

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

27' of 159, ²³⁰ ✓

Elevation 5732 ft
 Stratigraphic No. 4290

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale			Remarks
			Weight percent		Gal. per ton				Percent of orig. shale		Tendency to coke	
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	Ignition loss	Ash		
SBR51-3223	550-560	15890	1.0	2.1	96.8	0.1	2.6*	5.0	13.5	83.3	None	
SBR51-3224	560-570	15891	.6	1.1	98.2	.1	1.4*	2.8	9.0	89.2	"	
SBR51-3225	570-580	15892	.5	1.3	97.5	.7	1.3*	3.1	15.0	82.5	"	
SBR51-3226	590-600	15893	.4	1.5	97.3	.8	1.0*	3.6	18.4	78.9	"	
SBR51-3227	660-670	15894	1.3	1.3	96.8	.6	3.2*	3.2	17.0	79.8	"	
SBR51-3228	670-680	15895	.9	1.8	96.0	1.3	2.1*	4.3	18.6	77.4	"	
SBR51-3229	680-690	15896	.9	2.5	95.4	1.2	2.3*	6.0	19.4	76.0	"	
SBR51-3230	690-700	15897	.6	1.9	96.9	.6	1.5*	4.6	19.2	77.7	"	
SBR51-3231	700-710	15898	1.6	1.9	95.6	.9	4.1*	4.6	19.3	76.3	"	
SBR51-3232	710-720	15899	1.1	1.7	95.9	1.3	2.7*	4.1	14.9	81.0	"	
SBR51-3233	720-730	15900	1.7	2.0	95.9	.4	4.2*	4.7	21.5	74.4	"	
SBR51-3234	730-740	15901	1.1	1.1	97.3	.5	2.8*	2.6	20.6	76.7	"	
SBR51-3235	740-750	15902	1.2	1.7	96.9	.2	2.9*	4.1	16.6	80.3	"	
SBR51-3236	750-760	15903	1.2	1.8	96.5	.5	3.1*	4.2	19.6	76.9	"	
SBR51-3237	850-860	15904	1.8	1.0	96.5	.7	4.6*	2.4	20.0	76.5	"	
SBR51-3238	860-870	15905	1.9	1.0	96.4	.7	4.7*	2.4	19.9	76.5	"	
SBR51-3239	870-890	15906	1.8	.8	96.5	.9	4.5*	1.8	13.6	82.9	"	
SBR51-3240	880-890	15907	1.5	1.0	96.9	.6	3.7*	2.3	19.5	77.4	"	
SBR51-3241	880-900	15908	1.9	.6	96.9	.6	4.7*	1.4	18.9	78.0	"	
SBR51-3242	900-910	15909	1.8	1.0	96.4	.8	4.6*	2.3	18.6	77.8	"	
SBR51-3243	910-920	15910	1.8	1.4	96.1	.7	4.4*	3.4	16.9	79.2	"	
SBR51-3244	920-930	15911	1.7	1.5	96.1	.7	4.3*	3.6	19.7	76.4	"	
SBR51-3245	930-940	15912	1.8	1.3	96.0	.9	4.4*	3.1	21.0	75.0	"	
SBR51-3246	940-950	15913	1.8	1.4	95.8	1.0	4.6*	3.4	20.2	75.6	"	
SBR51-3247	960-970	15914	3.8	1.1	93.5	1.6	9.9	2.6	0.924	21.3	72.2	"
SBR51-3248	970-980	15915	3.4	1.2	94.1	1.3	8.8	2.9	.924	19.9	74.2	"
SBR51-3249	980-990	15916	2.5	1.2	95.3	1.0	6.4	2.9	.929	22.1	73.2	"
SBR51-3250	990-1000	15917	1.9	.9	96.3	.9	4.9*	2.2		20.9	75.4	"
SBR51-3251	1000-1010	15918	3.3	.8	95.3	.6	8.6	1.9	.928	22.4	72.9	"
SBR51-3252	1010-1020	15919	1.2	.8	97.9	.1	2.9*	1.9		22.1	75.8	"

*Estimated Core drill cuttings received October 19, 1951; assays made on air-dried samples.

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Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale			Remarks	
			Weight percent		Gas + loss	Gal. per ton			Percent of orig. shale		Tendency to coke		
Laramie	Their		Oil	Water		Spent shale		Oil	Water	Ignition loss		Ash	
SBR51-3253	1020-1030	15920	0.1	3.8	95.8	0.3	0.3*	9.0		15.4	80.4	None	
SBR51-3254	1040-1050	15921	.2	3.4	95.8	.6	.4*	8.0		22.0	73.8	"	
SBR51-3255	1050-1060	15922	.5	2.5	96.6	.4	1.3*	6.0		15.4	81.2	"	
SBR51-3256	1060-1070	15923	.7	2.1	96.6	.6	1.7*	5.0		18.2	78.4	"	
SBR51-3257	1070-1080	15924	2.3	1.8	95.0	.9	5.9	4.3	0.930	21.2	73.8	"	
SBR51-3258	1080-1090	15925	2.1	3.0	94.0	.9	5.5	7.2	.931	20.8	73.2	"	
SBR51-3259	1090-1100	15926	2.1	2.6	94.2	.6	6.5*	6.2		20.3	73.9	"	
SBR51-3260	1110-1120	15927	1.9	3.6	93.7	.8	4.7*	8.6		20.3	73.4	"	
SBR51-3261	1120-1130	15928	2.0	2.9	94.4	.7	5.1*	6.9		22.0	72.4	"	
SBR51-3262	1130-1140	15929	2.6	1.2	95.7	.5	6.8	2.9	.926	20.6	75.1	"	
SBR51-3263	1140-1150	15930	2.7	.9	95.8	.6	6.9	2.2	.926	21.9	73.9	"	
SBR51-3264	1150-1160	15931	2.4	1.1	95.9	.6	6.2	2.6	.925	22.1	73.8	"	
SBR51-3265	1160-1170	15932	2.7	.8	95.6	.9	7.0	1.9	.928	20.8	74.8	"	
SBR51-3266	1170-1180	15933	3.6	.7	94.5	1.2	9.3	1.7	.930	21.6	72.9	"	
SBR51-3267	1180-1190	15934	3.3	.7	95.1	.9	8.6	1.7	.929	21.2	73.9	"	
SBR51-3268	1190-1200	15935	3.4	.7	95.2	.7	8.8	1.7	.927	20.8	74.4	"	
SBR51-3269	1210-1220	15936	2.4	1.6	95.0	1.0	6.1	3.8	.929	19.1	75.9	"	
SBR51-3270	1230-1240	15937	3.9	.9	94.6	.6	10.0	2.2	.927	21.4	73.2	"	
SBR51-3271	1240-1250	15938	3.5	1.0	94.3	1.2	8.9	2.4	.931	21.9	72.4	"	
SBR51-3272	1250-1260	15939	4.7	.9	92.8	1.6	12.2	2.0	.927	21.4	71.4	"	
SBR51-3273	1260-1270	15940	4.7	1.0	93.1	1.2	12.2	2.4	.919	21.9	71.2	"	
SBR51-3274	1270-1280	15941	3.3	1.1	94.5	1.1	8.7	2.6	.918	20.0	74.5	"	
SBR51-3275	1280-1290	15942	3.6	1.0	94.0	1.4	9.4	2.4	.919	20.0	74.0	"	
SBR51-3276	1290-1300	15943	5.2	1.1	92.3	1.4	13.5	2.6	.930	20.1	72.2	"	
SBR51-3277	1300-1310	15944	3.5	1.5	93.8	1.2	9.0	3.6	.919	21.2	72.6	"	
SBR51-3278	1310-1320	15945	4.1	1.4	93.5	1.0	10.6	3.4	.917	18.6	74.9	"	
SBR51-3279	1320-1330	15946	3.7	1.6	93.2	1.5	9.6	3.8	.924	21.7	71.5	"	
SBR51-3280	1330-1340	15947	1.5	10.2	86.9	1.4	3.9*	24.4		12.6	74.3	"	
SBR51-3281	1340-1350	15948	.6	9.0	89.4	1.0	1.4*	21.6		14.6	74.8	"	
SBR51-3282	1350-1360	15949	.7	10.4	87.3	1.6	1.8*	24.9		13.2	74.1	"	

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

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 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.	Properties of spent shale			Remarks	
			Weight percent		Gal. per ton	Percent of orig. shale						
Laramie	Their		Oil	Water		Spent shale	Gas + loss	Oil	Water	Ignition loss	Ash	Tendency to coke
SBR51-3283	1360-1370	15950	0.4	11.4	87.1	1.1	1.1*	27.3		12.4	74.7	None
SBR51-3284	1375-1385	15951	2.5	4.8	90.5	2.2	6.5	11.5	0.932	20.3	70.2	"
SBR51-3285	1385-1390	15952	2.0	2.1	94.7	1.2	5.3	5.0	.924	22.6	72.1	"
SBR51-3286	1390-1395	15953	1.9	2.0	95.1	1.0	4.7*	4.7		23.0	72.1	"
SBR51-3287	1395-1400	15954	2.8	1.9	94.0	1.3	7.3	4.6	.923	20.2	73.8	"
SBR51-3288	1400-1405	15955	3.0	1.6	94.0	1.4	7.8	3.8	.924	20.9	73.1	"
SBR51-3289	1405-1410	15956	4.4	2.0	92.4	1.2	11.6	4.8	.918	19.7	72.7	"
SBR51-3290	1410-1415	15957	4.2	1.8	92.7	1.3	10.8	4.3	.920	20.0	72.7	"
SBR51-3291	1415-1420	15958	4.6	2.6	91.6	1.2	11.9	6.2	.919	19.2	71.7	"
SBR51-3292	1420-1430	15959	5.8	2.8	90.0	1.4	15.1	6.7	.917	20.1	69.9	"
SBR51-3293	1430-1440	15960	6.2	1.1	91.3	1.4	16.2	2.6	.918	23.4	67.9	"
SBR51-3294	1440-1450	15961	3.6	1.8	93.3	1.3	9.3	4.3	.919	21.6	71.7	"
SBR51-3295	1450-1460	15962	3.9	1.5	93.3	1.3	10.1	3.6	.921	22.4	70.9	"
SBR51-3296	1460-1470	15963	3.2	1.5	94.6	.7	8.2	3.6	.919	22.1	72.5	"
SBR51-3297	1470-1480	15964	1.6	1.5	96.3	.6	3.9*	3.6		15.7	80.6	"
SBR51-3298	1480-1490	15965	1.9	1.7	95.7	.7	4.8*	4.0		16.3	79.4	"
SBR51-3299	1490-1500	15966	1.8	.6	97.1	.5	4.4*	1.3		16.7	80.4	"
SBR51-3300	1510-1520	15967	2.4	1.1	95.7	.8	6.2	2.6	.909	19.9	75.8	"
SBR51-3301	1520-1530	15968	2.8	1.2	94.9	1.1	7.2	2.9	.917	22.0	72.9	"
SBR51-3302	1530-1540	15969	3.8	1.2	93.9	1.1	10.0	2.8	.918	25.1	68.8	"
SBR51-3303	1540-1550	15970	2.5	1.6	94.9	1.0	6.6	3.8	.918	18.1	76.8	"
SBR51-3304	1550-1560	15971	1.4	1.2	97.0	.4	3.4*	2.9		15.4	81.6	"
SBR51-3305	1560-1570	15972	1.1	1.5	97.0	.4	2.8*	3.5		13.8	83.2	"
SBR51-3306	1570-1580	15973	.8	1.3	97.2	.7	2.1*	3.0		15.6	81.6	"
SBR51-3307	1580-1590	15974	.6	1.5	97.3	.6	1.6*	3.5		15.6	81.7	"
SBR51-3308	1590-1600	15975	.4	2.3	96.6	.7	1.0*	5.5		10.1	86.5	"
SBR51-3309	1600-1610	15976	.5	1.7	97.1	.7	1.4*	4.0		9.0	88.1	"
SBR51-3310	1610-1620	15977	1.0	1.7	96.8	.5	2.6*	4.0		12.0	84.8	"
SBR51-3311	1620-1630	15978	1.4	2.1	95.4	1.1	3.5*	5.0		14.0	81.4	"
SBR51-3312	1630-1640	15979	1.4	2.2	95.2	1.2	3.6*	5.3		14.3	80.9	"

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

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Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale			Remarks
			Weight percent		Gal. per ton				Percent of orig. shale		Tendency to coke	
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil	Water	Ignition loss	Ash		
SBR51-3313	1640-1650	15980	1.3	2.0	95.7	1.0	3.2*	4.8	14.2	81.5	None	
SBR51-3314	1650-1660	15981	1.4	2.3	95.5	.8	3.4*	5.5	15.6	79.9	"	
SBR51-3315	1660-1670	15982	1.3	2.9	95.1	.7	3.2*	7.0	15.3	79.8	"	
SBR51-3316	1670-1680	15983	1.5	3.4	94.1	1.0	3.9*	8.1	14.9	79.2	"	
SBR51-3317	1680-1690	15984	1.4	3.8	94.0	.8	3.5*	9.1	15.2	78.8	"	
SBR51-3318	1690-1700	15985	1.5	2.6	95.0	.9	3.9*	6.2	16.1	78.9	"	
SBR51-3319	1700-1710	15986	1.6	2.8	94.7	.9	3.9*	6.7	18.1	76.6	"	
SBR51-3320	1710-1720	15987	1.3	2.3	95.5	.9	3.3*	5.5	17.9	77.6	"	
SBR51-3321	1720-1730	15988	1.2	2.2	95.8	.8	3.0*	5.3	16.1	79.7	"	
SBR51-3322	1730-1740	15989	1.1	2.6	95.8	.5	2.7*	6.2	16.4	79.4	"	
SBR51-3323	1760-1770	15990	1.3	6.4	89.0	3.3	3.2*	15.4	17.4	71.6	"	
SBR51-3324	1770-1780	15991	1.4	8.2	86.3	4.1	3.5*	19.7	16.0	70.3	"	
SBR51-3325	1780-1790	15992	.9	2.6	95.0	1.5	2.2*	6.2	14.6	80.4	"	
SBR51-3326	1790-1800	15993	.5	2.2	96.6	.7	1.2*	5.3	9.8	86.8	"	
SBR51-3327	1800-1810	15994	1.1	2.4	95.6	.9	2.8*	5.8	18.1	77.5	"	
SBR51-3328	1810-1820	15995	1.2	2.3	96.0	.5	3.0*	5.4	19.3	76.7	"	
SBR51-3329	1820-1830	15996	1.1	2.3	96.1	.5	2.7*	5.5	19.2	76.9	"	
SBR51-3330	1830-1840	15997	.9	1.3	97.4	.4	2.1*	3.1	29.4	68.0	"	
SBR51-3331	1840-1850	15998	.7	.8	98.0	.5	1.8*	1.9	27.8	70.2	"	
SBR51-3332	1850-1860	15999	.5	1.2	98.1	.2	1.3*	2.8	16.8	81.3	"	
SBR51-3333	1860-1870	16000	.3	1.4	97.8	.5	.9*	3.2	14.1	83.7	"	
SBR51-3334	1870-1880	16001	.2	1.2	98.4	.2	.5*	2.8	10.9	87.5	"	
SBR51-3335	1880-1890	16002	.3	1.0	98.3	.4	.8*	2.3	11.8	86.5	"	
SBR51-3336	1890-1900	16003	.1	1.0	98.8	.1	.3*	2.3	17.5	81.3	"	
SBR51-3337	1900-1910	16004	.3	1.4	98.0	.3	.8*	3.4	12.8	85.2	"	
SBR51-3338	1910-1920	16005	.3	1.5	97.7	.5	.8*	3.6	11.1	86.6	"	
SBR51-3339	1920-1930	16006	.3	2.2	96.8	.7	.8*	5.3	13.0	83.8	"	
SBR51-3340	1930-1940	16007	.3	2.0	97.1	.6	.6*	4.8	14.7	82.4	"	
SBR51-3341	1940-1950	16008	.2	1.5	97.8	.5	.4*	3.6	10.9	86.9	"	
SBR51-3342	1950-1960	16009	.2	.8	98.6	.4	.6*	1.8	6.7	91.2	"	

*Estimated

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 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.	Properties of spent shale			Remarks	
			Weight percent		Gal. per ton	Percent of orig. shale		Tendency to coke				
			Oil	Water					Spent shale	Gas + loss		
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil	Water	Ignition loss	Ash	Tendency to coke	Remarks
SBR51-3343	1960-1970	16010	Trace	1.4	97.9	0.7	Trace	3.4	6.2	91.7	None	
SBR51-3344	1970-1980	16011	0.2	1.7	97.4	.7	0.6*	4.1	10.2	87.2	"	
SBR51-3345	1980-1990	16012	.8	1.1	97.4	.7	2.1*	2.6	24.1	73.3	"	
SBR51-3346	1990-2000	16013	.5	1.2	97.7	.6	1.2*	2.9	21.1	76.6	"	
SBR51-3347	2000-2010	16014	.7	.6	98.3	.4	1.8*	1.4	21.6	76.7	"	
SBR51-3348	2010-2020	16015	.3	.9	98.0	.8	.8*	2.2	17.9	80.1	"	
SBR51-3349	2020-2030	16016	.2	1.4	98.0	.4	.6*	3.4	13.3	84.7	"	
SBR51-3350	2030-2040	16017	.2	1.6	97.3	.9	.6*	3.8	14.5	82.8	"	
SBR51-3351	2040-2050	16018	.3	1.5	97.5	.7	.8*	3.6	14.2	83.3	"	
SBR51-3352	2050-2060	16019	.4	1.4	97.6	.6	.9*	3.4	14.6	83.0	"	
SBR51-3353	2060-2070	16020	.2	1.7	97.8	.3	.6*	4.1	14.0	83.8	"	
SBR51-3354	2070-2080	16021	.5	3.3	95.3	.9	1.3*	7.9	14.2	81.1	"	
SBR51-3355	2080-2090	16022	.3	3.6	95.9	.2	.8*	8.6	13.4	82.5	"	
SBR51-3356	2090-2100	16023	.4	2.6	96.6	.4	1.1*	6.2	14.1	82.5	"	
SBR51-3357	2100-2110	16024	.4	3.5	95.8	.3	1.0*	8.4	15.1	80.7	"	
SBR51-3358	2110-2120	16025	.4	2.7	96.8	.1	.9*	6.5	13.8	83.0	"	
SBR51-3359	2120-2130	16026	.3	3.6	95.6	.5	.7*	8.6	13.6	82.0	"	
SBR51-3360	2130-2140	16027	.3	3.0	96.2	.5	.6*	7.2	13.8	82.4	"	
SBR51-3361	2140-2150	16028	.3	1.1	98.2	.4	.7*	2.6	15.8	82.4	"	
SBR51-3362	2150-2160	16029	.6	1.0	97.7	.7	1.4*	2.4	17.5	80.2	"	
SBR51-3363	2160-2170	16030	.4	1.4	97.8	.4	1.0*	3.4	16.1	81.7	"	
SBR51-3364	2170-2180	16031	Trace	1.6	97.7	.7	Trace	3.8	9.6	88.1	"	
SBR51-3365	2180-2190	16032	.1	1.0	98.7	.2	.3*	2.4	7.7	91.0	"	
SBR51-3366	2190-2200	16033	.5	.8	98.2	.5	1.3*	1.8	16.2	82.0	"	
SBR51-3367	2200-2210	16034	.3	1.4	97.7	.6	.6*	3.4	10.3	87.4	"	
SBR51-3368	2210-2220	16035	.8	.4	98.2	.6	2.0*	1.0	8.0	90.2	"	
SBR51-3369	2220-2230	16036	.2	1.2	98.1	.5	.6*	2.9	11.0	87.1	"	
SBR51-3370	2230-2240	16037	Trace	1.1	98.4	.5	Trace	2.5	8.8	89.6	"	
SBR51-3371	2240-2250	16038	.4	1.0	98.0	.6	1.0*	2.4	10.6	87.4	"	
SBR51-3372	2250-2260	16039	Trace	1.6	97.9	.5	Trace	3.8	10.0	87.9	"	

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number Laramie Their		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		Gal. per ton		Percent of orig. shale			
										Ignition loss			Ash
SBR51-3373	2260-2270	16040	0.3	1.5	97.4	0.8	0.8*	3.6	9.4	88.0	None		
SBR51-3374	2270-2280	16041	.4	1.5	97.4	.7	1.0*	3.5	9.6	87.8	"		
SBR51-3375	2280-2290	16042	.6	.6	98.2	.6	1.5*	1.4	10.2	88.0	"		
SBR51-3376	2290-2300	16043	Trace	2.4	96.8	.8	Trace	5.8	9.2	87.6	"		
SBR51-3377	2300-2310	16044	.1	1.6	97.4	.9	.3*	3.8	7.9	89.5	"		
SBR51-3378	2310-2320	16045	.2	1.8	97.1	.9	.4*	4.3	8.2	88.9	"		
SBR51-3379	2320-2330	16046	.1	.6	98.5	.8	.2*	1.4	5.1	93.4	"		
SBR51-3380	2330-2340	16047	.2	.7	98.3	.8	.4*	1.7	6.2	92.1	"		
SBR51-3381	2340-2350	16048	.3	.6	98.1	1.0	.6*	1.4	6.2	91.9	"		
SBR51-3382	2350-2360	16049	None	2.2	97.1	.7	None	5.3	6.4	90.7	"		
SBR51-3383	2360-2370	16050	.1	1.9	97.4	.6	.2*	4.4	8.4	89.0	"		
SBR51-3384	2370-2380	16051	Trace	1.3	98.0	.7	Trace	3.2	7.5	90.5	"		
SBR51-3385	2380-2390	16052	.3	.7	98.5	.5	.8*	1.7	10.2	88.3	"		
SBR51-3386	2390-2400	16053	.3	.7	98.7	.3	.8*	1.6	11.4	87.3	"		
SBR51-3387	2400-2410	16054	.1	1.5	97.8	.6	.2*	3.6	8.3	89.5	"		
SBR51-3388	2410-2420	16055	.2	1.5	97.8	.5	.6*	3.6	8.6	89.2	"		
SBR51-3389	2420-2430	16056	.3	1.1	98.1	.5	.7*	2.6	9.2	88.9	"		
SBR51-3390	2460-2470	16057	1.9	1.3	95.8	1.0	4.8*	3.1	10.4	85.4	"		
SBR51-3391	2470-2480	16058	.1	1.2	98.1	.6	.2*	2.8	6.4	91.7	"		
SBR51-3392	2480-2490	16059	.7	2.2	96.8	.3	1.6*	5.2	7.7	89.1	"		
SBR51-3393	2490-2500	16060	1.0	1.7	96.3	1.0	2.5*	4.1	16.4	79.9	"		
SBR51-3394	2500-2510	16061	.2	2.2	96.8	.8	.4*	5.3	8.4	88.4	"		
SBR51-3395	2510-2520	16062	.1	1.9	97.0	1.0	.3*	4.6	8.5	88.5	"		
SBR51-3396	2520-2530	16063	Trace	1.5	97.9	.6	Trace	3.6	9.6	88.3	"		
SBR51-3397	2530-2540	16064	"	1.5	98.0	.5	"	3.6	9.5	88.5	"		
SBR51-3398	2540-2550	16065	None	2.5	96.7	.8	None	6.0	6.5	90.2	"		
SBR51-3399	2550-2560	16066	.8	3.0	95.0	1.2	2.0*	7.2	11.0	84.0	"		
SBR51-3400	2560-2570	16067	.9	3.2	94.1	1.8	2.2*	7.7	10.9	83.2	"		
SBR51-3401	2570-2580	16068	.7	1.1	97.9	.3	1.7*	2.6	6.3	91.6	"		
SBR51-3402	2580-2590	16069	.6	2.6	95.4	1.4	1.6*	6.2	10.4	85.0	"		

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.	Properties of spent shale			Remarks	
			Weight percent		Gal. per ton			Percent of orig. shale		Tendency to coke		
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil	Water	Ignition loss		Ash	
SBR51-3403	2590-2600	16070	Trace	2.1	97.6	0.3	Trace	5.0	9.8	87.8	None	
SBR51-3404	2600-2610	16071	"	2.1	97.6	.3	"	4.9	10.5	87.1	"	
SBR51-3405	2610-2620	16072	None	1.9	97.6	.5	None	4.6	7.7	89.9	"	
SBR51-3406	2620-2630	16073	"	1.8	97.7	.5	"	4.3	7.7	90.0	"	
SBR51-3407	2630-2640	16074	0.2	2.1	97.2	.5	0.6*	5.0	8.4	88.8	"	
SBR51-3408	2640-2650	16075	None	1.8	97.9	.3	None	4.2	7.6	90.3	"	
SBR51-3409	2650-2660	16076	"	1.6	97.5	.9	"	3.8	7.9	89.6	"	
SBR51-3410	2660-2670	16077	"	1.4	97.9	.7	"	3.4	8.2	89.7	"	
SBR51-3411	2670-2680	16078	"	1.1	98.0	.9	"	2.6	7.5	90.5	"	
SBR51-3412	2680-2690	16079	"	1.3	98.1	.6	"	3.1	10.5	87.6	"	
SBR51-3413	2690-2700	16080	"	1.3	98.0	.7	"	3.1	9.9	88.1	"	
SBR51-3414	2700-2710	16081	"	1.4	97.9	.7	"	3.4	10.1	87.8	"	
SBR51-3415	2710-2720	16082	.3	1.6	97.3	.8	.7*	3.8	17.2	80.1	"	
SBR51-3416	2720-2730	16083	.1	1.0	98.0	.9	.3*	2.4	14.5	83.5	"	
SBR51-3417	2730-2740	16084	.1	1.6	97.9	.4	.3*	3.8	12.8	85.1	"	
SBR51-3418	2740-2750	16085	.1	1.1	98.5	.3	.3*	2.6	13.0	75.5	"	
SBR51-3419	2750-2760	16086	None	.8	99.0	.2	None	1.9	12.6	86.4	"	
SBR51-3420	2760-2770	16087	Trace	1.1	98.4	.5	Trace	2.6	9.7	88.7	"	
SBR51-3421	2770-2780	16088	None	.7	99.1	.2	None	1.7	12.9	86.2	"	
SBR51-3422	2780-2790	16089	"	1.2	98.5	.3	"	2.8	10.9	87.6	"	
SBR51-3423	2790-2800	16090	.3	3.1	94.8	1.8	.7*	7.3	8.8	86.0	"	
SBR51-3424	2800-2810	16091	None	1.2	98.3	.5	None	2.9	8.1	90.2	"	
SBR51-3425	2810-2820	16092	Trace	1.5	97.1	.4	Trace	3.5	8.3	89.8	"	
SBR51-3426	2820-2830	16093	.1	1.2	98.4	.3	.2*	2.9	8.6	89.8	"	
SBR51-3427	2840-2850	16094	Trace	2.1	97.3	.6	Trace	4.9	8.6	88.7	"	
SBR51-3428	2850-2860	16095	None	1.4	98.4	.2	None	3.4	8.9	89.5	"	
SBR51-3429	2860-2870	16096	.1	2.1	97.2	.6	.2*	5.0	10.3	86.9	"	
SBR51-3430	2870-2880	16097	.7	1.4	97.6	.3	1.6*	3.2	11.2	86.4	"	
SBR51-3431	2880-2890	16098	.3	1.4	98.0	.3	.6*	3.2	11.5	86.5	"	
SBR51-3432	2890-2900	16099	None	.9	99.0	.1	None	2.2	9.8	89.2	"	

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

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		Percent of orig. shale		Tendency of coke
Laramie	Their		Oil	Water					Oil	Water	Ignition loss	Ash	
SBR51-3433	2900-2910	16100	0.1	1.0	98.3	0.6	0.4*	2.3		11.1	87.2	None	
SBR51-3434	2910-2920	16101	None	1.3	98.0	.7	None	3.1		7.3	90.7	"	
SBR51-3435	2920-2930	16102	"	1.8	97.3	.9	"	4.3		8.9	88.4	"	
SBR51-3436	2930-2940	16103	.9	2.7	95.2	1.2	2.3*	6.5		14.0	81.2	"	
SBR51-3437	2940-2950	16104	.4	2.0	97.0	.6	.9*	4.8		11.6	85.4	"	
SBR51-3438	2950-2960	16105	None	1.6	97.5	.9	None	3.8		9.6	87.9	"	
SBR51-3439	2960-2970	16106	"	1.8	97.3	.9	"	4.3		11.1	86.2	"	
SBR51-3440	2970-2980	16107	"	1.7	97.6	.7	"	4.1		11.3	86.3	"	
SBR51-3441	2980-2990	16108	.1	1.8	97.8	.3	.1*	4.3		12.9	84.9	"	
SBR51-3442	2990-3000	16109	.4	1.3	97.7	.6	1.1*	3.1		8.0	89.7	"	
SBR51-3443	3010-3020	16110	1.1	.7	97.9	.3	2.7*	1.7		8.0	89.9	"	
SBR51-3444	3020-3030	16111	.7	.9	98.0	.4	1.8*	2.0		7.6	90.4	"	
SBR51-3445	3050-3060	16112	None	1.9	97.6	.5	None	4.6		11.8	85.8	"	
SBR51-3446	3060-3070	16113	.2	2.0	97.2	.6	.5*	4.8		11.4	85.8	"	
SBR51-3447	3070-3080	16114	None	1.8	98.0	.2	None	4.3		10.9	87.1	"	
SBR51-3448	3080-3090	16115	"	2.1	97.5	.4	"	4.9		11.8	85.7	"	
SBR51-3449	3090-3100	16116	"	2.0	96.9	1.1	"	4.8		9.7	87.2	"	
SBR51-3450	3100-3110	16117	.4	2.5	95.8	1.3	1.0	6.0		11.9	83.9	"	
SBR51-3451	3110-3120	16118	3.1	2.0	93.5	1.4	7.8	4.8	0.902	17.4	76.1	"	
SBR51-3452	3120-3130	16119	3.3	2.0	93.3	1.4	8.7	4.8	.900	17.3	76.0	"	
SBR51-3453	3130-3140	16120	3.8	1.8	93.1	1.3	10.1	4.3	.897	15.4	77.7	"	
SBR51-3454	3140-3150	16121	3.6	1.7	93.3	1.4	9.7	4.1	.898	15.1	78.2	"	
SBR51-3455	3150-3160	16122	2.1	1.1	95.5	1.3	5.6	2.6	.891	26.3	69.2	"	
SBR51-3456	3160-3170	16123	1.5	1.7	95.9	.9	3.9*	4.1		17.0	78.9	"	
SBR51-3457	3170-3180	16124	1.4	1.5	96.5	.6	3.5*	3.6		17.0	79.5	"	
SBR51-3458	3180-3190	16125	1.9	2.2	94.6	1.3	4.9*	5.3		15.9	78.7	"	
SBR51-3459	3190-3200	16126	.8	1.5	97.1	.6	2.1*	3.6		13.8	83.3	"	
SBR51-3460	3200-3210	16127	.3	1.0	98.3	.4	.9*	2.4		10.5	87.8	"	
SBR51-3461	3210-3220	16128	1.3	.6	97.8	.3	3.2*	1.4		13.3	84.5	"	
SBR51-3462	3220-3230	16129	.3	1.0	98.2	.5	.8*	2.4		18.5	79.7	"	

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.		Properties of spent shale			Remarks
			Weight percent		Gal. per ton				Percent of orig. shale		Tendency to coke	
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil	Water	Ignition loss	Ash		
SBR51-3463	3230-3240	16130	0.3	0.9	98.3	0.5	0.6*	2.2		12.7	85.6	None
SBR51-3464	3240-3250	16131	.1	.8	98.9	.2	.3*	1.8		12.0	86.9	"
SBR51-3465	3250-3260	16132	.3	1.2	98.2	.3	.6*	2.8		12.2	86.0	"
SBR51-3466	3260-3270	16133	None	1.1	98.5	.4	None	2.6		9.3	89.2	"
SBR51-3467	3270-3280	16134	.5	.8	98.1	.6	1.2*	1.9		11.1	87.0	"
SBR51-3468	3280-3290	16135	.1	1.2	98.5	.2	.3*	2.9		10.3	88.2	"
SBR51-3469	3290-3300	16136	2.0	1.0	96.3	.7	5.3	2.4	0.901	25.8	70.5	"
SBR51-3470	3300-3310	16137	1.0	1.2	97.2	.6	2.5*	2.9		17.2	80.0	"
SBR51-3471	3310-3320	16138	.9	1.2	97.3	.6	2.3*	2.9		17.2	80.1	"
SBR51-3472	3320-3330	16139	1.3	.9	97.2	.6	3.2*	2.2		27.2	70.0	"
SBR51-3473	3330-3340	16140	1.2	1.1	96.9	.8	3.0*	2.6		26.3	70.6	"
SBR51-3474	3340-3350	16141	.2	.9	98.6	.3	.5*	2.0		22.6	76.0	"
SBR51-3475	3350-3360	16142	.3	1.3	97.9	.5	.8*	3.1		11.2	86.7	"
SBR51-3476	3360-3370	16143	.3	1.4	97.8	.5	.8*	3.4		12.9	84.9	"
SBR51-3477	3370-3380	16144	.2	2.0	97.5	.3	.4*	4.7		9.4	88.1	"
SBR51-3478	3380-3390	16145	.2	1.3	97.4	1.1	.4*	3.1		9.6	87.8	"
SBR51-3479	3390-3400	16146	None	1.7	97.5	.8	None	4.1		9.5	88.0	"
SBR51-3480	3400-3410	16147	None	2.0	97.5	.5	None	4.8		8.8	88.7	"
SBR51-3481	3410-3420	16148	None	1.4	98.4	.2	None	3.4		8.0	90.4	"
SBR51-3482	3420-3430	16149	None	1.7	98.0	.3	None	4.0		8.0	90.0	"
SBR51-3483	3450-3460	16150	None	1.9	97.8	.3	None	4.4		7.0	90.8	"
SBR51-3484	3460-3470	16151	.1	2.0	97.5	.4	.2*	4.8		8.0	89.5	"
SBR51-3485	3470-3480	16152	None	1.8	97.8	.4	None	4.2		7.1	90.7	"
SBR51-3486	3480-3490	16153	None	1.9	97.8	.3	None	4.6		7.3	90.5	"
SBR51-3487	3490-3500	16154	None	2.3	97.4	.3	None	5.4		7.2	90.2	"
SBR51-3488	3500-3510	16155	None	2.2	97.4	.4	None	5.3		7.3	90.1	"
SBR51-3489	3510-3520	16156	None	1.7	98.2	.1	None	4.0		7.1	91.1	"
SBR52-1	3520-3530	16157	None	1.6	98.3	.1	None	4.0		7.6	90.7	"
SBR52-2	3530-3540	16158	None	2.0	97.9	.1	None	4.7		7.5	90.4	"
SBR52-3	3540-3550	16159	None	1.8	98.1	.1	None	4.3		9.0	89.1	"

*Estimated

Core drill cuttings received October 19, 1951; assays made on air-dried samples.

OIL-SHALE ASSAYS BY THE MODIFIED FISCHER RETORT METHOD

Samples from Carter Oil Company's Willow Creek No. 1 Well, located in the NE 1/4, SW 1/4 of Sec. 21, T. 11 S., R. 21 E.,
 Uintah County, Utah

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60°F.	Properties of spent shale			Remarks
			Weight percent		Gas + loss	Gal. per ton		Percent of orig. shale	Tendency to coke		
			Oil	Water		shale				Oil	
Laramie	Their								Ignition loss	Ash	
SBR52-4	3550-3560	16160	None	1.8	98.1	0.1	None	4.3	9.0	89.1	None
SBR52-5	3560-3570	16161	"	1.2	98.7	.1	"	3.0	10.9	87.8	"
SBR52-6	3570-3580	16162	"	1.1	98.8	.1	"	2.8	10.7	88.1	"
SBR52-7	3580-3590	16163	"	1.0	98.9	.1	"	2.5	8.2	90.7	"
SBR52-8	3490-3600	16164	"	.7	99.1	.2	"	1.7	7.0	92.1	"
SBR52-9	3600-3610	16165	"	.9	98.7	.4	"	2.2	6.7	92.0	"
SBR52-10	3610-3620	16166	"	1.1	98.7	.2	"	2.6	7.5	91.2	"
SBR52-11	3620-3630	16167	"	1.4	98.4	.2	"	3.4	7.9	90.5	"
SBR52-12	3630-3640	16168	.3	1.2	98.1	.4	0.9*	2.9	7.1	91.0	"
SBR52-13	3640-3650	16169	.1	1.0	98.3	.6	.1*	2.3	8.1	90.2	"
SBR52-14	3750-3760	16170	None	2.6	97.2	.2	None	6.2	7.7	89.5	"
SBR52-15	3760-3770	16171	"	2.7	96.9	.4	"	6.5	7.6	89.3	"
SBR52-16	3770-3780	16172	"	1.2	98.6	.2	"	2.9	25.8	72.8	"
SBR52-17	3780-3790	16173	"	1.2	98.5	.3	"	2.9	27.0	71.5	"
SBR52-18	3800-3810	16174	"	2.2	97.3	.5	"	5.3	10.2	87.1	"
SBR52-19	3810-3820	16175	"	1.9	97.8	.3	"	4.6	13.0	84.8	"
SBR52-20	3820-3830	16176	"	2.0	97.6	.4	"	4.8	10.5	87.1	"
SBR52-21	3830-3840	16177	"	2.5	97.2	.3	"	6.0	9.4	87.8	"
SBR52-22	3840-3850	16178	"	2.7	97.0	.3	"	6.4	9.0	88.0	"
SBR52-23	3850-3860	16179	"	2.7	96.9	.4	"	6.5	9.0	87.9	"
SBR52-24	3860-3870	16180	"	2.4	97.3	.3	"	5.8	9.3	88.0	"
SBR52-25	3870-3880	16181	"	2.6	96.9	.5	"	6.2	10.0	86.9	"
SBR52-26	3880-3890	16182	.4	2.2	97.2	.2	1.1	5.3	10.1	87.1	"
SBR52-27	3890-3900	16183	None	2.7	96.7	.6	None	6.5	9.0	87.7	"

*Estimated

Core drill cutting received October 19, 1951; assays made on air-dried samples.