

DEVIATION REPORT

Name of Company		Address			
Meridian Oil Inc.		P. O. Box 4289, Farmington, NM 87499			
Lease	Well No.	Unit Letter	Section	Township	Range
Riddle	1R	D	4	030-N	009-W
Pool			County		
Blanco Mesa Verde			San Juan		

I, the undersigned, certify that I, acting in my capacity as Petroleum Engineer of Meridian Oil Inc, am authorized by said Company to make this report; and that this report was prepared by me or under my supervision and directions and that the facts stated herein are true to the best of my knowledge and belief.

[Signature]

Subscribed and sworn to before me this 26th day of June, 1991

[Signature]

Notary Public in and for San Juan County, New Mexico

My Commission expires

August 17, 1992

RECEIVED
JUL 01 1991
OIL CON. DIV
DIST. 3

TABLE A:

MWD SURVEY DATA

RIDDLE #1 R
SAN JUAN COUNTY
NEW MEXICO

MERIDIAN OIL COMPANY

RECEIVED

JUL 01 1961

CON. CON.
1961

WELLPATH DATA

RIDDLE

Sta. Num.	M.D. Feet	Incl. Angle Deg.	Azi. Angle Deg.	Coordinates			Vert. Sec. Feet	Closure		Rate Change		Total D.L. Deg/100 Ft	TFO Deg.
				+N,-S Feet	+E,-W Feet	TVD Feet		Dist. Feet	Dire. Deg.	Incl. Deg/100 Ft	Azi. Deg/100 Ft		
1	0	0.00	0.00	0	0	0	0	0	0.0	0.00	0.00	0.0	0
2	217	0.00	0.00	0	0	217	0	0	0.0	0.00	0.00	0.0	0
3	261	0.31	324.82	0	-0	261	-0	0	324.8	0.70	79.95	0.7	0
4	354	0.59	286.02	0	-1	354	-1	1	302.9	0.30	41.72	0.4	0
5	448	1.17	277.96	1	-2	448	-1	2	288.6	0.62	8.57	0.6	0
6	541	0.76	266.04	1	-4	541	-1	4	282.2	-0.44	12.82	0.5	0
7	634	0.18	307.24	1	-4	634	-1	4	280.8	-0.62	44.30	0.7	0
8	728	0.69	231.77	1	-5	728	-1	5	276.6	0.54	80.29	0.7	0
9	821	0.79	221.62	-0	-6	821	-0	6	267.5	0.11	10.91	0.2	0
10	915	1.29	261.22	-1	-7	915	-0	7	263.0	0.53	42.13	0.9	0
11	1008	0.96	277.35	-1	-9	1008	-0	9	264.0	-0.35	17.34	0.5	0
12	1102	1.11	254.92	-1	-11	1102	-0	11	264.2	0.16	23.86	0.5	0
13	1195	1.04	250.58	-2	-12	1195	0	13	262.6	-0.08	4.67	0.1	0
14	1289	1.35	255.10	-2	-14	1289	0	14	261.3	0.33	4.81	0.3	0
15	1382	1.29	257.07	-3	-16	1382	1	17	260.7	-0.06	2.12	0.1	0
16	1476	1.37	261.36	-3	-19	1476	1	19	260.5	0.09	4.56	0.1	0
17	1569	1.07	265.92	-3	-20	1569	1	21	260.8	-0.32	4.90	0.3	0
18	1662	1.33	281.97	-3	-22	1662	0	23	262.0	0.28	17.26	0.5	0
19	1756	1.27	260.81	-3	-24	1756	0	25	262.8	-0.06	22.51	0.5	0
20	1849	1.38	293.72	-3	-27	1849	-1	27	263.0	0.12	35.39	0.8	0
21	1943	1.14	283.87	-2	-28	1943	-1	29	265.7	-0.26	10.48	0.3	0
22	2036	2.11	290.66	-1	-31	2036	-3	31	267.6	1.04	7.30	1.1	0
23	2130	2.14	294.12	0	-34	2130	-4	34	270.0	0.03	3.68	0.2	0
24	2223	2.76	294.50	2	-38	2223	-6	38	272.5	0.67	0.41	0.7	0
25	2317	2.75	299.79	4	-42	2316	-9	42	275.1	-0.01	5.63	0.3	0
26	2410	2.36	294.28	6	-46	2409	-11	46	277.0	-0.42	5.92	0.5	0
27	2503	1.20	293.98	7	-48	2502	-13	49	278.0	-1.25	0.32	1.2	0
28	2597	1.40	294.59	8	-50	2596	-14	51	278.7	0.21	0.65	0.2	0
29	2690	1.49	293.00	9	-52	2689	-15	53	279.4	0.10	1.71	0.1	0
30	2784	1.13	296.52	10	-54	2783	-16	55	279.9	-0.38	3.74	0.4	0
31	2877	1.03	303.66	10	-56	2876	-17	57	280.6	-0.11	7.68	0.2	0
32	2971	0.91	299.55	11	-57	2970	-18	58	281.1	-0.13	4.37	0.2	0
33	3064	0.31	281.64	12	-58	3063	-19	59	281.3	-0.65	19.26	0.7	0
34	3158	0.42	318.24	12	-58	3157	-19	60	281.5	0.12	38.94	0.3	0
35	3251	0.31	196.51	12	-59	3250	-19	60	281.5	-0.12	130.89	0.7	0
36	3345	0.09	131.68	12	-59	3344	-19	60	281.2	-0.23	68.97	0.3	0
37	3425	0.45	246.34	11	-59	3424	-19	60	281.0	0.45	143.33	0.6	0
38	3538	0.25	201.30	11	-59	3537	-18	61	280.6	-0.18	39.86	0.3	0
39	3688	0.00	219.30	11	-60	3687	-18	61	280.2	-0.17	12.00	0.2	0
40	3732	0.38	199.30	11	-60	3731	-18	61	280.1	0.86	45.45	0.9	0
41	3763	1.63	186.30	10	-60	3762	-18	61	279.6	4.03	41.94	4.1	0
42	3795	3.50	179.80	9	-60	3794	-16	60	278.3	5.84	20.31	5.9	0
43	3827	5.75	177.30	6	-60	3826	-14	60	275.8	7.03	7.81	7.1	0
44	3858	8.00	174.80	2	-59	3857	-10	59	272.3	7.26	8.06	7.3	0
45	3889	10.38	172.80	-3	-59	3887	-5	59	267.5	7.68	6.45	7.7	0
46	3921	12.63	171.80	-9	-58	3919	2	59	261.3	7.03	3.13	7.1	0

WELLPATH DATA

RIDDLE

Sta. Num.	M.D. Feet	Incl.	Azi.	Coordinates			Vert.	Closure		Rate Change		Total	TFO Deg.
		Angle Deg.	Angle Deg.	+N,-S Feet	+E,-W Feet	TVD Feet	Sec. Feet	Dist. Feet	Dire. Deg.	Incl. Deg/100 Ft	Azi. Deg/100 Ft	D.L. Deg/100 Ft	
47	3952	14.75	170.80	-16	-57	3949	9	59	254.2	6.84	3.23	6.9	0
48	3984	16.75	170.80	-25	-56	3980	18	61	246.0	6.25	0.00	6.3	0
49	4015	18.88	171.80	-34	-54	4009	27	64	237.8	6.87	3.23	6.9	0
50	4046	20.88	172.30	-44	-53	4038	38	69	229.8	6.45	1.61	6.5	0
51	4077	22.88	171.80	-56	-51	4067	49	76	222.4	6.45	1.61	6.5	0
52	4109	24.75	170.80	-69	-49	4096	62	84	215.5	5.84	3.13	6.0	0
53	4140	26.88	170.30	-82	-47	4124	75	94	209.7	6.87	1.61	6.9	0
54	4171	28.63	170.80	-96	-44	4152	90	106	204.8	5.65	1.61	5.7	0
55	4201	30.50	170.30	-111	-42	4178	105	119	200.8	6.23	1.67	6.3	0
56	4233	32.25	171.30	-127	-39	4205	121	133	197.2	5.47	3.13	5.7	0
57	4265	34.13	171.30	-145	-37	4232	139	149	194.3	5.88	0.00	5.9	0
58	4269	35.88	170.30	-147	-36	4235	141	151	193.9	43.75	25.00	46.1	0
59	4328	37.50	168.80	-182	-30	4282	176	184	189.4	2.75	2.54	3.1	0
60	4358	39.50	167.80	-200	-26	4306	195	202	187.5	6.67	3.33	7.0	0
61	4389	42.13	167.80	-220	-22	4329	215	221	185.7	8.48	0.00	8.5	0
62	4421	45.00	167.80	-241	-17	4353	237	242	184.1	8.97	0.00	9.0	0
63	4452	47.38	167.80	-263	-13	4374	259	263	182.7	7.68	0.00	7.7	0
64	4484	49.63	167.30	-286	-7	4395	283	287	181.5	7.03	1.56	7.1	0
65	4515	51.75	166.80	-310	-2	4415	307	310	180.4	6.84	1.61	7.0	0
66	4547	53.88	165.80	-335	4	4434	332	335	179.3	6.66	3.13	7.1	0
67	4579	56.25	165.80	-360	10	4453	358	360	178.3	7.41	0.00	7.4	0
68	4626	59.25	165.30	-399	20	4478	398	399	177.1	6.38	1.06	6.4	0
69	4668	58.75	164.80	-433	30	4499	434	434	176.1	-1.19	1.19	1.6	0
70	4695	57.88	164.80	-455	36	4513	456	457	175.5	-3.22	0.00	3.2	0
71	4726	57.13	164.80	-481	43	4530	482	483	174.9	-2.42	0.00	2.4	0
72	4761	56.25	165.30	-509	50	4549	511	511	174.4	-2.51	1.43	2.8	0
73	4784	56.00	164.80	-527	55	4562	530	530	174.0	-1.09	2.17	2.1	0
74	4819	55.50	165.30	-555	63	4582	559	559	173.6	-1.43	1.43	1.9	0
75	4844	55.13	165.30	-575	68	4596	579	579	173.3	-1.48	0.00	1.5	0
76	4888	54.50	165.30	-610	77	4621	615	615	172.8	-1.43	0.00	1.4	0
77	4911	54.00	165.30	-628	82	4635	633	633	172.6	-2.17	0.00	2.2	0
78	4944	53.50	165.80	-654	88	4654	660	660	172.3	-1.52	1.52	2.0	0
79	4969	53.13	165.30	-673	93	4669	680	680	172.1	-1.48	2.00	2.2	0
80	5038	52.25	166.30	-726	107	4711	734	734	171.6	-1.28	1.45	1.7	0
81	5069	52.00	165.80	-750	113	4730	758	759	171.5	-0.81	1.61	1.5	0
82	5127	51.75	165.80	-794	124	4766	804	804	171.1	-0.43	0.00	0.4	0
83	5188	51.00	167.30	-841	135	4804	851	852	170.9	-1.23	2.46	2.3	0
84	5227	50.88	166.80	-870	142	4829	881	882	170.8	-0.31	1.28	1.1	0
85	5289	50.25	166.80	-917	153	4868	929	930	170.6	-1.02	0.00	1.0	0

WELLPATH DATA

RIDDLE

Sta. Num.	M.D. Feet	Incl. Angle Deg.	Azi. Angle Deg.	Coordinates			Vert.	Closure		Rate Change		Total	TFO Deg.
				+N,-S Feet	+E,-W Feet	TVD Feet	Sec. Feet	Dist. Feet	Dire. Deg.	Incl. Deg/100 Ft	Azi. Ft	D.L. Deg/100 Ft	
86	5316	50.50	166.30	-937	157	4885	949	950	170.5	0.93	1.85	1.7	0
87	5347	50.88	166.80	-960	163	4905	973	974	170.4	1.23	1.61	1.8	0
88	5378	51.75	166.30	-984	169	4924	997	998	170.3	2.81	1.61	3.1	0
89	5409	52.50	166.30	-1008	174	4943	1022	1023	170.2	2.42	0.00	2.4	0
90	5441	53.38	165.80	-1033	181	4963	1047	1048	170.1	2.75	1.56	3.0	0
91	5475	54.50	165.80	-1059	187	4983	1074	1076	170.0	3.29	0.00	3.3	0
92	5507	55.25	165.30	-1085	194	5001	1100	1102	169.9	2.34	1.56	2.7	0
93	5539	56.25	165.30	-1110	201	5019	1127	1128	169.8	3.13	0.00	3.1	0
94	5570	57.38	164.80	-1135	207	5036	1152	1154	169.7	3.65	1.61	3.9	0
95	5602	58.25	165.30	-1161	214	5053	1179	1181	169.5	2.72	1.56	3.0	0
96	5633	59.25	164.80	-1187	221	5069	1205	1207	169.4	3.23	1.61	3.5	0
97	5665	60.50	165.30	-1214	228	5085	1233	1235	169.3	3.91	1.56	4.1	0
98	5695	61.50	164.80	-1239	235	5100	1259	1261	169.3	3.33	1.67	3.6	0
99	5727	62.38	165.30	-1266	242	5115	1287	1289	169.2	2.75	1.56	3.1	0
100	5759	63.50	165.30	-1294	250	5129	1315	1318	169.1	3.50	0.00	3.5	0
101	5789	64.25	165.30	-1320	256	5143	1342	1345	169.0	2.50	0.00	2.5	0
102	5821	65.25	165.30	-1348	264	5156	1370	1374	168.9	3.13	0.00	3.1	0
103	5853	65.88	165.30	-1376	271	5169	1399	1403	168.9	1.97	0.00	2.0	0
104	5884	66.88	165.30	-1404	278	5182	1427	1431	168.8	3.23	0.00	3.2	0
105	5916	67.63	165.30	-1432	286	5194	1457	1460	168.7	2.34	0.00	2.4	0
106	5948	68.50	164.80	-1461	293	5206	1486	1490	168.6	2.72	1.56	3.1	0
107	5979	69.13	165.30	-1489	301	5217	1515	1519	168.6	2.03	1.61	2.5	0
108	6012	69.75	165.80	-1519	309	5229	1545	1550	168.5	1.88	1.52	2.4	0
109	6042	71.13	165.80	-1546	316	5239	1573	1578	168.5	4.60	0.00	4.6	0
110	6074	72.50	166.30	-1576	323	5249	1604	1608	168.4	4.28	1.56	4.5	0
111	6105	73.25	166.30	-1604	330	5258	1633	1638	168.4	2.42	0.00	2.4	0
112	6137	74.25	166.30	-1634	337	5267	1664	1669	168.3	3.13	0.00	3.1	0
113	6168	75.25	166.30	-1663	344	5275	1693	1699	168.3	3.23	0.00	3.2	0
114	6199	76.25	166.30	-1692	351	5283	1723	1729	168.3	3.23	0.00	3.2	0
115	6231	77.25	166.30	-1723	359	5290	1754	1760	168.2	3.13	0.00	3.1	0
116	6262	78.38	166.30	-1752	366	5297	1784	1790	168.2	3.65	0.00	3.6	0
117	6294	79.38	165.80	-1783	373	5303	1815	1821	168.2	3.13	1.56	3.5	0
118	6325	80.38	165.80	-1812	381	5308	1846	1852	168.1	3.23	0.00	3.2	0
119	6356	81.38	165.80	-1842	388	5313	1876	1882	168.1	3.23	0.00	3.2	0
120	6387	82.50	165.80	-1872	396	5318	1907	1913	168.1	3.61	0.00	3.6	0
121	6419	83.50	165.80	-1902	404	5321	1938	1945	168.0	3.13	0.00	3.1	0
122	6449	84.38	165.30	-1931	411	5325	1968	1975	168.0	2.93	1.67	3.4	0
123	6479	85.13	165.80	-1960	419	5327	1997	2004	167.9	2.50	1.67	3.0	0
124	6510	84.88	165.80	-1990	426	5330	2028	2035	167.9	-0.81	0.00	0.8	0
125	6542	84.38	165.80	-2021	434	5333	2060	2067	167.9	-1.56	0.00	1.6	0
126	6578	84.13	165.80	-2056	443	5337	2095	2103	167.8	-0.69	0.00	0.7	0
127	6604	84.00	166.30	-2081	449	5339	2121	2129	167.8	-0.50	1.92	2.0	0
128	6636	83.63	166.30	-2112	457	5343	2152	2161	167.8	-1.16	0.00	1.2	0
129	6667	83.13	166.80	-2142	464	5346	2183	2191	167.8	-1.61	1.61	2.3	0
130	6698	82.88	167.30	-2172	471	5350	2214	2222	167.8	-0.81	1.61	1.8	0
131	6729	83.38	166.80	-2202	478	5354	2244	2253	167.8	1.61	1.61	2.3	0
132	6761	84.50	166.80	-2233	485	5357	2276	2285	167.7	3.50	0.00	3.5	0
133	6792	85.75	166.80	-2263	492	5360	2307	2316	167.7	4.03	0.00	4.0	0

WELLPATH DATA

RIDDLE

Sta. Num.	M.D. Feet	Incl.	Azi.	Coordinates			Vert.	Closure		Rate Change		Total	TFO Deg.
		Angle Deg.	Angle Deg.	+N,-S Feet	+E,-W Feet	TVD Feet	Sec. Feet	Dist. Feet	Dire. Deg.	Incl. Deg/100 Ft	Azi. Deg/100 Ft	D.L. Deg/100 Ft	
134	6855	86.38	166.80	-2324	506	5364	2369	2378	167.7	1.00	0.00	1.0	0
135	6885	87.38	167.30	-2353	513	5366	2399	2408	167.7	3.33	1.67	3.7	0
136	6919	88.13	167.30	-2386	520	5367	2433	2442	167.7	2.21	0.00	2.2	0
137	6950	87.63	167.30	-2417	527	5368	2464	2473	167.7	-1.61	0.00	1.6	0
138	6983	87.00	167.30	-2449	535	5370	2496	2506	167.7	-1.91	0.00	1.9	0
139	7013	88.38	167.80	-2478	541	5371	2526	2536	167.7	4.60	1.67	4.9	0
140	7045	88.63	167.80	-2509	548	5372	2558	2568	167.7	0.78	0.00	0.8	0
141	7076	89.75	167.80	-2540	554	5372	2589	2599	167.7	3.61	0.00	3.6	0
142	7107	90.13	168.30	-2570	561	5372	2620	2630	167.7	1.23	1.61	2.0	0
143	7138	89.63	168.30	-2600	567	5372	2651	2661	167.7	-1.61	0.00	1.6	0
144	7170	89.88	168.80	-2632	573	5373	2683	2693	167.7	0.78	1.56	1.8	0
145	7201	89.50	168.80	-2662	579	5373	2714	2724	167.7	-1.23	0.00	1.2	0
146	7233	88.75	168.80	-2693	586	5373	2746	2756	167.7	-2.34	0.00	2.4	0
147	7266	87.88	168.80	-2726	592	5374	2778	2789	167.7	-2.64	0.00	2.6	0
148	7269	87.38	168.80	-2729	593	5374	2781	2792	167.7	-16.67	0.00	16.8	0
149	7328	87.00	168.80	-2786	604	5377	2840	2851	167.8	-0.64	0.00	0.7	0
150	7360	87.13	168.80	-2818	610	5379	2872	2883	167.8	0.41	0.00	0.4	0
151	7391	86.63	168.80	-2848	616	5381	2903	2914	167.8	-1.61	0.00	1.6	0
152	7422	86.25	168.80	-2879	622	5382	2934	2945	167.8	-1.23	0.00	1.2	0
153	7454	85.88	169.30	-2910	628	5385	2966	2977	167.8	-1.16	1.56	1.9	0
154	7485	85.25	168.80	-2940	634	5387	2997	3008	167.8	-2.03	1.61	2.6	0
155	7517	84.13	168.80	-2971	640	5390	3028	3040	167.8	-3.50	0.00	3.5	0
156	7549	85.75	169.30	-3003	646	5393	3060	3072	167.9	5.06	1.56	5.3	0
157	7581	86.25	169.30	-3034	652	5395	3092	3103	167.9	1.56	0.00	1.6	0
158	7612	85.63	169.30	-3065	658	5397	3123	3134	167.9	-2.00	0.00	2.0	0
159	7644	85.75	169.30	-3096	664	5400	3155	3166	167.9	0.38	0.00	0.4	0
160	7675	85.75	168.80	-3126	670	5402	3186	3197	167.9	0.00	1.61	1.6	0
161	7706	85.88	169.80	-3157	676	5404	3216	3228	167.9	0.42	3.23	3.2	0
162	7738	85.75	169.80	-3188	681	5407	3248	3260	167.9	-0.41	0.00	0.4	0
163	7764	86.13	169.80	-3214	686	5408	3274	3286	168.0	1.46	0.00	1.5	0
164	7800	86.38	169.30	-3249	692	5411	3310	3322	168.0	0.69	1.39	1.6	0
165	7830	86.38	169.80	-3278	698	5413	3340	3352	168.0	0.00	1.67	1.7	0
166	7862	86.00	169.80	-3310	703	5415	3372	3384	168.0	-1.19	0.00	1.2	0
167	7893	86.25	170.30	-3340	709	5417	3403	3415	168.0	0.81	1.61	1.8	0
168	7925	86.13	170.30	-3372	714	5419	3435	3447	168.0	-0.38	0.00	0.4	0
169	7956	85.75	170.30	-3402	719	5421	3466	3477	168.1	-1.23	0.00	1.2	0
170	8018	85.13	169.80	-3463	730	5426	3527	3539	168.1	-1.00	0.81	1.3	0
171	8049	84.88	169.80	-3493	736	5429	3558	3570	168.1	-0.81	0.00	0.8	0
172	8081	84.13	170.30	-3525	741	5432	3590	3602	168.1	-2.34	1.56	2.8	0
173	8112	84.00	170.30	-3555	746	5435	3621	3633	168.1	-0.42	0.00	0.5	0
174	8145	84.00	170.80	-3588	752	5439	3653	3665	168.2	0.00	1.52	1.5	0
175	8176	83.50	171.30	-3618	756	5442	3684	3696	168.2	-1.61	1.61	2.3	0
176	8207	83.13	171.30	-3648	761	5446	3715	3727	168.2	-1.19	0.00	1.2	0
177	8239	83.50	171.80	-3680	766	5449	3747	3759	168.2	1.16	1.56	1.9	0
178	8271	83.38	171.80	-3711	770	5453	3779	3790	168.3	-0.38	0.00	0.4	0
179	8327	82.50	171.80	-3766	778	5460	3834	3846	168.3	-1.57	0.00	1.6	0
180	8422	79.38	172.30	-3859	791	5475	3928	3940	168.4	-3.28	0.53	3.3	0

WELLPATH DATA

RIDDLE

Sta. Num.	M.D. Feet	Incl. Angle Deg.	Azi. Angle Deg.	Coordinates			Vert. Sec. Feet	Closure		Rate Change		Total D.L. Deg/100 Ft	TFO Deg.
				+N,-S Feet	+E,-W Feet	TVD Feet		Dist. Feet	Dire. Deg.	Incl. Deg/100 Ft	Azi. Deg		
181	8515	76.13	172.80	-3949	803	5495	4019	4030	168.5	-3.49	0.54	3.5	0
182	8649	71.75	172.80	-4077	819	5532	4148	4159	168.6	-3.27	0.00	3.3	0