

08-9

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well Drilled in C. SW
SE 1/4 of Sec. 30, T. 11 S., R. 23 E., Uintah County, Utah

11' of 30g
45' of 25g
240' of 15g.

Location 53012F

Sample number		Run No.	Yield of product				Gal. per ton		Specific gravity of oil at 60°/60° F.	Properties of spent shale		Remarks
			Weight percent		Spent Shale	Gas + loss				Tendency to		
Laramie	Ther		Oil	Water					Oil	Water		cake
SBR61-6863	520-530	74518	2.1	0.8	96.2	0.9	5.3a	2.0			None	
SBR61-6864	530-540	74519	1.9	1.1	96.0	1.0	4.9a	2.6			None	
SBR61-6865	540-550	74520	2.2	1.3	95.2	1.3	5.8	3.1	0.921		None	
SBR61-6866	550-560	74521	2.1	1.3	95.6	1.0	5.6	3.1	.920		None	
SBR61-6867	560-570	74522	1.8	2.9	94.2	1.1	4.8a	7.0			None	
SBR61-6868	570-580	74523	4.0	1.4	93.9	.7	10.5	3.2	.918		None	
SBR61-6869	580-590	74524	4.5	1.1	93.4	1.0	11.9	2.6	.914		None	
SBR61-6870	590-600	74525	3.4	1.1	94.7	.8	8.9	2.5	.915		None	
SBR61-6871	600-610	74526	2.6	2.7	93.8	.9	6.7	6.5	.911		None	
SBR61-6872	610-620	74527	2.8	2.3	94.2	.7	7.3	5.6	.909		None	
SBR61-6873	620-630	74528	2.4	3.6	93.1	.9	6.4	8.5	.906		None	
SBR61-6874	630-640	74529	6.6	2.2	89.7	1.5	17.2	5.1	.922		None	
SBR61-6875	640-650	74530	1.5	6.0	91.6	.9	3.9a	14.4			None	
SBR61-6876	650-660	74531	2.0	5.2	92.0	.8	5.1a	12.4			None	
SBR61-6877	660-670	74532	3.0	1.5	94.8	.7	7.6	3.6	.940		None	
SBR61-6878	670-680	74533	1.3	4.0	93.4	1.3	3.4a	9.6			None	
SBR61-6879	680-690	74534	2.3	1.4	95.9	.4	6.0	3.4	.925		None	
SBR61-6880	690-700	74535	2.0	2.1	95.4	.5	5.2a	5.1			None	
SBR61-6881	700-710	74536	1.7	2.0	95.8	.5	4.5a	4.8			None	
SBR61-6882	710-720	74537	2.0	2.6	94.8	.6	5.2	6.2	.931		None	
SBR61-6883	720-730	74538	2.9	1.1	95.3	.7	7.6	2.6	.927		None	
SBR61-6884	730-740	74539	2.4	1.7	95.8	.1	6.1	4.1	.930		None	
SBR61-6885	740-750	74540	3.2	1.2	95.0	.6	8.3	2.9	.929		None	
SBR61-6886	750-760	74541	3.1	1.2	95.1	.6	8.0	2.9	.925		None	
SBR61-6887	760-770	74542	3.3	1.0	93.9	1.8	8.4	2.4	.926		None	
SBR61-6888	770-780	74543	4.8	1.2	92.9	1.1	12.5	2.9	.925		None	
SBR61-6889	780-790	74544	4.5	.9	93.8	.8	11.6	2.2	.926		None	
SBR61-6890	790-800	74545	4.6	1.2	93.1	1.1	12.2	2.9	.916		None	
SBR61-6891	800-810	74546	7.1	1.3	90.2	1.4	18.5	3.1	.914		None	
SBR61-6892	810-820	74547	4.7	1.3	93.0	1.0	12.2	3.1	.917		None	

a - Specific gravity estimated due to insufficient oil

Drill cutting samples received June 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3502P Sheet No. 1 of 6 sheets August 24, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well (Con.)

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		
SBR61-6893	820- 830	74548	4.5	1.6	93.0	0.9	11.6	3.8	0.920	None	
SBR61-6894	830- 840	74549	3.6	1.5	94.1	.8	9.3	3.6	.921	None	
SBR61-6895	840- 850	74550	4.1	1.8	93.3	.8	10.6	4.3	.922	None	
SBR61-6896	850- 860	74551	3.8	1.9	93.1	1.2	9.8	4.6	.923	None	
SBR61-6897	860- 870	74552	3.5	1.9	93.2	1.4	9.1	4.6	.921	None	
SBR61-6898	870- 880	74553	3.6	2.1	93.2	1.1	9.3	5.0	.925	None	
SBR61-6899	880- 890	74554	4.4	1.6	92.7	1.3	11.5	3.8	.925	None	
SBR61-6900	890- 900	74555	3.3	1.5	94.2	1.0	8.6	3.6	.923	None	
SBR61-6901	900- 910	74556	1.8	1.3	96.0	.9	4.7a	3.1	.919	None	
SBR61-6902	910- 920	74557	2.5	1.3	95.0	1.2	6.6	3.1	.907	None	
SBR61-6903	920- 930	74558	7.9	1.5	88.9	1.7	21.0	3.6	.909	None	
SBR61-6904	930- 940	74559	4.9	1.6	92.3	1.2	12.8	3.8	.905	None	
SBR61-6905	940- 950	74560	8.2	1.1	88.8	1.9	21.7	2.6	.903	None	
SBR61-6906	950- 960	74561	11.9	1.2	84.7	2.2	31.5	2.9	.901	None	
SBR61-6907	960- 970	74562	9.5	1.2	87.0	2.3	25.3	2.9	.912	None	
SBR61-6908	970- 980	74563	9.8	1.3	86.6	2.3	25.7	3.1	.911	None	
SBR61-6909	980- 990	74564	6.7	1.4	90.5	1.4	17.5	3.4	.913	None	
SBR61-6910	990-1000	74565	4.6	1.3	93.0	1.1	12.2	3.1	.912	None	
SBR61-6911	1000-1010	74566	6.0	1.3	91.2	1.5	15.6	3.1	.912	None	
SBR61-6912	1010-1020	74567	5.9	1.4	91.0	1.7	15.6	3.4	.913	None	
SBR61-6913	1020-1030	74568	6.8	1.5	90.1	1.6	17.9	3.6	.913	None	
SBR61-6914	1030-1040	74569	6.6	2.2	89.8	1.4	17.4	5.3	.913	None	
SBR61-6915	1040-1050	74570	.4	1.5	97.6	.5	1.0a	3.6		None	
SBR61-6916	1050-1060	74571	.5	1.6	97.1	.8	1.3a	3.8		None	
SBR61-6917	1060-1070	74572	.6	1.4	97.3	.7	1.5a	3.4		None	
SBR61-6918	1070-1080	74573	1.3	1.6	96.5	.6	3.4a	3.8		None	
SBR61-6919	1080-1090	74574	1.7	1.6	96.4	.3	4.4a	3.8		None	
SBR61-6920	1090-1100	74583	1.7	1.0	96.6	.7	4.4a	2.4		None	
SBR61-6921	1100-1110	74584	1.0	1.5	97.0	.5	2.6a	3.6		None	
SBR61-6922	1110-1120	74585	.9	1.5	97.2	.4	2.3a	3.6		None	

a - Specific gravity estimated due to insufficient oil

Drill cutting samples received June 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3502P Sheet No. 2 of 6 sheets August 24, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well (Con.)

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
SBR61-6923	1120-1130	74586	0.8	1.5	97.6	0.1	2.0a	3.6		None
SBR61-6924	1130-1140	74587	1.0	1.4	97.3	.3	2.5a	3.4		None
SBR61-6925	1140-1150	74588	1.1	1.4	97.2	.3	2.8a	3.4		None
SBR61-6926	1150-1160	74589	.9	1.4	97.5	.2	2.4a	3.4		None
SBR61-6927	1160-1170	74590	.5	1.6	97.5	.4	1.4a	3.8		None
SBR61-6928	1170-1180	74591	.5	1.4	97.9	.2	1.3a	3.4		None
SBR61-6929	1180-1190	74592	2.3	1.9	95.2	.6	5.8	4.6	0.925	None
SBR61-6930	1190-1200	74593	1.2	1.5	96.8	.5	3.0a	3.6		None
SBR61-6931	1200-1210	74594	2.6	1.5	95.0	.9	6.7	3.6	.917	None
SBR61-6932	1210-1220	74595	1.8	1.5	96.2	.5	4.6a	3.6		None
SBR61-6933	1220-1230	74596	1.0	1.5	97.1	.4	2.6a	3.6		None
SBR61-6934	1230-1240						1.0B			
SBR61-6935	1240-1250						No oil			
SBR61-6936	1250-1260						1.0B			
SBR61-6937	1260-1270	74597	1.7	1.1	96.5	.7	4.5a	2.6		None
SBR61-6938	1270-1280	74598	1.0	1.1	97.3	.6	2.5a	2.6		None
SBR61-6939-40	1280-1300						No oil			
SBR61-6941	1300-1310	74599	1.0	2.0	96.4	.6	2.5a	4.8		None
SBR61-6942	1310-1320	74600	2.8	2.3	94.2	.7	7.4	5.5	.912	None
SBR61-6943	1320-1330	74601	2.1	1.9	94.8	1.2	5.5	4.6	.913	None
SBR61-6944	1330-1340	74602	2.4	1.6	95.3	.7	6.1	3.8	.921	None
SBR61-6945	1340-1350	74603	1.3	1.9	96.3	.5	3.3a	4.6		None
SBR61-6946	1350-1360						1.0B			
SBR61-6947-48	1360-1380						No oil			
SBR61-6949-50	1380-1400						1.0B			
SBR61-6951	1400-1410	74604	.2	1.7	97.7	.4	.6a	4.1		None
SBR61-6952	1410-1420	74605	1.4	1.9	96.1	.6	3.6a	4.6		None
SBR61-6953	1420-1430	74606	.9	1.9	96.8	.4	2.4a	4.5		None
SBR61-6954	1430-1440	74607	1.7	1.2	96.4	.7	4.4a	2.9		None
SBR61-6955	1440-1450	74608	1.4	.9	97.3	.4	3.5a	2.2		None

a - Specific gravity estimated due to insufficient oil

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

Drill cutting samples received June 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3502P Sheet No. 3 of 6 sheets August 24, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well (Con.)

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	
SBR61-6956	1450-1460						No oil				
SBR61-6957	1460-1470						Trace				
SBR61-6958-62	1470-1520						No oil				
SBR61-6963	1520-1530						Trace				
SBR61-6964	1530-1540						1.0 B				
SBR61-6965	1540-1550						Trace				
SBR61-6966-73	1550-1630						No oil				
SBR61-6974-75	1630-1650						Trace				
SBR61-6976-77	1650-1670						No oil				
SBR61-6978-79	1670-1690						1.0 B				
SBR61-6980	1690-1700						Trace				
SBR61-6981-82	1700-1720						No oil				
SBR61-6983	1720-1730						Trace				
SBR61-6984	1730-1740						1.0 B				
SBR61-6985-89	1740-1790						No oil				
SBR61-6990	1790-1800	74609	0.5	0.8	98.3	0.4	1.2a	2.0		None	
SBR61-6991	1800-1810	74610	.8	1.2	97.8	.2	2.2a	2.8		None	
SBR61-6992	1810-1820	74611	.6	1.3	97.3	.8	1.5a	3.1		None	
SBR61-6993	1820-1830						1.0 B				
SBR61-6994-98	1830-1880						No oil				
SBR61-6999	1880-1890						Trace				
SBR61-7000	1890-1900	74612	.5	1.5	97.6	.4	1.2a	3.7		None	
SBR61-7001	1900-1910	74613	2.1	1.8	95.0	1.1	5.4a	4.4		None	
SBR61-7002	1910-1920						Trace				
SBR61-7003-05	1920-1950						No oil				
SBR61-7006-07	1950-1970						Trace				
SBR61-7008	1970-1980						1.0 B				
SBR61-7009	1980-1990						Trace				
SBR61-7010	1990-2000						1.0 B				
SBR61-7011	2000-2010						2.0 c				

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 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3502P Sheet No. 4 of 6 sheets August 24, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well (Con.)

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	
SBR61-7012	2010-2020						1.0 B				
SBR61-7013	2020-2030						3.0 c				
SBR61-7014-22	2030-2120						No oil				
SBR61-7023-26	2120-2160						1.0 B				
SBR61-7027	2160-2170						3.0 c				
SBR61-7028-29	2170-2190						1.0 B				
SBR61-7030	2190-2200						No oil				
SBR61-7031-32	2200-2220						Trace				
SBR61-7033-37	2220-2270						3.0 c				
SBR61-7038-41	2270-2310						1.0 B				
SBR61-7042	2310-2320						No oil				
SBR61-7043	2320-2330	74614	1.0	2.5	95.8	0.7	2.7a	6.0		None	
SBR61-7044	2330-2340						1.0 B				
SBR61-7045-46	2340-2360						No oil				
SBR61-7047	2360-2370						3.0 c				
SBR61-7048	2370-2380						Trace				
SBR61-7049	2380-2390						1.0 B				
SBR61-7050	2390-2400						3.0 c				
SBR61-7051-53	2400-2430						No oil				
SBR61-7054	2440-2450						1.0 B				
SBR61-7055-57	2450-2480						No oil				
SBR61-7058	2480-2590	74615	1.4	3.0	94.7	.9	3.6a	7.2		None	
SBR61-7059	2490-2500	74616	5.7	2.9	90.0	1.4	14.8	7.0	0.918	None	
SBR61-7060	2500-2510	74617	4.2	3.0	91.7	1.1	11.0	7.2	.918	None	
SBR61-7061	2540-2550	74618	1.6	3.1	94.4	.9	4.2a	7.4		None	
SBR61-7062	2550-2560	74620	1.1	2.2	96.1	.6	2.9a	5.3		None	
SBR61-7063-64	2570-2590						1.0 B				
SBR61-7065	2590-2600	74621	1.5	1.4	96.2	.9	3.9a	3.2		None	
SBR61-7066	2600-2610	74622	.8	.7	98.2	.3	2.0a	1.7		None	
SBR61-7067	2610-2620	74623	1.1	1.4	97.0	.5	2.8a	3.4		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 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-2502P Sheet No. 5 of 6 sheets August 24, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Honolulu Oil Corporation's Bitter Creek No. 1 Well (Con.)

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	Gas +					
Laramie	Their		Oil	Water	shale	loss	Oil	Water			
SBR61-7068	2640-2650	74624	1.5	1.6	96.2	0.7	3.9a	3.7		None	
SBR61-7069	2650-2660	74625	1.2	1.9	96.2	.7	3.2a	4.6		None	
SBR61-7070	2660-2670						3.0 c				
SBR61-7071-72	2670-2690						Trace				
SBR61-7073-98	2690-2950						No oil				
SBR61-7099-7100	2950-2970						1.0 B				
SBR61-7101	2970-2980						Trace				
SBR61-7102	2980-2990						No oil				
SBR61-7103-04	2990-3010						3.0 c				
SBR61-7105	3010-3020						No oil				
SBR61-7106-07	3020-3040						1.0 B				
SBR61-7108	3040-3050						Trace				
SBR61-7109-13	3050-3100						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

Drilling cutting samples received June 1, 1961; assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming, Illustration No. SBR-3502P Sheet No. 6 of 6 sheets August 24, 1961