C-411 NW NE 30, 55, 95W

a

Location 1,269,155 E
649,870 N

Long Ridge #8

7023.5 Collar
Elev. 7016.1 Mahogany Marker

Drilling Depth From	Drilling Depth To	Depth Relav To M. M. From	Depth Relav To M. M. To	Assay	Core	Assay Log	Description
78	79	+29	+28				Start core at 78'9"
79	80	+28	+27	11.0			
80	81	+27	+26	13.0			
81	82	+26	+25	10.9			65° sealed fracture
82	83	+25	+24	7.4			Bedding plane at 10° with volcanic ash streak
83	84	+24	+23	15.4			Nahcolite cavity -10"
84	85	+23	+22	17.4			Weathered section
85	86	+22	+21				Recovered 8½" weathered shale
86	87	+21	+20				One piece with bedding plane
87	88	+20	+19	20.2			Sloped 35° -2'2½"
88	89	+19	+18	20.1			Weathered section - yellow color
89	90	+18	+17				Recovered 3" weathered shale -1'8"
90	91	+17	+16	14.0			½" volcanic ash pocket
91	92	+16	+15	18.2			2" volcanic ash layer
92	93	+15	+14	28.2			Vertical seam 4" volcanic ash layer
93	94	+14	+13	28.5			55° seam
94	95	+13	+12	21.4			3/4" volcanic ash layer
95	96	+12	+11	32.0			
96	97	+11	+10	44.3			½" volcanic ash layer
97	98	+10	+ 9	39.8			
98	99	+ 9	+ 8	30.2			1" volcanic ash layer ¼" volcanic ash layer
99	100	+ 8	+ 7	25.8			25° sealed fracture 75° sealed fracture
100	101	+ 7	+ 6	22.6			
101	102	+ 6	+ 5	14.7			
102	103	+ 5	+ 4	27.8			
103	104	+ 4	+ 3	21.5			
104	105	+ 3	+ 2				Weathered section - yellow -4½"
105	106	+ 2	+ 1	14.5			
106	107	+ 1	0	16.8			45° sealed fracture
107	108	0	- 1	11.7			4" volcanic ash layer Mahogany marker
108	109	- 1	- 2	11.4			
109	110	- 2	- 3	12.5			Weathered section -1½" Soda seam
110	111	- 3	- 4	13.9			¼" volcanic ash layer
111	112	- 4	- 5	35.5			
112	113	- 5	- 6	31.0			Weathered section -3½" 45° sealed fracture
113	114	- 6	- 7				

Long Ridge #8

114	115	- 7	- 8	25.1		
115	116	- 8	- 9	28.4		
116	117	- 9	-10		Weathered section - white color - recovered 2"	-9"
117	118	-10	-11	26.4	¼" volcanic ash layer ¼ gilsonite layer	
118	119	-11	-12	31.2		
119	120	-12	-13	25.1		
120	121	-13	-14	62.1		
121	122	-14	-15	77.2		
122	123	-15	-16	63.2		
123	124	-16	-17	56.6	Nahcolite cavity	-7"
124	125	-17	-18	42.5		
125	126	-18	-19	51.9		
126	127	-19	-20	43.7	1" volcanic ash layer	
127	128	-20	-21	26.2		
128	129	-21	-22	28.5		
129	130	-22	-23	37.9	Vertical sealed fracture	
130	131	-23	-24	45.6		
131	132	-24	-25	43.2		
132	133	-25	-26	21.1	Weathered section No recovery	-4½"
133	134	-26	-27	25.1		
134	135	-27	-28	25.2	Weathered section	
135	136	-28	-29	41.6	No recovery	-7"
136	137	-29	-30	40.8	Weathered section No recovery	-3½"
137	138	-30	-31	53.3		
138	139	-31	-32	48.8		
139	140	-32	-33	42.3		
140	141	-33	-34	28.1		
141	142	-34	-35	22.9		
142	143	-35	-36	28.7		
143	144	-36	-37	33.7	70° fracture	
144	145	-37	-38	18.6	Weathered section No recovery	-9"
145	146	-38	-39	22.0	60° sealed fracture	
146	147	-39	-40		Weathered section	-1'1½"
147	148	-40	-41		Recovered 4½" weathered	
148	149	-41	-42	12.8	Shale - one piece with 60° fracture	
149	150	-42	-43	25.4		
150	151	-43	-44	27.4		
151	152	-44	-45	19.1		
152	153	-45	-46	36.9	80° sealed fracture	

Long Ridge #8

153	154	-46	-47		Weathered section recovered 2½" weathered shale -9½"
154	155	-47	-48	17.0	
155	156	-48	-49	38.9	
156	157	-49	-50	37.5	
157	158	-50	-51	28.2	Nahcolite cavity -6"
158	159	-51	-52		weathered section
159	160	-52	-53		No recovery -2'3"
160	161	-53	-54	31.0	
161	162	-54	-55	33.2	¼" volcanic ash layer weathered section - recovered 1" -5"
162	163	-55	-56	40.9	
163	164	-56	-57	44.5	
164	165	-57	-58	31.3	Weathered section
165	166	-58	-59	17.8	No recovery -1'2"
166	167	-59	-60		Weathered section -2'1"
167	168	-60	-61		Recovered 3" weathered shale 60° fracture
168	169	-61	-62		
169	170	-62	-63		Probable 60° frácture - no
170	171	-63	-64		evidence of weathering -2'9"
171	172	-64	-65		60° fracture
172	173	-65	-66	23.3	Weathered section
173	174	-66	-67		Recovered 2" weathered shale -1'0"
174	175	-67	-68	15.1	Weathered section - recovered
175	176	-68	-69		1'1" weathered shale -7"
176	177	-69	-70	7.6	weathered section Dry blocked last 1" - recovered -8" Some soft weathered shale

Core drilled 98.3'

Recovered 76.1'

Lost 22.2'

77.4% recovery

C411

MADE BY
CHECKED
DATE

UNION OIL COMPANY OF CALIFORNIA
CALCULATION SHEET

W.O. No., A. F. E. No.
SHEET No.

1925 FEL, 1125 FNL
NW-NE-30-55-95W
Location 1,269,155 E
649,870 N 845

TITLE: Long Ridge #8A
Vertical Hole

7153? 7123.5 ~~7023.5~~ Collar
Elev. 7016.1 Mahogany Marker

Drilling Depth From	Drilling Depth To	Depth Relav To M. M. From	Depth Relav To M. M. To	Assay	Core	Assay Log	Description	
78	79	+29	+28				Start core at 78'9"	
79	80	+28	+27	11.0				
80	81	+27	+26	13.0				
81	82	+26	+25	10.9			65° sealed fracture	
82	83	+25	+24	8.4			Bedding plane at 10° with volcanic ash streak	
83	84	+24	+23	15.4			Nahcolite cavity	-10"
84	85	+23	+22	17.4			Weathered section	
85	86	+22	+21				Recovered 8½" weathered shale	
86	87	+21	+20				One piece with bedding plane	
87	88	+20	+19	20.2			Sloped 35°	-2'2½"
88	89	+19	+18	20.1			Weathered section - yellow color	
89	90	+18	+17				Recovered 3" weathered shale	-1'8"
90	91	+17	+16	14.0			½" volcanic ash pocket	
91	92	+16	+15	18.2			2" volcanic ash layer	
92	93	+15	+14	28.2			Vertical seam 4" volcanic ash layer	
93	94	+14	+13	28.5			55° seam	
94	95	+13	+12	21.4			3/4" volcanic ash layer	
95	96	+12	+11	32.0				
96	97	+11	+10	44.3			½" volcanic ash layer	
97	98	+10	+ 9	39.8				
98	99	+ 9	+ 8	30.2			1" volcanic ash layer ¼" volcanic ash layer	
99	100	+ 8	+ 7	25.8			25° sealed fracture 75° sealed fracture	
100	101	+ 7	+ 6	22.6				
101	102	+ 6	+ 5	14.7				
102	103	+ 5	+ 4	27.8				
103	104	+ 4	+ 3	21.5				
104	105	+ 3	+ 2				Weathered section - yellow	-4½"
105	106	+ 2	+ 1	14.5				
106	107	+ 1	0	16.8			45° sealed fracture 4" volcanic ash layer	
107	108	0	- 1	11.7			Mahogany marker	
108	109	- 1	- 2	11.4			Weathered section	-1½"
109	110	- 2	- 3	12.5			Soda seam	
110	111	- 3	- 4	13.9			¼" volcanic ash layer	
111	112	- 4	- 5	35.5				
112	113	- 5	- 6	31.0			Weathered section 45° sealed fracture	-3½"
113	114	- 6	- 7					

114	115	- 7	- 8	25.1	
115	116	- 8	- 9	28.4	
116	117	- 9	-10		Weathered section - white color - recovered 2" -9"
117	118	-10	-11	26.4	¼" volcanic ash layer ¼ gilsonite layer
118	119	-11	-12	31.2	
119	120	-12	-13	25.1	
120	121	-13	-14	62.1	
121	122	-14	-15	72.2	
122	123	-15	-16	63.2	
123	124	-16	-17	56.6	Nahcolite cavity -7"
124	125	-17	-18	42.5	
125	126	-18	-19	51.9	
126	127	-19	-20	43.7	1" volcanic ash layer
127	128	-20	-21	26.2	
128	129	-21	-22	28.5	
129	130	-22	-23	37.9	Vertical sealed fracture
130	131	-23	-24	45.6	
131	132	-24	-25	43.2	
132	133	-25	-26	31.1	Weathered section No recovery -4½"
133	134	-26	-27	25.1	
134	135	-27	-28	25.2	Weathered section
135	136	-28	-29	41.6	No recovery -7"
136	137	-29	-30	40.8	Weathered section No recovery -3½"
137	138	-30	-31	53.3	
138	139	-31	-32	48.8	
139	140	-32	-33	42.3	
140	141	-33	-34	28.1	
141	142	-34	-35	22.9	
142	143	-35	-36	28.7	
143	144	-36	-37	33.7	70° fracture
144	145	-37	-38	18.6	Weathered section -9" No recovery
145	146	-38	-39	22.0	60° sealed fracture
146	147	-39	-40		Weathered section -1'1½"
147	148	-40	-41		Recovered 4½" weathered
148	149	-41	-42	12.8	Shale - one piece with 60° fracture
149	150	-42	-43	25.4	
150	151	-43	-44	27.4	
151	152	-44	-45	19.1	
152	153	-45	-46	36.9	80° sealed fracture

MADE BY 8A-C
CHECKED BY
DATE
UNION OIL COMPANY OF CALIFORNIA
CALCULATION SHEET
TITLE Long Ridge #8
W.O. No./A. F. E. No.
SHEETS SHEET No. 3

153	154	-46	-47		Weathered section recovered 2½" weathered shale -9½"
154	155	-47	-48	17.0	
155	156	-48	-49	38.9	
156	157	-49	-50	37.5	
157	158	-50	-51	28.2	Nahcolite cavity -6"
158	159	-51	-52		Weathered section
159	160	-52	-53		No recovery -2'3"
160	161	-53	-54	31.0	
161	162	-54	-55	33.2	¼" volcanic ash layer Weathered section - recovered 1" -5"
162	163	-55	-56	40.9	
163	164	-56	-57	44.5	
164	165	-57	-58	31.3	Weathered section
165	166	-58	-59	17.8	No recovery -1'2"
166	167	-59	-60		Weathered section -2'1"
167	168	-60	-61		Recovered 3" weathered shale 60° fracture
168	169	-61	-62		
169	170	-62	-63		Probable 60° fracture - no
170	171	-63	-64		evidence of weathering -2'9"
171	172	-64	-65		60° fracture
172	173	-65	-66	23.3	Weathered section
173	174	-66	-67		Recovered 2" weathered shale -1'0"
174	175	-67	-68	15.1	Weathered section - recovered
175	176	-68	-69		1'1" weathered shale -7" weathered section
176	177	-69	-70	7.6	Dry blocked last 1" - recovered -8" Some soft weathered shale

Core drilled 98.3'

Recovered 76.1'

Lost 22.2'

77.4% recovery