C310

CORE HOLE NO. 42X-10
Sec 10, T 2 S, R 100 W
Rio Blanco Co., Colorado

Shale Oil Core Hole No. 42X-10

Box No.	Footage	Description
1	20-28	20-29, light brown marlstone, wavy bedded.
2	28-36	29-30, fine grained light brown sandstone.
3	36-44	30-31'7", light brown marlstone, wavy bedded.
4	44-52	31'7"-32'1", sandstone - med grained yellowish brown.
5	52-60	32'1"-60', wavy bedded marlstone, light grey to grey and light brown, and siltstone light grey to grey and light brown. Some interbedded dark brown medium grained sandstone.
6	60-68	60-84, fine to medium grained, buff to light grey grading into limey or dolomitic fine grained sandstone.
7	68-76	Some wavy marlstone beds.
8	76-84	
9	84-92	84-90, fine to medium grained buff to light grey sandstone. Some wavy bedded marlstone. 90-91'3", light grey to grey marlstone. 91'3"-92, light grey to buff marlstone and fine grained sandstone, limey or dolomitic.
10	92-100	92-103, light grey to light brown marlstone, laminations are wavy. Interval contains several thin beds less than 1/4" of nocholite.
11	100-108	A prominent nocholite zone occurs at 97'10"-98. Brown and grey marlstone becomes deeper in color towards bottom of interval. 103-106, wavy and distorted bedding, light grey to light brown marlstone. 106-108, light brown marlstone and limey siltstone.
12	108-116	108-116, grayish brown to grey marlstone.
13	116-124	116-124, grey to brownish grey marlstone, 1" tuff bed at 117.5.
14	124-132	124-132, light brown to brown and light grey to grey marlstone, darker in color in upper 1-1/2'. 1/2" tuff at 125'7".

15	132-140	132-140, light brown to light grey to grey marlstone. 1/2" tuff at 133'4", 1/2" tuff at 136'2".
16	140-148	140-148, light brown to light grey marlstone. 1/2" tuff at 142'.
		Core above this point examined and described by R. W. Roberts.
		Core between this point (Box No. 17-80) examined by R. W. Roberts - re-examined by Powell and Beard. (Powell and Beard examined by density).
17	148-156	148-156, dark medium, tuff at 153'2".
18	156-164	156-164, dark medium.
19	164-172	164-172, medium w/occasional dark streak.
20	172-180	172-180, medium, 1/2" tuff at 176' and 1" tuff at 177'6".
21	180-188	180-188, medium.
22	188-196	188-196, medium w/occasional streak of light and dark 1/2" tuff at 189'1" and 1" tuff at 194'6".
23	196-204	196-204, medium, distorted bedding 198'-201'.
24	204-212	204-212, medium, w/occasional streak of light some thin tuff beds.
25	212-220	212-220, medium. 1-1/2" tuff at 221'4".
26	220-228	220-228, medium w/occasional streak medium dark some thin tuff beds.
27	228-236	228-233, medium. 233-234, medium dark. 234-236, medium, 1/2" tuff at 232'8".
28	236-243	236-41.75, medium. 241.75-42.5, dark. 242.5-43, medium.
29	243-251	243-51, medium.
30	252-259	251-56, medium dark. 256-59.5, medium w/occasional dark streak.
31	260-265	259.5-65, medium, some thin tuff beds.
32	265-273	265-73, medium to medium dark, 1/2" tuff at 278 (?).

33	273-281	273-74.5, medium. 274.5-75.5, medium to dark. 275.5-81, medium. Some thin tuff beds.
34	281-289	281-81.9, Core Lost. 281.9-85, medium to dark. 285-85.5, dark. 285.5-86.5, medium to dark. 286.5-89, medium.
35	289-297	289-94, medium, 1" tuff at 293'6". 294-95.5, medium to dark, 1/2" tuff at 294'8". 295.5-97, medium. Other thin tuff beds in interval.
36	297-305	297-05, medium tending toward light.
37	305-313	305-13, medium tending toward light. 304-09, interbedded light brown to grey siltstone, limey or dolomitic siltstone. 309'8"-310'9". Wavy bedded marlstone, siltstone and tuff. 310'9"-312', marlstone, siltstone, tuff. 312-13, wavy bedded marlstone, siltstone (?) tuff.
38	313-321	313-16, light w/medium streaks - wavy bedded. 316-21, medium, 1" tuff at 318'8"-1/2" tuff at 320'9".
39	321-329	321-29, medium, 4" tuff at 323'. 324-25, distorted bedding.
40	329-337	329-37, medium.
41	337-345	337-40, medium, increasing to medium dark at 340'. 340-41, dark. 341-45, medium to light.
42	345-353	345-47, light. 347-49, medium. 349-53, medium to dark.
43	353-361	353-55, medium to dark, 2" tuff at 354'. 355-56, medium. 356-61, medium to light 1" tuff at 357'3".
44	361-369	361-63, light. 363-66, medium w/occasional light streaks. 366-67, light. 367-69, medium to light, 1" tuff at 367'10".

45	369-377	369-77, light w/occasional streak medium in lower half of footage. (some limey or dolomitic siltstone), 2" tuff at 373'2".
46	377-385	377-85, light.
47	385-393	385-86, medium to light. 386-87, light, 3" brown tuff at 386'6". 387-93, medium w/occasional streak of medium dark. 1/2" tuff at 389'6". 1" tuff at 390', 1" tuff at 392'4". 1/2" tuff at 392'7".
48	393-401	393-01, medium to medium dark, 393-94 many 1/4" to 1/2" tuff beds. 6" tuff at 394'.
49	401-409	401-09, medium to medium dark. 1" tuff at 405'6".
50	409-417	409-15.3, medium to dark. 1/2" tuff at 413'6". 2" tuff at 413'8". 415.3-15.5, tuff (possible same as one noted above). 415.5-17, medium to dark.
51	417-425	417-25, medium. Nocholite zone 423'8" - 423'10".
52	422-425	422-24, medium. 424-25.5, dark.
		Three feet duplicated boxes No. 51 and 52. Error in double depth from unknown source. Unable to trace down and correct. From this depth down everything seems to check out and be correct depths.
53	426-433	425.5-26.5, medium to dark. 426.5-33, medium. 2" tuff at 426'5" - 1/2" tuff at 427'9".
54	434-440	433-37, medium to medium dark. 437-38.5, wavy bed. 438.5-41, medium.
55	441-448	441-43, medium. 443-44, medium to dark. 444-46, medium. 446-49, medium to dark.
56	449-456	449-56.5, medium.
57	457-464	456.5-64.2, medium.

58	465-471	464.2-468, medium. 468-70, medium dark to dark. 470-71.5, medium. Vertical fracture 469.5-471, calcite filled.
59	472-479	471.5-76.5, medium. 476.5-77, dark. 477-79, medium.
60	480-486	479-80, medium. 480-81, dark. 481-82, medium. 482-87, light, increasing to medium light. Bottom 1'+.
61	487-494	487-89, medium light. Nocholite 487'2" - 487'6". 2" tuff at 487'8" and tuff at 488'4" - 488'7". 489-94.5, medium.
62	495-502	494.5-97, medium light. 497-98.5, dark. 498.5-99.5, medium. 3" tuff at 499.5. 499.5-02, medium.
63	503-509	502-03.5, medium, thin tuff beds. 503.5-03.9, tuff w/interbedded shale. 503.9-04.2, dark. 504.2-04.6, tuff, (12' ± above Mahogoney Marker). 504.6-09.7, medium to dark.
64	510-517	509.7-17.5, medium.
65	518-525	517.5-19.1, medium. 519.1-19.5, tuff - Mahogoney Marker. 519.5-24.5, medium. 524.5-25.5, dark.
66	526-533	525.5-26, dark. 526-30.5, medium. 530.5-33.2, medium to dark - 2" tuff at 530.5.
67	534-540	533.2-40.6, medium to dark.
68	541-548	540.6-43.5, medium to dark. 543.5-44.5, dark. 544.5-48.5, medium to dark. Some thin tuff beds.

69	549-556	548.5-50.5, medium to dark. 550.5-50.9, tuff. 550.9-56.2, alternating 1' ± dark to medium.
70	557-563	556.2-59, medium to dark. (brown siltstone 556'3" - 556'5"). 559-61, dark. (interbedded dark grey marl and tuff 559'6" - 560). 561-62, medium. 562-64, medium to dark.
71	564-571	564-72, medium to dark. 2" tuff at 566.5.
72	572-579	572-74, medium. 574-78, medium to dark. 1" tuff at 575. 578-79, medium.
73	580-587	579-84, medium. 584-85, medium to dark. 585-87.7, medium. 2" tuff at 585'7".
74	588-595	587.7-89.9, medium to dark. 589.9-93.7, medium. 593.7-94.6, dark. 594.6-95.1, tuff. 595.1-95.7, dark.
75	596-603	595.7-600, medium to dark. 600-02.5, medium. 602.5-02.9, tuff. 602.9-03.2, medium.
76	604-612	603.2-09, medium. 609-610, medium - core all in small chips. 610-12, medium. Some lenticular tuff beds complete interval.
77	613-621	612-21, light.
78	622-630	621-28, light. 628-29, dark. 629-30, medium. 625-26, tuffaceous mudstone.
79	631-637	630-37, medium.
80	638-645	637-45, medium. 641'8" - 642'6", tuffaceous marlstone (?).

81	646-653	645-53, medium (medium grey marlstone). 2" tuff at 650.5. (646.5-647.5 lighter grey).
82	653-661	653-661, medium (medium grey marlstone).
83	662-668	661-61.8, blue tuff (?), very fine grain. 661.8-68, medium (medium grey marlstone).
84	669-676	668-70.5, medium (medium grey marlstone). 670.5-73.5, dark (dark grey marlstone). 673.5-75.5, medium (medium grey marlstone). 675.5-76.2, light (light grey marlstone).
85	677-684	676.2-78, light to medium. 678-84.3, medium to dark.
86	685-692	684.3-84.7, medium to dark. 684.7-87.5, medium. 687.5-89.5, dark. 689.5-92, medium.
87	693-699	692-93, medium. 693-94.5, dark. 694.5-700, medium to dark.
88	700-707	700-07, light to medium. Upper part of interval badly broken - vertical fractured(?). 707-08, medium to dark.
89	708-715	708-10.7, medium to dark. 710.7-12, medium to light. 712-13.5, dark. 713.5-13.9, brownish tuff flow (beds above and below distorted 713.9-14.9, dark. 714.9-15.5, medium. 715.5-15.9, medium to light.
90	716-723	715.9-16.5, medium. 716.5-18.6, light. 718.6-19.5, medium. 719.5-23.3, dark.
91	724-731	723.3-24.5, dark to medium. 724.5-27.2, medium. 727.2-28.2, medium to dark. 728.2-31, medium.
92	732-738	731-33, light. 733-36.8, medium to dark. 736.8-38.8, medium. 738.8-39, light.

93	739-746	739-43, light. 743-46.9, medium to dark.
94	747-754	746.9-47, medium to dark. 747-54.5, medium.
95	755-762	754.5-57, medium. 757-58.2, dark. 758.2-62.5, medium to dark.
96	763-770	762.5-69.8, medium to dark. 769.8-70.2, light. 764.2-765.2, missing-suspect brecciated zone.
97	771-778	770.2-75, light. 775-77.5, medium to light. 777.5-78.6, light.
98	779-786	778.6-81, light. 781-85, medium to dark. 785-86, medium to light.
99	787-794	786-89, medium. 789-92, light. 792-94.5, light to medium.
100	795-802	794.5-99.5, light. 799.5-02.5, light to medium.
101	803-810	802.5-04.2, medium to light. 804.2-06, light. 806-09.5, light to medium. 809.5-10, light.
102	811-818	810-15, light. 815-16.1, light medium. 816.1-17.2, medium. 817.2-17.8, light. 817.8-18.2, medium.
103	819-826	818.2-24.5, medium. 24.1-24.3, lost. 824.5-26.4, light.
104	827-834	826.4-28.5, light. 828.5-34.5, medium.
105	835-842	834.5-39.1, medium. 839.1-41.6, dark medium. 841.6-42.5, light.
106	843-849	842.5-46.5, light (+) to medium. 846.5-48.5, medium to dark (+). 848.5-49.5, medium.

107	850-857	849.5-52, medium. 852-54, medium to light. 854-55, medium. 855-57, medium to dark.
108	858-865	857-59, medium (+) to dark. 859-64, dark. 864-65, medium (+) to dark.
109	866-873	865-69, medium to dark. 869-73, medium (+) to dark.
110	874-881	873-77, medium to dark. 877-79, medium. 879-81, medium to light.
111	882-888	881-86, medium. 886-88.5, medium to dark.
112	889-896	888.5-94, medium dark. 894-96, medium.
113	897-903	896-01, medium. 901-04, medium to dark (+).
114	904-911	904-08, medium. 908-09, medium to dark. 909-12, medium.
115	912-921	912-21, medium (+) to dark.
116	922-931	921-31, medium to dark (+).
117	932-941	931-34, medium to dark. 934-39, medium. 939-41, medium to dark.
118	942-951	941-43, medium to dark. 943-46, medium. 946-49, medium to dark. 949-51, medium (+) to light.
119	952-960	951-53.5, medium to light. 953.5-58, medium to dark. 958-59, medium. 959-60, medium to dark.
120	961-971	960-62, medium to dark. 962-66, medium. 966-67, medium to dark. 967-70, medium. 970-71, light.
121	972-980	971-80, medium.

122	981-988	980-84.5, dark. 984.5-85, medium. 985-88, dark.
123	989-998	988-91.5, dark. 991.5-92, medium. 992-97, dark. 997-98, light medium. 996.5-97.7, badly broken.
124	999-1,006	998-01.5, medium - 2" at 996.5 slightly wavy. 1,001.5-06, dark.
125	1,007-1,013	1,006-07.5, medium. 1,007.5-14, dark. 1,008.5, 1-1/2" siltstone (?).
126	1,014-1,021	1,014-22, dark. 1,014.5, 2" siltstone (?).
127	1,022-1,031	1,022-26, medium to dark. 1,026-29.5, dark. 1,029.5-31, medium dark. 1,031-32, dark. 1,032-33.5, dark. 1,033.5-36, medium. 1,036-38, medium. 1,038-40.5, dark. 1,040.5-44, medium. 1,044-47, medium to dark. 1,047-49, dark. 1,049-52, medium. 1,052-54, dark. 1,054-55.5, medium dark. 1,055.5-57.5, medium. 1,057.5-60, dark. 1,060-63.5, medium dark. 1,063.5-71.5, medium. 1,071.5-74, light. 1,074-93.5, medium. 1,093.5-95.5, medium dark. 1,095.5-1,102, medium.
	1,102-1,103	1,102-03, medium dark. 1,103-05.5, medium. 1,105.5-10.5, light. 1,110.5-11.8, medium dark. 1,111.8-26, light medium. 1,126-28, dark. 1,128-31, dark medium. 1,131-33, medium. 1,133-35.5, dark medium. 1,135.5-38.5, dark medium. 1,138.5-42, light.

141	1,142-1,149	1,142-49, light.
143	1,150-1,157	1,149-57, light.
144	1,158-1,165	1,157-57.5, light. 1,157.5-58, medium. 1,158-62, dark. 1,162-65, medium. 1,162-65, completely broken into small chips.
145	1,166-1,172	1,165-68, medium. 1,168-70, light. 1,170-72.5, dark.
146	1,173-1,180	1,172.5-73, medium. 1,173-74, medium. 1,174-78, light. 1,178-80, dark.
147	1,181-1,188	1,180-87.5, dark. 1,187.5-88, medium.
148	1,189-1,196	1,188-89, light. 1,189-92, medium. 1,192-96, dark.
		A lot of grease on cores from about 1,180 feet.
149	1,197-1,205	1,196-05, medium.
150	1,206-1,212	1,205-12.5, dark (?).
151	1,213-1,220	1,212.5-15, dark. 1,215-20, light.
152	1,220-	1,220-21, medium. 1,221-26, dark. 1,226-35, medium. 1,228-29, marly silt.
	1,235-1,243	1,235-41.5, medium. 1,241.5-43.5, medium (+) to dark.
	1,243-1,251	1,243.5-51.5, medium to light.
156	1,252-1,259	1,251.5-59, medium.
157	1,260-1,266	1,259-67, medium.
158	1,267-1,274	1,267-75, medium.
159	1,275-1,282	1,275-83, medium. 1,280-82, badly broken.

160	1,283-1,289	1,283-90, medium.
161	1,290-1,297	1,290-98, medium.
162	1,298-1,305	1,298-99, dark. 1,299-05.5, medium. Complete footage in this box badly broken.
163	1,306-1,313	1,305.5-08, medium. 1,308-09.5, medium to dark. 1,309.5-13.2, dark.
164	1,314-1,321	1,313.2-20.5, medium to dark. 1,320.5-21, medium.
165	1,322-1,328	1,321-22, medium. 1,322-23.5, dark. 1,323.5-29, medium to dark.
166	1,329-1,336	1,329-30, medium to dark. 1,330-32.8, dark. 1,332.8-34.8, medium. 1,334.8-36.5, dark.
167	1,336-1,344	1,336.5-37, dark. 1,337-39, medium. 1,339-44, dark.
168	1,344-1,352	1,344-52, medium. 1,349-52, numerous light streaks.
169	1,352-1,360	1,352-60, medium to dark. Streaks running from light medium to dark.
170	1,360-1,368	1,360-68, medium (occasional dark interval).
171	1,368-1,376	1,368-69.5, medium to dark. 1,369.5-72.2, medium. 1,372.2-76, medium to dark.
172	1,376-1,384	1,376-80.5, medium to dark. 1,380.5-83.2, dark. 1,387.5-2", tuff.
173	1,384-1,392	1,383.2-89, dark. 1,389-92, medium to dark. Badly broken.
174	1,392-1,399	1,392-93, medium to dark. Badly broken. 1,393-1,400, dark.
175	1,400-1,408	1,400-07.5, dark.

		On box No. 175 markings jumped from 1,404 feet to 1,408 feet. No evidence at lost core. Remarking to bring up to date in box No. 184. This makes a discrepency of three feet with the driller. He will adjust his markings at box No. 185.
176	1,408-1,415	1,407.5-15.2, medium to dark.
177	1,416-1,423	1,415.2-19, medium to dark. 1,419-20.5, dark. 1,420.5-21.5, light. 1,421.5-23.2, medium.
178	1,424-1,430	1,423.2-30.2, medium.
179	1,431-1,438	1,430.2-38.5, medium.
180	1,439-1,445	1,438.5-45.5, medium.
181	1,446-1,453	1,445.5-53.5, medium.
182	1,454-1,460	1,453.5-60.8, medium.
183	1,461-1,468	1,460.8-67.8, medium. 1,467.8-68.5, dark. 1,468.5-68.8, medium.
184	1,469-1,476	1,468.8-76.8, medium.
185	1,477-1,484	1,476.8-80.5, medium. 1,480.5-84.5, Core Lost.
186	1,485-1,493	1,484.5-87, medium. 1,487-89, medium to dark. 1,489-93, black shale.
187	1,493-1,500	1,493-94, black shale. 1,494-98, medium (medium becoming slightly lighter). 1,498-1,500, grey, sandy, mudstone or claystone? 1,500-01, medium.
188	1,501-1,508	1,501-08.5, grey, sandy, mudstone or claystone?
189	1,509-1,516	1,508.5-16, as above.
190	1,517-1,524	1,516-23, as above. 1,523-24, medium.
191	1,525-1,532	1,524-28, medium. 1,528-28.5, black shale. 1,528.5-29.7, medium. 1,529.7-30, black shale. 1,530-31, medium. 1,531-32, black shale.

192	1,533-1,540	1,532-34.8, grey shale. 1,534.8-41, medium.
193	1,541-1,549	1,541-49, medium to light. Occasional shale streak.
194	1,549-1,557	1,549-57, medium.
195	1,557-1,564	1,557-60, light medium grey. Occasional shale streak. 1,560-62, medium to dark. 1,562-63.5, medium. 1,563.5-65, medium to dark.
196	1,566-1,572	1,565-73, medium (+) to dark. Occasional light streak and occasional shale streak.
197	1,573-1,580	1,573-75, medium to dark. 1,574.5-2", sandy stringer. 1,575-81, medium.
198	1,581-1,588	1,581-84, medium. 1,584-89, medium (+) to dark.
199	1,589-1,597	1,589-92, medium to dark. 1,592-93.5, medium. 1,593.5-96, light. 1,596-97, ??
200	1,598-1,606	1,597-1,600, medium. Badly broken. 1,600-05, missing.
201	1,607-1,614	1,605-10.8, medium. Badly broken. 1,610.8-11.2, tan sandstone. 1,611.2-11.9, medium. 1,611.9-13, tan sandstone w/marlstone stringers. 1,613-14, medium w/tan sandstone stringers.
202	1,615-1,622	1,614-18, light to medium. 1,618-22, medium.
203	1,623-1,630	1,622-28.5, medium. 1,628.5-29, light to medium. 1,629-30, light to medium w/siltstone stringers.
204	1,631-1,638	1,630-31.8, medium. 1,631.8-32.1, tan siltstone. 1,632.1-32.8, medium. 1,632.8-33, black shale. 1,633-39, medium w/some light streaks. 1,638-39, some siltstone streaks.

205	1,639-1,646	1,639-42, medium. 1,639-41, broken. 1,642-43, medium to dark. 1,643-47, medium. 1,643-45.5, numerous light streaks.
206	1,647-1,654	1,647-55, medium - some light streaks.
207	1,655-1,662	1,655-57.5, medium. 1,555.8-1", siltstone. 1,657.5-58.5, light to medium. 1,658.5-63, medium. 1,662.8-1", tuff.
208	1,663-1,670	1,663-65.5, medium. 1,665.5-67, medium to dark. 1,667-67.8, light. 1,667.8-69, medium to dark. 1,669-69.5, light to medium. 1,669.5-71, medium to dark.
209	1,671-1,678	1,671-71.5, medium to dark. 1,671.5-72, light. 1,672-73.5, medium (+) to dark. 1,673.5-79, medium w/some dark streaks.
210	1,679-1,685	1,679-80, medium. 1,679-1-1/2", siltstone. 1,680-86, light to medium. 1,680.5-1", siltstone (numerous lighter beds and silt stringers throughout interval).
211	1,686-1,693	1,686-94, medium. 86-86.5, poor marl. 88-88.5, tan silt. 90-90.5, as above. 92-92.2, as above.
212	1,694-1,701	1,694-95, medium. 94-94.2, tan silt. 94.7-94.8, as above. 1,695-02, light. (slight darkening near 1,702).
213	1,702-1,709	1,702-08, light medium. 02.5-02.8, tan silt. 06.2-06.5, as above. 07.3-07.6, as above. 1,708-10, medium.
214	1,710-1,717	1,710-18, light medium. 09.5-10.5, siltstone interbeds.

215	1,718-1,725	1,718-25, light. 23.5-24, slightly darker.
216	1,725-1,733	1,725-34, light medium. 27-27.3 - light streak.
217	1,734-1,741	1,734-41, dark grey to black shale (med). slickensides.
218	1,742-1,749	1,741-45, dark grey shale. 1,745-45.8, grey shale w/siltstone stringers. 1,745.8-47.8, black shale. 1,447.8-49, light to dark grey shale.
219	1,750-1,758	1,749-58, dark grey shale. 49.7-50, tan siltstone. 52.7-2", interbedded shale and silt.
220	1,759-1,763	1,758-63, dark grey to black shale. 59-3", tan siltstone. 61.5-62, interbedded shale and silt.

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