OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Texas Petroleum Corporation's McLish-Federal No. 1-14 well drilled in SE1/4NW1/4 (1980 feet S/N 1980 feet E/W) of sec 14, T 15 N, R 113 W, Uinta County, Wyoming

Kelly Bushing elevation 6,885 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR68-9635-9714	0- 800						No oil				
SBR68-9715-16	800- 820						Trace				
SBR68-9717-19	820- 850						No oil				
SBR68-9720	850- 860						Trace				
SBR68-9721	860- 870	33887	1.7	5.0	91.8	1.5	4.5a	12.0		None	
SBR68-9722-23	870- 890						Trace				
SBR68-9724-29	890- 950						No oil				
SBR68-9730	950- 960						Trace				
SBR68-9731	960- 970	33888	.6	4.2	93.8	1.4	1.4a	10.1		None	
SBR68-9732	970- 980	33889	2.5	4.8	91.0	1.7	6.6	11.5	0.920	None	
SBR68-9733	980- 990						b				
SBR68-9734-39	990-1050						No oil				
SBR68-9740	1050-1060						Trace				
SBR68-9741	1060-1070	33890	2.5	4.8	90.2	2.5	6.5	11.5	.918	None	
SBR68-9742	1070-1080	33891	1.2	5.4	92.8	.6	3.2a	12.9		None	
SBR68-9743	1080-1090	33892	1.1	3.4	92.6	2.9	2.9a	8.1		None	
SBR68-9744	1090-1100	33893	.7	4.4	93.8	1.1	1.7a	10.5		None	
SBR68-9745	1100-1110	33894	1.6	4.4	92.8	1.2	4.0a	10.5		None	
SBR68-9746	1110-1120	33895	.2	4.5	93.9	1.4	.4a	10.8		None	
SBR68-9747	1120-1130	33896	1.0	3.8	93.2	2.0	2.6a	9.1		None	
SBR68-9748	1130-1140						c				
SBR68-9749	1140-1150						No oil				
SBR68-9750	1150-1160	33897	.6	3.4	94.1	1.9	1.6a	8.1		None	
SBR68-9751	1160-1170	33898	1.0	3.8	93.8	1.4	2.6a	9.1		None	
SBR68-9752	1170-1180	33899	.7	3.1	94.7	1.5	1.9a	7.4		None	
SBR68-9753	1180-1190	33900	.3	1.5	96.0	2.2	.6a	3.6		None	
SBR68-9754	1190-1200						Trace				
SBR68-9755	1200-1210						b				
SBR58-9756	1210-1220						c				
SBR68-9757-59	1220-1250						b				

See footnote at end of table.

Drill cutting samples received August 14, 1968; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Texas Petroleum Corporation's McLish-Federal No. 1-14 well (con.)

Kelly Bushing elevation 6,885 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR68-9760	1250-1260						Trace				
SBR68-9761	1260-1270						No oil				
SBR68-9762	1270-1280	33901	2.6	4.0	90.9	2.5	6.5	9.6	0.937	None	
SBR68-9763	1280-1290	33902	4.1	4.2	89.1	2.6	10.5	10.2	.927	None	
SBR68-9764	1290-1300	33903	2.2	3.6	92.8	1.4	5.6	8.6	.932	None	
SBR68-9765	1300-1310	33904	1.0	2.9	94.7	1.4	2.7a	7.0		None	
SBR68-9766	1310-1320	33905	1.7	2.4	93.1	2.8	4.5a	5.8		None	
SBR68-9767	1320-1330	33906	1.9	4.1	92.6	1.4	4.9a	9.8		None	
SBR68-9768	1330-1340	33907	1.3	4.4	92.9	1.4	3.3a	10.5		None	
SBR68-9769-72	1340-1380						c				
SBR68-9773-74	1380-1400						b				
SBR68-9775-79	1400-1450						c				
SBR68-9780-81	1450-1470						b				
SBR68-9782	1470-1480						c				
SBR68-9783-85	1480-1510						b				
SBR68-9786-87	1510-1530						c				
SBR68-9788-91	1530-1570						b				
SBR68-9792	1570-1580						No oil				
SBR68-9793	1580-1590						Trace				
SBR68-9794	1590-1600						b				
SBR68-9795-97	1600-1630						No oil				
SBR68-9798	1630-1640						Trace				
SBR68-9799-9802	1640-1680						No oil				
SBR68-9803	1680-1690						Trace				
SBR68-9804	1690-1700						No oil				
SBR68-9805-06	1700-1720						Trace				
SBR68-9807-08	1720-1740						b				
SBR68-9809-24	1740-1900						No oil				
SBR68-9825	1900-1910						Trace				
SBR68-9826-43	1910-2090						No oil				

See footnote at end of table.

Drill cutting samples received August 14, 1968; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Texas Petroleum Corporation's McLish-Federal No. 1-14 well (con.)

Kelly Bushing elevation 6,885 feet

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[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR68-9844	2090-2100	33908	1.6	1.6	95.7	1.1	4.2a	3.8		None	
SBR68-9845	2100-2110	33909	.2	1.6	97.0	1.2	.4a	3.8		None	
SBR68-9846	2110-2120	33910	.1	1.5	97.4	1.0	.3a	3.6		None	
SBR68-9847	2120-2130						No oil				
SBR68-9848	2130-2140						b				
SBR68-9849-66	2140-2320						No oil				
SBR68-9867-69	2320-2350						Trace				
SBR68-9870	2350-2360						No oil				
SBR68-9871	2360-2370						Trace				
SBR68-9872-94	2370-2600						No oil				
SBR68-9895	2600-2610						b				
SBR68-9896-98	2610-2640						c				
SBR68-9899-9900	2640-2660						b				
SBR68-9901	2660-2670						c				
SBR68-9902	2670-2680						b				
SBR68-9903-04	2680-2700						No oil				
SBR68-9905	2700-2710	33911	1.4	1.0	96.0	1.6	3.7a	2.4		None	
SBR68-9906	2710-2720	33912	1.1	.8	96.2	1.9	2.9a	1.8		None	
SBR68-9907-08	2720-2740						b				
SBR68-9909	2740-2750	33913	.1	2.9	96.1	.9	.3a	7.0		None	
SBR68-9910	2750-2760	33914	6.1	1.4	90.0	2.5	15.9	3.4	0.917	None	
SBR68-9911	2760-2770	33915	4.0	1.4	93.0	1.6	10.5	3.4	.914	None	
SBR68-9912	2770-2780	33916	2.7	1.7	94.1	1.5	7.2	4.1	.914	None	
SBR68-9913	2780-2790	33917	.7	1.3	96.5	1.5	1.7a	3.1		None	
SBR68-9914	2790-2800	33918	.9	1.3	96.6	1.2	2.2a	3.1		None	
SBR68-9915	2800-2810	33919	3.3	1.5	92.6	2.6	8.6	3.6	.919	None	
SBR68-9916	2810-2820	33920	1.4	1.4	95.9	1.3	3.7a	3.4		None	
SBR68-9917	2820-2830	33921	1.7	1.3	95.2	1.8	4.3a	3.1		None	
SBR68-9918	2830-2840	33922	2.8	1.5	92.7	3.0	7.4	3.6	.919	None	
SBR68-9919	2840-2850	33923	4.1	1.3	92.2	2.4	10.7	3.1	.913	None	

See footnote at end of table.

Drill cutting samples received August 14, 1968; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Texas Petroleum Corporation's McLish-Federal No. 1-14 well (con.)

Kelly Bushing elevation 6,885 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton			Tendency to coke	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water			
SBR68-9920	2850-2860	33924	1.9	1.5	93.8	2.8	4.9a	3.6		None	
SBR68-9921	2860-2870	33925	1.0	3.8	93.5	1.7	2.5a	9.1		None	
SBR68-9922	2870-2880	33926	1.3	2.0	94.8	1.9	3.5a	4.8		None	
SBR68-9923	2880-2890	33927	2.2	1.3	94.6	1.9	5.7	3.1	0.910	None	
SBR68-9924	2890-2900	33928	1.8	.9	95.7	1.6	4.8a	2.2		None	
SBR68-9925	2900-2910	33929	1.7	1.0	95.4	1.9	4.4a	2.4		None	
SBR68-9926	2910-2920	33930	3.8	1.0	93.5	1.7	10.1	2.4	.909	None	
SBR68-9927	2920-2930	33931	1.8	.9	96.1	1.2	4.8a	2.0		None	
SBR68-9928	2930-2940	33932	.3	.9	98.0	.8	.9a	2.0		None	
SBR68-9929	2940-2950	33933	.6	.9	97.8	.7	1.7a	2.0		None	
SBR68-9930	2950-2960	33934	4.0	.9	93.0	2.1	10.5	2.2	.915	None	
SBR68-9931	2960-2970	33935	4.4	1.0	92.8	1.8	11.5	2.3	.916	None	
SBR68-9932	2970-2980	33936	3.9	.3	93.0	2.8	10.1	.8	.921	None	
SBR68-9933	2980-2990	33937	2.2	.5	96.2	1.1	5.8	1.2	.915	None	
SBR68-9934	2990-3000	33938	4.4	.6	93.0	2.0	11.5	1.4	.926	None	
SBR68-9935	3000-3010	33939	4.4	.5	93.5	1.6	11.6	1.2	.921	None	
SBR68-9936	3010-3020	33940	5.5	.4	92.0	2.1	14.2	1.1	.927	None	
SBR68-9937	3020-3030	33941	5.3	1.1	91.5	2.1	13.8	2.6	.925	None	
SBR68-9938	3030-3040	33942	4.5	1.2	92.4	1.9	11.7	2.9	.927	None	
SBR68-9939	3040-3050	33943	4.9	1.5	90.6	3.0	12.6	3.6	.928	None	
SBR68-9940	3050-3060	33944	4.9	1.7	91.7	1.7	12.7	4.1	.924	None	
SBR68-9941	3060-3070	33945	3.6	1.6	91.6	3.2	9.4	3.8	.925	None	
SBR68-9942	3070-3080	33946	3.2	1.6	93.0	2.2	8.2	3.8	.921	None	
SBR68-9943	3080-3090	33947	3.5	1.7	93.4	1.4	9.3	4.1	.909	None	
SBR68-9944	3090-3100	33948	2.2	1.3	94.0	2.5	5.7	3.2	.917	None	
SBR68-9945	3100-3110	33949	2.1	1.8	94.7	1.4	5.4a	4.3		None	
SBR68-9946	3110-3120	33950	3.0	2.0	93.7	1.3	7.8	4.8	.927	None	
SBR68-9947	3120-2130	33951	4.4	2.2	91.9	1.5	11.2	5.3	.934	None	
SBR68-9948	3130-3140	33952	4.1	2.6	91.7	1.6	10.8	6.2	.917	None	
SBR68-9949	3140-3150	33953	4.9	2.4	90.2	2.5	12.7	5.8	.926	None	

See footnote at end of table.

Drill cutting samples received August 14, 1968; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Union Texas Petroleum Corporation's McLish-Federal No. 1-14 well (con.)

Kelly Bushing elevation 6,885 feet

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[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR68-9950	3150-3160	33954	4.0	2.5	91.5	2.0	10.4	6.0	0.913	None	
SBR68-9951	3160-3170	33955	5.8	2.5	89.4	2.3	15.2	6.0	.906	None	
SBR68-9952	3170-3180	33956	4.1	2.0	92.0	1.9	10.9	4.8	.908	None	
SBR68-9953	3180-3190	33957	2.2	1.8	93.4	2.6	5.6	4.3	.913	None	
SBR68-9954	3190-3200	33958	2.7	1.7	93.6	2.0	7.2	4.1	.907	None	
SBR68-9955	3200-3210	33959	3.0	2.0	93.1	1.9	8.0	4.8	.908	None	
SBR68-9956	3210-3220	33960	2.6	2.0	93.2	2.2	6.8	4.8	.902	None	
SBR68-9957	3220-3230	33961	2.7	2.2	93.5	1.6	7.1	5.3	.902	None	
SBR68-9958	3230-3240	33962	1.7	2.6	93.9	1.8	4.5a	6.2		None	
SBR68-9959	3240-3250	33963	1.6	2.8	94.2	1.4	4.3a	6.7		None	
SBR68-9960	3250-3260	33964	2.0	3.6	90.6	3.8	5.3a	8.6		None	
SBR68-9961	3260-3270	33965	1.0	2.4	95.2	1.4	2.7a	5.8		None	
SBR68-9962	3270-3280	33966	2.0	2.5	94.0	1.5	5.2a	6.0		None	
SBR68-9963-69	3280-3350						b				
SBR68-9970-74	3350-3400						c				
SBR68-9975	3400-3410						Trace				
SBR68-9976	3410-3420						c				
SBR68-9977	3420-3430						No oil				
SBR68-9978	3430-3440						c				
SBR68-9979	3440-3450						b				
SBR68-9980-84	3450-3500						c				

1/ "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 cutting samples received August 14, 1968; Assays made on air-dried samples