

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well (Con.)

Surface elevation 4,750 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	
SBR61-357	1940-1950	70812	3.3	0.7	95.1	0.9	8.6	1.8	0.913	None	
SBR61-358	1950-1960	70813	3.6	.5	95.2	.7	9.4	1.3	.914	None	
SBR61-359	1960-1970	70814	3.4	.3	95.6	.7	8.8	.8	.921	None	
SBR61-360	1970-1980	70815	2.8	.4	96.3	.5	7.4	.8	.922	None	
SBR61-361	1980-1990	70816	2.9	.6	95.9	.6	7.6	1.3	.925	None	
SBR61-362	1990-2000	70817	2.3	.8	96.3	.6	5.8	1.9	.930	None	
SBR61-363	2000-2010	70818	2.8	.2	95.9	1.1	7.3	.4	.928	None	
SBR61-364	2010-2020	70819	3.7	.3	94.9	1.1	9.6	.8	.919	None	
SBR61-365	2020-2030	70820	4.3	.2	94.3	1.2	11.2	.6	.923	None	
SBR61-366	2030-2040	70821	4.3	.2	94.5	1.0	11.2	.6	.919	None	
SBR61-367	2040-2050	70822	3.7	.2	94.9	1.2	9.6	.4	.920	None	
SBR61-368	2050-2060	70823	4.3	.2	94.6	.9	11.3	.5	.912	None	
SBR61-369	2060-2070	70824	3.3	.1	95.6	1.0	8.6	.2	.920	None	
SBR61-370	2070-2080	70825	2.8	.1	96.1	1.0	7.2	.4	.921	None	
SBR61-371	2080-2090	70826	2.3	.2	96.7	.8	6.1	.4	.922	None	
SBR61-372	2090-2100	70827	2.5	.3	96.6	.6	6.6	.6	.920	None	
SBR61-373	2100-2110	70828	2.6	.3	96.2	.9	6.9a	.6		None	
SBR61-374	2110-2120	70829	3.0	.1	96.0	.9	7.9	.2	.924	None	
SBR61-375	2120-2130	70830	3.1	.2	95.9	.8	8.1	.5	.925	None	
SBR61-376	2130-2140	70831	2.7	.1	95.8	1.4	6.8	.4	.934	None	
SBR61-377	2140-2150	70832	2.8	.3	96.0	.9	7.1	.8	.928	None	
SBR61-378	2150-2160	70833	2.9	.4	95.8	.9	7.5	.9	.928	None	
SBR61-379	2160-2170	70834	4.2	.2	94.4	1.2	10.9	.5	.925	None	
SBR61-380	2170-2180	70835	4.4	.2	94.6	.8	11.6	.6	.909	None	
SBR61-381	2180-2190	70836	7.8	.4	91.5	.3	20.6	.9	.908	None	
SBR61-382	2190-2200	70837	6.5	.3	91.8	1.4	17.3	.7	.905	None	
SBR61-383	2200-2210	70838	5.7	.3	93.1	.9	15.1	.7	.902	None	
SBR61-384	2210-2220	70839	5.7	.4	93.0	.9	15.2	.8	.903	None	
SBR61-385	2220-2230	70840	4.4	.3	94.4	.9	11.7	.6	.910	None	
SBR61-386	2230-2240	70841	4.6	.1	94.7	.6	12.1	.4	.906	None	

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received June 10, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3454P Sheet No. 3 of 6 sheets January 25, 1961

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well (Con.)

Surface elevation 4,750 feet

Sample number			Yield of product					Specific gravity of oil at 60°/60° F.		Properties of spent shale		Remarks
			Weight percent		Gal. per ton					Tendency to coke		
			Oil	Water	Spent shale	Gas + loss	Oil				Water	
Laramie	Their	Run No.	Oil	Water	Spent shale	Gas + loss	Oil	Water				
SBR61-387	2240-2250	70842	6.2	0.2	92.5	1.1	16.2	0.4	0.909	None		
SBR61-388	2250-2260	70843	5.6	.3	93.1	1.0	14.7	.7	.909	None		
SBR61-389	2260-2270	70844	4.8	.3	94.1	.8	12.7	.7	.912	None		
SBR61-390	2270-2280	70845	4.9	.2	94.1	.8	13.0	.4	.908	None		
SBR61-391	2280-2290	70846	4.5	.3	94.3	.9	11.8	.6	.915	None		
SBR61-392	2290-2300	70847	5.4	.2	93.4	1.0	14.1	.5	.911	None		
SBR61-393	2300-2310	70848	5.4	.2	93.1	1.3	14.1	.5	.915	None		
SBR61-394	2310-2320	70849	5.0	.3	93.6	1.1	13.2	.6	.912	None		
SBR61-395	2320-2330	70850	5.0	.1	93.5	1.4	12.9	.4	.917	None		
SBR61-396	2330-2340	70851	5.6	.2	92.9	1.3	14.7	.5	.915	None		
SBR61-397	2340-2350	70852	3.8	.3	94.7	1.2	10.0	.6	.921	None		
SBR61-398	2350-2360	70853	7.1	.1	90.6	2.2	18.5	.2	.919	None		
SBR61-399	2360-2370	70854	2.9	.1	96.0	1.0	7.5	.4	.923	None		
SBR61-400	2370-2380	70855	4.5	.1	93.5	1.9	11.8	.1	.917	None		
SBR61-401	2380-2390	70856	8.4	.3	89.5	1.8	22.3	.7	.903	None		
SBR61-402	2390-2400	70857	5.5	.3	92.6	1.6	14.6	.7	.910	None		
SBR61-403	2400-2410	70858	9.9	.3	87.6	2.2	26.3	.6	.904	Slight		
SBR61-404	2410-2420	70859	10.5	.3	87.6	1.6	27.8	.7	.907	Slight		
SBR61-405	2420-2430	70860	8.4	.4	89.3	1.9	22.4	.8	.903	None		
SBR61-406	2430-2440	70861	7.1	.3	91.1	1.5	18.9	.6	.900	None		
SBR61-407	2440-2450	70862	5.7	.2	92.5	1.6	15.0	.5	.909	None		
SBR61-408	2450-2460	70863	5.4	.3	92.9	1.4	14.2	.8	.910	None		
SBR61-409	2460-2470	70864	4.9	.4	93.2	1.5	12.9	1.0	.908	None		
SBR61-410	2470-2480	70865	4.8	.4	93.4	1.4	12.7	1.0	.910	None		
SBR61-411	2480-2490	70866	4.4	.2	94.0	1.4	11.5	.6	.911	None		
SBR61-412	2490-2500	70867	2.0	.4	97.0	.6	5.4	1.0	.911	None		
SBR61-413	2500-2510	70868	2.0	.4	97.0	.6	5.4	.8	.912	None		
SBR61-414	2510-2520	70869	.4	.2	99.3	.1	.9a	.6		None		
SBR61-415	2520-2530	70870	.4	.8	98.6	.2	1.0a	2.0		None		
SBR61-416	2530-2540	70871	.5	.7	98.5	.3	1.2a	1.8		None		

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received June 10, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3454P Sheet No. 4 of 6 sheets January 25, 1961

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well (Con.)

Surface elevation 4,750 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		Gal. per ton				Tendency to	
			Oil	Water	Spent shale	Gas + loss	Oil	Water	coke	
SBR61-417	2540-2550	70872	0.2	0.5	98.8	0.5	0.6a	1.1	None	
SBR61-418	2550-2560	70873	1.0	.7	97.9	.4	2.6a	1.7	None	
SBR61-419	2560-2570	70874	1.4	.6	97.3	.7	3.7a	1.4	None	
SBR61-420	2570-2580	70875	2.3	.7	96.5	.5	6.2	1.6	0.903	None
SBR61-421	2580-2590	70876	3.2	.6	95.2	1.0	8.4	1.6	.903	None
SBR61-422	2590-2600	70877	4.2	.4	94.2	1.2	11.0	1.1	.909	None
SBR61-423	2600-2610	70878	4.4	.6	93.5	1.5	11.8	1.3	.901	None
SBR61-424	2610-2620	70879	3.7	.8	94.3	1.2	9.9	1.8	.908	None
SBR61-425	2620-2630	70880	3.9	.7	94.2	1.2	10.3	1.8	.906	None
SBR61-426	2630-2640	70881	3.3	1.2	94.4	1.1	8.7	2.8	.909	None
SBR61-427	2640-2650	70882	3.3	1.2	94.3	1.2	8.7	2.8	.910	None
SBR61-428	2650-2660	70883	3.5	1.1	94.6	.8	9.2	2.6	.908	
SBR61-429	2660-2670	70884	.9	1.7	96.8	.6	2.4a	4.0	None	
SBR61-430	2670-2680	70885	1.0	1.6	96.9	.5	2.5a	3.8	None	
SBR61-431	2680-2690	70886	1.3	1.4	96.6	.7	3.3a	3.5	None	
SBR61-432	2690-2700	70887	1.1	1.8	96.3	.8	2.8a	4.3	None	
SBR61-433	2700-2710	70888	1.0	1.7	96.3	1.0	2.5a	4.1	None	
SBR61-434	2710-2720	70889	1.7	2.0	95.2	1.1	4.4a	4.9	None	
SBR61-435	2720-2730	70890	1.9	1.2	95.3	1.6	5.0a	2.8	None	
SBR61-436	2730-2740	70891	4.3	1.4	93.0	1.3	11.3	3.4	.909	None
SBR61-437	2740-2750	70892	4.7	1.6	92.4	1.3	12.4	3.8	.910	None
SBR61-438	2750-2760	70893	2.1	1.1	95.9	.9	5.4	2.6	.909	None
SBR61-439	2760-2770	70894	2.6	.8	95.3	1.3	6.9	1.9	.903	None
SBR61-440	2770-2780	70895	2.2	.8	95.8	1.2	5.8	1.9	.905	None
SBR61-441	2780-2790	70896	1.5	.8	96.7	1.0	3.9a	1.8	None	
SBR61-442	2790-2800	70897	1.6	.6	96.5	1.3	4.2a	1.4	None	
SBR61-443	2800-2810	70898	1.1	.4	97.5	1.0	2.8a	.9	None	
SBR61-444	2810-2820	70899	1.1	.6	97.9	.4	2.9a	1.3	None	
SBR61-445	2820-2830	70900	1.4	.7	97.5	.4	3.6a	1.7	None	
SBR61-446	2830-2840	70901	1.4	.6	97.4	.6	3.8a	1.4	None	

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received June 10, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3454P Sheet No. 5 of 6 sheets January 25, 1961

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well (Con.)

Surface elevation 4,750 feet

Sample number		Run No.	Yield of product						Specific gravity of oil at 60°/60° F.	Properties of		Remarks
			Weight percent			Gal. per ton				spent shale		
			Oil	Water	Spent shale	Gas + loss	Oil	Water		Tendency to coke		
Laramie	Their											
SBR61-447	2840-2850	70902	1.4	0.9	97.0	0.7	3.8a	2.2			None	
SBR61-448	2850-2860	70903	1.7	.7	95.9	1.7	4.4a	1.7			None	
SBR61-449	2860-2870	70904	2.7	.7	95.6	1.0	7.2	1.8	0.895		None	
SBR61-450	2870-2880	70905	3.0	.8	95.0	1.2	8.1	1.9	.899		None	
SBR61-451	2880-2890	70906	4.4	.9	93.0	1.7	11.6	2.2	.905		None	
SBR61-452	2890-2900	70907	3.8	.8	94.5	.9	10.0	2.0	.900		None	
SBR61-453	2900-2910	70908	4.0	1.0	93.9	1.1	10.7	2.4	.894		None	
SBR61-454	2910-2920	70909	4.1	1.0	93.9	1.0	10.9	2.5	.896		None	
SBR61-455	2920-2930	70910	3.9	1.1	93.7	1.3	10.5	2.6	.897		None	
SBR61-456	2930-2940	70911	3.9	1.1	93.9	1.1	10.4	2.6	.895		None	
SBR61-457	2940-2950	70912	2.5	1.4	95.0	1.1	6.8	3.4	.891		None	
SBR61-458	2950-2960	70913	3.1	1.2	94.9	.8	8.2	2.9	.895		None	
SBR61-459	2960-2970	70914	2.9	1.2	94.9	1.0	7.8	2.8	.892		None	
SBR61-460-62	2970-3000						3.0c					
SBR61-463-65	3000-3030						No oil					
SBR61-466-67	3030-3050						3.0c					
SBR61-468	3050-3060	70915	3.1	1.3	94.6	1.0	8.3	3.1	.896		None	
SBR61-469	3060-3070	70916	2.9	1.3	94.8	1.0	7.9	3.1	.896		None	
SBR61-470	3070-3080	70917	2.7	1.2	95.3	.8	7.3	2.9	.888		None	
SBR61-471	3080-3090	70918	2.7	1.2	95.2	.9	7.3	2.9	.892		None	
SBR61-472	3090-3100	70919	3.8	1.0	94.0	1.2	10.2	2.4	.897		None	

a - Specific gravity estimated due to insufficient oil.

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

Drill cutting samples received June 10, 1960; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3454P Sheet No. 6 of 6 sheets January 25, 1961

U2-5

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

0' of 30 UH197  
 30' of 25 ✓  
 380' of 15 (2 pts, 340+40)

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well drilled in  
 C. NE 1/4, NE 1/4 of sec. 24, T. 9 S., R. 20 E., Uintah County, Utah

Surface elevation 4,750 feet

Mahogany Marker 3,200'

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60° F.		Properties of spent shale Tendency to coke		Remarks
Laramie	Their		Weight percent		Spent shale	Gas + loss	Gal. per ton				
			Oil	Water					Oil	Water	
SBR61-275-81	1090-1160						1.0B				
SBR61-282-83	1160-1180						3.0c				
SBR61-284	1180-1190						No oil				
SBR61-285-87	1190-1220						3.0c				
SBR61-288	1220-1230	70762	0.5	1.5	97.1	0.9	1.3a	3.6		None	
SBR61-289	1230-1240						3.0c				
SBR61-290	1240-1250						1.0B				
SBR61-291-98	1250-1330						3.0c				
SBR61-299	1330-1340	70763	.5	1.8	97.4	.3	1.4a	4.2		None	
SBR61-300	1340-1350	70764	.3	1.8	97.2	.7	.8a	4.2		None	
SBR61-301-03	1350-1380						3.0c				
SBR61-304	1380-1390	70765	.7	1.7	97.2	.4	1.7a	4.1		None	
SBR61-305-08	1390-1430						3.0c				
SBR61-309-10	1440-1460						3.0c				
SBR61-311	1460-1470	70766	3.1	1.5	94.9	.5	8.2	3.5	0.905	None	
SBR61-312	1470-1480	70767	1.9	2.0	95.3	.8	5.0a	4.8		None	
SBR61-313	1480-1490	70768	1.8	1.8	95.5	.9	4.7a	4.2		None	
SBR61-314	1490-1500	70769	2.7	1.9	94.3	1.1	7.0	4.6	.913	None	
SBR61-315	1500-1510	70770	1.5	1.2	96.0	1.3	3.8a	3.0		Slight	
SBR61-316	1510-1520	70771	1.5	1.0	96.6	.9	3.8a	2.4		None	
SBR61-317	1520-1530	70772	1.6	1.4	96.3	.7	4.1a	3.4		None	
SBR61-318	1530-1540	70773	2.9	1.5	94.7	.9	7.7	3.6	.909	Slight	
SBR61-319	1540-1550	70774	4.9	1.4	92.3	1.4	12.9	3.4	.914	Medium	
SBR61-320	1550-1560	70775	10.6	1.5	86.0	1.9	27.8	3.6	.910	Heavy	
SBR61-321	1560-1570	70776	5.5	1.5	90.4	2.6	14.5	3.6	.916	Medium	
SBR61-322	1570-1580	70777	.5	1.7	96.4	1.4	1.2a	4.1		Slight	
SBR61-323	1580-1590	70778	.4	1.3	97.7	.6	1.1a	3.1		None	
SBR61-324	1590-1600	70779	.5	1.5	97.9	.1	1.2a	3.6		None	
SBR61-325	1600-1610	70780	.8	1.9	96.9	.4	2.0a	4.5		None	
SBR61-326	1610-1620	70781	1.2	1.5	96.9	.4	3.1a	3.6		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 June 10, 1961; assays made on air-dried samples

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from DeKalb Agricultural Association's Ute Trail No. 6 Well (cont.)

Surface elevation 4,750 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	Thier		Oil	Water					Oil	Water	
SBR61-327	1620-1630	70782	0.6	1.9	97.2	0.3	1.4a	4.7			None
SBR61-328	1630-1640	70783	.6	1.2	97.6	.6	1.7a	2.8			None
SBR61-329	1640-1650	70784	1.8	.9	96.6	.7	4.8a	2.0			None
SBR61-330	1650-1660	70785	2.4	.9	96.1	.6	6.3	2.0	0.923		None
SBR61-331	1660-1670	70786	2.5	.7	96.0	.8	6.5	1.8	.915		None
SBR61-332	1670-1680	70787	3.4	.8	94.9	.9	8.9	1.9	.915		None
SBR61-333	1680-1690	70788	3.6	.9	94.7	.8	9.5	2.2	.914		None
SBR61-334	1690-1700	70789	3.0	1.1	95.1	.8	7.9	2.6	.910		Slight
SBR61-335	1700-1710	70790	3.6	1.0	94.5	.9	9.5	2.3	.922		Slight
SBR61-336	1710-1720	70791	4.1	1.0	94.4	.5	10.6	2.4	.917		None
SBR61-337	1720-1730	70792	2.2	1.0	96.2	.6	5.7a	2.4			None
SBR61-338	1740-1750	70793	1.5	.8	97.7	.0	3.9a	2.0			None
SBR61-339	1760-1770	70794	2.3	.2	97.0	.5	5.9	.6	.931		None
SBR61-340	1770-1780	70795	2.4	.3	96.4	.9	6.3	.7	.919		None
SBR61-341	1780-1790	70796	3.0	.5	95.5	1.0	7.7	1.2	.925		None
SBR61-342	1790-1800	70797	1.9	.6	96.7	.8	5.1a	1.4			None
SBR61-343	1800-1810	70798	2.3	.5	96.2	1.0	6.0	1.2	.908		None
SBR61-344	1810-1820	70799	2.4	.4	96.4	.8	6.3	1.0	.911		None
SBR61-345	1820-1830	70800	1.9	.1	96.8	1.2	4.9a	.4			None
SBR61-346	1830-1840	70801	1.8	.4	97.2	.6	4.6a	1.0			None
SBR61-347	1840-1850	70802	2.3	.3	96.2	1.2	6.0	.6	.927		None
SBR61-348	1850-1860	70803	2.4	.4	96.1	1.1	6.4	.8	.925		None
SBR61-349	1860-1870	70804	2.3	.5	95.6	1.6	6.1	1.2	.924		None
SBR61-350	1870-1880	70805	2.5	.1	96.1	1.3	6.4	.4	.926		None
SBR61-351	1880-1890	70806	3.4	.3	95.5	.8	8.7	.7	.919		None
SBR61-352	1890-1900	70807	3.8	.8	94.4	1.0	10.0	1.8	.917		Slight
SBR61-353	1900-1910	70808	1.8	.8	96.9	.5	4.8a	1.8			None
SBR61-354	1910-1920	70809	3.0	.4	94.8	1.8	7.9	1.0	.916		None
SBR61-355	1920-1930	70810	3.5	.4	95.2	.9	9.2	1.0	.915		None
SBR61-356	1930-1940	70811	3.8	.4	95.2	.6	9.8	.9	.922		None

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received June 10, 1960; assays made on air-dried samples

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