

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Ladd Petroleum Corporation's Federal Well 1-6-74 drilled in the
NE1/4SW1/4 of sec. 6, T 17 N, R 94 W, Sweetwater County, Wyoming

Surface elevation 6,736 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		
Laramie	Their		Oil	Water		Spent shale			Oil ^{1/}	Water
SBR75-20975-89	40-190						No Oil			
SBR75-20990	210-220						No Oil			
SBR75-20991-95	260-310						No Oil			
SBR75-20996-21013	320-500						No Oil			
SBR75-21014-22	510-600						No Oil			
SBR75-21023	600-610	13547	0.4	3.2	94.5	1.9	1.0a	7.7		None
SBR75-21024-28	610-660						No Oil			
SBR75-21029	660-670	13548	.0	3.1	94.1	2.8	No Oil	7.4		None
SBR75-21030-32	670-700						No Oil			
SBR75-21033	720-730						c			
SBR75-21034	730-740						b			
SBR75-21035-36	740-760						c			
SBR75-21037	770-780						No Oil			
SBR75-21038	780-790						Trace			
SBR75-21039-40	790-810						b			
SBR75-21041	810-820						Trace			
SBR75-21042-46	820-870						No Oil			
SBR75-21047	870-880						Trace			
SBR75-21048	880-890						b			
SBR75-21049	890-900						Trace			
SBR75-21050-69	900-1100						No Oil			
SBR75-21070-74	1110-1160						No Oil			
SBR75-21075	1160-1170	13549	1.6	4.0	92.8	1.6	4.2a	9.6		None
SBR75-21076	1170-1180	13550	1.4	3.6	93.0	2.0	3.7a	8.6		None
SBR75-21077	1180-1190	13551	1.3	3.4	92.6	2.7	3.3a	8.1		None
SBR75-21078	1190-1200	13552	1.7	4.1	92.4	1.8	4.4a	9.7		None
SBR75-21079	1200-1210	13553	1.7	4.0	93.0	1.3	4.5a	9.6		None
SBR75-21080	1210-1220	13554	1.7	3.7	91.9	2.7	4.4a	8.9		None
SBR75-21081	1220-1230	13555	1.2	3.9	93.1	1.8	3.1a	9.4		None
SBR75-21082	1230-1240	13556	.9	3.3	94.1	1.7	2.4a	7.9		None

See footnote at end of table.

Drill cuttings received October 29, 1975; assays made on air-dried samples

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Surface elevation 6,736 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 ^{1/}	Water	coke	
SBR75-21083	1240-1250	13557	1.2	3.1	94.5	1.2	3.2a	7.4	None	
SBR75-21084	1250-1260	13558	3.1	3.5	91.6	1.8	8.1	8.4	0.904	None
SBR75-21085	1260-1270	13559	3.0	3.5	92.1	1.4	8.0	8.4	.894	None
SBR75-21086	1270-1280	13560	2.9	4.4	90.5	2.2	7.7	10.5	.902	None
SBR75-21087	1280-1290	13561	2.8	3.8	91.0	2.4	7.5	9.1	.893	None
SBR75-21088	1290-1300	13562	2.9	3.6	91.6	1.9	7.8	8.6	.890	None
SBR75-21089	1300-1310	13563	3.0	3.8	91.2	2.0	7.9	9.1	.896	None
SBR75-21090	1310-1320	13564	2.9	3.4	92.4	1.3	7.8	8.1	.892	None
SBR75-21091	1320-1330	13565	3.2	3.3	92.0	1.5	8.6	7.9	.892	None
SBR75-21092	1330-1340	13566	3.5	3.0	92.2	1.3	8.0	8.4	.892	None
SBR75-21093	1340-1350	13567	3.0	3.7	91.4	1.9	8.1	8.9	.891	None
SBR75-21094	1350-1360	13568	3.8	2.9	91.7	1.6	7.7	9.1	.890	None
SBR75-21095	1360-1370	13569	3.6	3.1	91.8	1.5	8.3	8.6	.892	None
SBR75-21096	1370-1380	13570	3.1	3.7	91.6	1.6	8.3	8.9	.893	None
SBR75-21097	1380-1390	13571	3.4	3.4	91.1	2.1	9.2	8.1	.892	None
SBR75-21098	1390-1400	13572	3.1	4.1	91.0	1.8	8.3	9.8	.893	None
SBR75-21099	1400-1410	13573	2.7	3.2	91.7	2.4	7.3	7.7	.892	None
SBR75-21100	1410-1420	13574	1.3	3.4	94.0	1.3	3.3a	8.1	None	None
SBR75-21101	1420-1430	13575	.7	2.4	94.5	2.4	1.8a	5.8	None	None
SBR75-21102	1430-1440	13576	1.4	2.8	94.2	1.6	3.7a	6.7	None	None
SBR75-21103	1440-1450	13577	1.2	3.5	93.4	1.9	3.0a	8.4	None	None
SBR75-21104	1450-1460	13578	1.3	3.3	93.7	1.7	3.4a	7.9	None	None
SBR75-21105	1460-1470	13579	.9	2.3	94.4	2.4	2.4a	5.4	None	None
SBR75-21106	1470-1480	13580	.8	2.4	93.2	3.6	2.1a	5.8	None	None
SBR75-21107	1480-1490	13581	1.9	3.0	94.2	.9	5.0a	7.2	None	None
SBR75-21108	1490-1500	13582	1.3	3.5	93.3	1.9	3.3a	8.4	None	None
SBR75-21109	1500-1510	13583	1.5	3.4	93.2	1.9	3.9a	8.1	None	None
SBR75-21110	1510-1520	13584	1.4	3.7	92.7	2.2	3.7a	8.9	None	None
SBR75-21111	1520-1530	13585	1.4	3.7	92.9	2.0	3.6a	8.9	None	None
SBR75-21112	1530-1540	13586	1.3	3.8	92.7	2.2	3.5a	9.1	None	None

See footnote at end of table.

Drill cuttings received October 29, 1975; assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Ladd Petroleum Corporation's Federal Well 1-6-74 (con.)

Surface elevation 6,736 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 ^{1/}	Water	coke	
SBR75-21113	1540-1550	13587	1.1	3.8	93.0	2.1	2.8a	9.1	None	
SBR75-21114	1550-1560	13588	.8	3.5	92.8	2.9	2.0a	8.4	None	
SBR75-21115	1560-1570	13589	1.5	3.7	92.4	2.4	3.9a	8.9	None	
SBR75-21116	1570-1580	13590	1.5	3.5	93.5	1.5	3.9a	8.4	None	
SBR75-21117	1580-1590	13591	1.5	3.3	93.5	1.7	3.8a	7.9	None	
SBR75-21118	1590-1600	13592	1.5	3.9	92.9	1.7	3.8a	9.3	None	
SBR75-21119	1600-1610	13593	1.4	3.9	93.1	1.6	3.7a	9.3	None	
SBR75-21120	1610-1620	13594	1.2	3.2	92.8	2.8	3.2a	7.7	None	
SBR75-21121	1620-1630	13595	1.7	3.5	93.0	1.8	4.3a	8.4	None	
SBR75-21122	1630-1640	13596	1.3	3.8	92.4	2.5	3.4a	9.1	None	
SBR75-21123	1640-1650	13597	1.6	3.9	92.6	1.9	4.1a	9.3	None	
SBR75-21124	1650-1660	13598	1.4	4.0	92.4	2.2	3.8a	9.6	None	
SBR75-21125	1660-1670	13599	1.3	3.2	93.6	1.9	3.5a	7.7	None	
SBR75-21126	1670-1680	13600	1.5	3.7	92.8	2.0	3.8a	8.9	None	
SBR75-21127	1680-1690	13601	1.3	4.5	91.5	2.7	3.4a	10.8	None	
SBR75-21128	1690-1700	13602	1.7	3.7	92.1	2.5	4.4a	8.9	None	
SBR75-21129	1700-1710	13603	2.2	3.7	93.0	1.1	5.7	8.9	0.900	None
SBR75-21130	1710-1720	13604	1.9	3.7	92.1	2.3	4.9a	8.9	None	
SBR75-21131	1720-1730	13607	2.2	4.1	91.5	2.2	5.9	9.8	.903	None
SBR75-21132	1730-1740	13608	2.2	4.3	90.2	3.3	5.7	10.3	.905	None
SBR75-21133	1740-1750	13609	2.3	3.8	91.0	2.9	6.0	9.1	.904	None
SBR75-21134	1750-1760	13610	2.1	3.8	92.6	1.5	5.3	9.1	.920	None
SBR75-21135	1760-1770	13611	1.9	3.5	92.5	2.1	4.9a	8.4	None	
SBR75-21136	1770-1780	13612	1.7	3.7	92.9	1.7	4.6a	8.9	None	
SBR75-21137	1780-1790	13613	1.8	3.5	93.5	1.2	4.6a	8.4	None	
SBR75-21138	1790-1800	13614	1.5	3.2	94.3	1.0	3.9a	7.7	None	
SBR75-21139	1800-1810	13615	2.0	3.4	93.7	.9	5.1a	8.1	None	
SBR75-21140	1810-1820	13616	1.9	3.6	93.2	1.3	5.0a	8.6	None	
SBR75-21141	1820-1830	13617	2.4	3.8	92.2	1.6	6.2a	9.1	None	
SBR75-21142	1830-1840	13618	2.8	3.9	91.5	1.8	7.2a	9.3	None	

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Surface elevation 6,736 feet

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			Weight percent		Gal per ton			Tendency to			
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil ^{1/}	Water	coke		
SBR75-21143	1840-1850	13619	2.1	3.6	92.2	2.1	5.4	8.6	0.925	None	
SBR75-21144	1850-1860	13620	2.7	3.9	89.9	3.5	6.9	9.3	.955	None	
SBR75-21145	1860-1870	13621	3.0	2.4	90.2	4.4	7.9a	5.8		None	
SBR75-21146	1870-1880	13622	2.5	3.7	91.2	2.6	6.2	8.9	.956	None	
SBR75-21147	1880-1890	13623	2.3	2.5	91.7	3.5	5.7	6.0	.955	None	
SBR75-21148	1890-1900	13624	.4	4.0	94.3	1.3	1.2a	9.5		None	
SBR75-21149-58	1900-2000										Missing
SBR75-21159	2000-2010	13635	.0	5.0	93.4	1.6	Trace	1.2		None	
SBR75-21160	2010-2020	13636	.3	4.0	94.9	.8	.7a	9.6		None	
SBR75-21161	2020-2030	13637	.2	4.5	91.6	3.6	.6a	10.9		None	
SBR75-21162	2030-2040	13638	.1	4.4	94.4	1.1	.3a	10.5		None	
SBR75-21163	2040-2050	13639	.2	4.5	93.6	1.7	.5a	10.8		None	
SBR75-21164-68	2050-2100						c			None	
SBR75-21169	2100-2110						Trace			None	
SBR75-21170	2110-2120						b			None	
SBR75-21171	2120-2130						c			None	
SBR75-21172	2130-2140						Trace			None	
SBR75-21173	2140-2150						b			None	
SBR75-21174	2150-2160						c			None	
SBR75-21175	2160-2170	13640	.1	4.1	95.2	.6	.2a	9.8		None	
SBR75-21176	2170-2180	13641	.1	3.8	95.3	.8	.1a	9.2		None	
SBR75-21177	2180-2190	13642	.0	2.9	95.4	1.7	Trace	6.9		None	
SBR75-21178	2190-2200	13643	.0	4.3	95.1	.6	Trace	10.3		None	
SBR75-21179	2200-2210						Trace			None	
SBR75-21180	2210-2220						b			None	
SBR75-21181-82	2220-2240						c			None	
SBR75-21183	2240-2250						b			None	
SBR75-21184	2250-2260						c			None	
SBR75-21185	2260-2270	13644	.3	4.9	91.6	3.2	.9a	11.7		None	
SBR75-21186	2270-2280	13645	.3	5.4	92.6	1.7	.7a	12.9		None	

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			Weight percent		Gas + loss	Gal per ton		Tendency to		
Laramie	Their		Oil	Water		Spent shale		Oil ^{1/}	Water	coke
SBR75-21187	2280-2290	13646	0.2	4.6	93.5	1.7	0.5a	11.0	None	
SBR75-21188	2290-2300	13647	2.0	3.2	92.6	2.2	5.2a	7.7	None	
SBR75-21189	2300-2310	13648	1.7	3.7	92.9	1.7	4.4a	8.9	None	
SBR75-21190	2310-2320	13649	1.9	4.4	92.0	1.7	5.1a	10.5	None	
SBR75-21191	2320-2330	13650	1.7	3.3	94.3	.7	4.5a	7.9	None	
SBR75-21192	2330-2340	13651	1.8	3.1	93.4	1.7	4.8a	7.4	None	
SBR75-21193	2340-2350	13652	1.9	3.6	92.7	1.8	4.8a	8.6	None	
SBR75-21194	2350-2360	13653	1.9	4.3	91.6	2.2	4.9a	10.3	None	
SBR75-21195	2360-2370	13654	2.0	4.4	91.3	2.3	5.1a	10.5	None	
SBR75-21196	2370-2380	13655	1.8	4.7	90.8	2.7	4.6a	11.3	None	
SBR75-21197	2380-2390	13656	1.8	5.7	89.3	3.2	4.7a	13.7	None	
SBR75-21198	2390-2400	13657	.4	3.7	94.1	1.8	1.2a	8.9	None	
SBR75-21199	2400-2410						Trace			
SBR75-21200	2410-2420						b			
SBR75-21201	2420-2430						c			
SBR75-21202	2430-2440	13658	.2	4.0	93.4	2.4	.6a	9.6	None	
SBR75-21203	2440-2450	13659	.8	5.0	92.5	1.7	2.2a	12.0	None	
SBR75-21204	2450-2460	13660	.3	3.7	95.6	.4	.9a	8.9	None	
SBR75-21205	2460-2470						c			
SBR75-21206-07	2470-2490						b			
SBR75-21208	2490-2500						Trace			
SBR75-21209-12	3250-3290						No Oil			
SBR75-21213	3290-3300						Trace			
SBR75-21214-16	3310-3340						No Oil			
SBR75-21217-21	3350-3400						No Oil			
SBR75-21222	3410-3420						No Oil			
SBR75-21223	3420-3430						Trace			
SBR75-21224	3430-3440	13661	.3	4.5	93.4	1.8	.7a	10.8	None	
SBR75-21225	3440-3450						No Oil			

^{1/} "a"--indicates specific gravity estimated as 0.92. Oil yields were estimated by a rapid test-tube method: "No Oil," "Trace," "b"--less than 1 gal oil/ton, "c"--1 to 3 gal oil/ton.

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