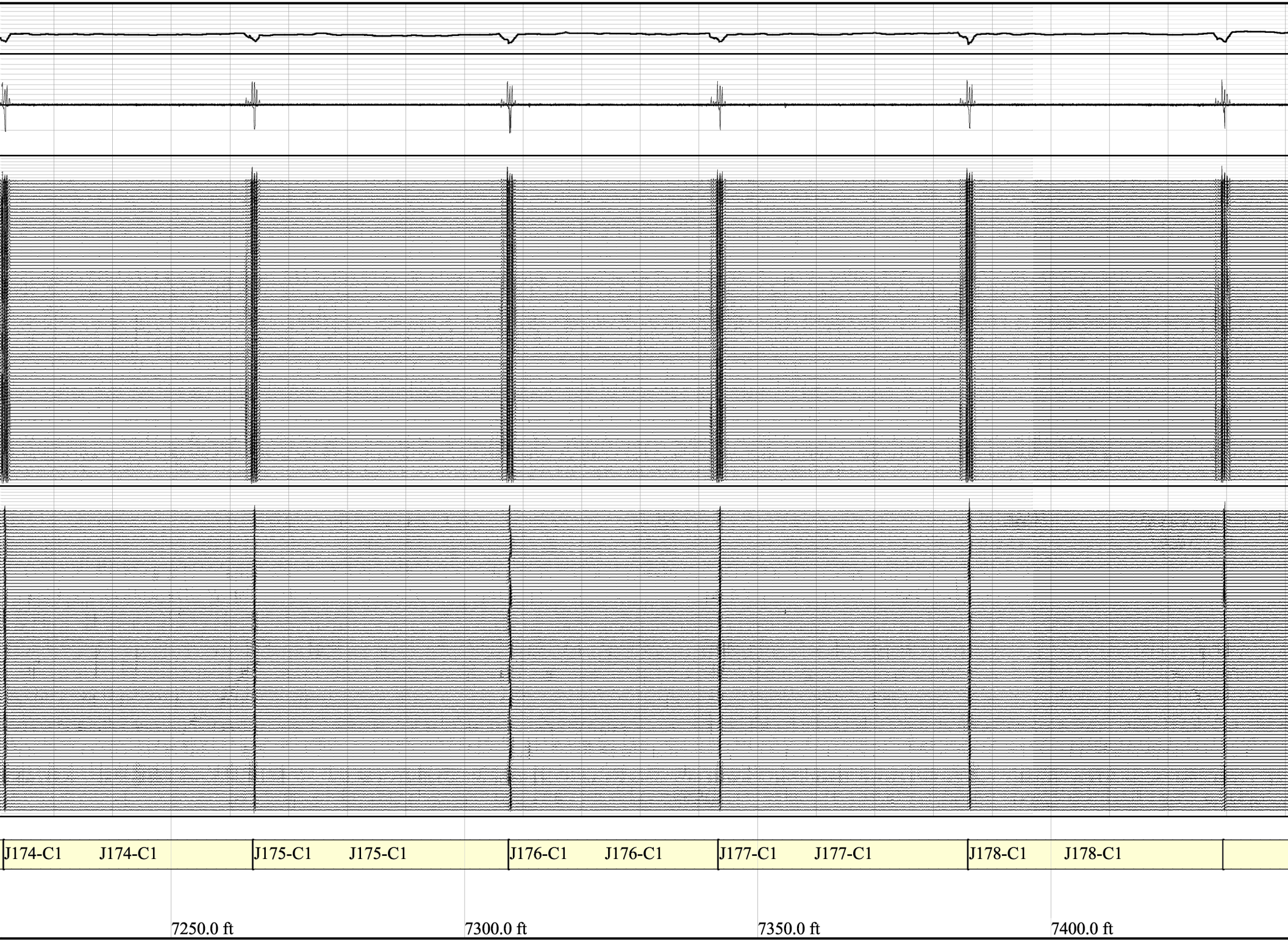
6650.0 ft
6700.0 ft
6750.0 ft


J164-C1
J164-C1
J165-C1
J165-C1
J166-C1
J166-C1
J167-C1
J167-C1
J168-C1
J168-C1
6800.0 ft
6850.0 ft
6900.0 ft
6950.0 ft


J169-C1
J169-C1
J170-C1
J170-C1
J171-C1
J171-C1
J172-C1
J172-C1
J173-C1
J173-C1
7000.0 ft
7050.0 ft
7100.0 ft
7150.0 ft
7200.0 ft


J174-C1
J174-C1
J175-C1
J175-C1
J176-C1
J176-C1
J177-C1
J177-C1
J178-C1
J178-C1
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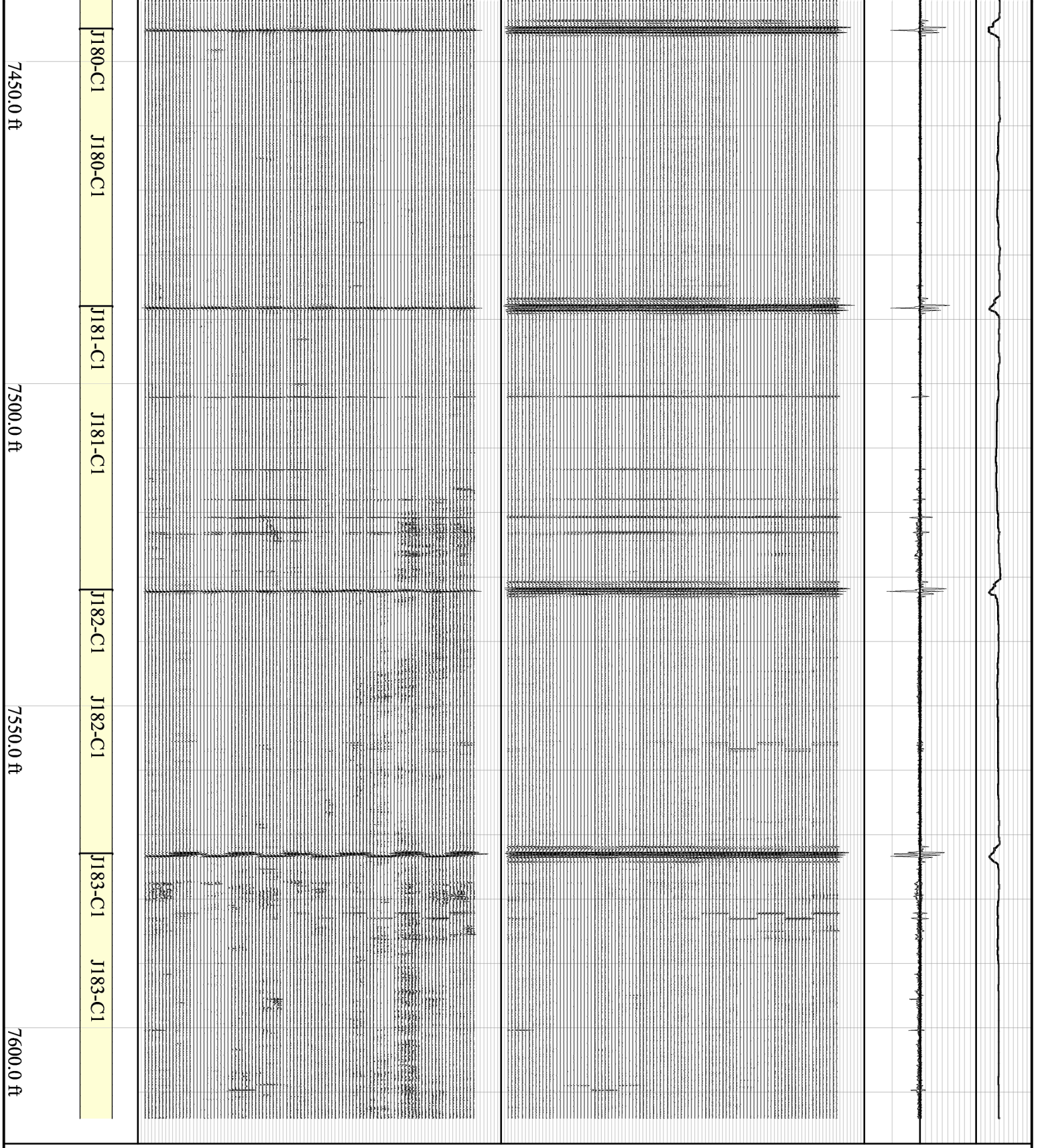
7300.0 ft
7350.0 ft
7400.0 ft



Southern California Gas Company Porter 69D

File 20160521_15392B_RSP_0_0_0_0_0_0_0.mvl

Identifier	Start Log Depth	Joint Length	Diameter	Wall Thickness	Weight	Max ML Depth	Max ML Position	Min Burst Pressure	Joint Depth Class
	ft	ft	in	in	lb/ft	%	ft	psi	
JT-1	16.56	5.94	9.625	0.472	47.0	21	21.80	8665	2
JT-2	22.50	42.83	9.625	0.472	47.0	0			1
JT-3	65.33	43.42	9.625	0.472	47.0	0			1
JT-4	108.75	45.14	9.625	0.472	47.0	0			1
JT-5	153.89	43.45	9.625	0.472	47.0	0			1
JT-6	197.34	43.88	9.625	0.472	47.0	0			1
JT-7	241.22	41.19	9.625	0.472	47.0	0			1
JT-8	282.42	43.32	9.625	0.472	47.0	0			1
JT-9	325.74	41.88	9.625	0.472	47.0	0			1
JT-10	367.62	41.94	9.625	0.472	47.0	0			1
JT-11	409.55	41.98	9.625	0.472	47.0	0			1
JT-12	451.53	40.96	9.625	0.472	47.0	0			1
JT-13	492.49	42.97	9.625	0.472	47.0	0			1
JT-14	535.46	38.69	9.625	0.472	47.0	0			1
JT-15	574.15	42.13	9.625	0.472	47.0	0			1
JT-16	616.27	43.13	9.625	0.472	47.0	0			1
JT-17	659.41	40.92	9.625	0.472	47.0	0			1
JT-18	700.33	43.37	9.625	0.472	47.0	0			1
JT-19	743.70	43.06	9.625	0.472	47.0	0			1
JT-20	786.76	40.07	9.625	0.472	47.0	0			1
JT-21	826.83	38.90	9.625	0.472	47.0	0			1
JT-22	865.73	43.21	9.625	0.472	47.0	0			1
JT-23	908.94	39.39	9.625	0.472	47.0	0			1
JT-24	948.34	41.46	9.625	0.472	47.0	0			1
JT-25	989.80	38.45	9.625	0.472	47.0	0			1
JT-26	1028.25	43.27	9.625	0.472	47.0	0			1
JT-27	1071.53	43.43	9.625	0.472	47.0	0			1
JT-28	1114.96	34.91	9.625	0.472	47.0	0			1
JT-29	1149.87	43.61	9.625	0.472	47.0	0			1
JT-30	1193.48	41.80	9.625	0.472	47.0	0			1
JT-31	1235.28	42.00	9.625	0.472	47.0	0			1
JT-32	1277.28	42.17	9.625	0.472	47.0	0			1
JT-33	1319.45	42.46	9.625	0.472	47.0	0			1
JT-34	1361.91	43.37	9.625	0.472	47.0	0			1
JT-35	1405.29	42.28	9.625	0.472	47.0	0			1
JT-36	1447.56	42.32	9.625	0.472	47.0	21	1482.85	8617	2
JT-37	1489.88	42.38	9.625	0.472	47.0	0			1
JT-38	1532.25	42.42	9.625	0.472	47.0	0			1
JT-39	1574.67	43.39	9.625	0.472	47.0	0			1
JT-40	1618.06	43.48	9.625	0.472	47.0	0			1
JT-41	1661.54	41.57	9.625	0.472	47.0	25	1684.02	8715	2
JT-42	1703.10	43.10	9.625	0.472	47.0	0			1
JT-43	1746.20	42.73	9.625	0.472	47.0	0			1
JT-44	1788.94	40.83	9.625	0.472	47.0	0			1
JT-45	1829.76	42.37	9.625	0.472	47.0	0			1
JT-46	1872.13	42.70	9.625	0.472	47.0	0			1
JT-47	1914.82	43.14	9.625	0.472	47.0	0			1
JT-48	1957.97	44.03	9.625	0.472	47.0	0			1
JT-49	2002.00	43.55	9.625	0.472	47.0	0			1
JT-50	2045.54	40.50	9.625	0.472	47.0	0			1
JT-51	2086.04	42.44	9.625	0.472	47.0	0			1
JT-52	2128.49	43.06	9.625	0.472	47.0	0			1
JT-53	2171.55	43.22	9.625	0.472	47.0	0			1
JT-54	2214.77	40.18	9.625	0.472	47.0	0			1
JT-55	2254.95	41.90	9.625	0.472	47.0	0			1
JT-56	2296.86	42.00	9.625	0.472	47.0	0			1
JT-57	2338.86	42.04	9.625	0.472	47.0	0			1
JT-58	2380.89	41.59	9.625	0.472	47.0	0			1
JT-59	2422.49	41.12	9.625	0.472	47.0	0			1
JT-60	2463.61	41.19	9.625	0.472	47.0	28	2500.19	8430	2
JT-61	2504.80	41.11	9.625	0.472	47.0	20	2512.85	8702	1
JT-62	2545.91	43.22	9.625	0.472	47.0	0			1
JT-63	2589.14	42.11	9.625	0.472	47.0	0			1
JT-64	2631.24	42.06	9.625	0.472	47.0	0			1
JT-65	2673.31	43.09	9.625	0.472	47.0	0			1
JT-66	2716.39	40.60	9.625	0.472	47.0	0			1
JT-67	2757.00	43.34	9.625	0.472	47.0	0			1
JT-68	2800.34	36.65	9.625	0.472	47.0	0			1
JT-69	2836.99	40.70	9.625	0.472	47.0	0			1
JT-70	2877.69	35.56	9.625	0.472	47.0	0			1
JT-71	2913.25	40.41	9.625	0.472	47.0	20	2950.40	8586	1
JT-72	2953.66	40.59	9.625	0.472	47.0	0			1
JT-73	2994.25	15.10	9.625	0.472	47.0	0			1
JT-74	3009.35	42.25	9.625	0.472	47.0	0			1
JT-75	3051.60	43.21	9.625	0.472	47.0	0			1
JT-76	3094.81	38.45	9.625	0.472	47.0	23	3111.26	8674	2
JT-77	3133.26	42.70	9.625	0.472	47.0	0			1
JT-78	3175.97	40.19	9.625	0.472	47.0	0			1
JT-79	3216.16	36.73	9.625	0.472	47.0	0			1
JT-80	3252.89	41.47	9.625	0.472	47.0	0			1

JT-81	3294.35	40.47	9.625	0.472	47.0	0			1
JT-82	3334.82	38.28	9.625	0.472	47.0	0			1
JT-83	3373.10	41.85	9.625	0.472	47.0	0			1
JT-84	3414.96	42.56	9.625	0.472	47.0	0			1
JT-85	3457.52	40.34	9.625	0.472	47.0	0			1
JT-86	3497.86	43.35	9.625	0.472	47.0	0			1
JT-87	3541.22	41.73	9.625	0.472	47.0	0			1
JT-88	3582.94	36.77	9.625	0.472	47.0	0			1
JT-89	3619.72	41.99	9.625	0.472	47.0	0			1
JT-90	3661.71	44.34	9.625	0.472	47.0	0			1
JT-91	3706.04	40.67	9.625	0.472	47.0	0			1
JT-92	3746.72	42.53	9.625	0.472	47.0	0			1
JT-93	3789.25	40.18	9.625	0.472	47.0	0			1
JT-94	3829.43	42.30	9.625	0.472	47.0	0			1
JT-95	3871.74	38.38	9.625	0.472	47.0	0			1
JT-96	3910.12	41.07	9.625	0.472	47.0	0			1
JT-97	3951.19	43.52	9.625	0.472	47.0	0			1
JT-98	3994.71	39.63	9.625	0.472	47.0	0			1
JT-99	4034.33	43.43	9.625	0.472	47.0	0			1
JT-100	4077.76	43.99	9.625	0.472	47.0	0			1
JT-101	4121.75	41.55	9.625	0.472	47.0	15	4134.60	8752	1
JT-102	4163.29	41.58	9.625	0.472	47.0	0			1
JT-103	4204.88	43.40	9.625	0.472	47.0	0			1
JT-104	4248.28	41.50	9.625	0.472	47.0	0			1
JT-105	4289.78	40.17	9.625	0.472	47.0	0			1
JT-106	4329.95	40.97	9.625	0.472	47.0	0			1
JT-107	4370.92	41.65	9.625	0.472	47.0	0			1
JT-108	4412.57	41.36	9.625	0.472	47.0	0			1
JT-109	4453.93	44.74	9.625	0.472	47.0	0			1
JT-110	4498.67	42.18	9.625	0.472	47.0	0			1
JT-111	4540.85	42.38	9.625	0.472	47.0	0			1
JT-112	4583.23	41.33	9.625	0.472	47.0	0			1
JT-113	4624.56	42.29	9.625	0.472	47.0	0			1
JT-114	4666.85	41.62	9.625	0.472	47.0	0			1
JT-115	4708.47	43.53	9.625	0.472	47.0	0			1
JT-116	4752.00	39.21	9.625	0.472	47.0	0			1
JT-117	4791.21	42.02	9.625	0.472	47.0	0			1
JT-118	4833.23	43.01	9.625	0.472	47.0	0			1
JT-119	4876.24	40.38	9.625	0.472	47.0	0			1
JT-120	4916.61	41.65	9.625	0.472	47.0	26	4943.65	8713	2
JT-121	4958.27	41.52	9.625	0.472	47.0	0			1
JT-122	4999.78	40.36	9.625	0.472	47.0	0			1
JT-123	5040.14	41.84	9.625	0.472	47.0	0			1
JT-124	5081.98	39.20	9.625	0.472	47.0	0			1
JT-125	5121.18	43.97	9.625	0.472	47.0	32	5164.21	8024	2
JT-126	5165.15	42.21	9.625	0.472	47.0	20	5180.33	8024	1
JT-127	5207.36	43.48	9.625	0.472	47.0	0			1
JT-128	5250.84	42.82	9.625	0.472	47.0	20	5271.82	8686	2
JT-129	5293.66	39.33	9.625	0.472	47.0	0			1
JT-130	5332.99	42.65	9.625	0.472	47.0	0			1
JT-131	5375.63	43.22	9.625	0.472	47.0	0			1
JT-132	5418.85	41.64	9.625	0.472	47.0	20	5432.58	8621	1
JT-133	5460.49	44.48	9.625	0.472	47.0	31	5469.93	8592	2
JT-134	5504.97	38.53	9.625	0.472	47.0	0			1
JT-135	5543.50	42.46	9.625	0.472	47.0	19	5555.28	8553	1
JT-136	5585.96	43.35	9.625	0.472	47.0	24	5613.24	8559	2
JT-137	5629.32	44.30	9.625	0.472	47.0	0			1
JT-138	5673.61	44.26	9.625	0.472	47.0	20	5692.39	8575	2
JT-139	5717.87	42.09	9.625	0.472	47.0	19	5741.34	8688	1
JT-140	5759.96	41.31	9.625	0.472	47.0	0			1
JT-141	5801.27	41.91	9.625	0.472	47.0	0			1
JT-142	5843.18	43.74	9.625	0.472	47.0	0			1
JT-143	5886.91	44.16	9.625	0.472	47.0	0			1
JT-144	5931.07	42.49	9.625	0.472	47.0	0			1
JT-145	5973.56	41.43	9.625	0.472	47.0	0			1
JT-146	6014.99	43.42	9.625	0.472	47.0	0			1
JT-147	6058.41	43.26	9.625	0.472	47.0	0			1
JT-148	6101.67	43.38	9.625	0.472	47.0	0			1
JT-149	6145.05	42.73	9.625	0.472	47.0	0			1
JT-150	6187.78	43.54	9.625	0.472	47.0	0			1
JT-151	6231.32	39.38	9.625	0.472	47.0	0			1
JT-152	6270.70	45.71	9.625	0.472	47.0	0			1
JT-153	6316.41	42.73	9.625	0.472	47.0	0			1
JT-154	6359.14	43.65	9.625	0.472	47.0	0			1
JT-155	6402.80	43.01	9.625	0.472	47.0	0			1
JT-156	6445.81	43.40	9.625	0.472	47.0	0			1
JT-157	6489.20	43.16	9.625	0.472	47.0	0			1
JT-158	6532.36	46.35	9.625	0.472	47.0	0			1
JT-159	6578.71	43.34	9.625	0.472	47.0	0			1
JT-160	6622.06	45.50	9.625	0.472	47.0	0			1
JT-161	6667.56	43.26	9.625	0.472	47.0	0			1
JT-162	6710.82	42.62	9.625	0.472	47.0	0			1
JT-163	6753.44	43.15	9.625	0.472	47.0	0			1
JT-164	6796.59	43.44	9.625	0.472	47.0	0			1

JT-165	6840.03	42.06	9.625	0.472	47.0	0			1
JT-166	6882.08	43.03	9.625	0.472	47.0	0			1
JT-167	6925.12	42.00	9.625	0.472	47.0	0			1
JT-168	6967.12	42.40	9.625	0.472	47.0	0			1
JT-169	7009.52	42.90	9.625	0.472	47.0	0			1
JT-170	7052.42	43.02	9.625	0.472	47.0	0			1
JT-171	7095.43	44.08	9.625	0.472	47.0	0			1
JT-172	7139.52	42.38	9.625	0.472	47.0	0			1
JT-173	7181.90	39.54	9.625	0.472	47.0	0			1
JT-174	7221.44	42.55	9.625	0.472	47.0	0			1
JT-175	7263.99	43.61	9.625	0.472	47.0	0			1
JT-176	7307.60	35.75	9.625	0.472	47.0	0			1
JT-177	7343.35	42.62	9.625	0.472	47.0	0			1
JT-178	7385.98	43.50	9.625	0.472	47.0	0			1
JT-179	7429.47	15.52	9.625	0.472	47.0	0			1
JT-180	7445.00	43.11	9.625	0.472	47.0	0			1
JT-181	7488.11	43.97	9.625	0.472	47.0	15	7520.59	8736	1
JT-182	7532.09	40.97	9.625	0.472	47.0	0			1
JT-183	7573.05	41.03	9.625	0.472	47.0	19	7584.77	8449	1