LCA 229
20' of 30g
30' of 25g
290' of 15g

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well drilled in C. SW 1/4 NE 1/4
1,980 feet S/N 1,980 feet W/E of sec. 7, T. 11 S., R. 21E., Uintah County, Utah

Elevation: 5496 KB
Morgan Marker: 3956'

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	of oil at 60°/60° F.	Tendency to coke	Remarks
SBR61-8233-55	50-280						No oil				
SBR61-8256	280-290						b				
SBR61-8257-63	290-360						No oil				
SBR61-8264	360-370	75009	1.9	1.9	95.3	0.9	5.0a	4.6		None	
SBR61-8265	370-380	75010	1.8	1.8	95.8	.6	4.7a	4.2		None	
SBR61-8266-76	380-500						No oil				
SBR61-8277-80	500-540						b				
SBR61-8281	540-550	75011	.6	2.0	97.0	.4	1.5a	4.8		None	
SBR61-8282	560-570	75012	.7	2.2	96.5	.6	1.9a	5.2		None	
SBR61-8283-84	570-590						No oil				
SBR61-8285-90	590-650						b				
SBR61-8291	650-660	75013	1.0	2.0	96.6	.4	2.6a	4.8		None	
SBR61-8292	660-670	75014	1.1	2.0	96.2	.7	3.0a	4.8		None	
SBR61-8293	670-680	75015	1.0	2.2	96.1	.7	2.5a	5.3		None	
SBR61-8294	680-690	75016	1.0	2.1	96.3	.6	2.7a	5.0		None	
SBR61-8295	690-700	75017	.8	2.4	96.3	.5	2.1a	5.8		None	
SBR61-8296	700-710	75018	.9	2.2	96.3	.6	2.3a	5.2		None	
SBR61-8297	710-720	75019	1.0	2.6	95.6	.8	2.7a	6.2		None	
SBR61-8298	720-730	75020	.7	2.2	96.5	.6	1.9a	5.2		None	
SBR61-8299	730-740	75021	.5	1.9	96.8	.8	1.4a	4.6		None	
SBR61-8300-01	740-760						b				
SBR61-8302	760-770	75022	.7	2.3	96.5	.5	1.8a	5.6		None	
SBR61-8303	770-780	75023	.9	2.3	96.4	.4	2.3a	5.6		None	
SBR61-8304	780-790	75024	.8	2.3	96.7	.2	2.2a	5.4		None	
SBR61-8305	790-800	75025	1.1	2.4	96.1	.4	2.9a	5.6		None	
SBR61-8306	800-810	75026	1.2	2.2	96.4	.2	3.2a	5.2		None	
SBR61-8307	810-820	75027	1.0	2.2	96.7	.1	2.7a	5.3		None	
SBR61-8308-09	820-840						b				
SBR61-8310	840-850	75028	1.5	2.0	96.3	.2	3.9a	4.7		None	
SBR61-8311	850-860	75029	1.3	2.0	96.5	.2	3.4a	4.7		None	

a - Specific gravity estimated due to insufficient oil
b - Less than 1.0 gallon of oil per ton of shale

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie Petr(um Research Center, Laramie, Wyoming, Illustrat(No. SBR-3507P, Sheet No. 1 of 7 sheets, Septemb 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	60°/60° F.	coke	Remarks
SBR61-8312	860- 870						Trace				
SBR61-8313-15	870- 900						b				
SBR61-8316	900- 910	75030	1.2	1.9	96.8	0.1	3.2a	4.4		None	
SBR61-8317	910- 920	75031	1.4	2.0	96.3	.3	3.7a	4.8		None	
SBR61-8318	920- 930	75032	1.5	1.9	96.1	.5	4.0a	4.4		None	
SBR61-8319	930- 940	75033	1.2	2.0	96.6	.2	3.0a	4.8		None	
SBR61-8320	940- 950	75034	1.3	2.0	96.6	.1	3.3a	4.8		None	
SBR61-8321	950- 960	75035	2.5	1.5	95.2	.8	6.4	3.7	0.926	None	
SBR61-8322	960- 970	75036	1.8	1.5	95.8	.9	4.8a	3.6		None	
SBR61-8323	970- 980	75037	1.7	1.7	96.2	.4	4.3a	4.0		None	
SBR61-8324	980- 990	75038	1.9	1.2	96.3	.6	4.8a	2.9		None	
SBR61-8325	990-1000	75039	1.5	1.6	96.3	.6	3.8a	3.8		None	
SBR61-8326	1060-1070	75040	2.0	.9	95.5	1.6	5.3a	2.2		None	
SBR61-8327	1070-1080	75041	2.1	1.1	95.6	1.2	5.5a	2.6		None	
SBR61-8328	1080-1090	75042	1.9	1.4	95.6	1.1	5.0a	3.4		None	
SBR61-8329	1090-1100	75043	1.9	1.2	95.6	1.3	5.0a	2.9		None	
SBR61-8330	1110-1120	75044	2.6	4.8	91.3	1.3	6.8	11.6	.928	None	
SBR61-8331	1120-1130	75045	1.3	3.7	93.9	1.0	3.4a	8.9		None	
SBR61-8332	1130-1140	75046	1.8	2.5	94.7	1.0	4.6a	6.1		None	
SBR61-8333	1140-1150	75047	1.6	2.6	95.0	.8	4.2a	6.3		None	
SBR61-8334	1150-1160	75048	3.6	2.9	92.2	1.3	9.3	6.9	.923	None	
SBR61-8335	1160-1170	75049	2.1	1.7	95.2	1.0	5.3	4.1	.925	None	
SBR61-8336	1170-1180	75050	2.0	2.9	94.0	1.1	5.3	7.0	.923	None	
SBR61-8337	1180-1190	75051	2.2	3.5	93.3	1.0	5.8a	8.4		None	
SBR61-8338	1200-1210	75052	2.2	2.7	93.8	1.3	5.7a	6.4		None	
SBR61-8339	1210-1220	75053	1.8	3.9	93.3	1.0	4.7a	9.3		None	
SBR61-8340	1220-1230	75054	2.0	3.2	93.3	1.5	5.1a	7.6		None	
SBR61-8341	1230-1240	75055	2.0	3.3	92.9	1.8	5.1a	7.8		None	
SBR61-8342	1240-1250	75056	2.2	3.1	93.2	1.5	5.7a	7.4		None	
SBR61-8343	1250-1260	75057	2.4	3.5	91.8	2.3	6.2a	8.4		None	

a - Specific gravity estimated due to insufficient oil

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

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie Pet(eum Research Center, Laramie, Wyoming, Illustrat(ı No. SBR-3507P, Sheet No. 2 of 7 sheets, Septem- 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	60°/60° F.	coke	Remarks
SBR61-8344	1260-1270	75058	2.6	3.5	92.2	1.7	6.9a	8.5		None	
SBR61-8345	1270-1280	75059	3.0	3.0	93.2	.8	7.7a	7.2		None	
SBR61-8346	1280-1290	75060	3.1	2.9	92.4	1.6	7.9	7.0	0.934	None	
SBR61-8347	1290-1300	75061	2.9	3.0	92.3	1.8	7.5a	7.2		None	
SBR61-8348	1300-1310	75062	6.1	2.6	88.8	2.5	15.8	6.2	.930	None	
SBR61-8349	1310-1320	75063	5.8	3.1	88.2	2.9	14.9	7.5	.936	None	
SBR61-8350	1320-1330	75064	6.0	2.9	90.3	.8	15.6	6.9	.932	None	
SBR61-8351	1330-1340	75065	5.2	2.0	90.6	2.2	13.4	4.8	.929	None	
SBR61-8352	1340-1350	75066	5.5	1.6	91.2	1.7	14.3	3.7	.925	None	
SBR61-8353	1350-1360	75067	5.6	1.7	90.9	1.8	14.6	4.1	.927	None	
SBR61-8354	1360-1370	75068	4.6	1.6	92.4	1.4	11.9	3.9	.926	None	
SBR61-8355	1370-1380	75069	6.5	1.3	90.0	2.2	16.8	3.0	.927	None	
SBR61-8356	1380-1390	75070	8.1	1.5	88.7	1.7	21.1	3.6	.922	None	
SBR61-8357	1390-1400	75071	8.7	1.2	87.4	2.7	22.6	2.9	.925	None	
SBR61-8358	1400-1410	75072	8.5	1.1	88.1	2.3	22.3	2.6	.918	None	
SBR61-8359	1410-1520	75073	8.6	.8	87.8	2.8	22.4	2.0	.923	None	
SBR61-8360	1420-1430	75074	8.7	1.1	87.8	2.4	22.6	2.6	.920	None	
SBR61-8361	1430-1440	75075	3.7	1.1	94.0	1.2	9.5	2.6	.927	None	
SBR61-8362	1440-1450	75076	3.3	1.1	94.5	1.1	8.4	2.7	.930	None	
SBR61-8363	1450-1460	75077	3.6	1.2	94.2	1.0	9.3	2.9	.930	None	
SBR61-8364	1460-1470	75078	3.3	1.2	94.3	1.2	8.5	2.9	.930	None	
SBR61-8365	1470-1480	75079	3.7	1.6	93.9	.8	9.6	3.7	.931	None	
SBR61-8366	1480-1490	75080	4.7	1.2	92.8	1.3	12.2	3.0	.924	None	
SBR61-8367	1490-1500	75081	4.7	1.4	92.7	1.2	12.0	3.3	.935	None	
SBR61-8368	1500-1510	75082	4.8	1.2	92.6	1.4	12.3	2.8	.926	None	
SBR61-8369	1510-1520	75083	4.3	2.1	92.4	1.2	11.2	5.0	.918	None	
SBR61-8370	1520-1530	75084	5.3	2.1	90.5	2.1	14.0	5.0	.912	None	
SBR61-8371	1530-1540	75085	16.4	1.8	77.4	4.4	43.5	4.3	.902	None	
SBR61-8372	1540-1550	75086	6.3	1.8	89.6	2.3	16.6	4.2	.915	None	
SBR61-8373	1550-1560	75087	5.6	1.8	90.6	2.0	14.6	4.4	.918	None	

a - Specific gravity estimated due to insufficient oil

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3507P, Sheet No. 3 of 7 sheets, September 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	$60^{\circ}/60^{\circ}$ F.	coke	Remarks
SBR61-8374	1560-1570	75088	1.9	1.6	94.6	1.9	5.1a	3.7		None	
SBR61-8375	1570-1580	75089	2.0	1.6	94.9	1.5	5.1a	3.9		None	
SBR61-8376	1580-1590	75090	2.0	1.6	94.8	1.6	5.2a	3.9		None	
SBR61-8377	1590-1600	75091	2.4	1.6	94.0	2.0	6.2a	3.7		None	
SBR61-8378	1600-1610	75092	1.8	1.6	95.2	1.4	4.6a	3.8		None	
SBR61-8379	1610-1620	75093	2.4	1.6	94.6	1.4	6.3a	3.7		None	
SBR61-8380	1620-1630	75094	1.9	1.4	95.4	1.3	4.8a	3.4		None	
SBR61-8381	1630-1640	75095	1.9	1.2	95.7	1.2	5.1a	2.9		None	
SBR61-8382	1640-1650	75096	1.3	1.6	96.2	.9	3.4a	3.9		None	
SBR61-8383	1650-1660	75097	1.3	1.3	96.6	.8	3.4a	3.0		None	
SBR61-8384	1660-1670	75098	1.6	1.4	96.1	.9	4.1a	3.4		None	
SBR61-8385	1670-1680	75099	1.7	1.5	95.5	1.3	4.3a	3.7		None	
SBR61-8386	1680-1690	75100	1.2	1.3	96.4	1.1	3.0a	3.2		None	
SBR61-8387-90	1690-1730						b				
SBR61-8391	1730-1740						No oil				
SBR61-8392	1740-1750	75101	.9	1.2	96.0	1.9	2.4a	2.8		None	
SBR61-8393-95	1750-1780						b				
SBR61-8396	1780-1790						No oil				
SBR61-8397	1790-1800	75102	1.1	1.8	96.0	1.1	2.8a	4.3		None	
SBR61-8398	1800-1810	75103	1.0	1.8	96.1	1.1	2.5a	4.4		None	
SBR61-8399	1810-1820	75104	1.1	1.8	96.0	1.1	2.9a	4.3		None	
SBR61-8400	1820-1830	75105	1.0	1.9	95.7	1.4	2.7a	4.5		None	
SBR61-8401	1830-1840	75106	1.1	1.7	95.8	1.4	2.8a	4.0		None	
SBR61-8402	1840-1850	75107	1.1	1.9	95.9	1.1	2.8a	4.6		None	
SBR61-8403	1850-1860	75108	1.2	1.9	96.1	.8	3.1a	4.5		None	
SBR61-8404	1860-1870	75109	1.0	2.0	96.1	.9	2.7a	4.9		None	
SBR61-8405	1870-1880	75110	1.2	1.9	96.1	.8	3.0a	4.6		None	
SBR61-8406	1880-1890	75111	1.0	1.9	96.0	1.1	2.7a	4.5		None	
SBR61-8407-08	1890-1910						b				
SBR61-8409-11	1910-1940						No oil				

a - Specific gravity estimated due to insufficient oil
b - Less than 1.0 gallon of oil per ton of shale

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie P(oleum Research Center, Laramie, Wyoming, Illustr(on No. SBR-3507P, Sheet No. 4 of 7 sheets, Sept(er 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	60°/60° F.	coke	Remarks
SBR61-8412-13	1940-1960						Trace				
SBR61-8414	1960-1970	75112	0.9	2.2	96.1	0.8	2.4a	5.4		None	
SBR61-8415	1970-1980	75113	.8	2.2	95.9	1.1	2.1a	5.3		None	
SBR61-8416	1980-1990	75114	.9	2.2	95.9	1.0	2.3a	5.3		None	
SBR61-8417	1990-2000	75115	1.3	1.5	96.2	1.0	3.5a	3.5		None	
SBR61-8418	2000-2010						No oil				
SBR61-8419-21	2010-2040						b				
SBR61-8422	2050-2050						No oil				
SBR61-8423	2050-2060						Trace				
SBR61-8424-25	2060-2080						b				
SBR61-8426	2080-2090	75116	.3	1.9	96.4	1.4	.9a	4.6		None	
SBR61-8427	2090-2100						b				
SBR61-8428	2100-2110						Trace				
SBR61-8429	2110-2120						b				
SBR61-8430-31	2120-2140						c				
SBR61-8432-33	2140-2160						b				
SBR61-8434	2160-2170	75117	.7	1.8	96.3	1.2	1.8a	4.4		None	
SBR61-8435-36	2170-2190						b				
SBR61-8437-40	2190-2230						c				
SBR61-8441-42	2230-2250						Trace				
SBR61-8443-45	2250-2280						b				
SBR61-8446	2280-2290						No oil				
SBR61-8447	2290-2300						Trace				
SBR61-8448	2300-2310						No oil				
SBR61-8449	2310-2320						Trace				
SBR61-8450	2320-2330						No oil				
SBR61-8451	2330-2340						Trace				
SBR61-8452	2340-2350						No oil				
SBR61-8453-55	2350-2380						Trace				
SBR61-8456-77	2380-2600						No oil				

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

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3507P, Sheet No. 5 of 7 sheets, September 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	60°/60° F.	coke	Remarks
SBR61-8478	2610-2620						Trace				
SBR61-8479	2620-2630						No oil				
SBR61-8480-81	2630-2650						Trace				
SBR61-8482	2650-2660						b				
SBR61-8483	2670-2680	75118	4.4	2.0	92.2	1.4	11.8	4.7	0.901	None	
SBR61-8484-85	2680-2700						b				
SBR61-8486	2700-2710						Trace				
SBR61-8487-88	2710-2730						No oil				
SBR61-8489	2730-2740						b				
SBR61-8490-91	2740-2760						No oil				
SBR61-8492	2760-2770						b				
SBR61-8493-8500	2770-2850						No oil				
SBR61-8501-06	2850-2910						b				
SBR61-8507-09	2910-2940						Trace				
SBR61-8510-17	2940-3020						No oil				
SBR61-8518-19	3030-3050						No oil				
SBR61-8520	3050-3060						b				
SBR61-8521	3060-3070	75119	.9	3.0	95.3	.8	2.4a	7.2		None	
SBR61-8522	3070-3080	75120	.8	2.7	95.7	.8	2.1a	6.5		None	
SBR61-8523	3080-3090	75121	.9	2.6	95.6	.9	2.3a	6.4		None	
SBR61-8524-26	3090-3120						c				
SBR61-8527	3120-3130						b				
SBR61-8528-30	3130-3160						Trace				
SBR61-8531	3160-3170						b				
SBR61-8532	3170-3180						Trace				
SBR61-8533	3180-3190						b				
SBR61-8534-36	3190-3220						Trace				
SBR61-8537-51	3220-3370						No oil				
SBR61-8552	3370-3380						b				
SBR61-8553-56	3380-3420						Trace				

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

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3507P, Sheet No. 6 of 7 sheets, September 19, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Wolf No. 2 Well

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal. per ton		of oil at	Tendency to	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	60°/60° F.	coke	Remarks
SBR61-8557	3420-3430										
SBR61-8558	3430-3440						Trace				
SBR61-8559-60	3440-3460						b				
SBR61-8561	3460-3470	75122	0.8	1.7	97.1	0.4	2.1a	4.0		None	
SBR61-8562-64	3470-3500						b				
SBR61-8565	3500-3510	75123	3.1	1.5	94.1	1.3	8.0a	3.5		None	
SBR61-8566	3510-3520	75124	3.0	1.5	94.1	1.4	7.8	3.7	0.904	None	
SBR61-8567	3520-3530	75125	2.9	1.6	94.4	1.1	7.6	3.8	.907	None	
SBR61-8568	3530-3540	75126	1.3	2.5	95.3	.9	3.4a	5.9		None	
SBR61-8569	3540-3550						c				
SBR61-8570	3550-3560						Trace				
SBR61-8571	3560-3570						c				
SBR61-8572	3570-3580						Trace				
SBR61-8573	3580-3590						No oil				
SBR61-8574	3590-3600						b				
SBR61-8575-80	3600-3660						No oil				
SBR61-8581-83	3670-3700						No oil				
SBR61-8584	3700-3710						b				
SBR61-8585-86	3710-3730						Trace				
SBR61-8587-90	3730-3770						No oil				
SBR61-8591	3770-3780						Trace				
SBR61-8592	3780-3790						b				
SBR61-8593-94	3790-3810						No oil				
SBR61-8595-8614	3820-4020						No oil				

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

Rotary drill cuttings (small samples) received August 14, 1961; Assays made on air-dried samples

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