OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well drilled 450 feet East and 1500 feet South of NW corner of sec. 21, T 24 N, R 106 W, Sweetwater County, Wyoming

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
SBR71-8928	366.0-367.5	62336	0.1	2.2	97.3	0.4	0.3a	5.3		None	Start core
SBR71-8929	367.9-368.6	62337	.1	1.3	97.9	.7	.1a	3.1		None	
SBR71-8930	369.0-369.7	62338	.3	1.0	98.1	.6	.6a	2.4		None	
SBR71-8931	369.7-370.7	62339	1.4	2.2	95.2	1.2	3.7a	5.3		None	
SBR71-8932	370.9-372.0	62340	1.7	2.4	93.8	2.1	4.5a	5.8		None	
SBR71-8933	372.0-373.0	62341	1.7	3.0	94.4	.9	4.3a	7.2		None	
SBR71-8934	373.0-374.0	62342	1.7	2.3	94.9	1.1	4.4a	5.5		None	
SBR71-8935	374.0-375.0	62343	1.6	2.4	94.9	1.1	4.1a	5.8		None	
SBR71-8936	375.0-376.0	62344	2.3	2.7	93.4	1.6	5.8	6.5	0.937	None	
SBR71-8937	376.0-377.0	62345	2.6	2.6	93.5	1.3	6.7	6.2	.951	None	
SBR71-8938	377.0-378.0	62346	3.0	1.9	94.1	1.0	7.7	4.6	.916	None	
SBR71-8939	378.0-379.0	62347	3.0	2.1	93.5	1.4	7.6	5.0	.924	None	
SBR71-8940	379.0-380.0	62348	3.1	2.0	93.6	1.3	7.9	4.8	.927	None	
SBR71-8941	380.0-381.0	62349	3.0	2.3	93.6	1.1	7.8	5.5	.914	None	
SBR71-8942	381.0-382.0	62350	4.1	1.8	92.5	1.6	10.6	4.3	.918	None	
SBR71-8943	382.0-383.0	62351	4.0	2.8	91.5	1.7	10.7	6.7	.893	None	
SBR71-8944	383.0-384.0	62352	2.6	3.0	93.4	1.0	6.7	7.2	.913	None	
SBR71-8945	384.0-385.0	62353	2.3	3.0	93.4	1.3	5.9	7.2	.920	None	
SBR71-8946	385.0-386.0	62354	3.7	2.7	92.4	1.2	9.6	6.5	.925	None	
SBR71-8947	386.0-387.0	62355	4.2	3.0	91.5	1.3	10.8	7.2	.933	None	
SBR71-8948	387.0-388.0	62356	3.2	3.0	92.7	1.1	8.3	7.2	.932	None	
SBR71-8949	388.0-389.0	62357	2.6	2.3	93.6	1.5	6.7	5.5	.924	None	
SBR71-8950	389.0-390.0	62358	2.9	3.2	92.3	1.6	7.5	7.7	.925	None	
SBR71-8951	390.0-391.0	62359	3.2	2.9	92.7	1.2	8.1	7.0	.928	None	
SBR71-8952	391.0-392.0	62360	2.0	2.6	92.1	3.3	5.3	6.2	.921	None	
SBR71-8953	392.0-393.6	62361	3.8	2.9	92.0	1.3	10.0	7.0	.915	None	
SBR71-8954	393.8-395.3	62362	5.2	1.9	91.5	1.4	13.3	4.6	.938	None	
SBR71-8955	395.3-395.9	62363	5.8	2.4	89.3	2.5	14.7	5.8	.937	None	
SBR71-8956	396.2-398.0	62364	3.7	2.4	92.9	1.0	9.4	5.8	.933	None	
SBR71-8957	398.0-400.0	62365	5.5	2.0	90.8	1.7	14.3	4.8	.925	None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR71-8958	400.0-402.0	62366	4.6	1.9	91.9	1.6	11.9	4.6	.921	None	
SBR71-8959	402.0-404.0	62367	4.8	1.7	91.5	2.0	12.5	4.1	.929	None	
SBR71-8960	404.0-406.0	62368	7.2	1.6	89.4	1.8	18.9	3.8	.914	None	
SBR71-8961	406.0-407.0	62369	6.7	1.9	89.4	2.0	17.5	4.6	.920	None	
SBR71-8962	407.0-408.0	62370	7.0	1.2	89.3	2.5	18.2	2.9	.923	None	
SBR71-8963	408.0-409.4	62371	12.1	2.1	82.9	2.9	31.8	5.0	.911	None	
SBR71-8964	409.4-410.0	62372	1.5	2.7	94.2	1.6	3.9a	6.5		None	
SBR71-8965	410.0-411.6	62373	8.1	1.1	88.5	2.3	21.2	2.6	.917	None	
SBR71-8966	411.6-412.7	62374	7.2	1.0	89.8	2.0	19.1	2.3	.907	None	
SBR71-8967	412.7-413.6	62375	9.8	2.0	85.0	3.2	26.1	4.8	.901	None	
SBR71-8968	413.6-415.0	62376	6.8	2.0	87.4	3.8	17.9	4.8	.911	None	
SBR71-8969	415.0-416.1	62377	9.1	2.8	84.9	3.2	24.0	6.7	.913	None	
SBR71-8970	416.1-417.3	62378	6.2	1.2	91.0	1.6	16.2	2.9	.915	None	
SBR71-8971	417.3-418.4	62379	5.0	2.0	91.0	2.0	13.1	4.8	.916	None	
SBR71-8972	418.7-419.3	62380	3.1	1.5	93.8	1.6	8.3	3.6	.903	None	
SBR71-8973	419.3-420.3	62381	13.3	1.3	82.1	3.3	34.5	3.1	.920	None	
SBR71-8974	420.3-421.3	62382	14.3	2.4	79.3	4.0	37.7	5.8	.912	None	
SBR71-8975	421.5-422.5	62383	11.7	2.5	82.3	3.5	30.7	6.0	.913	None	
SBR71-8976	422.5-424.0	62384	3.2	3.0	92.1	1.7	8.4	7.2	.911	None	
SBR71-8977	424.0-425.0	62385	3.5	2.0	93.2	1.3	9.2	4.8	.919	None	
SBR71-8978	425.0-426.0	62386	4.6	1.5	92.2	1.7	12.1	3.6	.918	None	
SBR71-8979	426.0-427.0	62387	3.5	1.5	93.6	1.4	9.1	3.6	.928	None	
SBR71-8980	427.0-428.0	62388	2.2	2.4	94.6	.8	5.6	5.8	.916	None	
SBR71-8981	428.0-429.0	62389	1.5	2.3	95.2	1.0	4.0	5.5	.915	None	
SBR71-8982	429.0-430.0	62390	1.5	3.5	94.4	.6	3.8a	8.4		None	
SBR71-8983	430.0-430.8	62391	2.3	1.9	95.0	.8	6.1	4.6	.914	None	
SBR71-8984	431.0-432.0	62392	4.5	1.7	92.1	1.7	11.7	4.1	.918	None	
SBR71-8985	432.0-433.6	62393	4.0	1.7	92.1	2.2	10.3	4.1	.923	None	
SBR71-8986	433.6-434.9	62394	7.0	2.0	88.4	2.6	18.5	4.8	.912	None	
SBR71-8987	435.3-436.7	62395	9.3	2.0	86.5	2.2	24.4	4.8	.911	None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

ir elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
amie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
l-8988	436.7-438.0	62396	10.0	2.3	84.9	2.8	26.5	5.5	0.906	None	
l-8989	438.0-439.0	62397	7.5	2.2	88.1	2.2	19.6	5.3	.914	None	
l-8990	439.0-440.2	62398	10.4	3.0	83.2	3.4	26.9	7.2	.921	None	
l-8991	440.2-441.7	62399	11.4	2.7	82.5	3.4	29.8	6.5	.920	None	
l-8992	441.7-442.8	62400	9.6	2.6	84.8	3.0	24.9	6.2	.921	None	
l-8993	442.8-444.1	62401	6.3	2.2	89.9	1.6	16.5	5.3	.909	None	
l-8994	444.1-445.7	62402	4.3	2.2	92.1	1.4	11.1	5.3	.920	None	
l-8995	445.7-447.3	62403	1.7	1.2	96.3	.8	4.4a	2.9		None	
l-8996	447.3-448.5	62404	12.2	2.0	82.9	2.9	31.9	4.8	.918	None	
l-8997	448.5-450.0	62410	10.8	1.7	83.5	4.0	28.1	4.1	.922	None	
l-8998	450.0-451.4	62411	10.6	2.2	84.4	2.8	27.5	5.3	.920	None	
l-8999	451.4-452.7	62412	10.4	1.8	84.4	3.4	27.2	4.2	.919	None	
l-9000	452.7-453.7	62413	7.7	1.6	88.4	2.3	20.2	3.8	.918	None	
l-9001	454.0-455.4	62414	5.4	1.5	91.5	1.6	14.3	3.6	.909	None	
l-9002	456.0-457.0	62415	7.1	1.0	89.7	2.2	18.7	2.5	.908	None	
l-9003	457.0-458.0	62416	8.0	1.4	86.7	3.9	21.0	3.4	.910	None	
l-9004	458.0-459.0	62417	7.2	1.9	87.7	3.2	18.9	4.6	.914	None	
l-9005	459.0-460.3	62418	4.1	1.6	93.1	1.2	10.7	4.0	.914	None	
l-9006	460.3-461.3	62419	3.7	1.1	94.0	1.2	10.1	2.6	.887	None	
l-9007	461.3-462.3	62420	7.1	1.2	90.2	1.5	19.0	2.8	.901	None	
l-9008	462.3-463.7	62421	8.6	1.6	87.6	2.2	22.8	3.8	.909	None	
l-9009	463.7-465.0	62422	2.9	1.6	94.2	1.3	7.6	3.8	.914	None	
l-9010	465.0-466.1	62423	4.1	1.0	93.4	1.5	10.7	2.4	.915	None	
l-9011	466.1-466.8	62424	12.8	1.4	82.0	3.8	33.6	3.4	.915	Slight	
l-9012	466.8-468.0	62425	16.0	1.5	77.8	4.7	41.9	3.6	.913	Slight	
l-9013	468.0-469.3	62426	8.1	1.5	87.8	2.6	21.1	3.6	.919	None	
l-9014	469.3-471.0	62427	2.4	1.2	95.1	1.3	6.3	2.9	.920	None	
l-9015	471.0-472.8	62428	6.7	1.3	89.2	2.8	17.5	3.1	.923	None	
l-9016	472.8-474.0	62429	4.2	.4	93.3	2.1	11.0	.8	.915	None	
l-9017	474.0-475.1	62430	2.3	.6	95.4	1.7	6.0	1.3	.925	None	

footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
SBR71-9018	475.1-475.9	62431	14.0	1.4	81.4	3.2	36.8	3.4	.910	Slight	
SBR71-9019	475.9-476.6	62432	17.7	2.3	75.5	4.5	46.6	5.5	.908	Slight	
SBR71-9020	476.6-478.0	62433	5.7	1.0	91.3	2.0	15.1	2.4	.907	None	
SBR71-9021	478.0-479.2	62434	3.8	.6	94.1	1.5	9.9	1.4	.918	None	
SBR71-9022	479.2-480.5	62435	9.7	1.2	86.6	2.5	25.3	2.9	.917	None	
SBR71-9023	480.5-482.0	62436	12.7	2.2	81.6	3.5	33.2	5.3	.914	None	
SBR71-9024	482.0-482.6	62437	13.5	1.7	81.6	3.2	35.6	4.1	.909	None	
SBR71-9025	482.6-483.8	62438	6.7	1.0	90.1	2.2	17.5	2.4	.912	None	
SBR71-9026	484.0-485.0	62439	2.7	.7	95.2	1.4	6.9	1.8	.922	None	
SBR71-9027	485.0-486.5	62440	1.9	.7	96.1	1.3	4.9a	1.8		None	
SBR71-9028	486.5-487.8	62441	3.9	1.5	93.3	1.3	10.1	3.6	.920	None	
SBR71-9029	487.8-489.2	62442	10.6	1.0	84.9	3.5	27.7	2.4	.914	None	
SBR71-9030	489.2-490.2	62443	10.0	1.4	85.9	2.7	26.3	3.4	.913	None	
SBR71-9031	490.2-491.2	62444	1.2	.7	97.6	.5	3.0a	1.7		None	
SBR71-9032	491.2-492.4	62445	1.1	.4	97.2	1.3	2.8a	1.0		None	
SBR71-9033	492.4-493.4	62446	13.7	1.3	80.8	4.2	35.9	3.1	.916	Slight	
SBR71-9034	493.4-494.3	62447	15.8	1.6	78.2	4.4	41.3	3.8	.915	Slight	
SBR71-9035	494.3-495.5	62448	3.2	1.0	94.3	1.5	8.4	2.4	.918	None	
SBR71-9036	495.5-496.7	62449	1.4	2.0	95.7	.9	3.5a	4.8		None	
SBR71-9037	496.7-498.0	62450	1.7	1.0	96.6	.7	4.3a	2.4		None	
SBR71-9038	498.0-499.8	62451	.6	.8	97.9	.7	1.6a	1.9		None	
SBR71-9039	499.8-500.4	62452	8.1	1.3	88.1	2.5	21.1	3.1	.918	None	
SBR71-9040	500.4-501.0	62453	15.4	1.8	79.0	3.8	40.3	4.3	.913	Slight	
SBR71-9041	501.0-502.0	62454	19.5	2.8	72.9	4.8	51.4	6.7	.910	Slight	
SBR71-9042	502.0-502.6	62455	9.6	1.8	85.6	3.0	25.3	4.3	.915	None	
SBR71-9043	502.6-504.0	62456	2.3	1.0	95.6	1.1	6.1	2.3	.921	None	
SBR71-9044	504.0-505.5	62457	3.4	1.2	94.2	1.2	8.7	2.9	.924	None	
SBR71-9045	505.5-506.5	62458	9.9	1.8	84.9	3.4	25.7	4.3	.918	None	
SBR71-9046	506.5-508.0	62459	11.1	1.9	83.9	3.1	28.8	4.6	.920	None	
SBR71-9047	508.0-509.0	62460	3.0	1.0	94.8	1.2	7.8	2.4	.919	None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	Remarks
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	
SBR71-9048	509.0-510.0	62461	1.5	0.8	96.6	1.1	3.8a	2.0		None	
SBR71-9049	510.0-511.0	62462	10.0	1.6	85.8	2.6	26.1	3.8	.914	None	
SBR71-9050	511.0-512.4	62463	14.1	1.9	80.4	3.6	37.0	4.6	.913	None	
SBR71-9051	512.4-513.4	62464	3.0	1.2	94.4	1.4	7.7	2.9	.924	None	
SBR71-9052	513.4-514.4	62465	6.4	1.2	89.5	2.9	16.7	2.9	.912	None	
SBR71-9053	514.4-516.0	62466	2.8	1.0	94.8	1.4	7.3	2.3	.916	None	
SBR71-9054	516.0-517.3	62467	4.5	2.2	91.7	1.6	11.8	5.2	.920	None	
SBR71-9055	517.3-518.1	62468	.1	.5	99.3	.1	.3a	1.2		None	
SBR71-9056	518.1-519.1	62469	1.5	.7	96.9	.9	3.9a	1.8		None	
SBR71-9057	519.1-520.1	62470	2.0	.6	95.5	1.9	5.1a	1.6		None	
SBR71-9058	520.1-521.4	62471	3.6	.9	93.6	1.9	9.5	2.2	.906	None	
SBR71-9059	521.4-522.5	62472	4.3	1.6	91.3	2.8	11.2	3.8	.921	None	
SBR71-9060	522.5-523.5	62473	2.8	1.1	94.4	1.7	7.2	2.6	.919	None	
SBR71-9061	524.7-526.1	62474	3.3	1.3	92.5	2.9	8.7	3.0	.926	None	
SBR71-9062	526.1-527.5	62475	2.2	1.0	95.2	1.6	5.6	2.4	.924	None	
SBR71-9063	528.0-529.1	62476	2.6	1.1	94.7	1.6	6.8	2.6	.912	None	
SBR71-9064	529.1-529.8	62477	4.5	1.9	92.7	1.8	11.7a	2.4		None	
SBR71-9065	529.8-530.8	62478	6.1	1.0	90.0	2.9	16.2	2.4	.898	None	
SBR71-9066	530.8-532.0	62479	8.0	1.8	85.0	5.2	21.0	4.4	.909	None	
SBR71-9067	532.0-533.0	62480	5.6	2.0	88.5	3.9	14.5	4.8	.921	None	
SBR71-9068	534.0-535.0	62481	3.8	1.8	91.9	2.5	9.9	4.3	.919	None	
SBR71-9069	535.7-537.2	62482	1.5	1.1	96.7	.7	4.0a	2.6		None	
SBR71-9070	537.2-539.2	62483	2.4	1.3	95.1	1.2	8.7	3.1	.928	None	
SBR71-9071	539.2-541.0	62484	4.7	1.7	91.2	2.4	12.4	4.1	.913	None	
SBR71-9072	541.0-542.0	62485	4.4	2.4	91.1	2.1	11.6	5.6	.915	None	
SBR71-9073	542.0-543.0	62486	4.2	1.7	92.6	1.5	11.1	4.1	.918	None	
SBR71-9074	543.0-544.0	62487	1.9	1.1	96.0	1.0	4.9a	2.8		None	
SBR71-9075	544.0-545.0	62488	3.2	1.6	93.6	1.6	8.4	3.8	.919	None	
SBR71-9076	545.0-546.0	62489	3.5	2.2	92.9	1.4	9.3	5.3	.915	None	
SBR71-9077	546.0-547.0	62490	4.5	1.8	92.0	1.7	11.8	4.3	.912	None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water	of oil at 60°/60° F	Tendency to coke	Remarks
SBR71-9078	547.0-548.0	62491	1.7	1.8	95.8	0.7	4.4a	4.2		None	
SBR71-9079	548.0-549.0	62492	.7	1.3	97.6	.4	1.8a	3.1		None	
SBR71-9080	549.0-550.0	62493	.8	1.0	97.8	.4	2.0a	2.4		None	
SBR71-9081	550.0-551.0	62494	1.1	.9	97.2	.8	2.9a	2.0		None	
SBR71-9082	551.0-552.0	62495	1.2	1.2	96.8	.8	3.2a	2.9		None	
SBR71-9083	552.0-553.1	62496	1.7	1.0	96.0	1.3	4.5a	2.4		None	
SBR71-9084	553.1-554.1	62497	6.2	2.0	89.5	2.3	16.4	4.7	0.915	None	
SBR71-9085	554.1-555.1	62498	9.9	2.2	84.4	3.5	26.1	5.2	.912	None	
SBR71-9086	555.1-556.2	62499	10.5	2.0	84.9	2.6	27.8	4.7	.907	None	
SBR71-9087	556.2-557.2	62500	3.3	1.7	93.4	1.6	8.7	4.1	.922	None	
SBR71-9088	557.2-558.4	62501	.7	.8	96.8	1.7	1.9a	1.8		None	
SBR71-9089	558.4-560.0	62502	1.1	1.7	96.0	1.2	2.8a	4.2		None	
SBR71-9090	560.0-561.5	62503	4.5	1.5	92.7	1.3	11.7	3.6	.921	None	
SBR71-9091	561.5-563.0	62504	4.3	1.6	91.5	2.6	11.3	3.7	.922	None	
SBR71-9092	563.0-564.0	62505	1.0	1.3	97.0	.7	2.6a	3.1		None	
SBR71-9093	564.0-565.0	62506	.7	1.1	97.5	.7	1.9a	2.5		None	
SBR71-9094	565.0-566.6	62507	1.2	1.1	96.7	1.0	3.2a	2.6		None	
SBR71-9095	566.6-567.0	62508	10.0	2.3	84.7	3.0	26.0	5.5	.917	None	
SBR71-9096	567.0-568.7	62509	2.7	1.7	94.1	1.5	7.1	4.0	.921	None	
SBR71-9097	568.7-570.0	62510	14.2	2.1	79.5	4.2	37.4	5.0	.912	None	
SBR71-9098	570.0-571.4	62511	10.1	2.3	84.3	3.3	26.5	5.4	.913	None	
SBR71-9099	571.4-572.8	62512	2.1	1.5	95.0	1.4	5.6	3.5	.922	None	
SBR71-9100	572.8-573.8	62513	1.0	1.2	96.8	1.0	2.6a	2.9		None	
SBR71-9101	574.0-576.0	62514	8.5	1.7	86.5	3.3	22.1	4.2	.919	None	
SBR71-9102	576.0-577.0	62515	1.5	1.6	95.7	1.2	3.9a	4.0		None	
SBR71-9103	577.0-578.0	62516	2.8	1.5	93.2	2.5	7.3	3.5	.925	None	
SBR71-9104	578.0-579.0	62517	.4	.9	97.6	1.1	1.1a	2.2		None	
SBR71-9105	579.0-580.4	62518	1.5	.9	97.0	.6	3.9a	2.3		None	
SBR71-9106	580.4-581.0	62519	8.6	1.1	88.1	2.2	22.2	2.6	.928	None	
SBR71-9107	581.0-582.0	62520	2.2	1.3	95.4	1.1	5.6	3.1	.927	None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
SBR71-9108	582.0-584.1	62521	0.0	2.6	97.1	0.3	Trace	6.3		None	
SBR71-9109	584.4-585.8	62522	.4	1.3	98.0	.3	1.0a	3.2		None	
SBR71-9110	585.8-586.9	62523	.0	1.7	98.0	.3	Trace	4.0		None	
SBR71-9111	586.9-587.9	62524	.2	1.8	97.9	.1	.5a	4.2		None	
SBR71-9112	587.9-589.0	62525	5.6	1.4	91.7	1.3	14.4	3.4	0.925	None	
SBR71-9113	589.0-591.0	62526	.0	2.9	96.9	.2	Trace	6.9		None	
SBR71-9114	591.0-592.5	62527	3.1	1.7	94.0	1.2	8.2	4.1	.913	None	
SBR71-9115	592.5-594.0	62528	2.2	2.2	94.1	1.5	5.8	5.3	.918	None	
SBR71-9116	594.0-595.0	62529	1.2	3.0	95.0	.8	3.2a	7.2		None	
SBR71-9117	595.0-596.0	62530	1.7	2.0	95.7	.6	4.5a	4.8		None	
SBR71-9118	596.0-597.0	62531	3.0	2.0	94.1	.9	7.7	4.8	.933	None	
SBR71-9119	597.0-598.0	62532	2.9	1.9	94.9	.3	7.5	4.6	.925	None	
SBR71-9120	598.0-599.9	62533	.1	3.0	96.8	.1	.2a	7.2		None	
SBR71-9121	599.9-601.0	62534	.4	1.9	97.6	.1	1.1a	4.6		None	
SBR71-9122	601.0-602.5	62535	.7	3.2	95.3	.8	1.8a	7.7		None	
SBR71-9123	602.5-604.0	62536	1.0	1.3	97.6	.1	2.7a	3.1		None	
SBR71-9124	604.0-605.0	62537	2.2	2.0	93.9	1.9	5.6	4.8	.927	None	
SBR71-9125	605.0-606.0	62538	3.3	1.8	93.6	1.3	8.5	4.3	.924	None	
SBR71-9126	606.0-607.0	62539	1.2	1.9	96.7	.2	3.0a	4.6		None	
SBR71-9127	607.0-608.0	62540	3.2	1.8	93.1	1.9	8.3	4.3	.920	None	
SBR71-9128	608.0-609.0	62541	2.3	2.3	94.2	1.2	6.0	5.5	.932	None	
SBR71-9129	609.0-610.0	62542	.8	2.5	95.9	.8	2.1a	6.0		None	
SBR71-9130	610.0-611.0	62543	.3	2.2	96.8	.7	.7a	5.3		None	
SBR71-9131	611.0-612.0	62544	1.1	2.4	95.2	1.3	2.9a	5.8		None	
SBR71-9132	612.0-613.0	62545	2.5	2.0	93.7	1.8	6.5	4.8	.913	None	
SBR71-9133	613.0-614.2	62546	1.2	2.1	95.5	1.2	3.2a	5.0		None	
SBR71-9134	614.2-615.6	62547	.9	1.6	96.0	1.5	2.3a	3.8		None	
SBR71-9135	615.6-616.6	62548	.0	2.2	96.9	.9	No oil	5.3		None	
SBR71-9136	616.6-618.0	62549	.0	4.2	94.5	1.3	No oil	9.9		None	
SBR71-9137	618.0-619.9	62550	.0	2.3	96.4	1.3	No oil	5.4		None	

See footnote at end of table.

Core samples received September 22, 1971; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Mintech Corporation and Marathon Oil Company's Carl Tomich No. 1 Well (con.)

Collar elevation 6,607 feet

Sample number		Run	Yield of product						Specific gravity of oil at 60°/60° F	Properties of spent shale	
			Weight percent				Gal per ton				
Laramie	Their	No.	Oil	Water	Spent shale	Gas + loss	Oil[1/]	Water		Tendency to coke	Remarks
SBR71-9138	619.9-621.6	62551	1.7	1.7	95.2	1.4	4.3a	4.1		None	
SBR71-9139	621.6-622.8	62552	3.5	1.2	92.7	2.6	9.0	2.9	0.921	None	
SBR71-9140	622.8-623.8	62553	3.4	1.5	92.7	2.4	8.7	3.6	.920	None	
SBR71-9141	623.8-624.8	62554	2.8	1.6	93.8	1.8	7.2	4.0	.925	None	
SBR71-9142	624.8-625.8	62555	2.2	1.4	94.8	1.6	5.7	3.2	.926	None	
SBR71-9143	625.8-626.9	62556	1.2	1.2	96.6	1.0	3.0a	2.9		None	
SBR71-9144	626.9-627.6	62557	7.6	1.7	88.7	2.0	19.7	4.1	.922	None	
SBR71-9145	627.6-628.5	62558	4.5	2.0	91.7	1.8	11.8	4.8	.919	None	
SBR71-9146	628.5-630.0	62559	.6	2.1	96.5	.8	1.5a	5.0		None	
SBR71-9147	630.0-631.8	62560	3.0	2.0	93.4	1.6	7.8	4.8	.919	None	
SBR71-9148	631.8-633.0	62561	.0	2.3	97.1	.6	Trace	5.4		None	
SBR71-9149	633.0-634.5	62562	.0	2.4	96.9	.7	Trace	5.8		None	
SBR71-9150	634.5-635.6	62563	.0	3.0	96.7	.3	No oil	7.3		None	
SBR71-9151	635.6-636.7	62564	.0	2.3	97.6	.1	No oil	5.4		None	
SBR71-9152	636.7-637.7	62565	.0	4.0	95.6	.4	No oil	9.5		None	
SBR71-9153	637.7-638.8	62566	.0	3.2	96.7	.1	Trace	7.7		None	
SBR71-9154	638.8-640.0	62567	7.0	2.5	88.9	1.6	18.4	6.0	.918	None	
SBR71-9155	640.0-641.0	62568	4.7	2.4	91.6	1.3	12.2	5.8	.919	None	
SBR71-9156	641.0-642.3	62569	2.6	1.5	95.0	.9	6.9	3.6	.920	None	
SBR71-9157	642.3-644.0	62570	1.3	1.1	97.5	.1	3.4a	2.6		None	
SBR71-9158	644.0-645.3	62571	2.3	2.0	95.2	.5	6.1	4.8	.916	None	
SBR71-9159	645.3-646.6	62572	.1	2.8	96.8	.3	.2a	6.7		None	
SBR71-9160	646.6-648.0	62573	.0	1.8	97.9	.3	No oil	4.3		None	
SBR71-9161	651.0-655.0	62574	.0	2.5	97.0	.5	No oil	6.0		None	
SBR71-9162	655.0-660.0	62575	.0	2.8	96.9	.3	No oil	6.7		None	
SBR71-9163	660.0-664.0	62576	.0	2.0	97.8	.2	No oil	4.7		None	
SBR71-9164	664.0-668.0	62577	.0	3.3	96.3	.4	No oil	7.9		None	

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

Core samples received September 22, 1971; Assays made on air-dried samples