

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well drilled in C. SE 1/4 of sec. 32, T. 10 S., R. 18 E., Uintah County, Utah

Derrick Floor elevation 5,661 feet

Wabgan marker 4031'

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		
SBR61-3617	440-450	72592	0.1	1.7	97.3	0.9	0.3a	4.1		None	
SBR61-3618	470-480	72593	.7	2.0	94.2	3.1	1.8a	4.8		None	
SBR61-3619	500-510	72594	.7	.8	97.6	.9	1.8a	1.8		None	
SBR61-3620	510-520	72595	1.1	1.6	96.6	.7	2.9a	3.8		None	
SBR61-3621	520-530	72596	1.1	1.4	96.7	.8	2.8a	3.4		None	
SBR61-3622	530-540	72597	.9	1.7	97.0	.4	2.3a	4.1		None	
SBR61-3623	540-550	72598	1.0	1.7	96.4	.9	2.7a	4.1		None	
SBR61-3624	550-560	72599	1.4	1.9	96.0	.7	3.5a	4.6		None	
SBR61-3625	560-570	72600	1.2	1.6	96.3	.9	3.2a	3.8		None	
SBR61-3626	570-580	72601	1.2	1.6	96.8	.4	3.0a	3.8		None	
SBR61-3627	580-590	72602	.9	1.4	96.9	.8	2.4a	3.4		None	
SBR61-3628	600-610	72603	1.2	1.7	96.7	.4	3.0a	4.1		None	
SBR61-3629	610-620	72604	1.5	1.5	96.4	.6	3.9a	3.6		None	
SBR61-3630	620-630	72605	1.1	1.4	96.7	.8	3.0a	3.3		None	
SBR61-3631	630-640	72606	1.1	1.6	96.8	.5	2.9a	3.8		None	
SBR61-3632	640-650	72607	1.2	1.4	97.0	.4	3.0a	3.4		None	
SBR61-3633	650-660	72608	1.4	1.2	96.6	.8	3.5a	2.9		None	
SBR61-3634	660-670	72609	1.1	1.5	97.0	.4	2.8a	3.6		None	
SBR61-3635	680-690	72610	1.8	1.7	95.9	.6	4.6a	4.1		None	
SBR61-3636	690-700	72611	1.6	1.7	96.0	.7	4.2a	4.1		None	
SBR61-3637	700-710	72612	1.8	2.3	95.2	.7	4.7a	5.4		None	
SBR61-3638	710-720	72613	2.4	1.7	95.3	.6	6.4	4.1	0.904	None	
SBR61-3639	720-730	72614	2.2	1.7	95.6	.5	5.8	4.1	.903	None	
SBR61-3640	730-740	72615	1.9	1.9	95.4	.8	5.0a	4.6		None	
SBR61-3641	740-750	72616	1.3	1.6	96.3	.8	3.4a	3.8		None	
SBR61-3642	750-760	72617	1.3	1.6	96.5	.6	3.4a	3.8		None	
SBR61-3643	760-770	72618	1.0	1.0	96.8	1.2	2.7a	2.4		None	
SBR61-3644	770-780	72619	1.0	1.8	96.5	.7	2.6a	4.4		None	
SBR61-3645	780-790	72620	1.1	2.1	96.3	.5	2.9a	5.0		None	
SBR61-3646	790-800	72621	.7	2.0	96.7	.6	1.9a	4.8		None	

a - Specific gravity estimated due to insufficient oil

Drill Cutting samples received January 20, 1961; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Cont.)

Derrick Floor elevation 5,661 feet

Perlick floor elevation 5,001 feet

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
SBR61-3647	800-810	72622	1.1	1.9	96.5	0.5	2.8a	4.6		None
SBR61-3648	810-820	72623	1.2	1.8	96.4	.6	3.2a	4.3		None
SBR61-3649	820-830	72624	1.0	2.3	95.7	1.0	2.5a	5.5		None
SBR61-3650	830-840	72625	.7	2.4	95.8	1.1	1.8a	5.8		None
SBR61-3651	840-850	72626	.9	2.1	96.0	1.0	2.4a	4.9		None
SBR61-3652	850-860	72627	1.1	2.1	96.4	.4	3.0a	5.0		None
SBR61-3653	860-870	72628	.1	6.4	93.0	.5	.1a	15.3		None
SBR61-3654	870-880	72629	1.0	1.3	97.2	.5	2.6a	3.1		None
SBR61-3655	880-890	72630	1.2	1.3	97.2	.3	3.0a	3.2		None
SBR61-3656	890-900	72631	1.2	1.1	97.3	.4	3.0a	2.7		None
SBR61-3657	900-910	72632	1.0	1.4	97.2	.4	2.7a	3.4		None
SBR61-3658	910-920	72633	1.0	1.4	97.3	.3	2.6a	3.4		None
SBR61-3659	920-930	72634	1.1	1.3	97.0	.6	2.9a	3.0		None
SBR61-3660	930-940	72635	1.1	1.4	97.0	.5	2.9a	3.4		None
SBR61-3661	940-950	72636	1.1	1.5	97.0	.4	2.8a	3.6		None
SBR61-3662	950-960	72637	1.2	1.6	96.7	.5	3.1a	3.8		None
SBR61-3663	960-970	72638	1.1	1.3	97.3	.3	3.0a	3.1		None
SBR61-3664	970-980	72639	1.3	1.5	96.8	.4	3.5a	3.6		None
SBR61-3665	980-990	72640	1.1	1.5	97.0	.4	2.8a	3.6		None
SBR61-3666	990-1000	72641	1.4	1.6	96.5	.5	3.6a	3.8		None
SBR61-3667	1000-1010	72642	1.7	1.5	96.2	.6	4.4a	3.6		None
SBR61-3668	1010-1020	72643	1.0	1.4	97.3	.3	2.6a	3.4		None
SBR61-3669	1020-1030	72644	1.2	1.5	97.0	.3	3.0a	3.6		None
SBR61-3670	1030-1040	72645	.6	1.6	97.6	.2	1.5a	3.8		None
SBR61-3671	1040-1050	72646	1.2	1.4	96.9	.5	3.1a	3.5		None
SBR61-3672	1050-1060	72647	.6	1.0	98.3	.1	1.5a	2.5		None
SBR61-3673	1060-1070	72648	.3	.7	98.6	.4	.7a	1.8		None
SBR61-3674	1070-1080	72649	.7	1.6	97.2	.5	1.8a	4.0		None
SBR61-3675	1080-1090	72650	.8	1.5	97.0	.7	2.2a	3.6		None
SBR61-3676	1090-1100	72651	1.1	1.6	96.6	.7	2.8a	4.0		None

a - Specific gravity estimated due to insufficient oil

Drill cutting samples received January 20, 1961; Assays made on air-dried samples

Laramie Petroleum Research Center, Laramie, Wyoming Illustration No. SBR-3476P, Sheet No. 2 of 7 sheets May 5, 1961

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Con.)

Derrick Floor elevation 5,661 feet

Surface Floor Elevation 5,001 feet

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	Thair		Oil	Water					Oil	Water	
SBR61-3677	1100-1110	72652	1.6	1.8	96.1	0.5	4.1a	4.4		None	
SBR61-3678	1110-1120	72653	.9	1.3	97.4	.4	2.4a	3.0		None	
SBR61-3679	1120-1130	72654	.8	1.3	97.3	.6	2.1a	3.2		None	
SBR61-3680	1200-1210	72655	1.5	1.5	96.3	.7	3.8a	3.7		None	
SBR61-3681	1210-1220	72656	1.5	1.5	96.4	.6	3.9a	3.6		None	
SBR61-3682	1220-1230	72657	1.1	1.6	96.8	.5	3.0a	3.7		None	
SBR61-3683	1230-1240	72658	1.3	1.5	96.5	.7	3.3a	3.6		None	
SBR61-3684	1240-1250	72659	1.4	1.4	96.2	1.0	3.6a	3.5		None	
SBR61-3685	1250-1260	72660	1.2	1.7	96.2	.9	3.1a	4.1		None	
SBR61-3686	1260-1270	72661	2.6	1.2	95.4	.8	6.8	2.9	0.915	None	
SBR61-3687	1270-1280	72662	2.0	1.0	96.3	.7	5.1a	2.4		None	
SBR61-3688	1280-1290	72663	2.9	1.4	94.4	1.3	7.6	3.2	.921	None	
SBR61-3689	1290-1300	72664	3.0	1.2	94.5	1.3	8.0	2.9	.911	None	
SBR61-3690	1300-1310	72665	4.1	.6	93.2	2.1	10.7	1.6	.917	None	
SBR61-3691	1310-1320	72666	3.6	1.2	93.9	1.3	9.6	2.8	.907	None	
SBR61-3692	1320-1330	72667	3.0	1.5	94.9	.6	8.0	3.6	.913	None	
SBR61-3693	1330-1340	72668	.8	1.9	96.9	.4	2.1a	4.6		None	
SBR61-3694	1340-1350	72669	.9	1.9	96.9	.3	2.4a	4.6		None	
SBR61-3695	1350-1360	72670	.5	1.4	97.6	.5	1.3a	3.4		None	
SBR61-3696	1360-1370	72671	.4	1.4	97.8	.4	1.2a	3.4		None	
SBR61-3697	1370-1380						b			None	
SBR61-3698	1380-1390						c			None	
SBR61-3699	1390-1400						b			None	
SBR61-3700-01	1400-1420						c			None	
SBR61-3702	1420-1430	72672	.2	2.0	97.4	.4	.5a	4.8		None	
SBR61-3703	1430-1440	72673	2.0	2.0	95.3	.7	5.1a	4.8		None	
SBR61-3704	1440-1450	72674	3.4	2.3	93.2	1.1	8.9	5.5	.925	None	
SBR61-3705	1450-1460	72675	2.9	1.7	94.9	.5	7.5	4.1	.919	None	
SBR61-3706	1460-1470	72676	1.5	2.6	95.7	.2	3.8a	6.2		None	
SBR61-3707	1470-1480	72677	2.9	1.2	95.3	.6	7.6	2.9	.917	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 January 20, 1961; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Con.)

Derrick Floor elevation 5,661 feet

			Yield of product				Specific gravity		Properties of	
Sample number		Run.	Weight percent		Spent	Gas +	Gal. per ton		of oil at	spent shale
Laramie	Their	No.	Oil	Water	shale	loss	Oil	Water	60°/60° F.	Tendency to
										coke
SBR61-3708	1480-1490	72678	2.1	1.4	96.1	0.4	5.5	3.4	0.916	None
SBR61-3709	1490-1500	72679	3.9	1.2	94.1	.8	10.4	2.9	.912	None
SBR61-3710	1500-1510	72680	1.0	1.8	96.8	.4	2.7a	4.2		None
SBR61-3711	1510-1520	72681	.5	1.1	98.1	.3	1.2a	2.8		None
SBR61-3712-13	1520-1540						c			
SBR61-3714	1540-1550						b			
SBR61-3715	1550-1560						c			
SBR61-3716	1560-1570	72682	.4	1.6	95.2	2.8	1.1a	3.7		None
SBR61-3717	1570-1580	72683	3.8	1.4	93.5	1.3	10.0	3.4	.912	None
SBR61-3718	1580-1590	72684	3.9	.7	94.2	1.2	10.1	1.8	.915	None
SBR61-3719	1590-1600	72685	1.6	.7	97.3	.4	4.2a	1.7		None
SBR61-3720	1600-1610	72686	6.7	.6	91.3	1.4	18.0	1.3	.899	None
SBR61-3721	1610-1620	72687	4.3	.7	92.9	2.1	11.5	1.8	.890	None
SBR61-3722	1620-1630	72688	8.8	.7	88.3	2.2	23.7	1.7	.897	None
SBR61-3723	1630-1640	72689	2.3	.9	96.0	.8	6.1	2.2	.905	None
SBR61-3724	1640-1650	72690	1.3	1.1	96.8	.8	3.4a	2.6		None
SBR61-3725	1650-1660						b			
SBR61-3726-27	1660-1680						No oil			
SBR61-3728-30	1680-1710						b			
SBR61-3731	1710-1720	72691	.5	.4	98.9	.2	1.4a	.8		None
SBR61-3732	1720-1730	72692	2.9	.8	95.6	.7	7.6a	1.9		None
SBR61-3733	1730-1740	72693	.6	.8	97.9	.7	1.6a	1.8		None
SBR61-3734	1740-1750	72694	2.1	1.1	95.8	1.0	5.4	2.6	.909	None
SBR61-3735	1750-1760	72695	3.8	1.4	93.4	1.4	10.1	3.4	.901	None
SBR61-3736	1760-1770	72696	4.4	.9	93.4	1.3	11.6	2.2	.904	None
SBR61-3737	1770-1780	72697	4.2	1.1	93.7	1.0	11.0	2.6	.914	None
SBR61-3738	1780-1790	72698	.7	1.5	97.4	.4	1.7a	3.6		None
SBR61-3739	1790-1800	72699	.6	.8	98.0	.6	1.5a	2.0		None
SBR61-3740-43	1800-1840						No oil			
SBR61-3744-46	1860-1890						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

Drill cutting samples received January 20, 1961; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Con.)

Derrick Floor elevation 5,661 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					
			Oil	Water							
Laramie	Their										
SBR61-3747-49	1900-1930						No oil				
SBR61-3750	1930-1940						b				
SBR61-3751	1940-1950						No oil				
SBR61-3752-54	1950-1980						c				
SBR61-3755-56	1980-2000						b				
SBR61-3757-59	2000-2030						Trace				
SBR61-3760	2030-2040						b				
SBR61-3761-66	2040-2100						No oil				
SBR61-3767-69	2100-2130						Trace				
SBR61-3770	2130-2140	72700	0.0	0.5	99.1	0.4	No oil	1.3		None	
SBR61-3771	2140-2150	72701	.3	.5	99.0	.2	.7a	1.3		None	
SBR61-3772	2150-2160	72702	.0	1.2	98.1	.7	Trace	2.9		None	
SBR61-3773	2160-2170	72703	.0	1.7	98.1	.2	Trace	4.1		None	
SBR61-3774	2170-2180	72704	.2	.6	99.0	.2	.4a	1.6		None	
SBR61-3775	2180-2190	72705	.0	.6	99.0	.4	Trace	1.4		None	
SBR61-3776-79	2190-2230						Trace				
SBR61-3780-84	2230-2280						No oil				
SBR61-3785	2280-2290	72706	2.0	1.7	95.6	.7	5.2a	4.1		None	
SBR61-3786	2290-2300	72707	2.3	1.5	95.4	.8	6.0	3.6	0.901	None	
SBR61-3787	2300-2310	72708	.5	1.0	98.4	.1	1.4a	2.4		None	
SBR61-3788	2310-2320	72709	1.1	1.0	97.2	.7	2.8a	2.4		None	
SBR61-3789	2320-2330	72710	1.6	.9	97.1	.4	4.1a	2.2		None	
SBR61-3790-94	2330-2380						No oil				
SBR61-3795	2380-2390						b				
SBR61-3796	2390-2400	72711	.1	.5	99.0	.4	.3a	1.2		None	
SBR61-3797-99	2400-2430						No oil				
SBR61-3800-03	2430-2470						Trace				
SBR61-3804-07	2470-2510						No oil				
SBR61-3808	2510-2520						Trace				
SBR61-3809-11	2520-2550						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

Drill cutting samples received January 20, 1961; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Con.)

Derrick Floor elevation 5,661 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		Gal. per ton					
Laramie	Their		Oil	Water	Spent shale	Gas + loss	Oil	Water		
SBR61-3812	2550-2560						Trace			
SBR61-3813	2560-2570						No oil			
SBR61-3814	2570-2580						Trace			
SBR61-3815-24	2580-2680						No oil			
SBR61-3825	2680-2690						Trace			
SBR61-3826-39	2690-2830						No oil			
SBR61-3840-46	2830-2900						Trace			
SBR61-3847	2900-2910						c			
SBR61-3848-49	2910-2930						b			
SBR61-3850-69	2930-3130						No oil			
SBR61-3870-98	3140-3430						No oil			
SBR61-3899	3430-3440						Trace			
SBR61-3900	3440-3450						c			
SBR61-3901-06	3450-3510						No oil			
SBR61-3907	3510-3520	72712	0.4	0.7	98.1	0.8	1.0a	1.8		None
SBR61-3908	3520-3530	72713	.7	.5	98.1	.7	1.9a	1.1		None
SBR61-3909	3530-3540	72714	.9	1.2	96.2	1.7	2.3a	2.8		None
SBR61-3910-19	3540-3640						No oil			
SBR61-3920	3640-3650	72715	1.8	.7	96.9	.6	4.7a	1.7		None
SBR61-3921	3650-3660	72716	1.2	1.2	97.0	.6	3.3a	2.8		None
SBR61-3922	3660-3670	72717	1.5	1.4	96.2	.9	3.8a	3.5		None
SBR61-3923	3670-3680	72718	3.3	1.2	94.0	1.5	8.6	2.9	0.918	None
SBR61-3924	3680-3690	72719	2.9	1.0	95.1	1.0	7.8	2.4	.902	None
SBR61-3925	3690-3700	72720	4.4	1.1	93.2	1.3	12.0	2.6	.885	None
SBR61-3926	3700-3710	72721	2.0	.8	96.1	1.1	5.2a	1.9		None
SBR61-3927	3710-3720	72722	1.1	1.0	97.0	.9	2.8a	2.5		None
SBR61-3928	3720-3730						b			
SBR61-3929	3730-3740						No oil			
SBR61-3930	3740-3750						Trace			
SBR61-3931-33	3750-3780						b			

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 January 20, 1961; Assays made on air-dried samples

OIL-SHALE ASSAYS BY MODIFIED FISCHER PETROT METHOD

Samples from Phillips Petroleum Company's Uteland Butte No. 2 well (Con.)

Derrick Floor elevation 5,661 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
UBR61-3934	3780-3790						Trace			
UBR61-3935-36	3790-3810						b			
UBR61-3937-40	3810-3850						Trace			
UBR61-3941	3850-3860						b			
UBR61-3942	3860-3870						c			
UBR61-3943	3870-3880	72723	1.1	1.3	97.1	0.5	2.9a	3.1	None	
UBR61-3944	3880-3890	72724	3.7	.9	94.5	.9	9.8	2.3	None	
UBR61-3945	3890-3900	72725	1.1	.5	97.9	.5	2.8a	1.2	None	
UBR61-3946	3900-3910						b			
UBR61-3947	3910-3920						Trace			
UBR61-3948-50	3920-3950						No oil			
UBR61-3951-52	3950-3970						b			
UBR61-3953-54	3970-3990						Trace			
UBR61-3955	3990-4000						b			
UBR61-3956-59	4000-4040						No oil			
UBR61-3960	4040-4050						Trace			
UBR61-3961-68	4050-4130						No oil			
UBR61-3969	4130-4140						Trace			
UBR61-3970-79	4140-4240						No oil			
UBR61-3980-81	4250-4270						No oil			
UBR61-3982-84	4280-4310						No oil			
UBR61-3985	4310-4320						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 January 20, 1961; Assays made on air-dried samples

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