

BONANZA 004
C1500658

UBC

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Gulf Mineral Resources Company's Bonanza No. 4 Corehole located
500 feet N/S and 750 feet E/W of sec 31, T 11 S, R 25 E, S.L.M., Uintah County, Utah

Surface elevation 6,295 feet

USMC363

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	Thair		Oil	Water					Oil	Water	
SBR73-5671	356.6-357.3	82016	3.4	2.6	93.2	.8	8.8	6.2	.929	None	
SBR73-5672	357.3-358.0	82017	3.8	2.8	92.6	.8	9.8	6.7	.925	None	
SBR73-5673	358.0-359.0	82018	3.6	2.0	93.0	1.4	9.3	4.8	.931	None	
SBR73-5674	359.0-360.0	82019	7.5	2.0	88.9	1.6	19.7	4.8	.913	None	
SBR73-5675	360.0-361.0	82020	7.9	3.4	88.3	.4	20.8	8.1	.910	None	
SBR73-5676	361.0-362.0	82021	5.2	1.1	93.0	.7	13.6	2.6	.917	None	
SBR73-5677	362.0-363.0	82022	4.5	1.2	93.3	1.0	11.7	2.9	.923	None	
SBR73-5678	363.0-364.0	82023	2.5	1.1	95.0	1.4	6.4	2.6	.940	None	
SBR73-5679	364.0-365.0	82024	3.5	1.0	94.3	1.2	9.0	2.4	.928	None	
SBR73-5680	365.0-366.0	82025	3.6	1.1	93.2	2.1	9.2	2.6	.936	None	
SBR73-5681	366.0-367.0	82026	2.3	1.5	95.1	1.1	5.9	3.6	.928	None	
SBR73-5682	367.0-368.0	82027	2.7	1.7	94.4	1.2	7.0	4.1	.928	None	
SBR73-5683	368.0-369.0	82028	2.4	2.0	94.1	1.5	6.2	4.8	.925	None	
SBR73-5684	369.0-370.0	82029	3.0	1.8	93.9	1.3	7.8	4.3	.925	None	
SBR73-5685	370.0-371.0	82030	4.8	1.5	92.0	1.7	12.5	3.6	.921	None	
SBR73-5686	371.0-372.0	82031	3.4	1.3	94.0	1.3	8.8	3.1	.923	None	
SBR73-5687	372.0-373.0	82032	11.4	1.8	84.3	2.5	29.6	4.3	.922	None	
SBR73-5688	373.0-373.6	82033	4.5	1.5	92.4	1.6	11.6	3.6	.926	None	
SBR73-5689	374.0-375.0	82034	4.5	2.0	92.1	1.4	11.6	4.8	.925	None	
SBR73-5690	375.0-376.0	82035	4.7	1.8	91.6	1.9	12.2	4.3	.925	None	
SBR73-5691	376.0-377.0	82036	8.5	1.7	87.5	2.3	22.2	4.1	.917	None	
SBR73-5692	377.0-378.0	82037	6.2	1.8	89.7	2.3	16.2	4.3	.916	None	
SBR73-5693	378.0-379.0	82038	9.1	1.5	86.9	2.5	23.9	3.6	.912	None	
SBR73-5694	379.0-380.0	82039	7.6	2.0	88.0	2.4	19.8	4.8	.919	None	
SBR73-5695	380.0-381.0	82040	2.0	1.5	95.3	1.2	5.2	3.6	.926	None	
SBR73-5696	381.0-382.0	82041	1.6	1.7	95.3	1.4	4.2a	4.1		None	
SBR73-5697	382.0-383.0	82042	.8	1.4	96.6	1.2	2.1a	3.4		None	
SBR73-5698	383.0-384.0	82043	2.0	1.9	94.6	1.5	5.2a	4.6		None	
SBR73-5699	384.0-385.0	82044	1.6	1.5	94.9	2.0	4.2a	3.6		None	
SBR73-5700	385.0-386.0	82045	1.5	1.1	95.4	2.0	3.9a	2.6		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. 4 Corehole (Continued)

Surface elevation 6,295 feet

			Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale		Remarks
Sample number		Run No.	Weight percent		Spent shale	Gas + loss	Gal per ton			Tendency to coke		
Laramie	Their		Oil	Water			Oil	Water				
SBR73-5701	386.0-387.0	82046	.7	1.6	96.6	1.1	1.8a	3.8		None		
SBR73-5702	387.0-388.0	82047	.8	1.5	96.7	1.0	2.1a	3.6		None	Base A-Groove	
SBR73-5703	388.0-389.0	82048	.7	1.4	97.2	.7	1.8a	3.4		None		
SBR73-5704	389.0-390.0	82049	2.9	2.0	93.3	1.8	7.6	4.8	.912	None		
SBR73-5705	390.0-391.0	82050	5.4	2.0	90.6	2.0	14.2	4.8	.911	None		
SBR73-5706	391.0-392.0	82051	6.7	2.3	88.8	2.2	17.7	5.5	.908	None		
SBR73-5707	392.0-393.0	82052	9.1	2.4	86.1	2.4	23.9	5.8	.914	None		
SBR73-5708	393.0-393.7	82053	5.4	2.4	90.2	2.0	14.1	5.8	.916	None		
SBR73-5709	394.0-395.0	82054	4.2	1.3	93.3	1.2	11.0	3.1	.915	None		
SBR73-5710	395.0-396.0	82055	3.8	2.5	92.4	1.3	9.9	6.0	.918	None		
SBR73-5711	396.0-397.0	82056	7.7	2.0	88.5	1.8	19.9	4.8	.927	None		
SBR73-5712	397.0-398.0	82057	9.2	1.6	87.0	2.2	24.0	3.8	.918	None		
SBR73-5713	398.0-399.0	82058	12.1	1.7	83.4	2.8	31.9	4.1	.908	None		
SBR73-5714	399.0-400.0	82059	14.3	1.8	81.0	2.9	37.7	4.3	.908	None		
SBR73-5715	400.0-401.0	82060	8.0	1.4	88.9	1.7	21.3	3.4	.901	None		
SBR73-5716	401.0-402.0	82061	6.6	1.5	89.6	2.3	17.2	3.6	.917	None		
SBR73-5717	402.0-403.0	82062	4.0	1.1	93.5	1.4	10.4	2.6	.922	None		
SBR73-5718	403.0-404.0	82063	6.4	1.1	90.4	2.1	16.7	2.6	.917	None		
SBR73-5719	404.0-405.0	82064	6.4	1.2	90.8	1.6	16.7	2.9	.918	None		
SBR73-5720	405.0-406.0	82065	3.4	1.4	94.2	1.0	8.9	3.4	.916	None		
SBR73-5721	406.0-407.0	82066	4.1	1.1	92.8	2.0	10.7	2.6	.916	None		
SBR73-5722	407.0-408.0	82067	3.6	1.4	93.0	2.0	9.4	3.4	.915	None		
SBR73-5723	408.0-409.0	82068	3.5	1.6	93.7	1.2	9.1	3.8	.919	None		
SBR73-5724	409.0-410.0	82069	3.1	1.2	94.8	.9	8.2	2.9	.908	None		
SBR73-5725	410.0-411.0	82070	4.6	1.0	93.4	1.0	12.1	2.4	.909	None		
SBR73-5726	411.0-412.0	82071	15.5	2.0	79.6	2.9	40.6	4.8	.914	None		
SBR73-5727	412.0-413.0	82072	9.0	1.4	87.4	2.2	23.9	3.4	.901	None		
SBR73-5728	413.0-414.0	82073	6.6	1.0	89.5	2.9	17.5	2.4	.905	None		
SBR73-5729	414.0-415.0	82074	7.6	1.3	89.5	1.6	20.2	3.1	.903	None		
SBR73-5730	415.0-416.0	82075	16.2	1.8	78.9	3.1	42.6	4.3	.911	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. 4 Corehole (Continued)

Surface elevation 6,295 feet

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
			Oil	Water			Oil	Water			
Laramie	Their						1/				
SBR73-5731	416.0-417.0	82076	14.7	1.7	80.7	2.9	39.1	4.1	.900	None	
SBR73-5732	417.0-418.0	82077	25.0	3.0	66.1	5.9	66.4	7.2	.902	Slight	
SBR73-5733	418.0-419.0	82078	27.5	4.3	62.4	5.8	73.0 ✓	10.3	.903	Moderate	
SBR73-5734	419.0-420.0	82079	21.6	2.8	71.0	4.6	57.0	6.7	.908	Slight	
SBR73-5735	420.0-421.0	82080	18.1	2.0	76.0	3.9	47.9	4.8	.905	None	
SBR73-5736	421.0-422.0	82081	11.4	1.4	84.3	2.9	29.7	3.4	.921	None	
SBR73-5737	422.0-423.0	82082	6.6	1.5	90.2	1.7	17.3	3.6	.916	None	
SBR73-5738	423.0-424.0	82083	10.6	1.2	85.8	2.4	27.8	2.9	.914	None	
SBR73-5739	424.0-425.0	82084	8.7	1.4	88.2	1.7	22.8	3.4	.913	None	
SBR73-5740	425.0-426.0	82085	20.8	1.8	73.6	3.8	55.3	4.3	.902	None	
SBR73-5741	426.0-427.0	82086	15.8	2.0	79.0	3.2	41.9	4.8	.903	None	
SBR73-5742	427.0-428.0	82087	5.7	1.9	91.2	1.2	15.0	4.6	.909	None	
SBR73-5743	428.0-429.0	82088	11.5	1.9	84.6	2.0	30.5	4.6	.903	None	
SBR73-5744	429.0-430.0	82089	6.2	1.7	90.5	1.6	16.2	4.1	.917	None	
SBR73-5745	430.0-431.0	82090	5.3	1.8	91.4	1.5	13.9	4.3	.916	None	
SBR73-5746	431.0-431.9	82091	15.4	2.2	79.5	2.9	39.7	5.3	.930	None	
SBR73-5747	432.8-434.0	82092	8.6	1.6	87.8	2.0	22.3	3.8	.925	None	
SBR73-5748	434.0-435.0	82093	3.4	1.0	93.8	1.8	8.9	2.4	.919	None	
SBR73-5749	435.0-436.0	82201	6.0	.6	91.8	1.6	15.8	1.4	.908	None	
SBR73-5750	436.0-437.0	82095	12.0	1.7	84.1	2.2	31.5	4.1	.914	None	
SBR73-5751	437.0-438.0	82096	11.9	1.1	85.1	1.9	31.9	2.6	.895	None	
SBR73-5752	438.0-439.0	82097	8.4	1.1	88.9	1.6	22.2	2.6	.907	None	
SBR73-5753	439.0-440.0	82098	10.6	1.5	85.6	2.3	27.9	3.6	.910	None	
SBR73-5754	440.0-441.0	82099	9.2	1.4	87.7	1.7	24.3	3.4	.906	None	
SBR73-5755	441.0-442.0	82100	3.9	1.4	92.5	2.2	10.2	3.4	.920	None	
SBR73-5756	442.0-443.0	82101	3.7	1.1	93.6	1.6	9.5	2.6	.929	None	
SBR73-5757	443.0-444.0	82102	5.0	1.5	91.7	1.8	13.1	3.6	.917	None	
SBR73-5758	444.0-445.0	82103	7.8	1.6	88.4	2.2	20.2	3.8	.924	None	
SBR73-5759	445.0-446.0	82104	2.7	1.2	94.9	1.2	7.0	2.9	.925	None	
SBR73-5760	446.0-447.0	82105	1.5	1.3	96.2	1.0	3.9	3.1	.924	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. 4 Corehole (Continued)

Surface elevation 6,295 feet

Sample number		Run No.	Yield of product				Specific gravity		Properties of spent shale Tendency to cöke	Remarks
			Weight percent		Spent shale	Gas + loss	Gal per ton			
			Oil	Water			Oil	Water		
Laramie	Their								60°/60° F	
SBR73-5761	447.0-448.0	82106	1.3	1.1	95.7	1.9	3.4	2.6	.917	None
SBR73-5762	448.0-449.0	82107	3.7	1.8	93.4	1.1	9.7	4.3	.911	None
SBR73-5763	449.0-450.0	82108	3.8	2.5	92.7	1.0	9.9	6.0	.918	None
SBR73-5764	450.0-451.0	82109	7.8	1.6	88.9	1.7	20.3	3.8	.921	None
SBR73-5765	451.0-452.0	82110	2.2	1.5	95.7	.6	5.7	3.6	.918	None
SBR73-5766	452.0-452.9	82111	6.3	1.1	91.0	1.6	16.6	2.6	.912	None
SBR73-5767	452.9-454.0	82112	7.0	2.0	89.7	1.3	18.3	4.8	.916	None
SBR73-5768	454.0-455.0	82113	1.3	1.2	97.0	.5	3.4a	2.9		None
SBR73-5769	455.0-456.0	82114	1.8	.7	96.5	1.0	4.7a	1.7		None
SBR73-5770	456.0-457.0	82115	5.8	1.8	90.3	2.1	14.9	4.3	.930	None
SBR73-5771	457.0-458.0	82116	6.9	2.5	90.0	.6	17.8	6.0	.927	None
SBR73-5772	458.0-459.0	82117	3.2	1.8	94.2	.8	8.3	4.3	.926	None
SBR73-5773	459.0-460.0	82118	1.3	1.2	96.9	.6	3.4a	2.9		None
SBR73-5774	460.0-461.0	82119	1.8	.9	96.0	1.3	4.7a	2.2		None
SBR73-5775	461.0-462.0	82120	2.0	1.0	95.8	1.2	5.2a	2.4		None
SBR73-5776	462.0-463.0	82121	1.6	1.5	95.4	1.5	4.2a	3.6		None
SBR73-5777	463.0-464.0	82122	1.2	.8	96.7	1.3	3.1a	1.9		None
SBR73-5778	464.0-464.9	82123	2.2	1.0	95.9	.9	5.8	2.4	.904	None

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

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