

Samples from Gulf Mineral Resources Company's Bonanza No. 5 Corehole located
2,050 feet S/N and 1,550 feet W/E of sec 13, T 11 S, R 25 E, S.L.M., Uintah County, Utah

Surface elevation 6,700 feet

USGMR 305

Sample number		Run No.	Yield of product				Specific gravity		Properties of		Remarks
			Weight percent		Spent shale	Gas + loss	Gal per ton		of oil at 60°/60° F	spent shale Tendency to coke	
Laramie	Their	Oil	Water	Oil			Water	Oil			Water
SBR73-5909	30.0-31.0	82257	5.5	.7	91.9	1.9	14.2	1.7	.930	None	
SBR73-5910	31.0-32.0	82258	3.3	.6	94.1	2.0	8.4	1.4	.936	None	
SBR73-5911	32.0-33.0	82259	2.6	1.3	95.2	.9	6.7	3.1	.935	None	
SBR73-5912	33.0-34.0	82260	3.6	1.2	94.2	1.0	9.2	2.9	.932	None	
SBR73-5913	34.0-35.0	82261	5.1	1.1	92.6	1.2	13.2	2.6	.928	None	
SBR73-5914	35.0-36.0	82262	3.0	.8	95.0	1.2	7.7	1.9	.929	None	
SBR73-5915	36.0-37.0	82263	2.5	1.0	95.1	1.4	6.4	2.4	.930	None	
SBR73-5916	37.0-38.0	82264	2.9	1.4	94.4	1.3	7.5	3.4	.928	None	
SBR73-5917	38.0-39.0	82265	1.9	1.4	95.8	.9	4.9a	3.4		None	
SBR73-5918	39.0-40.0	82266	5.8	1.3	91.5	1.4	15.0	3.1	.925	None	
SBR73-5919	40.0-41.0	82267	4.9	1.0	92.8	1.3	12.6	2.4	.928	None	
SBR73-5920	41.0-42.0	82268	3.2	1.0	94.6	1.2	8.2	2.4	.930	None	
SBR73-5921	42.0-43.0	82269	4.0	.7	93.6	1.7	10.3	1.7	.928	None	
SBR73-5922	43.0-44.0	82270	12.5	1.8	82.7	3.0	32.2	4.3	.929	None	
SBR73-5923	44.0-45.0	82271	4.0	1.3	93.3	1.4	10.3	3.1	.930	None	
SBR73-5924	45.0-46.0	82272	4.9	1.4	92.4	1.3	12.6	3.4	.930	None	
SBR73-5925	46.0-47.0	82273	4.8	1.4	92.6	1.2	12.4	3.4	.927	None	
SBR73-5926	47.0-48.0	82274	5.6	.8	92.1	1.5	14.5	1.9	.923	None	
SBR73-5927	48.0-49.0	82275	9.8	1.6	86.6	2.0	25.4	3.8	.926	None	
SBR73-5928	49.0-50.0	82276	5.0	1.1	92.8	1.1	13.0	2.6	.925	None	
SBR73-5929	50.0-51.0	82277	10.4	1.9	85.2	2.5	27.2	4.6	.918	None	
SBR73-5930	51.0-52.0	82278	4.4	1.3	93.2	1.1	11.3	3.1	.930	None	
SBR73-5931	52.0-53.0	82279	2.1	.7	96.0	1.2	5.4	1.7	.939	None	
SBR73-5932	53.0-54.0	82280	1.8	.9	96.6	.7	4.7a	2.2		None	
SBR73-5933	54.0-55.0	82281	1.0	.8	97.6	.6	2.6a	1.9		None	
SBR73-5934	55.0-56.0	82282	2.7	.8	95.7	.8	6.9	1.9	.941	None	
SBR73-5935	56.0-57.0	82283	1.7	.8	96.8	.7	4.4a	1.9		None	
SBR73-5936	57.0-58.0	82284	1.2	.5	97.6	.7	3.1a	1.2		None	
SBR73-5937	58.0-58.8	82285	.9	.6	98.0	.5	2.3a	1.4		None	
SBR73-5938	59.4-60.2	82286	.4	.8	98.0	.8	1.0a	1.9		None	Base A-Groove: 60'

See footnote at end of table.

Core samples received April 28, 1972; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Mineral Resources Company's Bonanza No. 5 Corehole (Continued)

Surface elevation 6,700 feet

Sample number		Run No.	Yield of product				Gal per ton		Specific gravity of oil at 60°/60° F	Properties of spent shale		Remarks
			Weight percent		Spent shale	Gas + loss				Tendency to coke		
			Oil	Water			Oil	Water				
Laramie	Their						1/					
SBR73-5939	60.2-61.0	82287	.9	.9	97.7	.5	2.3a	2.2		None		
SBR73-5940	61.0-62.0	82288	4.2	1.2	93.3	1.3	11.0	2.9	.918	None		
SBR73-5941	62.0-63.0	82289	6.2	1.6	90.0	2.2	16.2	3.8	.918	None		
SBR73-5942	63.0-64.0	82290	6.8	2.0	89.2	2.0	17.8	4.8	.913	None		
SBR73-5943	64.0-65.0	82291	10.4	2.0	85.1	2.5	27.3	4.8	.914	None		
SBR73-5944	65.0-66.0	82292	5.7	1.6	90.9	1.8	14.8	3.8	.920	None		
SBR73-5945	66.0-67.0	82293	4.3	1.5	93.0	1.2	11.2	3.6	.918	None		
SBR73-5946	67.0-68.0	82294	4.9	2.3	91.6	1.2	12.7	5.5	.923	None		
SBR73-5947	68.0-69.0	82295	8.2	2.7	87.2	1.9	21.0	6.5	.935	None		
SBR73-5948	69.0-70.0	82296	9.7	2.0	86.2	2.1	25.2	4.8	.923	None		
SBR73-5949	70.0-71.0	82297	10.5	1.5	85.9	2.1	27.7	3.6	.908	None		
SBR73-5950	71.0-72.0	82298	17.2	2.5	77.2	3.1	45.4	6.0	.907	None		
SBR73-5951	72.0-73.0	82299	8.4	1.6	88.6	1.4	22.2	3.8	.905	None		
SBR73-5952	73.0-74.0	82300	6.7	1.6	90.0	1.7	17.6	3.8	.912	None		
SBR73-5953	74.0-75.0	82301	4.0	1.1	94.1	.8	10.4	2.6	.925	None		
SBR73-5954	75.0-76.0	82302	7.3	1.1	89.7	1.9	19.0	2.6	.921	None		
SBR73-5955	76.0-77.0	82303	4.5	1.3	93.4	.8	11.8	3.1	.916	None		
SBR73-5956	77.0-78.0	82304	2.4	2.6	94.3	.7	6.1	6.2	.942	None		
SBR73-5957	78.0-78.6	82305	3.4	.5	94.7	1.4	8.8	1.2	.925	None		
SBR73-5958	79.8-81.0	82306	2.0	.3	96.2	1.5	5.2	.7	.920	None		
SBR73-5959	81.0-82.0	82307	4.2	1.1	94.2	.5	10.9	2.6	.920	None		
SBR73-5960	82.0-83.0	82308	10.3	1.6	86.4	1.7	27.0	3.8	.914	None		
SBR73-5961	83.0-84.0	82309	10.5	2.0	85.4	2.1	27.6	4.8	.912	None		
SBR73-5962	84.0-85.0	82310	6.9	1.0	90.5	1.6	18.2	2.4	.911	None		
SBR73-5963	85.0-86.0	82311	7.1	2.0	89.3	1.6	18.6	4.8	.914	None		
SBR73-5964	86.0-87.0	82312	13.4	2.4	81.2	3.0	34.8	5.8	.924	None		
SBR73-5965	87.0-88.0	82313	20.4	3.0	72.4	4.2	54.3	7.2	.900	Heavy		
SBR73-5966	88.0-89.0	82314	22.3	2.5	70.9	4.3	59.3	6.0	.901	Heavy		
SBR73-5967	89.0-90.0	82315	21.5	3.8	69.9	4.8	56.9	9.1	.905	Heavy		
SBR73-5968	90.0-91.0	82316	25.8	4.8	62.7	6.7	68.5	11.5	.903	Heavy		

See footnote at end of table.

Core samples received April 28, 1972; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Mineral Resources Company's Bonanza No. 5 Corehole (Continued)

Surface elevation 6,700 feet

Sample number		Run No.	Yield of product				Gal per ton 1/		Specific gravity of oil at 60°/60° F	Properties of spent shale		Remark
			Weight percent		Spent shale	Gas + loss				Tendency to coke		
Laramie	Their		Oil	Water					Oil		Water	
SBR73-5969	91.0- 92.0	82317	21.8	3.8	70.1	4.3	57.9	9.1	.902		Heavy	
SBR73-5970	92.0- 93.0	82318	13.8	2.0	80.7	3.5	36.5	4.8	.905		Moderate	
SBR73-5971	93.0- 94.0	82319	20.4	3.1	72.7	3.8	53.1	7.4	.920		Moderate	
SBR73-5972	94.0- 95.0	82320	7.4	2.1	89.2	1.3	19.2	5.0	.926		None	
SBR73-5973	95.0- 96.0	82321	18.3	2.5	76.2	3.0	47.4	6.0	.925		Slight	
SBR73-5974	96.0- 97.0	82322	8.4	1.2	87.3	3.1	21.5	2.9	.935		None	
SBR73-5975	97.0- 98.0	82323	7.4	1.1	90.0	1.5	19.2	2.6	.921		None	
SBR73-5976	98.0- 99.0	82324	18.9	1.6	73.8	5.7	49.2	3.8	.920		None	
SBR73-5977	99.0-100.0	82325	15.1	2.3	78.8	3.8	39.5	5.5	.917		None	
SBR73-5978	100.0-101.0	82326	6.4	2.1	90.3	1.2	17.1	5.0	.899		None	
SBR73-5979	101.0-102.0	82327	12.6	2.3	82.9	2.2	33.2	5.5	.908		None	
SBR73-5980	102.0-103.0	82328	6.2	1.5	91.2	1.1	16.1	3.6	.925		None	
SBR73-5981	103.0-104.0	82329	5.8	1.8	91.0	1.4	15.1	4.3	.921		None	
SBR73-5982	104.0-105.0	82330	11.6	2.8	83.3	2.3	30.2	6.7	.920		None	
SBR73-5983	105.0-106.0	82331	10.6	2.5	84.7	2.2	27.5	6.0	.925		None	
SBR73-5984	106.0-107.0	82332	3.3	1.7	93.7	1.3	8.6	4.1	.925		None	
SBR73-5985	107.0-108.0	82333	6.3	1.6	90.9	1.2	16.4	3.8	.923		None	
SBR73-5986	108.0-109.0	82334	7.9	1.6	88.5	2.0	20.7	3.8	.916		None	
SBR73-5987	109.0-110.0	82335	13.7	2.3	81.4	2.6	36.3	5.5	.905		None	
SBR73-5988	110.0-111.0	82336	10.3	1.7	86.0	2.0	27.6	4.1	.896		None	
SBR73-5989	111.0-112.0	82337	9.3	2.0	86.5	2.2	24.6	4.8	.907		None	
SBR73-5990	112.0-113.0	82338	13.1	2.5	81.2	3.2	34.6	6.0	.908		None	
SBR73-5991	113.0-114.0	82339	7.2	2.0	89.1	1.7	18.9	4.8	.911		None	
SBR73-5992	114.0-115.0	82340	5.0	1.4	91.8	1.8	12.9	3.4	.931		None	
SBR73-5993	115.0-116.0	82341	4.2	1.4	93.1	1.3	10.8	3.4	.930		None	
SBR73-5994	116.0-116.8	82342	6.0	1.7	90.7	1.6	15.6	4.1	.921		None	
SBR73-5995	116.8-117.5	82343	9.3	1.6	86.7	2.4	24.2	3.8	.921		None	
SBR73-5996	117.5-118.3	82344	4.4	1.4	92.9	1.3	11.4	3.4	.927		None	
SBR73-5997	118.3-119.0	82345	4.3	1.3	93.2	1.2	11.1	3.1	.926		None	
SBR73-5998	119.0-120.0	82346	3.0	1.1	94.8	1.1	7.7	2.6	.928		None	

See footnote at end of table.

Core samples received April 28, 1972; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Mineral Resources Company's Bonanza No. 5 Corehole (Continued)

Surface elevation 6,700 feet

Sample number		Run No.	Yield of product				Gal per ton		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			
SBR73-5999	120.0-121.0	82347	1.8	1.0	95.7	1.5	4.7a	2.4	0.920	None	
SBR73-6000	121.0-122.0	82348	3.8	1.3	93.5	1.4	10.0	3.1	.921	None	
SBR73-6001	122.0-123.0	82349	5.4	1.9	90.5	2.2	14.3	4.6	.912	None	
SBR73-6002	123.0-124.0	82350	3.6	1.5	92.1	2.8	9.2	3.6	.921	None	
SBR73-6003	124.0-125.0	82351	11.3	1.8	83.3	3.6	29.2	4.3	.926	None	
SBR73-6004	125.0-126.0	82352	3.7	1.2	93.1	2.0	9.7	2.9	.925	None	
SBR73-6005	126.0-127.0	82353	2.4	.5	95.7	1.4	6.3	1.3	.917	None	
SBR73-6006	127.0-128.0	82354	8.5	1.1	88.0	2.4	22.2	2.6	.919	None	
SBR73-6007	128.0-129.0	82355	10.8	1.6	84.3	3.3	27.8	3.8	.927	None	
SBR73-6008	129.0-130.0	82356	2.6	1.0	94.7	1.7	6.9	2.3	.927	None	
SBR73-6009	130.0-131.0	82357	1.4	1.0	96.3	1.3	3.6a	2.4		None	
SBR73-6010	131.0-132.0	82358	2.0	.9	96.0	1.1	5.2a	2.2		None	
SBR73-6011	132.0-133.0	82359	7.7	1.6	88.9	1.8	18.5	3.5	.926	None	
SBR73-6012	133.0-134.0	82360	3.9	4.0	91.4	.7	9.8	9.6	.948	None	
SBR73-6013	134.0-135.0	82361	6.8	2.0	89.0	2.2	16.2	4.8	.930	None	
SBR73-6014	135.0-136.0	82362	4.1	2.0	93.1	.8	10.6	4.8	.929	None	
SBR73-6015	136.0-136.8	82363	3.2	1.0	94.6	1.2	8.3	2.4	.936	None	
SBR73-6016	136.8-137.5	82364	1.9	1.2	96.2	.7	4.9	2.9	.920	None	

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

Core samples received April 28, 1972; Assays made on air-dried samples

Laramie Energy Research Center, Laramie, Wyoming, Illustration No. SBR-4537P Sheet 4 of 4 sheets

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