

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Bence Federal No. 1 Well drilled in  
C. SE 1/4, NE 1/4 of sec. 29, T. 11S., R. 16E., Duchesne County, Utah

Derrick floor elevation 6,569 feet

*mahogany markers 5999'*

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		
Laramie	Their		Oil	Water					Oil	Water	
SBR62-1274	200-210	78076	2.3	2.6	94.3	0.8	6.1	6.2	0.905	None	
SBR62-1275	210-220	78077	2.4	2.1	94.7	.8	6.2	5.2	.908	None	
SBR62-1276	220-230	78078	2.9	2.8	93.1	1.2	7.6	6.8	.903	None	
SBR62-1277	230-240	78079	6.6	1.7	90.4	1.3	17.4	4.1	.912	None	
SBR62-1278	240-250	78080	2.2	1.7	95.8	.3	5.8a	4.1		None	
SBR62-1279	250-260	78081	1.5	1.6	96.8	.1	6.2a	3.8		None	
SBR62-1280	260-270	78082	1.3	1.7	96.9	.1	3.4a	4.1		None	
SBR62-1281	270-280	78083	1.3	1.4	97.1	.2	3.4a	3.4		None	
SBR62-1282	280-290	78084	3.4	1.8	94.4	.4	8.7	4.3	.925	None	
SBR62-1283	290-300	78085	2.4	1.8	95.4	.4	6.4	4.3	.924	None	
SBR62-1284	300-310	78086	2.3	2.2	95.3	.2	5.9	5.3	.921	None	
SBR62-1285	310-320	78087	1.1	2.0	96.9	.0	2.8a	4.8		None	
SBR62-1286	320-330	78088	3.6	2.0	93.9	.5	9.2	4.8	.923	None	
SBR62-1287	330-340	78089	1.6	2.2	96.1	.1	4.1a	5.3		None	
SBR62-1288	340-350	78090	2.0	1.6	96.0	.4	5.1a	3.8		None	
SBR62-1289	350-360	78091	2.0	2.4	95.0	.6	5.1a	5.8		None	
SBR62-1290	360-370	78092	4.3	2.4	92.5	.8	11.1	5.8	.922	None	
SBR62-1291	370-380	78093	4.4	2.0	93.0	.6	11.3	4.8	.925	None	
SBR62-1292	380-390	78094	3.0	1.8	94.9	.3	7.7	4.3	.924	None	
SBR62-1293	390-400	78095	3.6	2.0	93.9	.5	9.3	4.8	.925	None	
SBR62-1294	400-410						No oil				
SBR62-1295-97	410-440						c				
SBR62-1298	440-450						b				
SBR62-1299	450-460						Trace				
SBR62-1300	460-470	78096	2.1	1.1	96.8	.0	5.5a	2.6		None	
SBR62-1301	470-480	78097	1.0	1.0	97.9	.1	2.5a	2.5		None	
SBR62-1302	480-490						b				
SBR62-1303	490-500	78098	1.6	1.8	96.5	.1	4.2a	4.3		None	
SBR62-1304-05	500-520						No oil				
SBR62-1306	520-530						b				

See footnotes at end of table.

Drill cutting samples received November 22, 1961; assays made on air-dried samples

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Samples from Humble Oil and Refining Company's Bence Federal No. 1 Well (Con.)

Derrick floor elevation 6,569 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	Water		coke	
SBR62-1307	530-540	78099	1.1	1.7	97.0	0.2	2.9a	4.1		None	
SBR62-1308	540-550	78100	5.9	1.8	91.3	1.0	15.5	4.3	0.918	None	
SBR62-1309	550-560						b				
SBR62-1310	560-570	78101	7.0	2.0	90.2	.8	18.2	4.9	.919	None	
SBR62-1311	570-580	78102	4.8	1.6	93.3	.3	12.8	3.8	.894	None	
SBR62-1312	580-590						No oil				
SBR62-1313	590-600	78103	.6	1.0	98.1	.3	1.5a	2.4		None	
SBR62-1314	600-610	78104	1.8	1.9	95.6	.7	4.8a	4.6		None	
SBR62-1315	610-620	78105	3.4	1.5	94.4	.7	9.0	3.6	.913	None	
SBR62-1316	620-630						b				
SBR62-1317	630-640						Trace				
SBR62-1318	640-650						b				
SBR62-1319-20	650-670						No oil				
SBR62-1321	670-680	78106	1.2	1.5	96.9	.4	3.2a	3.6		None	
SBR62-1322	680-690						b				
SBR62-1323	690-700	78107	1.4	1.3	97.0	.3	3.5a	3.1		None	
SBR62-1324	700-710	78108	4.6	2.0	92.5	.9	12.0	4.8	.910	None	
SBR62-1325	710-720	78109	2.6	1.3	95.5	.6	6.9	3.1	.911	None	
SBR62-1326	720-730	78110	3.1	1.3	94.7	.9	8.3	3.1	.905	None	
SBR62-1327	730-740	78111	2.9	1.2	95.3	.6	7.5a	2.8		None	
SBR62-1328	740-750						b				
SBR62-1329	750-760	78112	2.1	.8	96.9	.2	5.4a	1.9		None	
SBR62-1330	760-770	78113	2.0	1.0	96.8	.2	5.4	2.4	.909	None	
SBR62-1331	770-780	78114	2.0	.9	97.0	.1	5.4	2.2	.907	None	
SBR62-1332	780-790	78115	2.3	.9	96.2	.6	6.2	2.0	.908	None	
SBR62-1333	790-800	78116	1.4	1.5	96.9	.2	3.5a	3.6		None	
SBR62-1334	800-810						No oil				
SBR62-1335-38	810-850						b				
SBR62-1339	850-860						Trace				
SBR62-1340-43	860-900						b				

See footnotes at end of table.

Drill cutting samples received November 22, 1961; Assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3552P, Sheet No. 2 of 4 sheets February 6, 1962

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Bence Federal No. 1 Well (Con.)

Derrick floor elevation 6,569 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					
			Oil	Water							
Laramie	Their						Oil	Water			
SBR62-1344-46	900- 930						c				
SBR62-1347-49	930- 960						b				
SBR62-1350	960- 970						c				
SBR62-1351-52	980-1000						c				
SBR62-1353	1000-1010	78117	1.0	1.7	97.0	0.3	2.6a	4.1		None	
SBR62-1354	1010-1020	78118	1.2	1.6	96.7	.5	3.1a	3.8		None	
SBR62-1355-58	1020-1060						c				
SBR62-1359-63	1060-1110						b				
SBR62-1364	1110-1120						Assay				
SBR62-1365	1120-1130	78119	4.0	2.8	92.1	1.1	10.4	6.8	0.906	None	
SBR62-1366-68	1130-1160						b				
SBR62-1369-70	1160-1180						Trace				
SBR62-1371-73	1180-1210						b				
SBR62-1374-75	1210-1230						c				
SBR62-1376-80	1230-1280						b				
SBR62-1381	1280-1290	78120	1.9	2.1	95.0	1.0	5.0a	5.0		None	
SBR62-1382	1290-1300	78121	2.0	2.1	95.5	.4	5.2a	5.0		None	
SBR62-1383	1300-1310	78122	2.0	1.6	96.4	.0	5.3a	3.8		None	
SBR62-1384-89	1310-1370						b				
SBR62-1390	1370-1380						No oil				
SBR62-1391-92	1380-1400						b				
SBR62-1393-94	1400-1420						No oil				
SBR62-1395-96	1420-1440						b				
SBR62-1397-1418	1440-1660						No oil				
SBR62-1419	1660-1670						c				
SBR62-1420-54	1670-2020						No oil				
SBR62-1455-57	2020-2050						Trace				
SBR62-1458-60	2050-2080						No oil				
SBR62-1461-62	2080-2100						Trace				
SBR62-1463-92	2100-2400						No oil				

See footnotes at end of table.

Drill cutting samples received November 22, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3552P, Sheet No. 3 of 4 sheets February 6, 1962

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Humble Oil and Refining Company's Bence Federal No. 1 Well (Con.)

Derrick floor elevation 6,569 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					Oil	Water	
SBR62-1493-94	2410-2430						No oil				
SBR62-1495	2430-2440						c				
SBR62-1496-98	2440-2470						Trace				
SBR62-1499-1511	2470-2600						No oil				
SBR62-1512-15	2610-2650						No oil				
SBR62-1516	2650-2660	78123	1.0	1.1	97.5	0.4	2.7a	2.6			None
SBR62-1517	2660-2670	78124	2.4	1.2	95.8	.6	6.1	2.9	0.928		None
SBR62-1518	2670-2680	78125	2.3	1.1	95.7	.9	6.0	2.6	.926		None
SBR62-1519	2680-2690	78126	3.2	1.1	95.0	.7	8.5	2.6	.901		None
SBR62-1520	2690-2700	78127	1.7	.8	96.8	.7	4.5a	1.8			None
SBR62-1521-23	2700-2730						b				
SBR62-1524-27	2730-2770						No oil				
SBR62-1528	2770-2780						b				
SBR62-1529	2780-2790						Trace				
SBR62-1530	2790-2800						b				
SBR62-1531-33	2800-2830						Trace				
SBR62-1534-37	2830-2870						No oil				
SBR62-1538-39	2870-2890						b				
SBR62-1540	2890-2900	78128	3.0	1.0	94.5	1.5	7.9	2.4	.895		None
SBR62-1541-46	2900-2960						b				
SBR62-1547	2960-2970						c				
SBR62-1548-57	2970-3070						No oil				
SBR62-1558-83	3080-3340						No oil				
SBR62-1584-86	3360-3390						No oil				
SBR62-1587-89	3390-3420						b				
SBR62-1590-91	3420-3440						c				
SBR62-1592-93	3440-3460						b				
SBR62-1594-97	3460-3500						No oil				

a - Specific gravity estimated due to insufficient oil.

b - Less than 1.0 gallon of oil per ton of shale.

c - More than 1.0 but less than 3.0 gallons of oil per ton of shale.

Assay - Sample contained more than 3.0 gallons of oil per ton of shale.

Drill cutting samples received November 22, 1961; assays made on air-dried samples