

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from U. S. Bureau of Mines White Mountain Corehole No. 2 drilled in the NW1/4SE1/4SE1/4
(945 feet N/S, 1,132 feet W/E) of sec 28, T 19 N, R 106 W, Sweetwater County, Wyoming

Surface elevation 7,409 feet

Sample number	Run No.	Yield of product				Specific gravity of oil 60°/60° F	Properties of spent shale Tendency to coke	Remarks			
		Weight percent		Spent shale	Gas + loss				Gal per ton		
Laramie	Their	Oil	Water					Oil ¹ / _{Water}			
	65.0- 83.5							Barren Rock Not Assayed			
SBR75-8284	83.5- 84.5	2627	0.0	3.6	95.9	0.5	No oil	8.6	None		
SBR75-8285	84.5- 85.5	2628	.1	2.4	97.0	.5	0.2a	5.8	None		
SBR75-8286	85.5- 86.5	2629	.4	2.0	97.1	.5	1.0a	4.8	None		
SBR75-8287	86.5- 87.5	2630	.5	2.3	96.4	.8	1.2a	5.6	None		
SBR75-8288	87.5- 88.5	2631	.9	2.5	95.5	1.1	2.4a	6.0	None		
SBR75-8289	88.5- 89.5	2632	.6	2.9	95.6	.9	1.7a	7.0	None		
SBR75-8290	89.5- 90.8	2633	2.5	3.0	93.2	1.3	6.3	7.2	0.937	None	Some Rubble
SBR75-8291	90.8- 92.0	2634	3.6	2.5	92.1	1.8	9.3	6.0	.939	None	Some Rubble
SBR75-8292	92.0- 93.3	2635	1.0	4.2	93.8	1.0	2.6a	10.1		None	
SBR75-8293	93.3- 94.6	2636	1.4	3.7	93.9	1.0	3.7a	8.9		None	
SBR75-8294	94.6- 95.9	2637	1.6	3.6	93.6	1.2	4.2a	8.6		None	
SBR75-8295	95.9- 97.3	2638	.6	3.6	94.8	1.0	1.4a	8.6		None	
SBR75-8296	98.5-100.0	2639	.2	2.3	96.4	1.1	.5a	5.5		None	
SBR75-8297	100.0-101.4	2640	.4	2.5	96.3	.8	1.1a	6.0		None	
SBR75-8298	101.4-104.7	2641	.0	3.3	96.1	.6	No oil	7.9		None	
SBR75-8299	104.7-107.2	2642	.1	2.4	96.7	.8	.3a	5.8		None	
SBR75-8300	107.2-108.0	2643	1.1	3.0	95.1	.8	2.9a	7.2		None	
SBR75-8301	108.5-111.0	2644	.6	2.4	96.2	.8	1.5a	5.8		None	
SBR75-8302	111.0-112.0	2645	1.4	2.6	94.6	1.4	3.7a	6.2		None	
SBR75-8303	112.0-113.0	2646	2.2	3.6	92.6	1.6	5.7	8.6	.925	None	
SBR75-8304	113.0-114.0	2647	3.4	3.7	91.4	1.5	8.6	8.9	.935	None	
SBR75-8305	114.0-115.0	2648	3.7	5.0	89.5	1.8	9.5	12.0	.939	None	
SBR75-8306	115.0-116.0	2649	4.0	4.4	89.0	2.6	10.4	10.5	.931	None	
SBR75-8307	116.0-117.5	2650	4.5	3.0	90.5	2.0	11.5	7.2	.935	None	
SBR75-8308	118.5-120.0	2651	3.3	2.6	91.4	2.7	8.5	6.2	.928	None	Some Rubble
SBR75-8309	120.0-122.0	2652	3.0	2.4	92.9	1.7	7.7	5.8	.921	None	Some Rubble
SBR75-8310	122.0-123.0	2653	1.2	2.3	95.6	.9	3.0a	5.5		None	
SBR75-8311	123.0-124.0	2654	1.9	1.9	93.2	3.0	5.1a	4.6		None	
SBR75-8312	124.0-125.0	2655	2.0	1.2	95.7	1.1	5.4	2.9	.916	None	

See footnote at end of table.

Core samples received November 13, 1974; assays made on air-dried samples

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Samples from U. S. Bureau of Mines White Mountain Corehole No. 2 (con.)

Surface elevation 7,409 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 coke
Laramie	Their		Oil	Water					Oil ^{1/}	Water	
SBR75-8313	125.0-126.1	2656	2.2	1.4	95.1	1.3	5.8	3.4	0.916	None	
SBR75-8314	126.1-127.1	2657	2.4	1.4	95.2	1.0	6.3	3.4	.916	None	
SBR75-8315	128.5-130.7	2658	2.4	1.6	94.6	1.4	6.3	3.8	.909	None	Rubble
SBR75-8316	130.7-132.0	2659	2.5	2.5	93.5	1.5	6.5	6.0	.923	None	
SBR75-8317	132.0-133.0	2660	2.0	2.0	94.8	1.2	5.3	4.8	.910	None	
SBR75-8318	133.0-134.0	2661	2.2	2.0	94.7	1.1	5.8	4.8	.886	None	
SBR75-8319	134.0-135.0	2662	2.6	2.0	93.7	1.7	7.0	4.8	.890	None	
SBR75-8320	135.0-136.0	2663	.6	1.4	95.4	2.6	1.5a	3.4		None	
SBR75-8321	136.0-137.5	2664	1.1	1.5	96.0	1.4	2.8a	3.6		None	
SBR75-8322	138.5-140.5	2665	1.5	1.6	95.7	1.2	3.8a	3.8		None	Some Rubble
SBR75-8323	140.5-142.0	2666	2.9	1.6	94.3	1.2	7.5	3.8	.916	None	Some Rubble
SBR75-8324	142.0-143.0	2667	2.2	1.8	95.6	.4	5.8	4.3	.904	None	
SBR75-8325	143.0-144.0	2668	2.8	1.8	94.1	1.3	7.6	4.3	.898	None	
SBR75-8326	144.0-145.0	2669	2.3	2.0	94.4	1.3	6.1	4.8	.891	None	
SBR75-8327	145.0-146.1	2670	2.3	2.3	94.1	1.3	5.8	5.5	.934	None	
SBR75-8328	147.1-148.9	2671	2.1	1.6	95.0	1.3	5.6	3.8	.908	None	Some Rubble
SBR75-8329	148.9-150.0	2672	3.3	1.3	94.1	1.3	8.6	3.2	.916	None	Some Rubble
SBR75-8330	150.5-152.4	2673	2.7	1.6	94.4	1.3	7.1	3.8	.919	None	Some Rubble
SBR75-8331	152.4-153.6	2674	.1	2.3	96.4	1.2	.2a	5.5		None	Some Rubble
SBR75-8332	158.5-161.7	2675	.0	2.4	96.4	1.2	No oil	5.7		None	
	167.7-253.4										Barren Rock Not Assayed
SBR75-8333	253.4-255.4	2676	.7	2.2	95.8	1.3	1.9a	5.3		None	
SBR75-8334	255.4-260.5	2677	.1	3.2	96.3	.4	.3a	7.7		None	Rubble
SBR75-8335	260.5-263.6	2678	.3	3.0	96.0	.7	.9a	7.2		None	
SBR75-8336	263.6-265.9	2679	.6	3.0	95.5	.9	1.6a	7.2		None	
SBR75-8337	267.8-272.3	2680	2.0	2.3	94.4	1.3	5.2a	5.5		None	
SBR75-8338	272.3-276.8	2681	2.2	2.2	94.3	1.3	5.8	5.3	.930	None	
SBR75-8339	277.8-279.9	2682	2.0	2.2	94.5	1.3	5.2	5.3	.934	None	
SBR75-8340	279.9-281.5	2683	9.4	2.0	85.6	3.0	24.2	4.8	.929	None	Some Rubble
SBR75-8341	281.5-284.0	2684	6.2	1.9	89.4	2.5	16.3	4.6	.915	None	Some Rubble

See footnote at end of table.

Core samples received November 13, 1974; assays made on air-dried samples

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Surface elevation 7,409 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				Gal per ton					
		Laramie	Their	Oil	Water	Spent shale	Gas + loss	Oil ^{1/}			
SBR75-8342	2685	284.0-285.1	3.8	1.1	93.4	1.7	10.2	2.6	0.902	None	Rubble
SBR75-8343	2686	285.1-287.1	1.4	1.7	95.4	1.5	3.8a	4.1		None	
SBR75-8344	2687	287.8-292.3	1.5	1.8	94.7	2.0	3.9a	4.3		None	
SBR75-8345	2688	292.3-296.8	1.5	2.3	94.4	1.8	4.0a	5.5		None	
SBR75-8346	2689	297.8-301.4	1.1	2.5	95.7	.7	2.8a	6.0		None	
SBR75-8347	2690	301.4-304.9	.9	2.5	95.4	1.2	2.4a	6.0		None	
SBR75-8348	2691	304.9-307.8	.5	3.0	95.4	1.1	1.3a	7.2		None	
SBR75-8349	2692	307.8-313.0	.9	2.4	95.8	.9	2.3a	5.8		None	
SBR75-8350	2693	313.0-318.0	.3	2.3	95.4	2.0	.7a	5.5		None	
SBR75-8351	2694	318.0-323.0	.2	2.5	95.2	2.1	.6a	6.0		None	
SBR75-8352	2695	323.0-328.0	.5	2.7	94.2	2.6	1.4a	6.5		None	
SBR75-8353	2696	328.0-333.0	.9	2.1	95.5	1.5	2.5a	5.0		None	
SBR75-8354	2697	333.0-338.0	.3	2.2	95.5	2.0	.7a	5.3		None	
SBR75-8355	2698	338.0-342.0	.1	2.9	95.1	1.9	.3a	7.0		None	
SBR75-8356	2699	342.0-345.9	.0	1.9	96.1	2.0	Trace	4.6		None	
SBR75-8357	2700	345.9-346.4	2.2	2.1	94.6	1.1	5.9	5.0	.899	None	
SBR75-8358	2701	347.8-349.2	16.3	1.9	77.7	4.1	43.2	4.6	.906	None	
SBR75-8359	2702	349.2-350.2	3.0	2.6	92.7	1.7	8.0	6.2	.896	None	
SBR75-8360	2703	350.2-351.2	6.3	1.1	90.3	2.3	16.8	2.6	.902	None	
SBR75-8361	2704	351.2-352.2	6.3	1.3	90.1	2.3	16.6	3.1	.905	None	
SBR75-8362	2705	352.2-353.2	6.7	2.7	87.8	2.8	17.9	6.5	.905	None	
SBR75-8363	2706	353.2-354.2	6.2	1.8	89.3	2.7	16.5	4.3	.905	None	
SBR75-8364	2707	354.2-355.3	5.6	2.6	89.7	2.1	14.8	6.2	.908	None	
SBR75-8365	2708	355.3-356.4	5.9	2.8	88.8	2.5	15.6	6.7	.911	None	
SBR75-8366	2709	356.4-357.5	8.2	2.4	86.4	3.0	21.6	5.8	.913	None	
SBR75-8367	2710	357.8-359.5	6.3	2.7	88.6	2.4	16.7	6.5	.912	None	Some Rubble
SBR75-8368	2711	359.5-361.0	8.1	2.1	86.8	3.0	21.4	5.0	.911	None	
SBR75-8369	2712	361.0-362.0	10.2	1.8	84.7	3.3	27.1	4.3	.905	None	
SBR75-8370	2713	362.0-363.0	10.1	1.9	84.9	3.1	26.3	4.6	.917	None	
SBR75-8371	2714	363.0-364.0	10.7	1.7	84.1	3.5	28.0	4.1	.915	None	

See footnote at end of table.

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Surface elevation 7,409 feet

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				Tendency to coke		
		Laramie	Their	Oil	Water	Spent shale	Gas + loss	Oil ^{1/}				
SBR75-8372	2715	364.0-365.0	10.2	1.9	84.3	3.6	26.5	4.6	0.922	None		
SBR75-8373	2716	365.0-366.0	13.2	2.2	80.9	3.7	34.1	5.3	.932	None		
SBR75-8374	2717	366.0-367.3	14.9	1.7	79.2	4.2	38.7	4.1	.923	None		
SBR75-8375	2718	367.3-368.3	13.8	1.2	80.9	4.1	36.0	2.9	.919	None		
SBR75-8376	2719	368.3-369.7	10.7	2.3	84.2	2.8	27.6	5.5	.932	None		
SBR75-8377	2720	369.7-371.0	13.5	2.0	80.7	3.8	34.7	4.8	.930	None		
SBR75-8378	2721	371.0-372.4	13.8	1.4	80.4	4.4	35.4	3.4	.930	None		
SBR75-8379	2722	372.4-373.4	13.1	1.6	81.9	3.4	33.8	3.8	.929	None		
SBR75-8380	2723	373.4-374.4	13.2	1.9	81.3	3.6	34.1	4.6	.928	None		
SBR75-8381	2724	374.4-375.6	9.3	2.0	85.9	2.8	24.5	4.8	.911	None		
SBR75-8382	2725	375.6-376.8	8.5	2.5	86.4	2.6	22.2	6.0	.921	None		
SBR75-8383	2726	376.8-377.8	9.4	2.5	85.5	2.6	24.5	6.0	.920	None		
SBR75-8384	2727	377.8-379.3	9.9	1.5	83.9	4.7	26.1	3.6	.915	None		
SBR75-8385	2728	379.3-379.9	8.3	2.0	87.8	1.9	22.3	4.8	.893	None		
SBR75-8386	2729	379.9-381.4	10.6	1.8	85.2	2.4	27.8	4.3	.909	None		
SBR75-8387	2730	381.4-382.9	5.8	1.5	90.7	2.0	15.1	3.6	.923	None		
SBR75-8388	2731	382.9-383.9	11.8	1.5	83.8	2.9	30.8	3.6	.918	None		
SBR75-8389	2732	383.9-385.0	3.3	1.8	93.5	1.4	8.5	4.3	.913	None		
SBR75-8390	2733	385.0-386.2	1.6	1.7	95.8	.9	4.1a	4.1		None		
SBR75-8391	2734	387.8-389.0	3.2	1.3	93.9	1.6	8.4	3.1	.924	None	Some Rubble	
SBR75-8392	2735	389.0-390.6	6.3	.7	90.4	2.6	16.4	1.7	.917	None	Some Rubble	
SBR75-8393	2736	390.6-391.9	8.8	1.3	87.6	2.3	23.2	3.1	.911	None		
SBR75-8394	2737	391.9-393.2	9.4	1.8	86.2	2.6	24.8	4.3	.910	None		
SBR75-8395	2738	393.2-394.4	6.9	1.2	89.8	2.1	18.4	2.9	.900	None		
SBR75-8396	2739	394.4-395.6	7.7	1.1	88.5	2.7	20.6	2.6	.900	None		
SBR75-8397	2740	395.6-396.6	8.5	1.1	88.0	2.4	22.6	2.5	.906	None		
SBR75-8398	2741	397.8-399.5	6.4	.8	90.5	2.3	16.8	1.9	.912	None	Some Rubble	
SBR75-8399	2742	399.5-400.8	4.8	.4	93.0	1.8	12.7	1.1	.906	None	Some Rubble	
SBR75-8400	2743	400.8-402.0	5.7	.8	91.5	2.0	14.9	1.9	.917	Slight		
SBR75-8401	2744	402.0-403.6	5.6	1.2	91.5	1.7	14.9	2.9	.903	None		

See footnote at end of table.

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Surface elevation 7,409 feet

Sample number	Run No.	Yield of product							Specific gravity of oil at 60°/60° F	Properties of spent shale	
		Weight percent				Gal per ton				Tendency to coke	Remarks
		Oil	Water	Spent shale	Gas + loss	Oil ^{1/}	Water				
SBR75-8402	407.3-409.1	2745	6.0	0.6	91.8	1.6	15.6	1.4	0.918	None	Some Rubble
SBR75-8403	409.1-410.8	2746	7.0	1.2	89.4	2.4	18.6	2.9	.905	None	
SBR75-8404	410.8-412.9	2747	6.1	.7	90.8	2.4	16.1	1.7	.912	None	Rubble
SBR75-8405	412.9-414.4	2748	9.7	1.0	86.8	2.5	25.5	2.4	.908	None	Some Rubble
SBR75-8406	414.4-415.6	2749	9.6	1.2	86.7	2.5	25.7	2.9	.900	None	
SBR75-8407	415.6-416.6	2750	5.2	.8	92.8	1.2	14.0	1.8	.899	None	
SBR75-8408	416.6-417.4	2751	7.6	1.2	89.3	1.9	20.4	2.9	.899	None	
SBR75-8409	417.4-418.4	2752	4.3	1.2	93.1	1.4	11.4	2.9	.910	None	
SBR75-8410	418.4-420.0	2753	6.7	1.2	90.8	1.3	17.7	2.9	.905	None	Bottom Laney Member
SBR75-8411	420.0-420.8	2754	4.4	1.3	92.6	1.7	11.6	3.1	.909	None	Top Wilkins Peak Member
SBR75-8412	420.8-422.3	2755	.3	3.3	95.7	.7	.9a	7.9		None	
SBR75-8413	422.3-423.5	2756	8.6	2.1	86.8	2.5	22.7	5.0	.909	None	
SBR75-8414	423.5-425.0	2757	8.5	2.6	86.3	2.6	22.5	6.2	.907	None	
SBR75-8415	425.0-426.0	2761	.8	1.7	96.5	1.0	2.2a	4.1		None	
SBR75-8416	426.0-427.2	2762	.1	1.5	97.3	1.1	.4a	3.6		None	
SBR75-8417	427.2-428.6	2763	1.6	1.5	95.4	1.5	4.2a	3.6		None	
SBR75-8418	428.8-430.0	2764	3.7	1.5	92.8	2.0	9.7	3.6	.909	None	428.8-434.2; Sequence
SBR75-8419	430.0-431.9	2765	1.0	1.5	96.6	.9	2.7a	3.6		None	Uncertain
SBR75-8420	431.9-433.0	2766	.7	1.6	96.6	1.1	1.9a	3.8		None	
SBR75-8421	433.0-434.2	2767	.9	1.4	97.0	.7	2.3a	3.4		None	
SBR75-8422	434.2-434.7	2768	.4	1.3	97.2	1.1	1.1a	3.1		None	
SBR75-8423	434.7-435.4	2769	3.8	1.3	92.0	2.9	10.0	3.1	.917	None	
SBR75-8424	435.4-436.8	2770	3.9	1.6	92.9	1.6	10.2	3.8	.909	None	
SBR75-8425	436.8-438.2	2771	1.4	1.2	96.2	1.2	3.7a	2.9		None	
SBR75-8426	438.2-439.9	2772	3.1	1.9	93.3	1.7	8.2	4.6	.902	None	
SBR75-8427	439.9-441.0	2773	4.9	1.8	90.9	2.4	13.0	4.3	.902	None	
SBR75-8428	441.0-442.0	2774	4.5	1.9	91.5	2.1	11.9	4.6	.911	None	
SBR75-8429	442.0-443.0	2775	2.3	1.4	95.1	1.2	6.0	3.4	.908	None	
SBR75-8430	443.0-444.0	2776	2.0	1.2	95.8	1.0	5.3	2.9	.914	None	
SBR75-8431	444.0-445.2	2777	4.5	2.6	91.0	1.9	11.8	6.2	.905	None	

See footnote at end of table.

Core samples received November 13, 1974; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from U. S. Bureau of Mines White Mountain Corehole No. 2 (con.)

Surface elevation 7,409 feet

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			Tendency to		
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil ^{1/}	Water	coke	
SBR75-8432	445.2-446.5	2778	9.4	2.4	85.0	3.2	24.9	5.8	None	
SBR75-8433	446.5-448.2	2785	3.4	2.0	93.0	1.6	9.0	4.8	None	
SBR75-8434	448.2-449.6	2786	.1	3.0	96.0	.9	.2a	7.2	None	
SBR75-8435	449.6-450.1	2787	1.8	1.9	95.0	1.3	4.8a	4.6	None	
SBR75-8436	450.1-451.4	2788	.5	.7	98.1	.7	1.2a	1.7	None	
SBR75-8437	451.4-452.7	2789	.4	.6	98.1	.9	1.1a	1.3	None	
SBR75-8438	452.7-454.0	2790	2.0	2.2	94.4	1.4	5.3	5.3	.914	None
SBR75-8439	454.0-455.0	2791	8.3	2.4	86.1	3.2	22.0	5.8	.908	None
SBR75-8440	455.0-456.0	2792	13.2	2.6	80.2	4.0	34.9	6.2	.904	None
SBR75-8441	456.0-457.0	2793	9.9	2.6	84.2	3.3	26.1	6.2	.907	None
SBR75-8442	457.0-458.2	2794	4.2	2.2	91.5	2.1	11.0	5.3	.911	None
SBR75-8443	458.2-459.7	2795	2.1	1.5	94.8	1.6	5.5	3.6	.909	None
SBR75-8444	459.7-460.7	2796	.1	3.4	95.6	.9	.3a	8.1	None	
SBR75-8445	460.7-461.7	2797	.6	1.5	96.8	1.1	1.7a	3.6	None	
SBR75-8446	461.7-463.5	2798	.5	.9	97.9	.7	1.3a	2.2	None	
SBR75-8447	463.5-464.6	2799	.7	1.5	96.6	1.2	1.7a	3.6	None	
SBR75-8448	464.6-465.6	2800	2.9	1.7	93.4	2.0	7.7	4.1	.906	Some Rubble
SBR75-8449	465.6-466.6	2801	.6	1.6	96.9	.9	1.5a	3.8	None	
SBR75-8450	466.6-468.0	2802	1.4	1.5	95.7	1.4	3.6a	3.6	None	
SBR75-8451	468.0-469.2	2803	.9	1.5	97.2	.4	2.4a	3.6	None	
SBR75-8452	469.2-470.4	2804	9.3	2.0	86.1	2.6	24.7	4.8	.906	None
SBR75-8453	470.4-471.4	2805	8.0	2.8	86.1	3.1	21.1	6.7	.909	None
SBR75-8454	471.4-472.0	2806	4.0	1.7	91.3	3.0	10.4	4.1	.924	None

^{1/} "a"--indicates specific gravity estimated as 0.92.

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