

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Energy Research and Development Administration's White Mountain Corehole 4 drilled in the SW1/4SW1/4 (4,200 feet W/E, 89 feet N/S) of sec 17, T 19 N, R 105 W, Sweetwater County, Wyoming

Surface elevation 6,838 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		Spent shale	Gas + loss			
Laramie	Their		Oil	Water					Oil <sup>1/</sup>	Water	
SBR75-12700	10.0-10.6	5704	5.8	5.0	87.2	2.0	15.2	12.0	0.914	None	
SBR75-12701	10.6-11.6	5705	3.1	4.0	90.8	2.1	8.2	9.6	.914	None	
SBR75-12702	11.6-13.0	5706	1.7	3.5	93.6	1.2	4.3a	8.4		None	
SBR75-12703	13.0-14.0	5707	.7	3.0	95.6	.7	1.7a	7.2		None	
SBR75-12704	14.0-15.4	5708	.9	3.5	94.4	1.2	2.3a	8.4		None	
SBR75-12705	15.4-16.4	5709	1.9	3.1	93.7	1.3	5.0a	7.4		None	
SBR75-12706	16.4-18.2	5710	9.8	5.0	82.1	3.1	25.7	12.0	.918	None	
SBR75-12707	18.2-18.9	5711	8.1	4.0	85.7	2.2	21.0	9.6	.927	None	
SBR75-12708	19.0-20.0	5712	2.7	4.5	91.0	1.8	7.0	10.8	.921	None	
SBR75-12709	20.0-22.0	5713	.6	3.5	94.9	1.0	1.5a	8.4		None	
SBR75-12710	22.0-23.0	5714	.6	4.3	94.2	.9	1.5a	10.3		None	
SBR75-12711	23.0-24.0	5715	.9	4.0	94.2	.9	2.3a	9.6		None	
SBR75-12712	24.0-25.0	5716	1.3	4.5	93.4	.8	3.4a	10.8		None	
SBR75-12713	25.0-26.0	5717	4.2	5.0	89.0	1.8	10.9	12.0	.915	None	
SBR75-12714	26.0-27.0	5718	6.1	5.0	87.0	1.9	16.0	12.0	.911	None	
SBR75-12715	27.0-28.0	5719	7.8	4.6	84.6	3.0	20.5	11.0	.913	None	
SBR75-12716	28.0-29.0	5720	5.6	3.8	88.4	2.2	14.5	9.1	.918	None	
SBR75-12717	29.0-31.0	5721	.4	3.7	94.7	1.2	1.2a	8.9		None	
SBR75-12718	31.0-33.1	5722	.0	4.9	94.4	.7	Trace	11.7		None	
SBR75-12719	36.0-37.5	5723	1.5	2.9	94.4	1.2	4.0a	7.0		None	
SBR75-12720	37.5-38.6	5724	2.4	3.2	91.6	2.8	6.2a	7.7		None	
SBR75-12721	38.6-39.6	5725	6.6	3.3	87.7	2.4	17.2	7.9	.920	None	
SBR75-12722	39.6-40.6	5726	6.6	3.3	86.8	3.3	17.3	7.9	.916	None	
SBR75-12723	40.6-43.0	5727	3.4	4.2	91.0	1.4	8.8	10.1	.923	None	
SBR75-12724	43.0-46.0	5728	.1	3.2	96.0	.7	.3a	7.7		None	
SBR75-12725	46.0-49.5	5729	.4	1.9	97.2	.5	1.0a	4.6		None	
SBR75-12726	51.0-52.0	5730	5.4	3.1	89.8	1.7	14.2	7.4	.922	None	
SBR75-12727	52.0-53.0	5731	9.2	4.5	84.0	2.3	23.9	10.8	.924	None	
SBR75-12728	53.0-54.8	5732	9.3	4.5	83.9	2.3	24.0	10.8	.925	None	
SBR75-12729	54.8-55.8	5733	11.4	5.5	80.3	2.8	29.4	13.2	.931	None	

See footnote at end of table.

Core samples received June 11, 1975; assays made on air-dried samples

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Samples from Energy Research and Development Administration's White Mountain Corehole 4 (con.)

Surface elevation 6,838 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	Water				
SBR75-12730	55.8-57.4	5734	10.0	3.9	83.2	2.9	26.1	9.3	0.917	None	
SBR75-12731	57.4-58.4	5735	8.6	2.4	86.4	2.6	22.3	5.8	.919	None	
SBR75-12732	58.4-59.4	5736	5.8	1.9	89.8	2.5	15.1	4.6	.924	None	
SBR75-12733	59.4-60.4	5737	6.6	2.9	88.3	2.2	17.2	7.0	.919	None	
SBR75-12734	60.4-61.4	5738	5.7	2.4	89.0	2.9	14.8	5.8	.922	None	
SBR75-12735	61.4-62.4	5739	4.0	2.4	90.6	3.0	10.8	5.8	.902	None	
SBR75-12736	62.4-63.9	5740	5.9	3.6	87.8	2.7	15.5	8.6	.906	None	
SBR75-12737	63.9-65.2	5741	6.8	3.7	87.3	2.3	17.8	8.9	.922	None	
SBR75-12738	65.2-66.2	5742	8.2	4.6	85.5	1.7	21.1	11.0	.929	None	
SBR75-12739	66.2-67.2	5743	4.1	4.5	90.0	1.4	10.5	10.8	.935	None	
SBR75-12740	67.2-68.5	5744	8.1	3.4	85.9	2.6	21.1	8.1	.923	None	
SBR75-12741	68.5-69.8	5745	8.7	3.7	84.9	2.7	22.4	8.9	.928	None	
SBR75-12742	69.8-71.2	5746	7.9	3.7	86.2	2.2	20.2	8.9	.937	None	
SBR75-12743	71.2-72.6	5747	7.7	4.0	86.1	2.2	19.6	9.6	.939	None	
SBR75-12744	72.6-73.7	5748	10.0	3.0	84.7	2.3	26.1	7.2	.916	None	
SBR75-12745	73.7-74.7	5749	9.9	2.5	85.4	2.2	25.8	6.0	.920	None	
SBR75-12746	74.7-75.8	5750	8.7	2.8	86.2	2.3	22.8	6.7	.916	None	
SBR75-12747	75.8-76.9	5751	7.5	3.8	85.9	2.8	19.5	9.1	.916	None	
SBR75-12748	76.9-77.9	5752	8.2	3.7	85.8	2.3	21.5	8.9	.911	None	
SBR75-12749	77.9-78.9	5753	8.2	3.6	85.1	3.1	21.7	8.6	.909	None	
SBR75-12750	78.9-79.9	5754	8.7	3.4	85.6	2.3	22.9	8.1	.907	None	
SBR75-12751	79.9-80.9	5755	10.6	4.8	81.6	3.0	28.0	11.5	.907	None	
SBR75-12752	80.9-82.2	5756	8.4	5.2	83.4	3.0	22.1	12.5	.915	None	
SBR75-12753	82.2-83.6	5757	7.3	4.5	85.9	2.3	19.4	10.8	.903	None	
SBR75-12754	83.6-84.9	5758	5.8	3.4	88.7	2.1	15.2	8.1	.916	None	
SBR75-12755	85.0-86.0	5759	7.7	2.5	87.4	2.4	20.2	6.0	.916	None	
SBR75-12756	86.0-86.9	5760	9.7	2.7	84.9	2.7	25.2	6.5	.924	None	
SBR75-12757	86.9-88.5	5761	4.8	2.9	90.1	2.2	12.4	7.0	.919	None	
SBR75-12758	88.5-89.5	5762	5.4	2.3	90.0	2.3	14.0	5.5	.919	None	
SBR75-12759	89.5-90.8	5763	8.6	2.9	85.3	3.2	22.6	7.0	.915	None	

Core samples received June 11, 1975; assays made on air-dried samples

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Samples from Energy Research and Development Administration's White Mountain Corehole 4 (con.)

Surface elevation 6,838 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 <sup>1/</sup>	Water				
SBR75-12760	90.8- 91.9	5764	10.7	2.4	83.8	3.1	27.9	5.8	0.917	None	
SBR75-12761	91.9- 93.3	5765	4.2	3.4	90.3	2.1	11.0	8.1	.903	None	
SBR75-12762	93.3- 94.3	5766	2.4	3.3	92.8	1.5	6.4	7.9	.889	None	
SBR75-12763	94.3- 95.3	5767	1.5	2.5	94.6	1.4	4.0a	6.0		None	
SBR75-12764	95.3- 96.3	5768	1.7	3.3	93.7	1.3	4.5a	7.9		None	
SBR75-12765	96.3- 97.7	5769	1.5	3.5	93.5	1.5	4.0a	8.4		None	
SBR75-12766	97.7- 98.8	5770	3.9	2.1	92.2	1.8	10.2	5.0	.923	None	
SBR75-12767	98.8-100.0	5771	5.3	2.6	90.0	2.1	13.9	6.4	.915	None	
SBR75-12768	100.0-101.0	5772	6.9	3.3	87.4	2.4	17.9	7.9	.920	None	
SBR75-12769	101.0-102.0	5773	9.2	3.3	84.7	2.8	24.0	7.9	.922	None	
SBR75-12770	102.0-103.0	5774	8.3	3.0	85.6	3.1	21.5	7.2	.924	None	
SBR75-12771	103.0-103.9	5775	9.8	7.0	79.4	3.8	25.3	16.8	.924	None	
SBR75-12772	103.9-104.7	5776	2.3	6.5	89.3	1.9	6.1	15.6	.901	None	
SBR75-12773	104.7-105.3	5777	2.5	6.0	90.0	1.5	6.8	14.4	.896	None	
SBR75-12774	105.3-106.3	5778	2.5	6.0	90.3	1.2	6.6	14.4	.892	None	
SBR75-12775	106.3-107.3	5779	1.8	5.0	91.7	1.5	4.8a	12.0		None	
SBR75-12776	107.3-108.3	5834	4.5	5.0	87.9	2.6	12.1	12.0	.893	None	
SBR75-12777	108.3-109.1	5781	.0	10.5	89.1	.4	Trace	25.2		None	
SBR75-12778	109.1-110.1	5782	2.7	6.0	89.6	1.7	7.3	14.4	.888	None	
SBR75-12779	110.1-111.3	5783	3.1	6.6	88.9	1.4	8.3	15.8	.892	None	
SBR75-12780	111.3-112.3	5784	4.0	8.0	85.8	2.2	10.8	19.2	.886	None	
SBR75-12781	112.3-112.8	5785	.0	10.7	89.2	.1	Trace	25.6		None	
SBR75-12782	112.8-113.7	5786	4.0	6.0	88.0	2.0	10.7	14.4	.885	None	
SBR75-12783	113.7-115.3	5787	.0	7.8	91.1	1.1	Trace	18.8		None	
SBR75-12784	115.3-116.6	5788	.0	5.8	93.4	.8	Trace	14.0		None	
SBR75-12785	116.6-118.0	5789	.0	3.3	95.7	1.0	No Oil	7.9		None	
SBR75-12786	118.0-120.1	5790	.0	2.6	97.2	.2	No Oil	6.2		None	
SBR75-12787	120.1-121.7	5791	.0	4.1	95.6	.3	No Oil	9.8		None	
SBR75-12788	121.7-122.7	5792	.2	5.0	93.5	1.3	.6a	12.0		None	
SBR75-12789	122.7-123.7	5793	1.3	7.0	90.4	1.3	3.4a	16.8		None	

See footnote at end of table.

Core samples received June 11, 1975; assays made on air-dried samples

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Samples from Energy Research and Development Administration's White Mountain Corehole 4 (con.)

Surface elevation 6,838 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					
SBR75-12790	123.7-124.7	5794	0.0	3.0	96.5	0.5	No Oil	7.3	None
SBR75-12791	124.7-126.2	5795	2.3	6.5	90.0	1.2	6.0a	15.6	None
SBR75-12792	126.2-127.4	5796	1.9	4.9	91.6	1.6	5.0a	11.7	None
SBR75-12793	127.4-128.6	5797	2.2	5.6	90.1	2.1	5.8	13.4	0.894
SBR75-12794	128.6-129.6	5798	4.0	5.0	89.0	2.0	10.6	12.0	.890
SBR75-12795	129.6-130.9	5799	3.0	4.5	89.5	3.0	8.0	10.8	.892
SBR75-12796	130.9-131.9	5800	3.5	6.2	87.9	2.4	9.2	14.9	.902
SBR75-12797	131.9-133.0	5801	2.2	3.7	92.2	1.9	5.9	8.9	.897
SBR75-12798	133.0-134.6	5802	3.3	6.0	88.8	1.9	9.0	14.4	.888
SBR75-12799	134.6-135.6	5803	1.7	7.5	89.4	1.4	4.3a	18.0	None
SBR75-12800	135.6-136.7	5804	2.3	6.1	89.8	1.8	6.1	14.6	.888
SBR75-12801	136.7-137.8	5805	2.3	6.0	90.0	1.7	6.3	14.4	.886
SBR75-12802	137.8-138.8	5835	5.2	7.5	84.6	2.7	14.0	18.0	.889
SBR75-12803	138.8-139.8	5807	2.7	8.0	87.2	2.1	7.3	19.2	.886
SBR75-12804	140.0-141.7	5808	5.7	6.0	86.1	2.2	14.9	14.4	.914
SBR75-12805	141.7-142.7	5809	3.8	7.0	87.0	2.2	10.0	16.8	.914
SBR75-12806	142.7-143.7	5810	1.5	2.7	94.7	1.1	4.0a	6.4	None
SBR75-12807	143.7-144.5	5811	4.3	7.0	86.6	2.1	11.2	16.8	.915
SBR75-12808	144.5-146.0	5812	5.6	5.0	86.9	2.5	14.4	12.0	.928
SBR75-12809	146.0-147.0	5813	5.9	5.0	86.9	2.2	15.3	12.0	.929
SBR75-12810	147.0-148.0	5814	4.4	1.8	92.0	1.8	11.5	4.3	.928
SBR75-12811	148.0-149.0	5815	7.0	4.0	85.9	3.1	18.0	9.6	.934
SBR75-12812	149.0-149.9	5816	6.4	5.2	86.3	2.1	16.4	12.5	.933
SBR75-12813	150.0-151.0	5817	5.9	4.9	87.3	1.9	15.3	11.7	.930
SBR75-12814	151.0-152.0	5818	5.3	6.8	85.8	2.1	13.8	16.3	.926
SBR75-12815	152.0-153.0	5819	7.7	3.8	86.0	2.5	19.8	9.1	.933
SBR75-12816	153.0-154.4	5820	4.5	4.6	88.9	2.0	11.8	11.0	.918
SBR75-12817	154.4-155.4	5821	6.1	4.5	86.8	2.6	16.2	10.8	.902
SBR75-12818	155.4-156.4	5822	8.4	5.5	82.1	4.0	22.0	13.2	.911
SBR75-12819	156.4-157.7	5823	7.0	4.7	86.6	1.7	18.2	11.3	.927

See footnote at end of table.

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Surface elevation 6,838 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 <sup>1/</sup>	Water			
SBR75-12820	157.7-159.3	5824	3.0	6.2	88.7	2.1	7.9	14.9	0.910	None	
SBR75-12821	159.3-160.6	5825	6.0	5.5	86.0	2.5	15.7	13.2	.918	None	
SBR75-12822	160.6-161.6	5826	2.9	3.7	91.9	1.5	7.6	8.9	.902	None	
SBR75-12823	161.6-162.4	5827	4.5	8.0	84.5	3.0	11.7	19.2	.910	None	
SBR75-12824	162.4-163.6	5828	3.6	6.0	87.9	2.5	9.6	14.4	.905	None	
SBR75-12825	163.6-164.8	5829	2.6	3.3	92.3	1.8	7.2	7.9	.880	None	
SBR75-12826	164.8-166.3	5830	4.2	6.0	86.9	2.9	11.4	14.4	.881	None	
SBR75-12827	166.3-167.8	5831	.0	6.5	92.2	1.3	Trace	15.7		None	
SBR75-12828	167.8-169.3	5832	3.2	5.0	90.0	1.8	8.7	12.0	.890	None	
SBR75-12829	169.3-170.0	5833	.1	2.5	96.4	1.0	.4a	6.0		None	

<sup>1/</sup> "a"--indicates specific gravity estimated 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 oil/ton.

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