

**OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD**

Samples from Shamrock Oil & Gas Corporation's Hill Creek No. 1 Well drilled 500 feet South of North line  
and 500 feet East of West line, sec. 16 S., R. 19 E., Uintah County, Utah

Surface elevation 5,795 feet

Mahogany Marker 4165 (P)

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60° F.		Properties of spent shale		Remarks
			Weight percent		Gas + loss	Gal. per ton		Tendency to Coke			
Laramie	Their		Oil	Water		Spent shale			Oil	Water	
SBR61-1439-68	20-320						No oil				
SBR61-1469	320-330						b				
SBR61-1470	330-340						No oil				
SBR61-1471	340-350						Trace				
SBR61-1472-80	350-440						b				
SBR61-1481-86	440-500						c				
SBR61-1487	600-610						c				
SBR61-1488	610-620	71366	1.1	1.7	96.6	0.6	3.0a	4.0		None	
SBR61-1489	620-630	71367	1.9	1.4	95.8	.9	5.1a	3.4		None	
SBR61-1490	630-640	71368	1.9	1.5	95.7	.9	5.0a	3.5		None	
SBR61-1491	640-650	71369	1.5	1.2	95.9	1.4	3.9a	2.9		None	
SBR61-1492	650-660	71370	1.6	1.2	95.7	1.5	4.2a	2.9		None	
SBR61-1493	660-670	71371	2.0	1.3	96.0	.7	5.3	3.1	0.903	None	
SBR61-1494	670-680	71372	2.2	1.3	95.8	.7	5.9	3.1	.894	None	
SBR61-1495	680-690	71372	1.2	1.5	96.7	.6	3.0a	3.6		None	
SBR61-1496	690-700	71374	1.1	1.8	96.3	.8	2.9a	4.3		None	
SBR61-1497	700-710	71375	1.1	1.7	96.6	.6	2.8a	4.1		None	
SBR61-1498	710-720	71376	.8	1.2	97.0	1.0	2.2a	2.9		None	
SBR61-1499	720-730	71377	1.1	1.7	95.4	1.8	2.7a	4.1		None	
SBR61-1500	730-740	71378	1.2	1.4	96.5	.9	3.1a	3.4		None	
SBR61-1501	740-750	71379	1.2	1.4	96.9	.5	3.2a	3.4		None	
SBR61-1502	750-760	71380	1.2	1.2	97.0	.6	3.2a	2.9		None	
SBR61-1503	760-770	71381	1.4	1.2	96.7	.7	3.6a	2.9		None	
SBR61-1504	770-780	71382	1.5	1.4	96.5	.6	3.9a	3.5		None	
SBR61-1505	780-790	71383	1.5	1.2	96.5	.8	3.8a	2.9		None	
SBR61-1506	790-800	71384	1.5	1.2	96.3	1.0	3.8a	3.0		None	
SBR61-1507	800-810	71385	1.6	1.1	96.3	1.0	4.1a	2.6		None	
SBR61-1508	810-820	71386	1.5	1.2	96.5	.8	3.8a	2.9		None	
SBR61-1509	820-830	71387	1.7	1.2	96.9	.2	4.4a	2.9		None	
SBR61-1510	830-840	71388	1.4	1.5	96.9	.2	3.5a	3.6		None	

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.

Drill cutting samples received June 15, 1960; assays made on air-dried samples

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Samples from Shamrock Oil &amp; Gas Corporation's Hill Creek No. 1 Well (Con'd)

Surface elevation 5,795 feet

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60° F.		Properties of spent shale		Remarks
			Weight percent		Gas + loss	Gal. per ton			Tendency to coke		
			Oil	Water		Oil				Water	
Laramie	Their				Spent shale						
SBR61-1511	840- 850	71389	1.3	1.4	97.0	0.3	3.5a	3.4		None	
SBR61-1512	850- 860	71390	1.3	1.2	97.2	.3	3.3a	2.9		None	
SBR61-1513	860- 870	71391	1.2	1.2	97.4	.2	3.1a	2.9		None	
SBR61-1514	870- 880	71392	1.3	1.2	97.1	.4	3.4a	2.9		None	
SBR61-1515	880- 890	71393	1.0	1.2	97.5	.3	2.7a	2.9		None	
SBR61-1516	890- 900	71394	1.3	.8	97.5	.4	3.4a	1.9		None	
SBR61-1517	900- 910	71395	1.2	1.1	97.3	.4	3.2a	2.6		None	
SBR61-1518	910- 920	71396	1.2	1.1	97.1	.6	3.2a	2.6		None	
SBR61-1519	920- 930	71397	1.3	1.1	96.9	.7	3.3a	2.6		None	
SBR61-1520	930- 940	71398	1.4	1.2	96.6	.8	3.8a	2.8		None	
SBR61-1521	940- 950	71399	1.7	1.3	96.4	.6	4.4a	3.1		None	
SBR61-1522	950- 960	71400	1.4	1.0	96.9	.7	3.5a	2.5		None	
SBR61-1523	960- 970	71401	1.7	1.0	96.7	.6	4.5a	2.4		None	
SBR61-1524	970- 980	71402	2.6	1.2	95.4	.8	6.7	2.9	0.906	None	
SBR61-1525	980- 990	71403	2.1	1.5	95.9	.5	5.6	3.6	.909	None	
SBR61-1526	990-1000	71404	2.0	1.4	96.3	.3	5.3	3.4	.907	None	
SBR61-1527	1000-1010	71405	1.7	1.3	96.7	.3	4.5a	3.1		None	
SBR61-1528	1010-1020	71406	1.6	1.2	97.0	.2	4.1a	2.9		None	
SBR61-1529	1020-1030	71407	1.2	.9	97.5	.4	3.3a	2.2		None	
SBR61-1530-37	1030-1110						c				
SBR61-1538	1110-1120	71408	1.3	1.0	97.1	.6	3.4a	2.4		None	
SBR61-1539	1120-1130	71409	1.7	1.1	96.8	.4	4.4a	2.6		None	
SBR61-1540	1130-1140	71410	1.6	.7	96.9	.8	4.1a	1.7		None	
SBR61-1541	1140-1150	71411	1.3	1.1	96.7	.9	3.4a	2.6		None	
SBR61-1542	1150-1160	71412	1.6	1.1	96.6	.7	4.1a	2.6		None	
SBR61-1543	1160-1170	71413	1.4	1.0	96.8	.8	3.6a	2.4		None	
SBR61-1544	1170-1180	71414	1.7	.9	96.5	.9	4.5a	2.2		None	
SBR61-1545	1180-1190	71415	2.1	.8	96.0	1.1	5.4	1.9	.925	None	
SBR61-1546	1190-1200	71416	1.8	.8	96.5	.9	4.7a	1.9		None	
SBR61-1547	1200-1210	71417	2.2	.8	96.0	1.0	5.8	1.8	.923	None	

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			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		
			Oil	Water			Oil	Water				
Laramie	Their											
SBR61-1548	1210-1220	71418	1.8	0.6	96.4	1.2	4.7a	1.3		None		
SPR61-1549	1220-1230	71419	2.0	1.0	96.7	.3	5.2a	2.4		None		
SBR61-1550	1230-1240	71420	1.6	1.0	96.9	.5	4.3a	2.4		None		
SBR61-1551	1240-1250	71421	1.5	1.1	96.7	.7	3.9a	2.6		None		
SBR61-1552	1250-1260	71422	1.8	1.1	96.2	.9	4.8a	2.6		None		
SBR61-1553	1260-1270	71423	2.1	1.0	96.1	.8	5.5	2.4	0.924	None		
SBR61-1554	1270-1280	71424	1.9	1.0	96.0	1.1	4.9a	2.4		None		
SBR61-1555	1280-1290	71425	3.1	.9	95.0	1.0	8.1	2.0	.925	None		
SBR61-1556	1290-1300	71426	2.4	.7	96.0	.9	6.2	1.8	.923	None		
SBR61-1557	1300-1310	71427	4.0	.6	94.5	.9	10.4	1.3	.932	None		
SBR61-1558	1310-1320	71428	4.2	.6	94.2	1.0	10.8	1.4	.925	None		
SBR61-1559	1320-1330	71429	5.0	.7	93.1	1.2	13.1	1.7	.915	None		
SBR61-1560	1330-1340	71430	5.1	.8	92.6	1.5	13.4	1.8	.917	None		
SBR61-1561	1340-1350	71431	4.4	.7	93.3	1.6	11.6	1.7	.916	None		
SBR61-1562	1350-1360	71432	3.8	.0	90.7	5.5	9.9a	.0		None		
SBR61-1563	1360-1370	71433	3.6	.8	94.2	1.4	9.5	1.9	.910	None		
SBR61-1564	1370-1380	71434	4.4	.5	92.7	2.4	11.5a	1.1		None		
SBR61-1565	1380-1390	71435	3.7	.9	94.4	1.0	9.7	2.0	.921	None		
SBR61-1566	1390-1400	71436	3.2	1.1	94.8	.9	8.3	2.6	.919	None		
SBR61-1567	1410-1420	71437	2.9	1.1	94.9	1.1	7.7	2.6	.913	None		
SBR61-1568	1420-1430	71438	3.0	1.0	94.6	1.4	7.8	2.5	.916	None		
SBR61-1569	1430-1440	71439	3.2	1.2	94.5	1.1	8.5	2.9	.915	None		
SBR61-1570	1440-1450	71440	3.1	.8	94.5	1.6	8.1	1.9	.924	None		
SBR61-1571	1450-1460	71441	3.4	1.2	94.0	1.4	9.0	2.8	.914	None		
SBR61-1572	1460-1470	71442	3.2	1.0	94.1	1.7	8.2	2.4	.915	None		
SBR61-1573	1470-1480	71443	2.8	1.2	95.0	1.0	7.2	2.9	.914	None		
SBR61-1574	1480-1490	71444	3.5	1.1	94.3	1.1	9.1	2.6	.916	None		
SBR61-1575	1490-1500	71445	3.5	1.3	93.7	1.5	9.3	3.1	.913	None		

a - Specific gravity estimated due to insufficient oil.

Drill cutting samples received June 25, 1960; assays made on air-dried samples.

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3460P Sheet No. 3 of 3 sheets February 23, 1961