

UE-10

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Hager No. 1 Well drilled in NW1/4, SW1/4, NE1/4,
1,540 feet S/N and 2,050 feet W/E of sec. 2, T. 10S., R. 23E., Uintah County, Utah

Surface elevation 5,451.6 feet

mahogany marker 2891.6

			Yield of product						Specific gravity of oil at 60°/60° F.	Properties of spent shale	
Sample number		Run No.	Weight percent		Spent shale	Gas + loss	Gal. per ton			Tendency to coke	Remarks
Laramie	Their		Oil	Water			Oil	Water			
SBR62-2756	2200-2210	78771	5.3	0.9	92.0	1.8	13.9	2.2	0.913	None	
SBR62-2757	2210-2220	78772	8.2	1.5	88.3	2.0	21.5	3.6	.912	None	
SBR62-2758	2220-2230	78773	8.1	2.0	87.7	2.2	21.0	4.8	.921	None	
SBR62-2759	2230-2240	78774	9.3	1.8	86.6	2.3	24.1	4.3	.920	None	
SBR62-2760	2240-2250	78775	8.8	1.9	87.1	2.2	23.0	4.6	.923	None	
SBR62-2761	2250-2260	78776	9.1	2.0	86.6	2.3	23.7	4.8	.919	None	
SBR62-2762	2260-2270	78777	3.0	2.2	93.7	1.1	8.0	5.3	.909	None	
SBR62-2763	2270-2280	78778	2.6	2.1	94.2	1.1	6.7	5.0	.917	None	
SBR62-2764	2280-2290	78779	3.6	2.0	93.1	1.3	9.5	4.8	.912	None	
SBR62-2765	2290-2300	78780	4.0	2.5	91.7	1.8	10.3a	6.1		None	
SBR62-2766	2300-2310	78781	7.2	2.7	88.1	2.0	18.8	6.4	.913	None	
SBR62-2767	2310-2320	78782	6.1	4.4	86.8	2.7	15.9	10.5	.917	None	
SBR62-2768	2320-2330	78783	5.6	3.4	88.5	2.5	14.7	8.1	.914	None	
SBR62-2769	2330-2340	78784	5.6	2.8	89.8	1.8	14.6	6.7	.916	None	
SBR62-2770	2340-2350	78785	6.2	2.0	89.8	2.0	16.4	4.8	.914	None	
SBR62-2771	2350-2360	78786	4.6	1.7	92.2	1.5	12.0	4.1	.916	None	
SBR62-2772	2360-2370	78787	4.5	1.6	92.5	1.4	11.9	3.8	.911	None	
SBR62-2773	2370-2380	78788	3.8	1.5	93.4	1.3	9.9	3.6	.907	None	
SBR62-2774	2380-2390	78789	3.6	1.5	93.7	1.2	9.5	3.6	.910	None	
SBR62-2775	2390-2400	78790	2.8	1.1	95.1	1.0	7.2	2.6	.914	None	
SBR62-2776	2400-2410	78791	2.3	1.6	95.1	1.0	6.0	3.8	.901	None	
SBR62-2777	2410-2420	78792	2.1	1.7	95.0	1.2	5.6	4.1	.903	None	
SBR62-2778	2420-2430	78793	2.6	1.3	95.0	1.1	7.0	3.1	.904	None	
SBR62-2779	2430-2440	78794	5.4	1.8	91.2	1.6	14.3	4.3	.899	None	
SBR62-2780	2440-2450	78795	5.6	1.8	90.8	1.8	14.9	4.3	.902	None	
SBR62-2781	2450-2460	78796	5.5	1.8	91.2	1.5	14.5	4.3	.903	None	
SBR62-2782	2460-2470	78797	7.8	2.1	88.2	1.9	20.6	5.0	.904	None	
SBR62-2783	2470-2480	78798	7.4	2.0	88.8	1.8	19.6	4.8	.901	None	
SBR62-2784	2480-2490	78799	7.6	2.0	88.9	1.5	19.9	4.8	.910	None	
SBR62-2785	2490-2500	78800	7.7	2.0	88.5	1.8	20.4	4.8	.906	None	

See footnotes at end of table.

Drill cutting samples received December 11, 1961; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Hager No. 1 Well (Con.)

Surface elevation 5,451.6 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		Gal. per ton			Tendency to cpke
Laramie	Their		Oil	Water					Oil	Water	
SBR62-2786	2500-2510	78801	7.0	1.8	89.6	1.6	18.5	4.3	0.912	None	
SBR62-2787	2510-2520	78802	6.9	2.0	89.3	1.8	18.1	4.8	.909	None	
SBR62-2788	2520-2530	78803	3.9	1.9	92.9	1.3	10.4	4.4	.911	None	
SBR62-2789	2530-2540	78804	1.4	2.7	94.7	1.2	3.8a	6.5		None	
SBR62-2790	2540-2550	78805	.7	3.3	94.4	1.6	1.7a	7.9		None	
SBR62-2791	2550-2560	78806	2.0	2.7	93.6	1.7	5.2a	6.5		None	
SBR62-2792	2560-2570	78807	12.1	1.8	83.3	2.8	31.8	4.3	.915	None	
SBR62-2793	2570-2580	78808	9.6	2.1	86.3	2.0	25.1	5.0	.912	None	
SBR62-2794	2580-2590	78808A	7.6	1.8	89.0	1.6	19.9	4.3	.908	None	
SBR62-2795	2590-2600	78809	8.7	1.8	87.3	2.2	22.9	4.3	.909	None	
SBR62-2796	2600-2610	78810	9.8	1.9	86.0	2.3	26.0	4.6	.908	None	
SBR62-2797	2610-2620	78811	6.7	2.2	89.5	1.6	17.6	5.3	.913	None	
SBR62-2798	2620-2630	78812	4.1	2.1	92.7	1.1	10.9	5.0	.908	None	
SBR62-2799	2630-2640	78813	2.8	2.5	93.6	1.1	7.5	5.9	.903	None	
SBR62-2800	2640-2650	78814	10.6	1.9	85.3	2.2	27.8	4.5	.913	None	
SBR62-2801	2650-2660	78815	6.4	1.7	90.1	1.8	16.8	4.0	.909	None	
SBR62-2802	2660-2670	78816	6.2	1.9	90.4	1.5	16.5	4.6	.903	None	
SBR62-2803	2670-2680	78817	3.0	2.2	93.9	.9	8.1	5.3	.901	None	
SBR62-2804	2680-2690	78818	3.4	2.1	93.5	1.0	9.1	5.0	.900	None	
SBR62-2805	2690-2700	78819	3.5	1.7	93.7	1.1	9.5	4.1	.895	None	
SBR62-2806	2700-2710	78820	4.2	1.8	92.9	1.1	11.2	4.3	.906	None	
SBR62-2807	2720-2730	78821	2.4	2.2	94.6	.8	6.3	5.3	.904	None	
SBR62-2808-09	2730-2750	20' of sample						Trace			
SBR62-2810-14	2750-2800	50' " "						1.0 B			
SBR62-2815	2800-2810	78822	.6	2.3	96.2	.9	1.5a	5.5		None	
SBR62-2816	2810-2820	78823	.5	2.2	96.5	.8	1.2a	5.3		None	
SBR62-2817	2820-2830						3.0 c				
SBR62-2818	2830-2840						1.0 B				
SBR62-2819	2840-2850						3.0 c				
SBR62-2820	2850-2860						1.0 B				

See footnotes at end of table.

Drill cutting samples received December 11, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3557P, Sheet No. 2 of 5 sheets March 1, 1962

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Hager No. 1 Well (Con.)

Surface elevation 5,451.6 feet

Surface elevation 5,477.6 feet

Sample number		Run No.	Yield of products				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	
SBR62-2821-24	2860-2900	40' of sample					Trace				
SBR62-2825-27	2900-2930	30' "					3.0c				
SBR62-2828	2960-2970						3.0c				
SBR62-2829-30	2970-2990	20' "					Trace				
SBR62-2831	2990-3000	78824	2.2	2.0	94.9	0.9	5.8a	4.7		None	
SBR62-2832	3000-3010	78825	1.5	2.3	95.0	1.2	3.8a	5.6		None	
SBR62-2833	3010-3020						1.0 B				
SBR62-2834	3030-3040	10' 78826	1.5	2.4	94.8	1.3	4.0a	5.7		None	
SBR62-2835	3040-3050	78827	8.7	2.0	87.2	2.1	22.8a	4.8		None	
SBR62-2836	3050-3060	78828	11.1	1.8	82.2	4.9	28.9a	4.3		None	
SBR62-2837	3060-3070	78829	4.6	1.9	92.6	.9	12.1	4.5	0.907	None	
SBR62-2838	3070-3080	78830	3.5	2.5	92.9	1.1	9.1a	6.0		None	
SBR62-2839	3080-3090						1.0 B				
SBR62-2840	3090-3100	78831	1.5	2.4	95.2	.9	3.9a	5.8		None	
SBR62-2841	3100-3110	78832	5.3	1.7	91.7	1.3	14.1	4.1	.906	None	
SBR62-2842	3110-3120	78833	3.2	2.3	93.4	1.1	8.5	5.5	.905	None	
SBR62-2843	3120-3130	78834	1.4	2.2	95.9	.5	3.6a	5.3		None	
SBR62-2844	3130-3140						1.0 B				
SBR62-2845-52	3140-3220	80' of sample					Trace				
SBR62-2853-59	3220-3290	70' "					No oil				
SBR62-2860	3290-3300	78835	3.3	2.4	93.3	1.0	8.8	5.8	.900	None	
SBR62-2861	3300-3310	78836	1.0	1.8	96.2	1.0	2.6a	4.3		None	
SBR62-2862	3310-3320	78837	1.5	1.8	95.8	.9	4.0a	4.2		None	
SBR62-2863	3320-3330						1.0 B				
SBR62-2864	3330-3340						Trace				
SBR62-2865-66	3340-3360						1.0 B				
SBR62-2867	3360-3365						3.0c				
SBR62-2868	3365-3370						1.0 B				
SBR62-2869-71	3370-3400						Trace				
SBR62-2872	3400-3410						1.0 B				

See footnotes at end of table.

Drill cutting samples received December 11, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3557P, Sheet No. 3 of 5 sheets March 1, 1962

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Hager No. 1 Well (Con.)

Surface elevation 5,451.6 feet

Surface elevation 5,431.0 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		Gal. per ton		
Laramie	Their		Oil	Water					Oil	Water
SBR62-2875	3410-3420						b			
SBR62-2876-78	3420-3450						Trace			
SBR62-2879-83	3450-3500						No oil			
SBR62-2884	3500-3510	78838	0.8	1.4	97.0	0.8	2.1a	3.4		None
SBR62-2885	3510-3520	78839	2.9	1.8	94.3	1.0	7.6a	4.3		None
SBR62-2886	3530-3540	78840	3.4	1.9	93.5	1.2	9.2	4.6	0.895	
SBR62-2887	3540-3550	78841	2.8	1.9	94.5	.8	7.2a	4.6		None
SBR62-2888	3550-3560	78842	1.5	2.3	94.4	1.8	4.0a	5.5		None
SBR62-2889	3560-3570						c			
SBR62-2890	3570-3580	10' 78843	1.6	2.5	94.7	1.2	4.0a	6.0		None
SBR62-2891	3580-3595	15' 78844	7.2	1.6	89.9	1.3	19.1	3.8	.897	None
SBR62-2892	3595-3600	5' 78845	6.9	1.7	90.1	1.3	18.5	4.1	.897	None
SBR62-2893	3600-3610	10' 78846	4.0	2.0	93.3	.7	10.7	4.8	.893	None
SBR62-2894	3610-3620	10' 78847	3.8	2.0	93.4	.8	10.3	4.8	.893	None
SBR62-2895-96	3620-3640						b			
SBR62-2897	3640-3650						Trace			
SBR62-2898	3650-3660						No oil			
SBR62-2899-2901	3660-3690						Trace			
SBR62-2902	3690-3700	78848	1.3	2.1	96.2	.4	3.3a	5.0		None
SBR62-2903	3700-3710	78849	1.2	2.2	96.0	.6	3.1a	5.3		None
SBR62-2904	3710-3720	78850	3.4	1.4	93.8	1.4	9.2	3.4	.883	None
SBR62-2905	3720-3730	78851	6.4	1.7	90.8	1.1	17.1	4.1	.898	None
SBR62-2906	3730-3740	78852	4.6	2.5	92.3	.6	12.4	6.0	.881	None
SBR62-2907	3740-3750	78853	5.0	2.1	91.9	1.0	13.5	5.0	.881	None
SBR62-2908	3750-3760	78854	4.7	2.3	92.2	.8	12.6	5.5	.882	None
SBR62-2909	3760-3770	78855	3.7	2.3	93.4	.6	9.9	5.5	.883	None
SBR62-2910	3770-3780	78856	3.1	2.2	93.4	1.3	8.5	5.3	.885	None
SBR62-2911	3780-3790	78857	2.2	2.5	94.2	1.1	6.0	6.0	.881	None
SBR62-2912	3790-3800	78858	2.7	2.2	94.0	1.1	7.3	5.3	.880	None
SBR62-2913	3800-3810	78859	3.5	1.7	93.4	1.4	9.6	4.1	.880	None

See footnotes at end of table.

Drill cutting samples received December 11, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3557P, Sheet No. 4 of 5 sheets March 1, 1962

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Hager No. 1 Well (Con.)

Surface elevation 5,451.6 feet

Surface elevation 5,451.0 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			Gal. per ton		
Laramie	Their		Oil	Water					Oil	Water	
SBR62-2914	3810-3820	78860	2.3	1.6	94.8	1.3	6.2	3.8	0.884	None	
SBR62-2915-19	3420-3870						c				
SBR62-2920	3870-3880						Trace				
SBR62-2921	3880-3890	78861	1.6	2.3	94.8	1.3	4.2a	5.5		None	
SBR62-2922	3890-3900	78862	1.0	1.8	96.2	1.0	2.6a	4.3		None	
SBR62-2923	3900-3910						b				
SBR62-2924-27	3910-3950						Trace				
SBR62-2928	3950-3960						b				
SBR62-2929-31	3960-3990						c				
SBR62-2931A	3990-4000	78863	1.6	1.7	95.5	1.2	4.2a	4.1		None	
SBR62-2932	4000-4010	78864	1.8	1.6	95.5	1.1	4.6a	3.8		None	
SBR62-2933	4010-4020	78865	1.7	1.5	95.4	1.4	4.5a	3.6		None	
SBR62-2934-36	4020-4050						c				
SBR62-2937	4050-4060	78866	.6	1.7	96.7	1.0	1.5a	4.1		None	
SBR62-2938	4060-4070	78867	1.6	1.3	96.0	1.1	4.1a	3.1		None	
SBR62-2939	4070-4080	78868	1.6	.9	97.1	.4	4.3a	2.2		None	
SBR62-2940-47	4080-4160						c				
SBR62-2948	4160-4170						b				
SBR62-2949-52	4170-4210						Trace				
SBR62-2953-54	4210-4230						b				
SBR62-2955	4230-4240						Trace				
SBR62-2956-60	4240-4290						b				
SBR62-2961	4290-4300						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.

Drill cutting samples received December 11, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3557P, Sheet No. 5 of 5 sheets March 1, 1962