

## OIL-SHALE ASSAYS BY MODIFIED FISCHER RETORT METHOD

Samples from Wolf Energy Company's Blue Rim Unit-Federal Well 1-12 drilled in the NW1/4SW1/4  
(2,180 feet FSL, 1,800 feet FEL) of sec 12, T 22 N, R 107 W, Sweetwater County, Wyoming

Surface elevation 6,727 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 <sup>1/</sup>	Water
SBR75-19906-29	140.0-380.0						No Oil			
SBR75-19930-8	440.0-530.0						No Oil			
SBR75-19939	530.0-540.0	12723	1.9	5.4	89.8	2.9	4.9a	13.0		None
SBR75-19940	540.0-550.0						No Oil			
SBR75-19941-6	560.0-620.0						No Oil			
SBR75-19947	620.0-630.0						Trace			
SBR75-19948	630.0-640.0						c			
SBR75-19949-51	640.0-670.0						No Oil			
SBR75-19952	670.0-680.0	12724	2.4	4.1	92.1	1.4	6.4	9.8	0.901	None
SBR75-19953	680.0-690.0	12725	2.2	3.9	92.6	1.3	5.9	9.3	.899	None
SBR75-19954	690.0-700.0	12726	8.3	2.0	87.2	2.5	22.2	4.7	.903	None
SBR75-19955	700.0-710.0	12727	7.1	1.9	88.7	2.3	18.7	4.5	.907	None
SBR75-19956	710.0-720.0	12728	7.9	1.9	86.9	3.3	21.0	4.6	.906	None
SBR75-19957	720.0-730.0	12729	8.0	2.0	86.2	3.8	20.9a	4.9		None
SBR75-19958	730.0-740.0	12730	7.5	2.2	87.5	2.8	19.8	5.3	.907	None
SBR75-19959	740.0-750.0	12731	7.5	1.4	88.9	2.2	19.9	3.4	.903	None
SBR75-19960	750.0-760.0	12732	3.2	1.5	93.5	1.8	8.5	3.7	.901	None
SBR75-19961	760.0-770.0	12733	3.7	.8	91.3	4.2	9.8	1.9	.906	None
SBR75-19962	770.0-780.0	12734	6.5	1.1	89.6	2.8	17.0	2.7	.908	None
SBR75-19963	780.0-790.0	12735	7.0	1.0	89.5	2.5	18.3	2.5	.909	None
SBR75-19964	790.0-800.0	12736	1.1	2.0	95.4	1.5	2.8a	4.8		None
SBR75-19965	800.0-810.0	12737	11.6	1.5	83.2	3.7	30.8	3.5	.902	None
SBR75-19966	820.0-830.0	12738	4.1	1.8	92.4	1.7	10.8	4.2	.908	None
SBR75-19967	840.0-850.0	12739	.7	1.1	96.1	2.1	1.7a	2.6		None
SBR75-19968	850.0-860.0	12740	.7	1.8	96.5	1.0	1.9a	4.3		None
SBR75-19969	860.0-870.0	12741	2.3	1.2	94.3	2.2	6.0	2.9	.908	None
SBR75-19970	870.0-880.0	12742	5.7	1.5	90.6	2.2	14.9	3.6	.910	None
SBR75-19971	880.0-890.0	12743	5.2	1.4	91.2	2.2	13.7	3.4	.913	None
SBR75-19972	890.0-900.0	12744	5.8	1.5	90.5	2.2	15.4	3.6	.910	None
SBR75-19973	900.0-910.0	12745	4.8	1.1	91.3	2.8	12.7	2.6	.910	None

See footnote at end of table.

Drill cuttings received September 3, 1975; assays made on air-dried samples

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Samples from Wolf Energy Company's Blue Rim Unit-Federal Well 1-12 (con.)

Surface elevation 6,727 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 <sup>1/</sup>	Water	coke			
SBR75-19974	910- 920	12746	3.6	1.5	92.2	2.7	9.6	3.6	0.909	None		
SBR75-19975	920- 930	12747	3.1	3.5	90.4	3.0	8.2a	8.4		None		
SBR75-19976	930- 940	12748	5.1	2.3	90.6	2.0	13.4	5.5	.907	None		
SBR75-19977	940- 950	12749	.7	5.0	93.5	.8	1.8a	12.0		None		
SBR75-19978	950- 960	12750	.8	4.8	93.6	.8	2.0a	11.5		None		
SBR75-19979	960- 970	12751	4.2	1.7	92.5	1.6	11.1	4.1	.910	None		
SBR75-19980	970- 980	12752	4.2	1.9	92.4	1.5	11.0	4.6	.909	None		
SBR75-19981	980- 990	12753	4.0	1.9	92.5	1.6	10.6	4.6	.910	None		
SBR75-19982	990-1000	12754	4.4	1.6	92.6	1.4	11.6	3.8	.908	None		
SBR75-19983	1000-1010	12755	2.8	2.3	94.2	.7	7.5	5.5	.901	None		
SBR75-19984	1010-1020	12756	7.3	1.8	89.5	1.4	19.4	4.3	.908	None		
SBR75-19985	1020-1030	12757	5.7	.8	90.8	2.7	14.8a	1.8		None		
SBR75-19986	1030-1040	12820	4.2	1.7	92.6	1.5	11.0	4.1	.906	None		
SBR75-19987	1040-1050	12759	3.9	2.0	92.6	1.5	10.4	4.8	.911	None		
SBR75-19988	1050-1060	12760	2.9	1.5	93.9	1.7	7.7	3.6	.906	None		
SBR75-19989	1060-1070	12761	3.5	1.9	93.1	1.5	9.2	4.6	.906	None		
SBR75-19990	1070-1080	12762	3.1	1.5	93.3	2.1	8.2	3.6	.907	None		
SBR75-19991	1080-1090	12763	3.7	1.8	92.7	1.8	9.8	4.3	.906	None		
SBR75-19992	1090-1100	12764	2.9	1.9	93.4	1.8	7.6	4.6	.904	None		
SBR75-19993	1100-1110	12765	3.7	2.0	92.5	1.8	9.9	4.8	.904	None		
SBR75-19994	1110-1120	12766	5.1	2.4	90.7	1.8	13.4	5.8	.909	None		
SBR75-19995	1120-1130	12767	3.2	2.2	92.9	1.7	8.3	5.3	.908	None		
SBR75-19996	1130-1140	12768	2.3	1.7	93.7	2.3	6.1	4.0	.906	None		
SBR75-19997	1140-1150	12769	2.1	2.1	94.4	1.4	5.6	5.0	.901	None		
SBR75-19998	1150-1160	12770	1.8	2.0	94.6	1.6	4.8a	4.8		None		
SBR75-19999	1160-1170	12771	1.9	2.2	94.6	1.3	4.9a	5.3		None		
SBR75-20000	1170-1180	12772	1.8	2.1	95.0	1.1	4.7a	5.0		None		
SBR75-20001	1180-1190	12773	1.4	2.3	95.4	.9	3.6a	5.5		None		
SBR75-20002	1190-1200	12774	2.1	2.2	94.8	.9	5.5	5.3	.906	None		
SBR75-20003	1200-1210	12775	1.8	2.1	94.9	1.2	4.8a	5.0		None		

See footnote at end table.

Drill cuttings received September 3, 1975; assays made on air-dried samples

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Samples from Wolf Energy Company's Blue Rim Unit-Federal Well 1-12 (con.)

Surface elevation 6,727 feet

Sample number		Run No.	Yield of product				Specific gravity of oil at 60°/60° F	Properties of spent shale		Remarks
			Weight percent		Gas + shale	Gal per ton		Tendency to coke		
Laramie	Their		Oil	Water		Spent shale	loss		Oil <sup>1/</sup>	Water
SBR75-20004	1220-1230	12776	1.8	2.1	95.0	1.1	4.7a	5.0		None
SBR75-20005	1230-1240	12777	3.4	2.3	92.5	1.8	9.0	5.5	0.910	None
SBR75-20006	1240-1250	12778	1.7	2.2	94.2	1.9	4.4a	5.3		None
SBR75-20007	1250-1260	12779	2.8	2.2	93.8	1.2	7.4	5.3	.899	None
SBR75-20008	1260-1270	12780	2.6	2.2	93.6	1.6	7.1	5.3	.896	None
SBR75-20009	1270-1280	12781	1.3	1.9	94.9	1.9	3.3a	4.6		None
SBR75-20010	1280-1290	12782	1.4	2.5	95.6	.5	3.8a	6.0		None
SBR75-20011	1290-1300	12783	3.3	2.0	93.0	1.7	8.7	4.8	.906	None
SBR75-20012	1300-1310	12785	3.4	2.1	92.9	1.6	9.0	5.0	.906	None
SBR75-20013	1310-1320	12786	3.0	2.0	93.7	1.3	7.9	4.8	.902	None
SBR75-20014	1320-1330	12787	2.8	1.4	94.6	1.2	7.3	3.4	.905	None
SBR75-20015	1330-1340	12788	3.3	2.1	93.1	1.5	8.6	5.0	.904	None
SBR75-20016	1340-1350	12789	2.2	1.8	94.6	1.4	5.8	4.3	.903	None
SBR75-20017	1350-1360	12790	2.2	1.7	93.9	2.2	5.8a	4.0		None
SBR75-20018	1360-1370	12791	2.6	2.0	94.2	1.2	7.0	4.8	.900	None
SBR75-20019	1370-1380	12792	2.5	1.5	94.4	1.0	6.7	5.0	.900	None
SBR75-20020	1380-1390	12793	2.6	1.5	94.1	1.8	7.0	3.6	.908	None
SBR75-20021	1390-1400	12794	2.3	1.5	94.3	1.9	6.1	3.6	.910	None
SBR75-20022	1400-1410	12795	4.5	2.2	91.6	1.7	11.9	5.3	.908	None
SBR75-20023	1410-1420	12796	3.8	2.1	93.1	1.0	10.1	5.0	.909	None
SBR75-20024	1420-1430	12797	4.0	2.4	91.6	2.0	10.6	5.8	.917	None
SBR75-20025	1430-1440	12798	3.6	2.2	92.2	2.0	9.5	5.3	.912	None
SBR75-20026	1440-1450	12799	8.8	2.4	86.2	2.6	23.0	5.8	.913	None
SBR75-20027	1450-1460	12800	8.6	2.5	86.3	2.6	22.4	6.0	.920	None
SBR75-20028	1460-1470	12801	7.3	2.5	87.1	3.1	19.2	6.0	.912	None
SBR75-20029	1470-1480	12802	7.0	2.5	88.0	2.5	18.3	6.0	.913	None
SBR75-20030	1480-1490	12803	7.6	2.4	87.7	2.3	20.0	5.8	.912	None
SBR75-20031	1490-1500	12804	6.2	2.4	89.7	1.7	16.5	5.8	.908	None
SBR75-20032	1500-1510	12805	6.3	2.0	89.2	2.5	16.6	4.8	.911	None
SBR75-20033	1510-1520	12806	6.6	2.6	87.7	3.1	17.5	6.1	.913	None

See footnote at end of table.

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Samples from Wolf Energy Company's Blue Rim Unit-Federal Well 1-12 (con.)

Surface elevation 6,727 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		
Laramie	Their		Oil	Water		shale		Oil <sup>1/</sup>	Water	coke
SBR75-20034	1520-1530	12807	7.4	2.5	88.0	2.1	19.4	6.0	0.910	None
SBR75-20035	1530-1540	12808	5.7	1.7	89.9	2.7	15.0	4.1	.911	None
SBR75-20036	1540-1550	12809	6.4	2.5	89.2	1.9	17.0	6.0	.911	None
SBR75-20037	1550-1560	12810	5.8	1.9	89.9	2.4	15.2	4.6	.911	None
SBR75-20038	1560-1570	12811	5.9	2.4	89.8	1.9	15.6	5.8	.911	None
SBR75-20039	1570-1580	12812	2.6	2.3	93.3	1.8	6.9	5.5	.905	None
SBR75-20040	1580-1590	12813	2.9	2.3	93.4	1.4	7.7	5.5	.903	None
SBR75-20041	1590-1600	12814	2.9	2.4	93.3	1.4	7.6	5.8	.903	None
SBR75-20042	1600-1610	12815	2.1	2.5	94.0	1.4	5.5	6.0	.899	None
SBR75-20043	1610-1620	12816	1.4	1.6	95.3	1.7	3.8a	3.8		None
SBR75-20044	1620-1630	12817	2.1	2.5	94.2	1.2	5.5	6.0	.900	None

<sup>1/</sup> "a"--indicates specific gravity estimated as 0.92. "c"--1 to 3 gal oil/ton.

Drill cuttings received September 3, 1975; assays made on air-dried samples