



COPE LABORATORIES, INC.
Petroleum Reservoir Engineering

CN0673

COMPANY: GULF MINERAL RESOURCES COMPANY
WELL: NO. 11 BONANZA
FIELD: WILDCAT
COUNTY: UINTAH STATE: UTAH
LOCATION: 350' FSL 1800' FWL
SEC 17-T12S-R25E
DATE: 8-15-73
FORMATION: PARACHUTE
DRLG. FLD: AIR-MIST
REMARKS:
FILE NO.: RP-2-OSA-146
ENGRS: MOHL
ELEV.: 6700' GL
CORES: DIAMOND 3"

OIL SHALE ASSAY

Sample Number	Depth, Feet	OIL		Oil Specific Gravity	WATER		Spent Shale Wt. %	Gas Plus Loss Wt. %	Tendency to Coke	REMARKS
		Gal/Ton	Wt. %		Gal/Ton	Wt. %				
1	138.5-39	10.8	4.1	.923	3.1	1.3	93.4	1.2	NIL	
2	139-40.5	7.3	2.8	.912	4.6	1.9	94.3	1.0	NIL	
3	140.5-42	7.7	2.9	.918	4.6	1.9	94.2	1.0	NIL	
4	142-43.5	5.7	2.2	.933	4.6	1.9	95.0	0.9	NIL	
5	143.5-45	11.1	4.2	.916	4.3	1.8	92.6	1.4	NIL	
6	145-46.5	8.1	3.1	.915	3.8	1.6	94.2	1.1	NIL	
7	146.5-47.5	30.4	11.6	.911	4.6	1.9	84.0	2.6	NIL	
8	147.5-49	9.7	3.7	.921	4.6	1.9	93.0	1.4	NIL	
9	149-50.5	11.2	4.3	.917	4.8	2.0	92.2	1.5	NIL	
10	150.5-52	19.7	7.5	.909	4.8	2.0	88.4	2.1	NIL	
11	152-53	11.9	4.5	.912	4.1	1.7	91.7	2.1	NIL	
12	153-54	28.4	11.0	.930	5.5	2.3	83.7	3.0	NIL	
13	154-55.5	5.4	2.1	.930	4.6	1.9	94.0	2.0	NIL	
14	155.5-57	4.3	1.6	.917	4.1	1.7	94.8	1.9	NIL	
15	157-58.5	5.1	2.0	.919	3.6	1.5	94.6	2.0	NIL	
16	158.5-60	5.1	1.9	.920	3.6	1.5	93.9	2.7	NIL	
17	160-61	4.5	1.7	.915	3.8	1.6	94.4	2.3	NIL	
18	161-62.5	1.5	0.6	.927	4.3	1.8	95.6	2.0	NIL	
19	162.5-64	4.4	1.6	.899	3.6	1.5	94.7	2.2	NIL	
20	164-65.5	13.4	5.0	.899	4.1	1.7	90.8	2.5	NIL	
21	165.5-67	22.2	8.4	.903	4.8	2.0	87.4	2.2	NIL	
22	167-68.5	12.5	4.8	.915	5.0	2.1	91.1	2.0	NIL	
23	168.5-70	10.7	4.1	.921	5.8	2.4	91.6	1.9	NIL	
24	170-71.5	22.3	8.6	.923	5.5	2.3	87.3	1.8	NIL	
25	171.5-73	23.9	9.0	.905	4.1	1.7	87.0	2.3	NIL	
26	173-74	42.3	16.0	.906	6.5	2.7	77.7	3.6	NIL	
27	174-75.5	18.5	7.0	.903	4.6	1.9	88.8	2.3	NIL	
28	175.5-77	13.5	5.2	.917	3.6	1.5	91.4	1.9	NIL	
29	177-78.5	18.3	7.0	.912	3.6	1.5	89.0	2.5	NIL	
30	178.5-80	11.2	4.3	.913	3.8	1.6	92.2	1.9	NIL	
31	180-81.5	11.9	4.6	.925	5.0	2.1	91.0	2.3	NIL	
32	181.5-83	9.5	3.6	.916	3.8	1.6	92.4	2.4	NIL	
33	183-84	9.6	3.7	.913	4.3	1.8	91.9	2.7	NIL	

OIL SHALE ASSAY

Sample Number	Depth, Feet	OIL		Oil Specific Gravity	WATER		Spent Shale Wt. %	Gas Plus Loss Wt. %	Tendency to Coke	REMARKS
		Gal/Ton	Wt. %		Gal/Ton	Wt. %				
34	184-85	10.9	4.1	.904	2.6	1.1	91.8	3.0	NIL	
35	185-86	40.9	15.6	.913	5.0	2.1	78.4	3.9	SLIGHT	
36	186-87.5	22.1	8.3	.903	3.6	1.5	86.7	3.5	NIL	
37	187.5-89	18.6	7.0	.905	3.4	1.4	88.4	3.2	NIL	
38	189-90	34.9	13.2	.904	3.6	1.5	81.8	3.5	NIL	
39	190-91	33.4	12.8	.918	3.6	1.5	82.2	3.5	NIL	
40	191-92	30.1	11.3	.902	3.6	1.5	83.3	3.9	NIL	
41	192-93.5	57.7	21.7	.902	5.0	2.1	70.1	6.1	HIGH	
42	193.5-95	9.1	3.5	.911	6.0	2.5	79.0	5.1	HIGH	
43	195-96	50.0	15.4	.902	3.6	1.5	79.6	3.5	SLIGHT	
44	196-97	50.2	19.2	.917	5.3	2.2	74.8	3.8	SLIGHT	
45	197-98.5	17.9	6.9	.920	2.9	1.2	90.0	1.9	NIL	
46	198.5-00	29.0	11.1	.917	3.1	1.3	85.4	2.2	NIL	
47	200-01.5	35.0	13.2	.906	3.1	1.3	83.0	2.5	NIL	
48	201.5-03	32.3	12.2	.905	4.3	1.8	83.4	2.6	NIL	
49	203-04.5	28.2	10.7	.905	3.6	1.5	85.7	2.1	NIL	
50	204.5-06	14.1	5.4	.915	2.2	0.9	91.9	1.8	NIL	
51	206-07	27.3	10.5	.925	3.4	1.4	84.8	3.3	NIL	
52	207-08	24.7	9.5	.926	3.4	1.4	86.0	3.1	NIL	
53	208-09.5	10.7	4.1	.928	2.4	1.0	91.9	3.0	NIL	
54	209.5-11	29.8	11.3	.912	2.6	1.1	84.4	3.2	NIL	
55	211-12.5	22.9	8.7	.915	2.4	1.0	87.5	2.8	NIL	
56	212.5-14	22.3	8.5	.911	3.1	1.3	86.4	3.8	NIL	
57	214-15.5	14.7	5.7	.922	2.4	1.0	89.4	4.0	NIL	
58	215.5-17	10.7	4.2	.936	2.2	0.9	91.0	3.9	NIL	
59	217-218.5	17.4	6.7	.928	2.9	1.2	87.7	4.4	NIL	
60	218.5-20	6.7	2.6	.945	2.4	1.0	91.3	5.1	NIL	
61	220-21.5	5.1	2.0	.933	2.4	1.0	96.1	0.9	NIL	
62	221.5-22.5	9.3	3.6	.919	5.3	2.2	93.2	1.0	NIL	
63	222.5-24	19.6	7.5	.917	2.6	1.1	89.8	1.6	NIL	
64	224-25.5	6.4	2.4	.904	2.4	1.0	95.4	1.2	NIL	
65	225.5-27	17.3	6.6	.921	2.4	1.0	90.8	1.6	NIL	
66	227-28	2.2	0.8	.915	2.2	0.9	97.5	0.8	NIL	
67	228-29	8.5	3.3	.926	2.2	0.9	94.7	1.1	NIL	
68	229-30.5	12.3	4.8	.934	7.2	3.0	91.3	0.9	NIL	
69	230.5-32	3.8	1.5	.933	1.2	0.5	97.1	0.9	NIL	
70	232-33.5	5.0	1.9	.933	1.4	0.6	96.4	1.1	NIL	
71	233.5-35	4.2	1.6	.933	1.9	0.8	96.0	1.6	NIL	
72	235-36	10.6	4.1	.936	2.4	1.0	92.6	2.3	NIL	
73	236-37.5	2.0	0.8	.920	2.6	1.1	95.9	2.3	NIL	

OIL SHALE ASSAY

Sample Number	Depth, Feet	OIL		Oil Specific Gravity	WATER		Spent Shale Wt. %	Gas Plus Loss Wt. %	Tendency to Coke	REMARKS
		Gal/Ton	Wt. %		Gal/Ton	Wt. %				
74	237.5-39	11.1	4.3	.920	3.8	1.6	91.5	2.7	NIL	
75	239-40.5	7.0	2.7	.915	2.9	1.2	94.0	2.1	NIL	
76	240.5-42	15.7	5.9	.901	2.9	1.2	90.4	2.5	NIL	
77	242-43.5	6.4	2.4	.913	1.9	0.8	93.8	3.0	NIL	
78	243.5-45	7.6	2.9	.921	2.2	0.9	93.2	3.0	NIL	
79	245-46.5	4.4	1.7	.916	2.4	1.0	94.5	2.8	NIL	
80	246.5-48	5.3	2.1	.925	1.7	0.7	94.5	2.7	NIL	
81	248-49.5	7.3	2.8	.910	3.8	1.6	92.3	3.3	NIL	
82	249.5-51	4.9	1.8	.892	4.6	1.9	92.6	3.7	NIL	
83	251-52	4.0	1.8	.906	2.6	1.1	93.4	4.0	NIL	
84	252-53	2.6	1.0	.904	6.5	2.7	93.9	2.4	NIL	
85	253-54.5	11.3	4.3	.904	3.4	1.4	91.3	3.0	NIL	
86	254.5-56	7.2	2.7	.903	4.8	2.0	92.0	3.3	NIL	
87	256-57	5.5	2.1	.923	3.6	1.5	93.0	3.4	NIL	
88	257-58.5	5.9	2.3	.924	2.6	1.1	95.9	0.7	NIL	
89	258.5-60	15.0	5.7	.912	1.4	0.6	89.2	4.5	NIL	Bitum. Sand
90	260-61	16.2	6.2	.909	1.2	0.5	90.2	3.2	NIL	
91	261-62	4.5	1.7	.916	2.2	0.9	95.7	1.7	NIL	
92	262-63	6.3	2.4	.924	2.2	0.9	95.2	1.5	NIL	
93	263-64	3.5	1.3	.920	2.2	0.9	96.8	1.0	NIL	
94	264-65.5	11.9	4.6	.917	1.2	0.5	93.8	1.1	NIL	
95	265.5-66.5	11.3	4.3	.917	2.2	0.9	93.7	1.1	NIL	
96	266.5-68	0.0	0.0		4.1	1.7	97.1	1.2	NIL	
97	268-69	0.0	0.0		6.0	2.5	96.9	1.2	NIL	
98	269-70	2.4	0.9	.924	3.8	1.6	95.5	2.0	NIL	
99	270-71.5	20.9	8.0	.917	1.2	0.5	90.8	0.7	SLIGHT	
100	271.5-73	30.8	11.8	.917	1.2	0.5	88.1	0.4	SLIGHT	
101	273-74.5	17.3	6.6	.919	1.0	0.4	92.3	0.7	SLIGHT	
102	274.5-76	18.4	7.0	.918	0.7	0.3	91.8	0.9	SLIGHT	
103	276-77.5	15.7	6.0	.918	0.7	0.3	92.8	0.9	SLIGHT	
104	277.5-79	14.1	5.4	.920	1.4	0.6	93.0	1.0	SLIGHT	
105	279-280	18.8	7.3	.925	0.5	0.2	91.6	1.0	SLIGHT	
106	280-81	10.2	3.9	.924	1.0	0.4	95.0	0.7	NIL	
107	281-82	9.8	3.8	.925	1.4	0.6	94.7	0.9	NIL	
108	282-83.5	12.2	4.7	.929	1.2	0.5	92.7	2.1	NIL	
109	283.5-85	18.2	6.9	.915	1.0	0.4	90.9	1.8	SLIGHT	
110	285-86.5	1.9	0.7	.915	2.9	1.2	97.5	0.6	NIL	
111	286.5-88	1.7	0.7	.916	2.6	1.1	97.6	0.6	NIL	
112	288-89.5	0.0	0.0		3.4	1.4	98.0	0.7	NIL	

OIL SHALE ASSAY

RP-2-USA-140

Sample Number	Depth, Feet	OIL		Oil Specific Gravity	WATER		Spent Shale Wt. %	Gas Plus Loss Wt. %	Tendency to Coke	REMARKS
		Gal/Ton	Wt. %		Gal/Ton	Wt. %				
113	280.5-91	0.0	0.0		3.4	1.4	97.9	0.7	NIL	
114	291-02.5	0.0	0.0		3.2	1.3	98.0	0.7	NIL	
115	292.5-04	0.0	0.0		3.1	1.3	97.6	1.1	NIL	
116	294-95.5	0.0	0.0		2.3	1.0	98.0	1.0	NIL	
117	295.5-97	0.0	0.0		2.1	0.9	97.9	1.2	NIL	
118	297-98.5	0.0	0.0		5.1	2.1	96.7	1.2	NIL	
119	298.5-00	0.0	0.0		6.7	2.8	96.3	0.9	NIL	
120	300-01.5	0.0	0.0		7.8	3.2	95.7	1.1	NIL	
121	301.5-03	0.0	0.0		6.5	2.7	96.7	0.6	NIL	
122	303-04.5	0.0	0.0		6.4	2.7	96.8	0.5	NIL	
123	304.5-06	0.0	0.0		6.0	2.5	97.0	0.5	NIL	
124	306-07	0.0	0.0		6.3	2.6	97.0	0.4	NIL	
125	307-08	0.0	0.0		7.2	3.0	96.6	0.4	NIL	
	308	BLANK								