

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from The Ohio Oil Company's No. 1 Government Wolf Well drilled in
C. SW 1/4 NE 1/4 of sec. 6, T. 11 S., R. 21 E., Uintah County, Utah

Surface elevation 5,526 feet

Surface elevation 5,520 feet

Sample 4/12/60

Sample number		Run No.	Yield of product				Gal. per ton		Specific gravity of oil at 60°/60° F.	Properties of spent shale Tendency to coke	Remarks
			Weight percent		Spent shale	Gas + loss					
Laramie	Their		Oil	Water					Oil	Water	
SBR61-942-51	0-200						No oil				
SBR61-952	200-220						Trace				
SBR61-953-56	220-300						No oil				
SBR61-957-58	320-360						Trace				
SBR61-959	360-380						No oil				
SBR61-960	440-470	71145	0.0	7.3	92.3	0.4	No oil	17.4		None	
SBR61-961	470-500						No oil				
SBR61-962	530-560						Trace				
SBR61-963	560-590						No oil				
SBR61-964	600-610						c				
SBR61-965	610-620						No oil				
SBR61-966	620-630						Trace				
SBR61-967-69	630-660						b				
SBR61-970	660-670						c				
SBR61-971	670-680						No oil				
SBR61-972	680-690	71146	.8	3.4	95.2	.6	2.2a	8.1		None	
SBR61-973	690-700	71147	.8	3.9	94.8	.5	2.2a	9.3		None	
SBR61-974	700-710	71148	1.1	2.6	95.7	.6	2.8a	6.2		None	
SBR61-975	710-720	71149	.7	3.2	95.4	.7	1.9a	7.7		None	
SBR61-976-78	720-750						c				
SBR61-979	750-760	71150	1.1	2.4	95.9	.6	2.8a	5.8		None	
SBR61-980-85	760-820						c				
SBR61-986-87	820-840						b				
SBR61-988	840-850						Trace				
SBR61-989-91	850-880						b				
SBR61-992-93	880-900						c				
SBR61-994-95	900-920						Trace				
SBR61-996	920-930						c				
SBR61-997	930-940	71151	1.8	2.6	94.9	.7	4.7a	6.2		None	
SBR61-998	940-950	71152	1.6	2.5	95.1	.8	4.0a	6.0		None	

a - Specific gravity estimated due to insufficient oil.

b - Less than 1.0 gallon of oil per ton of shale.

c - More than 1.0 but less than 3.0 gallons of oil per ton of shale.

Drill cutting samples received May 17, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3458P Sheet No. 1 of 6 sheets February 15, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from the Ohio Oil Company's No. 1 Government Wolf Well (Con.)

Surface elevation 5,526 feet

Surface elevation 5,520 feet

Sample number		Run No.	Yield of product				Gal. per ton		Specific gravity of oil at 60°/60°F.	Properties of spent shale		Remarks
			Weight percent		Spent shale	Gas + loss				Tendency to coke		
Laramie	Their		Oil	Water					Oil	Water		
SBR61- 999	950- 960	71153	1.8	2.1	95.2	0.9	4.8a	5.0			None	
SBR61-1000	960- 970	71154	1.3	2.4	94.6	1.7	3.5a	5.8			None	
SBR61-1001	970- 980	71155	.8	6.8	91.8	.6	2.2a	16.3			None	
SBR61-1002	980- 990	71156	1.4	2.9	94.7	1.0	3.8a	7.0			None	
SBR61-1003	990-1000	71157	1.6	1.2	96.5	.7	4.2a	2.9			None	
SBR61-1004	1000-1010	71158	2.3	.8	95.9	1.0	6.0a	1.8			None	
SBR61-1005	1010-1020	71159	1.7	1.6	95.7	1.0	4.4a	4.0			None	
SBR61-1006	1020-1030	71160	2.0	1.1	95.8	1.1	5.1a	2.8			None	
SBR61-1007	1030-1040	71161	2.2	.7	95.7	1.4	5.8	1.7	0.906		None	
SBR61-1008	1040-1050	71162	2.1	.9	95.7	1.3	5.6	2.0	.904		None	
SBR61-1009	1050-1060	71163	2.2	.8	96.1	.9	5.8	1.9	.906		None	
SBR61-1010	1060-1070	71164	2.1	1.0	96.1	.8	5.5	2.5	.909		None	
SBR61-1011	1070-1080	71165	2.1	.9	96.0	1.0	5.6	2.0	.915		None	
SBR61-1012	1080-1090	71166	2.4	1.0	95.9	.7	6.2	2.4	.917		None	
SBR61-1013	1090-1100	71167	2.2	.6	95.8	1.4	5.7	1.6	.924		None	
SBR61-1014	1100-1110	71168	2.5	.8	95.9	.8	6.6	1.8	.917		None	
SBR61-1015	1110-1120	71169	2.2	.8	96.7	.3	5.7	1.9	.915		None	
SBR61-1016	1120-1130	71170	2.3	.7	96.3	.7	6.0	1.7	.919		None	
SBR61-1017	1130-1140	71171	4.7	.8	93.3	1.2	12.2	2.0	.918		None	
SBR61-1018	1140-1150	71172	5.1	.8	92.9	1.2	13.3	2.0	.916		None	
SBR61-1019	1150-1160	71173	4.6	.8	93.4	1.2	12.0	1.9	.916		None	
SBR61-1020	1160-1170	71174	1.6	.8	96.7	.9	4.1a	1.9			None	
SBR61-1021	1170-1180	71175	1.7	.8	96.6	.9	4.5a	1.9			None	
SBR61-1022	1180-1190	71176	1.7	.8	96.7	.8	4.5a	1.8			None	
SBR61-1023	1190-1200	71177	2.5	.5	95.8	1.2	6.5	1.2	.915		None	
SBR61-1024	1200-1210	71178	2.5	.6	95.8	1.1	6.5	1.4	.919		None	
SBR61-1025	1210-1220	71179	2.7	.6	95.7	1.0	7.0	1.3	.924		None	
SBR61-1026	1220-1230	71180	2.8	.6	95.7	.9	7.1	1.4	.925		None	
SBR61-1027	1230-1240	71181	2.7	.5	95.8	1.0	7.0	1.2	.926		None	
SBR61-1028	1240-1250	71182	2.7	.4	95.8	1.1	6.9	1.1	.925		None	

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received May 17, 1960; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from the Ohio Oil Company's No. 1 Government Wolf Well (Con.)

Surface elevation 5,526 feet

Surface elevation 5,526 feet

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale		Remarks
			Weight percent		Spent shale	Gas + loss					
Laramie	Their		Oil	Water					Oil	Water	
SBR61-1029	1250-1260	71183	3.2	0.4	95.0	1.4	8.2	1.1	0.924	None	
SBR61-1030	1260-1270	71184	2.4	.6	95.9	1.1	6.3	1.4	.925	None	
SBR61-1031	1270-1280	71185	2.1	.6	96.1	1.2	5.4	1.6	.921	None	
SBR61-1032	1280-1290	71186	2.4	.5	96.0	1.1	6.3	1.1	.920	None	
SBR61-1033	1290-1300	71187	2.3	.7	96.5	.5	6.1	1.6	.910	None	
SBR61-1034	1300-1310	71188	2.2	.7	96.7	.4	5.7	1.8	.915	None	
SBR61-1035	1310-1320	71189	2.4	.6	96.4	.6	6.2	1.6	.914	None	
SBR61-1036	1320-1330	71190	2.3	.7	96.5	.5	5.9	1.8	.915	None	
SBR61-1037	1330-1340	71191	3.0	.5	95.3	1.2	7.8	1.2	.927	None	
SBR61-1038	1340-1350	71192	3.3	.7	95.0	1.0	8.6	1.6	.928	None	
SBR61-1039	1350-1360	71193	3.3	.8	95.0	.9	8.6	1.8	.921	None	
SBR61-1040	1360-1370	71194	4.1	.5	94.1	1.3	10.6	1.2	.927	None	
SBR61-1041	1370-1380	71195	4.9	.5	94.0	.6	12.7	1.2	.925	None	
SBR61-1042	1390-1400	71196	6.6	.8	91.3	1.3	17.3	1.9	.915	None	
SBR61-1043	1400-1410	71197	6.7	.7	91.3	1.3	17.2	1.8	.916	None	
SBR61-1044	1410-1420	71198	4.3	1.0	93.9	.8	11.2	2.4	.914	None	
SBR61-1045	1420-1430	71199	4.0	1.0	94.2	.8	10.6	2.4	.915	None	
SBR61-1046	1430-1440	71200	4.1	.9	94.1	.9	10.7	2.2	.914	None	
SBR61-1047	1440-1450	71201	4.1	1.0	93.9	1.0	10.7	2.4	.922	None	
SBR61-1048	1450-1460	71202	4.4	.8	93.5	1.3	11.5	2.0	.917	None	
SBR61-1049	1460-1470	71203	3.9	1.0	94.4	.7	10.1	2.4	.918	None	
SBR61-1050	1470-1480	71204	4.1	1.1	94.0	.8	10.5	2.8	.924	None	
SBR61-1051	1480-1490	71205	4.1	1.1	93.9	.9	10.8	2.6	.920	None	
SBR61-1052	1490-1500	71206	4.2	.9	93.6	1.3	10.9	2.2	.923	None	
SBR61-1053	1500-1510	71207	4.3	.9	93.8	1.0	11.1	2.2	.919	None	
SBR61-1054	1510-1520	71208	4.1	1.0	93.8	1.1	10.6	2.4	.921	None	
SBR61-1055	1520-1530	71209	3.9	.7	94.2	1.2	10.1	1.8	.915	None	
SBR61-1056	1530-1540	71210	3.4	.7	94.4	1.5	8.9	1.7	.920	None	
SBR61-1057	1540-1550	71211	3.9	.8	94.4	.9	10.3	1.9	.921	None	
SBR61-1058	1550-1560	71212	3.9	.8	94.2	1.1	10.1	2.0	.917	None	

Drill cutting samples received May 17, 1960; assays made on air-dried samples

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Samples from the Ohio Oil Company's No. 1 Government Wolf Well (Con.)

Surface elevation 5,526 feet

Sample number			Yield of product					Specific gravity of oil at 60°/60°F.	Properties of spent shale		Remarks
			Weight percent		Spent shale	Gas + loss	Gal. per ton		Tendency to coke		
Laramie	Their	Run No.	Oil	Water			Oil	Water		Oil	Water
SBR61-1059	1560-1570	71213	5.9	0.7	91.9	1.5	15.4	1.7	0.912	None	
SBR61-1060	1570-1580	71214	6.0	1.2	91.6	1.2	15.8	2.8	.915	None	
SBR61-1061	1580-1590	71215	5.7	.9	91.8	1.6	14.9	2.3	.914	None	
SBR61-1062	1590-1600	71216	4.2	.5	93.3	2.0	10.8	1.2	.920	None	
SBR61-1063	1600-1610	71217	3.3	.9	94.8	1.0	8.6	2.2	.915	None	
SBR61-1064	1610-1620	71218	2.2	.9	96.1	.8	5.9	2.2	.914	None	
SBR61-1065	1620-1630	71219	2.3	1.1	96.1	.5	6.2	2.6	.912	None	
SBR61-1066	1630-1640	71220	1.2	.8	97.8	.2	3.1a	1.9		None	
SBR61-1067	1640-1650	71221	3.5	1.1	94.6	.8	9.3	2.6	.910	None	
SBR61-1068	1650-1660	71222	3.2	.8	95.3	.7	8.3	1.9	.909	None	
SBR61-1069	1660-1670	71223	2.8	.7	95.6	.9	7.4	1.8	.902	None	
SBR61-1070	1670-1680	71224	2.6	.7	95.8	.9	6.7	1.8	.912	None	
SBR61-1071	1680-1690	71225	2.7	.6	95.8	.9	7.0	1.6	.909	None	
SBR61-1072	1690-1700	71226	3.8	.6	94.5	1.1	9.8	1.6	.916	None	
SBR61-1073	1700-1710	71227	1.6	1.5	96.5	.4	4.0a	3.6		None	
SBR61-1074	1710-1720	71228	2.6	1.5	95.3	.6	6.8	3.6	.916	None	
SBR61-1075	1720-1730	71229	2.0	1.3	96.1	.6	5.1a	3.1		None	
SBR61-1076	1730-1740	71230	1.8	1.5	95.8	.9	4.6a	3.6		None	
SBR61-1077	1740-1750	71231	1.2	1.6	96.4	.8	3.1a	3.8		None	
SBR61-1078-79	1750-1770						Trace				
SBR61-1080-81	1770-1790						b				
SBR61-1082	1790-1800	71232	.6	1.1	96.8	1.5	1.4a	2.7		None	
SBR61-1083	1800-1810	71233	3.5	1.7	93.9	.9	9.3	4.0	.915	None	
SBR61-1084	1810-1820	71234	2.5	1.5	95.3	.7	6.6a	3.5		None	
SBR61-1085	1820-1830	71235	1.3	1.8	96.6	.3	3.3a	4.3		None	
SBR61-1086	1830-1840	71236	1.4	1.7	96.4	.5	3.7a	4.1		None	
SBR61-1087	1840-1850	71237	.8	1.7	96.7	.8	2.1a	4.1		None	
SBR61-1088	1850-1860	71238	1.0	1.8	96.8	.4	2.6a	4.3		None	
SBR61-1089	1860-1870	71239	.9	1.4	96.3	1.4	2.4a	3.2		None	
SBR61-1090	1870-1880						c				

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Drill cutting samples received May 17, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3458P Sheet No. 4 of 6 sheets February 15, 1961.

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from the Ohio Oil Company's No. 1 Government Wolf Well (Con.)

Surface elevation 5,526 feet

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale	Remarks
Laramie	Their		Weight percent		Spent shale	Gas + loss	Gal. per ton		Tendency to coke	
			Oil	Water					Oil	Water
SBR61-1091-93	1880-1910						b			
SBR61-1094-96	1910-1940						c			
SBR61-1097	1940-1950						b			
SBR61-1098-1100	1950-1980						c			
SBR61-1101	1980-1990	71240	1.8	2.1	95.3	0.8	4.6a	5.0	None	
SBR61-1102	1990-2000	71241	1.4	1.5	96.2	.9	3.5a	3.6	None	
SBR61-1103	2000-2010	71242	1.5	1.3	96.3	.9	3.9a	3.1	None	
SBR61-1104-09	2010-2070						b			
SBR61-1110-11	2070-2090						c			
SBR61-1112	2090-2100	71243	1.4	1.5	96.5	.6	3.6a	3.6	None	
SBR61-1113	2100-2110	71244	1.4	1.4	96.6	.6	3.5a	3.4	None	
SBR61-1114	2110-2120						c			
SBR61-1115-16	2120-2140						b			
SBR61-1117	2140-2150	71245	.5	2.0	97.0	.5	1.3a	4.8	None	
SBR61-1118-35	2150-2330						c			
SBR61-1136	2330-2340						b			
SBR61-1137-39	2340-2370						c			
SBR61-1140-45	2380-2440						c			
SBR61-1146-50	2440-2490						b			
SBR61-1151	2490-2500						c			
SBR61-1152-59	2500-2580						b			
SBR61-1160	2600-2610						c			
SBR61-1161	2620-2630	71246	1.1	1.5	96.6	.8	2.9a	3.6	None	
SBR61-1162	2630-2640	71247	.7	1.1	97.8	.4	1.8a	2.6	None	
SBR61-1163	2640-2650	71248	3.7	2.1	92.9	1.3	9.7a	5.1	None	
SBR61-1164	2650-2660	71249	3.7	2.0	92.7	1.6	9.7	4.8	0.903	
SBR61-1165	2660-2670	71250	2.7	.8	94.4	2.1	7.0	2.0	.913	
SBR61-1166	2670-2680	71251	1.9	1.4	96.1	.6	4.9a	3.4	None	
SBR61-1167	2680-2690	71252	1.6	1.2	96.8	.4	4.1a	3.0	None	
SBR61-1168	2690-2700	71253	1.6	1.3	96.6	.5	4.2a	3.0	None	

a - Specific gravity estimated due to insufficient oil; b - less than 1.0 gallon of oil per ton of shale; c - more than 1.0 but less than 3.0 gallons of oil per ton of shale.

Drill cutting samples received May 17, 1960; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from the Ohio Oil Company's No. 1 Government Wolf Well (Con.)

Surface elevation 5,526 feet

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale Tendency to coke		Remarks
			Weight percent		Spent shale	Gas + loss					
Laramie	Their		Oil	Water					Oil	Water	
SBR61-1169-77	2700-2790						c				
SBR61-1178-88	2820-2930						c				
SBR61-1189-92	2940-2980						b				
SBR61-1193	2990-3000						Trace				
SBR61-1194-98	3000-3050						b				
SBR61-1199	3050-3060	71254	1.8	2.3	94.6	1.3	4.8a	5.5		None	
SBR61-1200-02	3060-3090						c				
SBR61-1203-05	3090-3120						b				
SBR61-1206-10	3120-3170						c				
SBR61-1211-14	3170-3210						b				
SBR61-1215	3210-3220						No oil				
SBR61-1216	3220-3230						b				
SBR61-1217-19	3230-3260						Trace				
SBR61-1220-24	3260-3310						b				
SBR61-1225	3310-3320						c				
SBR61-1226	3320-3330	71255	2.7	1.7	94.7	.9	7.4	4.0	0.879	None	
SBR61-1227	3330-3340	71256	4.4	1.6	92.0	2.0	11.7	3.8	.905	None	
SBR61-1228	3340-3350	71257	5.0	1.6	92.0	1.4	13.1	3.8	.914	None	
SBR61-1229	3350-3360	71258	4.2	2.0	92.6	1.2	11.2	4.7	.901	None	
SBR61-1230	3360-3370	71259	4.9	2.0	91.9	1.2	13.2	4.8	.900	None	
SBR61-1231-40	3370-3470						c				
SBR61-1241-43	3470-3500						b				
SBR61-1244	3500-3510	71260	2.6	1.8	94.9	.7	6.8	4.3	.900	None	
SBR61-1245	3510-3520						c				
SBR61-1246-49	3520-3560						b				
SBR61-1250-51	3560-3580						Trace				
SBR61-1252-53	3580-3600						No oil				

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