

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Oil Corporation's Trapper's Trail Unit No. 1 Well drilled in the NW1/4NW1/4 (662 feet S/N, 655 feet E/W) of sec 16, T 15 N, R 97 W, Sweetwater County, Wyoming

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 <sup>1/</sup>
SBR72-11299-339	1860-2270						No Oil		
SBR72-11340-42	2270-2300						Trace		
SBR72-11343-44	2300-2320						c		
SBR72-11345-81	2320-2690						No Oil		
SBR72-11382	2690-2700						Trace		
SBR72-11383-87	2700-2750						No Oil		
SBR72-11388	2750-2760						c		
SBR72-11389	2760-2770						No Oil		
SBR72-11390	2770-2780						b		
SBR72-11391-92	2780-2800						No Oil		
SBR72-11393	2800-2810						Trace		
SBR72-11394	2810-2820						b		
SBR72-11395	2820-2830						Trace		
SBR72-11396	2830-2840						b		
SBR72-11397	2840-2850						c		
SBR72-11398	2850-2860						b		
SBR72-11399	2860-2870						Trace		
SBR72-11400-01	2870-2890						c		
SBR72-11402	2890-2900						b		
SBR72-11403-04	2900-2940						Trace		
SBR72-11405	2940-2970	78149	0.1	2.0	97.9	0.0	0.2a	4.7	None
SBR72-11406	2970-3000	78150	.5	2.0	96.4	1.1	1.3a	4.8	None
SBR72-11407	3000-3030	78151	2.0	1.8	95.4	.8	5.2a	4.3	None
SBR72-11408	3030-3060	78152	5.1	1.1	92.0	1.8	13.6	2.6	0.893
SBR72-11409	3060-3090	78153	3.0	1.9	94.1	1.0	8.0	4.6	.902
SBR72-11410	3090-3120	78154	2.8	1.6	95.3	.3	7.6	3.7	.884
SBR72-11411	3120-3150	78155	3.0	1.0	95.2	.8	8.0	2.4	.887
SBR72-11412	3150-3180	78156	3.5	1.5	94.4	.6	9.4	3.6	.901
SBR72-11413	3180-3210	78157	3.4	1.0	93.8	1.8	8.8	2.4	.909
SBR72-11414	3210-3240	78158	3.8	1.1	93.8	1.3	10.2	2.6	.903

See footnote at end of table.

Drill cuttings received October 25, 1972; Assays made on air-dried samples

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Oil Corporation's Trapper's Trail Unit No. 1 Well (con.)

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		Gal per ton			Tendency to coke
Laramie	Their		Oil	Water				Oil <sup>1</sup> /	Water		
SBR72-11415	3240-3270	78159	6.2	1.8	90.6	1.4	16.6	4.3	0.895	None	
SBR72-11416	3270-3300	78160	6.6	1.7	89.6	2.1	17.5	4.1	.900	None	
SBR72-11417	3300-3330	78161	6.3	1.7	89.7	2.3	16.7	4.1	.899	None	
SBR72-11418	3330-3360	78162	6.3	1.6	90.0	2.1	16.7	3.8	.901	None	
SBR72-11419	3360-3400	78163	6.2	1.6	90.1	2.1	16.7	3.8	.896	None	
SBR72-11420	3400-3430	78164	6.2	1.5	90.0	2.3	16.6	3.6	.898	None	
SBR72-11421	3430-3440	78165	6.0	1.5	90.6	1.9	15.8	3.6	.911	None	
SBR72-11422	3440-3450	78166	.5	.8	97.9	.9	1.2a	1.9		None	
SBR72-11423	3450-3460	78167	2.1	1.1	95.8	1.0	5.7	2.6	.887	None	
SBR72-11424	3460-3470	78168	3.4	1.1	93.7	1.8	9.1	2.8	.894	None	
SBR72-11425	3470-3480	78169	3.9	1.0	93.6	1.5	10.5	2.4	.899	None	
SBR72-11426	3480-3490	78170	6.3	1.0	90.9	1.8	16.6	2.3	.914	None	
SBR72-11427	3490-3500	78171	5.6	1.1	91.6	1.7	14.4	2.6	.926	None	
SBR72-11428	3500-3510	78172	5.2	1.1	92.4	1.3	13.5	2.6	.913	None	
SBR72-11429	3510-3520	78173	4.4	1.0	93.3	1.3	11.4	2.4	.921	None	
SBR72-11430	3520-3530	78174	3.4	.9	94.5	1.2	9.1	2.0	.908	None	
SBR72-11431	3530-3540	78175	2.5	.8	95.5	1.2	6.7	1.9	.901	None	
SBR72-11432	3540-3550	78176	2.7	1.1	95.0	1.2	7.3	2.6	.899	None	
SBR72-11433	3550-3560	78177	3.2	1.1	94.9	.8	8.5	2.6	.903	None	
SBR72-11434	3560-3570	78178	1.2	1.5	96.7	.6	3.2a	3.6		None	
SBR72-11435	3570-3580	78179	2.6	.8	95.1	1.5	7.0	1.8	.900	None	
SBR72-11436	3580-3590	78180	1.6	.8	96.2	1.4	4.3a	1.8		None	
SBR72-11437	3590-3600	78181	.9	1.9	97.6	.5	.1a	4.6		None	
SBR72-11438	3600-3610	78182	.0	1.8	97.7	.5	Trace	4.3		None	
SBR72-11439	3610-3620	78183	2.0	1.9	95.3	.8	5.3	4.6	.886	None	
SBR72-11440	3620-3630	78184	2.6	1.7	94.3	1.4	6.9	4.1	.891	None	
SBR72-11441	3630-3640	78185	1.9	1.7	95.1	1.3	5.1	4.1	.893	None	
SBR72-11442	3640-3650	78186	1.2	1.6	96.5	.7	3.2a	3.8		None	
SBR72-11443	3650-3660	78187	.2	2.0	97.7	.1	.6a	4.8		None	
SBR72-11444	3660-3670						Trace				

See footnote at end of table.

Drill cuttings received October 25, 1972; Assays made on air-dried samples

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Oil Corporation's Trapper's Unit No. 1 Well (con.)

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		Gal per ton		
Laramie	Their		Oil	Water					Oil <sup>1</sup> /	Water
SBR72-11445-46	3670-3690						No Oil			
SBR72-11447	3690-3700						Trace			
SBR73-3439	5710-5720	80023	0.1	1.7	97.7	0.5	0.3a	4.1	None	Sample depths not lagged. Deduct approx. 20 feet to estimate drilling depth.
SBR73-3440	5720-5730	80024	.9	3.8	93.4	1.9	2.3a	9.1	None	
SBR73-3441	5730-5740	80025	1.5	4.1	93.6	.8	3.9a	9.8	None	
SBR73-3442	5760-5770	80026	.1	3.3	95.5	1.1	.3a	7.9	None	
SBR73-3443	5770-5780	80027	.0	2.8	96.1	1.1	Trace	6.7	None	
SBR73-3444	5780-5790	80028	.0	2.9	96.3	.8	Trace	7.0	None	
SBR73-3445	5790-5800	80029	.3	3.0	95.9	.8	.8a	7.2	None	
SBR73-3446	5800-5810	80030	.5	2.1	95.9	1.5	1.3a	5.0	None	
SBR73-3447	5810-5820	80031	1.6	2.2	94.7	1.5	4.2a	5.3	None	
SBR73-3448	5820-5830	80032	1.7	2.6	94.2	1.5	4.4a	6.2	None	
SBR73-3449	5830-5840	80033	1.5	2.7	94.2	1.6	3.9a	6.5	None	
SBR73-3450	5840-5850	80034	2.2	3.1	92.9	1.8	5.7	7.4	0.918	None
SBR73-3451	5850-5860	80035	2.4	2.2	93.5	1.9	6.4	5.3	.904	None
SBR73-3452	5860-5870	80036	2.3	2.0	94.1	1.6	6.1	4.8	.902	None
SBR73-3453	5870-5880	80037	1.8	3.2	92.1	2.9	4.7a	7.7	None	
SBR73-3454	5900-5910	80038	2.0	2.1	94.6	1.3	5.4	5.0	.895	None
SBR73-3455	5910-5920	80039	1.5	2.4	95.0	1.1	3.9a	5.8	None	
SBR73-3456	5920-5930	80040	1.2	2.8	94.5	1.5	3.1a	6.7	None	
SBR73-3457	5930-5940	80041	1.2	2.8	94.5	1.5	3.1a	6.7	None	
SBR73-3458	5940-5950	80042	1.2	3.0	94.3	1.5	3.1a	7.2	None	
SBR73-3459	5950-5960	80043	.9	2.1	95.7	1.3	2.3a	5.0	None	
SBR73-3460	5960-5970	80044	2.2	2.5	93.3	2.0	5.8	6.0	.909	None
SBR73-3461	5970-5980	80045	2.5	3.0	92.1	2.4	6.7	7.2	.891	None
SBR73-3462	5980-5990	80046	2.5	2.3	93.5	1.7	6.8	5.5	.884	None
SBR73-3463	5990-6000	80047	1.6	2.4	94.1	1.9	4.2a	5.8	None	
SBR73-3464	6000-6010	80048	.9	1.8	95.2	2.1	2.3a	4.3	None	
SBR73-3465	6010-6020	80049	1.9	2.0	94.5	1.6	4.9a	4.8	None	
SBR73-3466	6020-6030	80050	2.3	1.6	94.8	1.3	6.3	3.8	.879	None

See footnote at end of table.

Drill cuttings received October 25, 1972; Assays made on air-dried samples

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Samples from Gulf Oil Corporation's Trapper's Unit No. 1 Well (con.)

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		Gal per ton		
Laramie	Their		Oil	Water					Oil/	Water
SBR73-3467	6030-6040	80051	0.1	0.6	98.4	0.9	0.3a	1.4		None
SBR73-3468	6040-6050	80052	2.8	1.6	93.4	2.2	7.6	3.8	0.885	None
SBR73-3469	6050-6060	80053	2.6	1.8	94.2	1.4	7.0	4.3	.886	None
SBR73-3470	6060-6070	80054	2.3	1.6	95.0	1.1	6.2	3.8	.888	None
SBR73-3471	6070-6080	80055	3.8	2.0	93.0	1.2	10.2	4.8	.897	None
SBR73-3472	6080-6090	80056	2.9	1.6	94.3	1.2	7.7	3.8	.897	None
SBR73-3473	6090-6100	80057	.5	2.0	95.8	1.7	1.3a	4.8		None
SBR73-3474	6100-6110	80058	3.7	2.1	92.2	2.0	10.0	5.0	.891	None
SBR73-3475	6110-6120	80059	4.0	5.0	88.0	3.0	10.6	12.0	.900	None
SBR73-3476	6120-6130	80060	4.3	3.4	90.1	2.2	11.6	8.1	.885	None
SBR73-3477	6130-6140	80061	3.0	2.0	93.8	1.2	8.2	4.8	.882	None
SBR73-3478	6140-6150	80062	2.6	1.9	94.2	1.3	7.0	4.6	.886	None
SBR73-3479	6150-6160	80063	2.6	1.6	94.3	1.5	7.1	3.8	.878	None
SBR73-3480	6160-6170	80064	1.8	1.5	95.4	1.3	4.7a	3.6		None
SBR73-3481	6170-6180	80065	2.1	1.6	94.9	1.4	5.5a	3.8		None
SBR73-3482	6180-6190	80068	2.0	1.4	95.4	1.2	5.2a	3.4		None
SBR73-3483	6190-6200	80069	1.9	1.5	95.5	1.1	4.9a	3.6		None
SBR73-3484	6200-6210	80070	2.4	5.2	89.1	3.3	6.2a	12.5		None
SBR73-3485	6210-6220	80071	2.8	5.0	89.1	3.1	7.3a	12.0		None
SBR73-3486	6220-6230	80072	1.9	4.2	91.6	2.3	4.9a	10.1		None
SBR73-3487	6230-6240	80073	1.0	1.3	96.5	1.2	2.6a	3.1		None
SBR73-3488	6240-6250	80074	1.4	1.4	96.3	.9	3.6a	3.4		None
SBR73-3489	6250-6260	80075	.9	1.3	96.6	1.2	2.3a	3.1		None
SBR73-3490	6260-6270	80076	1.8	2.3	94.3	1.6	4.7a	5.5		None
SBR73-3491	6270-6280	80077	.9	1.9	96.0	1.2	2.3a	4.6		None
SBR73-3492	6280-6290	80078	.6	1.2	96.6	1.6	1.6a	2.9		None
SBR73-3493	6290-6300	80079	.5	2.2	96.5	.8	1.3a	5.3		None
SBR73-3494	6300-6310	80080	1.2	.8	96.8	1.2	3.1a	1.9		None
SBR73-3495	6310-6320	80081	.4	1.7	97.0	.9	1.0a	4.1		None
SBR73-3496	6320-6330	80082	2.5	8.4	84.7	4.4	6.5a	20.1		None

See footnote at end of table.

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Samples from Gulf Oil Corporation's Trapper's Unit No. 1 Well (con.)

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		Gal per ton			Tendency to coke
Laramie	Their		Oil	Water				Oil <sup>1/</sup>	Water		
SBR73-3497	6330-6340	80083	0.4	2.4	96.1	1.1	1.0a	5.8	0.989	None	
SBR73-3498	6340-6350	80084	.3	2.0	96.1	1.6	.8a	4.8		None	
SBR73-3499	6350-6360	80085	.3	1.9	96.1	1.7	.8a	4.6		None	
SBR73-3500	6360-6370	80086	6.9	1.8	88.5	2.8	16.7	4.3		Moderate	Coal tar in oil
SBR73-3501	6370-6380	80087	1.1	1.7	96.1	1.1	2.9a	4.1		Slight	w/sample
SBR73-3502	6380-6390	80088	.5	2.1	96.3	1.1	1.3a	5.0		None	
SBR73-3503	6390-6400	80089	.3	1.9	96.9	.9	.8a	4.6		None	
SBR73-3504	6400-6410	80090	.4	1.6	97.4	.6	1.0a	3.8		None	
SBR73-3505	6410-6420	80091	.5	2.0	96.7	.8	1.3a	4.8		None	
SBR73-3506	6420-6430	80092	.0	.3	98.0	1.7	Trace	.7		None	
SBR73-3507	6430-6440	80093	.5	1.5	97.3	.7	1.3a	3.6		None	
SBR73-3508	6440-6450	80094	.6	2.2	96.2	1.0	1.6a	5.3		None	
SBR73-3509	6450-6460	80095	.3	1.7	97.0	1.0	.8a	4.1		None	
SBR73-3510	6460-6470	80096	.2	1.3	97.3	1.2	.5a	3.1		None	
SBR73-3511	6470-6480	80097	1.2	8.6	86.4	3.8	3.1a	20.6		None	
SBR73-3512	6480-6490	80098	.4	3.7	94.2	1.7	1.0a	8.9		None	
SBR73-3513	6490-6500	80099	.1	1.6	96.8	1.5	.3a	3.8		None	

<sup>1/</sup> "a"--indicates specific gravity estimated as 0.92. Oil yields were estimated by a rapid test-tube method: "No oil," "Trace," "b"--less than 1 gal oil/ton, "c"--1 to 3 gal oil/ton.

Drill cuttings received October 25, 1972; Assays made on air-dried samples